

**DEPARTMENT OF VETERANS AFFAIRS
VHA MASTER SPECIFICATIONS**

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SECTION 00 01 15
LIST OF DRAWING SHEETS

The drawings listed below accompanying this specification form a part of the contract.

<u>Drawing No.</u>	<u>Title</u>
	<u>GENERAL</u>
X1	Cover Sheet
	<u>ELECTRICAL</u>
E1	Site Plan - Electrical Remodeling
E2	Basement Plan - Electrical Remodeling
E3	First Floor Plan - Electrical Remodeling
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E5	Second Floor Plan - Electrical Remodeling
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**SECTION 01 00 00
GENERAL REQUIREMENTS**

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SECTION 01 00 00
GENERAL REQUIREMENTS

1.1 GENERAL INTENTION

- A. Contractor shall completely prepare site for building operations, including demolition and removal of existing structures, and furnish labor and materials and perform work for Fargo VA Medical Center Correct Identified Electrical System Issues, Project Number 437-12-102 as required by drawings and specifications.
- B. Visits to the site by Bidders may be made only by appointment with the Medical Center Engineering Officer.
- C. Offices of Image Group, Inc., as Architect-Engineers, will render certain technical services during construction. Such services shall be considered as advisory to the Government and shall not be construed as expressing or implying a contractual act of the Government without affirmations by Contracting Officer or his duly authorized representative.
- D. Prior to commencing work, general contractor shall provide proof that a OSHA certified "competent person" (CP) (29 CFR 1926.20(b)(2) will maintain a presence at the work site whenever the Contractor or subcontractors are present.
- E. Prior to commencing work all Contractor Personnel working on site must provide proof that they have taken and passed a Tuberculosis Test within the past ninety (90) days.
- F. Training:
1. All employees of contractor or subcontractors shall have the (Non Supervisory) 10-hour or (Supervisory) 30-hour OSHA certified Construction Safety course and /or other relevant competency training, as determined by VA.
 2. Submit training records of all such employees for approval before the start of work.

1.2 BID INSTRUCTIONS

- A. A single award will be made on Item No. I (Base Bid), but in the event the offer exceeds the funds available, a single award will be made on Item No. II or Item No. III, etc., in that order, based on available funding. Offerors should quote a price on each item listed.

1.3 BID SCHEDULE

Project: _____ Contractor: _____

ITEM #	DESCRIPTION	DEDUCT	TOTAL BID (including "deduct")
I	Base Bid	N/A	\$

II	Alternate Bid No. 1	\$	\$
III	Alternate Bid No. 2	\$	\$
IV	Alternate Bid No. 3	\$	\$
V	Alternate Bid No. 4	\$	\$
VI	Alternate Bid No. 5	\$	\$

Note: The number of "Bid Alternates", if any, vary by solicitation. The above is provided as an example format and is not meant to imply that all solicitations include 5 Alternate Bids. Please adjust as needed per solicitation.

Example Completed Bid Schedule:

Contractor X has a Base Bid of \$105,200.00, and a "Deduct" for Alternate Bid No. 1 of \$5,000.00, as well as a "Deduct" for Alternative Bid No. 2 of \$3,000.00, and a "Deduct" for Alternative Bid No. 3 of \$4,000.00. The table immediately below is how their bid would be submitted.

ITEM #	DESCRIPTION	DEDUCT	TOTAL BID (including "deduct")
I	Base Bid	N/A	\$105,200.00
II	Alternate Bid No. 1	\$5,000.00	\$100,200.00
III	Alternate Bid No. 2	\$3,000.00	\$97,200.00
IV	Alternate Bid No. 3	\$4,000.00	\$93,200.00

1.4 STATEMENT OF BID ITEM(S)

- A. ITEM I, BASE BID: Work includes all general construction, alterations, and electrical work, equipment, utility systems, necessary removal of existing construction and certain other items as drawn and specified.
- B. ITEM II: State the amount for all work in the BASE BID, less deductions under ALTERNATE BID NO. 1.
- C. ITEM III: State the amount for all work in the BASE BID, less deductions under ALTERNATE BID NO.'S 1 and 2.
- D. ITEM IV: State the amount for all work in the BASE BID, less deductions under ALTERNATE BID NO.'S 1, 2 and 3.
- E. ITEM V: State the amount for all work in the BASE BID, less deductions under ALTERNATE BID NO.'S 1, 2, 3 and 4.
- F. ALTERNATE BIDS:
 - 1. ALTERNATE BID NO. 1: Delete the six (6) solar powered LED light poles in the parking lots as indicated by notation ALTERNATE NO. 1 on drawings.

2. ALTERNATE BID NO. 2: Delete the seven (7) solar powered LED light poles in the parking lots as indicated by notation ALTERNATE NO. 2 on drawings.
3. ALTERNATE BID NO. 3: Delete the six (6) solar powered LED light poles in the parking lots as indicated by notation ALTERNATE NO. 3 on drawings.
4. ALTERNATE BID NO. 4: Delete Restroom emergency lighting as indicated by notation ALTERNATE NO. 4 on drawings.

1.5 SPECIFICATIONS AND DRAWINGS FOR CONTRACTOR

- A. AFTER AWARD OF CONTRACT, 0 sets of specifications and drawings will be furnished.
- B. Additional sets of drawings may be made by the Contractor, at Contractor's expense, from reproducible sepia prints furnished by Issuing Office. Such sepia prints shall be returned to the Issuing Office immediately after printing is completed.
- C. Contractor shall provide the Fargo VA with three (3) sets of Drawings and Specifications.

1.6 CONSTRUCTION SECURITY REQUIREMENTS

- A. Security Procedures:
 1. General Contractor's employees shall not enter the project site without appropriate badge. They may also be subject to inspection of their personal effects when entering or leaving the project site.
 2. No photography of VA premises is allowed without written permission of the Contracting Officer.
 3. VA reserves the right to close down or shut down the project site and order General Contractor's employees off the premises in the event of an emergency. The General Contractor may return to the site only with the written approval of the Contracting Officer.

1.7 FIRE SAFETY

- A. Applicable Publications: Publications listed below form part of this Article to extent referenced. Publications are referenced in text by basic designations only.
 1. American Society for Testing and Materials (ASTM):
 - E84-2009.....Surface Burning Characteristics of Building Materials
 2. National Fire Protection Association (NFPA):
 - 10-2010.....Standard for Portable Fire Extinguishers
 - 30-2008.....Flammable and Combustible Liquids Code
 - 51B-2009.....Standard for Fire Prevention During Welding, Cutting and Other Hot Work
 - 70-2011.....National Electrical Code

241-2009.....Standard for Safeguarding Construction,
Alteration, and Demolition Operations

