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LEHIGH
UNIVERSITY

DESIGN STANDARDS AND GUIDELINES
LU Facilities

January 2026

Lehigh University
Facilities, 681 Taylor St., Bethlehem, PA 18015

Purpose

The purpose of this document is to provide standards and guidelines to architects, engineers and contractors working for and with Lehigh University. The intent is to convey design, construction, sustainability, maintainability and operational parameters, both standard and unique.

These standards are not intended to be used directly as contract specifications, but to provide guidance in terms of finishes, materials, equipment and methods that are of great importance to Lehigh University for the long-term maintainability, sustainability, and aesthetic of the campus and buildings. Consultants should conduct independent evaluations, consider beneficial alternatives, and discuss recommendations with LU Facilities Representatives and associated professional staff. Deviations from standards herein presented must be approved in writing by the LU Facilities Representative prior to implementation.

All standards presented are not universally applicable to every project. The standards represented herein are intended to represent preferred materials and systems that result in satisfying Lehigh University's requirements.

Please note that this is intended to be an evolving document. As content is added or edited, design teams working on current projects will be notified by the LU Facilities Representative.

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Division 00 - Procurement and Contracting Requirements

Lehigh has a university-wide *Sustainable Purchasing Policy.*

Refer to Lehigh's Sustainable Purchasing Policy.

Contact LU Facilities Representative for more information.

Division 1 – General Requirements

A. Sustainability

Lehigh has established standards that require all new and existing campus construction be built to USGBC LEED Silver (or equivalent) standards or higher.

Refer to Lehigh's Sustainability Strategic Plan 2030.

Refer to Lehigh's Climate Action Strategy.

Additionally, Lehigh has specific construction & demolition waste management goals that contractors are required to meet. *Refer to Construction & Demolition Waste Management* for the specific requirements.

B. Drawing and CAD Standards

Lehigh University has Drawing and CAD Standards, which are to be followed, see attached appendix.

Any consultants using BIM, CAD, GIS are expected to follow these standards. Capital projects are required to follow BIM Level 3 standards. Standards for BIM Level of Design (LOD), deliverables, and otherwise will be established in project specific BIM execution plans.

Also, please refer to the Lehigh University Digital Data Release Policy and Agreement.

C. Building and Room Numbering Policy

All projects at Lehigh University are to follow the *Building and Room Numbering Policy.*

D. Accessibility

Ensure federal and state accessibility standards are met, so that they are functional, meet requirements, and are integrated into the design to not appear/act as supplementary to the overall design. In existing conditions, all projects should

aspire to improve accessible conditions beyond those required by regulations as much as reasonable.

E. Standard Space Types

Below are a series of specific requirements for spaces typically programmed into facilities at Lehigh. These requirements are intended to highlight major points/elements and items relative to the design, performance and construction of these spaces. Specific project programming information may supplement these requirements. Additionally, spaces may exist in project programs that are not specifically addressed in these standards where supplemental program data may provide information for these spaces. These standards are to be used in guidance for design, construction, and performance of these spaces, and as general information for typical Lehigh University requirements.

F. Lobbies

1. General

a) Lobbies should have direct access to toilet rooms that are visually screened.

b) Stairs should be visible from the lobby and identified with appropriate and required signage.

c) Passenger elevators should be convenient for the lobby and well signed for accessibility.

d) Provide a location for designated trash and recycling receptacles that is conveniently located within the typical path of travel to ensure visibility and use. *Refer to Trash and Recycling Receptacle Standard* to be used as basis of design. Each element specified is required. Size and quantity of units and paper insets are to be coordinated with LU Facilities Representative.

e) The following elements should be considered when designing lobbies: donor wall, LEED plaque and sustainability signage, seating, trash/recycling receptacles, data and power for lobby users, upgraded finishes for appearance and durability, monitors for building, information, reception, visibility and/or connectivity to circulation.

f) Additional potential areas near the lobby: concession area and vending area.

2. Lighting

Refer to LU's MEP Standards for specific light fixture information. *(See Appendix)*

3. Ceilings

a) ACT ceiling and grid. Refer to Division 9 B. Ceiling Assemblies for additional information.

b) GWB ceilings are not permitted unless required by historic or other exceptional circumstances, and with written approval from the LU Facilities Representative. GWB borders, coves, and/or soffits, and trim may be used.

c) With written approval from the LU Facilities Representative, GWB borders, coves, and/or soffits, and trim may be used.

d) Specialty ceilings may be considered with written approval from the LU Facilities Representative.

4. Flooring

a) Main entries should have vestibules with space for walk-off carpet tiles (Tarkett Assertive Stria or similar).

b) Walk off mats will be furnished and installed by Lehigh only as needed.

c) Recessed, metal walk off mats are not acceptable.

d) Flooring should be a hard, durable, and low-porosity surface such as porcelain tile, terrazzo, concrete (polished or sealed depending on location), or stone.

5. Wayfinding

a) Provide building directories, wayfinding/directional signage, code required signage (exiting, accessibility, and other), and other building support signage as part of the basic services.

b) Provide a building directory in the main lobby and secondary entries as suitable. Review sign types, locations and messaging with LU Facilities Representative.

c) See appendix for Lehigh's Interior Signage Standards.

G. Offices, Administrative and Meeting Room Areas

1. Furniture

a) Furniture and equipment layout are to be included in floor plans at Schematic Design Phase.

b) Demonstrate ADA clearances in offices with furniture shown to scale in all phases, as well as requirements for any ADA furnishings.

c) *Please refer to Furniture Standards* and *Furniture Purchasing Policy*

2. Lighting

a) Indirect lighting is preferred for artificial light. Natural light is also preferred whenever possible. For specific light fixture information and Refer to *LU's MEP*

Standards.

3. Ceilings

a) ACT ceiling and grid. Refer to Division 9 B. Ceiling Assemblies for additional information.

b) No GWB ceilings in these areas unless required by historic or other exceptional circumstances.

4. Flooring

Carpet tile/plank and rubber cove base, resilient flooring at kitchenettes.

5. Tele/data and power

a) Show data and power locations on electrical and furniture plans.

b) Provide outlets on every wall of the office, as well as LAN ports on at least two walls.

c) Each LAN port is to have two (2) network drops.

6. Acoustics

a) Provide adequate acoustical privacy in all offices.

b) Preferable methods are through insulated walls and ceiling tiles / surfaces.

c) Unless otherwise approved, all interior walls shall extend to bottom of deck.

d) Consideration of measures of acoustical privacy relative to building systems shall be considered as well (i.e., HVAC provisions and other).

7. A/V Audio-Visual Systems

Coordinate with LU Facilities Representative and LTS Department for system requirements and parameters within offices and administrative areas. *Refer to LU AV Standards*

H. Classrooms / Academic Facilities (Computational/Dry Labs/Computer Labs and Similar Spaces)

1. General

a) Classrooms (Including Computational/Dry Labs/Computer Labs and similar spaces) may be unique and custom designed spaces to support the activities and teaching methods that occur within them. These spaces may have unique requirements accordingly, and special needs for fixed furniture, equipment, building services, audio-visual equipment, HVAC service/tolerances/redundancy, access control, and other features.

b) Below are some general guidelines to support the requirements of these spaces that are subject to refinement, validation and further definition based on the specific function, requirements, and activities of a particular space.

