Thanksgiving Station TOD Design Standards

Thanksgiving Station Transit Oriented Development (TOD) Design Standards

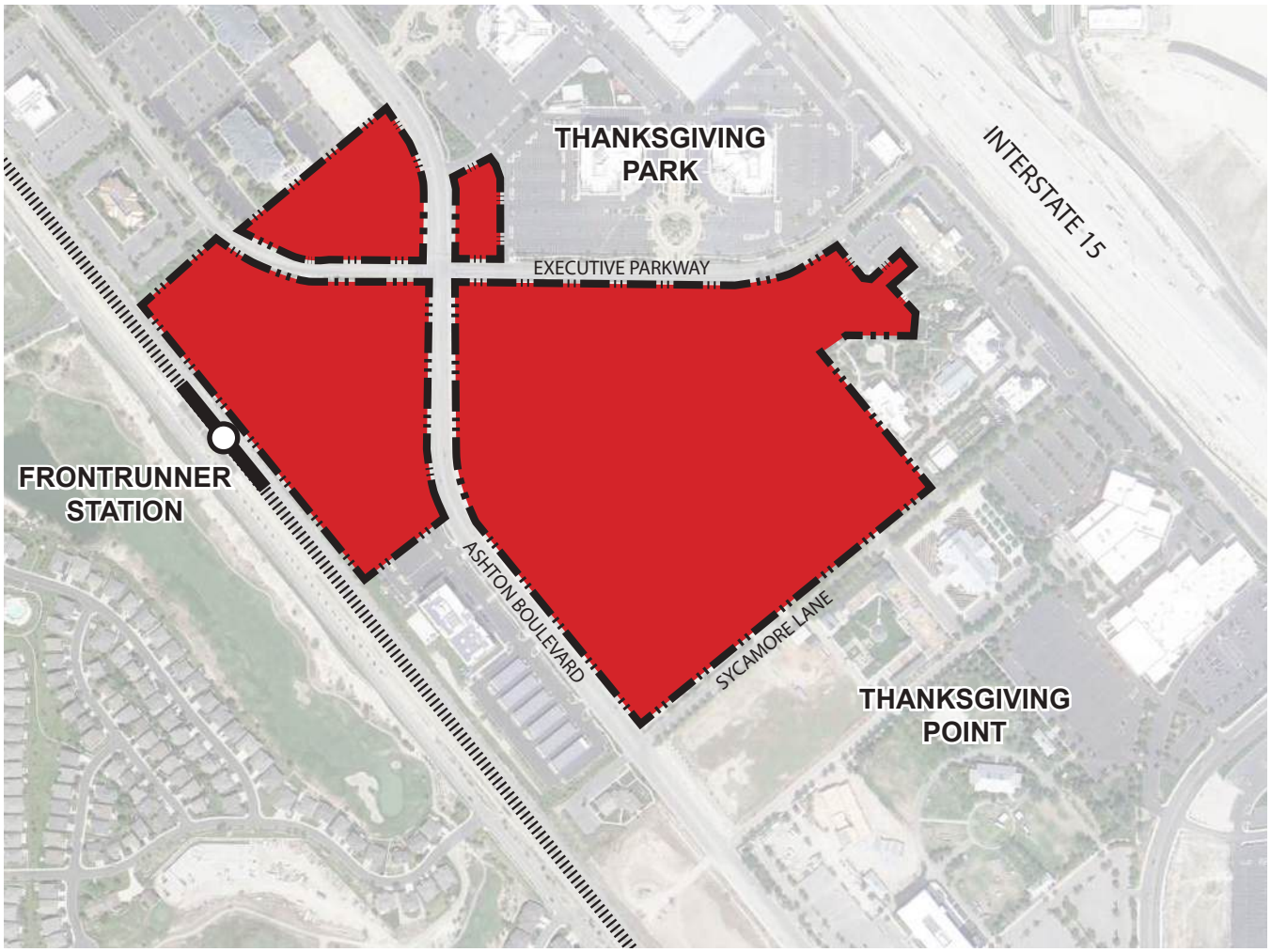
Section 1. Introduction

A. Purpose and Intent. The Thanksgiving Station Transit Oriented Development (TOD) area is established to create a self-sustaining, walkable neighborhood, in which residents, employees, and visitors have multiple transportation options to access neighborhood amenities, employment, open space and mass transit. The neighborhood's proximity to FrontRunner, future bus rapid transit (BRT) or light rail, Thanksgiving Point, and significant employment base presents an opportunity to create a unique and sustainable TOD neighborhood within Lehi. The purpose of the Thanksgiving Station TOD Design Standards ('Standards') is to provide a road map for new retail, office and residential development set within a public realm framework that collectively ensure the function, physical form, and overall character of development, enhance the human experience, neighborhood identity, and are complimentary to Thanksgiving Point.

B. Site Area & Context. Thanksgiving Station TOD is an approximately 50-acre neighborhood in Lehi, Utah. This neighborhood is an important gateway development linking the FrontRunner Station, Thanksgiving Park, and Thanksgiving Point. The FrontRunner Station provides access to commuter rail (Route 750), bus, and future bus rapid transit (BRT). Route 750 offers direct access to Provo and Ogden, Utah with a full UTA system providing access to such destinations as Downtown Salt Lake City, Salt Lake City International Airport, Brigham Young University (BYU), and University of Utah.

Thanksgiving Park is an employment hub in North Utah County consisting of 850,000 square feet of Class A office space. Thanksgiving Point is a premier indoor and outdoor farm, garden, and museum complex with venues and programs designed to build curiosity about science and the natural world. Thanksgiving Point is a major destination not only for the region but for the whole state.

C. Guiding Principles. The urban design and built environment blend time-tested placemaking practices with sustainable and healthy city building strategies to create a unique and authentic Thanksgiving Station TOD. The guiding principles establish an overarching vision which reflects the input from various landowners, city staff, and elected officials.



Thanksgiving Station TOD Area

1. **Create an authentic TOD for Lehi and Thanksgiving Point for the current and future citizens of Lehi that will be cherished for generations.**

    a. Create a flexible plaza/open space that can be activated year-round.
    b. Create a hierarchy of public and private spaces.
    c. Provide density necessary to support a TOD.
    d. Create a neighborhood that will last generations.
    e. Activate the ground floor of buildings along plazas and promenades with commercial uses and entrances of residential uses.

2. **Create a signature TOD that is unique to Lehi and Thanksgiving Point.**

    a. Design the public space and buildings in a harmony with one another to create a truly special experience unlike any other along the Wasatch Range.
    b. Utilize durable materials in the public realm and architecture that ground the community in our time and place in history.
    c. Curate a successful mix of retail/restaurants to support the TOD and wider community.

d. Locate and design public spaces in a manner that is central to Thanksgiving Point and the broader TOD Area.
e. Incorporate special architecture at prominent locations that create identity and visual interest.

3. Establish an interconnected and pedestrian friendly network of streets, promenades, trails and public spaces that knit Thanksgiving Station into the surrounding community.

a. Provide safe and intuitive pedestrian and bicycle connections to the existing and planned network.
b. Connect to the regional public spaces and places network.
c. Create safe pedestrian street crossings.
d. Provide intuitive and direct access to public parking facilities.
e. Provide direct and intuitive access to Lehi Station.
f. Integrate space for contemporary personal mobility technologies seamlessly into the design (e.g.; scooters, e-bikes, ride-hail, carshare, etc.) in a manner that is congruent with a walkable urban experience.

4. Create a built environment that encourages a healthy lifestyle and community.

a. Develop well-connected street networks that encourage walking and biking.
b. Design pedestrian-scale streetscapes with an emphasis on scale, comfort, safety, amenities, and connectivity.
c. Design for all ages and abilities
d. Employ principles of universal design.
e. Create a variety of scale and types of public spaces and places.
f. Locate, orient, and design lobbies, stairways, and interior public spaces to be visible, comfortable, and connected from inside to outside.
g. Incorporate multiple opportunities for food, drink, entertainment and gathering that may include casual dining, sit down dining, pub, coffee shop, restaurant, food truck, and farmers markets.
h. Emphasize visibility and access to nature and outdoor spaces.
i. Facilitate social engagements through an interconnected public realm with multiple gathering places.
j. Create a public realm lighting strategy that respects dark skies, circadian rhythm of humans, and bio-diverse habitats. Lighting strategies should include adaptive dimming; limits on backlight, uplight and glare; light source spectrum; and light trespass.
k. Design the public realm to be comfortable and safe during all four seasons.
l. Affordable housing should be offered on site. Diversity of dwelling unit sizes and price points will allow for an inclusive community.

5. Create a district that embodies resilient and environmentally sustainable strategies into the construction and function of the public realm and built environment.

a. Utilize low carbon, durable, high performance materials that will stand the test of time.
b. Source material locally and with low embedded energy.
c. Work toward the incremental development of district systems for stormwater, parking, low energy lighting, fiber infrastructure, and energy.

d. Work toward the development of car share and bike share facilities, electric vehicle plug-in, coordinated BRT and/or shuttle systems, and district parking strategies.
e. Site and building design should strive to meet LEED Gold Criteria.
f. Allow for a mix of office, residential, neighborhood retail, restaurant uses to locate in the TOD.
g. Encourage buildings that reduce energy consumption and have user-friendly features such as operable windows, light handling and shading devices, natural daylighting, low VOC materials, and other materials and systems that support healthy indoor air quality.

D. Related Controls and Documents. The Thanksgiving Station TOD Design Standards are designed to supplement the regulations established in the Thanksgiving Station TOD Area Requirements ('Requirements'). The regulations set forth in the Requirements replaces Chapter 38 Transit Oriented Development Zone (TOD) and the Standards replace Chapter 37 Design Standards in the Lehi City Development Code. This document provides detailed design criteria on urban design, landscape, and architecture to guide a comprehensive approach to the aesthetic quality, functionality, and livability of the overall development. These Standards will ensure Thanksgiving Station TOD becomes a special place for Lehi residents and functions as a true TOD by leveraging the benefits of alternative modes of transportation to shape an urban neighborhood focused on the pedestrian experience.

All developments within Thanksgiving Station are subject to review by the Thanksgiving Station Architectural Review Committee (ARC) for final approvals to ensure that proposed building design satisfies the requirements set forth in this document.

Section 2. Multi-Family Residential Design Standards

A. Purpose and Application. This section is intended to create multi-family developments that will establish a distinct neighborhood for Thanksgiving Station, with sustained quality and adequate amenities, and will enhance a sense of community. Reference imagery contained in this section is emblematic of farm/agrarian industrial, contemporary farm/agrarian industrial, and contemporary architectural style and character. This style and character should influence the design of multi-family development within Thanksgiving Station.

B. Architectural Standards

1. **General Design Concepts.** New development should be designed for its specific context within Thanksgiving Station. Each building should be designed such that the overall development is cohesive. Building architecture, exterior materials and colors should be coordinated to prevent repetitive design and give the impression of a neighborhood built over time.

2. **Side and Rear Facades.** These Standards shall be applicable to all sides of a building fronting a street, public or private, or public park, with each applicable façade required to meet the terms of this section.

(Left). Lighter more contemporary palette with dark accents. (Right). Warmer material palette with dark accents. Both buildings utilize similar building materials but are varied to give diversity and variety.

3. **Building Materials.** The majority of each façade, meaning 51 percent or more of the wall area excluding windows and doors, shall be constructed of brick, stone, architectural textured concrete, fiber cement siding, wood, metal, luxury EIFS, or other durable building material. Stucco and EIFS shall not be used on prominent corners or hierarchal architectural features. Building materials should coordinate; however, materials should be varied to give diversity and variety to the project.

4. **Color.** Each building should have a coordinated color scheme, however not every building should be constructed from the same color scheme. Building colors should be selected to establish diversity and variety within the project.

(Left). Townhome style ground floor units include stoops and raised planters to create privacy through a grade separated entrance in the base of a multi-family building. (Right). These townhome style units ground floor entrances that orient to a publicly accessible open space.

5. **Townhome Building Entrances.** The primary entrance and front façade of individual townhomes or townhome-style ground floor units within a development shall be oriented toward streets, parks, courtyards, or public open space.

Left). Lobby entrance facing the street is recessed and articulated with more glass, awning, signage, and lighting to clearly distinguish within the architectural treatment of the base. (Right). Ground floor unit is elevated slightly above the street but has direct access via a stoop to the street as well as from a corridor internal to the building access from a shared building lobby.

6. **Building Entrances.** Multi-family buildings, whether apartments or condominiums, shall provide the following building entrances facing a street:

   a. One primary street entrance connecting to interior hallways, stairwells, and elevators for all residents to use.

b. Individual street entrances, patios, porches, and stoops shall connect ground floor units to sidewalks to the best extent possible. Exceptions are ground floor units facing Ashton Boulevard or Executive Parkway, or where topographic conditions create physical limitations.

Left). Even with a simple material and color palette, the building utilizes a central massing break to create two symmetrical but smaller building frontage elements to avoid a monolithic frontage. (Right). Building utilizes an asymmetrical break and change in material to provide variation in the facade plane.

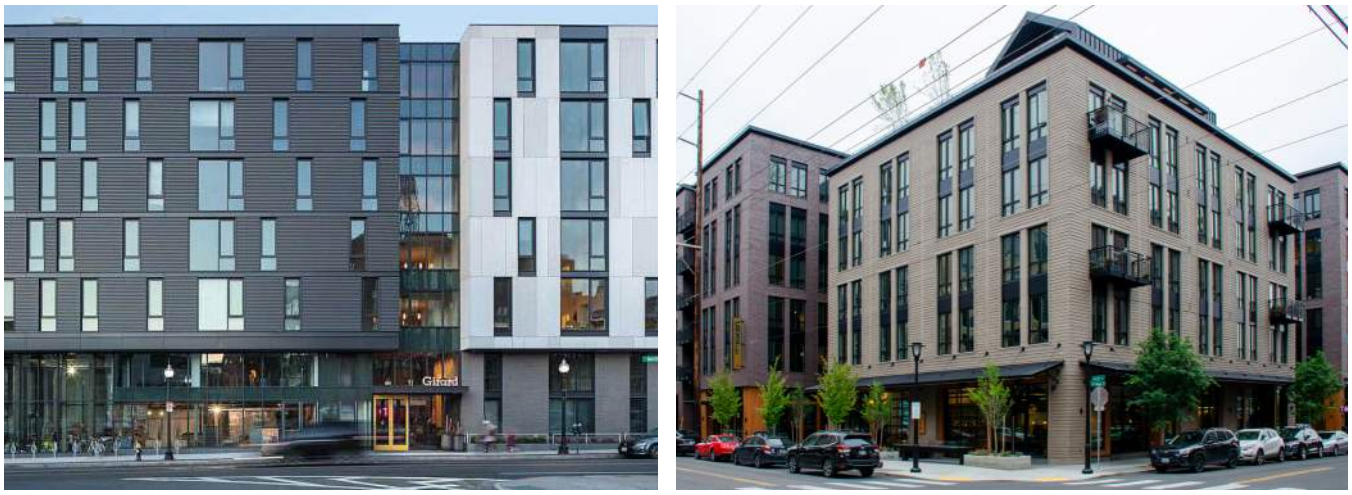
7. **Architectural Variation.** Multi-family buildings, apartment or condominium style, shall be designed so that a single building frontage should not be longer than 200 feet without a change in plane of at least 2 feet deep and 15 feet wide.