3. Occupational Safety and Health Administration (OSHA):

29 CFR 1926.....Safety and Health Regulations for Construction

- B. Fire Safety Plan: Establish and maintain a fire protection program in accordance with 29 CFR 1926. Prior to any worker for the contractor or subcontractors beginning work, they shall undergo a safety briefing provided by the contractor's competent person per OSHA requirements. This briefing shall include information on the construction limits, VAMC safety guidelines, means of egress, break areas, work hours, locations of restrooms, use of VAMC equipment, etc. Documentation shall be provided to the Project Engineer that individuals have undergone contractor's safety briefing.
- C. Site and Building Access: Maintain free and unobstructed access to facility emergency services and for fire, police and other emergency response forces in accordance with NFPA 241.
- D. Separate temporary facilities, such as trailers, storage sheds, and dumpsters, from existing buildings and new construction by distances in accordance with NFPA 241. For small facilities with less than 6 m (20 feet) exposing overall length, separate by 3m (10 feet).
- E. Temporary Construction Barriers: Install and maintain temporary construction barriers to provide dust proof separations between construction areas and adjoining areas. Maintain negative air at all times. A fire retardant polystyrene, 6 mil. thick or greater plastic barrier meeting local fire codes may be used where dust control is the only hazard, and an agreement is reached with the Project Engineer and Medical Center.
- F. Means of Egress: Do not block exiting for occupied buildings, including paths from exits to roads. Minimize disruptions and coordinate with Project Engineer.
- G. Egress Routes for Construction Workers: Maintain free and unobstructed egress. Inspect daily.
- H. Fire Extinguishers: Provide and maintain extinguishers in construction areas and temporary storage areas in accordance with 29 CFR 1926, NFPA 241 and NFPA 10.
- I. Flammable and Combustible Liquids: Store, dispense and use liquids in accordance with 29 CFR 1926, NFPA 241 and NFPA 30. Remove from job site when not being used.
- J. Existing Fire Protection: Do not impair automatic sprinklers, smoke and heat detection, and fire alarm systems.

- K. Smoke Detectors: Prevent accidental operation. Remove temporary covers at end of work operations each day. Coordinate with Project Engineer.
- L. Hot Work: Perform and safeguard hot work operations in accordance with NFPA 241 and NFPA 51B. Coordinate with Project Engineer. Obtain permits from Project Engineer in advance.
- M. Fire Hazard Prevention and Safety Inspections: Inspect entire construction area daily and correct potential fire hazard situations.
- N. Smoking: Smoking is prohibited except in designated smoking rest areas.
- O. Dispose of waste and debris in accordance with NFPA 241. Remove from buildings daily.
- P. Perform other construction, alteration and demolition operations in accordance with 29 CFR 1926.

1.8 OPERATIONS AND STORAGE AREAS

- A. The Contractor shall confine all operations (including storage of materials) on Government premises to areas authorized or approved by the Contracting Officer. The Contractor shall hold and save the Government, its officers and agents, free and harmless from liability of any nature occasioned by the Contractor's performance.
- B. The Contractor shall, under regulations prescribed by the Contracting Officer, use only established roadways, or use temporary roadways constructed by the Contractor when and as authorized by the Contracting Officer. When materials are transported in prosecuting the work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any Federal, State, or local law or regulation. When it is necessary to cross curbs or sidewalks, the Contractor shall protect them from damage. The Contractor shall repair or pay for the repair of any damaged curbs, sidewalks, or roads.
- C. Working space and space available for storing materials shall be as determined by the Project Engineer.
- D. Workmen are subject to rules of Medical Center applicable to their conduct.
- E. Execute work so as to interfere as little as possible with normal functioning of Medical Center as a whole, including operations of utility services, fire protection systems and any existing equipment, and with work being done by others. Use of equipment and tools that transmit vibrations and noises through the building structure, are not permitted in buildings that are occupied, during construction, jointly by patients or medical personnel, and Contractor's personnel, except as permitted by Project Engineer where required by limited working space. Systems Shut Down, excessive noise or vibration, or other factor

determined by Project Engineer to be disruptive to the operation of the Medical Center may at Project Engineer's discretion cause work to be delayed, phased or scheduled at other than normal working hours at no additional cost to the Government.

1. Do not store materials and equipment in other than assigned areas.
 2. Schedule delivery of materials and equipment to immediate construction working areas within buildings in use by Department of Veterans Affairs in quantities sufficient for not more than two work days. Provide unobstructed access to Medical Center areas required to remain in operation.
 3. Where access by Medical Center personnel is not required, storage of Contractor's materials and equipment will be permitted subject to fire and safety requirements.
- F. Utilities Services: Where necessary to cut existing pipes, electrical wires, conduits, cables, etc., of utility services, or of fire protection systems or communications systems (except telephone), they shall be cut and capped at suitable places where shown; or, in absence of such indication, where directed by Project Engineer. All such actions shall be coordinated with the Project Engineer involved:
- G. Phasing: To insure such executions, Contractor shall furnish the Project Engineer with a schedule of approximate dates on which the Contractor intends to accomplish work in each specific area of site, building or portion thereof. In addition, Contractor shall notify the Project Engineer in advance of the proposed date of starting work in each specific area of site, building or portion thereof. Arrange such dates to insure accomplishment of this work in successive phases mutually agreeable to Project Engineer and Contractor.
- H. All Buildings will be occupied during performance of work.
1. Contractor shall take all measures and provide all material necessary for protecting existing equipment and property in affected areas of construction against dust and debris, so that equipment and affected areas to be used in the Medical Centers operations will not be hindered. Contractor shall permit access to Department of Veterans Affairs personnel and patients through other construction areas which serve as routes of access to such affected areas and equipment. Coordinate alteration work in areas occupied by Department of Veterans Affairs so that Medical Center operations will continue during the construction period.
- I. Contractor shall maintain in operating condition existing fire protection and alarm equipment.

- J. Utilities Services: Maintain existing utility services for Medical Center at all times. Provide temporary facilities, labor, materials, equipment, connections, and utilities to assure uninterrupted services. Where necessary to cut existing water, steam, gases, sewer or air pipes, or conduits, wires, cables, etc. of utility services or of fire protection systems and communications systems (including telephone), they shall be cut and capped at suitable places where shown; or, in absence of such indication, where directed by Project Engineer.
1. No utility service such as water, gas, steam, sewers or electricity, or fire protection systems and communications systems may be interrupted without prior approval of Project Engineer.
 2. Contractor shall submit a request to interrupt any such services to Project Engineer, in writing, 48 hours in advance of proposed interruption. Request shall state reason, date, exact time of, and approximate duration of such interruption.
 3. Contractor will be advised of approval of request, or of which other date and/or time such interruption will cause least inconvenience to operations of Medical Center. Interruption time approved by Medical Center may occur at other than Contractor's normal working hours at no additional cost to the Government.
 4. Major interruptions of any system must be requested, in writing, at least 15 calendar days prior to the desired time and shall be performed as directed by the Project Engineer.
 5. In case of a contract construction emergency, service will be interrupted on approval of Project Engineer. Such approval will be confirmed in writing as soon as practical.
- K. Abandoned Lines: All service lines such as wires, cables, conduits, ducts, pipes and the like, and their hangers or supports, which are or are to be abandoned shall be entirely removed.
- L. To minimize interference of construction activities with flow of Medical Center traffic, comply with the following:
1. Keep roads, walks and entrances to grounds, to parking and to occupied areas of buildings clear of construction materials, debris and standing construction equipment and vehicles.
- M. Coordinate the work for this contract with Project Engineer. This includes the scheduling of traffic and the use of roadways, as specified in Article, USE OF ROADWAYS.

