APPENDIX D

HARDSCAPE GUIDELINES

DESIGN GUIDELINES

HARDSCAPE GUIDELINES:

The Tennessee Tech hardscape design guidelines create consistency, promote unity, organize beauty and establish a cohesive framework that integrates paving, pathways, plazas, and outdoor furnishings into a unified visual and functional system. The guidelines begin by defining a consistent material palette for pavements, and seating areas, ensuring that all hardscape elements complement one another and reinforce the campus identity. Pathways should be organized into a clear hierarchy, with primary pedestrian routes connecting major campus zones and secondary paths leading to courtyards, gardens, and recreational areas. This hierarchy not only improves circulation but also creates visual order and intuitive wayfinding.

To promote unity, the design guidelines incorporate recurring design elements such as uniform lighting fixtures, coordinated benches, and standardized signage throughout the campus. Gathering spaces, including plazas and outdoor commons, should be strategically placed to serve as focal points for social interaction and campus events, while maintaining a consistent design language that ties them to surrounding pathways and green spaces. Materials and patterns should be selected to harmonize with the natural landscape, using textures and colors that complement seasonal plantings and enhance the sense of place.

Organizing beauty within the hardscape involves balancing functionality with aesthetics. Sustainability should also be embedded in the design, incorporating permeable pavements for stormwater management and durable, locally sourced materials to reduce environmental impact. By unifying these elements under a clear set of design principles, the hardscape design guidelines transforms exterior spaces into a cohesive, inviting, and visually appealing environment that reflects the university's identity and enhances the campus experience.

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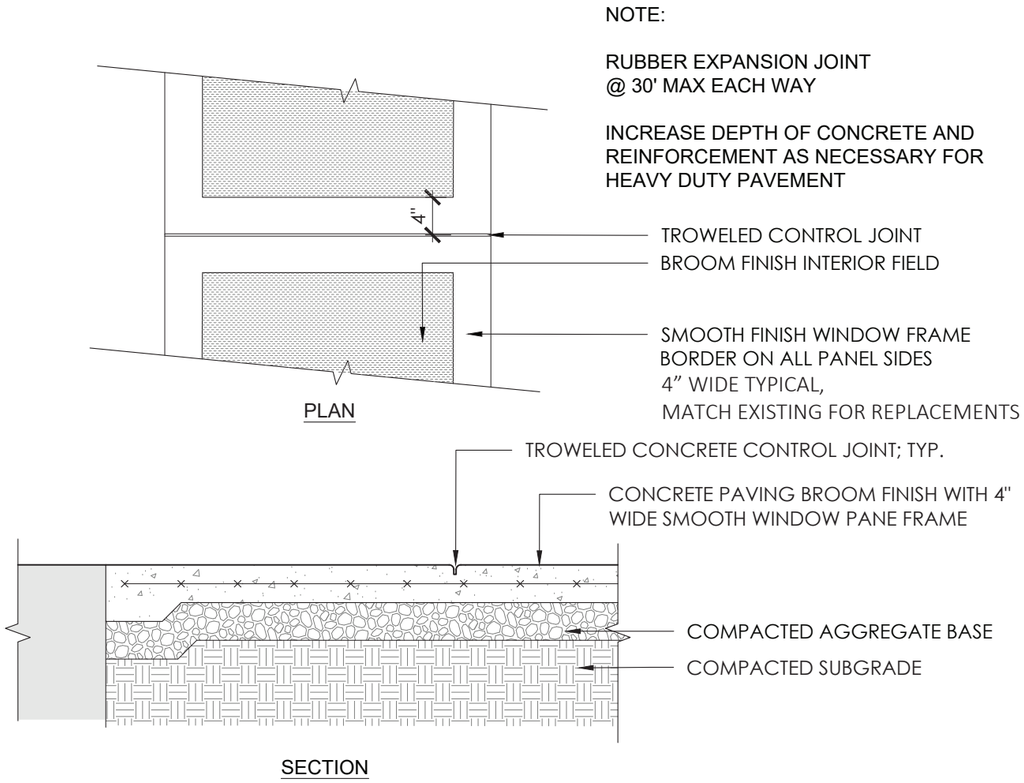
CONCRETE PAVEMENT - Light Duty

To promote a cohesive, accessible, and sustainable pedestrian environment across campus, all walkways shall be designed with consistent materials, colors, and detailing. These pathways serve as vital connectors between academic buildings, residential areas, and campus amenities, and their design plays a key role in shaping the overall campus experience.

CONCRETE PAVEMENT - Heavy Duty

Heavy-duty concrete paving is used on campus in areas that require enhanced structural strength and long-term durability, such as service drives, loading zones, fire lanes, and maintenance access routes. Designed to withstand frequent vehicular traffic and heavy loads, this paving solution ensures reliable performance under demanding conditions. Its robust composition also supports low maintenance and longevity, making it a practical choice for infrastructure-critical zones. While primarily functional, heavy-duty concrete can be finished and detailed to align with campus aesthetics, ensuring it integrates seamlessly into the broader landscape design.

Typical Concrete Walkway
Color: Gray
Layout: Window Frame with Light Broom Finish



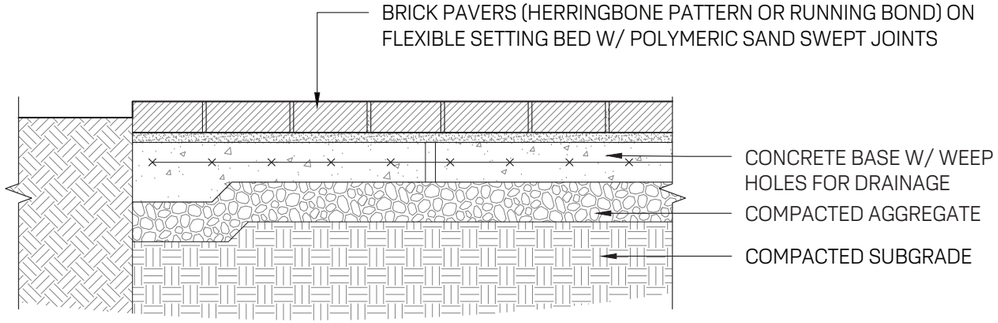
Typical Detail

DESIGN GUIDELINES

BRICK PAVING

Brick paving is used strategically across campus to signify areas of elevated importance, detail, and intentional design. These spaces, often serving as gathering points, pedestrian corridors, and collaborative zones, benefit from the warmth, texture, and timeless quality of clay brick, which enhances both functionality and aesthetic appeal.

