



# SECOND CREEK CAMPUS: INDUSTRIAL DESIGN STANDARDS

DECEMBER 21, 2021





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# 1 OVERVIEW

## OVERVIEW

- 1.1 DEN STRATEGIC DEVELOPMENT PLAN & SECOND CREEK CAMPUS
- 1.2 COMMERCIAL DISTRICTS AT DEN: GUIDING PRINCIPLES
- 1.3 HOW TO USE THIS DOCUMENT

With approximately 53 square miles (13,700 hectares) of land area, Denver International Airport (DEN) has the second largest land ownership of any airport in the world. DEN's Division of Real Estate supports the airport's core aviation mission by capitalizing on DEN's size, capacity for growth, and centralized location, both nationally and globally, to create innovative, sustainable and economically beneficial commercial development of the airport's non-aviation land. Commercial real estate development at DEN is positioned to leverage the region's rapidly growing economy, diverse industry clusters, expansive transportation network and highly educated workforce.

The Strategic Development Plan (SDP) guides the effort by creating a vision and road map for transforming airport land into a series of vibrant development districts that serve diverse local, national and global businesses. The Industrial Design Standards work with and support the SDP by establishing a set of rules to guide design and implementation of development within each district. The Industrial Design Standards illustrate the overall design intent and how each district can achieve the design vision through specific design requirements.

# 1.1 DEN STRATEGIC DEVELOPMENT PLAN & SECOND CREEK CAMPUS

## STRATEGIC VISION

DEN's landscape context inspires the 2018 Strategic Development Plan. Within this landscape context, the plan creates distinct districts, each with a unique character and relationship to its surroundings. The districts are based on a framework of streets and public spaces designed to balance flexible growth and evolving technologies with the creation of attractive, human-scaled places. DEN's development districts will become destinations.

## SECOND CREEK CAMPUS VISION & OVERVIEW

The Second Creek Campus's approximately 360 acres (145 hectares) of development area will be a hub of research, development and advanced manufacturing adjacent to the Rocky Mountain Arsenal Wildlife Refuge. It is named for the main channel and multiple tributaries of Second Creek which run through the district, and its broad open campus feel offers unobstructed views west toward the bison grazing at the Rocky Mountain Arsenal Wildlife Refuge and the Front Range. The Second Creek Campus is anticipated to eventually host up to 4.5 million SF of research and industrial uses.

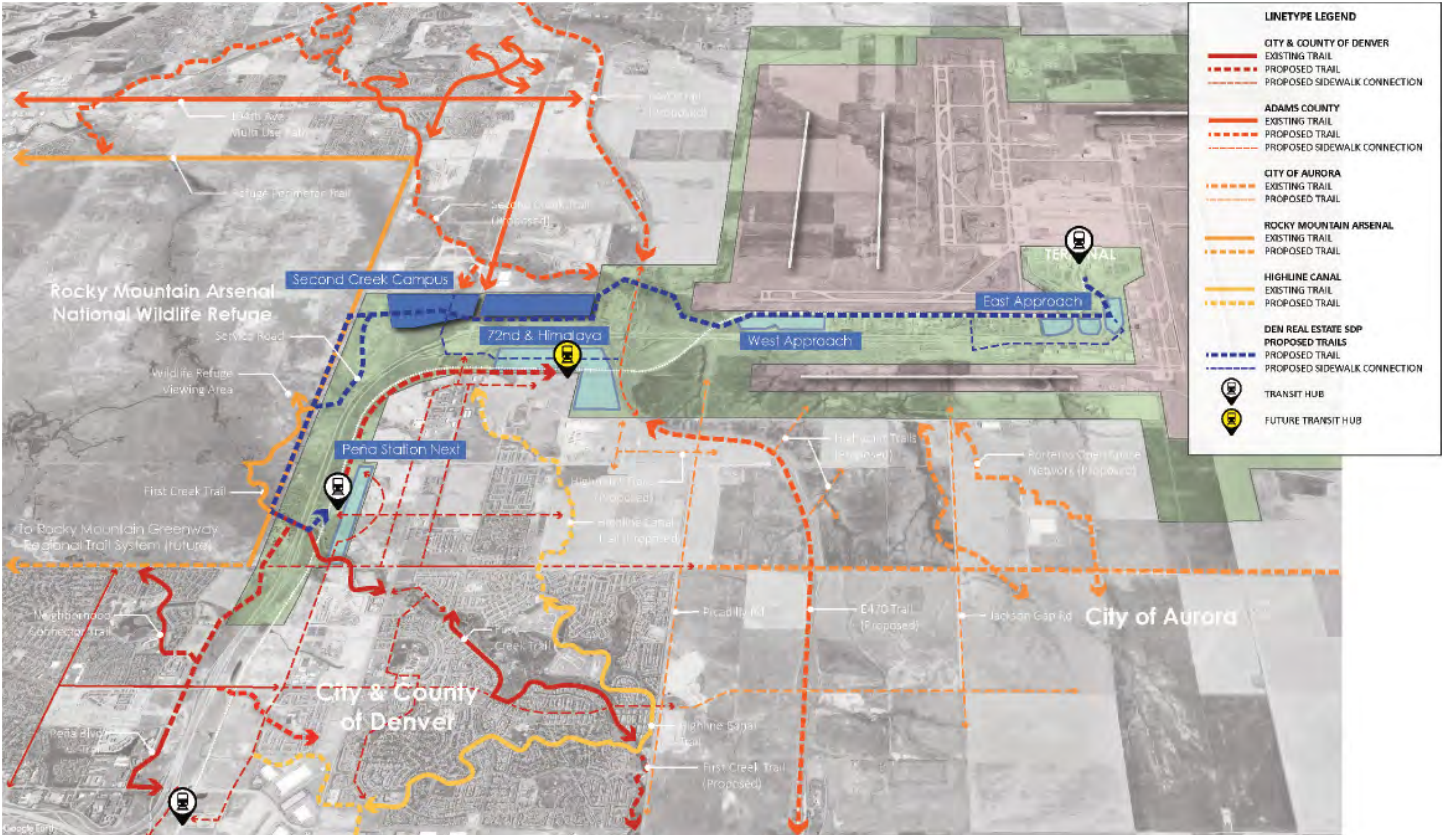
The district lies directly north of Pena Boulevard and south of DEN's shared border with Commerce City and Adams County. The district is bisected in a north-south direction by Tower Road, with roughly 163 acres to the west and 203 acres to the east. West of Tower Road the district is bisected by Second Creek (running north-south), before extending to the Wildlife refuge. A second, intermittent arm of Second Creek runs north-south through the east portion of the district.

The district is subject to a 1000-foot scenic buffer extending 1,000' feet from the center of Pena Boulevard to be preserved as open space. The buffer is intended to provide a very conscious arrival experience to DEN, and protect views of both the native prairie ecosystems and sight-lines to the terminal and the Front Range of the Rockies. Second Creek and its tributaries are also defining natural features in the district and development should strategically preserve open space where the creek provides critical ecological function as well as a sense of place.

Primary district access is from Tower Road, with access to and from in-bound and out-bound Pena Boulevard. The District is also bordered by E-470 Toll Road to the east, but will provide no direct access to this roadway. Regional trail connections, providing bicycle and pedestrian access to A-Line rail stations and beyond, are planned at the east, west and southern boundaries of the site.



Regional Context: future land use



Regional Context: existing and future trails

## 1.2 COMMERCIAL DISTRICTS AT DEN: GUIDING PRINCIPLES

While the Commercial Districts at DEN each have a unique character shaped by their distinct purposes, the SDP guides development of a cohesive community with an overarching airport identity. It shapes the experience of airport users and visitors and serves as a guide for all development on DEN property. The Guiding Principles apply to all DEN development districts, including Second Creek Campus.

Second Creek Campus is located directly north of the Pena Boulevard curve that provides in-bound travelers with their first direct view of the terminal. The district provides an easily accessed location for airport-related industrial, distribution and warehousing in close proximity to DEN as well as the growing neighborhoods in Far Northeast Denver and Commerce City.

Six guiding principles, described in greater detail on the pages that follow, support the SDP's vision for all of DEN's destination districts:

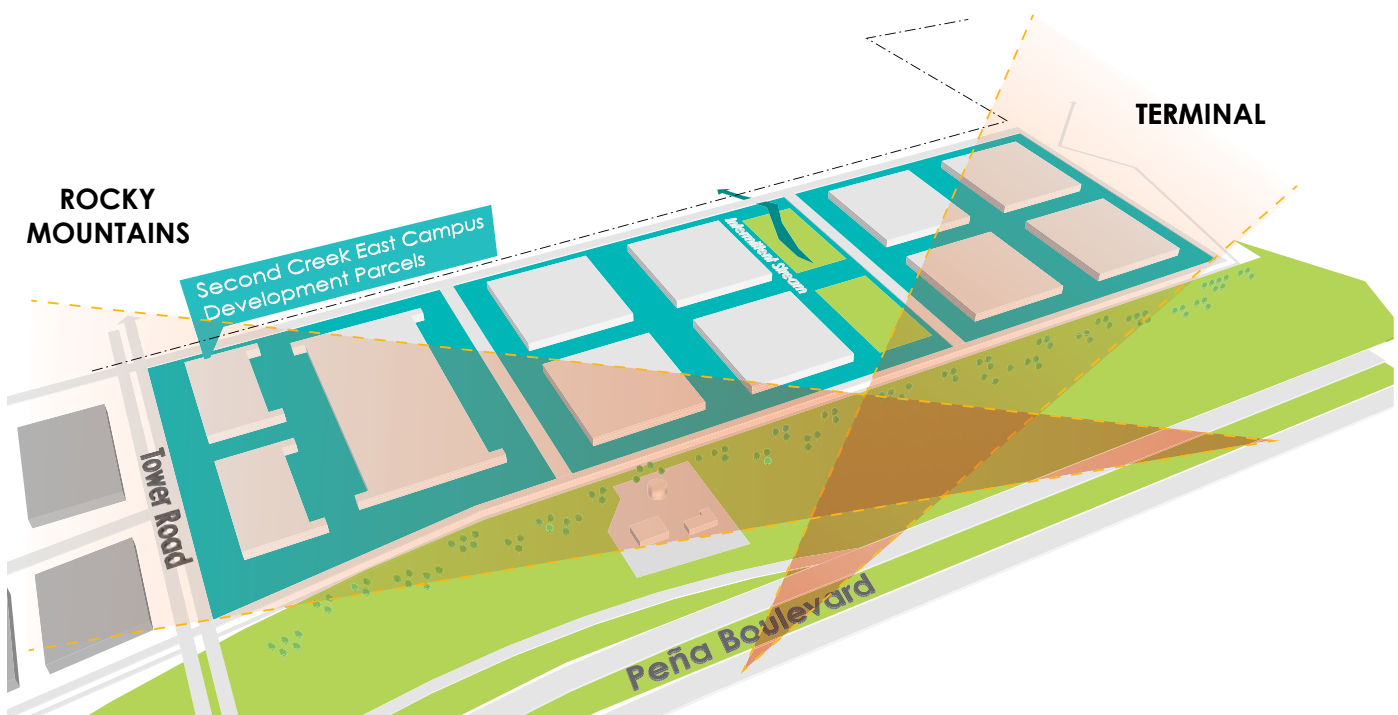
- Frame View Corridors to the Mountains and Terminal
- Screen Visually Undesirable Uses
- Create Prominent Architectural Presence
- Provide Legibility of Access to District Entrances
- Ensure Continuity with the Pena Experience
- Build a Compact, Cohesive District

The principles provide an overarching framework and context for the specific standards that will guide Second Creek Campus' site development consistent with DEN's Strategic Development Plan vision.

## FRAME VIEW CORRIDORS TO THE MOUNTAINS AND TERMINAL

Building should be in an east-west orientation or kept low on the north-south axis to ensure that views to the Jeppesen Terminal and the Front Range are framed when appropriate, and minimally obstructed when required. Development should utilize building setbacks, massing, siting, orientation, scale and other approaches to enhance views from Peña Boulevard and the commuter rail to the terminal and mountains. These strategies should be the basis for evaluating each individual building as well as overall district massing. Measurable evidence should be used to demonstrate the effectiveness of building siting and design related to view enhancement and impacts.

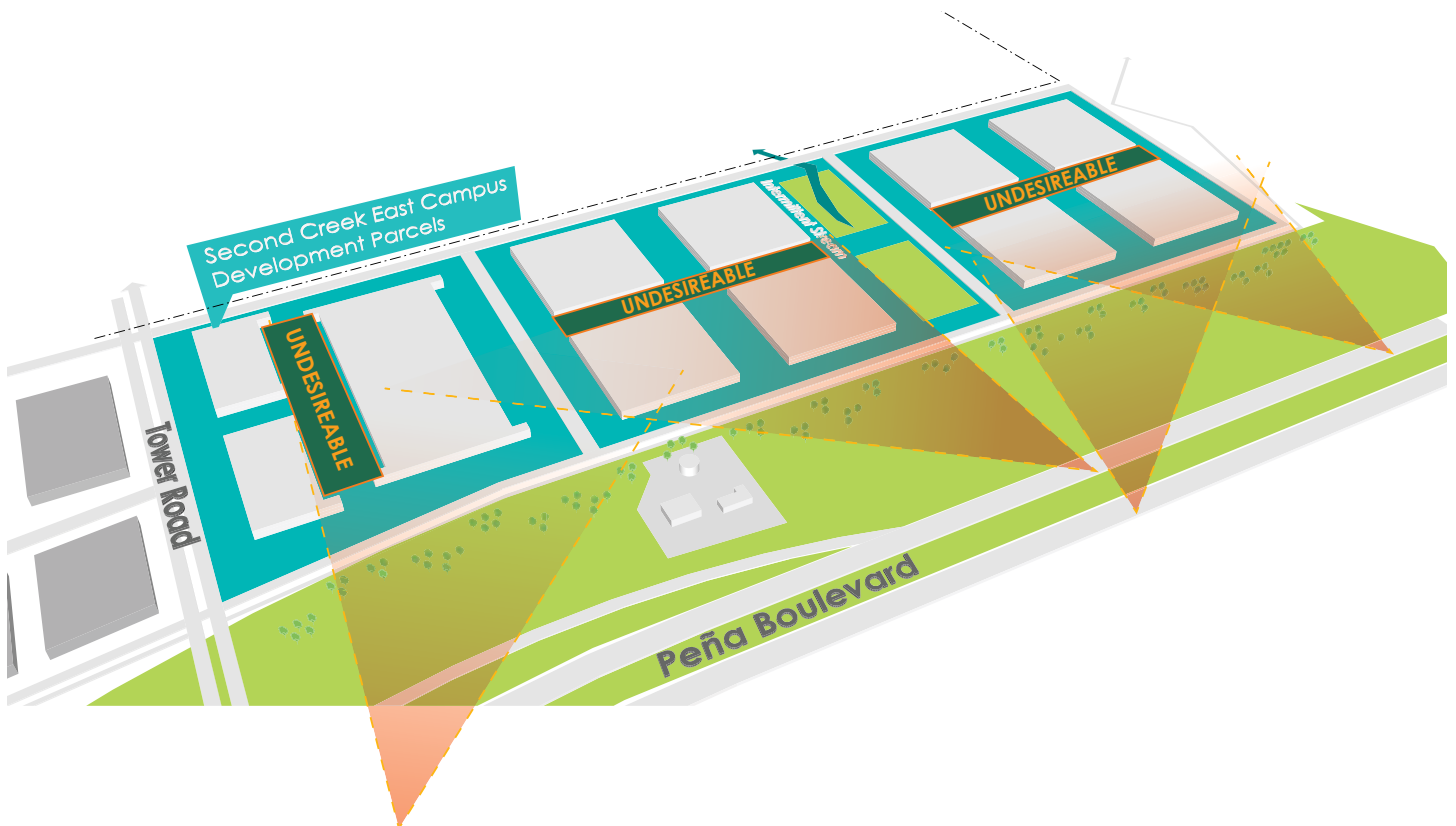
Within the Second Creek Campus, the most prominent mountain views will be from the west side of Tower Road, specifically the parcels at the campus's western boundary. These parcels will also enjoy foreground views of the Rocky Mountain Arsenal Wildlife Refuge. Development on the west side of Tower Road should utilize building setbacks, massing, siting, orientation and scale to preserve and emphasize mountain views. Due to existing topography and distance from the Terminal, eastward views to the terminal will be limited or potentially non-existent; parcels east of Tower Road and at the far eastern boundary of the campus are the most likely to have terminal views. No architectural accommodations for terminal views are anticipated within the district.



