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Medical Equipment Support Systems]

Division 11-7010 – MEDICAL EQUIPMENT SUPPORT SYSTEMS

PART 1 – GENERAL

1.1 SUMMARY

- A. Contractor shall provide medical equipment support systems as indicated on the drawings. Support systems shall be as required by equipment manufacturer. Support systems shall be supplied to the tolerances and deflections required by the equipment manufacturer.
- B. The scope of this section covers support systems for all ceiling suspended equipment including:
 - 1. Surgical lights
 - 2. Procedure / exam lights
 - 3. Equipment booms / anesthesia booms / gas columns
 - 4. Monitor equipment
 - 5. Injector equipment
 - 6. Ceiling mounted televisions

1.2 RELATED SECTIONS

- A. Division 11 Medical Equipment
- B. Division 5 Metals

1.3 QUALITY ASSURANCE

- A. Manufacturers qualifications:
 - 1. The vendor shall not have less than 10 years experience in the supply of pre-engineered and fabricated structural steel medical equipment support systems.
 - 2. Vendor shall demonstrate experience with projects of similar size and scope.

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3. All welding and fabrication required for the manufacture of the medical equipment support systems shall be performed off site in a controlled environment. All welding required for the manufacture of the mounting systems shall conform to the American Welding Society Structural Welding Code – Steel (AWS D1.1). All welding shall be performed under the supervision of a certified AWS welding inspector.
- B. The same manufacturer shall supply all of the medical equipment support systems.
- C. The medical equipment support systems are to be assembled to the greatest extent possible before delivery to the job site.
- D. The publications listed below form a part of this specification to the extent referenced. The publications are referenced in the text by the basic designation only.
- E. American Society for Testing and Materials (ASTM)
 1. ASTM A36 Carbon Structural Steel
 2. ASTM A6 General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling
 3. ASTM A500 Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
 4. ASTM A501 Hot-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
 5. ASTM A563 Carbon and Alloy Steel Nuts
 6. ASTM A572 High-Strength Low-Alloy Columbium-Vanadium Structural Steel
- F. American Welding Society (AWS) - D1.1 Structural Welding Code - Steel
- G. American Iron and Steel Specification (AISC) - Steel Construction Allowable Stress Design
- H. The Society for Protective Coatings (SSPC) - SP6 Commercial Blast Cleaning

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1.4 SUBMITTALS

- A. Successful medical equipment support system provider shall submit layout drawings showing the complete mounting system including plans, sections, and attachment details of the system. Layout drawings shall show all manufactured parts by part number and all fasteners and hardware.
- B. The medical equipment support system drawings shall show design loads and be sealed by a licensed engineer.
- C. The medical equipment support system shall lend itself to a rational structural analysis with section properties of framing members being able to be supplied and demonstrated by calculation.

1.5 WARRANTY

- A. The medical equipment support system provider shall warranty the completed support system against defects in workmanship, engineering, and materials for a period of five (5) years from the date of installation. The completed support system shall be plainly marked with the suppliers' identification tag showing the suppliers name and telephone number.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- A. Products supplied by the following manufacturer shall be provided:
Healthcare Technology Corporation – Accu-Mount Support Systems
www.healthcaretec.com phone: 877-878-3534

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2.2 MATERIALS

- A. Structural Steel: ASTM A36
- B. Steel Pipe and Structural Tubing: ASTM A53
- C. Fasteners: SAE Grade 5 Zinc Finish
- D. Hanger Rod: ASTM A193 B7

2.3 FINISHES

- A. All of the medical equipment support system components shall be finished in accordance with one the following:
 - 1. RoHS compliant thermoset polyester powder coat finish after a commercial blast of all components to SP6 Commercial Blast finish per SSPC specifications.
 - 2. Electrically zinc coated per ASTM B 633 Type III SC 1

2.4 DESIGN

- A. The medical equipment support system shall be designed to meet or exceed the boom and light manufacturers maximum allowable deflection, or 0.2 degrees, which ever is less. The support system shall be designed to maintain allowable deflection criteria and withstand the maximum load produced by the medical equipment at its most eccentric position under full load.
- C. The medical equipment support system shall attach to the existing building structure utilizing clipped or anchored connections. Welding to the existing building structure is not permitted. Connection of the medical equipment support system to concrete portions of the building structure shall be by means of the following:
 - 1. Powers Fasteners, Power Stud + SD1 Wedge Expansion Anchor
 - 2. Simpson Strong-Tie Titen HD Heavy Duty Screw Anchors
- D. The medical equipment support system shall be designed with a minimum safety factor of four (4) based upon ultimate strength under full static loading conditions.

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PART 3 – EXECUTION

3.1 INSTALLATION

- A. Set work accurately where shown on plans, plumb, level and set parallel or perpendicular as required to line and plane of designed ceiling grid.
- B. Install anchors in accordance with anchor manufacturers installation guidelines, recommendations and instructions.
- C. Install and tighten all bolts and miscellaneous fasteners in accordance with established industry practice or manufacturer's requirements.
- D. Attach boom and light manufacturers "pre-install" leveling plate to the medical equipment support system at the elevation from finished ceiling as indicated on plans and drawings.

3.2 CLEAN AND PROTECT

- A. Upon installation completion of the section remove and dispose of all shipping packaging and containers.
- B. Clean after installation all exposed pre-finished items and protect this work from damage until completion of the project.