Typical Brick Paving
Color: Red Blend
Pattern: Running Bond or Herringbone
Brick Type: Clay Brick Paving with Beveled Edge



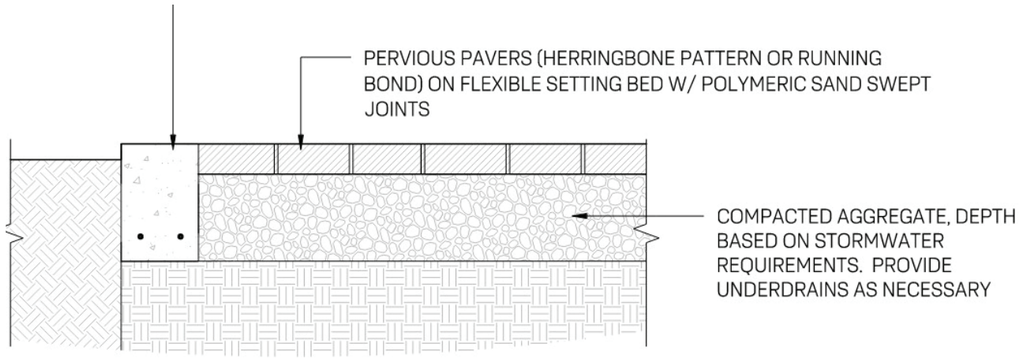
Typical Detail

DESIGN GUIDELINES

CONCRETE PAVERS

Concrete pavers offer a versatile and environmentally responsible solution for enhancing both the functionality and aesthetic quality of campus infrastructure. As stormwater regulations and sustainability goals continue to evolve, these systems provide an opportunity to transform traditionally utilitarian surfaces into high-performance, visually engaging spaces that support Tennessee Tech's commitment to ecological stewardship and design excellence.

Typical Concrete Pavers
Color: Gray
Pattern: Herringbone Field



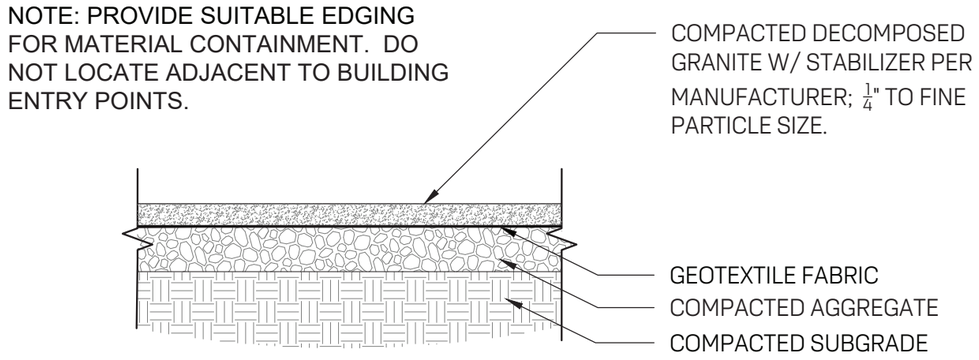
Typical Detail

DESIGN GUIDELINES

DECOMPOSED GRANITE

Decomposed granite (DG) paving offers a natural, textured surface that enhances the character and usability of informal gathering spaces across campus. Its understated elegance and permeability make it an ideal material for areas with no cross-traffic and a focus on community engagement, relaxation, and outdoor interaction.

Typical Decomposed Granite
Color: Selected by Project
Edging: Concrete Border or Metal Edging



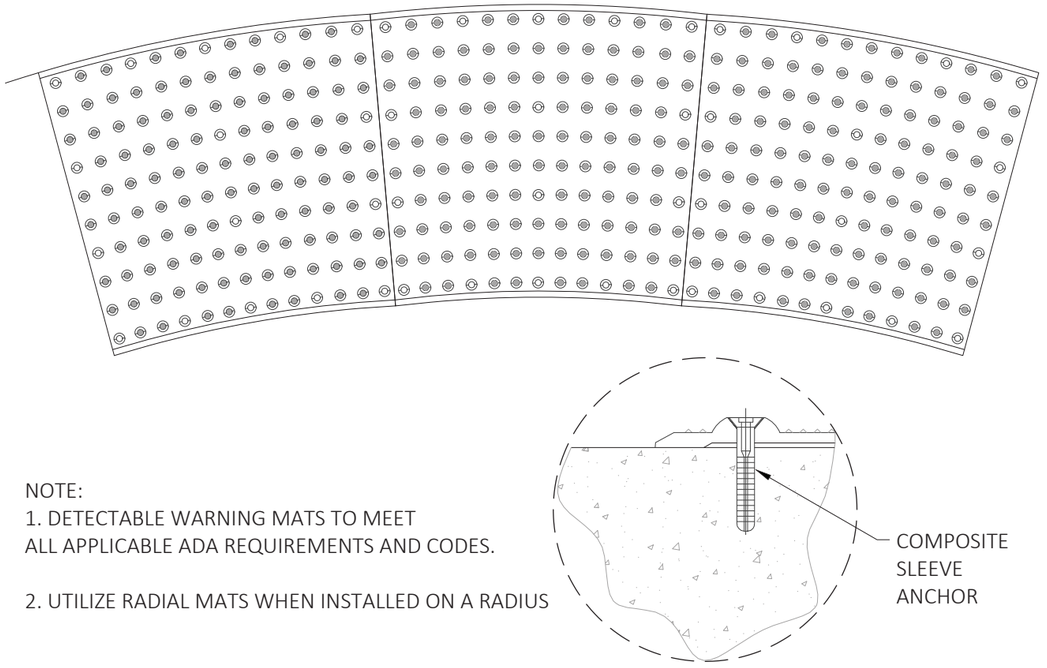
Typical Detail

DESIGN GUIDELINES

DETECTABLE WARNING

Detectable warning strips are textured surfaces that help people with vision impairments identify changes in walking areas, like curb ramps or street crossings. They have raised bumps that can be felt underfoot or with a cane and are usually a bright color to stand out. These strips improve safety and accessibility while blending into the overall design of campus walkways.