## SCREEN VISUALLY UNDESIRABLE USES

Site and building design should screen visually undesirable uses from view from Peña Boulevard and the commuter rail. These uses could include parking, fuel pumping stations, service areas or drive-through lanes. Screening can include placing buildings along view corridors or, when needed, utilizing landscape elements such as berms. Any landscape screening should relate to the character of the surrounding Peña Boulevard corridor landscape and be consistent with DEN's broader planning and landscape strategy. Measurable evidence should be used to demonstrate the effectiveness of landscape elements in screening.

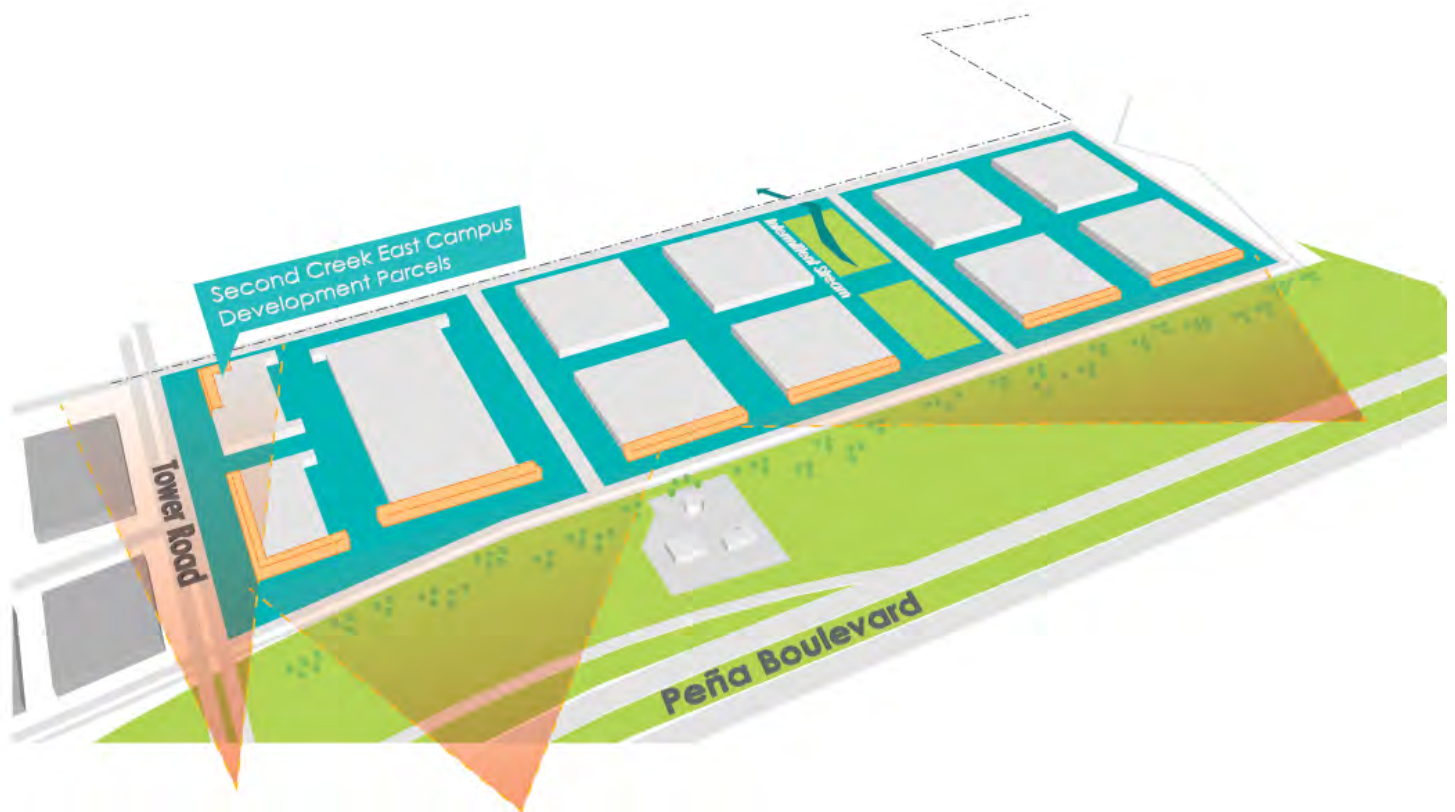
Industrial development at the Second Creek Campus District can be expected to have significant loading dock and service areas, along with large areas of impervious surface for large vehicle parking, turn-around and layover. Site design should focus on reducing the prominence of these uses by orienting large vehicular circulation, parking and loading away from Peña Boulevard and Tower Road. When these uses cannot be screened from view via site design and building orientation, landscape and berms can provide significant visual softening.



## CREATE PROMINENT ARCHITECTURAL PRESENCE

Buildings should front Pena Boulevard and the commuter rail, with a distinct architectural character that contributes to the corridor-wide experience of the airport and prairie landscape. Building massing and landscape design should be harmonious, forming an overall impression that contributes to the visual qualities of the Pena Boulevard experience. Site design should avoid placing service uses, blank walls, parking garages and other visually undesirable uses along district edges.

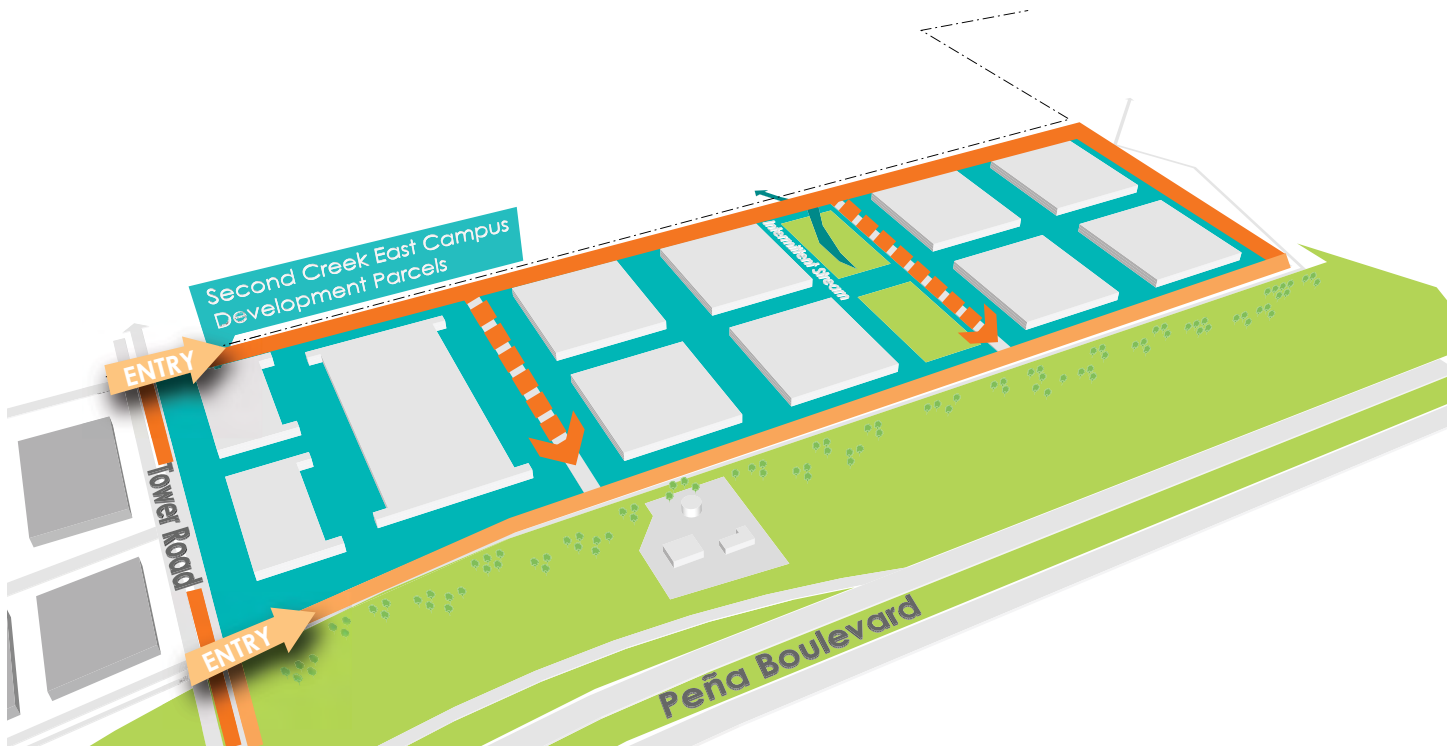
At Second Creek Campus, building facades that face Tower Road and Pena Boulevard should exhibit an elevated architectural character. While industrial land uses often result in large blocky footprints that emphasize function over form, aesthetically pleasing, human-scaled industrial architecture exists and will be celebrated at Second Creek Campus.



## PROVIDE LEGIBILITY OF ACCESS TO DISTRICT ENTRANCES

District site design should support intuitive and direct access that is visually legible and functionally accessible from Peña Boulevard. The primary vehicular route should lead to major program elements within the district. Designs should utilize architectural massing, signage and landscape to signify the primary access.

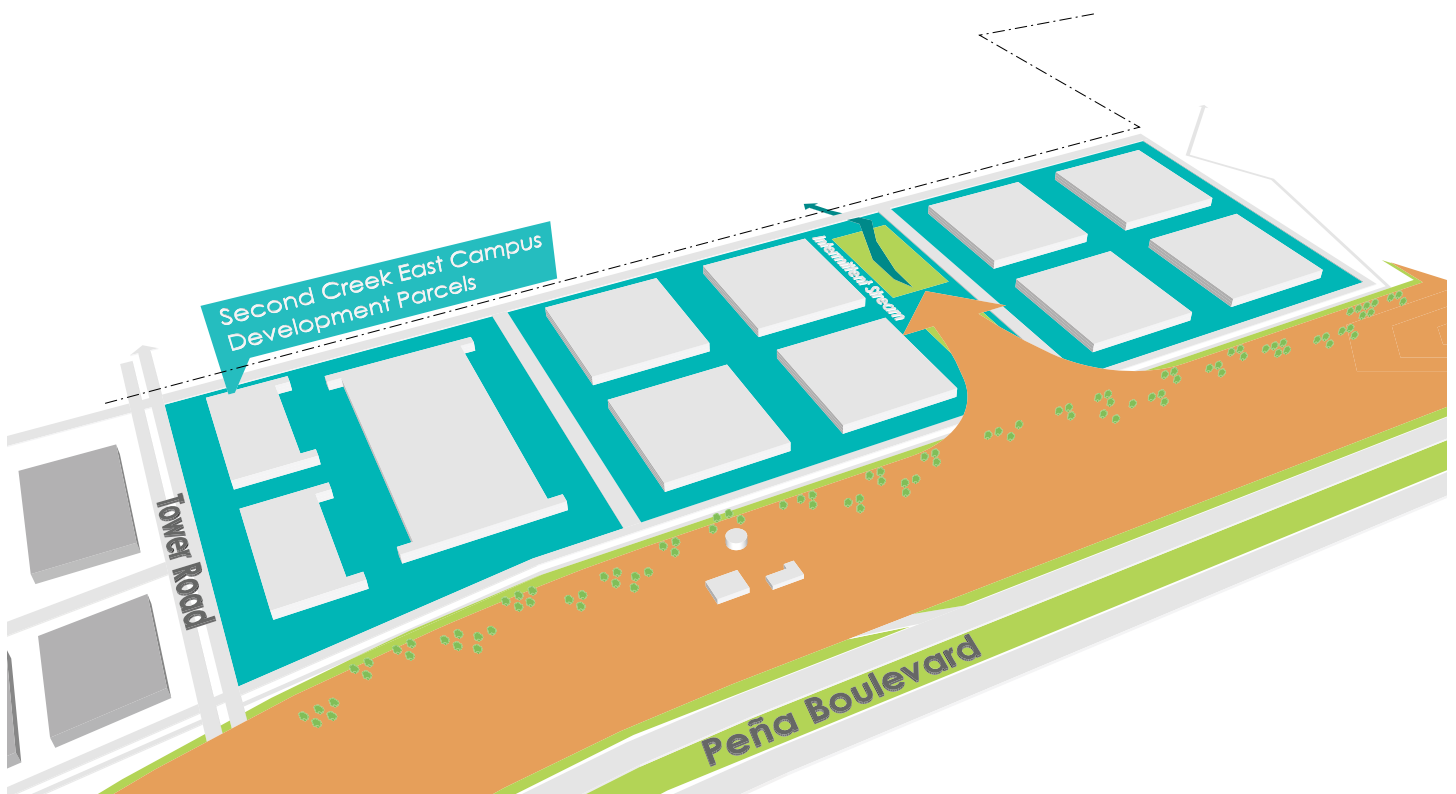
At the Second Creek Campus, the primary vehicular access points to both the east and west portions of the District will be on Tower Road, and entrances should provide equal prominence and sense of arrival to both portions of the development. North and south entry roads should align across Tower Road, to provide potential for full-movement, signalized intersections (as warranted) and to preserve westward mountain views.



## ENSURE CONTINUITY WITH THE PENA EXPERIENCE

District landscape design should contribute to and complement the overall Peña Boulevard experience as outlined in the Strategic Development Plan. Designs should intentionally blur the boundaries between the expansive, naturalistic corridor-wide landscape and district landscape by seamlessly continuing planting, land form and drainage strategies.

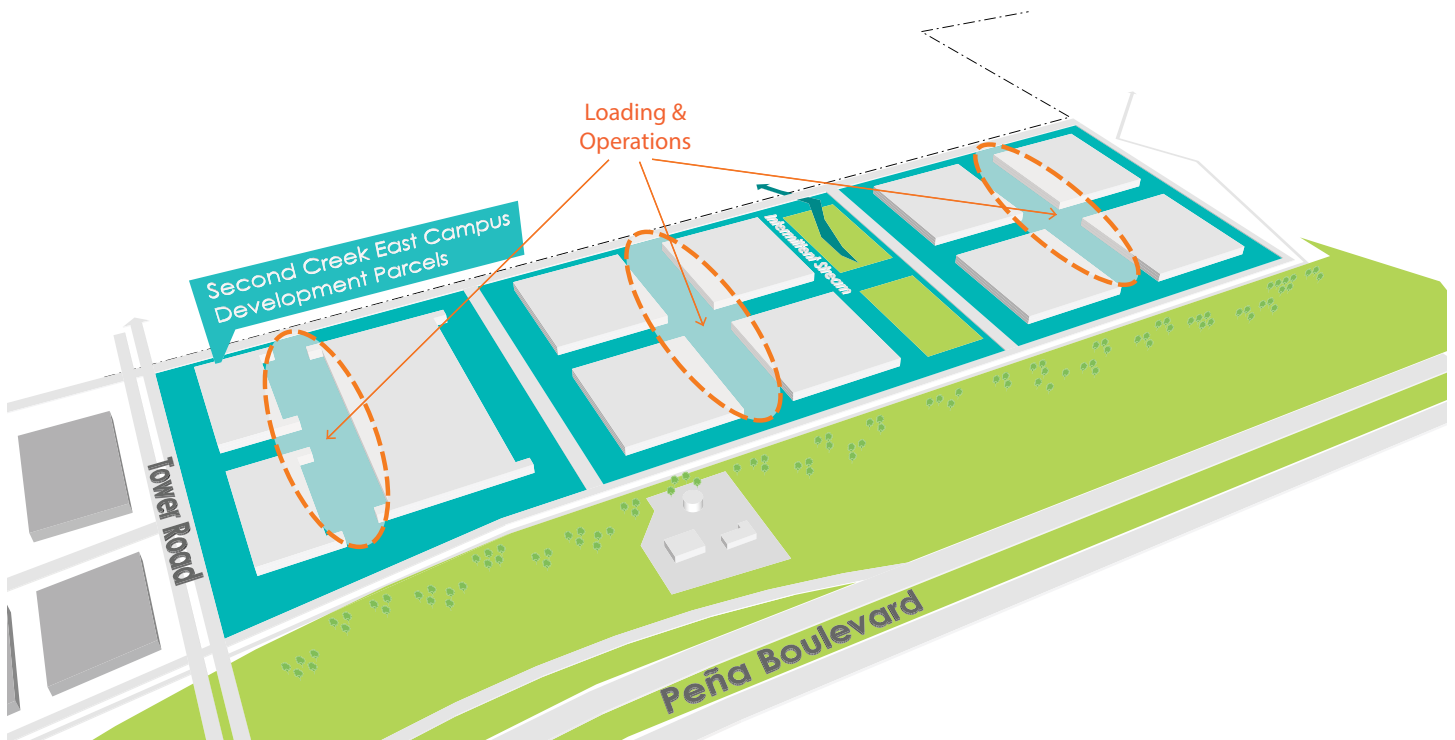
Second Creek and the West Arm of Second Creek run through the district on both sides of Tower Road, and campus design should take advantage of these drainage corridors as an internal open space amenity and a natural connection to the adjacent Peña Boulevard scenic buffer.