2. Furniture

See Furniture Purchasing Policy. Any classroom furniture is to be coordinated with Lehigh's Planning Department.

3. Lighting

Refer to LU's MEP Standards for specific light fixture information.

4. Ceilings

a) ACT ceiling and grid. Refer to Division 9 B. Ceiling Assemblies for additional information.

b) No GWB ceilings in these areas unless required by historic or other exceptional circumstances.

5. Flooring

a) Sloped or tiered floors in classrooms may need to be provided where size and configuration requires a sloped floor for sightlines and classroom function (i.e., typically over 50 students; subject to program verification). Sloped or tiered floors should be constructed as platforms and not concrete to allow for future modification or removal.

b) Ceiling configuration needs to be considered to work with floor configuration and support classroom and classroom systems functions (i.e., A/V systems, lighting, acoustics, service access, surface treatment, and other considerations for function).

c) Flooring to be carpet tile/plank with rubber cove base.

6. A/V

Refer to LU's AV Standards

a) Lectern basis of design is as follows:

- Middle Atlantic Products L5TURFR33LDW L5 Series Turret Frame, L5-

TURFR-33LDW, 33" W, 1.5 Bays

- Middle Atlantic Products MAPRO L5KBB2SEHC600N34L L5 33" Wide Sota HPL, color: Silver Alu Metalx (color to be reviewed with project finishes)
- Middle Atlantic Products L5SPNL33 L5 Sloped PNL 33
- Coordinate with LU Facilities Representative regarding required modifications to add a touch panel box and doc cam shelf in coordinating laminate.

I. Wet Labs

1. General- See the Laboratory Design Guidelines and Minimum Provider Safety Requirements.

a) All new labs at Lehigh, whether in a new building or in an existing building, require the lab owner/researcher to complete a Lab Planning Information Form prior to the start of design. A formal equipment list that identifies all equipment (by make and model) that will be installed or operated in the lab will be required at the time of submission of the form.

b) Lehigh has a desire to deploy open lab and shared lab concepts wherever practical to allow for maximum flexibility and use of the space.

c) Wet Labs may be unique and custom designed to support activities and research that occur within. It is typical that wet labs will have unique requirements accordingly, and special needs for fixed furniture, equipment, building services (i.e. power, water, RO/DI water, data, gas, compressed air, vacuum and other services), shielding, vibration tolerances, EMI resistance/levels, HVAC service/tolerances/redundancy, access control, structural requirements and other features. Below are some general guidelines to support the requirements of wet labs that are subject to refinement, validation, and further definition based on the specific function, requirements and activities of a particular wet lab.

Contact LU Facilities Representative for Planning Guidelines for Lehigh University Research Laboratories.

2. Furniture

a) Provide fixed furniture and equipment (lab benches, shelving/cabinets, carriers and other fixed systems) in labs and coordinate with end user program and building services (i.e. power, water, RO/DI water, data, gas, compressed air, vacuum, and other services) to provide all required building services in a modular and regular manner (i.e., 3' on center, 6’ on center, other).

b) Loose Furniture: Provide washable and chemical/stain resistant fabrics and finishes for all furniture within wet lab spaces.

c) Lockable storage in furniture, equipment, and built-in casework should be provided based on the user needs.

d) Chem tops are to be through body material where necessary.

3. Ceilings

a) ACT ceiling and grid. Refer to Division 9 B. Ceiling Assemblies for additional information.

b) No GWB ceilings in these areas unless required by historic or other exceptional circumstances

c) Special/upgraded finishes to address chemical, static, microbial or other resistance, as required based on program, use, and equipment requirements, should be discussed with the LU Facilities Representative. Armstrong Ultima Health Zone or USG equivalent are the basis of design in these areas.

4. Flooring

Resilient floor or seamless surface as required, chemical, static, microbial or other resistance, as required based on program, use, existing space, and equipment requirements.

5. Walls

Paint - Semi-gloss, min. Special/upgraded finishes to address chemical, static, microbial or other resistance, shielding requirements, or other as required based on program, use, and equipment requirements. Low VOC paint is preferred whenever possible.

6. Building Services

Provide all building services (HVAC, power, water, RO/DI water, data, gas, compressed air, vacuum, and other services) to support space use and to support equipment to be used in the space. See *LU's MEP Standards* for additional information on building services. Please note that some equipment within labs are the responsibility of and owned by the lab owner/researcher. Pre-balancing is required prior to the start of work on any new lab in existing buildings. The extent of balancing will be determined by the design engineer and Lehigh Representative.

Refer to LU Service Level Agreement for details on facility provided services.

7. Shielding

As required, provide shielding from electrical interference (EMI, RF and other types) or to contain any radioactivity or other items/activities requiring containment in the space (e.g., shielded walls), to support the operational

requirements of equipment and activities in wet labs.

8. Environmental Health & Safety (EH&S)

1) Laboratory EH&S Review and Approval
   All laboratory designs, layouts, and renovations (regardless of scope) shall be submitted to Environmental Health & Safety (EH&S) and Life Safety for review. Projects may not proceed to construction documents or occupancy without written EH&S approval. EH&S will evaluate code compliance, hazard classification, chemical use, ventilation strategies, and operational safety considerations.

2) Hazardous Chemical and Biohazardous Waste Management
   All hazardous chemical, biological, and regulated materials generated within the laboratory shall be handled and disposed of in accordance with Lehigh University Waste Disposal Guidelines and applicable federal, state, and local regulations (EPA, DEP, DOT, OSHA, NIH). Designers must ensure that facilities accommodate compliant waste accumulation and handling practices. See ***Lehigh University Waste Disposal Guidelines***

3) Chemical Storage, Use, and Control Area Requirements
   Design professionals shall evaluate and incorporate all applicable chemical storage and use criteria, including but not limited to:

   a) Fire-resistance ratings and compartmentalization

   b) Control area delineation and maximum allowable quantities (MAQs)

   c) Storage requirements by hazard class (flammable liquids, corrosives, toxics, oxidizers, cryogens)

   d) Ventilated storage or dedicated cabinets where required

   e) Separation of incompatible chemicals
      All designs shall clearly identify the expected chemical inventory and corresponding control area compliance.

4) Laboratory Safety Information, Signage, and Documentation
   Designs shall provide appropriate infrastructure for required laboratory safety postings, including:

   a) Laboratory entrance signage

   b) Emergency contact information

   c) Up-to-date laboratory floor plans

   d) Safety equipment locations

   e) Chemical inventory summaries. Departments are responsible for ensuring that chemical inventories and laboratory postings are updated.

