

## PART 1 - GENERAL

### 1.1 EXISTING SYSTEMS

- A. The electrical drawings show portions of the existing electrical systems that are to remain, be removed, or be modified as a part of the Contractor's work. Concealed features of the existing systems are derived from record drawings and the Engineer's best judgment of the configuration, but no guarantee is made as to their correctness or completeness.
- B. The Contractor shall inspect the existing installation prior to bidding and shall judge the work required to provide a complete installation within the overall intent of the contract documents, acknowledging that undocumented conditions will be encountered during construction.
- C. Existing systems and systems adjacent to the work shall be investigated thoroughly. Prior to beginning demolition or new construction field trace all raceways in the work area. Determine source, destination, and load; and mark appropriately.
- D. Contractor to assume all junction boxes (all junction boxes not indicated on drawings) in the work area have outdated panel circuit designators. Trace circuit and update circuit designation on each junction box within the work area.
- E. Provide 500 strap supports for raceway sizes one inch and smaller for each electrical system to support existing raceways to remain.

### 1.2 MAINTAINING EXISTING SYSTEMS

- A. The building will continue operation during the work and it is essential that no system operation be interrupted unless scheduled with the Owner. Contractor shall assume responsibility for unscheduled interruptions and expedient repair. Any damage resulting from performance of work under this contract shall be immediately repaired to assure continuing operation and integrity at no increase in contract cost.
- B. Maintain existing systems not identified for demolition. Maintaining existing systems includes relocating the system to coordinate with work of this contract, when work of this contract cannot be done while the existing system is in its present location. Examine drawings of all disciplines to determine where work of other trades will or is likely to require relocation of existing systems. Relocation of any system shall be permanent.
- C. Exact relocation requirement of existing systems to remain to be based on detailed coordination with other trades. Contractor to provide proposed locations of relocated devices to Owner for approval prior to commencement of work.
- D. Contractor shall assume the risk of maintaining existing systems except relocation of systems at or beyond the magnitude indicated below shall be considered an additional cost, if not shown to be relocated. If such wiring is found the Contractor shall notify Architect of wiring location, reason it must be removed and cost of relocation and receive the Owner's approval before proceeding with the work.
  - 1. Power wiring #2 AWG and above
  - 2. Any Fiber Optic cable
  - 3. Telecommunication cable, 50 pair and above

E. Security/Access Control

1. Existing security/access control system cabling that is currently located in the "Demolition Areas" is scheduled to be removed or disconnected by the Owner or their vendor. If security/access control system cabling is encountered in the "Demolition Areas", maintain in operation and notify the Owner in writing as to the location and type of wiring.

F. Fire Alarm System

1. Active fire alarm system conduit and cabling is routed within the "Demolition Areas" and serves outlet devices or equipment in adjacent occupied areas and shall be maintained.
2. Contractor shall provide the following prior to demolition:
  - a. Coordinate with UWMC Fire Alarm staff to identify active conduits and cabling that must be maintained.
  - b. Coordinate with UWMC Fire Alarm staff to disconnect active circuits and devices that are shown to be demolished.
  - c. Notify Owner in writing when in-service fire alarm conduits and cabling are encountered that must be relocated.
3. Where it is necessary to shut down existing fire alarm systems for switch-over purposes or any other reason that leaves the building unprotected, the Contractor shall provide a continuous approved fire watch during the shutdown in accordance with Seattle Fire Department Administrative Rule 9.06.04. The fire watch shall include but is not limited to the following:
  - a. Fire watch shall be performed by licensed security personnel, trained in the use and operation of portable fire extinguishers and instructed in how to contact the UW Police dispatcher by either radio or telephone.
  - b. Continuous rounds to cover all areas of the building are required every 30 minutes.
  - c. An evacuation plan which includes a method to notify all occupants is required in occupied buildings.
  - d. Maintain a log of the rounds and comprehensive notes.
  - e. Provide a 30-day notice to the Owner and attend coordination meetings for fire watch approval.
4. Provide 14 days written notification to the University's Construction Coordinator, requesting approval for fire protection system shutdown or functional impairment; receipt of the approval from the University's Construction Coordinator is required before any system shutdown or functional impairment.

G. Telecommunications

1. Active data, and low voltage system cabling that is not associated with the outlet devices or other low voltage devices that are scheduled for removal shall be maintained.
2. Contractor shall provide the following prior to demolition:
  - a. Coordinate with hospital IT staff to identify active cabling that must be maintained.
  - b. Notify Owner in writing when in-service telephone and computer cables are encountered that must be relocated.