1.9 ALTERATIONS

- A. Survey: Before any work is started, the Contractor shall make a thorough survey with the Project Engineer of areas of buildings in which alterations occur and areas which are anticipated routes of access, and

furnish a report, signed by both, to the Contracting Officer. This report shall list:

1. Existing condition of surfaces not required to be altered throughout affected areas of buildings.
 2. Shall note any discrepancies between drawings and existing conditions at site.
 3. Shall designate areas for working space, materials storage and routes of access to areas within buildings where alterations occur and which have been agreed upon by Contractor and Project Engineer.
- B. Re-Survey: Thirty days before expected partial or final inspection date, the Contractor and Project Engineer together shall make a thorough re-survey of the areas of buildings involved. They shall furnish a report on conditions then existing, of surfaces as compared with conditions of same as noted in first condition survey report:
1. Re-survey report shall also list any damage caused by Contractor to such surfaces, despite protection measures; and, will form basis for determining extent of repair work required of Contractor to restore damage caused by Contractor's workmen in executing work of this contract.
- D. Protection: Provide the following protective measures:
1. Temporary protection against damage for portions of existing structures and grounds where work is to be done, materials handled and equipment moved and/or relocated.
 2. Protection of interior of existing structures at all times, from damage, dust and weather inclemency. Wherever work is performed, floor surfaces that are to remain in place shall be adequately protected prior to starting work, and this protection shall be maintained intact until all work in the area is completed.

1.10 INFECTION PREVENTION MEASURES

- A. Implement the requirements of VAMC's Infection Control Risk Assessment (ICRA) team. ICRA Group may monitor dust in the vicinity of the construction work and require the Contractor to take corrective action immediately if the safe levels are exceeded.
- B. Establish and maintain a dust control program as part of the contractor's infection preventive measures in accordance with the guidelines provided by ICRA Group and Project Engineer.
 1. All personnel involved in the construction or renovation activity shall be educated and trained in infection prevention measures established by the Medical Center.
- C. In general, following preventive measures shall be adopted during construction to keep down dust and prevent mold.

1. Dampen debris to keep down dust and provide temporary construction partitions in existing structures where directed by Project Engineer. Blank off ducts and diffusers to prevent circulation of dust into occupied areas during construction.
2. Do not perform dust producing tasks within occupied areas without the approval of the Project Engineer. For construction in any areas that will remain jointly occupied by the Medical Center and Contractor's workers, the Contractor shall:
 - a. Provide dust proof construction barriers to completely separate construction from the operational areas of the hospital in order to contain dirt debris and dust. Maintain negative air at all times. A fire retardant polystyrene, 6-mil thick or greater plastic barrier meeting local fire codes may be used where dust control is the only hazard, and an agreement is reached with the Project Engineer.
 - b. HEPA filtration is required where the exhaust dust may reenter the breathing zone. Contractor shall verify that construction exhaust to exterior is not reintroduced to the Medical Center through intake vents, or building openings. Install HEPA (High Efficiency Particulate Accumulator) filter vacuum system rated at 95% capture of 0.3 microns including pollen, mold spores and dust particles. Insure continuous negative air pressures occurring within the work area. HEPA filters should have ASHRAE 85 or other prefilter to extend the useful life of the HEPA. Provide both primary and secondary filtrations units. Exhaust hoses shall be heavy duty, flexible steel reinforced and exhausted so that dust is not reintroduced to the Medical Center.
 - c. Adhesive Walk-off/Carpet Walk-off Mats, minimum 600mm x 900mm (24" x 36"), shall be used at all interior transitions from the construction area to occupied Medical Center area. These mats shall be changed as often as required to maintain clean work areas directly outside construction area at all times.
 - d. Vacuum and wet mop all transition areas from construction to the occupied Medical Center at the end of each workday. Vacuum shall utilize HEPA filtration. Maintain surrounding area frequently. Remove debris as they are created. Transport these outside the construction area in containers with tightly fitting lids.
 - e. The contractor shall not haul debris through patient-care areas without prior approval of the Project Engineer and the Medical Center. When, approved, debris shall be hauled in enclosed dust proof containers or wrapped in plastic and sealed with duct tape.

No sharp objects should be allowed to cut through the plastic. Wipe down the exterior of the containers with a damp rag to remove dust. All equipment, tools, material, etc. transported through occupied areas shall be made free from dust and moisture by vacuuming and wipe down.

- f. Using a HEPA vacuum, clean inside the barrier and vacuum ceiling tile prior to replacement. Any ceiling access panels opened for investigation beyond sealed areas shall be sealed immediately when unattended.
- g. There shall be no standing water during construction. This includes water in equipment drip pans and open containers within the construction areas. All accidental spills must be cleaned up and dried immediately. Remove and dispose of porous materials immediately.
- h. At completion, remove construction barriers and ceiling protection carefully, outside of normal work hours. Vacuum and clean all surfaces free of dust after the removal.

1.11 DISPOSAL AND RETENTION

- A. Materials and equipment accruing from work removed and from demolition shall be disposed of as follows:
 - 1. Reserved items which are to remain property of the Government are to be stored. Items that remain property of the Government shall be removed or dislodged from present locations in such a manner as to prevent damage which would be detrimental to re-installation and reuse. Store such items where directed by Project Engineer.
 - 2. Items not reserved shall become property of the Contractor and be removed by Contractor from Medical Center.

1.12 PROTECTION OF EXISTING VEGETATION, STRUCTURES, EQUIPMENT, UTILITIES, AND IMPROVEMENTS

- A. The Contractor shall preserve and protect all structures, equipment, and vegetation (such as trees, shrubs, and grass) on or adjacent to the work site, which are not to be removed and which do not unreasonably interfere with the work required under this contract. The Contractor shall only remove trees when specifically authorized to do so, and shall avoid damaging vegetation that will remain in place. If any limbs or branches of trees are broken during contract performance, or by the careless operation of equipment, or by workmen, the Contractor shall trim those limbs or branches with a clean cut and paint the cut with a tree-pruning compound as directed by the Contracting Officer.
- B. The Contractor shall protect from damage all existing improvements and utilities at or near the work site and on adjacent property of a third

party, the locations of which are made known to or should be known by the Contractor. The Contractor shall repair any damage to those facilities, including those that are the property of a third party, resulting from failure to comply with the requirements of this contract or failure to exercise reasonable care in performing the work. If the Contractor fails or refuses to repair the damage promptly, the Contracting Officer may have the necessary work performed and charge the cost to the Contractor.

(FAR 52.236-9)

1.13 RESTORATION

- A. Remove, cut, alter, replace, patch and repair existing work as necessary to install new work. Except as otherwise shown or specified, do not cut, alter or remove any structural work, and do not disturb any ducts, plumbing, steam, gas, or electric work without approval of the Project Engineer. Existing work to be altered or extended and that is found to be defective in any way, shall be reported to the Project Engineer before it is disturbed. Materials and workmanship used in restoring work, shall conform in type and quality to that of original existing construction, except as otherwise shown or specified.
- B. Upon completion of contract, deliver work complete and undamaged. Existing work (walls, ceilings, partitions, floors, mechanical and electrical work, lawns, paving, roads, walks, etc.) disturbed or removed as a result of performing required new work, shall be patched, repaired, reinstalled, or replaced with new work, and refinished and left in as good condition as existed before commencing work.
- C. At Contractor's own expense, Contractor shall immediately restore to service and repair any damage caused by Contractor's workmen to existing piping and conduits, wires, cables, etc., of utility services or of fire protection systems and communications systems (including telephone) which are not scheduled for discontinuance or abandonment.

1.14 AS-BUILT DRAWINGS

- A. The contractor shall maintain two full size sets of as-built drawings which will be kept current during construction of the project, to include all contract changes, modifications and clarifications.
- B. All variations shall be shown in the same general detail as used in the contract drawings. To insure compliance, as-built drawings shall be made available for the Project Engineer's review, as often as requested.
- C. Contractor shall deliver two approved completed sets of as-built drawings to the Project Engineer within 15 calendar days after each completed phase and after the acceptance of the project by the Project Engineer.

