Environmental Health and Safety

- Request lead and asbestos testing for materials that will be disturbed during construction.
- In abatement specification, provide rough quantities of materials that will be abated.
- Grease traps and other sanitary sewer pretreatment devices must be approved by EHS.
- Provide erosion and sedimentation control for projects where soil will be disturbed.
- Provide fall protection (passive measures, such as railings and parapets are preferred) at roofs and other elevated surfaces that pose a fall risk to UT personnel (or students).
- Ensure there is an emergency shower and eye wash within 10 seconds travel distance from chemical or biological hazard.
- Flammable and combustible chemical quantities must comply with NFPA 45. Provide a chemical list from researcher. What is lab unit hazard class (NFPA 45)? What are maximum allowable quantities per NFPA 45?
- Confirm adequate lab exhaust capacity of new lab ventilation device (i.e. fume hood or snorkel).
- Provide adequate air changes per hour in laboratory [refer to decision tree for correct ACH]
- Install illuminable ‘laser in use’ sign at eye level, laser curtain or other containment in locations where Class 3b or 4 lasers will be used. Locations must also be secured or keyed so that only authorized personnel may enter rooms with lasers. [this comment is typically customized for the configuration of each lab]
- Perform dye testing of sanitary sewer drains to confirm there are no cross connections with storm sewer.
- Do not use glass pipe.
- Label laboratory drain piping as ‘lab wastewater’; avoid using ‘acid waste’ or ‘lab waste’.
- Configure fume hoods so that they are away from thoroughfares, doors, HVAC diffusers or other apparatus that could adversely affect proper function of hood enclosure.
- Fume hood must have a flow indicator, flow alarm or face velocity alarm indicator.
- Low flow/high performance hoods shall have a target face velocity of 75 fpm with the sash opened at 18”.
- Conventional fume hoods and radioisotope fume hoods shall have a target face velocity of 100 fpm with the sash opened at 18”.
- Biosafety cabinets should not be ducted type.
- Install anti-restart protection at outlet serving at machine (such as saws, drill press, etc.)
- Backflow prevention at food service and wet labs
- Adequate number of hand sinks at food service
- Provide a 3-compartment sink at food service kitchen/prep area
- Cleanable surfaces and coved base at food service kitchens.
- Specify and install cement board or glass-mat gyp board behind tile.
Operations

Best Practice or Code

- Changes to exhaust in newer labs that impact truth tables, lab pressurization, etc.
- Ensure project specifications are based on current campus standards rather than copy/paste of PSP's last project
- The HVAC BAS Controls specification must reference OFPC Specification 23 09 23.A, not the PMCS BAS Specs which are long outdated.
- Do not use return air plenum as an exhaust

01 91 00 Facilities Commissioning

- Need to see commissioning plans and results for the project.
- Provide appropriate access for maintenance, i.e. stairwell is preferred to ladder

4.01.03 Campus Conditions

- Need to see evidence the designer has visited, or will visit, the site to understand existing conditions. This is more than just looking at drawings. It includes actual field work. This should entail looking at the current available capacities of building systems, not just assume that extra capacity is available.

4.02.00 Project Design & Approval Process Part 1.02E

- Need to see the development of an annual operating budget.

4.02.00 Project Design & Approval Process Part 2.01

- Need to see a LCC for major system alternatives, such as including, or not, an energy recovery system in an AHU replacement.

23.00.00 General Mechanical Part 1.01J

- N+1 redundancy for building utility services and for critical applications.

23.00.00 General Mechanical Part 1.04A

- Clearly define lengths of warranties. (Note: UT System Standards specify much longer warranties for motors, 5 years, and some other items.)

23.20.00 HVAC Piping and Pumps Part 1.03E

- Review all chilled water connections used for equipment or lab cooling for compliance with this standard section.

23.00.00 General Mechanical

- Maintenance Access to coils, fire/smoke dampers, etc.
- Must have a 2’x3’ area of clear space in front of VAV control panels, from deck to floor.
No turning vanes. All Elbows are to be Radius 90's
Show Coil pull space
Coils must meet standards
AHU access doors must meet standards
Provide DI/RO water for humidification systems, steam generators, etc. not city water
Ensure P-trap orientation and depth are appropriate to AHU pressure rating

25.00.00
Show VFD and BAS control box locations
Mount VFD displays at 60” AFF

Fire Prevention and Safety
Best Practice or Code
- Ensure project specifications are based on current campus standards rather than copy/paste of PSP’s last project
- Ensure labor requirements and close out document requirements meet UT Standards.
- Job specifications must specify adequate drainage requirements for main drains and remote test drains.

Plans
- Drainage termination locations not shown
- Valves not accessible for maintenance purposes in accordance with UT Standards
  - All valves required to be accessible
  - If valves are behind walls, all access panels need to be large enough for a 24” Wrench
  - All valves in stairwells to be visible and not behind wall
- Sprinkler heads not shown on plans for buildings with existing systems, typically occurs on small PMCS remodel projects, often no fire sprinkler plans are submitted.
  - Reviewer has to look at architectural, mechanical and structural plans to determine if any sprinkler work will be required by the project.