## BUILD A COMPACT, COHESIVE DISTRICT

Building design should contribute to a cohesive district identity by maintaining a complementary height, material palette and architectural style. Site design should locate buildings/projects adjacent to each other to limit gaps in development. Each phase of development should cumulatively contribute to district placemaking. Buildings on district edges should reinforce district identity and define a distinct character withing the corridor-wide experience.

At Second Creek Campus, service and loading areas should be located and oriented to face each other to the greatest degree possible in order to facilitate shared vehicular access and meaningful visual screening of these uses. District circulation should focus on creating internal and external multi-modal connectivity, providing safe bicycle and pedestrian connections to the front door of each business or tenant, and intuitive external connections to nearby transit stations and stops.



## 1.3 HOW TO USE THIS DOCUMENT

### ORGANIZATION

The Second Creek Campus: Industrial Design Standards Document is divided into seven sections, as listed below.

- **Section 1** provides geographic and policy context for the district, including a summary of overarching DEN policies that apply across all DEN properties.
- **Sections 2 -5** contain the actual design requirements, expressed by a series of Intent statements and standards for each topic. The sections are organized from large-scale to small-scale, beginning with district layout, followed by building and parcel design, then streetscape and public realm, and finally signage.
- **Section 6** provides a summary of the entitlements and approvals process.
- **Section 7** specifies the requirements and timing of the technical engineering submittals and reviews.

### INTENT VS STANDARD

**Intent** statements describe the goals for each subtopic. These statements are the ‘why’ that provide background for future reviewers to apply the standards. In cases where an applicant may request to waive one or more standards, intent statements will help DEN’s design reviewers to determine if a variation or alternate approach still meets the vision of the document.

**Standards** are prescriptive criteria that provide specific direction for achieving the intent statements. All standards are required, and variations must be approved by DEN.

Intent and standard statements are generally presented in parallel order, so that the first standard describes the means to achieve the first intent statement. This correspondence is not absolute, and a standard may fulfill more than one intent. Similarly, a single intent may need more than one standard to completely fulfill its goal. specific means to achieve the Intent.



## 2 DISTRICT LAYOUT

### DISTRICT LAYOUT

- 2.1 VIEWS
- 2.2 BUILDING HEIGHTS
- 2.3 BLOCK CONFIGURATION
- 2.4 BUILDING PLACEMENT & ORIENTATION
- 2.5 OPEN SPACE FRAMEWORK
- 2.6 SUSTAINABLE DISTRICT SYSTEMS

The Second Creek Campus is framed by Tower Road, Pena Boulevard, Second Creek and the West Arm of Second Creek. The east side of Tower Road will be developed first, and will provide a north and south access point off of Tower, leading to a perimeter circulation system for this portion of the campus. The access points will be mirrored on the west side of Tower, and the perimeter road similarly expanded when that side of the campus comes on line.

Second Creek serves as a central organizing element and major open space amenity on both sides of the Campus. It will serve as non-motorized circulation corridor and provide connection to the adjacent landscape and Pena Boulevard scenic buffer.

## 2.1 VIEWS

### Intent

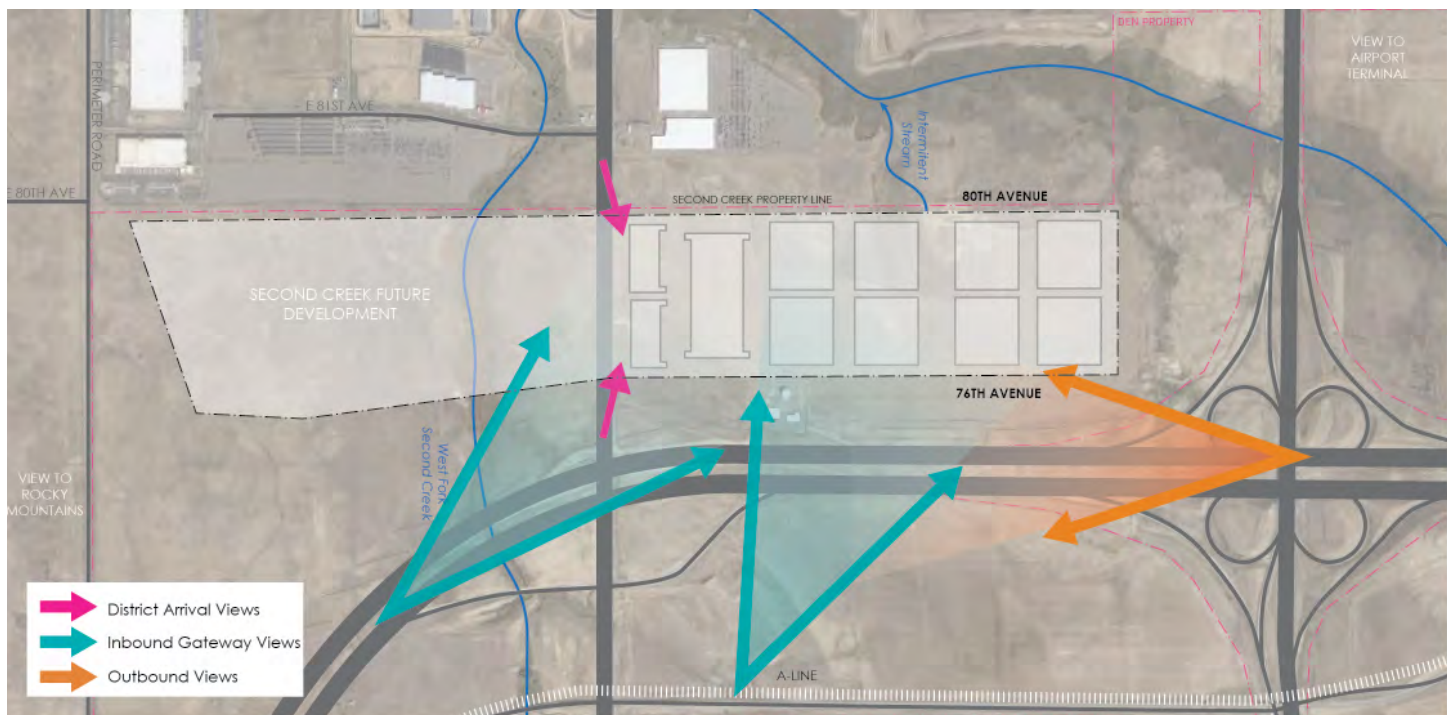
- Support and contribute to the inbound visual entry sequence to DEN.
- Blend with adjacent landscape to direct outbound views toward distant vistas of the Rocky Mountains.
- Provide a visual sense of arrival to the district from Tower Road.

### Standards: Pena Edge

- Buildings shall not create a visually homogeneous wall along the length of the district.
- Buildings shall use broad, large-scale architectural and landscape gestures to provide variety and modulation in facade and massing as seen from Pena Boulevard. Techniques may include but are not limited to: (see Section 3.2 for additional detail):
  - » massing changes
  - » landscaped setbacks within the facade
  - » landscape buffers and landform

### Standards: Eastern Edge

- Buildings shall provide an aesthetically pleasing facade that supports and frames the western views to the Rockies.
- Buildings shall not create extreme contrast with adjacent landscape, via color, material or form.



*Building placement and design should provide attractive views to both inbound and outbound travelers on Pena Boulevard and the A-Line train.*

## 2.2 BUILDING HEIGHTS

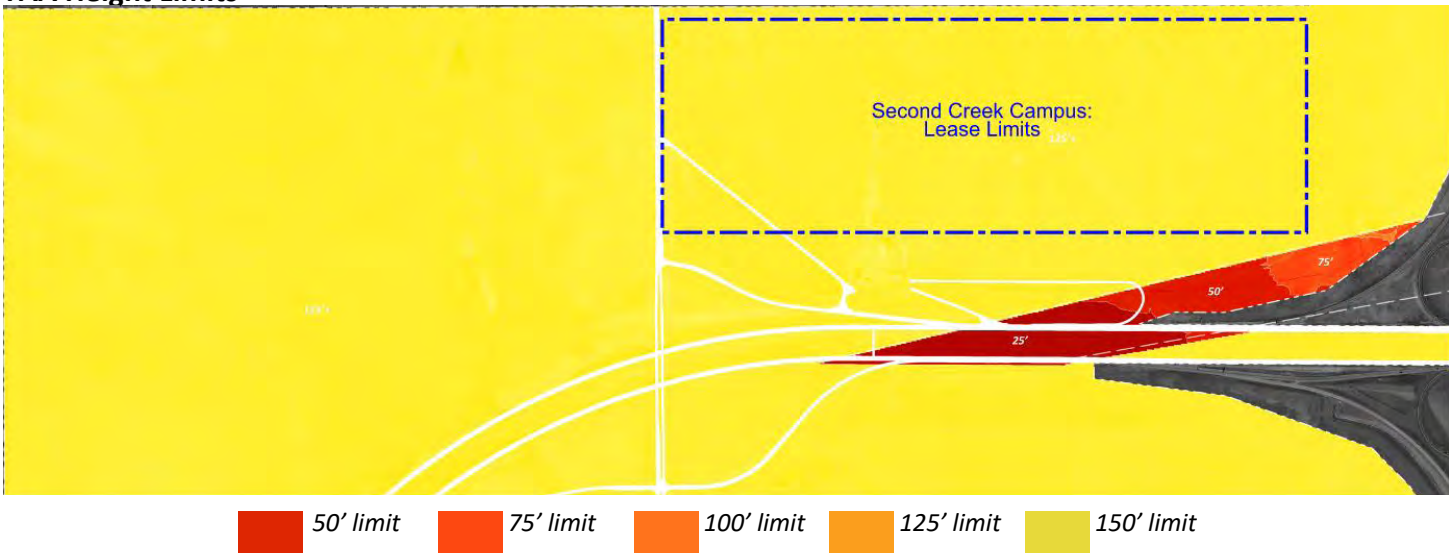
### Intent

- Maintain sight-lines from DEN’s air traffic control tower per the FAA defined specific height regulations that are applicable to all DEN property.
- Distribute taller buildings to the north and shorter buildings to the south to work with the Second Creek Campus’s natural downslope from south to north to reduce the perceived height and scale of buildings.

### Standards

- No part of the building, building equipment or protrusion from a building shall exceed height restrictions set by the FAA. Site plan must be submitted to FAA for final approval of proposed building heights.
- Building heights shall be limited to a maximum of 75 feet on the southern half of the property and 150 feet on the northern half of the property.
- Any group of buildings designed or developed concurrently shall locate the taller or tallest building(s) to the northern-most portion of the property being design or developed.
- Any building which includes changes in height shall locate the taller or tallest portions of the building to the northern side of the parcel being developed.

### FAA Height Limits



*The entire Second Creek Campus District falls within a 150' building height limit, as defined by the FAA. Heights are further limited by these guidelines, to create an appropriate Pena Boulevard edge.*

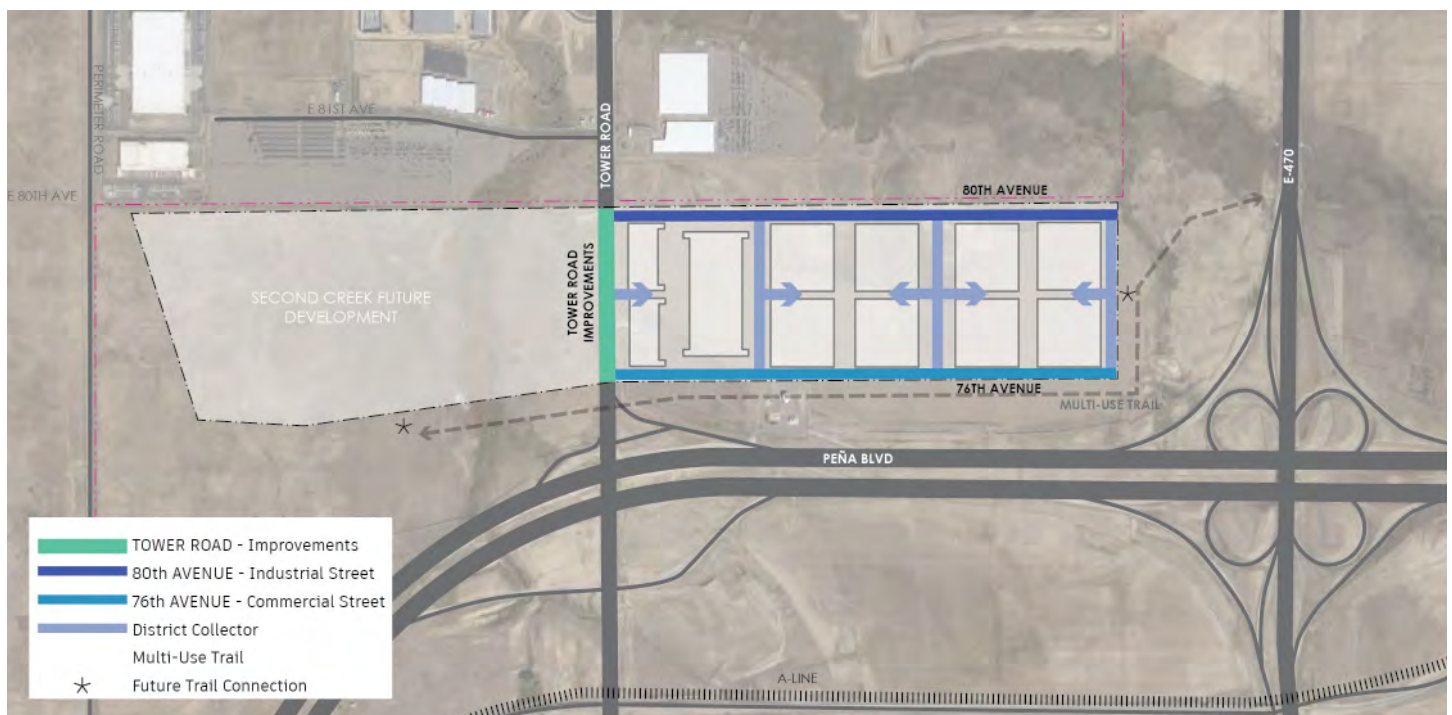
## 2.3 CIRCULATION NETWORK AND BLOCK CONFIGURATION

### Intent

- Streamline access to Tower Rd, Pena Blvd and E-470.
- Maintain flexibility in final alignment of north-south streets to provide a variety of parcel sizes as the campus develops.
- Provide access for emergency services.

### Standards: Vehicular

- One roadway shall connect the east-west boundary roads to complete a perimeter loop.
- At least one and no more than three north-south roadways shall connect the north and south boundary roads within the interior of the development.
- The north-south roadways shall be offset no less than 50 feet from the centerline of Second Creek (intermittent). See Section 2.5 Open Space Framework for open space requirements related to Second Creek Greenway.