(Left). Sawtooth treatment of the roofline gives a distinct form to the building. (Right). Building design uses smaller building forms, step downs, and low-rise building forms to create visual interest and movement in the collective roofline of the building.

8. **Form and Massing.** Building form should be considered when designing multi-family dwellings to create visually engaging compositions. The following architectural features shall be incorporated into the design of all multi-family buildings:

   a. **Varied Roof Lines.** Buildings shall be designed with variations in building roof lines to create visual interest and a distinctive street frontage. The dominant building height should not exceed 70% of a building frontage. This may be done through varied parapet heights, recessed

elements, articulated rooftops, step downs, hip and/or vaulted roofs, loft-style units with higher ceilings on highest floor, framed elements, or any other similar building features that vary roof profiles.



(Left). Building utilizes both a variation in size of windows and staggered window spacing to create visual interest within the facade, while highlighting the resident entrance through more glass vertically expressed. (Right). Building utilizes a more regular grid pattern for windows but groups windows to emphasize vertical expressions in the building facade.

b. Architectural Window Articulation. Each façade should be designed to create visual interest and distinctive buildings through variation in opening size, varied and/or orderly grouping of windows, articulation of windows (sills, mullions, fins, etc.), or the use of recessed windows.

(Left). Building composition includes recessed elements and a step back on the top floor for a corner rooftop amenity covered with a unique canopy structure. These features bring visual interest and enhance the overall public realm experience providing an elevated amenity space with an outward public expression. (Right). The break in the building creates small building massing of differing material compositions while introducing natural light by exposing the corridor and creating visual connections with the external environment.

c. Façade Articulation. Each façade shall have variation in plane depth, accomplished through elements such as: variation in footprint setbacks, upper-level step backs, recessed entries, or offsets in the general plane of the façade, including columns, pilasters, fins, or ribs.

(Left). Recessed base, increased use of glass, and material change helps to distinguish the lower level from the upper floors of the building. (Right). While material changes and how the building expresses itself through the full height of the building to create the impression of a collection of smaller urban buildings, the increased use of glass compared to the smaller window openings on the upper floors of the building help distinguish the base and ground the building.

d. Vertical Separation. Buildings in excess of 2 stories in height should generally exhibit architectural detailing that establishes a vertical separation between lower and upper stories. This may be accomplished by a change in material, style or color, recessed base, enhanced floor-to-floor dimensions, or other methods. Upper floor building treatments are permitted to express themselves to grade, so long as the ground floor use is articulated as follows:

i. Storefront or increasing glazing, awnings or more glazing for retail, amenity, lobby, and other common building areas.

ii. Articulated individual entries for residential, such as stoops, patios, or porches.

(Left). Recessed balconies are utilized to create unique patterning within the building facade. (Right) Building uses projecting balconies to create depth and articulation within the building facade.

e. Balconies, Porches, and Patios. Balconies, porches, and patios shall be incorporated to articulate building facades and activate the ground floor. Balconies, porches and patios may

be recessed and/or projecting with a minimum depth of 5 feet and at least 50 square feet in size. Incorporation of Juliet balconies may also be considered.

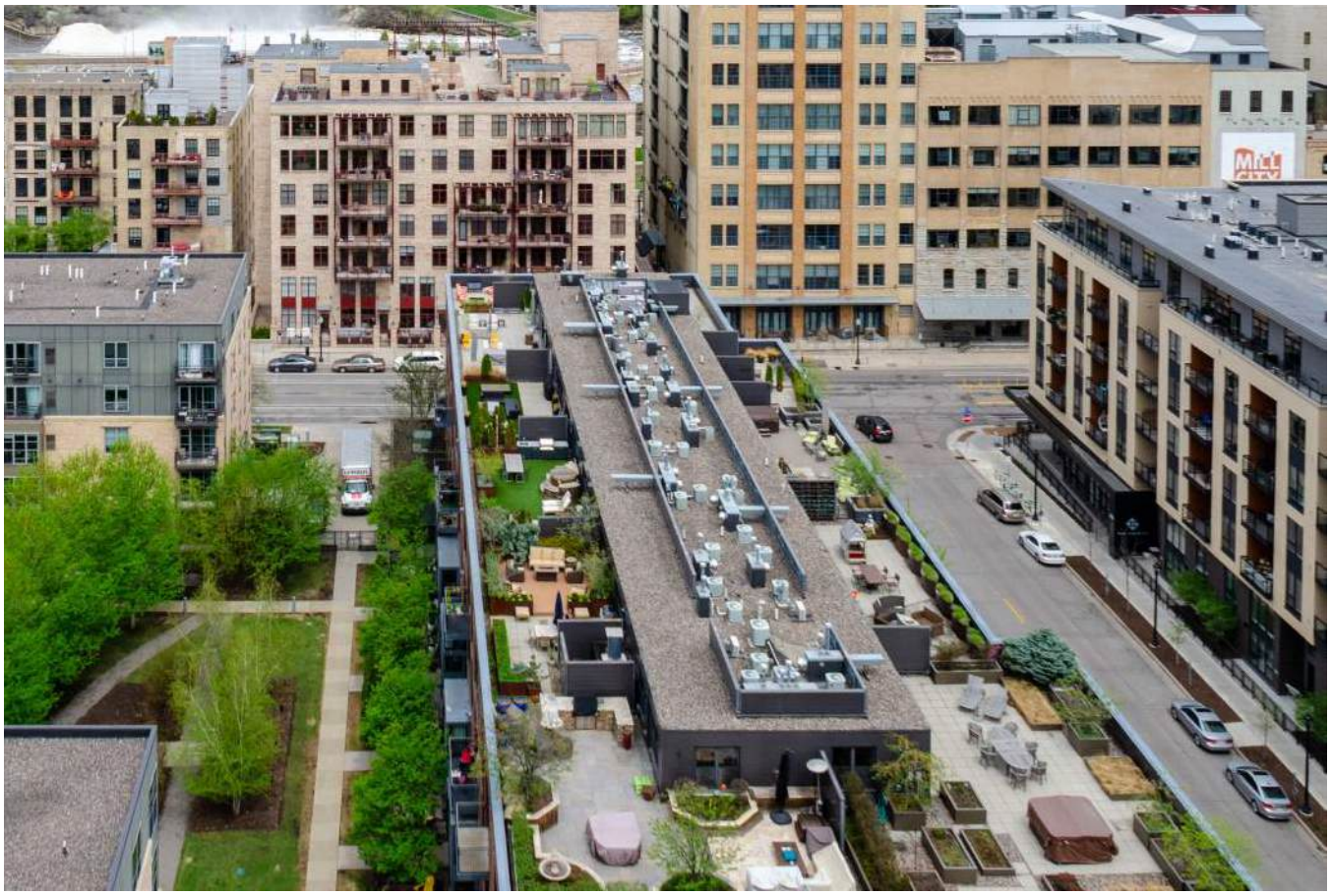
(Left). Corner feature includes enhanced materials and recessed entry to help emphasize the entry to the building. (Right) Building uses a recess in building massing, awning, and signage to highlight the entrance.

f. Entrances. Primary entries of each building shall be emphasized through changes in wall plane and building massing. Exterior stairs and other entry accesses shall be integrated into the overall building design.

(Left). The angled facade planes create unique massing and building forms that create visual movement in how light, shade and shadow change throughout the day influencing how the building is perceived from various perspectives. (Right). Building setback at the corner creates a small plaza that is activated by ground floor commercial uses and public art.

g. Public Street Orientation. Large windows, porches, entryways, and other entry features shall be oriented toward public streets and active common spaces. Prominent corners shall receive special treatment to create visual focal points. Corner treatments may include but are not limited to:

i. Tower elements
ii. Variations in height (step downs or low-rise building elements)
iii. Larger scale windows, openings, and entry ways
iv. Enhanced or articulated massing/materials
v. Setbacks for public spaces and/or public art



(Above). Mechanical and utility equipment is located away from perimeter building edges and/or behind low parapet walls to not only screen from view but create opportunities for rooftop amenity spaces.

9. **Screening.** Mechanical and utility equipment on the roofs of buildings shall be located or screened so as not to be visible from public and private streets. Screens shall be aesthetically incorporated into the design of the building and may include such treatments as balustrades and parapet walls. If visible from public view, screening materials should be compatible with those of the building.

Section 3. Retail Design Standards

A. Purpose and Application. This section is intended to guide the development of an urban, walkable, pedestrian-oriented retail destination for Thanksgiving Station TOD, Thanksgiving Point, and Lehi as a whole. Reference imagery contained in this section is emblematic of farm/agrarian industrial, contemporary farm/agrarian industrial, and contemporary architectural style and character. This style and character should influence the design of retail development within Thanksgiving Station, especially for free standing retail structures that provide the opportunity to create distinct placemaking moments through their design.

B. Architectural Standards

(Top Left). Enhanced fenestration, operable windows, and outdoor dining areas gives the building a strong relationship to the sidewalk experience both day and night. (Top Right). Ground floor retail in the base of a residential building includes operable storefronts to increase glass along street frontage and outdoor dining space. (Bottom Left). Barn structure is a restaurant fronting onto a public plaza with a minimum of 40% of frontage being glass. (Bottom Right). Grocery store with operable windows for the cafe function of the store.

1. Street Facades.

a. Retail uses should maintain a strong physical and visible relationship with the sidewalk experience.

b. The façade facing the street frontage shall include large windows with transparent, non-reflective glass. Opaque, heavily tinted, or reflective glass should not be used on the first

floor of a building facing the street. When glass is tinted, it should allow for a minimum of 60 percent light to pass through the windows into the building.

c. A minimum of 40 percent of the façade area on the first floor facing the street shall consist of glass. Where a building is located on a corner lot, a minimum of 40 percent of each retail façade on the first floor should consist of glass.

d. Where appropriate, retail uses should include an operable storefront to allow encourage stronger indoor/outdoor relationships with the public realm (streets, parks, plazas, paseos, etc).

(Top Left and Bottom Right). Hierarchal massing features should be designed with adjacent buildings in mind to highlight entrances, create focal points, and visual interest through layer massing elements within public spaces. (Top Right and Bottom Left). Buildings utilize different materials, textures, facade plane changes, and roof pitch angles to highlight storefront entries.

2. Architectural Features.

a. The hierarchal architectural features at building entrances shall include at least two of the following features:

i. differing exterior materials;
ii. awnings or canopies;
iii. decorative lighting;
iv. increase amount of glass such as side or transom windows; and
v. articulations in the facade.

b. Buildings with multiple entrances should have at least two separate hierarchal features to distinguish entrance locations.

(Top Left and Top Right). Freestanding retail building illustrating different ways in which to articulate a similar building form to create visually attractive retail buildings. (Bottom Left). Mixed use buildings that integrate retail and active storefronts into the overall design of the building. (Bottom Right) Unique building form for an ice cream shop that creates a unique building form that helps activate an urban plaza.

3. Massing:

a. Buildings shall be designed as three-dimensional forms with articulations in each façade. Façade articulations are typically included at building entrances, hierarchal building features, and to breakup long sections of wall area on the ground floor. In a mixed use building, ground floor retail should be clearly defined, have an increased floor-to-floor height, and designed in conjunction with the broader building.

(Left). Freestanding retail building on a park space designed with operable windows and outdoor seating areas. (Right) Retail base includes operable windows, outdoor dining, and an accessible rooftop terrace offering views and additional pedestrian spaces overlooking a plaza.

b. Free-standing retail buildings should be designed with rooflines utilizing stepped parapets, hip and/or vaulted roofs, domes, and/or other distinct roof forms.

c. Free-standing retail buildings located on a park or plaza space should be designed in a manner that helps activate those spaces, such as operable windows, rooftop decks, unique building forms, or similar treatments.


(Left). Grocery store is accessed from a pedestrian paseo that has direct access to the street sidewalk. (Right). Multiple retail tenants within the facade have individual entries with the corner retail use having its entry at the corner.

4. Building Entrances:

a. Public entrances shall be developed on all buildings to face streets, paseos, courtyards, plazas, or other public spaces.

b. Buildings located on a street corner should either provide a corner entrance or provide two individual entrances facing each street.

(Above). All images show examples of buildings appropriately applying approved exterior building materials.

5. Building Materials:

a. Brick, stone, architectural grade metal, fiber cement, concrete, and wood are required as primary building materials. Stucco and EIFS shall not be used on architectural features and pop-outs in a façade, but are allowed on recessed wall areas, walls between entrances, and between hierarchal architectural features for no more than 25% of the facade.

(Left). Freestanding retail frontage uses varying parapet heights to screen mechanical and utility equipment on the roof. (Right) Retail village with farm-style shed roofs with clerestory roof projections create voids within roof forms to discretely hide mechanical and utility equipment

6. Screening:

a. Mechanical and utility equipment on the roofs of buildings shall be located or screened so as not to be visible from public and private streets. Screens shall be aesthetically incorporated into the design of the building and may include such treatments as balustrades and parapet walls. If visible from public view, screening materials should be compatible with those of the building.

Section 4. Office Design Standards

A. Purpose and Application. This section is intended to guide the development of urban office building(s) within the Thanksgiving Station TOD. Office is an important part of creating true live-work environment by transit and is envisioned for a prominent corner within the TOD neighborhood. Reference imagery contained in this section is emblematic of farm/agrarian industrial, contemporary farm/agrarian industrial, and contemporary architectural style and character. This style and character should influence the design of office development within Thanksgiving Station and presents the potential to create a distinct visual gateway into the neighborhood from the transit station.

B. Architectural Standards

(Left). Office building utilizes larger clear glass on base and smaller windows on the upper floors. (Right). Building compositionally consists of two architectural treatments to create the appearance of two smaller buildings. A portion of the building is predominantly all glass with horizontal metal panels and spandrel glass juxtaposed alongside a more solid facade with punched openings.

1. Street Facades.

a. The façade facing the street frontage shall include large clear glass windows on the street level and smaller windows may be allowed on the upper floors. Opaque, heavily tinted, or reflective glass should not be used on the first floor of a building facing the street. When glass is tinted, it should allow for a minimum 60 percent light to pass through the windows into the building.

b. Buildings fronting a street shall provide glass at a minimum of 30 percent of the façade area on the first floor facing the street. Where a building is located on a corner lot, a minimum of 30 percent of each façade facing the street on the first floor shall consist of glass.

(Left). Building uses a central recessed element to create articulation in the facade combined with more glass, awning, and signage to identify building entrance. (Right). Increase fenestration, material changes, and a projecting trellis structure creates a portal to highlight the building entrance and provides articulation in the building facade.

2. Architectural Features:

a. Buildings shall have hierarchal massing at building entrances. Building entrances shall include at least one of the following features:

   i. roof tower feature;
   ii. pitched roof feature;
   iii. parapet extensions or height variation;
   iv. articulation in the façade; and
   v. other comparable features as approved by the ARC.