D. Paragraphs A, B, & C shall also apply to all shop drawings.

1.15 USE OF ROADWAYS

A. For hauling, use only established public roads and roads on Medical Center property. When necessary to cross curbing, sidewalks, or similar construction, they must be protected by well-constructed bridges.

1.16 TEMPORARY USE OF EXISTING ELEVATORS

A. Use of existing elevators for handling building materials and Contractor's personnel will be permitted subject to following provisions:

1. Contractor makes all arrangements with the Project Engineer for use of elevators. The Project Engineer will ascertain that elevators are in proper condition.
2. Contractor covers and provides maximum protection of following elevator components:
 - a. Entrance jambs, heads soffits and threshold plates.
 - b. Entrance columns, canopy, return panels and inside surfaces of car enclosure walls.
 - c. Finish flooring.

1.17 TEMPORARY TOILETS

A. Contractor may have for use of Contractor's workmen, such toilet accommodations as may be assigned to Contractor by Medical Center. Contractor shall keep such places clean and be responsible for any damage done thereto by Contractor's workmen. Failure to maintain satisfactory condition in toilets will deprive Contractor of the privilege to use such toilets.

1.18 AVAILABILITY AND USE OF UTILITY SERVICES

- A. The Government shall make all reasonably required amounts of utilities available to the Contractor from existing outlets and supplies, as specified in the contract. The Contractor shall carefully conserve any utilities furnished without charge.
- B. Electricity (for Construction and Testing):
1. Obtain electricity by connecting to the Medical Center electrical distribution system. Electricity is available at no cost to the Contractor.

1.19 TESTS

- A. Pre-test mechanical and electrical equipment and systems and make corrections required for proper operation of such systems before requesting final tests. Final test will not be conducted unless pre-tested.
- B. Conduct final tests required in various sections of specifications in presence of an authorized representative of the Contracting Officer.

Contractor shall furnish all labor, materials, equipment, instruments, and forms, to conduct and record such tests.

- C. Mechanical and electrical systems shall be balanced, controlled and coordinated. A system is defined as the entire complex which must be coordinated to work together during normal operation to produce results for which the system is designed.
- D. All related components shall be functioning when any system component is tested. Tests shall be completed within a reasonably short period of time during which operating and environmental conditions remain reasonably constant.
- E. Individual test result of any component, where required, will only be accepted when submitted with the test results of related components and of the entire system.

1.20 CONSTRUCTION MEETINGS

- A. A Construction meeting(s) may be held to coordinate the activities of the Contractors at the discretion of the Project Engineer or the Contractor.
 - 1. Each meeting shall be attended by VA Representative, A/E Representative, and Field Superintendent of each trade.

1.21 INSTRUCTIONS

- A. Contractor shall furnish Maintenance and Operating Manuals and verbal instructions when required by the various sections of the specifications and as hereinafter specified.
- B. Manuals: Maintenance and operating manuals (two bound hard copies and .pdf files on CD or DVD.) for each separate piece of equipment shall be delivered to the Project Engineer coincidental with the delivery of the equipment to the job site. Omit all special characters in electronic file names (i.e.: #, %, &, *, :, <, >, ?, /). Manuals shall be complete, detailed guides for the maintenance and operation of equipment. They shall include complete information necessary for starting, adjusting, maintaining in continuous operation for long periods of time and dismantling and reassembling of the complete units and sub-assembly components. Manuals shall include an index covering all component parts clearly cross-referenced to diagrams and identifying each separate item. Emphasis shall be placed on the use of special tools and instruments. The function of each piece of equipment, component, accessory and control shall be clearly and thoroughly explained. All necessary precautions for the operation of the equipment and the reason for each precaution shall be clearly set forth. Manuals must reference the exact model, style and size of the piece of equipment and system being furnished. Manuals referencing equipment similar to

but of a different model, style, and size than that furnished will not be accepted.

- C. Instructions: Contractor shall provide qualified, factory-trained manufacturers' representatives to give detailed instructions to assigned Department of Veterans Affairs personnel in the operation and complete maintenance for each piece of equipment. All such training will be at the job site. These requirements are more specifically detailed in the various technical sections. Instructions for different items of equipment that are component parts of a complete system, shall be given in an integrated, progressive manner. All instructors for every piece of component equipment in a system shall be available until instructions for all items included in the system have been completed. This is to assure proper instruction in the operation of inter-related systems. All instruction periods shall be at such times as scheduled by the Project Engineer and shall be considered concluded only when the Project Engineer is satisfied in regard to complete and thorough coverage. The Department of Veterans Affairs reserves the right to request the removal of, and substitution for, any instructor who, in the opinion of the Project Engineer, does not demonstrate sufficient qualifications in accordance with requirements for instructors above.

1.22 LOCAL FARGO VA HEALTH CARE SYSTEM CONSTRUCTION CONTRACTOR ORIENTATION AND POLICIES

- A. Contracts: The following staff or resource people will be working with you at the Fargo VA HealthCare System. Please feel free to contact these individuals with any questions:
1. Contracting Officer: Darryl Moon (701) 239-3700, ext. 93326.
 2. Chief Engineer: Dennis Langevin (701) 239-3700, ext. 93365 or (701) 239-3760
 3. Project Engineer: Todd Dalzell (701) 239-3700, ext. 93362 or (701) 239-3760
 4. Engineering Technician: David Busching (701) 239-3700, ext. 93222 or (701) 239-3760
- B. Vehicle Traffic Rules: All construction contractors shall park their vehicles in areas assigned by the Contracting Officer or Engineering Service representatives. All persons coming on the premises of the Fargo VA HealthCare System must obey the posted traffic and parking rules. Police Service will issue tickets to contractor vehicles parked in areas other than those assigned.
- C. Keys/ID Badges: VA ID badges must be worn while you are on Medical Center premises. Contact Engineering Service to obtain an ID badge and any necessary keys. Contract staff are responsible for the security of

keys and ID badges issued to them and may be charged for replacement cost. You must notify Engineering (ext. 3361) personnel in Building 3 immediately to report any loss, theft or suspected reproduction of a Medical Center key or access card.

D. Smoking: Smoking is prohibited in all Medical Center buildings and grounds. Smoking is permitted only in designated smoking shelters.

E. Use of Government Telephones and Fax Machines

1. Government telephones are for official Government business use.

Contract staff may use telephones, for local calls only, to contact your place of employment or to address unforeseen events such as injury on the job, work schedule changes etc.

2. The Government fax machine located in the Engineering Building 38, may be used for local faxes with the approval of Engineering staff.

F. Housekeeping

1. All construction sites shall be kept clean, orderly and in sanitary condition.

2. All rags/cloth and rubbish soaked with flammable and/or combustible material shall be placed in a covered metal receptacle until being disposed.

3. A clear and unobstructed path must be maintained to all portable fire extinguishers, hose cabinets, pull stations, fire exits and electrical panels.

4. Fire doors and smoke barrier doors shall not be blocked in a manner to prevent their protective operation in the event of a fire.

5. The use of wedges, stops, ropes, or other unapproved methods of holding doors open is prohibited.

6. All indoor trash containers over 20 gallons will be constructed of non-combustible materials and be covered or have a self-extinguishing cover.

G. Storage

1. Any commodities that may be hazardous in combination with each other must be stored so they cannot come in contact with each other.

2. Store flammable and combustible liquids and gasses in approved storage containers.

3. A clear space of 18 inches will be maintained below sprinkler heads.

4. Items stored in tiers will be stacked, blocked, interlocked and limited in height to prevent sliding or collapse.

5. Materials will not be stored directly on the floor.

6. Storage areas will be kept free from accumulation of materials that constitute hazards.

7. Stairwells, stairways and corridors shall not be utilized for storage.
8. Storage will not be permitted within 3 feet of an electric panel in all directions.

