

January 2025 Design Standard Updates

Details

Mechanical

- **23 31 13 03 Single Duct Air Terminal Unit Ceiling Diffuser:**
 - Cleaned up detail formatting.
- **33 00 00 02 Typical Building Steam System Piping Schematic:**
 - Cleaned up detail formatting.
 - Corrected mislabeled MPC.
 - Added N.C. note to MPS bypass valve.
- **33 63 00 05 Steam Metering Piping:**
 - Cleaned up detail formatting.
- **33 70 00 03 Transformer Pad Detail:**
 - Relabeled detail spec section.

Narratives

Access Control

- **Electronic Door Access Control System:**
 - Specified which items will be furnished by UNL BSM.

Architectural

- **Custodial Facilities**
 - Cleaned up section formatting.
- **Floors**
 - Specified terrazzo use must be approved by NU FPCP project manager.

Electrical

- **Building Electrical Systems**
 - Added clarification that new ATS neutral configuration should match / not compromise existing ATSS.
 - Added requirement for restroom emergency lighting.
 - Added requirement for red conduit for fire alarm wiring.

Fire and Life Safety

- **Fire Alarm Systems – UNL**
 - Added requirement for red conduit for fire alarm wiring
- **Fire Alarm Systems – UNO**
 - Added new narrative specific to UNO.

General

- **Codes, Standards, and Regulations**
 - Updated NEC year to current 2023 adoption.
- **Sustainability:**
 - Updated link to new policy location.

Mechanical

- **Plumbing Systems**
 - Specified Ohio Medical compressors are not allowed.

Utilities

- **Utility Metering**
 - Updated spec section for pressure sensors schematic diagram.
 - Updated spec section for steam flow meter schematic diagram.

Specifications

General

- **08 71 00 Door Hardware**
 - Specification created

Fire Suppression

- **21 05 00 Basic Fire Suppression Requirements**
 - Fixed typos and updated formatting

Plumbing

- **22 05 19 Plumbing Meters and Gages**
 - Updated section formatting

Heating Ventilation and Air Conditioning

- **23 36 13 Lab Valves**
 - Specification created
- **23 73 13 Air handling Units**
 - Specified Fan array controls are provided by UNL BSM.
 - Q-Pac Fan Systems or equal are not allowed with custom packaged air handlers.

Electrical

- **26 00 00 Basic Electrical Requirements**
 - Added restriction on aluminum wiring in relation to 26 05 19 – Conductors & Cables.
 - Replaced metal halide callout for exterior lighting fixtures with LED.
- **26 81 00 Fire Alarm – UNL**
 - Specification created

July 2024 Design Standards Updates

General: General update to change Design Guidelines to Design Standards. All references of Design Guidelines shall hereafter be understood to be Design Standards.

Details

Architectural

- **UNK Restroom Standards:**
 - Created restroom designs for UNK.

Electrical

- **26 56 00 01 Parking Light Street Pole:**
 - Removed top hand hole.
 - Removed surge protector requirement
 - Required connections be wrapped with heat shrink in lieu of vinyl tape.
- **26 56 00 02 Pedestrian Pole A:**
 - Downsized copper ground
 - Reduced depth of concrete collar
 - Required connections be wrapped with heat shrink in lieu of vinyl tape.
- **26 56 00 03 Pedestrian Pole B:**
 - Downsized copper ground.
 - Reduced depth of concrete collar.
 - Required connections be wrapped with heat shrink in lieu of vinyl tape.
- **26 56 00 04 Pedestrian Pole C:**
 - Downsized copper ground.
 - Reduced depth of concrete collar.

DESIGN STANDARD UPDATE LOG

- Required connections be wrapped with heat shrink in lieu of vinyl tape.
- **26 56 00 05 Light Pole Fuse Wiring Diagram:**
 - Removed previous SPD detail.

Mechanical

- **23 21 00 06 Terminal Heating Unit Hydronic Coil Piping:**
 - Updated correct uses for detail.
- **23 31 13 03 Single Duct Air Terminal Unit Ceiling Diffuser:**
 - Added keynote 7 about damper.
- **23 37 00 02 Outside Air Louver Plenum Construction:**
 - Added required snow screen to detail.

Utilities

- **33 63 00 01 Steam Distribution System Drip Trap:**
 - Changed number of 90-degree bends to 3.
- **33 63 00 03 Steam Isolation Valve By-Pass:**
 - Updated gauge type and valve material.
- **33 70 00 01 Vault Electrical:**
 - Changed junction box to stainless steel.
- **33 70 00 03 Transformer Pad:**
 - Added general notes 12, 13 and 14.
- **33 70 00 04 Switch Pad:**
 - No alterations without written consent.