(Left). Glass is used to contrast more solid facade planes, create feature elements compositionally that illuminate differently at night, and to bring focus to primary building entries. (Right). Rooftop step back creates movement in the roofline of the building.

b. The hierarchal architectural features at building entrances shall include at least two of the following features:

   i. differing exterior material types;
   ii. awnings or canopies;

iii. decorative lighting; and
iv. increased amount of glass.

c. When applicable and/or grade changes allow, through-lobbies should be considered to connect internal courtyards to streets.

(Top Left) Office design included covered walkways made with perforated metal screens to reduce solar heat gain from the southern exposure. (Top Right). The unique form of the building gives the impression a 'shed' structure floating over a glass box, with vertical circulation (elevator and stair tower) being celebrated with a mural as well as breaking down the horizontal scale of the building. (Bottom) Office building with a flat roof line utilizes vertical fins, cantilevered upper floors, recessed wall areas, and angled facades to create facade articulations and visual interest.

d. An office building façade shall include at least three of the following features:

i. awnings or canopies;
ii. covered walkways;
iii. decorative lighting;
iv. string course;
v. spandrel glass or curtain wall systems;

vi. fins, louvers, or other shade devices;
vii. angled, cantilevered, curved building forms;
viii. projecting and/or recessed building elements;
ix. wainscot of a minimum 30 inches in height except for under windows; and
x. other comparable architectural features as approved by the ARC.

(Left) Office utilizes distinct fenestration patterning on the upper floor, recessed base, and enhanced glazing at the entry that connects to a rooftop amenity to create building articulation. (Right). Building composition includes several changes in facade plane creating movement and depth while emphasizing the corner condition.

3. Massing:

a. Buildings shall be designed as three-dimensional forms with articulation in each façade. Façade articulations are typically included at building entrances and hierarchal building features to break up long sections of wall area.

b. Buildings shall be designed so that a single building frontage does not exceed 200 feet without a change in plane of at least 2 feet deep and 15 feet wide.

c. Office buildings may have flat roof lines with architectural variations occurring through other means as required by this section.

d. Sites that have changes in grade should integrate the grade change into the design of the building. The building and its foundation may be used as a method of retaining grade.

(Left and Right) Both office buildings include stepping in the facade to hold an urban street frontage on a sloping site.


(Left) In addition to holding a perimeter street, office building actively engages a central plaza. (Right). Office building frames an active courtyard space with a covered walkway that links the lobby directly to an adjacent parking facility.

4. Building Entrances:

a. Public entrances shall be developed on all new buildings to face streets. Entrances are optional along Executive Parkway and Ashton Boulevard to prioritize internal streets to promote better connectivity within the broader development and associated parking areas.

b. Where a building(s) orients around a courtyard or plaza space, through lobbies are encouraged to create secondary entrances and facilitate better connectivity between open space amenities and streets.


(Left) Darker material palette consists of architectural grade metal panel and glass with two recessed elements, one to highlight the lobby entrance and the other to highlight a rooftop deck. (Right). Lighter material palette consisting of brick, wood metal, and regular window pattern. A building recess provides a common outdoor balcony on each floor, breaking up the buildings massing to create smaller facade elements and creates movement in the roofline.

5. Building Materials:

a. Brick, stone, architectural grade metal, fiber cement, spandrel or curtainwall glass, wood, or luxury EIFS are required for primary exterior building materials.
b. Stucco and split face CMU may be used as a secondary material only. These materials shall not be used on main architectural features.

c. Luxury EIFS and architectural grade metal should not be used on the ground floor of a building near entries or heavily trafficked pedestrian areas.

(Above) Mechanical and utility equipment is screened behind tall parapet walls with materials and colors designed to blend into the overall buildings design and composition.

6. Screening:

a. Mechanical and utility equipment on the roofs of buildings shall be located or screened so as not to be visible from public and private streets. Screens shall be aesthetically incorporated into the design of the building and may include such treatments as balustrades and parapet walls. If visible from public view, screening materials should be compatible with those of the building.

Section 5. Parking Structure Design Standards

A. Purpose and Application. Parking structures allow for the consolidation of parking in order to shape a more pedestrian-oriented experience within a TOD. This section is intended to guide the development of freestanding parking garages that expose edges to a street versus being lined by another land use. Parking structures when treated like a building or artfully screened have the ability to be integrated into urban environments in a manner that can enhance the human experience. Reference imagery contained in this section is emblematic of the type of treatments that should be explored to treat exposed parking garage edges within the TOD.

B. Architectural Standards

(Left) Ground floor retail use in the base of the parking structure would follow the Retail Design Standards in the document. (Right). Example of a liner condition on a parking garage and the intent of limiting the parking structure from project no more than one floor above the liner building, which factors in the appearance of a step back to the building on the upper floor.

1. Street Facades.

a. Above grade parking structures shall incorporate liner buildings, or liner, with active uses (i.e. residential, office, and/or retail land uses). For residential buildings, where parking serves predominantly residential uses, a liner is required on all sides of an above grade garage facing a street, paseo, or park. For shared office/residential parking structures, liner is required on at least two sides at a height no less than one story, or 10 feet, below the top surface level of parking structure. Example, if a parking structure parks on the roof at level 7, the roof of a liner residential building would need to be at level 6, which is equivalent to a 5-story liner building.

b. When two sides of a parking garage are exposed, façade treatments should screen while allowing for natural ventilation, to the extent possible.

c. Liner buildings shall utilize the appropriate combination, as applicable, of architectural standards from this section. For example, ground floor retail frontages shall meet the Retail Design Standards and upper floors for residential uses shall meet the Multi-family Design Standards.

(Top 2 Images) Example of when a parking structure is treated artful it can be a terminus or focal point contributing to the overall placemaking experience. (Bottom 3 Images). Parking structure was designed in a manner that integrates with the mixed use campus that it serves utilizing the elevator and stair to create a tower feature and opportunity for signage and branding.

2. Architectural Features (Exposed Parking Structure):

a. Design shall clearly identify lobbies and entrances not associated with liner buildings or uses.

b. Parking structure pedestrian and vehicular entrances and/or access points should consider the following features to improve access and wayfinding:

i. differing exterior material types;
ii. awnings or canopies;
iii. decorative or enhanced lighting; and
iv. increased amount of glass, as applicable.

c. Street-oriented parking structure facades should conceal or effectively reduce the impact of parked cars and light sources from the exterior view for the full height of the structure.

(Left) Example of exposed parking structure in pedetrian-oriented urban neighborhood that utilizes a series of decorative panels, feature walls, and changes in facade plane to create a visually attrative parking structure. (Right). Parking structure facade is organized compositionally like a building with a distinct base, fenestrations, and a series of features walls of varying materials, one of which was use for signage.

d. A parking structure façade shall include screening elements for at least 30 percent of exposed parking structure, designed to coordinate or compliment the design of liner buildings and/or associated buildings. Parking structure facades shall include at least one or a combination of the following screening elements, as appropriate:

i. patterned and/or dimensional metal perforated screens;
ii. decorative concrete panels;
iii. awnings or canopies;
iv. feature walls with punched opening and/or murals;
v. spandrel glass or curtain wall systems;
vi. fins, louvers, or other shade devices;
vii. plant materials (vines, etc.); and
viii. other comparable architectural features as approved by the ARC.

(All Above Images) Examples of exposed parking structure using appropriate materials.

3. Building Materials:

a. Brick, stone, architectural textured concrete, architectural grade metal, perforated metal panels, fiber cement, spandrel or curtainwall glass, plant materials, and wood shall be used for exterior parking structure materials.

Section 6. Urban Design Standards

A. Public Spaces and Places. The public spaces and places network is comprised of a variety of public spaces and places, of different sizes and scales, connected to each other by highly pedestrianized streets, trails, and pedestrian walkways.

Each park, plaza, or promenade has a distinct character and function within the overall network and are intended to be enjoyed at various times of the day and week by residents, employees, and visitors alike. Each space should be intentionally designed to provide a unique experience and program elements intended to allow people to gather, play, stroll, relax, dine, and shop.

1. **The Urban Promenade.**

    a. The Urban promenade will be a linear park/promenade that links the Lehi Front Runner station, new development, Thanksgiving Point, and existing office development to one-another. This should be designed in a manner that allows for a variety of low-speed, personal mobility options (pedestrians, bicycles, e-scooters, etc.) to co-exist in an off-street environment.

2. **The Central Green.**

    a. The Central Green will provide a mix of both soft and hardscape environments that allows for a variety of programmed and non-programmed events to take place. This should be designed in a manner that promote its use by residents, employees, visitors, and the greater Lehi Community.

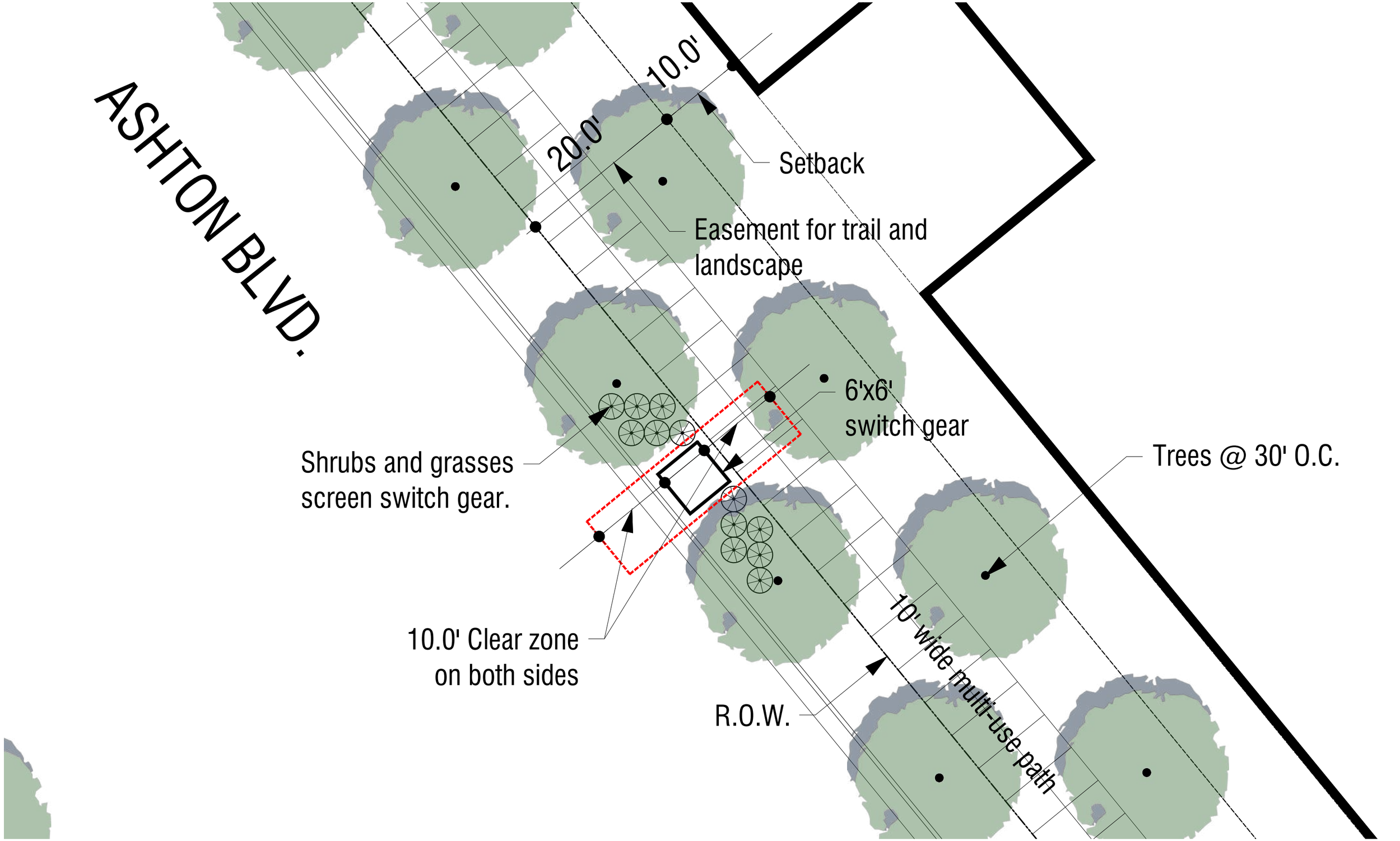
3. **The Plaza.**

    a. The Plaza will be the heart of the TOD for generations to come. Designed as primarily a hardscape urban plaza, this will be where the Christmas tree is lit, farmers markets and art fairs are held, families bring relatives, and the community comes together. This will include the highest concentration of neighborhood retail, restaurants, and active ground floor uses both adjacent to and within the piazza.

4. **Streetscape.** Streetscape design will establish the overall character of the TOD creating rhythm and visual impact and highlighting areas of significance. Because there will be multiple users in the TOD, the streetscape and open spaces are intended to provide a common thread that ties all the various land uses and user groups together. Common materiality, furnishings, and wayfinding helps visitors understand they are within the Thanksgiving Station TOD.

A hierarchy of Streetscape design varies based upon specific street functions. Due to the mixed-use nature of the project, mixing uses vertically and horizontally, streets are classed not on specific uses on them, but on the role each street will play in the development and how the streets will interact with each other. The street network forms a coordinated whole, where each is different but carries common threads that create a unified development.

Power Gear Placement and Access



THANKSGIVING POINT | POWER - SWITCH GEAR ALONG ASHTON

All information provided is conceptual for discussion and/or illustrative purposes only, and subject to change without notice.