H. Hazardous Materials

1. Discovery of any suspected asbestos containing material shall result in the contractor stopping work in the area and reporting the discovery immediately to the Engineering Office (ext. 3361) in Building 3 or one of the contact persons indicated above. Engineering Service shall then evaluate the suspect material and if it contains asbestos shall arrange for the removal of the asbestos.
2. Contractors shall maintain and provide upon request MSDS's for products used during construction which shall explain the labeling system and all other required information. Report any discovery of an existing hazardous material to Engineering Service, Building 3 (ext. 3361).

I. Infection Control

1. PURPOSE: To prevent the acquisition of nosocomial infection in patients and healthcare workers during Medical Center renovation or construction activities.
2. The contractor shall contact Engineering Service (701) 239-3760 or ext. 3361) in Building 3 prior to beginning construction in any areas so that an Infection Control Risk Assessment (ICRA) may be performed and all applicable forms completed. All infection control precautions indicated by the ICRA shall be implemented by the contractor prior to beginning work in the area.
3. General: The goal of Infection Control is to identify and reduce the risks of acquiring and transmitting infections among patients, employees, service workers and visitors to the Medical Center. During construction or renovation projects, hidden infection disease hazards may be released into the air, carried on dust particles, on workers clothing or be present in damp areas or areas where water has collected. One particular organism of concern is a fungal organism known as Aspergillus. Aspergillus can be found in decaying leaves and compost, plaster and drywall, and settled dust. These organisms like many other encountered in our everyday lives usually do not cause problems in healthy people, however a hospital is full of sick patients. Aspergillus and other organisms can cause severe illness and even death in some patients. Therefore, it is critical that everyone do their best to help prevent conditions that might lead to the dispersion of this or other infectious organisms by:

- a. Maintaining barrier walls that keep dust and dirt inside the worksite.
 - b. Maintaining a state of negative air pressure within the construction site to prevent dust and dirt from dispersing into the Medical Center from the worksite.
 - c. Removing demolition debris in a manner that minimizes any contamination of the environment outside the worksite by dust and debris.
 - d. Utilizing walk off mats and making sure clothing is free of loose soil and debris when leaving the construction site.
 - e. Assuring that any water or sludge found during demolition of plumbing or in the construction process is collected and disposed of in a controlled manner.
 - f. Keeping demolition chutes sealed when not in use to maintain dust control. Use a water spray to minimize dust generation when using chutes if possible.
 - g. Using only designated entry and exit pathways.
4. Please feel free to contact Infection Control at ext. 3668 if you have questions or concerns.
 5. If you find any needles, syringes, sharp medical objects please do not handle or remove yourself. Contact the Medical Center project coordinator or Project Engineer at (701) 239-3760 or at Medical Center extension 3361 for removal.
 6. Infection control activities are critical in all areas of the Medical Center. Construction activities causing disturbance of existing dust, or generating new dust must be conducted in ways that will minimize dust generation and dispersion.
 7. All construction/maintenance workers and contract workers must follow the infection control procedures as described in this guideline.
 8. The following infection control procedures shall be followed at a minimum:
 - a. BARRIERS - Complete all critical barriers before construction begins.
 - 1) Construction or renovation sites not capable of containment within a single room must be separated from patient-care areas and other critical areas by barriers that keep the dirt and dust inside the work site.
 - 2) The integrity of the barrier walls must assure a complete seal of the construction area from adjacent areas.
 - 3) Temporary barriers and enclosures must be dust proof with airtight seals maintained at the full perimeter of the walls,

floors and upper decking, as well as all penetrations. Seal holes, pipes, conduits and punctures appropriately.

- 4) Tightly sealing doors or an overlapping flap of at least 2 feet in width of a durable poly must be used at points of personnel access.
- 5) Elevator shafts or stairways must be isolated outside of the construction field to prevent dispersion of dust from the work site.

b. ENVIRONMENTAL CONTROLS

- 1) Isolate the HVAC system in areas where work is being done to prevent contamination of the duct system.
- 2) Maintain negative air pressure within work site. Utilize HEPA-filtration units if air is being re-circulated.
- 3) Seal holes, pipes, conduits and punctures appropriately.
- 4) Provide a designated area within the work site where all personnel leaving the work site can vacuum off with a HEPA-filtered vacuum to remove all loose dust and debris from clothing.
- 5) Vacuum with a HEPA-filtered vacuum and/or wet mop frequently at entrance and exit points.
- 6) "Sticky" or walk-off mats shall be utilized immediately outside the construction area to remove dust and soil from shoes, cart wheels, etc. as personnel exit the area. The mats must be large enough to cover the entire exit and changed frequently to prevent accumulation of dust.
- 7) Contain construction debris during transport in covered containers.
- 8) Debris must be removed from the construction area on a daily basis in covered carts using specified traffic patterns.
- 9) Control, collection and disposal must be provided for any drain liquid or sludge encountered when demolishing plumbing.

c. CLEANING

- 1) The construction zone and adjacent areas must be maintained by wet mopping the area daily or more frequently as needed to minimize dust generation.
- 2) Final cleaning of the area must be completed prior to acceptance of the completed project area by VA.
- 3) Do not remove barriers from work area until the project is completed and area is thoroughly cleaned. Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction.

- 4) Clothing shall be free of loose soil and debris before exiting the construction zone.
- 5) Personnel entering sterile/invasive procedure areas will be provided with a disposable jump suit, head covering and shoe covers to wear while working in the area. They must be removed when exiting the area and new coverings obtained when reentering the areas.
- 6) Tools and equipment must be damp-wiped prior to entry and exit from sterile and invasive procedure areas.
- 7) Tools and equipment soiled with blood or body fluids must be cleaned with a hospital-approved disinfectant prior to removing from the area.

d. ENVIRONMENTAL MONITORING AND COMPLETION

- 1) Infection Control, in cooperation with Engineering and Safety will make periodic visits to the work site to ensure compliance with the infection control guidelines.
- 2) Whenever safe infection control conditions are not met the appropriate contractor will be notified to correct the conditions immediately.
- 3) All work will be stopped on a project if a hazardous infection control deficiency exists that would result in patients being put at significant risk.
- 4) Water supply lines will be flushed before placing newly renovated or constructed areas into service. Industrial Hygiene will assure that water supply lines are safe for use.

J. Construction Safety

1. The Medical Center policy is to provide an environment for patients, visitors and staff that is free from danger. Within the Medical Center, the NFPA Life Safety Code is followed. Interim life safety measures (ILSM's) are applied to all construction projects as necessary and are defined in construction contracts. Minimum ILSM's are:
 2. Exits - provide free and unobstructed egress.
 3. Free and unobstructed access to emergency department/service for emergency forces.
 4. Temporary construction partitions are in accordance with contract requirements.
 5. Smoking is permitted in designated areas only.
 6. Storage, housekeeping and debris removal policies and procedures that reduce the flammable and combustible fire load are enforced.
 7. Hazard surveillance is increased in construction areas.

