**CU Denver “Standards Boot Camp” Agenda**

**Introduction to the Arrangement of the Guidelines and Design Standards Manual**. Parts 1-3

* Architect/Engineer contract Exhibit D (attached) lists required codes to follow and CU Denver specific “codes” that include the Campus Standards – compliance is critical as this document consolidates our standard (not program) needs in a single document. It is a guideline and not specification.
* The design team will need to demonstrate compliance with the CU Denver standards and CU Denver specific codes at the end of each design phase. (discuss matrix/checklist methodology)
* A code consultant from the current list on the State Buildings web site will do a 3rd party review for compliance with the State Approved Building Codes at each design phase and issue a Notice of Code Compliance at end of the Construction Document phase prior to bidding.

**PART 1** (Review prior to start of design)

* Policies procedures and responsibilities
* Bldg Life and system life expectancy
* Live Load min 100 lb/sf/ mech room 150 lb/sf
* Energy Conv. – high performance bldg program (hand out)
* Demand control ventilation (ASHRAE)
* Code review / inspection process
* DRB process (required, meeting minutes, advisory)
* Room numbering (building ID process – building #, floor# – clockwise approach
* Door numbering (security connection)
* Equipment numbering (map to Siemens BAS System)
* Drawing production standard (see UCD Supplementary Terms and Conditions)

Drawing Production Standards and shall be fully compatible and editable in an AutoCAD version approved by the GIS Coordinator.

The maximum number of submittals is to be determined by the UCD project manager and the Architect/Engineer for the project.

**PART 2** (Review prior to start of design)

* Planning and Design Guidelines
* Campus Design philosophy
* Physical and site requirement
* Site, exterior, parking, vehicle / pedestrian circulation
* Landscape guidelines – (discuss zones and low water use)
* Exterior lighting / campus signage / building signage
* Become familiar with overall campus planning guidelines for specific campus
* Exterior emergency phones – WiFi

**PART 3** (Review prior to start of design)

* Service provider requirements
* Service provider needs – delivery, mail, freight elevator, custodial, hazardous waste, mech/elec rooms, material handling.
* Campus requirements that do not fit CSI 00-33format
* Mechanical Infrastructure

Anschutz Medical Campus:

* Central plant – steam/chilled water
* Chilled water delivered at 41˚ F (maybe higher at times)
* Chilled water to return at 56˚ F (may require re-circulation until temp reached)
* Utility vaults
* Steam/condensate
* Must meter steam, chilled water and electrical use through BAS

Downtown Campus:

* Requirements varied dependent on location
* Review metering needs with BAS group
* BSL3 Planning (if applicable)
* Security – important to review Part 4 – Division 28 prior to design and follow prescribed steps
* High Performance Building Program – understand program building must achieve a minimum of LEED Gold
* Audio-Visual – Review AV stds and work with Ed Support Services through PM to meet needs.

**Introduce Internal CU Denver Service Providers**

* Building Maintenance & Operations
* IT Services
* Security
* Parking
* Health and Safety
* Grounds
* Environmental Services (housekeeping)
* Educational Support Services (AV)
* Police

**Campus Standards Part 4, Divisions 00-33** (Review prior to start of specifications)

* Part 4 is organized in the 2010 CSI Master Format Div. 00-33
* Project Specification should match this version 00-33 format
* **Division 01** – Covers UCD admin needs during construction – use appropriate campus version and modify as noted per project
* **Division 02**
* Need to include asbestos contaminated soil management plan SOP document exactly as shown – do not alter.
* Mention MS-4 plan and requirement of contractor to pull storm water permit and formally submit and provide evidence of inspections and closeout.
* Meter irrigation water
* Storm, sanitary and water must be designed to current city of Aurora (COA) standards and be formally submitted through UCD to (COA) prior to start of construction for projects at Anschutz medical Campus.
* **Division 03** – Make sure there is a statement about concrete cure compound is compatible with floor adhesive and other finishes.
* **Division 07** – Roof design is reviewed by FM Global and need to conform. UCD will obtain review
* **Division 08** – Keying and Lockset – Best – need to meet with PM, lockshop, and end users.
* **Division 09** – Finishes – Important that they are durable low maintenance and compatible with LEED and indoor air quality requirements
* **Division 10** – 10 14 00 Signage – Basis of design is ASI paperflex type sign with standard grey color.
* **Division 14** – Elevators – Discuss elevator tool needs of BMO and requirement for service/maintenance by any current UCD elevator service vendor (issues of proprietary software or codes). 1 year service contract to be included in specifications.
* **Division 23**
* Review 23 00 00 – prior to design start
* BAS System – Siemens is required to assist in controls design and sequencing
* Acid waste pipe
* Demand control ventilation
* Low voltage wire
* BAS panels should be in telecom room – how is it managed –
* Steam to hot water exchanger - stainless steel
* Equipment number should match BAS naming
* Central Plant steam and chilled water (Anschutz Medical Campus)
* **Division 26**
* Read 26 00 00 and 26 05 00 prior to start of design
* Branch circuits can be in mc cable
* Discuss emergency generator and ATS approach
* Cable trays in hallway will contain all low voltage wiring and
  + - Stay in conduit until it goes into a room and then it can run in bridle or J hooks

