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BuildingName
The Description of the Project
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SPECIFICATION DIVISION 22

NUMBER SECTION DESCRIPTION

DIVISION 22 PLUMBING
SECTION 226313 – MEDICAL GAS CERTIFICATION (FOR HOSPITAL FUNDED PROJECTS)

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DIVISION 22 PLUMBING
SECTION 226313 – MEDICAL GAS CERTIFICATION (FOR HOSPITAL FUNDED PROJECTS)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, Standard General and Supplementary General Conditions, Division 1 Specification Sections, and other applicable Specification Sections including the Related Sections listed below, apply to this Section.

B. Related Sections:

1. Section 018113: Sustainable Design Requirements.
2. Section 019110/019100: Commissioning
3. Section 220500 Common Work Results for Mechanical
4. Section 221113 Piping Materials and Methods
5. Section **XXXXXX** Medical Gas Systems

1.2 SUMMARY

A. Perform certification of all medical gas/ vacuum installations in conformance with NFPA 99C.

B. Certification services will be a direct contract between UM and the certification contractor and should not be included in the contractor's bid. Contractor shall be responsible for coordination of and with the certification contractor's services. The information expressed in this specification is for contractor information purposes only.

C. Section Includes:

1. Owner approved medical gas certification companies
2. Certifiers scope of services

1.3 REFERENCES

A. Definitions

1. Portable Document Format (PDF): An open standard file format licensed by Adobe Systems used for representing documents in a device-independent and display resolution-independent fixed-layout document format.

1.4 SUBMITTALS

A. Documentation:

1. Certification reports in conformance with NFPA 99C
   a. Submit to the State of Michigan Health Facilities Evaluation Section at the completion of each project phase. All submittals shall be conducted thru the UM Project Manager.
   b. Final, approved reports shall be delivered in hard copy and electronic Adobe Acrobat pdf form to the UMH Plumbing Shop Foreman at the completion of each project phase.

2. Medical gas as-built drawings
   a. Medical gas as-builts shall be uploaded in electronic Adobe Acrobat pdf form to the UMH Facilities Planning & Development website:
   b. http://www.med.umich.edu/facilities/plan/vn/

B. All Submittals: Identify and incorporate information in each submittal as follows:

1. Assemble complete submittal package per project into a single indexed file. Report hard copies shall be bound and compiled in an orderly fashion. Report electronic copies shall be saved and complied as a single pdf file.
2. Submitted documents shall be FINAL, APPROVED reports and as-builts. Partial, preliminary reports or reports identifying outstanding issues of non-compliance should not be submitted to UMHHC. Prior to submitting FINAL reports, all outstanding issues and/or code deficiencies shall be resolved and re-certified.

C. Electronic Submittals: File name shall use project identifier (UMH project RTN number) and project name followed by a description of the file contents. An example of a file name:

1. RTN 1234567 Emergency Dept Expansion- FINAL Med Gas Certification Report.pdf
2. RTN 1234567 Emergency Dept Expansion- FINAL Med Gas As-Built.pdf

1.5 QUALITY ASSURANCE

A. Reference Standards: Services described in this section shall be in compliance with the following quality assurance standards; latest editions, unless noted otherwise.

1. NFPA 99C, “Standard for Health Care Facilities”, 2005 edition

B. All medical gas certification services shall be conducted under the direct supervision of an ASSE 6020 certified inspector and ASSE 6030 certified verifier.

C. All medical gas certifications required under a given project shall be conducted by a single certification company.

D. Coordinate testing and inspections with the University of Michigan mechanical inspector, UM project manager and UMH plumbing shop.

1.6 ACCEPTABLE CERTIFICATION CONTRACTORS

A. Acceptable Medical Gas Certification Service Providers:

1. Diamond Medical Services (Rob Rawlings)
2. ~~Pneumatic Medical, Au Gres, MI~~Gassy Girl (Matt Bussinger)

PART 2 - PRODUCTS

2.1 NOT APPLICABLE

PART 3 - EXECUTION

3.1 GENERAL SERVICE REQUIREMENTS:

A. Inspection and testing shall be performed on all new piped gas systems, additions, renovations, temporary installations, or repaired systems to assure the facility, by a documented procedure, that all applicable provisions of NFPA 99C have been adhered to and system integrity has been achieved and/or maintained.

B. The verifier will check all source equipment, piping distribution, valving, outlets & inlets and labeling for form, function and conformance. All alarm systems shall be tested for set points, signals, and pressures monitored. Piping systems are to be tested for purity, free of both gaseous and particulate contaminants.

C. The duties of the medical gas certifier shall include:

1. Coordination with project manager and project phasing in order to avoid delays in the project schedule. Certifications shall be conducted, certified and submitted for each phase of construction.
2. Coordination with the project's UM mechanical inspector to ensure that medical gas installations are certified prior to mechanical inspection.
3. Alerting UM Project Manager of any errors or violations that may impact project budget or schedule.

D. If deficiencies are found, the certifier shall summarize in a deficiency report issued thru the UM Project Manager. The mechanical contractor shall make corrections as required and coordinate with the certification contractor for re-certifying the installation.

3.2 CERTIFICATION REPORT:

A. The verifier is to inspect, test, and develop a document that proves that the installation meets all current code requirements and that it is safe and ready for patient use.

B. Submit reports in conformance with NFPA 99C, specifications and the requirements listed below.

C. Reports shall be signed by a licensed ASSE 6030 certifier.

D. Reports shall be bound and include UM/ UMH project numbers (ie UM AEC Project # and UMH FPD RTN #) and project name (from project construction documents) clearly labeled on the cover sheet.

E. Report shall include a list of all deficiencies, corrections made and final re-certification results. Reports shall not be submitted with outstanding, unresolved deficiencies within the scope of work.

3.3 MEDICAL GAS AS-BUILTS

A. The University of Michigan Hospitals & Health Centers Facilities Planning & Development (UMHHC FPD) maintains a web-based, digital record drawing of all medical gas/ vacuum systems in use in UMHHC facilities. Access to viewing, printing and downloading the current medical gas as-built as well as uploading proposed changes to these documents is controlled thru a secure log-in thru the UMH FPD website:

1. http://www.med.umich.edu/facilities/plan/vn/

B. At the completion of the medical gas certifier's services, the certifier shall be responsible for generating an as-built of all source equipment, piping distributions, isolation valves, alarms and outlets/ inlets modified and/ or added in the scope of the project.

C. The certification contractor shall be responsible for uploading the project medical gas as-built to the UMHHC FPD website to aid in the upkeep of accurate medical gas as-builts.

D. Submitted as-builts will be incorporated into the hospital's master record drawings and re-posted to UMHHC FPD's website.

3.4 COMMISSIONING

A. Perform commissioning activities in accordance with Related Sections.

END OF SECTION 226313