Typical Detectable Warning
Color: Yellow

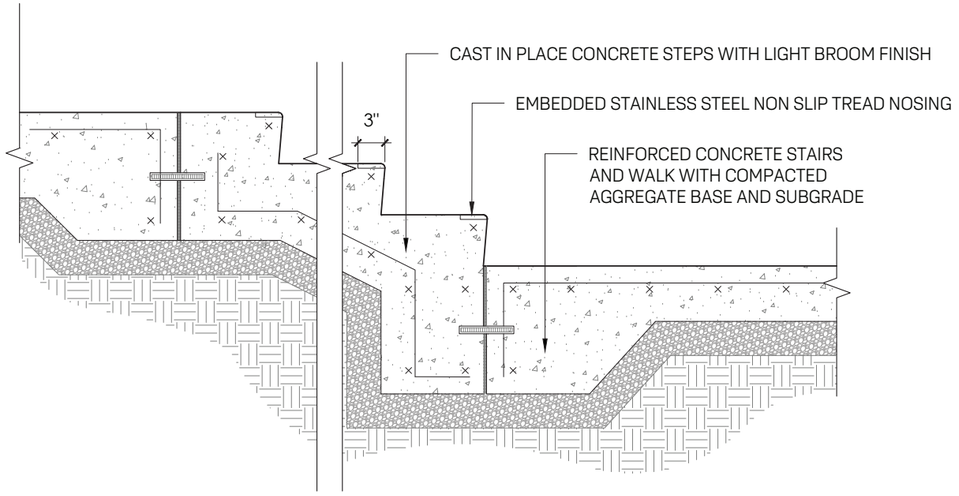


Typical Detail

STAIRS

Concrete steps with a steel edge provide a durable and refined solution for campus environments, especially in high-traffic or outdoor areas. The concrete offers long-lasting strength, while the steel edging reinforces the step profile, protecting against wear and chipping over time. This combination enhances safety by improving visibility and traction, and adds a clean, modern detail that complements campus architecture. Ideal for building entrances, amphitheaters, and landscape transitions, these steps balance functionality with a polished appearance.

Typical Stair
Color: Gray with Light Broom Finish
Material: Concrete



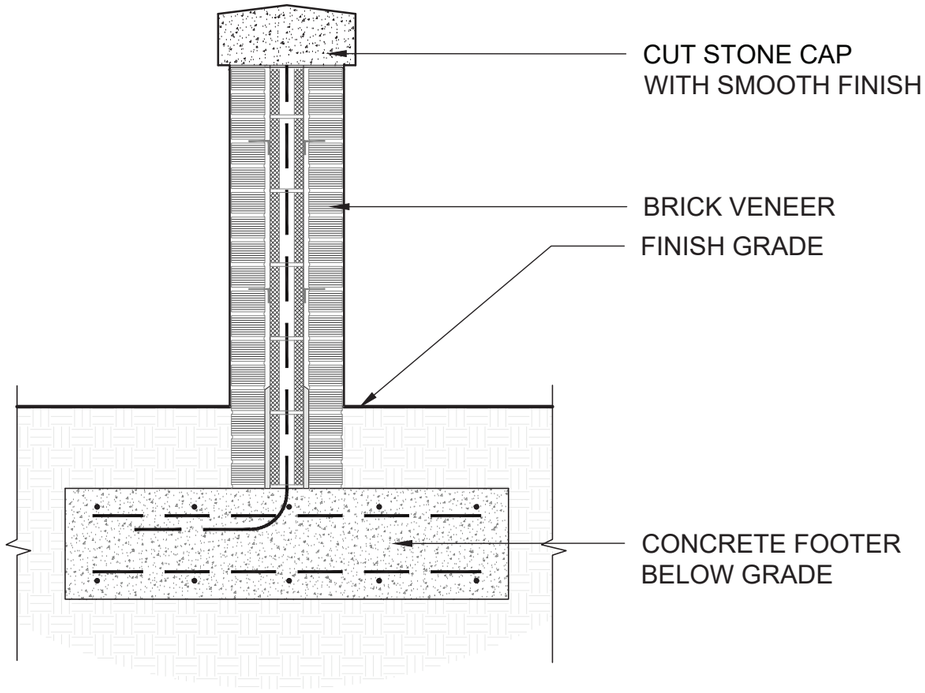
Typical Detail

DESIGN GUIDELINES

BRICK SITE WALLS

Brick seat walls with cut stone caps are elegant and functional landscape features commonly used on campus to define outdoor gathering areas, provide informal seating, and enhance architectural cohesion. Constructed with traditional clay brick, these walls offer warmth, texture, and visual continuity with surrounding buildings. The cut stone cap adds a refined finish, offering a smooth, durable surface for sitting while protecting the brickwork below from weathering. These seat walls are ideal for plazas, courtyards, and along walkways, where they contribute to both the usability and aesthetic quality of the campus environment. Their timeless design supports a welcoming, community-focused atmosphere.