### 1.3 EXISTING SYSTEMS CONCEALED

- A. The electrical drawings show portions of the existing electrical systems which are to remain, be removed or be modified as a part of the Contractor's work. Concealed features of the existing systems are derived from record drawings and the Engineer's best judgment of the configuration, but no guarantee is made as to their correctness.
- B. The Contractor shall inspect the existing installation prior to bidding and shall make his own judgment as to the work required to provide a complete installation within the intent of the contract documents.

### 1.4 DEMOLITION WORK

- A. The demolition work required under this contract exceeds what is specifically shown on the drawings. Provide demolition of where needed to support the overall nature of the work indicated on the architectural drawings.
- B. The demolition drawings show portions of the existing systems that are derived from record drawings and limited field verification. Branch circuits serving devices shown on the plans are not indicated, assume that each device indicated will require 30 feet of raceway and wire demolition. Field trace existing branch circuitry and remove all elements that serve the devices indicated for removal.
- C. The Contractor shall inspect the existing installation prior to bidding and shall make his own judgment as to the work required to provide complete demolition within the intent of the contract documents.
- D. Verify that all circuits in any raceway that is in an area where electrical systems are to be removed are de-energized and not in use.

### 1.5 TEMPORARY SYSTEMS

- A. Provide temporary systems for phasing of construction. Temporary systems are required of any Division 26 section or system affected by the phasing or sequencing of the work. The contractor may rearrange the diagrammatically indicated locations of homeruns if advantageous to meet the phasing requirements.
- B. Provide temporary lighting, exit lighting, and fire notification in areas of construction that will have ongoing or intermittent public access. Temporary lighting shall comply with IES standards and other provisions of these specifications. Selected light fixtures must have battery backup to allow for egress at all times. Indicate path to nearest exit with exit signs. All temporary systems shall be removed after they are no longer in operation.

### 1.6 WORK OUTSIDE OF PROJECT AREA

- A. Electrical work may be required outside of the project limits, the remodel areas, the limits of construction, or similar boundaries identified on the project drawings. Work may not be specifically indicated on the electrical plans but can be required by diagrammatic home runs, one line diagrams, or performance specifications.
- B. Review work of other trades and disciplines for similar impacts. Remove and relocate electrical equipment in the way of work of other trades.

- C. For work outside of the project area assume that removal and replacement of ceiling tiles is required in all finished areas. Spaces above existing ceilings are highly congested. Route wiring around obstructions and provide pull boxes per code.

#### 1.7 PREMIUM TIME

- A. Premium time shall be included in the Base Bid for electrical system(s) outages and for other work as required by the schedule, as shown on the drawings and as noted in other Divisions of the Specifications.

### PART 2 - PRODUCTS

#### 2.1 EXISTING MATERIALS

- A. All materials which are a part of the building shall remain the property of the Owner.

#### 2.2 EXISTING MATERIALS TO BE REINSTALLED

- A. Existing materials and equipment (except interior, undamaged raceways) that are removed as a part of the work or stored in surplus shall not be reinstalled as a part of the new systems unless specifically noted or authorized in writing by the Owner. Forward a copy of the authorization to the Engineer. The requirements of the specifications (i.e., condition, installation, testing, etc.) shall apply as if the materials were new, furnished by the Contractor.

#### 2.3 EXISTING MATERIALS NOT TO BE REINSTALLED

- A. In coordination with the Architect, these materials shall be made available for his inspection and decision as to whether the Owner will retain possession. Items selected for retention shall be turned over to the Owner. These items shall be delivered to a location on the premises selected by the Owner. Take reasonable care to avoid damage to this material. If the Contractor fails to conform to this requirement, he shall purchase and turn over to the Owner replacement material of like kind and quantity.
- B. All material not selected for retention by the Owner and debris shall be legally disposed of by the Contractor.

### PART 3 - EXECUTION

#### 3.1 EXISTING CONDITIONS

- A. Examine the structure, building, and conditions under which electrical work is to be installed for conditions detrimental to proper and timely completion of electrical work. Do not proceed with work until deficiencies or detrimental conditions have been corrected. Report deficiencies or detrimental conditions of existing electrical work which might be unsuitable to connect with or receive other work. Failure to so report shall constitute acceptance of other work as being fit and proper for the reception of electrical work.