0 10 ft
SCALE: 1"=10'

N

12/6/2022

CIVITAS

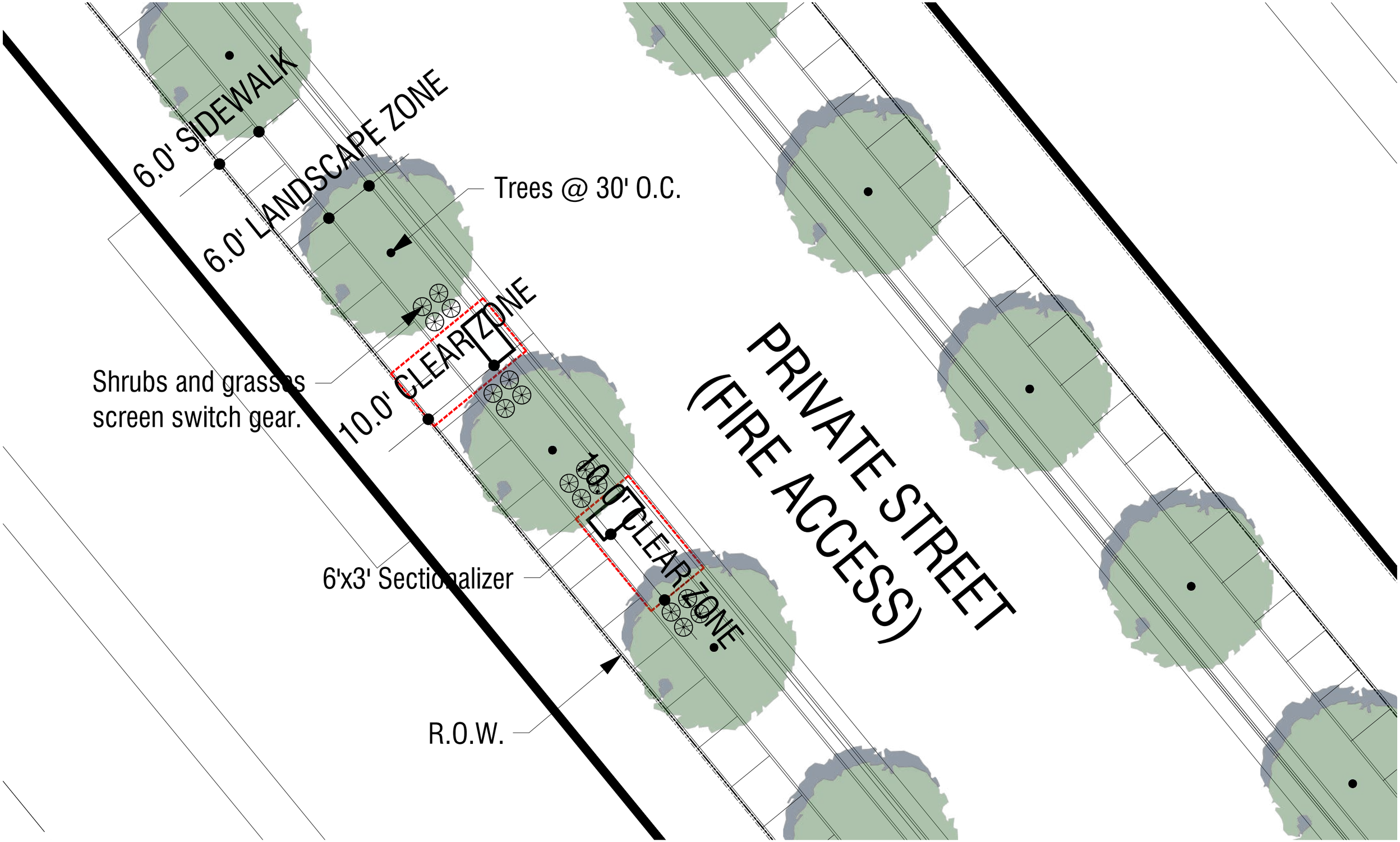
THANKSGIVING POINT | POWER - SECTIONALIZER ALONG PRIAVE STREET

All information provided is conceptual for discussion and/or illustrative purposes only, and subject to change without notice.

SCALE: 1"=10'

12/6/2022

CIVITAS



THANKSGIVING POINT | POWER - SECTIONALIZER ALONG PRIAVE STREET

All information provided is conceptual for discussion and/or illustrative purposes only, and subject to change without notice.

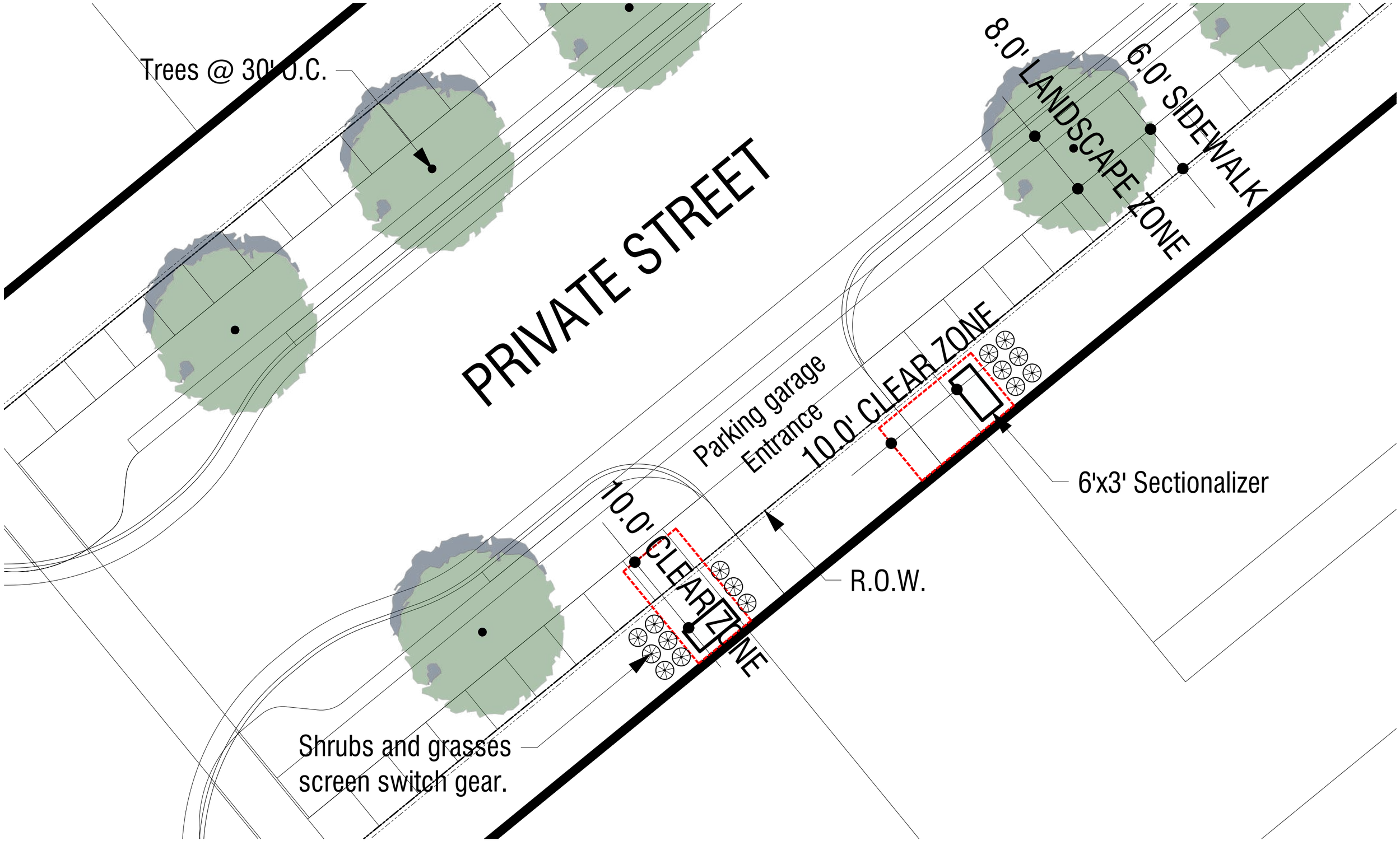
0 10 ft

SCALE: 1"=10'

N

12/6/2022

CIVITAS



THANKSGIVING POINT | POWER - SECTIONALIZER NEAR GARAGE ENTRANCE

0 10 ft

SCALE: 1"=10'

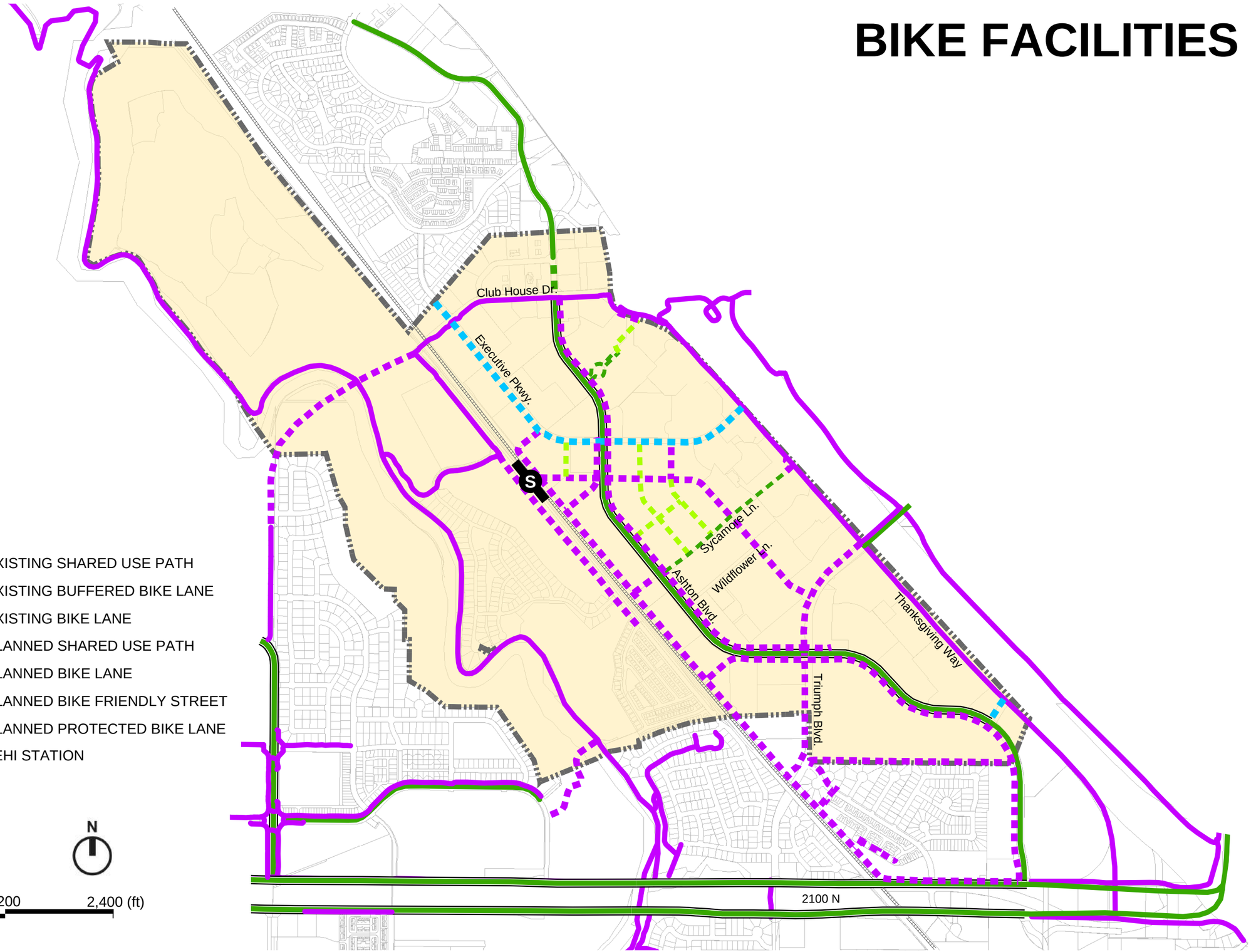
N

12/6/2022

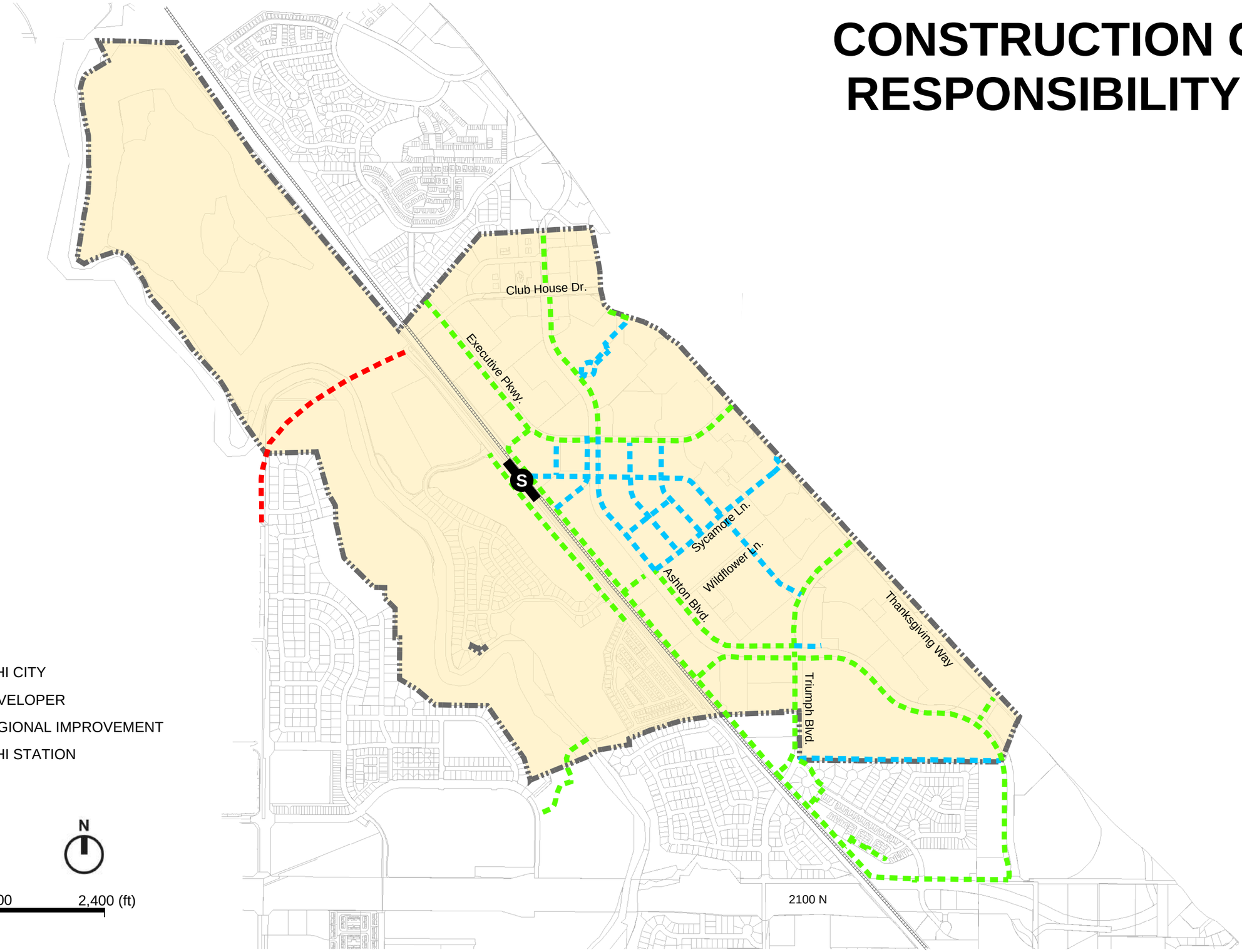
CIVITAS

Bike Facilities Map and Cost Allocations

BIKE FACILITIES MAP



CONSTRUCTION COST RESPONSIBILITY MAP



Water Dedication Conditions

Water Dedication Conditions – Utah Transit Authority Property

Thanksgiving Point Area Plan

03/02/2023

Water dedications will be provided, in the required amounts, at Area Plan recording for all 1,800 multifamily residential units not located on the parcel currently owned by the Utah Transit Authority ("UTA"). Water dedication for all 200 multifamily residential units to be located on the UTA parcel shall be required prior to site plan approval by the Planning Commission for any portion of the UTA property. All water dedications for existing developed property in the area have been satisfied.

Chapter 28
Resort Community Zone

CHAPTER 28

RESORT COMMUNITY ZONE (RC)

(Amended 09/11/18; 08/09/22)

Section 28.010. Purpose and Intent.