Typical Brick Site Wall
Color: Red Brick Blend to Match Campus Architecture
Material: Cast Stone Cap with Brick Veneer Base



Typical Detail

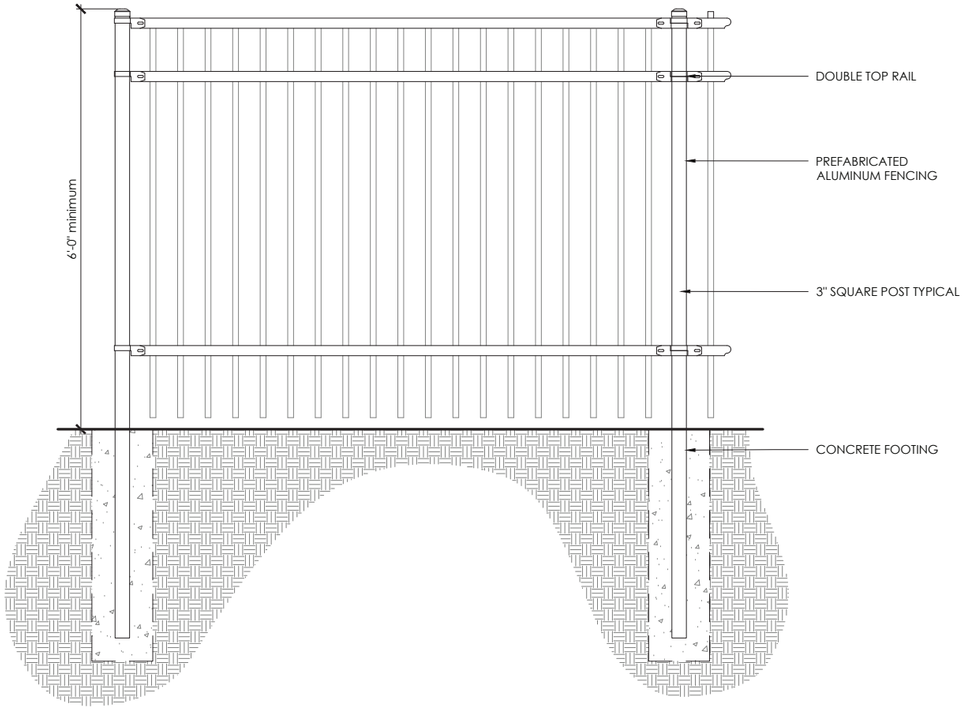
DESIGN GUIDELINES

BOUNDARY FENCE

Aluminum decorative fencing provides a lightweight, durable, and visually appealing solution for campus boundaries, courtyards, and secure areas. Designed to mimic the look of traditional wrought iron while offering the benefits of rust resistance and low maintenance, aluminum fences are ideal for long-term outdoor use. Their ornamental detailing—such as finials, scrollwork, or custom post caps—adds architectural character and complements both historic and contemporary campus buildings. These fences offer security without compromising aesthetics, helping to define space while maintaining an open and welcoming campus atmosphere.

BRICK PIERS:
Brick piers can be use as an intermittant option along prominent fence sections provided they match the campus architecture.

Typical Boundary Fence
Color: Black Powdercoat
Material: Aluminum Prefabricated

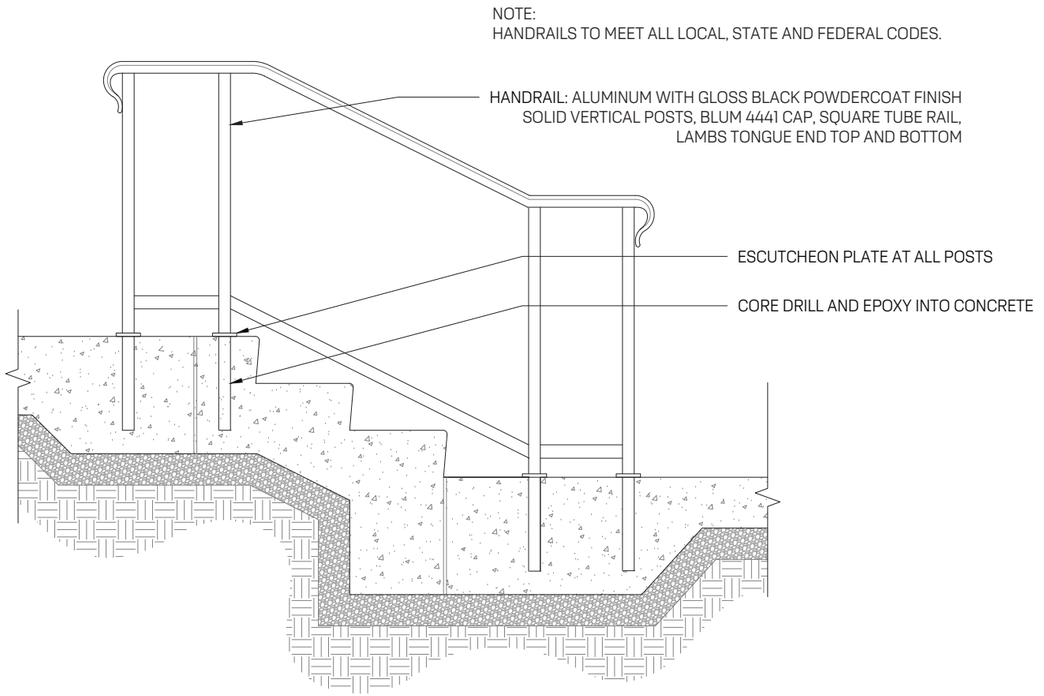


Typical Detail

HANDRAIL, TRADITIONAL

Traditional aluminum handrails with lamb's tongue end details offer a timeless and elegant solution for campus stairways, ramps, and accessible routes. Crafted from durable aluminum, these handrails provide long-lasting performance with minimal maintenance, while the lamb's tongue end detail—a graceful, curved termination—adds a refined architectural touch. This classic design not only enhances safety and accessibility but also contributes to the overall aesthetic of the campus, complementing both historic and contemporary buildings. The combination of strength, style, and craftsmanship makes these handrails a fitting choice for high-visibility areas where design and function must work together.