5) Emergency Safety Equipment Requirements
   Projects involving laboratory, clinical, instructional, or research activities that use hazardous chemicals, biological materials, human/animal-derived fluids, or other hazardous agents must include appropriate emergency safety equipment. At a minimum, this shall include:

   a) Emergency eyewash stations (ANSI Z358.1 compliant)

   b) Emergency showers (ANSI Z358.1 compliant)

i) To support user dignity during emergency decontamination, all safety shower stations must be isolated from the general public or equipped with modesty curtains. These enclosures must be constructed of durable, chemical-resistant materials and designed so that they do not interfere with the functional requirements of ANSI/ISEA Z358.1 or the access obligations outlined in OSHA 29 CFR 1910.151(c).

c) Clearly accessible equipment paths with unobstructed reach

d) Supplemental safety equipment as determined by hazards (spill kits, ventilation alarms, Class D extinguishers, first aid stations, etc.) Placement shall comply with code, manufacturer specifications, and EH&S guidance.

J. Kitchenettes

1. Kitchenettes are to be planned within new buildings and renovations as appropriate per the building program.

2. Kitchenettes are to include a sink, refrigerator and countertop microwave. Appliances (including microwaves) shall be ADA compliant as required, and part of the construction documents for purchase and installation by the GC/CM.

3. Kitchenettes are ***not*** to have dishwashers, stoves, ovens or ice makers. Stoves and ovens are ***allowed*** in residence hall projects, as well as stand-alone ice machines in shared kitchenettes. Coordinate with LU Facilities Representative. Appliances shall be ADA compliant as required, and part of the construction documents for purchase and installation by the GC/CM.

K. Restrooms

1. General

a) In addition to all public restrooms required by code, each Lehigh facility shall include (whenever possible as part of a major renovation/expansion and required in new facilities), at least one (1) family/single occupant restroom per floor. These rooms shall comply with all applicable codes and standards for a single occupancy public restroom.

b) Sight lines should screen the toilet room interior from public view.

c) Provide at least one (1) floor drain per toilet room and slope the floor to the drain.

d) Layouts should ideally locate trash cans adjacent to restroom exit to allow for hygienic disposal of paper towels, recessed trash cans are not permitted.

e) Single occupant restrooms should provide occupancy indicators as part of door hardware.

2. Lighting

a) Lighting shall be carefully considered in toilets and restrooms to provide

minimum required lighting levels per code and to be functional. Lighting shall also be specified and located for ease of access and maintenance.

4. Acoustical

a) Provide adequate acoustical privacy in all restrooms.

b) Preferable methods are through insulated walls and ceiling tiles / surfaces.

c) Unless otherwise approved, all interior walls shall extend to bottom of deck.

d) Consideration of measures of acoustical privacy relative to building systems shall be considered as well (i.e., HVAC provisions and other).

5. Flooring

a) Floors to be of a durable material; easy to maintain, such as through-body porcelain tile, sealed concrete or epoxy.

b) If tile floors are used, epoxy grout is preferred.

c) Medium to dark grey grout is preferred, white or light colors will not be accepted on floors.

d) Review all selections with LU Facilities Representative.

6. Walls

a) Walls and wall base to be of a durable material, such as porcelain or ceramic tile, concrete, or epoxy, to coordinate with wall and floor finishes. Epoxy grout and larger format tiles for walls are preferred.

b) Wet walls (behind sinks, toilets, urinals) are required to be full height tile. Consider including side walls only at toilet partitions. Review with LU Facilities Representative.

c) Bullnose (finished edge) tile, Schluter or equivalent metal trim shall be used to prevent unfinished exposed edges of tile at all locations for ease of cleaning.

d) Cove tile base is preferred for ease of cleaning.

e) Coordinate typical tile conditions including inside and outside corners, varying tile/base type alignment, how wall mirrors are integrated, etc. during design to avoid unresolved conditions in the field. Review with LU Facilities Representative.

7. Toilet Partitions

a) Toilet partitions are to be floor mounted, made of solid 1” minimum high-density polyethylene (HDPE) with continuous plastic wall brackets, stainless steel shoes,

door privacy guard and latch strike hardware.

b) Lehigh has determined that the quality level provided by Scranton Products or approved equal are acceptable.

c) No metal, phenolic resin or painted metal partitions should be specified.

d) Texture shall be easy to clean. Review color selections with LU Facilities Representative.

8. Showers

Shower stall is the wet area for showering. Changing room is the area outside the shower stall. Shower room is the entire area outside the shower stall.

a) Shower Room ceilings (spaces outside of the shower stall) are to be Armstrong Ultima Health Zone (basis of design) or USG equivalent or GWB. Consult with a Lehigh University Representative.

b) Shower stall ceilings are to be hard ceiling, such as large format tile or solid surface.

c) Shower stall walls are to be solid surface or a pre-fab shower enclosure can be used.

d) Shower stalls are to have a shower rod and shower curtain.

e) Shower room designs should include a separate, private changing area.

f) Shower rooms should include floor to ceiling partitions and doors to the changing area, with no gaps.

9. Toilet Room Accessories

a) The following toilet accessories will be provided and installed by a GC/CM, unless determined otherwise by the Lehigh Representative:

- Toilet paper dispensers
- Soap dispensers (wall mounted, foam soap)
- Feminine product dispensers (free)
- In-stall feminine waste receptacles
- Free standing trash receptacles (not built-in, wall mounted or under counter). Locate near the door for hygienic purposes
- Paper towel dispensers (powered - power is to be provided by the contractor)

b) The design team is to plan and coordinate blocking and other related requirements for these accessories in all designs, including mounting heights.

c) The following toilet accessories shall be designed, provided and installed by the

design team and contractor:

- Grab bars
- Mirrors
- Drinking fountains: Wall mounted electric water cooler type, with bottle filler, should be in the proximity of the toilet rooms.

L. Lactation Rooms

1. Lehigh University has both a federal and ethical responsibility to provide lactation spaces for nursing mothers returning to work, students returning to course work, and visitors to campus. Refer to LU's *Lactation Room Wellness Standard.*

2. All Lactation Rooms should include:

a) Locking door with occupancy indicator (new construction)

b) Chair and small table

c) Sink with countertop (new construction)

d) Mirror over sink

e) Paper towel dispenser, soap dispenser and trash can.

f) Outlets should be near the chair and to support a mini-fridge (furnished and installed by Lehigh)

M. Storage Spaces / Rooms

1. Storage spaces shall have sealed concrete or resilient flooring unless an alternate flooring material is approved by the LU Facilities Representative.

2. Storage rooms may have special requirements based on the contents to be stored in the room (i.e., security, bikes, temperature/ humidity control, venting, etc.). Coordinate any special requirements with the LU Facilities Representative.

3. Provide built in storage items (i.e., casework, shelving, others) per LU Facilities Representative and program requirements. The shelving should be as follows: Edsal 4 -Tier Heavy Duty Black Metal Utility shelving unit with Wire Shelves (77-in W x 24-in D x 72-in H), Model #ERL772472W4

4. Space shall be provided in all major renovations and new construction for the storage of attic stock materials. Attic stock requirements are to be reviewed during each design phase with LU Facilities Representatives.

N. LTS (Telecom) Closets

Lehigh's LTS department is to be engaged at the early stages of all projects to ensure exchange and integration of most current requirements and preferences. LTS (Telecom) rooms are separate rooms from electrical rooms / spaces.

Refer to *LU's Communications Infrastructure Standards 1-24-05* for more information about LTS Closet requirements.