The intent of the Resort Community Zone and this Chapter is to recognize and provide for the orderly development of certain properties as a tourist, convention, hospitality, business, and gathering destination and to provide for the implementation of the Lehi City General Plan. Furthermore, this ordinance and the standards for development contained herein are intended specifically to accomplish the following:

A. Recognize and promote the potential of Lehi City as the premier destination community in Utah and the Western States, with its strategic locale centralized among major population centers, public transit, and interstate transportation ways.

B. Recognize the uniqueness of Lehi's position in: Utah's technology sector, family-oriented tourist destination, and proximity to public transit. Encourage the development and operation of facilities catering to tourists, businesses, employees, local families, and convention/group-related events which will ultimately bring all levels of consumers to the City.

C. Capture previously unreachable tax revenues by providing an incentive for business owners, new residents, and retail operators from outside the state to locate in the new destination community of Lehi City.

D. Accommodate the mixed and progressive development of land, facilities, and buildings that intermingle various uses while maintaining a harmonious relationship, and while protecting the health, safety, and long-term welfare of the community.

E. Enhance local property values by creating a property use zone that is completely unique to the State and surrounding states, and that attracts world-class business operators.

F. Support public service entities such as Police and Fire Departments by dedicating land or utilizing certain space within the Resort Community Zone at no cost to the City.

G. Allow the City to more quickly realize retail tax revenues by providing for the timely development of the resort property through an expedited approval and permit process of individual projects.

H. Allow the City to encourage and facilitate more detailed and specific planning and analysis for certain areas of the City.

I. Establish provisions and requirements which enable the City to address unique areas of the City or where other characteristics exist that warrant a comprehensive set of land use policies and standards which will encourage an efficient and imaginative development pattern.

An application for approval of a Resort Community Zone is a request by the applicant for additional flexibility beyond that allowed by the traditional zones within the City. It is the sole responsibility and burden of the applicant to convince the Planning Commission and City Council that the proposed Resort Community Zone is preferable to traditional zoning. Approval for use of the Resort Community Zone lies at the discretion of the City Council.

Section 28.020. Resort Descriptions.

A Resort Community Zone may include a cohesive and complimentary mixture of land uses, including commercial, residential, recreational, and/or business park. A Resort Community Zone shall largely include facilities and venues that have a destination orientation, commercial uses and residential projects that encourage use by tourists and visitors from outside the City as well as residents and employees that live and work in the Resort Area. Uses should focus on services for tourists, visitors, and the local community.

A unifying design and operating theme should unite the varied and mixed uses. Development should promote creative property configuration with usable public and private recreation areas, parks, pedestrian areas, and open space.

Section 28.030. Minimum Eligibility Requirements.
A property that is eligible for establishment as a Resort Community Zone must meet the following requirements:

A. The property must include a minimum area of seven hundred (700) contiguous acres.

B. Forty-five (45%) of the property shall be used for facilities and venues that are considered tourist, hospitality, or resort destinations. 35% of the property may be used as non-resort commercial. 20% of the property may be used as residential (residential uses not to exceed 20% of total property by acreage) as defined in an approved Area Plan.

Definitions:
Residential – Residential is a parcel used for permanent dwelling. Residential designation includes private roads, single family residences, multifamily dwellings, condominiums, apartments, townhomes, etc.
Commercial – Commercial uses shall be parcels whose use includes commercial office, convenience stores, and non-food service retail uses.
Resort – Resort uses are parcels used for hospitality and tourism. Hospitality is defined as the reception, housing and entertainment of visitors or guests. The following uses may be considered: hospitality, food service, convenience stores, educational, entertainment, parks, golf course, civic uses, and museums.

C. The property in a Resort Community Zone is considered highly dependent upon traffic and visitors from outside the City and shall be located in the I-15 corridor, being immediately adjacent to the Interstate or adjacent to a major arterial transportation corridor. If the arterial corridor is not an existing corridor, the developer of the proposed Resort Community Zone shall be responsible for the construction of the corridor.

Section 28.040. Allowed Uses.
Each requested use must be authorized through an Area Plan that has been approved and adopted by the City Council pursuant to the provisions of Chapter 15, Area Plans, of this Code. Proposed uses will be reviewed for compatibility within the Resort Community Zone as well as compatibility with allowed uses in adjacent zones.

Section 28.050. Public Support Requirements
The large scale and public nature of a Resort Community Zone requires the specialized support of various public services. As part of the approval process, the City may require the property owners to make certain allowances within the Resort Community Zone property for public facilities and public support operations as follows:

A. Fire/EMS Sub-station. One half (1/2) acre of property shall be dedicated to the City, if deemed necessary by Lehi City, without cost whereon a Fire Substation may be constructed and operated by the City.

B. Police Sub-station. A facility or space within a facility shall be provided to the City, if deemed necessary by Lehi City, without cost wherein a Police Substation may be operated.

Section 28.060. Procedures for Establishment of Resort Community Zone. *(Amended 07/28/09)*

A. General Plan Amendment. All areas proposed for development as a Resort Community Zone shall require a General Plan Amendment in accordance with Chapter 4, Amendments, of this Code.

B. Master Development Concept Plan. Concurrent with any request to amend the Land Use Element of the General Plan to a Resort Community designation, a Master Development Concept Plan shall be submitted. A Master Development Concept Plan must be reviewed by the City Council, following Planning Commission and Reviewing Departments' evaluation, prior to property being designated as a Resort Community Land Use.

1. The Master Development Concept Plan gives the applicant, Reviewing Departments, Planning Commission, and City Council an opportunity to discuss the development prior to the General Plan land use being established and prior to the preparation of a more detailed Area Plan. The applicant can use the Master Development Concept Plan meetings to ask questions and receive direction on project layout, as well as discuss the procedure for approval, specifications and requirements for layout of streets, drainage, water, sewerage, fire protection, mitigation of environmental impacts, and similar matters, and the availability of existing services.

2. The Master Development Concept Plan shall cover the entire area proposed as a RC Zone and shall identify in general terms the following:
   (a) proposed land uses.

(b) overall layout and locations of uses including potential civic/religious uses.
(c) major infrastructure improvements that may be necessary.
(d) proposed site-planning standards including architecture and materials of buildings.
(e) park areas, open space areas, trails and other community amenities.
(f) proposed landscaping, buffering, and transitioning treatments.
(g) location of any critical lands.
(h) all other issues that must be addressed to allow a thorough informed review by the Reviewing Departments, Planning Commission, and City Council of the proposed Master Development Concept Plan.

3. To accommodate requests for changes to the Master Development Concept Plan, the City may allow the Master Development Concept Plan to be amended. Amendments shall follow the same requirements for initial review of a Master Development Concept Plan including review by the Reviewing Departments, Planning Commission, and City Council.

4. A Master Development Concept Plan shall be effective for a period of two years from the date that the Master Development Concept Plan is reviewed by the City Council, at the end of which time an application for a Zoning Map amendment and Area Plan shall have been submitted and under review by the City. If an application for Area Plan approval in conjunction with an application for a Zoning Map Amendment to the Resort Community Zone has not been filed within the two year period, the Master Development Concept Plan shall be void. The City Council may grant an extension of the Concept Plan according to the provisions of Section 10.120.

5. Properties designated as a Resort Community Land Use for which the Master Development Concept Plan has become void shall require the applicant to submit a new Master Development Concept Plan for review subject to the then existing provisions of this Code and General Plan.

C. Zoning Map Amendment and Area Plan. Following approval of a General Plan Amendment and review of a Master Development Concept Plan by the City Council, the applicant may prepare a Zoning Map Amendment and an Area Plan pursuant to the provisions of Chapter 4 and Chapter 15 of this Code. The establishment of a Resort Community Zone requires the City Council to review, approve, and adopt an Area Plan for those properties proposed for a Resort Community Zone, following receipt of a Reviewing Departments and Planning Commission recommendation, prior to approval and adoption of an Area Plan, the Reviewing Departments, Planning Commission, and City Council shall verify that the Resort development follows the general layout of the Master Development Concept Plan. The Area Plan must comply as closely as possible with the Master Development Concept Plan and shall cover the entire Resort Community Zone.

D. Effect of Area Plan Approval. If a proposed Area Plan is adopted by the City pursuant to Chapter 15 of this Code, all permits, licenses, and development must comply with the adopted Area Plan. Additionally, developers and builders must comply with the Lehi City General Plan, the Lehi City Development Code, and all other codes and ordinances of the City unless modified by the adopted Area Plan.

Section 28.070. Development Standards.

Where a Resort Community Zone proposes a mix of recreational and commercial or business park uses, the following development standards shall apply in addition to any other commercial development standards and TOD standards contained in this Code or the Design Standards and Public Improvement Specifications Manual, unless modified through an approved Area Plan:

A. Building Design. The proposed structures shall be complimentary to the surrounding architecture in terms of scale, massing, and exterior materials. Buildings adjacent to single family detached units shall be limited to 2 stories or 38 feet.

B. Parking. Large expanses of asphalt shall be reduced and broken into smaller parking areas through the use of parking lot landscaping. Parking lots shall include ample landscaping to buffer cars from neighboring properties including the use of berms and landscaped islands (see Section 12.090(C).

C. Access and Traffic. Adequate vehicular and pedestrian access must be provided. A traffic impact study shall be required as part of the Area Plan, in order to project auto and truck traffic generated by the uses proposed.

D. Roof Design. Roof design may be further defined as part of an approved Area Plan.

E. Materials. New buildings shall blend with the materials of surrounding buildings. Building materials

may be further defined as part of an approved Area Plan.

F. Signage. Signage of buildings shall be part of a coordinated signage system for the entire Resort development. Signage shall help unify the development and provide a positive image. Natural materials such as wood, stone, rock and metal with external illumination shall be used. The size and location of signage shall conform to the requirements and design guidelines of Chapter 23, Signs, of this Code.

G. Lighting. Outdoor lighting shall be screened by shields or hoods to prevent glare onto adjacent properties. The intensity of large fixtures shall be reduced by utilizing a larger number of smaller light poles of twelve (12) to eighteen (18) feet. Incandescent lights shall be used in smaller pedestrian spaces where quality light is especially important.

Section 28.080. Residential Design Standards.
The following design standards shall apply to any residential developments within a RC Zone including any defined sub-area or pod, or any residential project or development or any portion of a residential project or development. These standards are considered as minimum requirements for residential areas.

A. Single Family Design Standards. For all single family detached units, the following standards shall apply:

1. Product Mix. Single family detached areas shall provide a *variety* of home styles to ensure a diverse and interesting street scene. Neighborhoods that have nearly identical homes and streets without variation in product placement and form are not allowed. In order to ensure that the neighborhood is non-repetitive, the same home elevation or homes with the same color scheme shall not be built on adjacent lots on the same street or on lots directly or diagonally across the street from one another.

2. Corner Lots. Attention should be paid to corner lots. At least one home plan per neighborhood shall be designed specifically for corner home sites. This home plan is required to include wrap-around architecture to provide visual interest on both the front and corner side yard of the home, and the ability to turn the garage for side entry. An example would be continuing a full-wrap of material accent onto the side façade, adding a wrap-around porch, or facing the home on a diagonal towards the intersection.

3. Garages. The home and front yard rather than the garage shall be the primary emphasis of the front elevation. The garage shall not extend forward of the main architecture of the home. The use of side load/swing-in type garages is highly encouraged.

4. Wall Variations. Each exterior wall of the home shall have architectural variations. At least four (4) or more of the following architectural features shall be incorporated into the design: a change in building materials, building projections measuring at least three (3) feet in depth, roof line variations measuring at least three (3) feet in height, awnings and lighting, or another architectural variation that creates visual interest.

B. Multi-Family Design Standards. The standards found in Section 37.040 of this Code shall apply to all multi-family attached residential projects, unless the Area Plan provides alternative standards.

Section 28.090. Development Approvals and Permits.
Following the establishment of a Resort Community Zone, and approval and adoption of an Area Plan by the City Council, the applicant may prepare and submit applications for development approval including subdivision and site plan approval pursuant to Chapter 11, Application Requirements, of this Code with the exceptions to the review and approval procedures as noted below. The Applicant must make a complete submittal according to the requirements specified in Chapter 11 and the City's current application form(s) prior to the review of any development request by the City.

The City recognizes the importance of timely reviews when dealing with large scale resort projects. In order to facilitate and expedite the review process, the following review provisions shall apply to site plan and subdivision applications within the Resort Community Zone:

A. Expedited Subdivision Review Process.

1. Minor subdivisions. Subdivision review and approval may be granted by the Zoning Administrator and Public Works Director if all of the following provisions apply:

(a) The subdivision includes less than ten (10) lots.

(b) The subdivision does not require the construction of any public improvements or the dedication of any public right of way.

The Preliminary and Final plans may be submitted and reviewed simultaneously, and the Zoning Administrator and Public Works Director are designated by the City Council as the officers having authority, on behalf of the City Council, to approve and sign the final Document(s) or plat. The lots in a minor subdivision can be divided by a metes and bounds document or a plat. The Zoning Administrator or the Public Works Director may request input from the Reviewing Departments, Planning Commission, or City Council as deemed necessary. The requirement for a public hearing and noticing shall be waived for all minor subdivisions.

2. All other subdivisions shall require the City's standard procedures for review and approval of a subdivision plat.

B. Expedited Site Plan Review Process.

1. Site Plans with a total valuation, including building and all associated site improvements, less than 20,000,000 dollars may be granted review and approval by the Zoning Administrator and Public Works Director. The Zoning Administrator or the Public Works Director may request input from the Reviewing Departments, Planning Commission, or City Council as deemed necessary.

2. Site Plans with a total valuation, including building and all associated improvements, greater than 20,000,000 dollars shall follow the City's standard procedures for review and approval of a site plan including approval by the Planning Commission, following a review by the Reviewing Departments.

C. Subdivision and Site Plan submittals which qualify for review and approval by the Zoning Administrator and Public Works Director should be reviewed within one week of the date a complete submittal is filed with the City, and in no case shall the time to review the submittal exceed two (2) weeks.

Section 28.100. Hospitality Incentives.

The universal success of the City and the private developer within the Resort Community Zone is considered largely dependent upon the participation and use of certain hospitality services within the Zone.

One half (1/2) of the City Innkeeper Tax from the Resort Community Zone will be used to support advertising and promotional activities as mutually agreed upon by the City Council and principal owner in the Resort Community Zone or their designees.

Section 28.110. Inspection and Occupancy.

A. All development and construction shall be subject to inspection approval by City Building Officials. The applicant must make a complete submittal according to Lehi City Building Department's building permit submittal checklist prior to review of any building permit by the City.

B. If development exceeds the capacity of the City Inspection Staff, independent professional inspection services may be secured. The hiring of the independent professional shall be the responsibility of the City and the cost of inspection services shall be borne by the owner(s) of the Resort. The hiring of the independent professional shall be done in mutual agreement between the City and the owners of the resort.

C. All development and construction shall be subject to occupancy approval by City Building Officials.

Section 28.120. Variations from Development Code and Design Standards.

In the process of approving an Area Plan for a Resort Community Zone, the Planning Commission may recommend, and City Council may approve variations from applicable standards of this Code or the Lehi City Design Standards and Public Improvements Specifications Manual if all of the following conditions are met:

A. That the granting of the variation will not adversely affect the rights of adjacent landowners or residents.

B. That the variation desired will not adversely affect the public health, safety or general welfare.

C. That the granting of the variation will not be opposed to the general spirit and intent of this Chapter or the General Plan.

