

## DIVISION 15 - MECHANICAL

### Section 15000 - General Discussion

#### Introduction

The work shall be in accordance with all rules, regulations, by-laws and requirements of all authorities having jurisdiction.

*Refer any questions, clarifications regarding Division 15 to UA Facilities Design & Construction.*

#### Part 1 - General

- Codes

- The project shall comply with the latest edition of the following codes unless otherwise stated:

- Arizona State Fire Code
- Uniform Building Code (1997)
- Life Safety Code, NFPA 101
- National Electrical Code
- OSHA 1910, regulations 29 CFR 1910 and 1926
- Uniform Mechanical Code (1997)
- Uniform Plumbing Code (1997)
- N.F.P.A. in total
- Americans with Disabilities Act
- ASHRAE 90.1 - 89 and subsequent addenda
- IAQ Guidelines for Occupied Buildings Under Construction (SMACNA)
- BSR/ASHRAE Standard 62-1989R
- ANSI/AIHA Z9.5 Laboratory Ventilation
- ACGIH Industrial Ventilation Manual of Recommended Practices
- OSHA 29 CFR 1919.146 Confined Spaces Standard

- Working In Confined Spaces

- Whenever work is required within a confined space, e.g., utility vaults, utility tunnels, sumps, pits, sewers, etc., contact UA Risk Management and Safety Department for details and procedures on UA Confined Space Entry Program.

- Laboratory Design Criteria

- Refer to UA DSS Tab C-3.
- *Discuss fume hood selection and HVAC system criteria with UA Facilities Design & Construction.*

- Record Drawings

- Provide a set of blueline prints and clearly mark, as the job progresses, all changes and deviations from that shown on Contract Drawings. Drawings shall be kept up-to-date during construction and in addition to field measurements shall include; change orders, field instructions and all other changes.
- Reference Division 01300 for further details.

- Buried Services

- After inspection and approval of service lines in trenches, *provide a continuous trace wire and attach to service line directly.* The Mechanical Contractor shall take 'as-built' measurements, including all depths, prior to commencement of backfilling operations. It will not be sufficient to check off line locations. Definite measurements shall be taken for each service line. The location of buried piping shall be shown on the drawings and dimensioned from fixed points.

- Temporary Use Of Equipment

- Permission must be obtained from Architect/U of A prior to operating any mechanical systems during construction.
- Where the mechanical systems are operated during construction, the Mechanical Contractor shall maintain the system and equipment in proper operating condition.
- Before any area of the building is turned over to the U of A for acceptance and for beginning of the guarantee/warranty period, the systems and equipment shall be returned to the initial new condition e.g., by replacing used air filters with new air filters, cleaning the air side of all coils in the air handling systems, lubricating all bearings according to manufacturer's factory standards and adjusting control systems according to specifications and/or to suit the U of A.
- Provision For Future Expansion And/Or Installations
  - Where piping, ductwork and equipment is indicated for use in future expansion of the building and/or for future installations within the building, the Contractor shall leave sufficient clear space and install the piping, ductwork and equipment in such manner that connections to the future building expansion and/or future installations within the building can be made without removing existing floors, walls, ceilings. The Contractor shall consult with the Architect/U of A whenever necessary for this purpose.
  - Any piping stub-outs provided for future connections to domestic hot and cold water piping systems shall be arranged so that "dead legs" (i.e., pipe sections where there is no water circulation) are prevented. The termination point of any piping stub-out shall be as close to the main piping flow as physically possible. Where future branch lines must extend a distance greater than ten (10) branch line pipe diameters from the main piping flow, a valved drain port or blind flange with a valved drain shall be provided at the end of the branch piping to allow periodic flushing.
  - Abandonment of Domestic Water Piping
    - Verify routing of existing domestic hot and cold water piping systems prior to their being abandoned. Cap abandoned branch lines as close as physically possible to the main piping flow to eliminate "dead legs". Elimination of "dead legs" shall not hinder the proper operation of any existing hot water return, i.e., recirculation, systems.

#### **Part 2 - Products**

- No discussion.

#### **Part 3 - Execution**

- No discussion.

#### **End of Section 15000**