O. Custodial Closets

1. Provide minimum of one (1) per floor.

2. Custodial closets shall be separate spaces not intended for joint use or any other purpose.

3. Custodial closets shall be directly accessible from a corridor or service hallway and not be accessed through intermediary spaces (restrooms, electrical rooms, others) unless approved by Lehigh University.

4. Custodial closets shall have a floor mounted mop sink and faucet with hot and cold water, as well as a mop rack, and FRP walls up to 48".

5. Each building shall have either shelving in the custodial closets for supplies (toilet paper, paper towels, soap, etc.) or there should be a separate storage room with shelving for custodial supplies for the building.

P. Mechanical Spaces / Rooms

1. Mechanical spaces shall have the floor painted with a two-part urethane epoxy. Mechanical space walls shall be primed and painted.

2. Mechanical spaces shall be separate spaces not intended for joint use or any other purpose. Co-location of any non-mechanical equipment (custodial, electrical, data/tele- communications, facility/other storage, etc.) is not acceptable.

3. Mechanical spaces shall be directly accessible from a corridor or service hallway. In some instances, mechanical spaces may be accessed through doors to the exterior or service yards. This shall be coordinated with the LU Facilities Representative.

4. Building HVAC controls should be located in these spaces, and not the electrical rooms or LTS (telecom) rooms.

5. All mechanical equipment is to be located in mechanical rooms. No mechanical equipment shall be located in rooms not specifically designated as mechanical rooms (i.e., storage areas and other areas).

6. *Refer to LU's MEP Standards.*

Q. Electrical Spaces / Life Safety Equipment Rooms

1. Electrical spaces/ Life Safety Equipment Rooms shall be separate spaces not intended for joint use or any other purpose. Co-location of any non-electrical equipment (custodial, mechanical, data/telecommunications, facility/other storage, etc.) is not acceptable.

2. Electrical spaces shall be directly accessible from a corridor or service hallway.

3. Electrical spaces shall not be accessed through intermediary spaces (restrooms, mechanical rooms, others) unless approved by Lehigh University. In some instances, electrical spaces are preferable to be accessed through doors to the exterior or service yards. This shall be coordinated with the LU Facilities Representative.

4. Sealed concrete flooring.

5. *Refer to LU's MEP Standards.*

Division 2 – Existing Conditions

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Division 3 – Concrete

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Division 4 – Masonry

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A. Unit Masonry

1. Brick type is to be determined on a case-by-case basis.

2. Provide cavity walls for exterior masonry walls. CMU back-up is preferred but light-gauge steel framing is acceptable.

3. Anchors and ties shall be stainless steel.

4. Through-wall flashing to be stainless steel, copper, or zinc-coated copper.

5. All selections should comply with Brick Institute of America (BIA) technical standards.

Division 5 – Metals

A. Exterior Handrails

Exterior handrails are preferred to be Marine 316 Stainless Steel with or without black powder coating. All fasteners must be resistant to salt used during the winter months. Any variations must be reviewed and approved by the LU Facilities

Representative.

B. Interior Handrails

Interior handrail and guardrail material and style to be reviewed with LU Facilities Representative.

C. Metal Ladders

1. All ladder access to roofs must be interior ladders.

2. Stair access to the roof is preferable to ladder access, especially in new construction and when there is equipment on the roof.

3. All ladders are to be ANSI rated; Grade 1, Type IAA, 375 pounds special duty.

4. Alternating tread stairs are not preferred.

5. Ship ladders are prohibited.

6. If ladders are within publicly accessible areas, they should be secured by cage and lock, or similar precautions.

7. Ladders with Handrails shall be simply designed and constructed brushed stainless-steel tube 304.

Division 6 – Wood, Plastics, Composites

A. Millwork and Casework

1. Solid surface under-mount sinks are preferred in public spaces, while stainless steel drop-in bowls are acceptable in utilitarian spaces. Type and size shall be reviewed with the LU Facilities Representative to ensure programmatic needs are met.

2. Built-in reception desks will only be allowed if essential to the program.

3. Millwork and pulls shall be reviewed with the LU Facilities Representative throughout the design process.

4. Shaped supports are preferred under any counter where a knee space is designed below.

5. Laminate countertops and wood edging will not be accepted at the areas containing sinks. Quartz and Solid Surface are preferred countertops. Confirm selection with LU Facilities Representative.

6. For light-colored laminate, brown edges shall not be visible.

7. All millwork and casework should be minimum AWI “Custom” grade. Select projects may consider “Premium” grade.

8. Use of any wood veneer or solid wood shall be reviewed by LU Facilities Representative.

Division 7– Thermal & Moisture Protection

A. Exterior Walls

Performance: New exterior walls must meet requirements of ASHRAE 90.1. Minimum assembly R-Value 22 or better.

Excluded Materials:

- EIFS (Exterior Finish and Insulation System) or similar materials.
- Vinyl or Aluminum siding
- Stucco

B. Roofing

1. PVC roof system is standard for all low-slope roofs. Any modifications/ alternatives/substitutions of other PVC roof systems must be approved by owner.

2. PVC materials must meet or exceed ASTM D4434 or D6754 and all standards included therein. These standards cover flexible sheets made from poly vinyl chloride resin, plasticizers, reinforcing fibers and weather packages. PVC Sheet must meet ASTM D4434 Classification Type III or Type IV.

3. To make Seams and repairs, the sheet shall be capable of being bonded watertight to itself during the design service life of the sheets. The manufacturer shall recommend a suitable method. Design Service life is defined as the designated time period of intended system performance. The thickness tolerance shall be +- 10% on the overall thickness. The sheet shall have a minimum coating or laminate thickness of 0.40 mm [0.016 in.] above the cross points of any fabric or fiber and the surface exposed to the weather (not required in D6754). The sheet and any factory seams shall be watertight and visually free of pinholes, particles of foreign matter, undispersed raw material, protracting fibers or reinforcement, or other manufacturing defects that might affect serviceability.

4. The manufacturer shall inspect and test their product to ensure compliance of the product with these ASTM standards.

5. The sheet shall be identified on the side intended to be exposed to the weather with its ASTM designation, the name of the manufacturer or supplier, or PVC. Such Identification shall occur at intervals not to exceed 3 m [9.84 ft] in the long direction. The identification shall be applied in such a manner as to be legible five years from installation.

6. Requests for use of a non-PVC roof on any project is to be approved in writing by the LU Facilities Representative.

7. All roofing system designs are to be in compliance with FM Global standards.

8. Asphalt Shingles may be used for slate replacement but only with approval by the LU Facilities Director of Planning, Design, and Construction.

9. All roof openings shall be compliant with applicable OSHA regulations for floor and roof openings.

10. Walk pads are to be provided for access to rooftop equipment. Sika brand Crossgrip open grid walking mat is standard. Any substitute mats must be approved prior by the LU Facilities Representative.

C. Waterproofing

Sheet-applied below-grade waterproofing is required for foundation walls and footings. Membrane to be protected with drainage board and insulation/perimeter foundation drain as needed. Insulation must meet building code.