Product Data
- Missing submittals
- Product data submitted for equipment and products that do not meet and/or prohibited by UT Austin Standards or the project job specification

Close out Documents
- As-built drawings incorrect, drawings are not stamped as as-builts and do not have the FPE’s RME’s signature and date in the title block as being as-built drawings.
- Contractor submits shop drawings that have just been stamped as as-builts
- Missing maintenance data sheets
- Missing State required testing documentation.
- Missing copies of corrected overhead inspection discrepancy lists as required by UT Austin Standards.
Fire Alarm

- Fire alarm risers installed are class A and have proper separation; Audio risers are installed in a class X configuration
- All of the fire alarm equipment provided on the equipment list also have data product information for each
- Existing notification circuits can support new notification appliances, otherwise new remote power supplies or Amps may be required

On Sprinkler Projects

- Provide a 10 inch, 24 VDC, general alarm electric bell on the building exterior. To be programmed silence-able
- Verify number of monitor modules for each sprinkler device
- Ensure projects comply with 90A NFPA
- Required audibility and intelligibility requirements are on drawings
- As-builds:
  a. Drawings are not stamped with FPE or APS signature
  b. Location of devices does not match field locations
  c. Addresses of devices are not correct
  d. Fire alarm systems not correct most of the time
  e. Voltage drop calculations do not match equipment layout in field
- Training requirements
  a. Smoke management 100% tested with the shop present
  b. Show major device locations and sequence of operation to shop fire alarm technicians
  c. Show major equipment locations and operations to fire sprinkler technicians

Interiors

Sections 9, 10 & 12 - PMCS standards

- All interior finishes items should meet the current standards. Refer to Sections 9, 10 & 12
- Physical samples are required to be submitted and reviewed by UT Reviewer/UT Project Manager prior to client presentation to determine the appropriate color/pattern/texture.

09 00 03 Finishes General Provisions

- All specified materials must have a demonstrated performance history in a similar institutional setting, with similar regularity of cleaning / maintenance for at least 5 years.
- Homogeneous materials required
- Custom designed colors/materials/furnishings must request approval.

09 30 00 Tile

- Floor tile must be porcelain
- Grout must be dark and be epoxy type meeting ANSI 118.3

09 60 00 Flooring - General

- Specialty flooring: Not permitted: bamboo, cork, leather, woven vinyl, laminate
- Wood flooring for specialty areas only: Must request approval
• All flooring must be from a known established manufacturer/dealer (with local representation) who has been producing or selling the product for a minimum of 5 years.
• All flooring must have nationally recognized/industry accepted sustainability certification relative to the material.

**09 65 00 Resilient Flooring**
• LVT (Luxury Vinyl Tile) must have a minimum of 40mm wear layer (20 base vinyl, 20 ceramic impregnated) factory applied final finish of aluminum oxide, and a minimum 20 year standard performance warranty.
• Rubber tile: Must have minimum 10 year standard performance warranty

**09 65 13.13 Resilient Base**
• Must meet ASTM F 1861 Type TS rubber, continuous roll
• Must be dark neutral color

**09 68 00 Carpeting**
• Require maximum 24” x 24” or 18” x 36” modular carpet tile with structured back
• Must be darker colors with pattern (enough to camouflage spills) – no solid colors
• Construction must be: Textured/level loop, Patterned/graphic loop, Multi-level/textured loop
• Must meet or exceed Green Label Plus, set by the Carpet and Rug Institute (CSI)
• Must have a minimum of 10 years in the production of modular carpet tile products as a “running line” part of the product offerings
• Specific carpet tile backing system(s) must have a manufacturer’s history of at least 5 years.
• Minimum 15 year manufacturer’s standard performance warranty covering wear, edge ravel, tuft bind delamination and static control.

**10 26 13 Corner Guards**
• Provide in all public spaces, service areas, and at specialty finishes

**12 00 00 Furnishings General Provisions**
• Must meet BIFMA standards
• Must have a demonstrated history in a similar institutional setting with similar regularity of cleaning and maintenance.
• Custom designed colors/materials/furnishings must request approval. All physical samples are required to be submitted and reviewed by UT Reviewer/UT Project Manager prior to client presentation to determine the appropriate color/pattern/texture.

**12 05 12 Fabrics**
• Patterned, darker colors, with additional finishes as appropriate
• Public spaces: Minimum 100,000 double rubs (Wyzenbeek)
• Other spaces: Minimum 50,000 double rubs (Wyzenbeek)

**12 36 00 Countertops**
• Must not require specialty maintenance

All physical samples are required to be submitted and reviewed by UT Reviewer/UT Project Manager prior to client presentation to determine the appropriate color/pattern/texture.
Landscaping

- Supply a tree survey of all trees over 8” diameter (include species, DBH, and map of location).
- Show trees to be preserved and trees to be removed on the site plan.
- Show tree protection fencing around all trees to be preserved (this fence must be chain-link).
- Show trees having critical root zone impacts on site plan.
- Plant large trees at least 30’ apart, and they shall not jeopardize the future growth of existing trees - see UT desirable tree list at: http://www.utexas.edu/facilities/divisions/support/documents/UT-Desirable-Tree-List.pdf
- Have the following soil volumes for newly planted trees:
  - 06 02 71 Large trees (from our desirable species list) - 1,000 ft3
  - 06 02 72 Medium trees – 500 ft3
  - 06 02 73 Small trees (ornamental) – 275 ft3
- Have a note stating the appropriate method for planting new trees (to include correct method for B&B nursery stock).