Typical Historic Handrails
Color: Powdercoated Black
Material: Custom Aluminum Fabricated

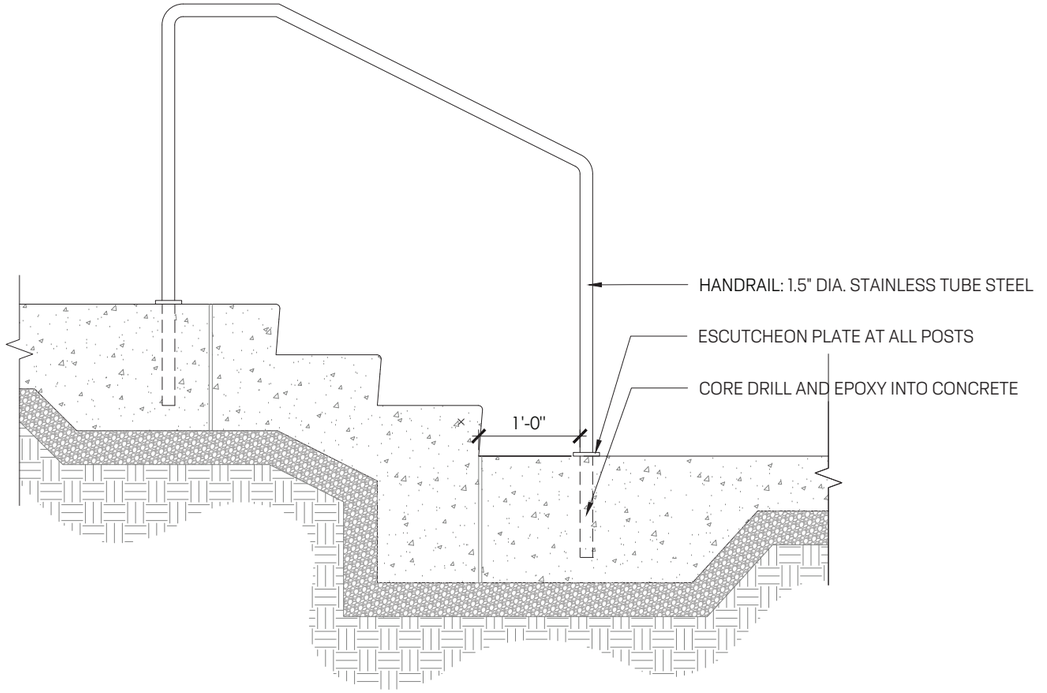


Typical Detail

HANDRAIL, CONTEMPORARY

Contemporary stainless steel handrails offer a sleek, modern solution for campus environments, combining durability with minimalist design. Made from corrosion-resistant stainless steel, these handrails are ideal for both indoor and outdoor applications, including stairways, ramps, and elevated walkways. Their clean lines and polished or brushed finish complement a wide range of architectural styles, providing a refined look that enhances the overall aesthetic of the space. In addition to their visual appeal, stainless steel handrails are low-maintenance, long-lasting, and meet safety and accessibility standards, making them a practical and stylish choice for high-traffic campus areas.

Typical Contemporary Handrail
Color: Brushed Stainless Steel
Material: Custom Fabricated Steel



Typical Detail

GUARDRAIL, HISTORIC

Matching existing historic metal handrails involves replicating the design, material, and craftsmanship of original handrails found on campus buildings or landscape features. These handrails are typically made from wrought iron or steel and feature traditional detailing such as scrollwork, decorative posts, and custom end treatments. When new handrails are required—whether for restoration, replacement, or expansion—they should be carefully designed to mirror the proportions, finishes, and stylistic elements of the historic originals. This approach preserves the architectural integrity of the campus, maintains visual continuity, and honors the craftsmanship of earlier eras while meeting current safety and accessibility standards.

Typical Historic Guardrail
Color: Painted Black
Material: Custom Fabricated Steel
Reproductions Should be Provided in Powdercoated Aluminum Whenever Possible
Design: Match Existing Building Rails while Maintaining Current Code Standards

DESIGN GUIDELINES

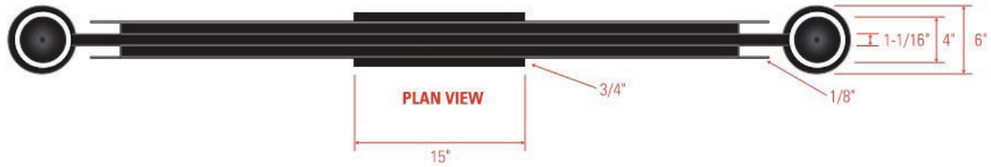
BUILDING SIGNS - SITE

Building signage has been standardized to create a cohesive and uniform visual identity across campus. This initiative reduces signage clutter, improves wayfinding, and reinforces the overall aesthetic of the university environment. By aligning signage design with campus guidelines, the result is a cleaner, more organized appearance that supports both functionality and institutional branding.

PLACEMENT:
Orient perpendicular to buildings.

SIGN DETAILS

POST: 4” BLACK ANODIZED, DIRECT BURIAL
CAP: 4” SPUN, SPHERE
DEORATIVE RINGS: CIRCULAR
ESCUTCHEONS: 6” DIAMETER
PANEL: DOUBLE SIDED, NON ILLUMINATED
FONT: PT SANS BOLD AND REGULAR
LOGO: RAISED 15” DIAMETER