Division 8 – Openings Doors & Frames

A. Interior Doors

1. Interior doors may be solid core wood, aluminum, or hollow metal. Doors are to be fire rated as required. Full glass doors may be used in select circumstances. All doors taller than 7'-0", and any non-standard details to be reviewed with LU Facilities Representative. All stained grade wood doors to be confirmed with the LU Facilities Representative.

2. Interior doors need to be designed to accommodate Lehigh's access control system (card readers, etc.). Magnetic strikes are not acceptable. Double doors require a removable center mullion, Refer to *Lehigh's Access Control and Door Hardware Standards.*

3. All rooms in which staff and faculty occupy for conducting University business (office, conference rooms, classrooms, etc.) must have a door with vision lites or a sidelite. The size of the vision lite or sidelite shall be determined by the design team. Please consider signage and room scheduling device locations when designing sidelites.

4. Lehigh prefers that signage not be installed on glass.

5. Any frosted interior glass be applied film (not manufactured as frosted glass).

6. Interior hollow-metal steel frames are preferred to be fully welded. Discuss any proposed variation with LU Facilities Representative.

7. Door, frame, and hardware finishes shall be standard color/finish, not custom.

B. Exterior Doors

1. Exterior doors are to be of a durable material such as aluminum or hollow metal steel. Wood exterior doors may be considered in certain locations, with approval from the LU Facilities Representative.

2. Exterior doors need to be designed to accommodate Lehigh's access control system (card readers, etc.). Magnetic strikes are not acceptable. Double doors require a removable astragal.

3. Automatic door openers are to be designed and installed per ADA requirements, for exterior doors. Controls should be building mounted unless not feasible, in which case bollard mounted is acceptable. Refer to *Lehigh University's Access Control and Door Hardware Standards* for hardware requirements.

C. Windows

a) Lehigh has an *Operable Window Policy*, which limits the use of operable windows on campus. Operable windows are limited to individual offices or residential spaces. Exceptions may be made in historic buildings. *(See Appendix)*

b) Design teams for renovation or new construction should consult with the LU Facilities Representative regarding acceptable locations for operable windows.

c) Operable Windows are limited to individual offices, residential spaces, as approved by LU Facilities representative and comply with existing LU Facilities *Operable Window Policy*.

d) Windows should be replaced in a manner best suited to maintaining the character of the original windows. Window material to be reviewed with LU Facilities representative.

D. Skylights

Skylights are not preferred. Design teams for renovation or new construction should consult with the LU Facilities Representative if there is a desire to include skylights.

E. Fire Department Knox (Key) Box

The City of Bethlehem requires a Knox box at the main entrance of all new buildings and major building renovations on campus. The location of the Knox box/es is to be reviewed and coordinated with the Bethlehem Fire Department and the LU Facilities Representative. Knox boxes are ordered from www.knoxbox.com. Once on the

website, type in ‘Bethlehem Fire Department’ and the correct Knox boxes will come up for purchase.

F. Hardware and Access Control

General Notes:
Please review door hardware before door specs are selected to ensure compatibility.

Doors and Frames (must be compatible with Lehigh standard hardware please confirm)

- Hollow metal
- Aluminum
- Storefront
- All Glass (Not approved for exterior doors or access control applications)
- Partial Glass door with header and footer (must have optional SFIC housing for mechanical keying, **proprietary hardware** not approved)

ADA Auto door Closers and Operators

- LCN- 9550 Senior Swing with key switch control (example)
- All equipment should be hardwired, (Wireless push plates are not approved)
- If Access Control is installed, door lock power will be supplied by the access control system
- Outside push plate will be disabled while the building is locked, a valid card reader will enable the push plate operation
- Timing controlled by access system using a CX.12PLUS logic module
- If Access Control is installed, push plates should be wired to existing working auto operator and a 18/4 is run to the to the access control junction box from push plates but not connected.

Non-Electronic Hinges ● McKinney ● Hager **Hinges Continuous** ● Select ● Pemko **Hinges Spring** ● Hager ● Ives **Push Plates, Pulls, Push Bars** ● Hager ● Ives ● Rockwood ● Don-Jo **Kick Plates** ● Hager ● Ives ● Rockwood ● Don-Jo **Wall Stops, Holders** ● Hager ● Ives ● Rockwood ● Don-Jo	**Floor Stops** ● Hager ● Ives ● Rockwood ● Don-Jo **Closers (Door) – no substitutes** ● LCN **Closers (Floor) –(must be approved by facilities)** ● Rixson **Magnetic Hold Opens** ● LCN **Weather stripping** ● **?** **Hardware Finish** ● US26D – 626 (Chrome) **Standard** ● US11 – 643e (Aged Bronze) ● US10B – 613 (Oil rubbed Bronze)

1. See also Division 28 Electronic Safety and Security.

2. *Lehigh University's Access Control and Door Hardware Standards*, which are written, maintained and reviewed by Lehigh's IDEAL Office, are to be requested from the LU Facilities Representative.

3. Johnson Controls is Lehigh's preferred access control vendor. Lehigh typically works directly with Johnson Controls for procurement and installation of access control systems.

4. Electrical contractors on new projects or renovations are responsible for furnishing and installing pathways from electrical or telecom rooms to each door requiring access control.

Division 9 – Finishes

A. Partitions

1. Non-load Bearing Concrete Masonry Unit Partitions

Where practical, CMU should also be considered for acoustically sensitive, high abuse, high traffic, and wet locations. Typical locations might include restrooms and locker rooms, emergency egress stairwells, loading areas, and mechanical rooms.

2. Filled/Polished CMU assemblies

Split Face CMU can be used in locations of high traffic public areas such as visible mechanical spaces, egress stairs and corridors, and workspaces, as determined by the design team and with approval from the LU Facilities Representative.

3. GWB Partitions

GWB partitions are to be appropriately specified by the design team per location, such as fire rated walls, bathrooms, etc. Abuse-resistant GWB should be considered in high-use locations such as stairwells and corridors and other locations as determined appropriate by design team and agreed upon by the LU Facilities Representative.

4. Specialty Partitions

Movable partitions are discouraged, consult with LU Facilities Representative.

5. Finishes

a) Refer to Gypsum Association's GA-214-96 for definition of the five levels of drywall finishing. Provide Level 1 finish for all concealed areas, including ceiling plenums.

b) Provide Level 4 finish for surfaces scheduled for wall surfaces exposed to view unless determined to be Level 5.

c) Provide Level 5 finish for surfaces with gloss or semi-gloss surfaces, or for large surfaces flooded with natural or artificial light, or surfaces exposed to raking light.

6. Framing

a) Steel framing for Wall and Partitions should meet ASTM standards.

b) All studs shall extend to underside of deck.

c) Provide deflection head tracks at all non-rated partitions.

d) Provide UL compliant head tracks at all rated partitions.

e) Provide blocking as needed for casework, railings, equipment, fixtures, restroom accessories and other wall mounted elements.

7. Acoustic Treatment

a) Unless otherwise indicated, partitions are to be considered full height at program spaces (offices and conference rooms), corridors, restrooms, and stairwells.

b) Provide acoustic sealant between partition and slab/deck at all full-height partitions.

c) Provide acoustic insulation at program spaces (offices and conference rooms), corridors, and restrooms.