Utilities

THANKSGIVING POINT AREA PLAN
CULINARY WATER (Amended)

Introduction

Lehi City performed a water model analysis of the Thanksgiving Point Area. The provided information and documents represent a water system analysis specific to the amended Thanksgiving Point Area plan. For this analysis the following assumptions have been made:

1. Water source from connection to existing Lehi City water system
2. Future water source of Lehi City connection to Central Utah Water Conservancy District (CWP) pipeline.
3. Tank elevation of 4762 (Sand Pit Tank)

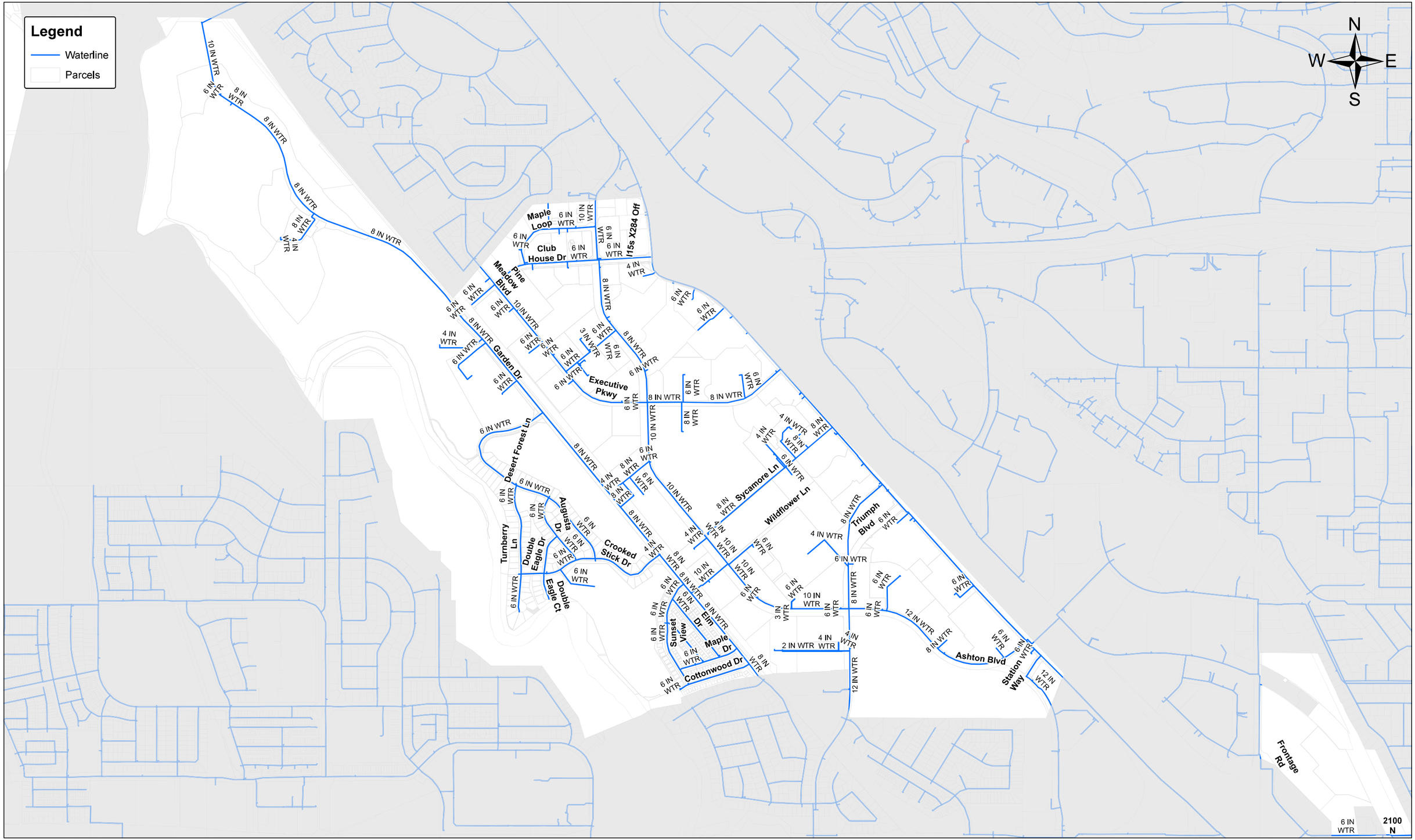
Design Criteria

-Minimum Pipe Size 6" Pipe (Roughness Coefficient = 130)
-ERU (Capita per Unit) = 3.8
-Average Flow 100 gallons per day per person
-Peak Instantaneous Flow 400 gallons per day per person (Peaking Factor = 4)
-Peak Hourly Flow 0.8 GPM/ERU
-Storage 400 gallons per day per connection ERU
-Source 800 gallons per day per connection or ERU
-Minimum Pressure 50 psi at peak flow at Junction J8892

Summary of Results

-Design Peak Hourly Flow = 1,600 gallons per minute
-Source Required 1,111 gallons per minute
-Storage Required, Tank 800,000 gallons (2.45 ac-ft)

Peak Instantaneous flow
Minimum Pressure 50.0 psi @ Junction 8892



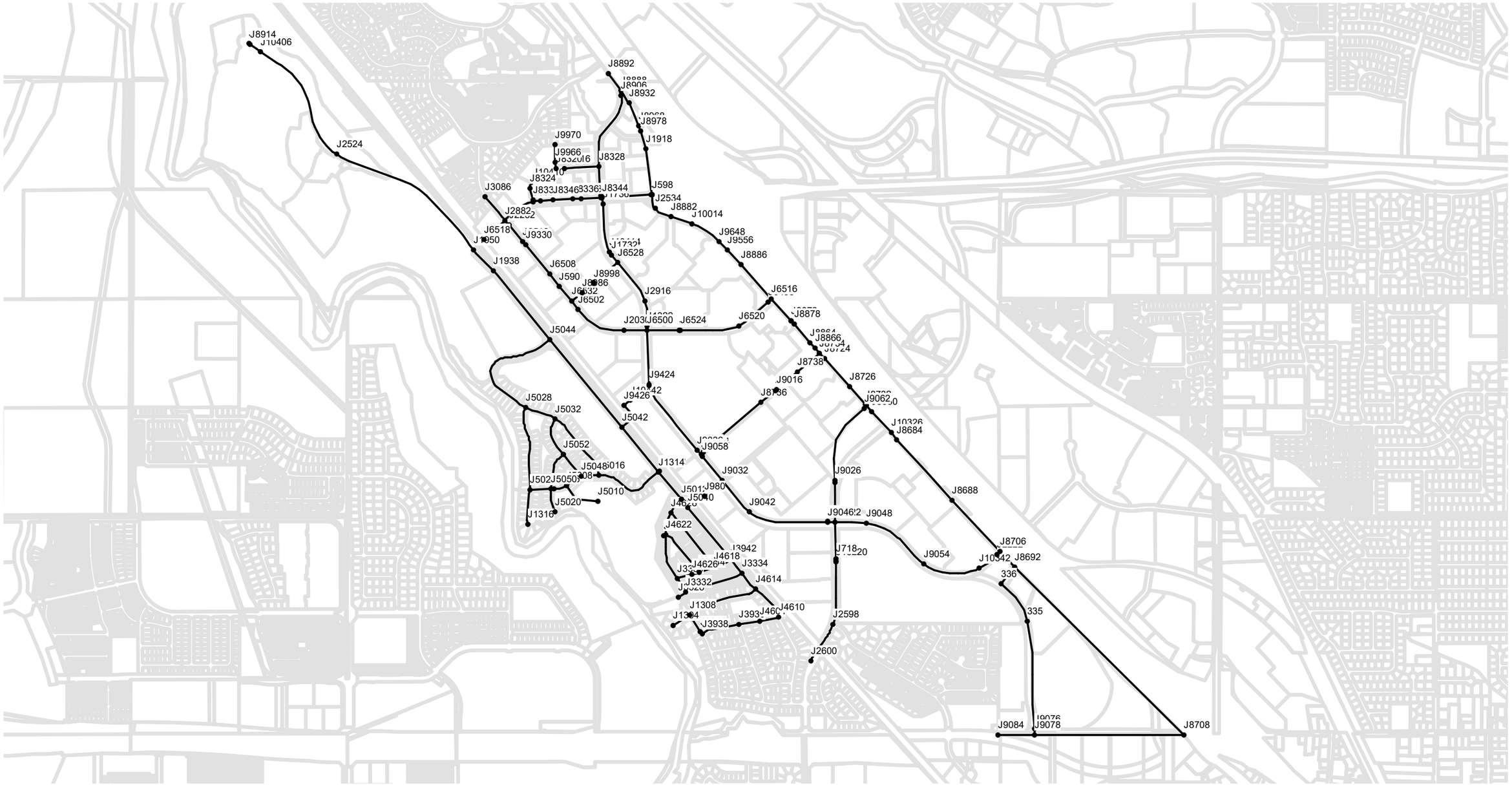
THANKSGIVING POINT

EXISTING CULINARY WATER SYSTEM

0 250 500 1,000 1,500 Feet

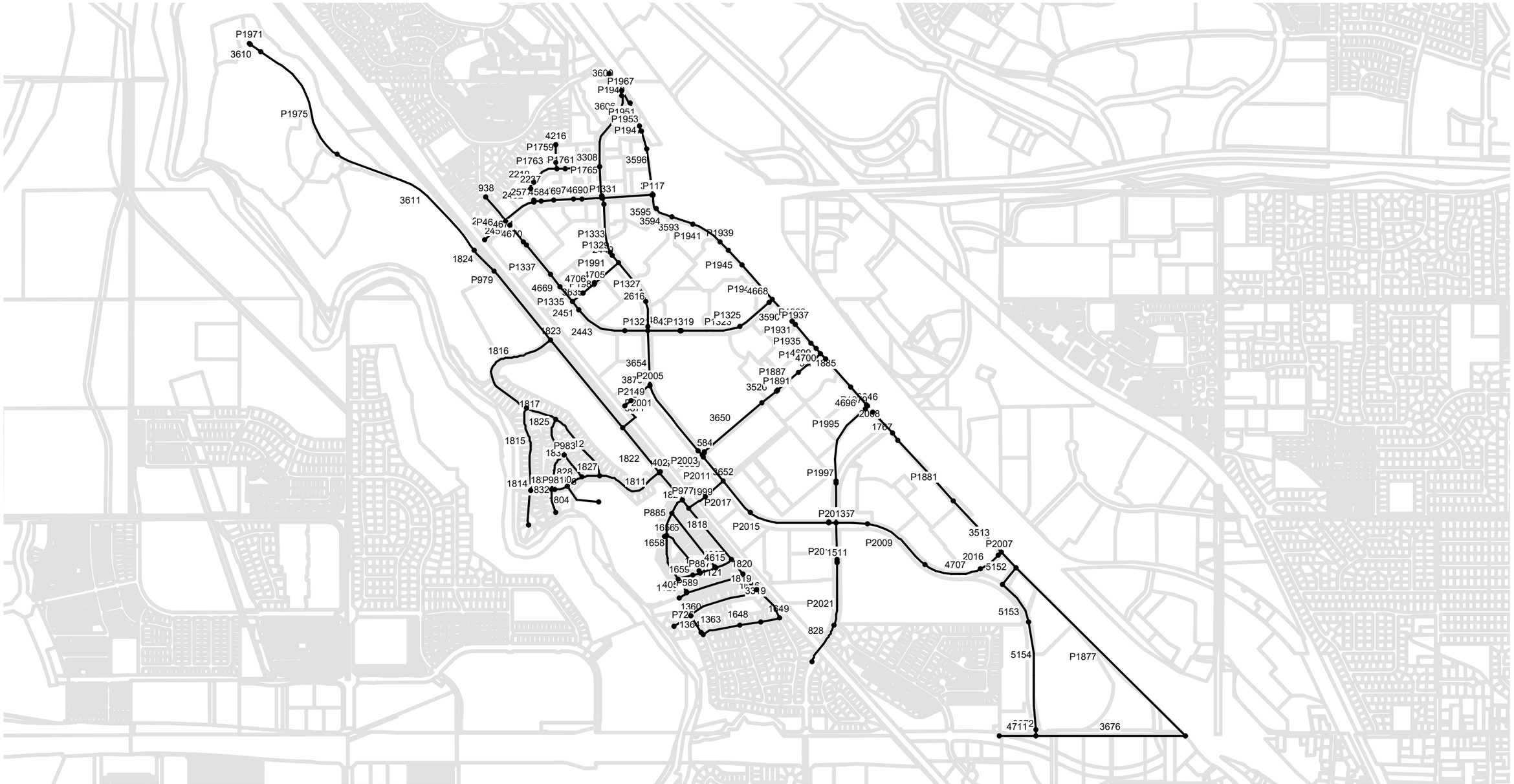
1 inch = 500 feet

CULINARY JUNCTION MAP



EPANET 2

CULINARY PIPES MAP



EPANET 2

CULINARY SYSTEM PRESSURE TABLE

Node ID	Elevation (ft)	Base Demand (gpm)	Pressure (psi)
Junc J10014	4611.45	0.00	62.51
Junc J10216	4552.17	0.00	90.76
Junc J10220	4552.17	0.00	90.76
Junc J10326	4595.14	0.00	67.71
Junc J10342	4566.76	0.00	80.01
Junc J10406	4580.05	0.00	75.57
Junc J10410	4570.01	0.00	80.19
Junc J10414	4568.47	1.42	81.09
Junc J10442	4547.24	0.04	91.17
Junc J1304	4524.67	0.44	103
Junc J1308	4526.71	2.50	102.12
Junc J1312	4550.13	0.00	90.33
Junc J1314	4549.57	0.68	90.57
Junc J1316	4508.23	1.50	108.23
Junc J1322	4559.02	0.00	85.34
Junc J1732	4568.18	0.00	81.23
Junc J1736	4583.10	1.19	74.66
Junc J1892	4548.98	0.00	90.08
Junc J1894	4548.95	0.00	90.09
Junc J1918	4623.52	0.00	57.06
Junc J1938	4563.12	0.00	83.89
Junc J1942	4580.09	0.82	75.52
Junc J1950	4572.87	0.00	79.57
Junc J2030	4556.00	0.00	86.68
Junc J2034	4550.85	0.00	89.57
Junc J2160	4531.10	0.27	99.27
Junc J2222	4573.10	0.00	77.26
Junc J2252	4561.78	0.00	83.77
Junc J2524	4566.01	25.41	81.98
Junc J2534	4606.92	4.98	64.37
Junc J2538	4567.26	0.00	81.4
Junc J2598	4544.85	0.00	94.39
Junc J2600	4522.41	0.00	104.43
Junc J2878	4568.73	2.54	80.66
Junc J2882	4562.40	0.17	83.49
Junc J2916	4562.86	1.65	83.63
Junc J3086	4568.64	0.29	80.7
Junc J3324	4524.41	0.00	102.23
Junc J3328	4518.11	0.37	104.96
Junc J3330	4525.75	0.82	101.6
Junc J3332	4524.48	0.00	102.21
Junc J3334	4539.86	1.19	95.74
Junc J3916	4524.87	0.10	103.02