K. Fire Safety

1. The contractors shall coordinate all construction activities with the VA Engineering Service to determine if fire alarm initiating devices are located within the construction area. Engineering Service shall disable the appropriate alarm initiating devices. Once work in the area is complete it is the contractor's responsibility to contact Engineering Service to have the fire alarm initiation devices enabled.
2. Fire alarm, detection and suppression systems are not to be impaired unless there is work on the system to be performed. If fire alarm, detection and suppression systems are impaired for more than four hours the contractor shall implement a fire watch, at no additional cost to the Government, in compliance with NFPA requirements and shall obtain VA Engineering Service approval.
3. Additional fire fighting equipment is provided and employees are trained in its use.
4. Hot works permits and fire extinguishers are required when working with open flames, or hot items and for activities that may generate sparks. Contact Engineering Service to obtain a hot work permit.
5. In the event of a fire alarm, "CODE 5" and the location of a fire will be communicated by an overhead announcement. The "all clear" is authorized by the Fargo Fire Department or by the personnel conducting the fire drill and will be communicated by an overhead announcement. If a fire or fire drill is located in or adjacent to the construction area, construction contractor staff shall be responsible for the following:
 - a. Be alert to the Code 5 announcement.
 - b. Participate in fire drills.
 - c. Follow the RACE Plan (Rescue, Alarm, Contain, Extinguish) if fire is discovered by a construction contractor.
 - d. Close all corridor doors within the construction area.
 - e. Evacuate the immediate area.

L. Utilities

1. Engineering (ext. 3361) is responsible for all utilities within the Medical Center. If there are problems or failures of the utilities, call extension 3361 during normal business hours (Monday through Friday, 8:00 a.m. to 4:30 p.m.). After hours and on weekends, contact the Police Service at ext. 3251 to report problems and failures. A utilities failure and its type/location will be communicated by a "Code 2 - Utility Failure" overhead announcement.

2. All utility service connections shall be reviewed with and approved by Engineering Service just prior to the connection being made with the existing utility. This condition shall apply to both temporary and permanent connections. This final utility system connection check is meant to ensure the following:
 - a. The Medical Center is prepared for the connection.
 - b. The contractor is prepared for the connection work, which shall include but not be limited to, all safety measures have been taken or are in place, backflow preventers are in place, hot work permits have been issued, fire watch is in place, fire alarm initiation devices have been disabled if necessary, etc.

M. Emergencies

1. Disasters ("Code 6"): The Medical Center has initiated a process that provides an "all-hazard" approach to disaster management. Construction contractor staff shall ensure corridors are free of obstructions and a foreman or representative shall report to the Engineering Service office for further instructions.
2. Hostage Situations - Immediately report to Police Service (ext. 3251), any incident in which the safety of any person is threatened by another.
3. Bomb Threats ("Code 7") - React calmly and evacuate. Notify Police Service (ext. 3251) if the threat poses immediate danger to a person or destruction of property. If you discover a suspicious object, do not touch or move the object
4. Severe Weather - In the event of a "Code 8 - Take Cover" overhead announcement, all personnel are expected to take cover in windowless interior corridors that are not on the top floor of the building.
5. "Code Black" - React calmly and evacuate. Avoid area(s) where it has been indicated an armed assailant is in the building or on the ground.

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Infection Control Risk Assessment (ICRA)

General Project Information

Project : _____ Project Leader: _____

Risk Assessment Completed by: _____ Date: _____

Instructions for Use:

1. ___ Determine Type of Construction Project/ Activity (Type A, B or C from chart on back)
2. ___ Determine Risk Group (Low, Medium, High or Highest Risk from chart on back)
3. ___ Determine Class of Precautions (I, II or III using table below)
4. ___ Complete ICRA Form
5. ___ Forward Copies of ICRA to Infection Control and Chief, Engineering Service
6. ___ Project Leader to Communicate Precautions Required to Workers, Implement Precautions and Monitor Compliance

Class of Precautions

Type of Construction Project / Activity (Circle A, B or C)			
Risk Group (Check One)	A	B	C
<input type="checkbox"/> Low Risk Group	I	I	II
<input type="checkbox"/> Medium Risk Group	I	II	III
<input type="checkbox"/> High Risk Group	I	II	III
<input type="checkbox"/> Highest Risk Group	II	III	III

Precautions (Circle Class)

Class I	<ol style="list-style-type: none"> 1) Execute work by methods to minimize raising dust from construction operations 2) Immediately replace any ceiling tile displaced for visual inspection 3) Remove minor demolition materials in manner to avoid dispersion of dust or debris
Class II	<ol style="list-style-type: none"> 1) Provide an active means to prevent airborne dust from dispersing into atmosphere 2) Water-mist work surfaces to control dust while cutting 3) Seal unused doors with tape 4) Block off and seal air vents, isolate HVAC system 5) Place walk off dust mat at exit of work site 6) Clean work surfaces with disinfectant upon completion 7) Contain construction waste during transport in covered containers 8) Wet mop frequently at exit points 9) Clean clothing of all loose soil/dust prior to leaving work area
Class III	<ol style="list-style-type: none"> 1) Remove or isolate HVAC system in area where work is being done to prevent contamination of the duct system 2) Complete all critical barriers before construction begins 3) Maintain negative air pressure within work site utilizing HEPS-equipped air filtration units when air is being re-circulated 4) Contain construction debris during transport in covered containers 5) Seal holes, pipes, conduits and punctures 6) Clean clothing of all loose soil/dust prior to leaving work area. Vacuuming with a HEPA-filtered vacuum to remove all loose dust and debris from clothing is the preferred method to maximize removal and minimize dispersion of dust 7) Wet mop frequently at exit points 8) Leave barriers up in work area for maximum extent possible until the work area has been thoroughly cleaned 9) Remove barrier materials carefully to minimize spreading of dirt and debris associated with construction

Critical Barriers: Critical barriers constructed of plastic or gypsum board should extend from floor to upper decking. All seams should be tightly sealed. Entries made through a plastic barrier should be constructed with 2-foot wide double flap to prevent escape of dust and debris. Door entries must be capable of closing tightly for same purposes.

Send copy of completed document to Infection Control and Chief, Engineering Svc.

STEP ONE:

Using the following table, identify the Type of Construction Project/Activity

TYPE A	Inspection and non-invasive activities. Includes, but is not limited to: <ul style="list-style-type: none"> • Removal of ceiling tiles for visual inspection limited to 1 tile per 50 feet • Painting (but not sanding) • Wall covering, electrical trim work, minor plumbing, and activities which do not generate dust or require cutting of walls or access to ceilings other than for visual inspection
TYPE B	Small scale, short duration activities which create minimal dust. Includes, but is not limited to: <ul style="list-style-type: none"> • Installation of telephone and computer cabling • Access to chase spaces • Cutting of walls or ceiling where dust migration can be controlled
TYPE C	Work that generates a moderate to high level of dust or requires demolition or removal of any fixed building components or assemblies, major remodeling or new construction projects. Includes, but is not limited to: <ul style="list-style-type: none"> • Sanding of walls for painting or wall covering • Removal of floorcoverings, ceiling tiles and casework • New wall construction • Duct work or electrical work above ceilings • Projects that require consecutive work shifts

STEP TWO:

Use the following table to *identify the Risk Group* that will be affected. If more than one risk group will be affected in a specific area, select the higher risk group.