*Show detail on drawings*

Wall

Cable Tray 2” Conduit

Hallway Side Room Side

* **Division 27**

**Telecom**

* Read 27 00 00 thru 27 32 53 prior to start of design
* Stack telecom rooms, IT approved RCDD must oversee IT design

**AV**

* Read 27 40 00 thru 27 51 00 prior to start of design
* Look a classroom and conference layouts and organization of media controls in relation to podium or presentation area
* **Division 28**
* **Read 28 00 00** prior to start of design
* Need to have meeting with PM, Security, and user to identify special security needs.
* Need to control access to building, vertical access (stairs and elevators), HIPPA/FERPA, and high value spaces.
* **Division 32** - Landscape – coordinate with Part 2 Section 2.13 and 2.14 when completing design and specs. – include 1 year of maintenance.

**CU Denver “Lessons Learned”**

In Addition to the Approved Codes in Exhibit C of the Contract (SC 5.1 and SC5.2) the university adds the following requirements under the UCD Supplementary Terms and Conditions (Exhibit H)

# The Manual of Guidelines and Standards for Design and Construction Projects (use most current version) - website location:

# ([www.ucdenver.edu/about/departments/FacilitiesManagement/FacilitiesProjects/Pages/GuidelinesStandards.aspx](http://www.ucdenver.edu/about/departments/FacilitiesManagement/FacilitiesProjects/Pages/GuidelinesStandards.aspx) )

NIH (use of most current edition); ANSI/AIHA Z9 Accredited Standards Committee available at <http://www.aiha.org/insideaiha/standards/Pages/ANSIZ9.aspx>, Laboratory Ventilation last updated 2003; ANSI/AIHA Z9.6-2008 Exhaust systems for Grinding, Buffing and Polishing; etc.

Health and Safety Standards for Ventilation Systems;

Biomedical and Animal Research Facilities Design Policies and Guidelines, National Institutes of Health, Aug 2010 and subsequent published revisions; Available at <http://orf.od.nih.gov/PoliciesAndGuidelines/>;

Biosafety in Microbiological and Biomedical Laboratories (BMBL, 5th edition, 2009);

ILAR Guide for the Care and Use of Laboratory Animals (8th ed, 2011); International Building Code (IBC);

IH Guidelines for Research Involving Recombinant DNA Molecules (NIH Guidelines);

Uniform Federal Accessibility Standards (UFAS); other guidance to consider:

Guidelines for Design and Construction of Hospital and Healthcare Facilities, 2010, (formerly known as “AIA Guidelines”); ANSI/ASHRAE/ASHE Standard 170: Ventilation of Health Care Facilities

Colorado Rules and Regulations pertaining to Radiation Control, 6 CCR 1007 Part 1-20.

The latest edition of the Life Safety Code (NFPA 101) (use most restrictive interpretation where it conflicts with the IBC).

AIHA American Standard for Laboratory Ventilation ANSI/AIHA Z9.5-1992.

Last edition of "Guide for Care and Use of Laboratory Animals."

UCD Campus Standard Biosafety Level (BL3) Construction Standards.

The National Fire Protection Standards, 45, 72 latest addition.

City of Aurora Asphalt and Paving Standards (latest edition).