#### 3.2 DEMOLITION

- A. Signaling and communication systems, other electrical equipment free standing or surface mounted, raceway (exposed) and conductors; which are no longer in service presently or as a result of this contract shall be removed. Unused flush mounted devices, outlet and other

boxes in finished areas shall be removed from wall and the remaining hole patched to match adjacent wall surfaces. Unused raceways and sleeves shall be cut flush at ceiling, floor or wall and filled with grout. Unused raceways above accessible ceilings shall be removed.

- B. Contractor shall remove all floor, wall or ceiling mounted electrical equipment in the "Demolition Area" indicated on the drawing. If Contractor questions whether a particular device that is not shown in the documents within the defined "Demolition Area" is to be removed, the Contractor shall notify the Architect noting type and location of device. If so directed the Contractor shall maintain the existing device in service without any change in contract price.
- C. Communication cabling: Existing active communication cabling will be identified by UWMC staff. Protect and retain in operation. All inactive and abandoned communication cabling shall be removed.
- D. Security/Card Access equipment and cabling: Existing security and card access equipment and cabling is to be removed by the Owner (UWMC) or the Owner's vendor. Notify UWMC Construction Coordinator of any security or card access equipment or cabling within the "demolition area".

### 3.3 POWER OUTAGES

- A. The facility will continue its normal operation during the construction work; therefore it is required that the Contractor schedule electrical system(s) outages with the Owner. Electrical systems(s) outages to Owner occupied areas shall not be permitted from 7:00 a.m. to 6:00 p.m. on any day of the week.
- B. Submit a written request for a power outage at least one week in advance identifying the areas, and systems that will be affected, time and duration of the power outage. The Contractor shall receive written authorization to proceed with the outage and shall renotify the Owner verbally at least one hour prior to the outage and also notify the Owner when the outage is completed.
- C. **Unscheduled Outages:** In the event that the Contractor's work causes or contributes to an electrical system(s) outage (or other system fault), the Contractor is responsible for immediately correcting the problem. Included (as examples) shall be any premium time required to stay on the job site until problem is corrected and air freight for parts not locally available. If the Contractor fails to correct the problem, the Owner's cost of correcting the problem shall be deducted from the Contractor's contract amount.

### 3.4 EXISTING SYSTEMS MAINTAINED

- A. **General**
  - 1. Reroute existing circuits that are interrupted as a result of this contract that serve devices to remain in service.
  - 2. **Power Circuits** (Including removal or relocation of existing panelboards).
    - a. Prior to demolition work trace out and identify each branch circuit and feeder circuit that serves loads in occupied areas.
    - b. Provide temporary wiring, schedule outage and reconnect loads to temporary wiring.
    - c. Provide new wiring in new location.

- d. Schedule outage, disconnect temporary wiring, and connect loads to new wiring. Remove temporary wiring.
- e. Outage for each circuit that must remain active shall not be more than 20 minutes.

3. Signal Systems

- a. Prior to demolition trace out and identify device and systems being served.
- b. Provide temporary wiring to maintain operation of system throughout facility.
- c. Schedule outage and connect to temporary wiring and test system.
- d. Provide new wiring on new location.
- e. Schedule outage, disconnect temporary wiring, and reconnect to new wiring. Remove temporary wiring.
- f. Outage for each system shall not be more than 20 minutes.

B. Telecommunications

- 1. Carefully bundle active cables to be maintained and support from structure above construction activities.
- 2. Protect all active cables from heat, abrasion, tension or other potentially damaging influences while demolition work is in progress.
- 3. Protect all active equipment from dust, debris, or physical contact with anything or anyone that has not been authorized by UWMC IT staff.
- 4. Where active cables and innerduct pass through locations for new walls, carefully bundle the cables and encase in 4-inch split duct. Support the split duct and cable bundles on both sides of new walls during and after construction. Firestop as necessary.

3.5 ACCESS TO PERFORM WORK

- A. Carefully remove, store or temporarily hang and re-install in undamaged condition all electrical equipment, lighting fixtures and ceiling tiles where access to perform work is required. Clean prior to re-installation. Provide new lamps when so noted.

3.6 NEW DEVICES IN REMODEL AREAS

- A. Provide flush mounting for devices in existing walls. Fish conduit in wall. Where existing boxes are indicated to be reused, extend box as necessary and provide new devices and plates.
- B. Contractor is cautioned that the existing building contains clay tile and concrete walls. New devices may require cutting and patching, and it shall be the responsibility of the contractor to provide all cutting and patching required for the installation of the Division 26 work. Contractor shall investigate existing areas prior to bid and shall include all costs of such work in the bid.
- C. This facility has wiring embedded in raceways in concrete slabs. Provide new concealed wiring to last outlet or pull box before homerun to panel.

END OF SECTION