Low Risk	Medium Risk	High Risk	Highest Risk
<ul style="list-style-type: none"> • Office areas • Engineering • Environmental Service areas • Storerooms 	<ul style="list-style-type: none"> • General patient care areas/units (i.e. Ultrasound, Physical Therapy, Radiology, Respiratory Therapy, Urgent Care) • Cafeteria • Kitchens • Blood draw areas • OP Pharmacy 	<ul style="list-style-type: none"> • ICU/CCU • Laboratories • Surgical Pt. Care Unit • Outpatient surgery • Dialysis • Oncology • Pharmacy admixture (Inpatient) 	<ul style="list-style-type: none"> • Surgery • SPD (Processing and Sterile Storage) • Invasive procedure rooms • PACU

SECTION 01 33 23
SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

- 1-1. Refer to Articles titled SPECIFICATIONS AND DRAWINGS FOR CONSTRUCTION (FAR 52.236-21) and, SPECIAL NOTES (VAAR 852.236-91), in GENERAL CONDITIONS.
- 1-2. For the purposes of this contract, samples, test reports, certificates, and manufacturers' literature and data shall also be subject to the previously referenced requirements. The following text refers to all items collectively as SUBMITTALS.
- 1-3. Submit for approval, all of the items specifically mentioned under the separate sections of the specification, with information sufficient to evidence full compliance with contract requirements. Materials, fabricated articles and the like to be installed in permanent work shall equal those of approved submittals. After an item has been approved, no change in brand or make will be permitted unless:
 - A. Satisfactory written evidence is presented to, and approved by Contracting Officer, that manufacturer cannot make scheduled delivery of approved item or;
 - B. Item delivered has been rejected and substitution of a suitable item is an urgent necessity or;
 - C. Other conditions become apparent which indicates approval of such substitute item to be in best interest of the Government.
- 1-4. Forward submittals in sufficient time to permit proper consideration and approval action by Government. Time submission to assure adequate lead time for procurement of contract - required items. Delays attributable to untimely and rejected submittals will not serve as a basis for extending contract time for completion.
- 1-5. Submittals will be reviewed for compliance with contract requirements by Architect-Engineer, and action thereon will be taken by Architect-Engineer on behalf of the Contracting Officer.
- 1-6. Upon receipt of submittals, Architect-Engineer will assign a file number thereto. Contractor, in any subsequent correspondence, shall refer to this file and identification number to expedite replies relative to previously approved or disapproved submittals.
- 1-7. The Government reserves the right to require additional submittals, whether or not particularly mentioned in this contract.
- 1-8. Schedules called for in specifications and shown on shop drawings shall be submitted for use and information of Department of Veterans Affairs and Architect-Engineer. However, the Contractor shall assume responsibility for coordinating and verifying schedules. The Contracting Officer and Architect-Engineer assumes no responsibility for checking

schedules or layout drawings for exact sizes, exact numbers and detailed positioning of items.

- 1-9. Submittals must be submitted by Contractor only and shipped prepaid. Contracting Officer assumes no responsibility for checking quantities or exact numbers included in such submittals.
 - A. Submit material and finish samples, in quadruplicate. Submit other samples in single units unless otherwise specified. Submit seven (7) copies of shop drawings, schedules, manufacturers' literature and data, and certificates, except where a greater number is specified.
 - B. Submittals will receive consideration only when covered by a transmittal letter signed by Contractor. Letter shall be sent via first class mail or Courier and shall contain the list of items, name of Medical Center, VA Project Number, VA Project Title, name of Contractor, VA contract number, applicable specification paragraph numbers, applicable drawing numbers (and other information required for exact identification of location for each item), manufacturer and brand, ASTM or Federal Specification Number (if any) and such additional information as may be required by specifications for particular item being furnished. In addition, catalogs shall be marked to indicate specific items submitted for approval.
 1. A copy of letter must be enclosed with items, and any items received without identification letter will be considered "unclaimed goods" and held for a limited time only.
 2. Each sample, certificate, manufacturers' literature and data shall be labeled to indicate the name and location of the Medical Center, VA Project Number, VA Project Title, name of Contractor, manufacturer, brand, VA contract number and ASTM or Federal Specification Number as applicable and location(s) on project.
 3. Required certificates shall be signed by an authorized representative of manufacturer or supplier of material, and by Contractor.
 - C. If submittal samples have been disapproved, resubmit new samples as soon as possible after notification of disapproval. Such new samples shall be marked "Resubmitted Sample" in addition to containing other previously specified information required on label and in transmittal letter.
 - D. Approved samples will be kept on file by the Project Engineer at the site until completion of contract.
 - E. Submittal drawings (shop drawings) and schedules, required for work of various trades, shall be checked before submission by technically qualified employees of Contractor for accuracy, completeness and

compliance with contract requirements. These drawings and schedules shall be stamped and signed by Contractor certifying to such check.

1. For each drawing required, submit one legible photographic paper or vellum reproducible or electronic .pdf. Omit all special characters in electronic file names (i.e.: #, %, &, *, <, >, ?, /).
2. Reproducible shall be full size.
3. Each drawing shall have marked thereon, proper descriptive title, including Medical Center location, VA project number, VA Project Title, VA Contract Number, manufacturer's number, reference to contract drawing number, detail Section Number, and Specification Section Number.
4. A space 120 mm by 125 mm (4-3/4 by 5 inches) shall be reserved on each drawing to accommodate approval or disapproval stamp.
5. Submit drawings, ROLLED WITHIN A MAILING TUBE, fully protected for shipment.
6. When work is directly related and involves more than one trade, shop drawings shall be submitted to Architect-Engineer under one cover.
- 1-10. Samples, shop drawings, test reports, certificates and manufacturers' literature and data, shall be submitted for approval to Image Group, Inc., 403 Center Avenue, Suite 300, Moorhead, MN 56560.
- 1-11. At the time of transmittal to the Architect-Engineer, the Contractor shall also send a copy of the complete submittal directly to the Project Engineer. Fargo VA Medical Center, Attn: Engineering Service (138), 2101 Elm Street, Fargo, ND 58102.

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SECTION 01 74 19
CONSTRUCTION WASTE MANAGEMENT

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies the requirements for the management of non-hazardous building construction and demolition waste.
- B. Waste disposal in landfills shall be minimized to the greatest extent possible. Of the inevitable waste that is generated, as much of the waste material as economically feasible shall be salvaged, recycled or reused.
- C. Contractor shall use all reasonable means to divert construction and demolition waste from landfills and incinerators, and facilitate their salvage and recycle not limited to the following:
 - 1. Waste Management Plan development and implementation.
 - 2. Techniques to minimize waste generation.
 - 3. Sorting and separating of waste materials.
 - 4. Salvage of existing materials and items for reuse or resale.
 - 5. Recycling of materials that cannot be reused or sold.
- D. At a minimum the following waste categories shall be diverted from landfills:
 - 1. Inerts (eg, concrete, masonry and asphalt).
 - 2. Clean dimensional wood and palette wood.
 - 3. Engineered wood products: (Plywood and Particle Board).
 - 4. Metal products (eg, steel, wire, beverage containers, copper, etc).
 - 5. Cardboard, paper and packaging.
 - 6. Plastics (eg, ABS, PVC).
 - 7. Paint.

1.2 RELATED WORK

- A. Section 02 41 00, DEMOLITION.
- B. Section 01 00 00, GENERAL REQUIREMENTS.

1.3 QUALITY ASSURANCE

- A. Contractor shall practice efficient waste management when sizing, cutting and installing building products. Processes shall be employed to ensure the generation of as little waste as possible. Construction /Demolition waste includes products of the following:
 - 1. Excess or unusable construction materials.
 - 2. Packaging used for construction products.
 - 3. Poor planning and/or layout.