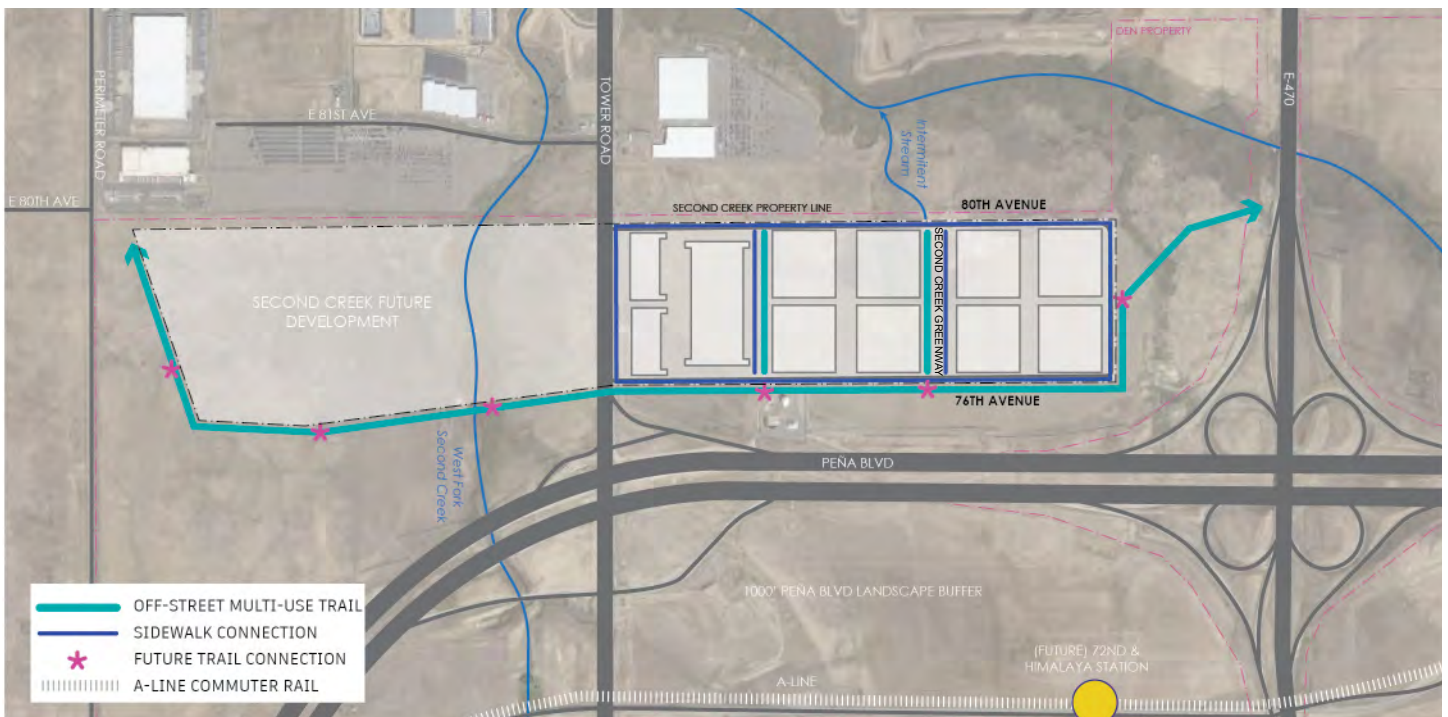
*The east side of the Second Creek campus will provide a perimeter road as well as flexibly-located north-south connector roads.*

Standards: Bicycles and Pedestrians

- All roadways will include a 5' minimum, detached pedestrian walkway on at least one side of the road.
  - » On roadways with a behind-the-curb mixed use facility (see next standards), the pedestrian walkway requirement is met by the mixed-use facility.
  - » See Section 4.1 Roadways for additional detail on public realm cross-sections and dimensions.
- The southern boundary road will include an on-street OR off-street bicycle/mixed use facility for use by personal bicycles, bikeshare and other micromobility/personal mobility devices, including motorized conveyances such as e-bikes and e-scooters.
- To increase safety of vulnerable uses on roadways with high numbers of industrial vehicles, all north-south district roadways shall include an off-street/behind the curb bicycle/mixed use facility.

Standards: Emergency Vehicles

- All mixed use pathways within the district that are not adjacent to roadways shall be designed to accommodate emergency vehicles (weight, width, outriggers).

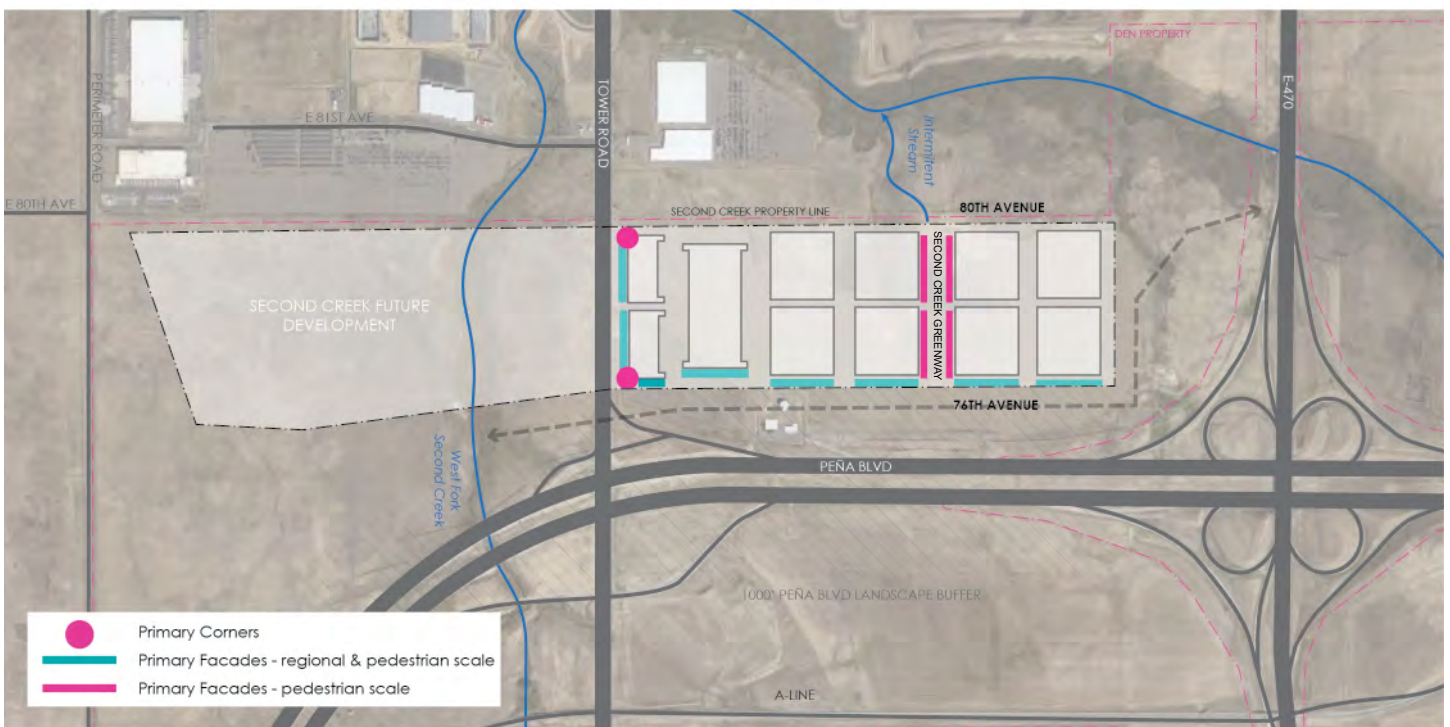


Internal and external bicycle/multi-use path connections.

## 2.4 BUILDING PLACEMENT & ORIENTATION

### Intent

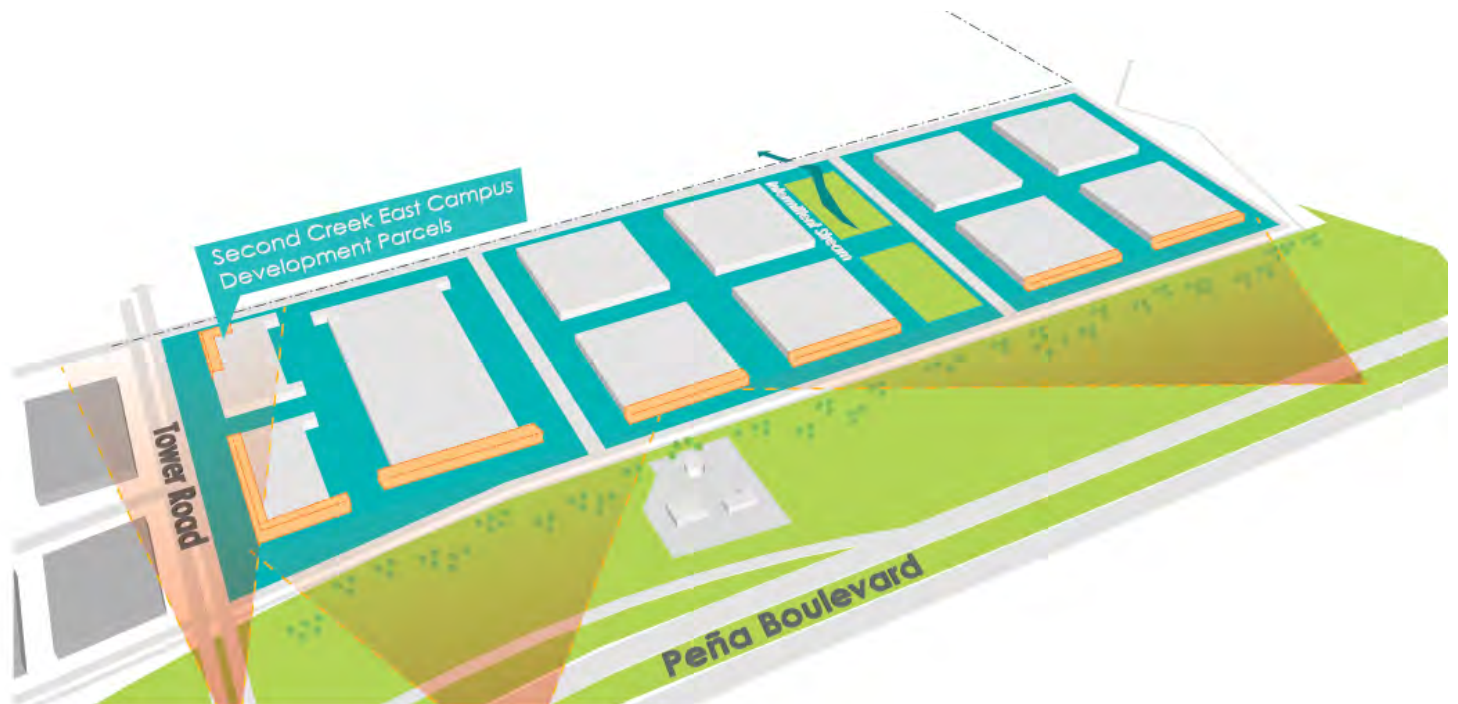
- Use buildings to frame and call attention to the district's primary access points on Tower Road.
- Preserve the Second Creek intermittent stream channel and associated open space required in these standards (see Section 2.5 Open Space Framework).
- Reduce the visibility of parking and dock areas as viewed from important corners, viewsheds, street frontage and the shared open space system.
- Design individual parcels to work with topography to the greatest degree possible.
- Locate and orient buildings to block visual clutter such as service and loading areas, with special attention to district entries on Tower Road.
- Promote DEN's sustainability goals by orienting buildings to take advantage of passive cooling and daylighting opportunities.



*Primary architectural features, corners and facades.*

## Standards

- Buildings shall orient primary facades, including visitor, staff and administrative functions, to Tower Road, Pena Boulevard, the easternmost perimeter road (north-south segment) or the Second Creek Greenway. (See Section 3.4 Facade Articulation for more detail on requirements for primary facades.)
- Loading docks and service entries of perimeter buildings shall not face Tower Road, Pena Boulevard or Second Creek Greenway.
- Buildings and development-related grading shall not extend into the Second Creek Greenway corridor as defined in Section 2.5 of this document.
- On multi-building projects, loading docks shall be oriented to face each other to screen views of loading activities and reduce the amount of internal roadway needed.
- The intersection of Tower Road and 76th Ave/80th Ave shall be considered the Campus's main district gateway and is subject to the following standards:
  - » 76th Ave:
    - Corner building shall have a maximum setback of 100 feet from property boundary on Tower Road and 100 feet from 76th Ave. Greater setbacks maybe considered to accommodate features such as of enhanced planting, entry plazas, freestanding artworks, or drainage features.
    - Primary facade shall extend the full length of the buiding's 76th Ave and Tower Rd faces.
  - » 80th Ave:
    - Corner building shall have a maximum setback of 100 feet from property boundary on Tower Road. Greater setbacks maybe considered to accommodate features such as of enhanced planting, entry plazas, freestanding artworks, or drainage features.
    - Primary facade shall extend a minimum of 100' of the building's 80th Ave and Tower Rd faces.



*Buildings shall feature primary facades facing Tower Road and Pena Boulevard.*

## 2.5 OPEN SPACE FRAMEWORK

### Intent

- Preserve, enhance and provide visual connection to the surrounding short grass prairie context.
- Utilize the Second Creek Greenway to provide enhanced non-motorized connectivity within the district.
- Provide a comfortable pedestrian and bicycle environment calibrated to roadway width, traffic volume and traffic speed.
- Locate and orient spaces to support passive viewing from inside adjacent buildings and other applicable Crime Prevention Through Environmental Design (CPTED) principles.
- Use streetscape to bring a sense of place, human scale and shade throughout the district.

### Standards: Pena Buffer

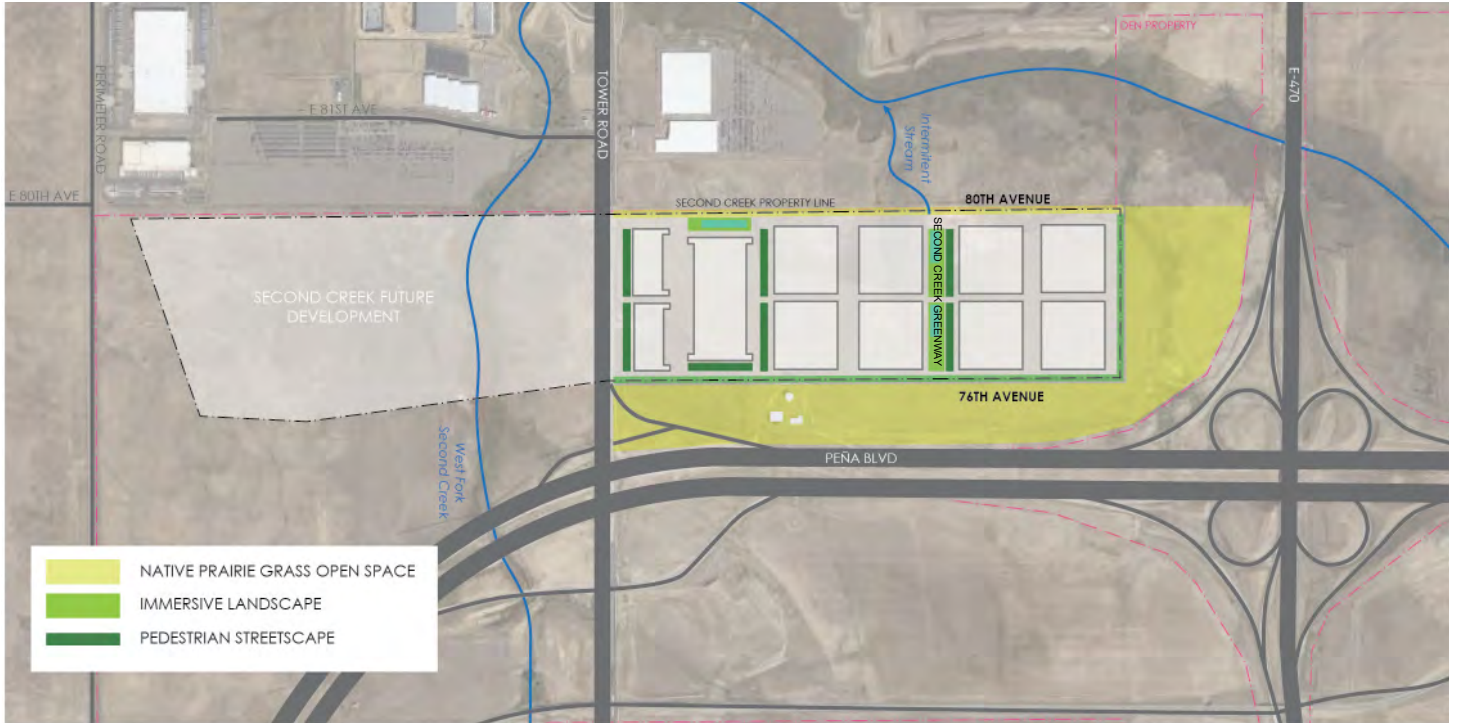
- The Pena Boulevard Buffer shall be designed to act as a visual transition between Pena Boulevard and the district, and shall preserve the opportunity for immersive experiences including multi-use paths.

### Standards: Second Creek Greenway

- The Second Creek Greenway shall roughly follow the current alignment of Second Creek, and shall provide buffered open space on both sides of the existing intermittent waterway.
- The Second Creek Greenway shall be designed to act as a primary visual and physical open space for the district, including mixed-use paths.
  - » This open space shall be a minimum of 150 feet in width, with a minimum width of 42 feet on each side of the intermittent creek's centerline.
  - » This open space shall include a 12'-wide multi-use path on at least one side of the creek.
  - » This multi-use path shall provide formal marked connection to the Pena Boulevard Buffer.
  - » This multi-use path shall provide a formal marked connection to circulation on the adjacent north-south roadway; this connection shall be located at approximately the north-south midpoint of the roadway.



*Denver's new 39th Avenue Greenway provides an example of the type of amenity expected to be provided by the Second Creek Greenway.*



*Types of open space in the eastern portion of the Second Creek Campus.*

## 2.6 SUSTAINABLE DISTRICT SYSTEMS

### Intent: Sustainability

- Advance DEN's goal to be the most sustainable airport in the world and align with the City's carbon neutral goals.
- Reduce carbon emissions, energy usage and environmental impact during construction and long-term operation.
- Reduce water usage in both interior and exterior applications.
- Provide a flexible, performance-based framework that allows each project within the District to employ the best practices and most up-to-date technology available at the time of its construction.
- Improve building performance and reduce operations and maintenance costs.