DESIGN GUIDELINES

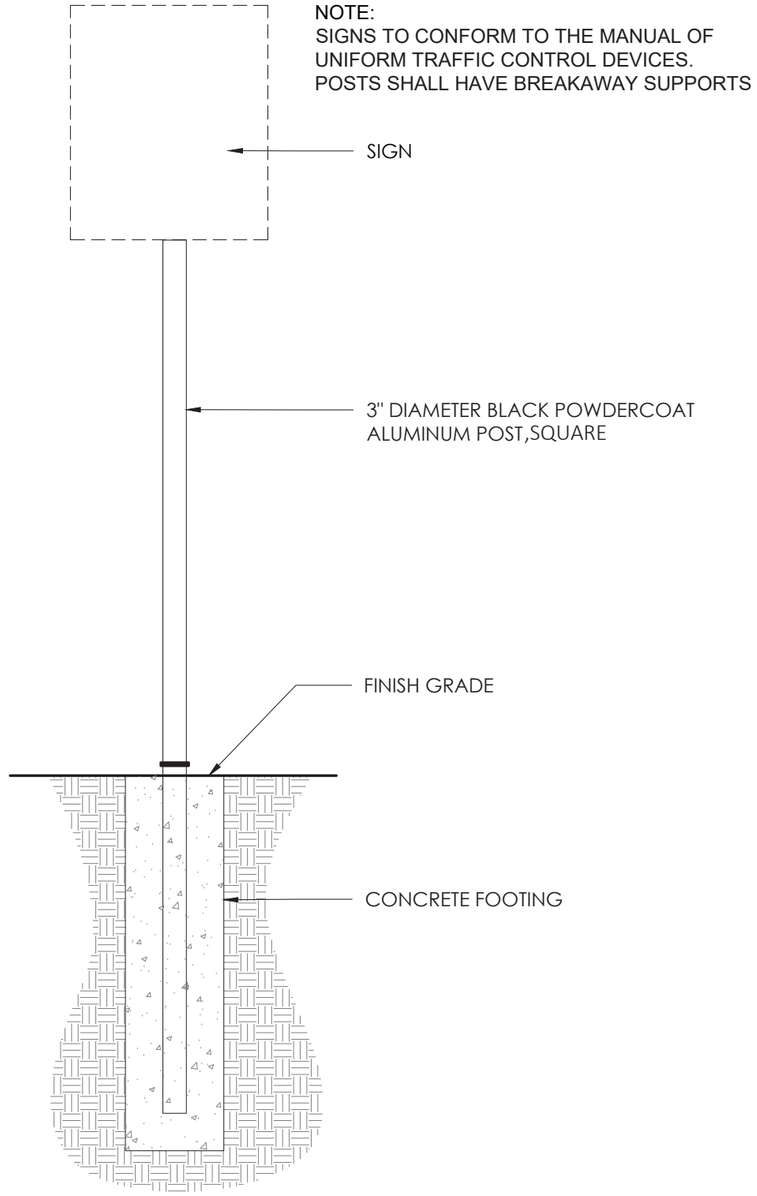
PARKING SIGN

Consistent parking signage across campus helps reduce visual clutter and streamlines wayfinding, allowing greater focus on more prominent and meaningful campus elements. By standardizing design and placement, the university enhances the overall landscape experience while reinforcing clarity, order, and institutional identity.

LOCATIONS:
Parking Lot Identification, ADA Parking, Reserved Parking Locations, Loading Areas

Typical Parking Sign
Color: Varies, Black

Typical Detail



DESIGN GUIDELINES

STREET SIGN

Consistent vehicular directional signage enhances campus navigation while minimizing visual distractions. By standardizing design, placement, and messaging, the signage system allows greater focus on key campus elements such as architecture, landscape features, and gathering spaces. This clarity supports both functional movement and the overall aesthetic experience of the university environment.

PROPOSED STREET SIGNAGE:

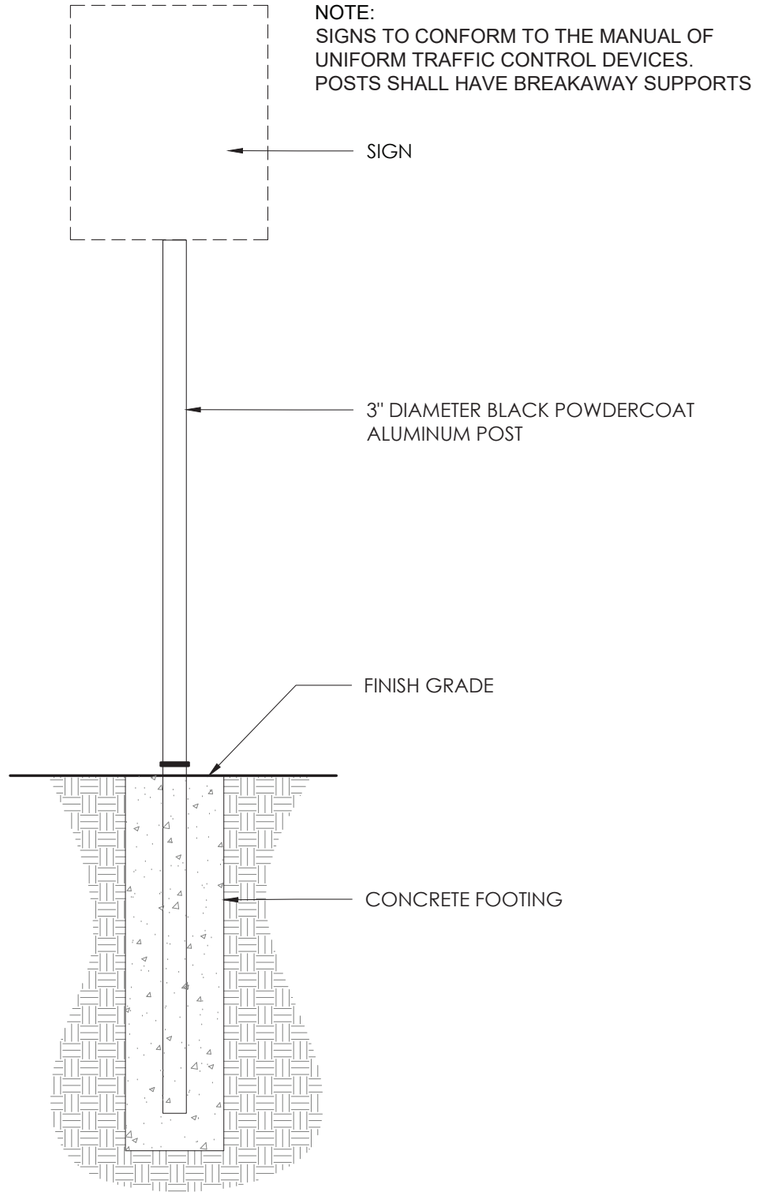
- Clearview font, mixed upper and lowercase
- 6” high font (road speeds of less than 25 mph)
- Purple background, white border, gold teagle border
- Use TTU standard pantone colors

Primary Color Palette

Tennessee Tech Purple
- #582c83
- R88, G44, B131
- C82, M100, Y11, K2
- PMS 268C

Tennessee Tech Gold
- #FFD100
- R255, G209, B0
- C1, M16, Y99, K0
- PMS 109C

Typical Directional Sign
Color:



Typical Detail

DESIGN GUIDELINES

SITE FURNISHINGS

To foster a welcoming, inclusive, and functional outdoor environment across campus, all seating installations shall adhere to a unified design approach that emphasizes variety, accessibility, and contextual integration. Seating areas are essential components of the campus landscape, supporting rest, social interaction, study, and reflection. As such, they must be thoughtfully designed to meet the diverse needs of students, faculty, staff, and visitors. Seating locations should provide a mix of surfaces from smooth to perforated to allow for user needs.