4. Construction error.
 5. Over ordering.
 6. Weather damage.
 7. Contamination.
 8. Mishandling.
 9. Breakage.
- B. Establish and maintain the management of non-hazardous building construction and demolition waste set forth herein. Conduct a site assessment to estimate the types of materials that will be generated by demolition and construction.
- C. Contractor shall develop and implement procedures to reuse and recycle new materials to a minimum of 25 percent.
- D. Contractor shall be responsible for implementation of any special programs involving rebates or similar incentives related to recycling. Any revenues or savings obtained from salvage or recycling shall accrue to the contractor.
- E. Contractor shall provide all demolition, removal and legal disposal of materials. Contractor shall ensure that facilities used for recycling, reuse and disposal shall be permitted for the intended use to the extent required by local, state, federal regulations. The Whole Building Design Guide website <http://www.wbdg.org> provides a Construction Waste Management Database that contains information on companies that haul, collect, and process recyclable debris from construction projects.
- F. Contractor shall assign a specific area to facilitate separation of materials for reuse, salvage, recycling, and return. Such areas are to be kept neat and clean and clearly marked in order to avoid contamination or mixing of materials.
- G. Contractor shall provide on-site instructions and supervision of separation, handling, salvaging, recycling, reuse and return methods to be used by all parties during waste generating stages.
- H. Record on daily reports any problems in complying with laws, regulations and ordinances with corrective action taken.

1.4 TERMINOLOGY

- A. Class III Landfill: A landfill that accepts non-hazardous resources such as household, commercial and industrial waste resulting from construction, remodeling, repair and demolition operations.

- B. Clean: Untreated and unpainted; uncontaminated with adhesives, oils, solvents, mastics and like products.
- C. Construction and Demolition Waste: Includes all non-hazardous resources resulting from construction, remodeling, alterations, repair and demolition operations.
- D. Dismantle: The process of parting out a building in such a way as to preserve the usefulness of its materials and components.
- E. Disposal: Acceptance of solid wastes at a legally operating facility for the purpose of land filling (includes Class III landfills and inert fills).
- F. Inert Backfill Site: A location, other than inert fill or other disposal facility, to which inert materials are taken for the purpose of filling an excavation, shoring or other soil engineering operation.
- G. Inert Fill: A facility that can legally accept inert waste, such as asphalt and concrete exclusively for the purpose of disposal.
- H. Inert Solids/Inert Waste: Non-liquid solid resources including, but not limited to, soil and concrete that does not contain hazardous waste or soluble pollutants at concentrations in excess of water-quality objectives established by a regional water board, and does not contain significant quantities of decomposable solid resources.
- I. Mixed Debris: Loads that include commingled recyclable and non-recyclable materials generated at the construction site.
- J. Mixed Debris Recycling Facility: A solid resource processing facility that accepts loads of mixed construction and demolition debris for the purpose of recovering re-usable and recyclable materials and disposing non-recyclable materials.
- K. Permitted Waste Hauler: A company that holds a valid permit to collect and transport solid wastes from individuals or businesses for the purpose of recycling or disposal.
- L. Recycling: The process of sorting, cleansing, treating, and reconstituting materials for the purpose of using the altered form in the manufacture of a new product. Recycling does not include burning, incinerating or thermally destroying solid waste.
 - 1. On-site Recycling - Materials that are sorted and processed on site for use in an altered state in the work, i.e. concrete crushed for use as a sub-base in paving.
 - 2. Off-site Recycling - Materials hauled to a location and used in an altered form in the manufacture of new products.

- M. Recycling Facility: An operation that can legally accept materials for the purpose of processing the materials into an altered form for the manufacture of new products. Depending on the types of materials accepted and operating procedures, a recycling facility may or may not be required to have a solid waste facilities permit or be regulated by the local enforcement agency.
- N. Reuse: Materials that are recovered for use in the same form, on-site or off-site.
- O. Return: To give back reusable items or unused products to vendors for credit.
- P. Salvage: To remove waste materials from the site for resale or re-use by a third party.
- Q. Source-Separated Materials: Materials that are sorted by type at the site for the purpose of reuse and recycling.
- R. Solid Waste: Materials that have been designated as non-recyclable and are discarded for the purposes of disposal.
- S. Transfer Station: A facility that can legally accept solid waste for the purpose of temporarily storing the materials for re-loading onto other trucks and transporting them to a landfill for disposal, or recovering some materials for re-use or recycling.

1.5 SUBMITTALS

- A. In accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, and SAMPLES, furnish the following:
- B. Prepare and submit to the Project Engineer a written demolition debris management plan. The plan shall include, but not be limited to, the following information:
 - 1. Procedures to be used for debris management.
 - 2. Techniques to be used to minimize waste generation.
 - 3. Analysis of the estimated job site waste to be generated:
 - a. List of each material and quantity to be salvaged, reused, recycled.
 - b. List of each material and quantity proposed to be taken to a landfill.
 - 4. Detailed description of the Means/Methods to be used for material handling.
 - a. On site: Material separation, storage, protection where applicable.

- b. Off site: Transportation means and destination. Include list of materials.
 - 1) Description of materials to be site-separated and self-hauled to designated facilities.
 - 2) Description of mixed materials to be collected by designated waste haulers and removed from the site.
 - c. The names and locations of mixed debris reuse and recycling facilities or sites.
 - d. The names and locations of trash disposal landfill facilities or sites.
 - e. Documentation that the facilities or sites are approved to receive the materials.
- C. Designated Manager responsible for instructing personnel, supervising, documenting and administer over meetings relevant to the Waste Management Plan.
 - D. Monthly summary of construction and demolition debris diversion and disposal, quantifying all materials generated at the work site and disposed of or diverted from disposal through recycling shall be submitted with Pay Request or Pay Request shall be rejected.

1.6 APPLICABLE PUBLICATIONS

- A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced by the basic designation only. In the event that criteria requirements conflict, the most stringent requirements shall be met.
- B. U.S. Green Building Council (USGBC):
LEED Green Building Rating System for New Construction

1.7 RECORDS

- A. Maintain records to document the quantity of waste generated; the quantity of waste diverted through sale, reuse, or recycling; and the quantity of waste disposed by landfill or incineration. Records shall be kept in accordance with the LEED Reference Guide and LEED Template.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. List of each material and quantity to be salvaged, recycled, reused.
- B. List of each material and quantity proposed to be taken to a landfill.
- C. Material tracking data: Receiving parties, dates removed, transportation costs, weight tickets, tipping fees, manifests, invoices, net total costs or savings.

PART 3 - EXECUTION**3.1 COLLECTION**

- A. Provide all necessary containers, bins and storage areas to facilitate effective waste management.
- B. Clearly identify containers, bins and storage areas so that recyclable materials are separated from trash and can be transported to respective recycling facility for processing.
- C. Hazardous wastes shall be separated, stored, disposed of according to local, state, federal regulations.

3.2 DISPOSAL

- A. Contractor shall be responsible for transporting and disposing of materials that cannot be delivered to a source-separated or mixed materials recycling facility to a transfer station or disposal facility that can accept the materials in accordance with state and federal regulations.
- B. Construction or demolition materials with no practical reuse or that cannot be salvaged or recycled shall be disposed of at a landfill or incinerator.

3.3 REPORT

- A. Submit a summary of construction and demolition debris diversion and disposal including beginning and ending dates of period covered with each application for progress payment or progress payment shall be rejected.
- B. Quantify all materials diverted from landfill disposal through salvage or recycling during the period with the receiving parties, dates removed, transportation costs, weight tickets, manifests, invoices. Include the net total costs or savings for each salvaged or recycled material.
- C. Quantify all materials disposed of during the period with the receiving parties, dates removed, transportation costs, weight tickets, tipping fees, manifests, invoices. Include the net total costs for each disposal.

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