Node ID	Elevation (ft)	ase Deman (gpm)	Pressure (psi)
Junc J6518	4574.08	0.00	78.43
Junc J6520	4590.85	1.07	71.68
Junc J6524	4567.19	0.00	81.91
Junc J6528	4567.59	0.00	81.5
Junc J6532	4552.43	0.00	88.07
Junc J6534	4566.04	0.00	81.92
Junc J718	4552.30	0.00	90.69
Junc J8316	4581.96	0.14	75
Junc J8320	4578.87	0.00	76.34
Junc J8322	4587.11	0.00	72.77
Junc J8324	4568.04	1.23	81.05
Junc J8328	4591.73	7.32	70.75
Junc J8332	4577.59	0.00	76.99
Junc J8336	4575.10	0.84	78.06
Junc J8338	4565.75	0.00	82.05
Junc J8342	4584.55	0.00	74.01
Junc J8344	4585.24	0.00	73.72
Junc J8346	4569.68	0.00	80.38
Junc J8680	4599.05	0.00	66.02
Junc J8684	4594.00	0.00	68.21
Junc J8688	4583.04	0.00	72.95
Junc J8692	4573.75	0.00	76.98
Junc J8706	4574.38	0.00	76.71
Junc J8708	4568.60	0.00	79.22
Junc J8710	4599.97	0.00	68.24
Junc J8724	4608.50	0.00	64.31
Junc J8726	4603.35	0.00	66.68
Junc J8732	4600.30	0.03	68.09
Junc J8734	4609.71	0.00	63.76
Junc J8736	4569.09	0.00	81.36
Junc J8738	4589.07	0.02	72.71
Junc J8864	4611.68	0.00	62.87
Junc J8866	4610.70	0.00	63.32
Junc J8870	4615.32	0.00	61.19
Junc J8872	4615.16	0.00	61.26
Junc J8876	4614.57	0.00	61.53
Junc J8878	4614.50	0.00	61.56
Junc J8882	4607.22	0.00	64.29
Junc J8886	4615.52	0.00	60.9
Junc J8888	4638.58	0.00	50.42
Junc J8892	4640.68	0.00	49.42
Junc J8906	4636.02	0.00	51.53
Junc J8914	4580.54	0.00	75.33

Junc J3936	4531.43	2.18	100.2
Junc J3938	4524.80	0.92	103.06
Junc J3940	4536.84	1.50	96.79
Junc J3942	4541.24	1.03	94.95
Junc J3944	4531.30	1.23	99.19
Junc J4604	4535.89	1.16	98.24
Junc J4610	4540.06	0.94	96.34
Junc J4614	4540.45	0.70	95.81
Junc J4618	4536.88	2.02	96.77
Junc J4620	4524.87	0.29	101.92
Junc J4622	4524.80	5.14	101.95
Junc J4626	4528.38	0.34	100.45
Junc J4628	4536.29	1.94	96.88
Junc J4630	4548.52	0.13	91.38
Junc J5008	4528.51	0.50	99.45
Junc J5010	4499.31	0.04	112.11
Junc J5012	4548.52	0.31	91.38
Junc J5016	4533.73	0.90	97.22
Junc J5020	4516.63	0.60	104.59
Junc J5022	4520.01	1.04	103.12
Junc J5028	4538.65	3.26	95.02
Junc J5032	4539.14	1.98	94.84
Junc J5036	4525.72	0.12	100.66
Junc J5040	4546.46	1.42	92.31
Junc J5042	4543.64	0.00	92.8
Junc J5044	4549.11	0.00	90.25
Junc J5046	4530.61	2.37	98.54
Junc J5048	4531.92	1.44	97.98
Junc J5050	4525.46	0.53	100.77
Junc J5052	4530.61	1.94	98.54
Junc J590	4553.31	0.00	87.64
Junc J592	4607.94	0.00	63.9
Junc J594	4607.91	0.00	63.91
Junc J596	4607.91	0.00	63.91
Junc J598	4607.94	0.00	63.9
Junc J640	4584.42	0.00	74.06
Junc J642	4584.38	0.00	74.07
Junc J6488	4566.83	0.00	82.06
Junc J6490	4566.70	1.54	82.12
Junc J6492	4566.86	0.00	82.05
Junc J6494	4566.86	0.00	82.05
Junc J6498	4614.57	0.00	61.42
Junc J6500	4558.60	288.00	85.62
Junc J6502	4552.89	0.48	87.9
Junc J6508	4554.89	2.01	86.92
Junc J6512	4559.38	0.00	84.86
Junc J6516	4616.60	0.00	60.54
Junc J8932	4637.14	1.39	51.07
Junc J8968	4631.10	3.49	53.73
Junc J8978	4629.66	0.78	54.36
Junc J8982	4556.04	2.15	86.51
Junc J8986	4556.10	0.00	86.48
Junc J8990	4559.78	0.00	84.89
Junc J8994	4559.71	0.00	84.91
Junc J8998	4559.71	0.00	84.91
Junc J9006	4577.20	0.00	77.85
Junc J9012	4576.54	0.00	78.14
Junc J9016	4577.17	0.00	77.87
Junc J9020	4562.11	0.00	85.71
Junc J9022	4554.59	32.00	89.43
Junc J9026	4563.48	1.04	85.08
Junc J9032	4547.51	0.00	91.85
Junc J9036	4547.90	0.00	91.41
Junc J9038	4547.64	0.00	91.56
Junc J9042	4549.67	0.00	91.12
Junc J9044	4554.66	0.00	89.36
Junc J9046	4554.23	0.00	89.55
Junc J9048	4555.81	0.00	84.75
Junc J9054	4558.07	0.00	83.77
Junc J9058	4547.57	0.04	91.6
Junc J9062	4598.39	0.00	68.98
Junc J9076	4558.53	0.00	83.57
Junc J9078	4556.92	0.00	84.27
Junc J9084	4553.87	0.00	85.58
Junc J9330	4558.96	0.97	85.05
Junc J9424	4550.92	0.00	89.54
Junc J9426	4548.72	0.00	90.54
Junc J9556	4614.93	0.00	61.1
Junc J9648	4614.24	0.00	61.38
Junc J980	4545.01	0.00	92.93
Junc J9966	4581.99	0.00	74.99
Junc J9970	4587.11	1.81	72.77
Junc 335	4564.00	1.03	81.2
Junc 336	4566.00	0.00	80.34

THANKSGIVING POINT AREA PLAN

Pressure Irrigation (Amended)

Introduction

Lehi City performed a water model analysis of the Thanksgiving Point Area. The provided information and documents represent a Pressure Irrigation system analysis specific to the amended Thanksgiving Point Area plan amendment. For this analysis the following assumptions have been made:

1. Water source from connection to existing Lehi City Pressure Irrigation system.
2. Pond elevation of 4750 (Sand Pit Reservoir)

Design Criteria

-Minimum Pipe Size: 8" Pipe (Roughness Coefficient = 130)
-Average Daily Flow: 3.5 gallons per minute per acre
-Peak Hourly Flow: 7 gallons per minute per acre (Peaking Factor = 2)
-Fire Flow: 1500 gallons per minute
-Storage: 5040 gallons per acre
-Source: 3.5 gallons per minute per acre
-Minimum Pressure: 50 psi at peak flow, 20 psi at peak flow with fire flow .

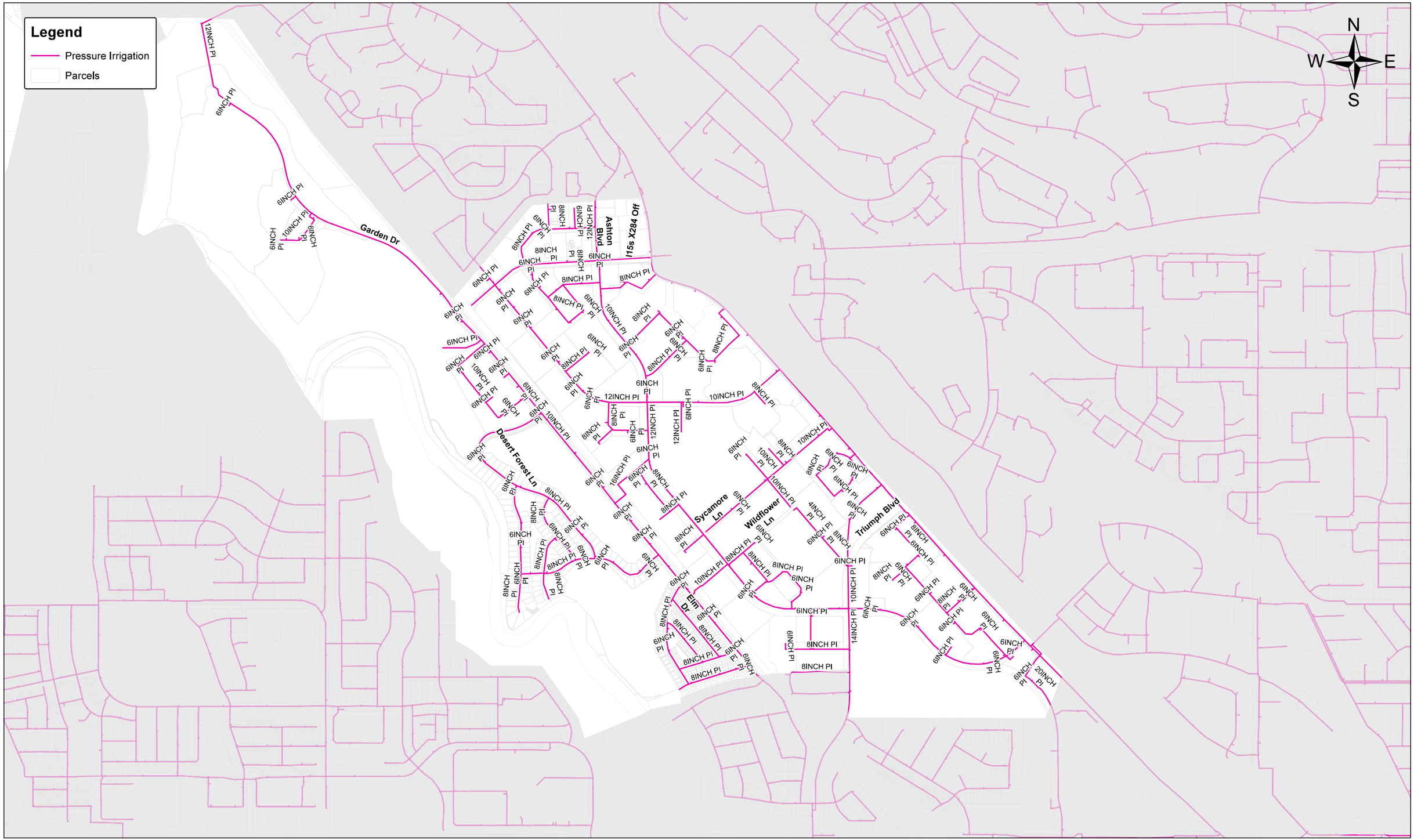
Summary of Results

-Design Peak Hourly Flow: 2729 gallons per minute
-Source Required: 70 gallons per minute
-Storage Required: Tank 105,840 gallons + 180,000 gallons fire storage = 258,840 gallons (0.88 ac-ft)

Model: Peak Hourly with 1500 GPM Fire Flow
Minimum Pressure 43.6 psi at JuncJ13782

Notes

1: All other areas outside the amendment descriptions to remain as currently defined with the original area plan. Some areas such as the North American Museum of Ancient Life (NAMAL) were defined with the approval of the individual building.