B. Ceiling Assemblies

For renovations, coordinate with the LU Facilities Representative to specify the type of ceiling assembly already in use in the building to ensure continuity.

Introduce new material only with permission from the LU Facilities Representative. Deviations from these products must be approved by the LU Facilities Representative.

Refer to the Standard Space Types (Division I (E)) at the beginning of these standards for additional information regarding ceiling assemblies. See sections below for specific product information.

1. Plaster and Gypsum Board Ceilings

GWB, plaster, and splined ceilings are generally discouraged due to lack of access to plenum space. However, GWB ceilings may be used in select spaces, such as for edge conditions and soffits and as deemed appropriate by the LU Facilities Representative. Restrooms are to receive ACT ceilings, no GWB.

2. Acoustic Ceiling Treatment

2x2 ACT is preferred. No ACT larger than 2x4 will be allowed without permission of LU Facilities Representative.

Standard grid and tile for all office, classroom, and other public spaces:

- Armstrong Interlude 9/16 XL HRC or equal
- Armstrong 2x2 Ultima beveled tegular tile or USG equivalent
- VE tile option: Armstrong Canyon beveled tegular or USG equivalent

Standard and tile for all damp and wet labs, and shower rooms (not in shower stalls):

- Armstrong Interlude 9/16 XL HRC or equal
- Armstrong Ultima Health Zone beveled tegular or USG equivalent

Standard grid and tile for kitchens:

- Armstrong Ultima Health Zone flat lay in or USG equivalent as required by code.

3. Specialty Ceilings

a) For areas such as main vestibules or double height spaces, alternate ceiling types may be considered. Some examples of approved alternate ceilings are: Wood slat (Rulon or equal), metal, acoustic clouds, unfinished ceilings with a

K-13 or similar finish, wood acoustic ceiling tiles.

b) All specialty ceilings must conform to Lehigh's requirement of maximum tile size of 2'x4'.

b) Specialty ceilings must allow easy access to the space above by a single technician. Clips and concealed suspension systems are not permitted.

c) Fabric ceilings are not permitted.

4. Paint and Coatings

Sherwin-Williams products are preferred at Lehigh, even if a color from another manufacturer is selected. Substitutions will be considered if demonstrated to be of equivalent performance. Low VOC paint and primer is preferred, whenever possible. Chalkboard and whiteboard paint is not allowed.

Specifier Notes:

a) Primer can be eliminated on most previously painted substrates in sound condition.

b) Replace specified primer with **Extreme Bond Primer** for unknown paints on existing surfaces and old semi-gloss and glossy, hard-to-paint surfaces.

b) For occupied spaces requiring odor elimination and reduction of formaldehyde, replace ProMar 200 with **Harmony Latex Paint**, flat, eggshell or semi-gloss.

c) If a product that can kill bacteria on a surface within 2 hours of exposure is required, review with LU Facilities Representative.

d) Clean Room and Lab spaces: If sterilization cleaners are used, or if there is heavy moisture and chemical resistance requirements, review with LU Facilities Representative.

5. Interior Paint Schedule

Ceilings and soffits: flat finish
Walls: eggshell finish
Trim: satin finish

a) Masonry and Concrete – ceilings and soffits - flat finish

- Primer: Loxon Concrete and Masonry
- 2 finish coats: ProMar 200 Zero VOC flat

b) Masonry and Concrete – eggshell finish

- Primer: Loxon Concrete and Masonry Primer
- 2 finish coats: ProMar 200 Zero VOC eggshell

c) CMU – eggshell finish

- Filler: PrepRite Block Filler
- 2 finish coats: ProMar 200 Zero VOC eggshell

d) Gypsum – ceilings and soffits- flat finish

- Primer: ProMar Ceiling Paint flat
- Finish coat: ProMar Ceiling Paint flat

e) Gypsum – eggshell finish

- Primer: ProMar 200 Zero Primer
- 2 finish coats: ProMar 200 Zero VOC eggshell

f) Moisture and Impact Resistant Gypsum – eggshell finish

- Primer: Multi-Purpose Water based Acrylic-Alkyd Primer – No Substitutions
- 2 finish coats: ProMar 200 Zero VOC eggshell

g) Moisture and Impact Resistant Gypsum – Pre-Catalyzed EPOXY (** select eggshell finish or semi-gloss finish) Light commercial, Dry Laboratories and Rest Rooms eggshell finish

- Primer: Multi-Purpose WaterBased Acrylic-Alkyd Primer – No Substitutions
- 2 finish coats: ProIndustrial Pre-Catalyzed Water Based Epoxy ** select finish – eggshell or semi-gloss

h) Wood- painted – eggshell finish

- Primer: ProMar 200 Zero VOC Primer
- 2 finish coats: Solo 100% Acrylic Latex, semi-gloss

i) Wood – stained finish

- Stain: Minwax Performance Series Wood Stain 250 VOC
- 2 finish coats: Min-Wax Fast Drying Polyurethane (gloss, semi-gloss, or satin)

j) Ferrous Metal and Non-Ferrous Metal – Doors, Frames, Stair components and miscellaneous metals including elevator frames and doors

- Primer: ProIndustrial Pro-Cryl Universal Primer
- 2 finish coats: ProIndustrial WB Alkyd Urethane Enamel, B53 series ** select finish – low sheen or semi-gloss

k) Pre-Catalyzed EPOXY (eggshell finish or semi-gloss finish)

- Primer: TBD
- 2 finish coats: ProIndustrial Pre-Catalyzed Water Based Epoxy
  ** select finish – eggshell or semi-gloss

l) Concrete Floors – (pigmented)

- 2 finish coats: ArmorSeal 8100 WB Epoxy coating

m) Concrete Floors – (clear sealer)

- 2 finish coats: GP 3477 Epoxy Water Emulsion Sealer

n) Exposed Ceilings

- Primer (Ferrous and Non-Ferrous Metal): ProIndustrial Pro-cryl Universal Primer
- 2 coats: Low VOC Waterborne Acrylic Dryfall, Flat B42- W00081;
  OR:

  Low VOC Waterborne Acrylic Dryfall, Eggshell B42- W00082

6. Color Palette

Paint color selections must be reviewed and approved by the LU Facilities Planning, Design, and Construction department representative for consistency on campus. Design teams and/ or individual campus stakeholders must have written approval for any paint color choices on campus.

7. Tile

Through-body porcelain tile shall be used for floor uses. If tile floors are used, epoxy grout is preferred. Medium to dark grey grout is preferred, white or light colors will not be accepted on floors.

8. Resilient Flooring

Non-wax products such as LVT or linoleum are preferred over BBT and VCT. 20 mil wear layer minimum, 30 mil preferred for LVT. Careful attention shall be given to product texture to avoid scratching and visible dirt from salt, etc. Flooring direction/pattern plan to be included. Coordinate selections and locations with LU Facilities Representative.

9. Resilient Base

Type TS rubber cove, coil is preferred. White and light colors are not preferred.
Wood base is not preferred, check with LU Facilities Representative when matching existing finishes.

10. Resilient Stair Treads & Landings

Speckled colored hammered finish rubber is preferred.

11. Flooring Transitions

Minimal or no transition strips are preferred between flooring products. If required, smaller profiles are preferred. To be reviewed by LU Facilities Representative.