Typical Tables and Chairs
Color: Black

DESIGN GUIDELINES

BENCHES

Consistent campus benches with standardized mounting contribute to a unified and orderly landscape aesthetic. By aligning bench design, materials, and installation methods across campus, the university reduces visual clutter, simplifies maintenance, and reinforces a cohesive sense of place. Standard mounting also ensures durability, accessibility, and compatibility with surrounding hardscape and planting elements.

Typical Bench
Color: Black
Mount: Mount to Concret Pavement Anchor Locations

INFORMAL SEATING

Accent seating should be incorporated throughout campus to provide variety, comfort, and choice for the campus community. These seating elements—such as sculptural benches, movable chairs, porch-style swings, or small café tables—can complement standard bench installations while introducing moments of character and flexibility.

Placed in courtyards, garden edges, quiet nooks, or near building entrances, accent seating encourages informal gathering, reflection, and spontaneous use. By diversifying seating types and styles, the campus landscape becomes more inclusive, engaging, and responsive to the everyday rhythms of student and faculty life.

Typical Informal Seating
Color: Varies -

DESIGN GUIDELINES

BIKE RACKS

Consistent use of uniform bike racks across campus enhances organization and maximizes available parking capacity. By standardizing rack design and placement, the university improves spatial efficiency, simplifies maintenance, and supports a more orderly and accessible cycling environment. This approach also contributes to a cohesive campus aesthetic while encouraging sustainable transportation.

REQUIREMENTS:
Provide quantities that mee TN HPBr Target LM3.2 for Bicycle Storage. Increase parking density at residential buildings as projects allow.

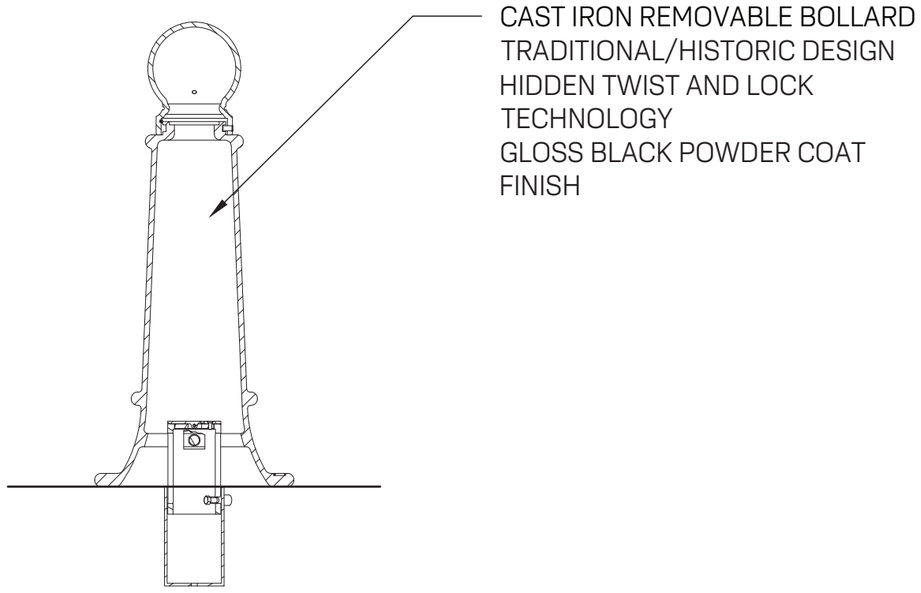
Typical Bike Rack
Color: Black
Install: Place Perpendicular to Building Face

DESIGN GUIDELINES

BOLLARD - Decorative

Removable decorative bollards are an effective tool for managing vehicular and pedestrian circulation while preserving flexibility for university operations. Their consistent use enhances campus aesthetics, defines boundaries, and improves safety—yet allows for temporary access when needed for maintenance, events, or emergency services. This dual functionality supports both visual cohesion and operational efficiency across the campus landscape.

Typical Bollard
Color: Black - Non Lighted

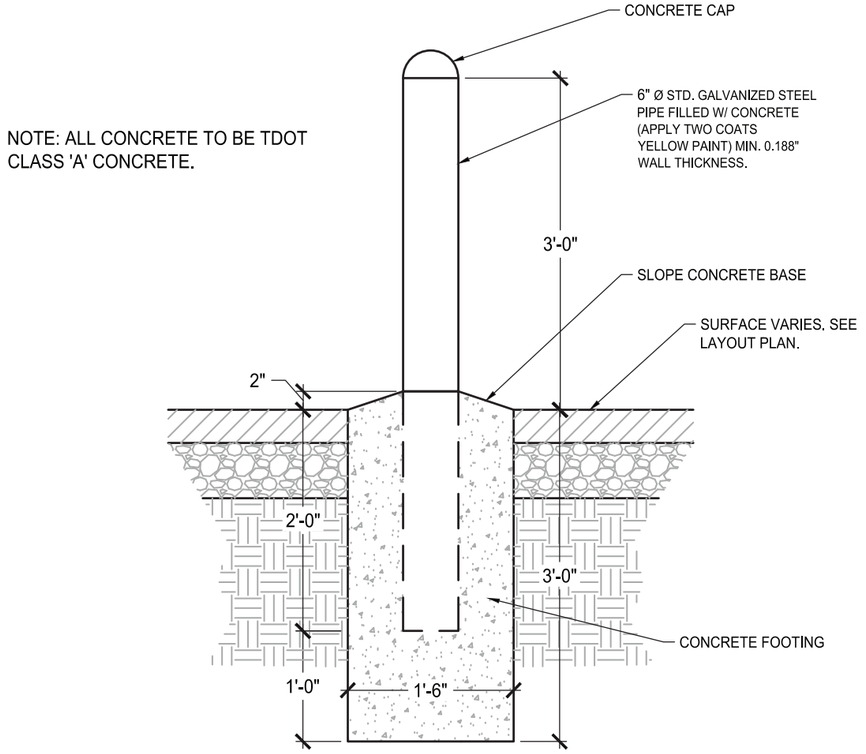


Typical Detail

BOLLARD - Protective

To safeguard buildings and pedestrian areas from potential vehicular impact, protective-use bollards shall be installed at strategic locations where vehicle conflict is a concern. These bollards serve a dual purpose: providing robust physical protection while maintaining visual harmony with the surrounding built environment.