### Standards: Site

- Projects shall document climate risk mitigation and resiliency strategies considered in site and building design. Future City mandates related to climate resiliency, sustainability or equitability will be considered for applicability to the building or site if they are passed before a project is submitted for review.
- All projects shall be 100% electrified; gas infrastructure will not be provided or permitted.

### Standards: Building

- All buildings shall achieve certification for LEED Gold, using the version of LEED Gold current at the time of project kickoff.
- All buildings to provide documentation proving Net Zero Energy or Net Zero Energy Ready status. Net Zero Energy Ready defined as having reduced annual energy consumption to a level that can be offset by on-site renewable energy system.

*Variances to the above standards may be available on request from the DEN Design Review Board; variance requests will be considered on a case-by-case basis and consider the aggregated sustainability profile of the proposed project as a whole.*

## 2.7 GRADING & DRAINAGE

### Intent

- Integrate site grading and drainage into the overall site development such that it complements existing and planned DEN systems and is aesthetically pleasing, especially within frontage areas along Pena Boulevard and Tower Road.
- Minimize impacts due to site grading and drainage improvements on the site development itself, on adjacent areas, and for DEN planned future development.
- Recharge underground aquifers.
- Minimize long-term maintenance demands of stormwater systems.
- Align visual qualities of stormwater detention and treatment elements to district character.
- Adhere to FAA guidance regarding Hazardous Wildlife Attractants on or near airports and the USDA Airport Wildlife Hazards Program.
- Utilize site grading and berming to screen visually undesirable uses.

### Standards: Site Grading

- Site grading shall complement and integrate into the overall site development, adjacent areas, and DEN-defined aesthetics.
- An appropriate geotechnical investigation shall be performed for all proposed development and all resulting recommendations (over-excavation, structural fill, foundations, paving profiles, etc.) shall be implemented.
- Site grading shall be balanced to the maximum extent possible to minimize the amount of soils to be imported or exported from the site.
- Excess soils may be, with prior DEN approval, used to construct landscape berms/forms within the Pena Boulevard Scenic Buffer in conformance with the landscape standards for the Pena Boulevard Corridor.



*Articulated permeable paver mats at light vehicle parking can provide water quality and capture volume.*

- Maximum grades shall be as follows:
  - » In pedestrian and high-traffic areas, grades shall generally avoid slopes exceeding 10:1 to allow the available open space to be usable.
  - » In landscape areas, grades shall not exceed 4:1 for vegetated slopes and 3:1 for rip-rap and/or hardscape slopes.
- Retaining walls, if necessary, shall not exceed 6-feet in height and shall be permitted as required by the Building Department.
- Should a slope require a retaining wall greater than 6-feet in height, the walls must be terraced such that each wall does not exceed 6-feet in height and the face of each wall steps back a minimum of 6-feet from the back of the adjacent lower wall.
- Retaining walls must be provided with guardrails if required by building code.
- Retaining walls, as well as any required guardrails, shall complement the architectural style of its associated building and conform with the overall character of the Second Creek Campus District.

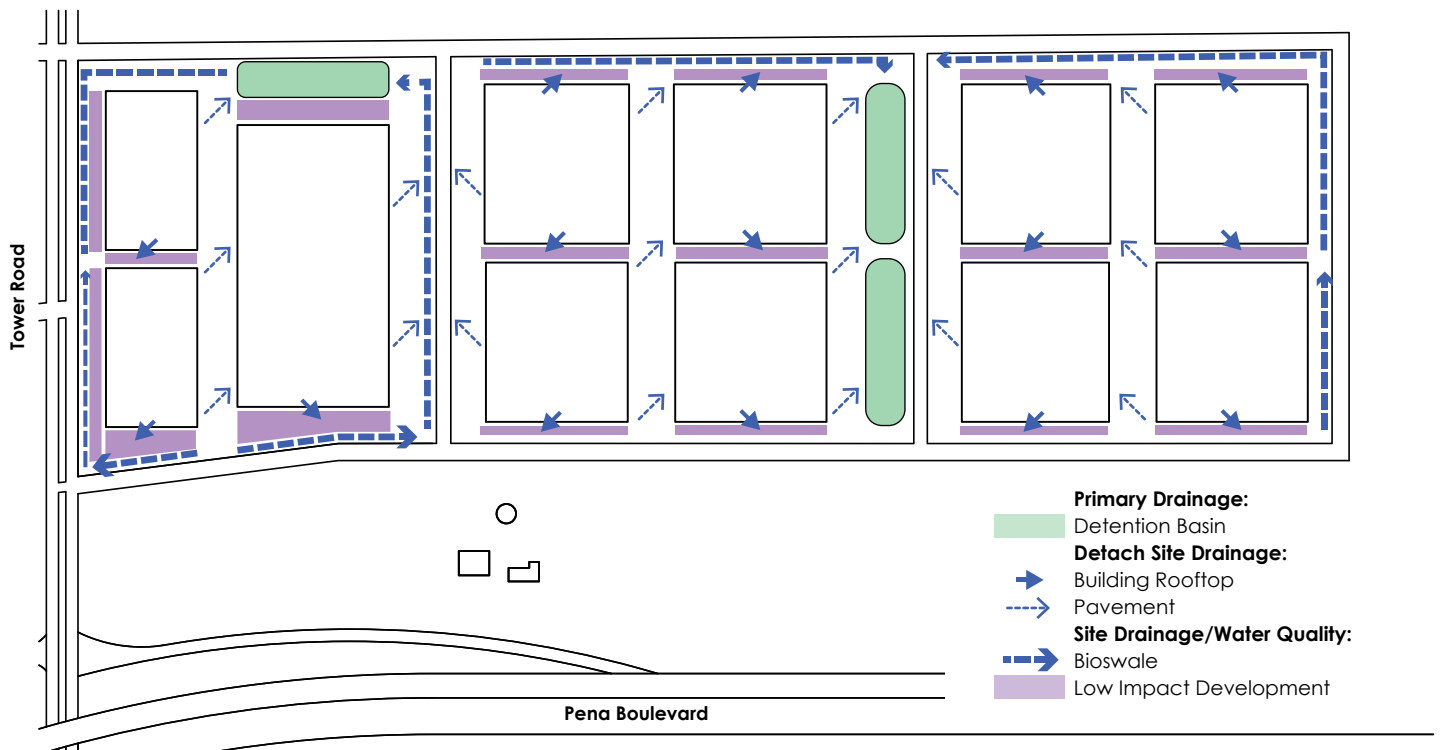
#### Standards: Drainage

- Primary site drainage design shall be considered on a regional basis for conveyance and detention.
- Secondary site drainage design shall be considered on a site-by-site basis and focus on water quality, disconnection of runoff sources, runoff volume and velocity reduction, and integrated into the design of the proposed buildings and parking areas.



*Retaining walls shall act as an aesthetic amenity.*

- All water quality, open drainage and detention structures shall be designed and landscaped to incorporate water quality capture and volume reduction.
  - » Examples include but are not limited to rain gardens, streetside stormwater planters, bio-swales and permeable paving.
- Drainage features shall be hidden if possible.
- Exposed drainage features (channels, ponds, etc.) shall be designed and landscaped as a site amenity.
- Snow storage areas must be integrated into the site drainage design such that it does not obstruct pedestrian or vehicular traffic, snowmelt does not sheet flow directly off the edges of pavement, nor in a location that might directly or indirectly damage existing vegetation.
- Detention facilities must include maintenance access features per MHFD and DEN-specific requirements.
  - » Maintenance access paths in open space areas and stormwater facilities shall be constructed of stabilized, permeable paving material as approved by DEN.
- Site drainage design shall conform to locally accepted low-impact development standards if possible.
- Site drainage design shall comply with all applicable FAA rules and regulations, DEN’s Wildlife Hazard Mitigation Plan, MHFD’s and CCD’s Design Criteria, as well as DEN-specific design requirements.
- Infrastructure O&M Plans must be provided for all drainage infrastructure per local design criteria.
- All drainage reports, plans, and specifications must be approved by CCD for compliance with the local MS4 permit and by DEN AIM Development for conformance with Airport-specific requirements.



Conceptual stormwater framework.



## 3 BUILDING & PARCEL DESIGN

### BUILDING & PARCEL DESIGN

- 3.1 ARCHITECTURAL CHARACTER
- 3.2 MASSING & SCALE
- 3.3 ROOF FORMS
- 3.4 FACADE ARTICULATION
- 3.5 GLAZING & WINDOWS
- 3.6 EXTERIOR MATERIALS & COLORS
- 3.7 ACCESS & PARKING
- 3.8 SITE LANDSCAPE
- 3.9 ARCHITECTURAL SUSTAINABILITY

Architecture should be distinctive in character, harmonious and clearly expressive of its purpose. At Second Creek Campus, this charge takes on additional layers as buildings address the triple challenge of accommodating large-scale industrial uses, exhibiting a distinctive district identity that can be perceived from Pena Boulevard and the A-Line train and providing pedestrian-scale detail and interest within the district itself. Architectural detailing should transition logically between the sides of a building based on use and location in the district, with massing forms and articulation having an overall horizontal emphasis.

## 3.1 ARCHITECTURAL CHARACTER

### Intent

- Provide architecture that is representative of DEN as an international-caliber airport.
- Provide distinctive, harmonious architecture that expresses its industrial purpose through an honest expression of architectural systems.
- Emphasize the human-scale and provide visual interest consistent with district character.
- Provide visual continuity in terms of mass, scale, materials, and color.
- Manifest sustainability and resiliency.

### Standards: General

- The ground story of buildings shall be activated with elements that enhance the pedestrian experience.
- Undesirable building features shall be concealed by design elements.
- All buildings shall include at least 3 of the following architectural features
  - » Overhangs
  - » Canopies or Porticos
  - » Recesses/Projections
  - » Arcades
  - » Raised corniced parapets over the entrance
  - » Tower Elements (at strategic locations)
  - » Variation in the roof line
- The following features are NOT allowed:
  - » Residential architectural character or features such as dormers, shutters, and divided-light windows.
  - » Non-functional ornamentation, structure, or decoration inconsistent with the architecture character.
  - » Historical or regional styles and elements such as arches, domes, moldings, cornices, pediments, and ordered columns
  - » Simulated structure, windows, or materials.
  - » Arbitrary, whimsical, or fad-oriented architecture.
  - » Asphalt roof shingles
  - » Wood siding, shingles, or trim, composition shingles, clay or concrete tile roofing.

### Standards: Entries

- Each building shall provide a well-defined entry sequence for pedestrian and vehicular uses from the street to the building.
- Secondary entrances shall be easily accessible and convenient to building parking and delivery areas, but not be dominant.
- Building entries shall be located so that they are easily identifiable with convenient public access.
- Primary building entry (pedestrian entry) shall provide a minimum of two of the following elements:
  - » Overhangs
  - » Distinct Fenestration
  - » Variation in Massing and Scale
  - » Protected Entry



Image: [bridgersteel.com](http://bridgersteel.com)



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Image: [matthew millman](http://matthewmillman)



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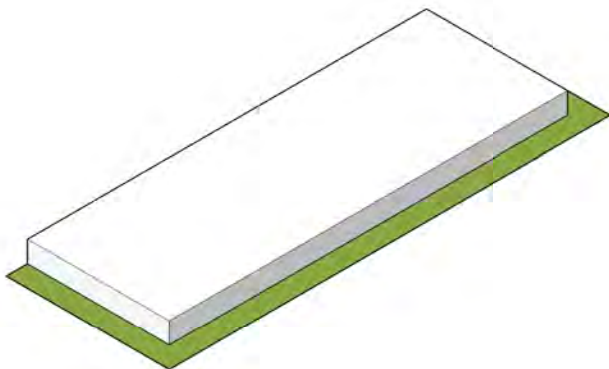
## 3.2 MASSING & SCALE

### Intent

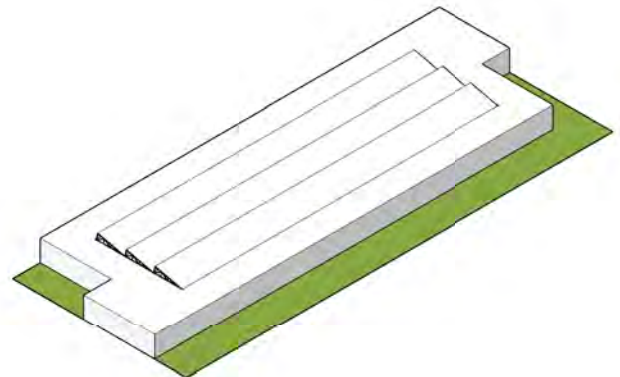
- Reduce perceived scale by visually breaking down the large massing typical of industrial and warehouse buildings.
- Promote architectural variation and visual interest.
- Articulate building massing and roof lines to provide visual interest.
- Maintain sight-lines from DEN's air traffic control tower per the FAA defined specific height regulations that are applicable to all DEN property.

### Standards

- All buildings shall use broad, large-scale architectural gestures to provide variety and modulation in facade and massing as seen from Pena Boulevard.
- Variation at the ground plane shall be provided to create graceful transitions in scale and mass from car to building entries.
- Provide additive and subtractive shifts in the building footprint to reduce mass and scale and to provide outdoor amenity spaces for employees and visitors.
- No part of the building, building equipment, or protrusion from a building shall exceed height restrictions set by the FAA.



*No massing variation*



*Massing variation through shifted volumes*

## 3.3 ROOF FORM

### Intent

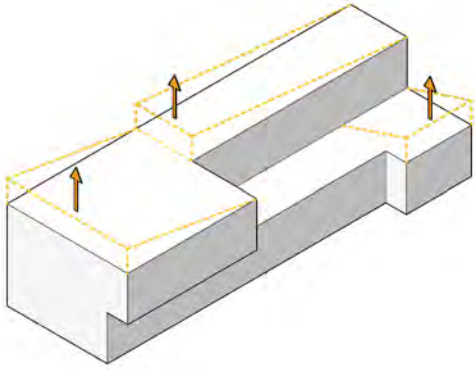
- Provide added architectural interest via roof forms
- Provide a counterpoint to large scale massing i.e. continuous monitors, areas of monitors, or totemic / tower elements related to context (*see examples below.*)
- Enhance building sustainability

### Standards

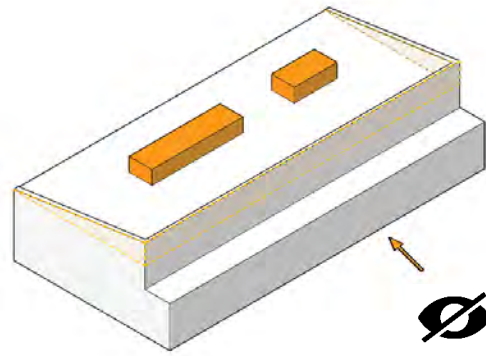
- Roof forms and features shall complement the character of the design and the district.
- Roof lines shall reflect the variations in the building massing and respond to the overall scale of building facades.
- Roof systems shall be designed to support and optimize green roof plantings.
- Variations in roof forms may be utilized to conceal undesirable elements, such as mechanical equipment, from pedestrian view.
- Roofs shall be treated as a 5th facade. They should be given the same attention as vertical facades and be cleanly organized, screen unsightly rooftop equipment and provide sensible daylighting to the spaces below. Roofs may be more visible than secondary building facades given the site topography and land masses adjacent to the site.