Division 10 – Specialties

A. Whiteboards and Chalkboards

Whiteboards are typically to be included as part of the furniture package, which is procured by Lehigh. Contractor is responsible for wall blocking for whiteboards, as indicated on the drawings. Whiteboard installation is also typically part of the furniture installation, procured by Lehigh.

Whiteboard standard is Quartet Infinity Glass magnetic marker board with standoffs, white surface or equal. Sizes range depending on location and user preference. Sizes and locations to be reviewed by LU Facilities Representative.

Whiteboards and chalkboards are to be designed, specified and purchased as framed units. Lehigh will not allow frames to be custom built on site.

B. Tackboards

Tackboards are typically to be included as part of the base building. Contractor is responsible for wall blocking for tackboards, as indicated on the drawings. Forbo bulletin board is preferred, mounted to Masonite backer, with finished Schluter or similar edge, and mounted on clips. Seams are to be minimized. Sizes, colors and locations to be reviewed by LU Facilities Representative.

C. Signage

1. Exterior Signage and Wayfinding

Refer to current exterior *Wayfinding and Signage Manual* (to be included on all new buildings and large-scale renovation projects). Locations for Exterior Signage and Wayfinding are to be coordinated with the LU Facilities Representative.

Locations for signage are to be coordinated with the LU Facilities Representative.

3. Interior Signage

Refer to *Interior Signage Standards.* Coordinate interior signage with LU Facilities Representative.

4. Donor Signage

Donor signage should be incorporated into the construction documents by the design team, per the direction of the LU Facilities Representative.

5. LEED and Sustainability Building Element Signage

Refer to Interior Signage Standards. Coordinate LEED plaque signage and sustainability building elements signage with LU Facilities Representative as part of the base building signage package.

Division 11 – Equipment

A. Special Equipment

For projects requiring special equipment, the design team is to collaborate with the LU Facilities Representative and the end users for standard equipment and vendors. This includes, but is not limited to, food service equipment, fitness equipment, lab equipment, and trash/recycling equipment.

B. Interior Trash and Recycling

Refer to *Trash and Recycling Receptacle Standard.* Coordinate quantity and locations with LU Facilities Representative.

Division 12 – Furnishings

A. Furniture

1. Refer to *Lehigh Furniture Design Standards*. *and* *Furniture Purchasing Policy*

2. All furniture is to be reviewed and approved by LU Facilities Representative. While furniture is typically contracted directly by Lehigh University, coordination is required with the design team, AV consultant and integrator, and contractors for power and data.

3. Fixed seating is also typically contracted directly by Lehigh but needs to be coordinated and planned by the design team.

B. Window Treatments

1. Basis of design is as follows for instructional spaces, to be reviewed by LU Facilities Representative on per project and per location basis:

Manufacturer - Draper
Clutch Operated FlexShade

Fabric Series: SW2700
Color: P-28 Oyster/Charcoal 3% open (review color and openness with project/space use type and project finishes)
Fascia Color: Charcoal Bronze (review with project finishes)

2. Coordinate room darkening/black out shades with A/V as required by program. Same for motorized shades, where required by space type/configuration. Review both with LU Facilities Representative.

3. Basis of design for older residential buildings is mini blinds. Match existing when necessary, and review with LU Facilities Representative.

Division 13 – Special Construction

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Division 14 – Conveying Systems

A. Elevators

1. Design team is to work with LU Facilities Representative and Lehigh's Elevator Consultant for design and selection of elevators. They should start reviewing design and specifications for the elevator during the Design Development (DD) phase of every project.

2. Walls around elevators should be finished in a hard, durable surface. The surface should be cleanable, stain resistant, and able to withstand impact from equipment.

3. Elevator doors should be stainless steel.

4. Floors shall be rubber with a non-skid raised pattern in service or exterior elevators (i.e., garages) or upgraded flooring (i.e., terrazzo tile, ceramic tile, other materials) in all other elevators. Interior cabs shall be of metal, solid surface, or other durable and high-quality finishes that will discourage and hide vandalism and provide an attractive elevator cab finish.

5. Elevator ceiling shall be stainless steel with LED downlights.

6. New construction and modernizations shall be designed for a minimum 3500 lb capacity, where applicable.

7. Elevator controllers and door operators shall not be proprietary and must be located in the equipment room, not the elevator jamb.

8. Elevator equipment rooms, in addition to meeting all code requirements, shall have access to allow for equipment and technicians to reasonably service room and its equipment. Access to room shall be direct and shall be located in a discrete

fashion to not appear as a publicly accessible room. Co-location of any non-elevator equipment (mechanical, electrical, data/ telecommunications, facility/other storage, etc.) is not acceptable.

9. Elevators may require access control (card readers), either for elevator access (outside the elevator) or for specific floor access (inside the elevator). Coordinate requirements with Lehigh University.

10. All elevators are to have phones programmed to call Lehigh University Police Department (coordinate with LU LTS).

11. Coordinate requirements for elevator equipment rooms. This may include location, access off service corridors (similar to other service spaces), proximity to elevator chase, building service requirements (power, data, telephone, HVAC/venting, other items), and other considerations.

12. Coordinate elevator car operating panel signage with building signage.

B. Vertical Wheelchair Lifts

Design team is to work with LU Facilities Representative and Lehigh's Elevator Consultant for selection and use of vertical wheelchair lifts.

Division 21 – Fire Suppression

Refer to LU's MEP Standards.

Division 22 – Plumbing

Refer to *LU's MEP Standards*.

Division 23 – Heating Ventilating and Air Conditioning

Refer to LU's MEP Standards.

Division 25 – Integrated Automation

Lehigh's primary controls contractors are Siemens and Honeywell systems.

Refer to LU's MEP Standards.

Division 26 – Electrical

Refer to LU's MEP Standards.

Division 27 – Communications

Refer to LU's Communications Infrastructure Standards 1-24-2025.

Division 28 – Electronic Safety and Security

Refer to Lehigh University's Access Control and Door Hardware Standards,

Division 31 – Earthwork

A. Site Planning Standards

Refer to Site/Civil Land Surveying and Related Drawing Requirements.

B. Soil Disturbance or Excavation Restoration Specification

Upon disturbing or excavating the soil on Lehigh University property the following procedures must be followed.

1. Seeded Areas

a) Excavation should be completely backfilled and compacted to bring to grade with surrounding undisturbed ground.

b) When backfilled, if additional soil is needed to bring the excavation to grade, the soil will be supplied by contractor, and compacted to prevent settling.

c) Soil surface shall be raked smooth and level. All rocks shall be removed from top two inches of soil to create suitable seed bed for grass seed.

d) Perennial Rye (sun applications) or Turf Type Tall Fescue (shady applications) grass seed, unless otherwise specified prior to excavation, shall be applied to prepared soil at a rate Shall be applied to prepared soil at manufacturer recommended rates. Annual Rye grass is not acceptable in any case.

e) Erosion control shall be used to ensure soil and seed stay intact through the germination period of the seed.

f) Initial watering of seed is required by installer. Apply enough water to seed bed to keep grass seed moist for a period of 24 hours. Additional water should be applied by the installer daily for three (3) weeks if no rain is expected each day.