Typical Bollard
Color: Match Surrounding Architecture



Typical Detail

BLUE LIGHT PHONE

Campus blue light phones serve as a vital physical connection between the campus community and university safety providers. Their bright yellow color ensures high visibility within the landscape, allowing quick identification in moments of urgency. Strategically placed throughout campus, these phones reinforce a sense of security and accessibility, supporting the university's commitment to safety and well-being.

PLACEMENT:
Verify with Campus Police for placement.

Typical Blue Light Phone
Color: Yellow
Connection: Copper Phone Line
Mount: Provide ADA Concrete Pathway

TRASH RECEPTACLE

Consistent trash receptacles across campus establish a uniform approach to waste placement that supports both functionality and visual harmony. By standardizing design, color, and location, these receptacles blend seamlessly into the landscape, minimizing visual disruption and reinforcing the campus's overall aesthetic. This approach also simplifies maintenance and encourages responsible waste disposal

LOCATIONS:
Required at every shuttle stop, parking and parking lot sidewalk entrance.

Provide higher denstiy of receptacles at buildings providing food service and residence halls.

Typical Trash Receptacle
Color: BLACK

DESIGN GUIDELINES

PEDESTRIAN LIGHTING

Pedestrian pole lights serve as the primary source of pathway illumination across campus, ensuring safe and comfortable movement during evening hours. Their consistent light output, unified aesthetic, and ease of maintenance make them a critical component of the campus infrastructure. By standardizing fixture design and placement, the university reinforces visual cohesion, supports efficient upkeep, and enhances the overall nighttime experience for students, faculty, and visitors.

Typical Pedestrian Pole Light
HOLOPHANE
GVD3-P40-50K-MVOLT-MS-GL3LV-BK-EG-TBK-PR7
80W LED
EAGLE FINIAL

DESIGN GUIDELINES

PARKING AREA LIGHT

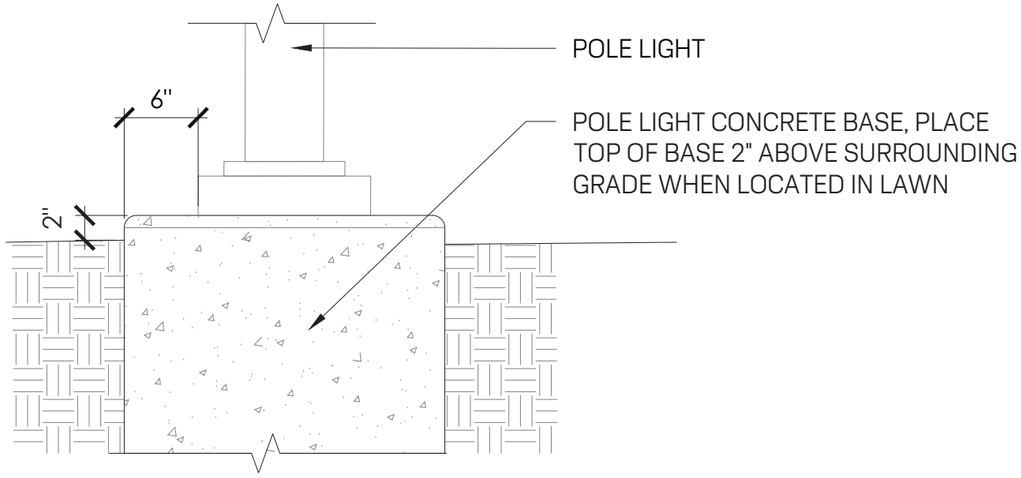
Parking area lights should be designed to ensure safety and security for users by providing adequate illumination across parking lots, drive aisles, and pedestrian paths. At the same time, fixtures must be selected and positioned to minimize light spill into adjacent buildings, residential areas, and natural landscapes. Shielded luminaires, controlled mounting heights, and thoughtful photometric planning help balance visibility with environmental sensitivity, supporting both campus functionality and community well-being.

Typical Parking Area Light
Color: BLACK

TYPICAL LIGHT POLE BASE

All light bases should be designed to remain minimally visible from public view, preserving the visual integrity of the campus landscape. At the same time, they must allow for regular maintenance access to ensure lighting systems remain functional and safe. This balance supports both aesthetic goals and operational efficiency, contributing to a clean, unobtrusive campus environment.

Typical Uplight
Color:



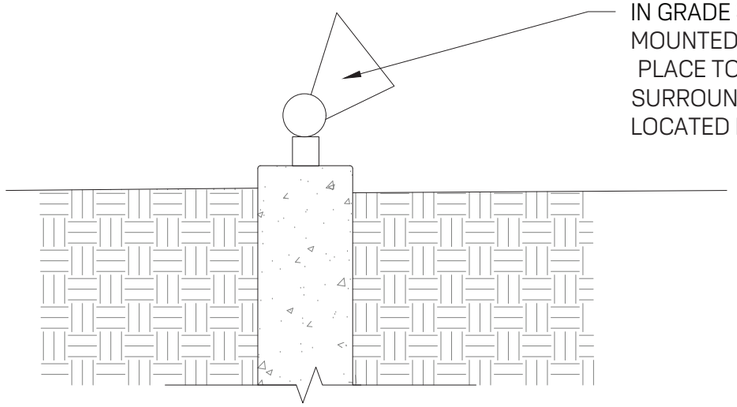
Typical Detail

DESIGN GUIDELINES

SIGNAGE LIGHT

In-grade signage lights should be protected by a concrete base to ensure durability and ease of maintenance. This approach safeguards lighting infrastructure from damage while preserving the integrity of surrounding landscape elements. The concrete base provides a clean, unobtrusive transition between signage and ground plane.

Typical Signage Light
Color: BLACK



Typical Detail