*Examples of roof articulation in industrial and large-scale buildings.*



*Roof line follows massing.*



*A raised parapet blocks pedestrian views of roof equipment.*



*DEN's roof provides a distinctive local landmark.*

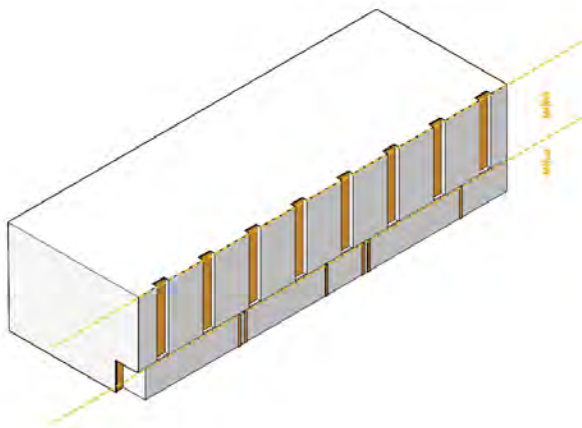
# 3.4 FACADE ARTICULATION

## Intent

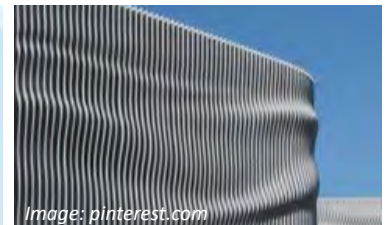
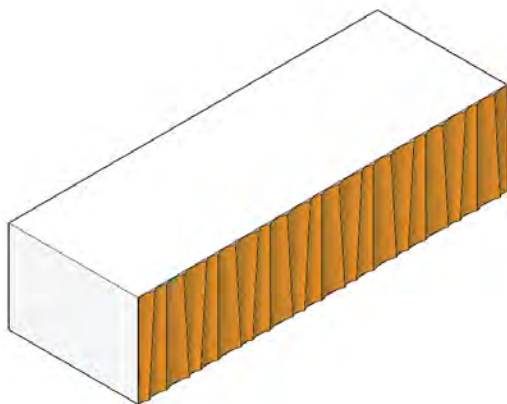
- Create visual interest by avoiding large featureless facades.
- Further reduce the perceived scale of the buildings.
- Distinguish Second Creek from typical industrial developments.
- Articulate entrances.

## Standards

- If building is non-monolithic:
  - » Ground floor of building shall be 1/3 overall height of building.
  - » Facade penetrations and details shall be proportionate to building height.

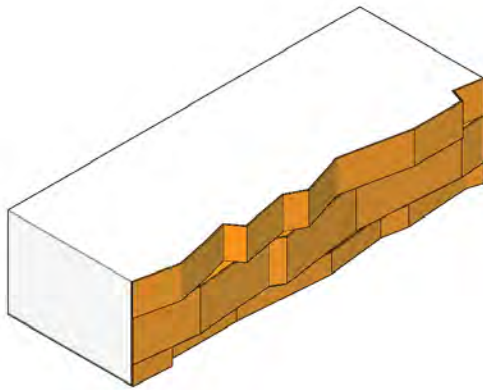


*Non-monolithic buildings: a horizontal break helps define a ground level volume.*



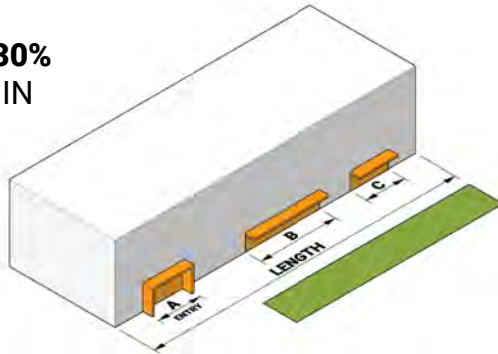
*Monolithic buildings: scalloped panels help create visual interest at all levels.*

- If building is monolithic, facade must be highly articulated to provide visual interest at ground level.
- Ground floor, primary facades shall have storefronts, entry areas, canopies or other features along no less than 30% of their horizontal length.
- Entries shall be easily identifiable destination points and scaled in proportion to the façade.
- Portions of the building may be carved to create entries or allow daylight to penetrate deeper into the building and allow the landscape and architecture to merge.

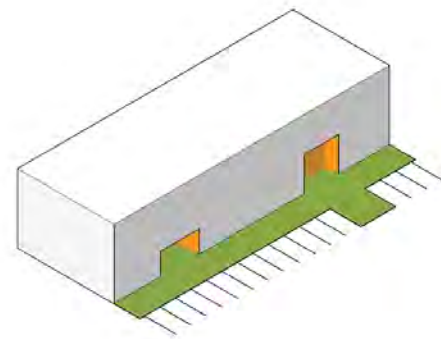


*Breaking the plane of the facade creates dynamic form.*

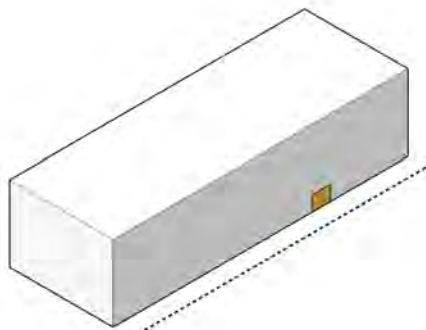
**A + B + C = 30%  
LENGTH MIN**



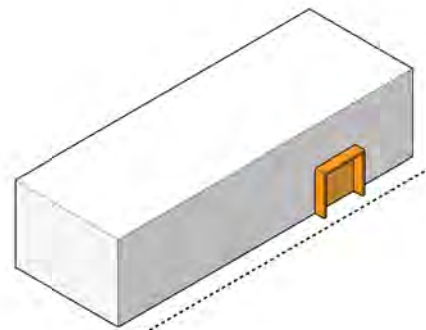
*Buildings shall have frequent transparent openings along ground level.*



*Small courtyards provide more surface area for entry and glazing.*



*Undefined entry*



*Well defined entry*

- When awnings are included in building design, they shall be subject to the following standards:
  - » Structural design shall minimize bird perching opportunities.
  - » The material of awnings and canopies shall be architectural materials that complement the building.
  - » Awnings shall not be internally illuminated.
  - » Canopies shall not exceed 70 feet without a break.
- Facades shall be complementary in style and material.
- Entry facades shall employ finer detail at pedestrian level to avoid large featureless surfaces on exterior.

## 3.5 GLAZING & WINDOWS

### Intent

- Use windows for views (for occupant wellbeing) and daylighting (as a sustainability strategy).
- Further break up large wall areas.
- Comply with FAA safety requirements regarding glare to aircraft.
- Meet sustainability requirements for natural daylight throughout the building.

### Standards

- All windows shall be trimmed with architecturally appropriate details in keeping with the overall style of the building's architecture.
- Transparency shall be provided on faces of the building that face Tower Road and Pena Blvd. or generally have public exposure.
  - » East and West facing facades shall have windows with integral shading devices.
  - » South facing facades shall have windows with architecturally integrated shading devices.
  - » North facing windows shall be provided for natural daylighting.
- The use of tinted glass will be reviewed with the submission of a glass sample.
- Office spaces shall be a minimum of 40% glazed on exterior wall.
- Warehouse spaces shall be a minimum of 15% glazed on exterior wall .
- Roof shall provide daylighting using clerestories or skylights across 30% of warehouse footprint
- Entries and primary corners should be transparent for safety, occupant wellbeing and wayfinding.



*Windows are opaque on exterior and located only at corner. This does not create an inviting entry or comfortable interior space*



*Windows are transparent from exterior, control daylight thoughtfully and complement the architecture and adjacent program through their expression.*



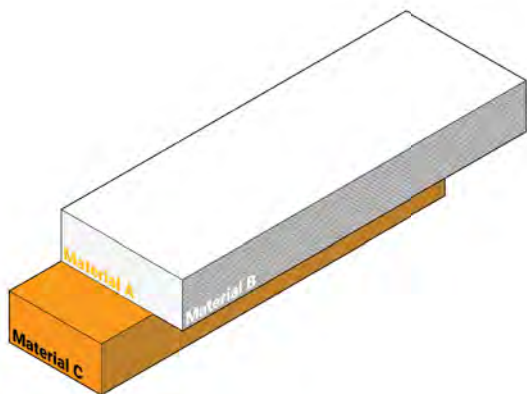
## 3.6 EXTERIOR MATERIALS & COLORS

### Intent

- Utilize materials and colors that complement DEN’s architecture and the high plains environment.
- Utilize durable, low-maintenance materials that withstand the effects of time and contribute to the long term viability of the Buildings and District.
- Use limited palette of materials to emphasize variation in architectural massing or use, not as applique

### Standards: Colors

- Primary building facades shall use a neutral color palette.
- Accent colors shall be selected to complement the dominant building color.
- Unique branding colors may be used in limited areas (i.e. at an entry)
- These colors shall not be distributed over entire facades as stripes or trim and shall be scaled so that they are proportional to the facade in which they are located.
- Colors shall not act as advertisements or billboards.



*Materials shall reinforce architecture, not detract.*



**Standards: Materials**

- Building exteriors shall use materials with texture and character.
- Changes in materials shall be reflected in massing and/or offsets. Number of disparate materials should be limited to a maximum of three primary materials to avoid a busy appearance.
- Design shall incorporate materials defined below as “natural finish materials”. A minimum of 50% of the entrance elevation shall consist of those materials defined as “natural finish” materials, and a minimum of 25% of the other elevations. “Natural finish materials” are defined as:
  - » Concrete (both precast and cast-in-place)
  - » Metal panels or anodized aluminum
  - » Glazing Systems (storefront and curtainwall)
  - » Stainless steel
  - » Exposed steel
  - » Weathering steel (i.e. corten)
  - » Metal panels; factory finished metal panels or aluminum panels
- All metal panels shall be fully engineered architectural quality systems.
- Exterior materials, with the exception of glass, shall NOT be reflective.
- The following elements are not permitted:
  - » Exterior Insulation and Finish System (EIFS)
  - » Concrete block or CMU (with the exception of trash screening structures)
  - » Corrugated / “metal” siding or fluted/ribbed form liner
  - » Asphalt shingles

## 3.7 ACCESS & PARKING

### Intent

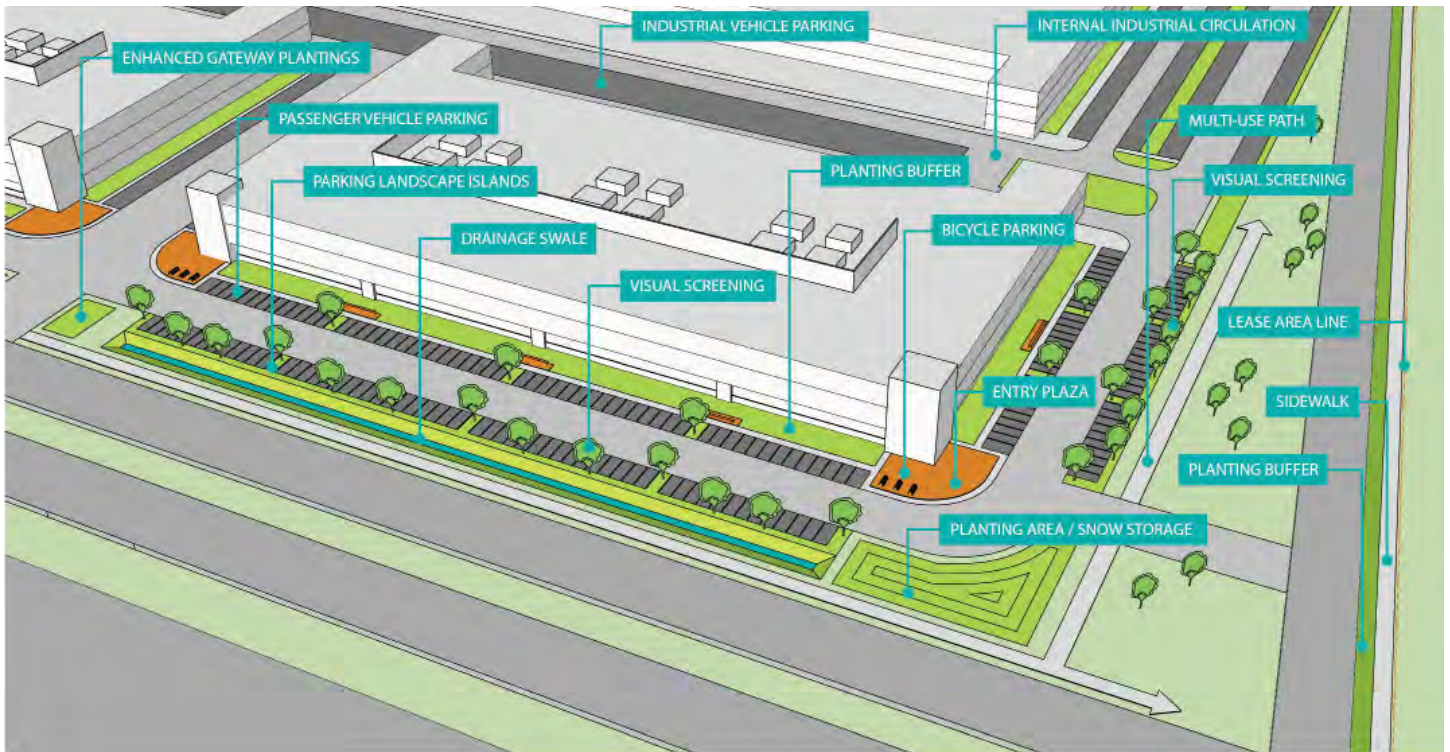
- Create a walkable, human-scale environment.
- Minimize conflicts between vehicles, bicycles and pedestrians.
- Minimize the visual impact of parking and vehicular activity .
- Reduce trespass of headlights, lighting and vehicle noise onto adjacent properties, natural areas and roadways.
- Minimize environmental heat islands and drainage impacts by right-sizing impervious surfaces.
- Encourage multi-modal mobility options.

### Standards: Vehicular Access & Parking

- In order to reduce the number of curb cuts and enhance pedestrian safety, adjacent properties shall utilize shared driveways/access points on all internal district roadways.
- Parking for passenger vehicles shall be separated and buffered from industrial vehicle parking, and shall have dedicated internal circulation exclusive from heavy truck traffic.
- Parking areas adjacent to Tower Road, Pena Boulevard or the Second Creek Greenway shall be visually screened.
  - » Screening may be vegetative, architectural or land form.
  - » Architectural screening such as walls shall be a minimum of 30” and a maximum of 36” high, in order to preserve vehicular sight lines and align with Crime Prevention Through Environmental Design (CPTED) principles.
- Minimize impervious area by sizing parking area for opening-day use and designating space for future parking expansion, as needed.
  - » If disturbed by construction, parking expansion area should be landscaped with native, adapted or low-water planting or approved seed mix until needed as parking.
- Non-truck parking areas shall provide landscape islands at a ratio of one parking-space sized island for every 15 contiguous parking spaces.
  - » Landscape islands shall be, at a minimum, the same length and width as adjacent parking spaces.
  - » The landscape island requirement can be aggregated if larger islands are strategically located for drainage or placemaking purposes; islands do not need to be spaced every 15 spaces and square footage of multiple islands can be combined into a single island.
  - » Landscape islands may be used as part of a larger drainage/stormwater strategy OR as a visual amenity to provide shade and reduce the urban heat island effect.
  - » Landscape islands used as a visual amenity shall include at least one (1) shade tree and either shrubs OR groundcover. All planting shall comply with USDA Wildlife Hazard Mitigation standards.

### Standards: Bicycle Access & Parking

- All parking areas shall provide bicycle parking spaces equal to 5% of vehicular parking spaces, with a minimum of four (4) bicycle parking spaces; a standard 'inverted U' rack counts as two spaces.
- Bicycle parking shall be located within 100' of a primary building entrance, with a direct line of site from at least one building window.
- The total number of exterior bicycle spaces may be reduced to the minimum of 4 spaces if the adjacent building provides an indoor bike storage facility.
- Individual building sites shall provide multi-use connection from the closest adjacent roadway (78th Ave, or north-south connector streets) to the primary entrance for each tenant.
  - » Multi-use connection shall be the same width as the multi-use path on the adjacent roadway.



*Landscape should emphasize district and building entries.*

## 3.8 SITE LANDSCAPE

### Intent

- Emphasize district entities and promote district identity.
- Emphasize and define primary pedestrian entries to buildings.
- Soften the massing, scale and visual impact of large industrial buildings.
- Promote DEN's sustainability goals by emphasizing native and drought-tolerant species.
- Adhere to guidelines outlined by the USDA & FAA from the *FAA Manual for Wildlife Hazard Management*.

### Standards

- Species selection shall be drought resistant and native or adapted to the Colorado plains environment.
- Species selection shall conform to the approved planting list by the USDA or be submitted to the USDA for approval.
- The intersections of Tower Road and the district's north and south perimeter roads shall be considered district gateways and adjacent parcels shall provide enhanced landscape plantings at these locations.
- Individual buildings shall use enhanced plantings to emphasize non-service entries to the building.
- All buildings shall provide a minimum 15'-foot wide amenity/planting zone at the base of all non-loading dock sides of the building. This zone shall include the following:
  - » A minimum 5' wide accessible sidewalk. If parking is adjacent to the sidewalk, wheel stops shall be used to avoid vehicular overhang into the sidewalk.
  - » A minimum 5' wide planting zone or amenity area. Amenities may include seating, shade or other pedestrian-focused elements. If paved, the amenity zone should be differentiated from the sidewalk by material, color or texture.
  - » A minimum 5' wide no-planting zone immediately adjacent to the building; this width shall comply with parcel-specific geotechnical recommendations.
- Aggregate planting areas for plant health, climate and visual impact.