Narratives

Architectural

- **Equipment Rooms, Mechanical:**
 - Specified material for watertight seal.
- **Floors:**
 - Specified material for watertight seal.
- **Laboratories, Chemical and Biological:**
 - Updates to fume hood sensors to increase air change rates.

Civil

- **Sidewalks and Rigid Pavement:**
 - Added stainless steel handrail requirement.

Closed Circuit Television

- **Closed Circuit Television – UNL:**
 - Created Narrative.

Electrical

- **Building Electrical Systems - UNL:**
 - Removed preference of integral SPDS to standalone units.

Energy Conservation

- **Energy Conservation:**
 - Updates to modeling, life cycle, BTUs and chilled beams.

Fire and Life Safety

- **Fire Alarm Systems – UNL:**
 - Made more specified for UNL with updated information and technology.

Landscape

- **Landscape Design Planting and Irrigation:**
 - Gave preferences on seeding vs sodding for different campuses.
- **Rigid Paving:**
 - Removed requirement for fiber reinforcement.

Mechanical

- **Airside Components and Systems:**

DESIGN STANDARD UPDATE LOG

- Set to most Current ASHRAE standards and allows for custodial and restroom exhaust to be combined for certain reasons.
- **Building Steam Systems:**
 - Added Buildings Without PRV's section.
- **Cooling Systems:**
 - Re-wrote exceptions for Plate and Frame exchangers and Buna-N sections.
 - Updated Chilled Water End Use
- **Heating Systems:**
 - Specified waterside temperature differential.
 - Introduced exception for automatic balancing valves.
- **HVAC Control and Building Automation Systems:**
 - Added exception for internal air handler and fire damper.
 - Specified Delta P valve.
- **HVAC Systems:**
 - Specified water source for chilled beams.
 - Gave requirements for DOAS systems
- **Mechanical Design Deliverables and Process:**
 - Updated estimated peak estimations.
- **Plumbing Systems:**
 - Designated the correct temperatures for Thermostatic mixing valves.

Utilities

- **Chilled Water Distribution System:**
 - Introduced consideration of building side booster pumps.
- **General Utilities Guidelines:**
 - Added requirements for major building renovations.
 - Included medium voltage instructions.
 - Added scheduling of shutdowns.
 - Gave vault dimensions.
- **Steam Distribution System:**
 - Changed distribution piping requirements.
 - Added steam stop valve requirements.
 - Requires ASME B16.34 compliance.

Specifications

Heating Ventilation and Air Conditioning

- **23 33 00 Ductwork Accessories:**
 - Duct smoke detector to be provided by fire alarm installer.
- **23 73 13 Air Handling Units:**
 - Allows equal for specified backdraft dampers.
 - Allows Camfil fast frame clipless mounting with owner permission on frame filters.

Electrical

- **26 05 13 Medium Voltage MV Cable:**
 - Cable splices to be allowed with owner approval.
 - Removed outdated cable pull requirements
 - Removed requirement for testing immediately after installation. Testing after termination preparation remains required.
- **26 05 33 Raceways:**
 - Raceways in refrigerated areas shall be PVC or aluminum.
 - Requirement that fittings be same material added.
 - Removed section requiring only sections 8' above floor and lower to be rigid steel or intermediate metal conduit.

DESIGN STANDARD UPDATE LOG

- Exposed raceways in utilities managed areas to be only rigid steel or intermediate conduit, unless approved otherwise.
- Conductors over 600V shall be rigid steel conduit or intermediate metal conduit only.
- **26 12 00 Padmounted Liquid-Filled Medium-Voltage Transformers:**
 - Requirement of fiberglass shields around primary bushings.
- **26 24 13 Switchboards:**
 - Requirement of short-circuit, arc-flash, and coordination studies.
 - Require coordination curves be submitted.
 - Switchboards to be service entrance rated.
 - Drawing dimensions to be considered the basis of design.
 - Updated requirement that all breakers less than 250A be thermal-magnetic trip with inverse time current characteristics.
 - Requirement to install breakers with integral ground-fault protection per code.
 - Requirement to include all necessary control power and components.
 - Removal of sections involving fusible switchboards and other outdated equipment.
- **26 43 13 Surge Protection:**
 - Require that outdoor SPDs be suitable for Class C environments.
 - Updated language requiring all SPDs to be integral to equipment.
- **25 56 13 Lighting Poles:**
 - Added requirement that poles stored outside be unwrapped prior to storage.

Exterior Improvements

- **Turf and Grasses:**
 - Made applicable to all campuses not just UNL.

Process Interconnections

- **40 05 13 Process Piping:**
 - Specification created.