2. Sodded Areas

a) Soil preparation will be the same as stated above for seeded areas.

b) Sod will be a Turf Type Tall Fescue and Perennial Rye mix unless otherwise stated. Suppliers will be provided upon request.

c) When installed, sod will match the existing grade of surrounding area.

d) All pieces of sod will be placed tightly together to prevent drying out of edges and creating tripping hazards.

e) Sod shall be watered by the installer for seven (7) consecutive days with enough water to properly saturate the roots and native soil. If sod dries out and yellows, this will be considered negligence, and sod replacement will be required, at no cost to Lehigh.

f) Sod or seed installation will be inspected by a Lehigh University representative. Lehigh University reserves the right to withhold payment until above requirements are satisfied.

Division 32 – Exterior Improvements

A. Site Furnishings and Fixtures

1. Site furnishings shall include Lehigh University approved seating, tables, trash and recycling receptacles (refer to *Trash and Recycling Receptacle Standard, See Appendix*), bicycle racks, signage posts, and others as dictated by site location and building program.

2. Locations and types to be determined by LU Facilities Representative.

B. Bike Racks

1. Racks must comply with University Standard and be set at location approved by LU Facilities Representative. Lehigh has approved the Heavy Duty Inverted-U Rack from Sportworks or approved equal.

2. University Standard is: Inverted U-shaped (no cross bar or other infill), Stainless steel, Satin No. 4, no surface blemishes. 1-1/2” Schedule 40 (2” O.D.) Size: 3’ high, 2’ long, using 24” radius. Space a minimum of 3’-0” o.c.

C. Landscape

1. Ground Cover/Trees/Accents

a) Shall allow for safe public access and shall visually connect existing architectural and site elements with the future buildings and parking facilities.

b) The design and selection of all landscape treatments should be integrated into the overall design approach for each site.

c) Special landscape treatments are recommended at primary building entrances and at pedestrian and roadway gateways.

d) Landscape treatments at primary building entrances shall be coordinated with architectural styles, materials, and color schemes.

e) All landscape treatments shall adhere to the principles of sustainable design to the fullest extent possible.

f) Native deer resistant species shall be utilized whenever possible.

g) The use of energy-efficient landscape design (e.g., placement and selection of shade trees and windbreaks and the use of vegetation and reflective materials to reduce heat islands) should be utilized whenever possible.

h) All landscape designs are to be coordinated with and approved by the Associate Director of Custodial, Grounds and Athletics and the LU Facilities Representative.

D. Planting Guide

Contact LU Facilities Representative for more information.

E. Tree Grates

Contact LU Facilities Representative for more information.

F. Hardscape

1. Materials and Methods/Utilization

a) Shall allow for safe public access and shall visually connect existing architectural and site elements with the future buildings and parking facilities.

b) The site shall feature pedestrian and bicycle access along all access points and adjacent roadways.

c) Pervious hardscape materials (e.g., pervious pavement or pavers) should be utilized whenever possible to reduce runoff generated from impervious surfaces.

2. Paving - Exterior Sidewalk

a) Minimum six (6) inches of 4000 PSI concrete.
b) Eight (8) inches of approved PennDot stone base

G. Fencing

The design team is to coordinate all proposed fencing with the LU Facilities

Representative.

H. Site Walls

The design team is to coordinate all proposed site walls with the LU Facilities Representative.

I. Exterior Equipment

1. All exterior mechanical and/or electrical equipment shall be screened from view. This includes rooftop equipment and ground-level equipment.

2. The screening should be adequate to fully cover the equipment from ground level or adjacent building view.

3. Noise from exterior mechanical and/or electrical equipment should be considered and discussed with the LU Facilities Representative to determine if acoustic treatments need to be added.

J. Exterior Trash Enclosures

1. Exterior trash enclosures shall be provided with each project unless waived by the LU Facilities Representative, and if not required by the City of Bethlehem.

2. Trash enclosures should also be screened from public areas, campus view corridors and building entries. Screening shall be provided from ground level views as well as any adjacent building views. Exterior trash enclosures are to be three-sided, made of wood or composite material.

3. Trash enclosures are to be large enough to house trash and recycling toters. Dumpsters are not used, unless specifically indicated by Lehigh.

4. Interior trash rooms are not permitted. Lehigh's trash is removed from buildings on a daily basis and should be stored in exterior trash and recycling totes.

K. Exterior Trash and Recycling Receptacles

1. LU Facilities purchases, installs and maintains all exterior trash and recycling receptacles on campus.

2. Exterior trash and recycling locations for new buildings are to be coordinated with the LU Facilities Representative.

3. Exterior trash and recycling receptacles are presently Big Belly High Capacity (HC 5) *Smart, Solar-Powered Compacting Model.* Alternative receptacles need prior approval from Lehigh University Representatives.

L. Site Lighting

Refer to LU's MEP Standards.

M. Bus Shelters

1. Bus shelters basis of design by Duo-Gard Industries.

2. For projects requiring new bus shelters, the design team is to coordinate with the LU Facilities Representative for bus shelter style, features and location.

Appendix: Other Guidelines, Standards and Policies

This Appendix contains live links to other guidelines, standards, and policies that may be applicable to the project. If a link is not available, please communicate with the LU Facilities Representative to determine if the policy is required for the project.

Last Update

- Access Control and Door Hardware Standards 2/2024
  (Contact the LU Facilities Representative to determine if required.)
- Addressable Fire Alarm System 1/2021
- AV Standards 12/2026
- Building and Room Numbering Policy 8/2024
- Classroom Technology Standard Part 1 / Part 2 / Part 3 5/2024
- Branding and Visual Identity Guide 1/2026
- Construction & Demolition Waste Management 11/2020
- Control Survey Report 9/2016
- Drawing and CAD Standards 8/2024
- Dry Pipe and Preaction Sprinkler System 5/2024
- Emergency Phone Standard 1/2025
- Environmental Permitting Requirements for New Construction Projects 6/2019
- Wayfinding and Signage Manual 11/2023
- Furniture Standards 8/2024
- Furniture Purchasing Policy 9/2024
- Interior Signage Standards 1/2024
- Climate Action Strategy 2021
- Lehigh University Environmental Health and Safety Various
  (for policies and procedures related to contractors, labs, hazardous waste, trainings, etc.)
- Lehigh University Digital Data Release Policy and Agreement 12/2024
- Lehigh University Sustainable Purchasing Policy 8/2021
- LTS Communications Infrastructure Standards 1/2025
- LTS Procedural Standards 11/2019
- *LU's MEP Standards* 7/2025
- Lactation Rooms (Alternate Link 2019) 6/2016
- Operable Window Policy 9/2019
- Laboratory Planning Guidelines 8/2024
- Site / Civil Land Surveying and Related Drawing Requirements 2/2024
- Site Lighting 1/2023
- Space Assignment Policy 1/2025
- Sustainability Strategic Plan 2030 10/2020
- Trash and Recycling Receptacle Standard 2/2021
- Waste and Recycling Guideline 5/2019
- Wet Pipe Sprinkler Systems 3/2021