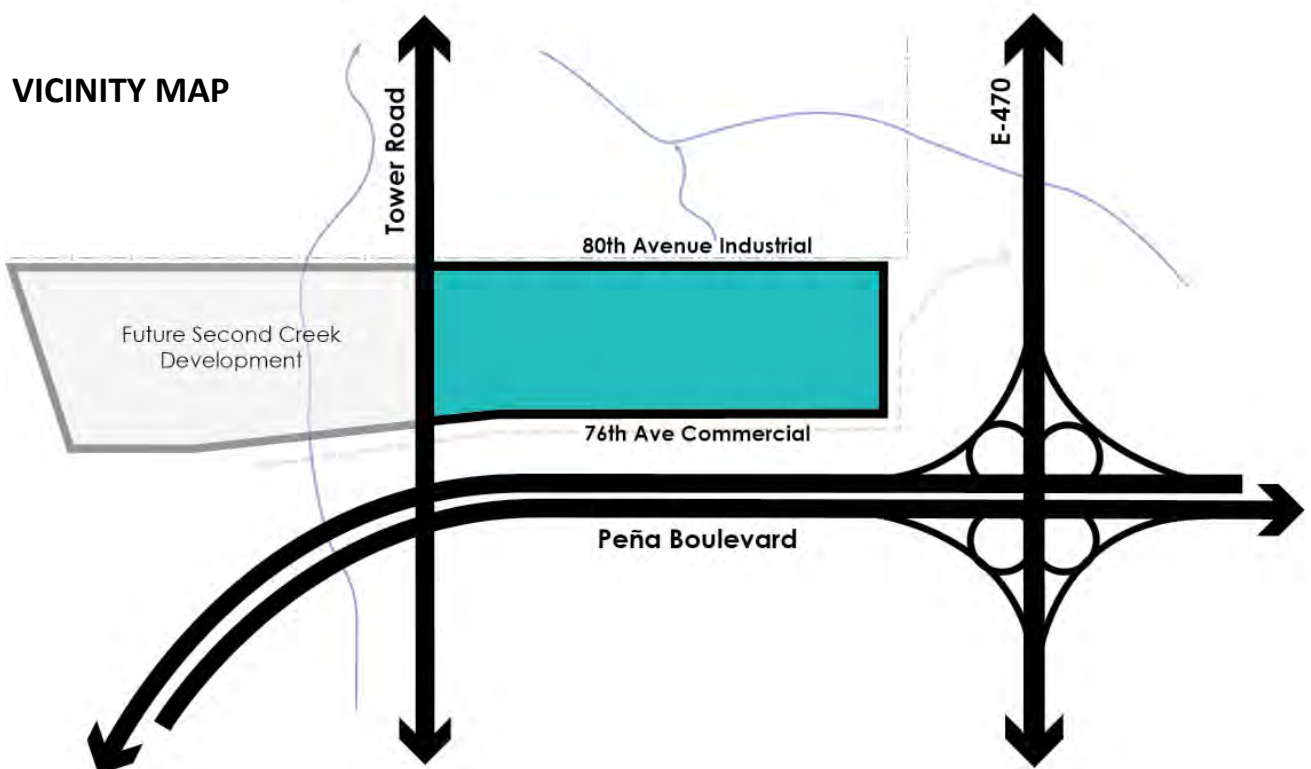
## 4 STREETScape & PUBLIC REALM

### STREETSCAPE & PUBLIC REALM

- 4.1 ROADWAYS
- 4.2 STREETSCAPE
- 4.3 LIGHTING
- 4.4 PAVING
- 4.5 LANDSCAPE & PLANT MATERIAL
- 4.6 IRRIGATION

Streetscapes and public realm play a critical role in establishing district character and cohesion. They will use a family of furnishings and plant materials that provide visual continuity within Second Creek and across other DEN districts. Plant materials are chosen to promote sustainability and to promote a safe aviation environment by minimizing wildlife attractants and hazards.

Thoughtful provision of pedestrian and bicycle facilities, both on-road and behind the curve, promote user safety and further DEN's sustainability goals for full multi-modal circulation.



# 4.1 ROADWAYS

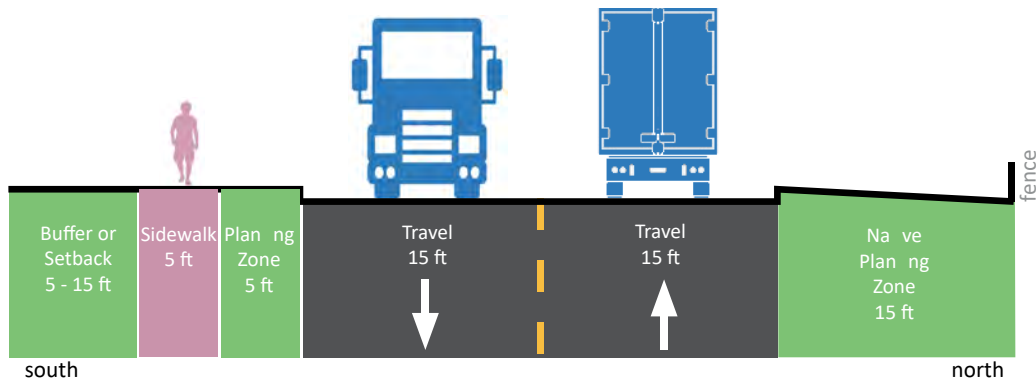
## 80TH AVENUE (NORTH PROPERTY BOUNDARY)

### Intent

- Prioritize access and operational efficiency for large vehicle and trailer movements.
- Preserve potential for north/south roadway connections in future phases of development.
- Provide safe, direct bicycle connectivity to the northern portion of the district.

### Standards

- Each development parcel shall be permitted two access points from 80th Avenue.
- Roadway shall be a minimum of 30 feet from flowline to flowline, including two (2) 15-foot wide travel lanes.
  - » The number of travel lanes shall be determined by a formal traffic study and should include sufficient capacity for all future phases of development east of Tower Road. Use and volume projections shall be approved by DEN in advance of roadway approval and construction.
  - » The native planting zone on the north side of the roadway may be narrowed to accommodate a turn lane at Tower Rd and as needed at internal intersections.
  - » Roadway shall be aligned in accordance with all regulations related to the existing gas easement near the northern property boundary.



Section: 80th Avenue east of Tower Road.

- The south side of the roadway shall have a minimum 15-foot wide amenity zone behind the curb, including a five-foot (5') planting zone, a five-foot (5') sidewalk and a 5-10' buffer or building setback.
  - » The sidewalk shall be unobstructed and free of elements such as telephone and light poles, traffic control boxes and similar.
  - » The planting zone shall include plantings spaced in accordance with USDA wildlife hazard avoidance guidelines. Pedestrian and street lighting and other amenities as identified in subsequent sections of this document shall also be included. Utility poles, traffic control and similar elements shall be permitted in this zone.
  - » Minimum width of the buffer/setback zone between the sidewalk and adjacent development shall depend on use as defined below:
    - ◇ surface parking (passenger vehicles), 5' planted buffer or 5' buffer with 34-36" screening wall
    - ◇ surface parking (heavy trucks), 8' planted buffer
    - ◇ face of building, 10' setback
- The north side of the roadway shall have a minimum fifteen-foot (15') native planting zone designed to create a physical and visual transition to the short grass prairie beyond the property boundary.

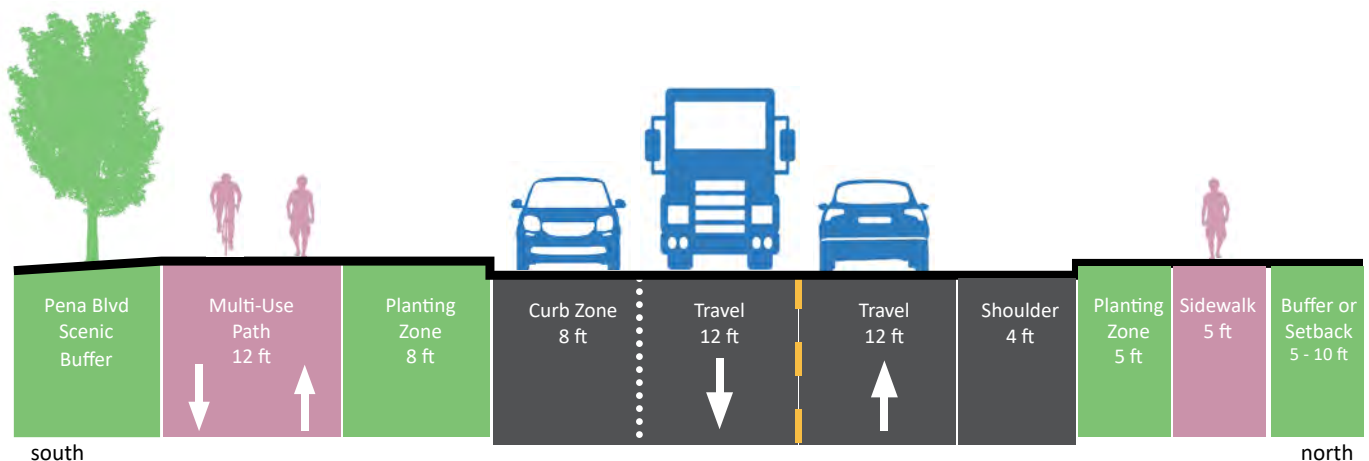
## 76TH AVENUE (PENA EDGE)

### Intent

- Provide district access for public, visitor and workforce traffic.
- Provide safe and efficient options for personal vehicle, bicycle and pedestrian movements.
- Preserve potential connection to north/south roadways in future phases of development.
- Provide visual and physical landscape transition to the adjacent Pena Boulevard Scenic Buffer.
- Allow for future intersection improvements and connection to future development on west side of Tower Rd.

### Standards

- Each development parcel shall be permitted two access points from 76th Avenue.
- Roadway shall be a minimum of 36 feet from flowline to flowline, including two (2) 12-foot wide travel lanes, one (1) 4-foot wide shoulder, and one (1) 8-foot wide curb zone.
  - » The number of travel lanes shall be determined by a formal traffic study and should include sufficient capacity for all future phases of development east of Tower Road. Use and volume projections shall be approved by DEN in advance of roadway approval and construction.
  - » The curb zone may be used for on-street parallel parking or for left- or right-turn lanes (with roadway striping adjusted as necessary), as needed along the length of the roadway.
- The South side of the roadway shall have a minimum 20-foot wide amenity zone behind the curb, including an eight-foot (8') planting zone and a twelve-foot (12') multi-use path.
  - » The multi-use path shall be unobstructed and free of elements such as telephone and light poles, traffic control boxes and similar.
  - » The multi-use path may be located within the Pena Boulevard Scenic Buffer, but should be aligned as close 76th Avenue as possible in order to promote efficient non-motorized movement to destinations within the Second Creek Campus.
  - » The planting zone and multi-use path may be shifted south as needed to accommodate future intersection expansion at Tower Rd.



Section: 76th Avenue east of Tower Road.

- » The planting zone shall include plantings spaced in accordance with USDA wildlife hazard avoidance guidelines. Pedestrian and street lighting and other amenities as identified in subsequent sections of this document shall also be included. Utility poles, traffic control and similar elements shall be permitted in this zone.
- The North side of the roadway shall have a minimum 15-foot wide amenity zone behind the curb, including a five-foot (5') planting zone, a five-foot (5') sidewalk and a 5-10' buffer or building setback.
  - » The sidewalk shall be unobstructed and free of elements such as telephone and light poles, traffic control boxes and similar.
  - » The planting zone shall include plantings spaced in accordance with USDA wildlife hazard avoidance guidelines. Pedestrian and street lighting and other amenities as identified in subsequent sections of this document shall also be included. Utility poles, traffic control and similar elements shall be permitted in this zone.
  - » Minimum width of the buffer/setback zone between the sidewalk and adjacent development shall depend on use as defined below:
    - ◇ surface parking (passenger vehicles), 5' planted buffer or 5' buffer with 34-36" screening wall
    - ◇ surface parking (heavy trucks), 8' planted buffer
    - ◇ face of building, 10' setback

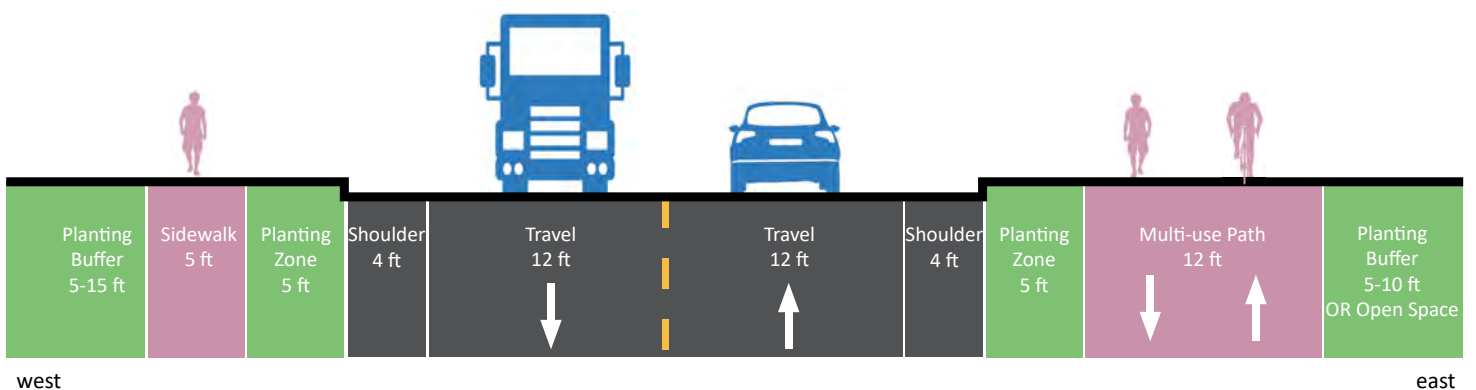
## INTERIOR STREETS: NORTH / SOUTH CONNECTIONS

### Intent

- Provide multi-modal connection within the district interior.
- Promote bicycle comfort and safety by providing enhanced separation between motorized and non-motorized travel.
- Provide internal parcel access.

### Standards

- Primary parcel access shall be permitted on North/South internal streets to reduce traffic buildup on 80th and 76th Avenues.
- Interior north/south streets shall be a minimum of 32 feet from flowline to flowline.
  - » The number of travel lanes shall be determined by a formal traffic study and should include sufficient capacity for all future phases of development east of Tower Road. Use and volume projections shall be approved by DEN in advance of roadway approval and construction.
  - » This section shall include a minimum of two (2) 12-foot wide travel lanes and two (2) 4-foot wide shoulders.
- The east and west sides of the cross-section shown below may be reversed, based on relationship to open space:
  - » For Road A, the multi-use path may be on the east or west side of the roadway.
  - » For Road B, the multi-use path shall be located on the side of the road closest to the Second Creek Greenway.
  - » For Road C, the multi-use path shall be on the east side of the roadway as shown, and may be aligned in the adjacent open space or within the Campus boundaries.



Section: North/South interior streets

- For all roadways:
  - » The sidewalks and multi-use paths shall be unobstructed and free of elements such as telephone and light poles, traffic control boxes and similar.
  - » The planting zone shall include plantings spaced in accordance with USDA wildlife hazard avoidance guidelines. Pedestrian and street lighting and other amenities as identified in subsequent sections of this document shall also be included. Utility poles, traffic control and similar elements shall be permitted in this zone.
  - » Minimum width of the buffer/setback zone between the sidewalk and adjacent development shall depend on use as defined below:
    - ◇ surface parking (passenger vehicles), 5' planted buffer or 5' buffer with 34-36" screening wall
    - ◇ surface parking (heavy trucks), 8' planted buffer
    - ◇ face of building, 10' setback
    - ◇ open space, no planted buffer or setback required

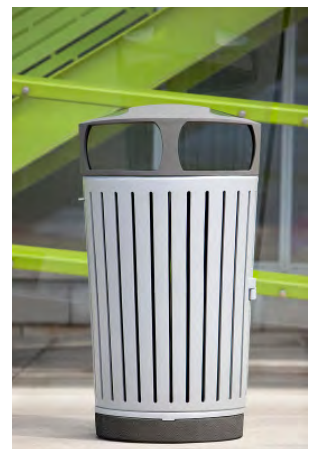
## 4.2 STREETScape

### Intent

- Create a walkable, pedestrian-friendly street that minimizes conflicts between bicycles, pedestrians, light service vehicles and heavy industrial vehicles.
- Reinforce district character through a cohesive public realm.
- Encourage multi-modal commuting for Second Creek Campus workforce through a network of well designed sidewalks and bike facilities that connect to existing and future transit.
- Provide clear wayfinding to and within the site.
- Create a cohesive rhythm with the location of landscape plantings, furnishings, paving and lighting.

### Standards - General

- All streets shall use similar or complementary streetscape elements, hardscape treatments, and plantings.
- Seating, paving patterns, signage and lighting shall accentuate human scale.
- Street furnishings, trees and amenities shall be consistently and intentionally located within well defined zones parallel to the sidewalk or multi-use path.
- A minimum of one (1) immersive landscape amenity opportunity shall be created near the perimeter of each development parcel/block. The immersive landscape amenities should include furnishings, signage and enhanced planting.



*Example of a group of related furnishings*

#### Standards - Furniture

- Maintenance, safety, and comfort should be primary considerations in the type, design and placement of street furniture.
  - » Streetscape benches shall be oriented so they will not impede pedestrian movement and shall not block the minimum unobstructed pedestrian walking zone.
  - » Recognizing the impact of potential odors, trash receptacles shall be located within a convenient distance of, but not directly adjacent to, benches or other seating.
  - » Within open space areas, trash receptacles shall be located adjacent to trails for easier maintenance.
  - » Bike racks shall be placed in proximity to and visible from primary building entrances, per Section 3.7 Access and Parking.
- Seating shall be placed to serve bus stops, building entrances and plazas and/or publicly accessible open space areas.
- High quality, low maintenance site furniture shall be used throughout the District in all publicly accessible areas.
- Street furnishing elements shall include a complementary palette of benches, trash receptacles, bike racks and all other street and site furnishings to provide pedestrian & workforce comfort and convenience.
- The placement of site furnishings should be adequate in number, provide consistency and be coordinated with the overall organization, context and placement of all building and site elements.
- Trash receptacles that allow for a separate recycling container shall be preferred.

#### Standards: Tower Road Streetscape

- Tower Road shall include a minimum of 8 feet (intended to accommodate a 6' deep transit shelter mounted on a concrete pad) behind the sidewalk to accommodate transit shelters and other transit-related amenities.
- This zone shall be landscaped to align with and support District character and identity.

## 4.3 LIGHTING

### Intent

- Use multi-layered exterior lighting approach to create a sense of place and feelings of pedestrian security and safety.
- Control glare to comply with FAA requirements and minimize light pollution onto adjacent properties.
- To provide energy efficient lighting and lighting control systems.
- Integrate lighting designs with architectural site elements and adjacent properties.

### Standards

- All projects shall integrate lighting designs that coordinate and harmonize with existing lighting designs on adjacent parcels and/or the larger site.
- All projects shall comply with the DEN Electrical DSM Chapter 5 “Lighting Systems” requirements.
- All projects shall be designed to meet FAA requirements, ASHRAE/IESNA 90.1-2019 standards, current International Building Code (IBC), and Denver Street Lighting Design Guidelines.
- All light fixtures shall use high-efficiency, commercial grade and have LED light sources.
- All light fixtures and equipment shall be UL-listed.
- Light fixtures shall be full cut-off to minimize uplight and glare unless otherwise approved through written approval and contribute to the character of the site.
- All sites shall be designed to meet LEED BD+C “Light Pollution Reduction” credit to both reduce overall uplight and light trespass on the site.
- Color temperature for all site lighting shall be consistent throughout the site. New projects shall match adjacent existing projects.
- Exterior lighting control system shall provide time-clock **and** photocell-based control for dusk-to-dawn application and dimming or on/off capabilities to reduce output for lights not required after hours.
- Pole mounted street and parking lighting shall not exceed 40 feet to top of fixture; pole height is subject to FAA review and approval.
- Pedestrian scale lighting shall not exceed 15 feet to top of fixture.
- Light pole locations shall be coordinated with landscape elements and utilities.
- Lighting in open spaces shall be minimal and pedestrian oriented to promote pedestrian use and safety while minimizing light pollution in natural areas.

## 4.4 PAVING

### Intent

- Provide a unified public realm and streetscape throughout the district.
- Clearly delineate pedestrian and bicycle areas from vehicular areas.

### Standards: General

- Paving in all pedestrian walking zones shall be concrete or DEN approved specialty paving material or pattern.
- Special paving material or pattern shall be used to enhance pedestrian areas associated with building entries, building related amenity areas, and publicly accessible open space amenity areas. Special paving shall be ADA compliant and avoid intricately detailed patterns.
- The paving shall incorporate use of sustainable materials, processes or methods.

### Standards - Roadways, Driveways and Parking

- Paving in drives, parking and loading serving industrial vehicles shall be constructed of asphalt or concrete at a thickness designed to accommodate heavy industrial traffic and emergency vehicles per site specific geotechnical report.
- Paving in drives and parking serving predominantly passenger and light vehicles shall be constructed of asphalt, concrete or permeable pavement material as approved by DEN to a thickness designed to accommodate moderate traffic and emergency vehicles per site specific geotechnical report.

## 4.5 LANDSCAPE & PLANT MATERIAL

### Intent

- Design landscape and planting that create continuity between the surrounding short-grass prairie environment , Pena Boulevard Scenic corridor and adjacent DEN development districts.
- Provide a number of public health benefits including improved air quality, water quality, reduced heat island effect and access to open space.
- Respect the location and environment of Second Creek Campus by selecting native, drought tolerant plant material that mimics the warm season short-grass prairie that dominates the landscape at DEN.
- Design landscape and plant material within Second Creek Campus surface drainage facilities in a way that mimics the hydrology supporting the mesic mid-grass prairie at the edge of the floodplain.
- Provide high quality and well-maintained landscape and irrigation throughout the project that enhances overall property image and creates a sense of project pride and identity.
- Minimize landscaping that supports habitat opportunity for wildlife species of concern that pose an unacceptable risk to aircraft operations.
- Design landscape and plant palette that promotes long-term maintenance goals and conform to the airport's Division of Airport Infrastructure Maintenance (AIM) standards.
- Adhere to guidelines outlined by the USDA & FAA from the *FAA Manual for Wildlife Hazard Management*.

### Standards: Plant Material

- Plant material shall be adaptable to drought, road salt (Magnesium Chloride) & recycled water standards.
- Native/adapted and low water use plant material shall be preferred. Plant diversity and the inclusion of pollinator friendly plant species is encouraged.
- Plant material shall enhance existing plant communities in the drainage ways with complementary selections.
- The use of high-water turf grass is discouraged except for high traffic areas. Any areas utilizing turf shall be sodded, not seeded.
- Plants treated with neonicotinoids or other bee killing chemicals at any stage in their germination shall not be used.
- Plant material shall conform to the following minimum size requirements:
  - » Deciduous trees (3.0" caliper)
  - » Ornamental trees (2" caliper)
  - » Large evergreen trees (8' ht)
  - » Small evergreen trees (6' ht)
  - » Upright shrubs (4' ht)
  - » Shrubs (5 gallon container)
  - » Perennials (1 gallon container)
  - » Grasses (1 gallon container)
  - » Ground cover (4" pots)

#### Standards: Landscape

- The site naturally features gentle slopes with sandy, loamy soils. Landscape site design shall minimize steep slopes where possible to maintain grading viable for plant life, irrigation, and maintenance.
  - » Seeded or Sodded Areas: 4:1 max slope
  - » Tree, Shrub, Perennial & Grasses: 3:1 max slope
- All seed mixes shall be developed on a site specific basis per geotechnical / soils report & consistent with natural short grass prairie or mesic mid-grass prairie surroundings.
- All seed areas shall be drill-seeded and hydro-mulched.

#### Standards: Streetscape

- Roadway medians, shoulders, isolated patches of landscape and other heavily engineered areas are not compatible with the prairie typology and therefore shall not be seeded.
  - » Design with magnesium chloride infiltration and contamination in mind.
  - » Seed planting is prohibited within Right of Way.
- Street trees shall follow USDA Wildlife Hazard mitigation requirements.
- Street trees shall be required at the 78th and 80th Ave gateways into the Second Creek Campus, and along Tower Road.
  - » Street trees shall be planted, at a minimum, to the first curb cut/intersecting roadway on the development side of 78th and 80th Avenues and a minimum of 200 feet on the non-development side of both roadways.
  - » Street trees shall be evenly spaced and centered between streetlights.
  - » Street tree spacing shall be designed so that canopies do not overlap, creating unwanted habitat opportunity and wildlife attractant.

#### Standards: Pena Boulevard Scenic Buffer and Open Space

- Landscape design shall relate to the character of the surrounding corridor landscape and be consistent with DEN's broader planning and landscape strategy.
- Landscaping shall be consistent with a native prairie plant palette.
- Site landscaping and topography shall visually screen views of undesirable uses and frame views toward the mountains, airport terminal and/or Second Creek drainage-way. Undesirable views include but are not limited to homogeneous parking lots, fuel pumping stations, service areas, or loading docks.

## 4.6 IRRIGATION

### Intent

- Establish installation practices that ensure a healthy landscape, resilient to drought, extreme temperatures & high traffic roadside conditions.
- Align with DEN's sustainability goals to conserve water and manage water quality.

### Standards: General

- All landscaping shall be irrigated by an automatic irrigation system.
  - » Irrigation zones dedicated to drought tolerant & xeric shrub, perennial & ornamental grass species may be turned off after two years of establishment.
  - » Irrigation zones dedicated to trees shall remain on permanent, automatic irrigation system.
- Tree lawns shall be irrigated with micro-spray irrigation heads to limit over-spray and evaporation.
- The use of spray irrigation shall be limited to turf-grass, native grass & perennial areas only.
  - » All other areas shall minimize use of spray irrigation to limit over-spray, and evaporation.
- All irrigation systems shall install rainwater sensors.

### Standards: Open Space

- All ornamental landscape areas adjacent to benches, pavilions and other high traffic areas intended for people to stop, pause or rest (ie immersive landscape areas) shall be irrigated with a permanent automatic irrigation system.
- Native prairie grass & scenic buffer open space areas shall be irrigated for establishment with a temporary automatic irrigation system during establishment.
- Irrigation shall be programmed in accordance to like-planting type (i.e. shade trees evergreen trees, shrubs, grasses, etc) and watering requirements (i.e. xeric, very low, low, moderate, high water use).

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# DENVER

## International Airport



Gate A

Arrivals

Gate B

## 5 SIGNAGE

### **SIGNAGE**

- 5.1 DISTRICT SIGNAGE
- 5.2 BUILDING SIGNAGE

Second Creek Campus signage focuses on a dual purpose of district identity and internal wayfinding. Entry signage on Tower Road announces the presence of the district and guides vehicles to the appropriate entrance for passenger and industrial vehicles, while internal wayfinding signage aids in multi-modal navigation. Building signage supports this wayfinding function, and is focused on providing destination assistance with tenant advertising a secondary effect.

## 5.1 DISTRICT SIGNAGE

### Intent

- Promote District identity and contribute to a unique sense of place.
- Identify District entrances and provide an intuitive, easy-to-use wayfinding system.
- Acknowledge mode-specific differences in speed of movement and eye height, and utilize the appropriate modal best practices relative to sign location and sizing.

### Standards: General

- All District signage shall use consistent or coordinating shapes, colors, materials, typeface and font size and lighting sources.
- All signage shall complement the district's architectural character.
- To avoid visual clutter, post-mounted signs should be consolidated onto as few posts as possible. Regulatory and traffic control signage, such as stop signs or speed limit signage, shall be excluded from this standard and shall not be used for signage consolidation.

### Standards: Entry/Monument Signage

- All entry signs shall extend to the ground in lieu of being mounted on posts.
- Entry/monument signage is limited to the Second Creek Campus district name/logo and address, and shall not include individual tenant names or logos.

### Standards: Wayfinding and Directional Signage

- Informational and directional signage shall be located in the amenity zone between the curb and sidewalk or in the setback area between the sidewalk and building face.
- Signage shall be located so as to not hinder pedestrian/bicycle movement, block access to ground floor tenants, or infringe upon intersection sight triangles.
- Any directional signage indicating distances shall measure those distances in miles not minutes to recognize the difference in micromobility speeds (walking, scooters, bikes, e-bikes).
- Regulatory signs (stop, yield, accessible parking and similar) are excepted from the preceding standards and shall comply with all applicable regulations in size, application and location.



*District signage may act as a gateway with prominent Second Creek Campus branding (left); it may also feature tenant names (middle) or tenant names and directional wayfinding (right).*

## 5.2 BUILDING SIGNAGE

### Intent

- Provide signage that is architecturally compatible with the character of the building and the District.
- Provide wayfinding cues to staff and visitors.

### Standards: General

- Signage is limited to corporate name and/or logo, or corporate name and/or logo and 'Express', 'Air Cargo' 'Air Freight' or similar designation, provided that they are registered corporate identities.
- Font style and color shall be the tenant's choice.
- Wherever possible, architectural elements shall be utilized for sign application; examples include header, soffit, fascia, parapet.
  - » Signage shall not extend above or below the architectural feature on which it is mounted.
  - » Signage mounted above bays, doors or other features shall be centered over the feature and shall not exceed the width of the feature.
- To support wayfinding, signs must be oriented to achieve maximum visibility from the public roadway and shall be placed in a manner that compliments the architectural elements.
- Sign mounting shall adhere to the following standards:
  - » All signs shall be permanently mounted.
  - » Mounting hardware shall be non-corrosive and concealed from public view.
  - » Installation hardware and mountings should limit potential for nesting of birds.

### Standards: Master Tenant Signage

- Master Tenant signature signs may be applied on any side of the building, but no more than one (1) permitted per side.
- Maximum Master Tenant signature sizes shall be limited by building height, and are limited to 1/3 of building width, with the following exceptions and heights:
  - » Building height 0 - 22'                      16' width maximum; 18" height maximum
  - » Building height 23-25'                      25' width maximum; 28" height maximum
  - » Building height 36-48'                      32' width maximum; 36" height maximum
  - » Building height 49+ or more              42' width maximum; 48" height maximum

### Standards: Sub-Tenant Signage

- A maximum of two (2) Sub-Tenant signature signs are permitted per sub-tenant.
- Sub-Tenant signature signs may be applied at the office entrance and/or above a warehouse bay door.
- Maximum Sub-Tenant signature sizes shall be limited by building height, as follows:
  - » Building height 0 - 22'                      8' width maximum; 9" height maximum
  - » Building height 23-25'                      9' width maximum; 12" height maximum
  - » Building height 36-48'                      10' width maximum; 15" height maximum
  - » Building height 49' or more              12' width maximum; 18" height maximum

## 5.2 BUILDING SIGNAGE, continued

Standards: Prohibited Sign Types

- The following sign types and elements are prohibited:
  - » plaques or painted-on numbers
  - » stenciling
  - » exposed lamp tubing (back-lit and spot-lit signage is allowed with appropriate cut-off to control light spill and glare)
  - » flashing or animated signs
  - » window signs
  - » roof signs or signs mounted on top of the parapet
  - » signage on awnings or canopies
  - » paper, handmade or hand lettered signs
  - » signage on bay or roll-up doors
  - » vertically mounted lettering, in which the word is rotated from horizontal and read from bottom to top or top to bottom



*Building signage should utilize architectural building features when possible and should be center over features such as doors (left); lighted signage shall be internally or backlit (right).*



*Signage is limited to tenant name and/or logo (left and right).*

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## **6 ENTITLEMENTS & APPROVALS**

Entitlement to be guided by Commercial Districts at DEN: Development Approval Process flow chart, conditions defined in tenant lease agreement and DEN project manager.ti



## 7 TECHNICAL GUIDING DOCUMENTS

Second Creek Campus is zoned DIA under Section 9.5 of the Denver Zoning Code, and there are no viewplane ordinances on the site. DEN will require that all developers and tenants development plans conform to the design standards described within this document.

All development in the Second Creek Campus will also have to adhere to recommendations made by the United States Department of Agriculture (USDA) **Airport Wildlife Hazards Program**. This program provides guidance intended to reduce the likelihood of aviation-related wildlife strikes that threaten human health and safety. More information is provided at:

[https://www.aphis.usda.gov/aphis/our focus/wildlife damage/programs/SA\\_Airport/CT\\_Airport\\_hazards](https://www.aphis.usda.gov/aphis/our%20focus/wildlife%20damage/programs/SA_Airport/CT_Airport_hazards)

In addition, the Federal Aviation Administration (FAA) provides additional information regarding Hazardous Wildlife Attractants, and how development should avoid introducing these elements, in AC 150/5200-33 (February 21, 2020).

Additional DEN documents referenced in these standards or which may otherwise be relevant include the following:

- DEN Real Estate Strategic Development Plan (2018)
- Civil Design Standards Manual
- DEN Industrial Stormwater Management Plan (2020)
- DEN Sustainability Management Plan (2013)