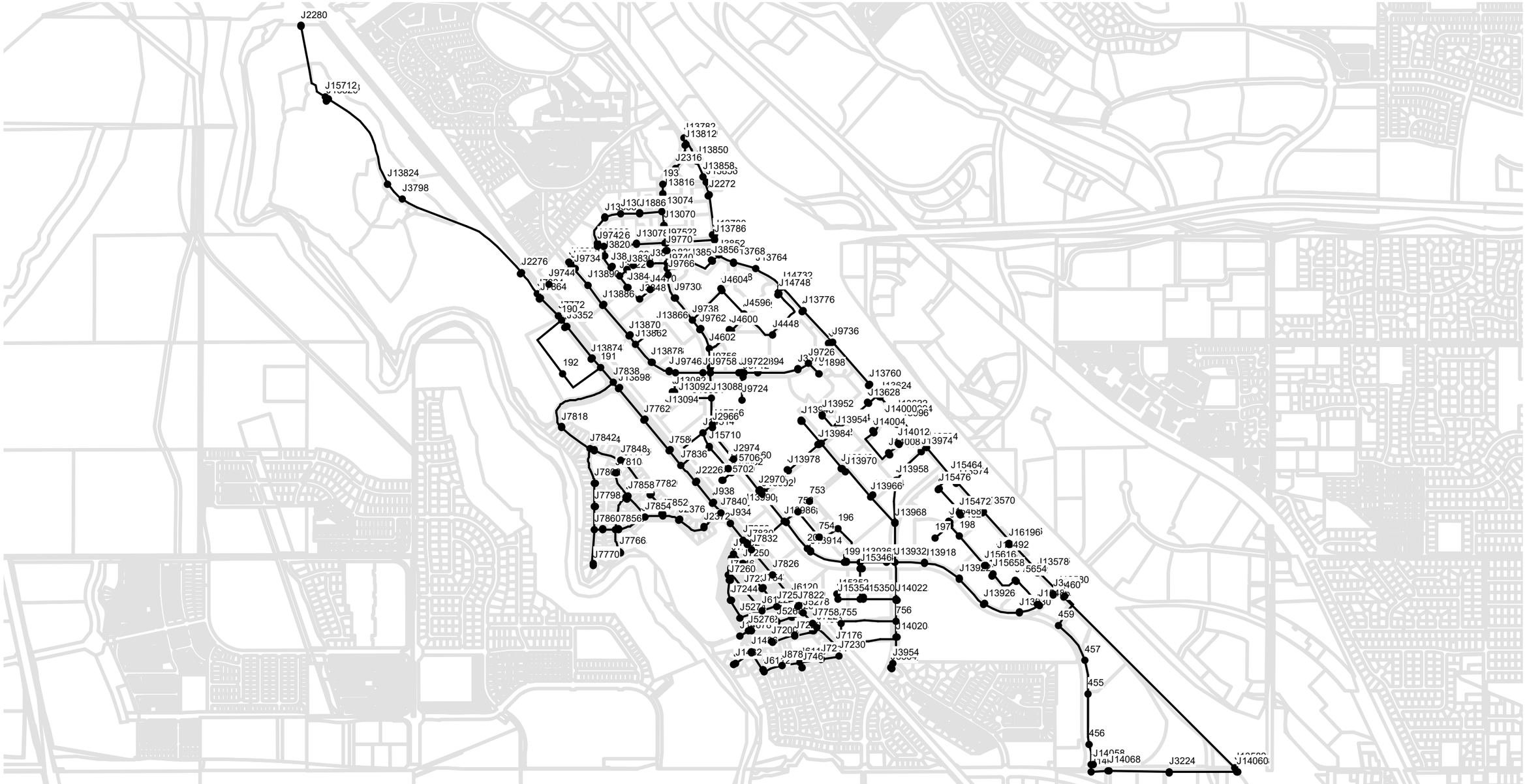
THANKSGIVING POINT

EXISTING PRESSURIZED IRRIGATION SYSTEM

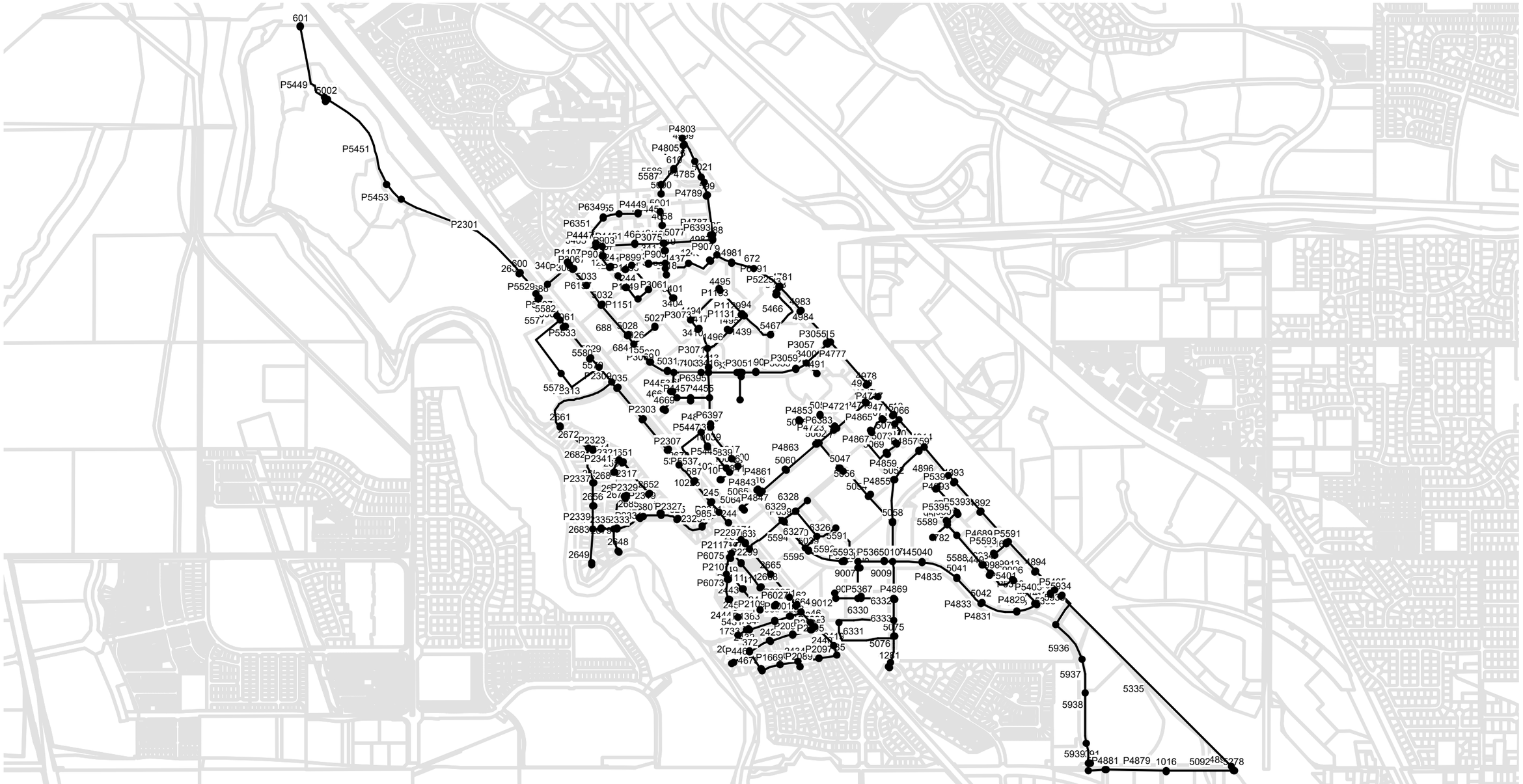
0 250 500 1,000 1,500 Feet

1 inch = 500 feet

PRESSURE IRRIGATION JUNCTION MAP



PRESSURE IRRIGATION PIPES



Node ID	Elevation	Demand	Pressure
	(ft)	(gpm)	(psi)
Junc J12688	4587.4	16.5	65.0
Junc J13056	4574.1	2.6	71.3
Junc J13058	4573.9	0.0	71.4
Junc J13060	4578.9	1.6	69.2
Junc J13064	4566.1	4.6	74.7
Junc J13066	4566.5	0.0	74.6
Junc J13068	4589.1	1.4	64.8
Junc J13070	4588.5	2.3	65.1
Junc J13072	4584.8	4.1	66.6
Junc J13074	4591.6	4.0	63.8
Junc J13076	4575.5	4.0	70.6
Junc J13078	4575.2	0.7	70.7
Junc J13080	4555.2	12.7	78.6
Junc J13082	4555.1	0.0	78.6
Junc J13084	4553.7	0.0	79.1
Junc J13086	4553.5	5.8	79.2
Junc J13088	4553.3	0.0	79.2
Junc J13090	4551.1	0.0	80.3
Junc J13092	4554.6	0.0	78.8
Junc J13094	4552.1	7.4	79.9
Junc J13568	4587.5	0.0	65.3
Junc J13570	4588.4	0.0	64.9
Junc J13572	4593.0	0.0	62.8
Junc J13574	4593.7	0.0	62.5
Junc J13576	4577.5	0.0	70.0
Junc J13578	4576.8	0.0	70.3
Junc J13580	4574.2	0.0	71.5
Junc J13582	4568.6	0.0	71.6
Junc J13584	4599.8	0.0	59.6
Junc J13586	4582.9	0.0	67.4
Junc J13588	4568.6	0.0	71.5
Junc J13620	4605.1	0.0	57.3
Junc J13622	4606.0	0.0	56.9
Junc J13624	4609.5	0.0	55.4
Junc J13626	4599.0	0.0	59.9
Junc J13628	4598.4	0.0	60.2
Junc J13630	4568.6	0.0	73.1
Junc J13632	4579.8	0.0	68.2
Junc J13634	4578.6	0.0	68.7
Junc J13758	4611.2	0.0	54.6
Junc J13760	4611.7	0.0	54.4
Junc J13762	4611.3	7.0	54.9
Junc J13764	4611.4	0.0	54.8
Junc J13766	4606.7	0.0	56.9

Node ID	Elevation	Demand	Pressure
Junc J2370	4541.7	1.6	83.0
Junc J2372	4541.5	1.6	83.1
Junc J2374	4534.9	1.4	85.9
Junc J2376	4534.5	0.0	86.1
Junc J2964	4551.5	0.0	79.5
Junc J2966	4550.9	0.0	79.8
Junc J2968	4548.3	0.0	80.5
Junc J2970	4547.9	0.0	80.7
Junc J2972	4550.4	0.0	79.8
Junc J2974	4549.8	0.0	80.1
Junc J3222	4559.7	0.0	75.2
Junc J3224	4561.0	0.0	74.7
Junc J3324	4572.7	7.8	72.1
Junc J3326	4572.8	0.0	72.1
Junc J3350	4557.0	1.3	77.2
Junc J3352	4556.3	0.0	77.5
Junc J3368	4588.9	0.0	64.2
Junc J3370	4589.0	0.0	64.2
Junc J3562	4543.0	2.8	80.5
Junc J3564	4542.3	0.0	80.8
Junc J3790	4564.5	5.8	75.2
Junc J3792	4564.3	26.5	75.3
Junc J3794	4565.9	0.0	74.6
Junc J3796	4566.1	0.0	74.5
Junc J3798	4566.3	0.0	74.4
Junc J3800	4565.2	0.0	74.9
Junc J3818	4564.0	0.0	75.6
Junc J3820	4564.3	0.0	75.4
Junc J3822	4564.8	0.0	75.2
Junc J3824	4567.7	2.8	73.9
Junc J3826	4567.3	5.2	74.2
Junc J3828	4565.9	4.9	74.7
Junc J3830	4564.5	0.0	75.3
Junc J3832	4577.6	0.0	69.6
Junc J3834	4564.9	0.0	75.1
Junc J3836	4564.4	0.0	75.4
Junc J3838	4575.1	1.8	70.7
Junc J3840	4574.3	0.0	71.1
Junc J3842	4563.0	0.0	76.0
Junc J3844	4563.8	14.2	75.6
Junc J3846	4562.5	0.0	76.2
Junc J3848	4562.7	0.0	76.1
Junc J3850	4588.3	5.7	64.9
Junc J3852	4606.9	0.0	56.9
Junc J3854	4599.1	0.0	60.3

Node ID	Elevation	Demand	Pressure
Junc J13768	4607.1	0.0	56.7
Junc J13770	4613.1	0.0	54.0
Junc J13772	4614.2	0.0	53.5
Junc J13774	4614.5	0.5	53.3
Junc J13776	4615.5	0.0	52.9
Junc J13778	4608.6	3.9	56.2
Junc J13780	4608.9	0.0	56.1
Junc J13782	4638.5	0.0	43.6
Junc J13784	4607.9	0.0	56.5
Junc J13786	4607.9	0.4	56.5
Junc J13810	4635.7	0.0	44.9
Junc J13812	4635.2	0.0	45.1
Junc J13814	4603.3	2.3	58.8
Junc J13816	4602.9	1.5	59.0
Junc J13818	4580.3	0.0	70.0
Junc J13820	4580.5	0.0	69.9
Junc J13822	4568.3	133.2	73.7
Junc J13824	4568.2	0.0	73.8
Junc J13848	4630.8	1.9	46.9
Junc J13850	4634.6	1.1	45.3
Junc J13856	4628.6	0.9	47.8
Junc J13858	4629.8	0.0	47.3
Junc J13862	4552.3	7.5	80.2
Junc J13864	4559.5	13.3	77.1
Junc J13866	4559.7	11.9	77.0
Junc J13868	4552.6	0.0	80.1
Junc J13870	4552.7	8.5	80.1
Junc J13872	4551.4	0.4	79.6
Junc J13874	4551.8	28.3	79.4
Junc J13876	4553.9	0.0	79.4
Junc J13878	4553.7	0.0	79.5
Junc J13880	4554.7	0.0	79.0
Junc J13882	4554.7	0.0	79.0
Junc J13884	4556.7	0.0	78.6
Junc J13886	4556.9	0.0	78.5
Junc J13888	4560.2	10.5	77.2
Junc J13890	4559.4	10.4	77.5
Junc J13892	4562.5	2.4	76.4
Junc J13894	4562.3	0.9	76.4
Junc J13896	4548.9	0.0	80.6
Junc J13898	4549.0	0.0	80.6
Junc J13900	4554.6	0.0	77.6
Junc J13902	4554.1	0.0	77.8
Junc J13904	4548.8	0.0	80.1
Junc J13906	4547.8	0.0	80.5

Node ID	Elevation	Demand	Pressure
Junc J3856	4599.7	0.0	60.0
Junc J3954	4544.9	0.0	79.8
Junc J440	4614.4	2.1	53.2
Junc J442	4614.8	0.0	53.1
Junc J4440	4587.4	0.1	65.3
Junc J4442	4585.5	1.6	65.8
Junc J4444	4588.6	0.0	64.5
Junc J4446	4588.9	16.0	64.4
Junc J4448	4588.8	0.0	64.4
Junc J4468	4566.3	0.0	74.6
Junc J4470	4566.0	0.0	74.7
Junc J4514	4562.4	0.0	76.4
Junc J4594	4584.1	17.4	66.4
Junc J4596	4584.3	0.0	66.3
Junc J4598	4578.1	0.0	68.9
Junc J4600	4577.7	0.0	69.1
Junc J4602	4562.1	0.0	75.8
Junc J4604	4586.4	0.0	65.4
Junc J5262	4537.0	0.4	83.2
Junc J5264	4536.8	0.3	83.3
Junc J5266	4533.2	2.0	85.0
Junc J5268	4532.9	3.2	85.1
Junc J5270	4525.7	3.4	88.4
Junc J5272	4525.6	0.3	88.5
Junc J5274	4525.7	3.1	88.6
Junc J5276	4524.7	0.1	88.9
Junc J5278	4540.0	0.2	81.9
Junc J6086	4524.8	1.2	86.6
Junc J6088	4524.9	2.4	86.6
Junc J6110	4531.3	3.0	83.8
Junc J6112	4524.8	3.7	86.6
Junc J6114	4537.5	0.5	83.5
Junc J6116	4537.2	0.2	83.6
Junc J6118	4536.8	0.1	83.8
Junc J6120	4541.3	0.3	81.8
Junc J6122	4531.4	2.2	86.1
Junc J7174	4540.9	0.0	80.1
Junc J7176	4540.9	2.6	80.1
Junc J7186	4536.4	2.6	81.7
Junc J7188	4536.1	1.9	81.8
Junc J7194	4540.4	1.2	80.8
Junc J7196	4540.2	1.9	80.9
Junc J7198	4529.6	3.6	85.0
Junc J7200	4529.7	3.7	85.0
Junc J7214	4536.0	1.6	81.8

PRESSURE IRRIGATION PIPE SEGMENTS

Link ID	Diameter (in)	Flow (gpm)
Pipe 10000	8	-130.5
Pipe 10033	8	-130.5
Pipe 10034	8	0.0
Pipe 10035	6	0.0
Pipe 10036	6	0.0
Pipe 10039	6	0.0
Pipe 10041	10	617.5
Pipe 10057	16	634.5
Pipe 1016	6	0.0
Pipe 10225	10	-497.6
Pipe 1054	6	0.0
Pipe 1061	6	-1.3
Pipe 1067	6	0.0
Pipe 11200	6	0.0
Pipe 115	6	-2.1
Pipe 1150	6	-2.8
Pipe 1229	6	-5.8
Pipe 1230	6	0.0
Pipe 1231	10	32.3
Pipe 1237	6	0.0
Pipe 1238	8	68.0
Pipe 1239	8	-109.3
Pipe 1240	6	-4.9
Pipe 1241	8	92.3
Pipe 1242	6	0.0
Pipe 1243	6	-1.8
Pipe 1244	6	0.0
Pipe 1245	6	0.0
Pipe 1246	8	-42.5
Pipe 1247	6	0.0
Pipe 1281	14	2273.5
Pipe 1437	8	36.7
Pipe 1438	6	-0.1
Pipe 1439	8	-90.4
Pipe 1440	6	-16.0
Pipe 1450	6	0.0
Pipe 1494	6	-17.4
Pipe 1495	6	0.0
Pipe 1496	8	-119.4
Pipe 1513	8	41.2
Pipe 1730	6	-0.4
Pipe 1731	6	-2.0
Pipe 1732	6	-3.4
Pipe 1733	8	251.6

Link ID	Diameter (in)	Flow (gpm)
Pipe 5069	6	-6.4
Pipe 5070	6	0.0
Pipe 5071	8	15.7
Pipe 5072	8	14.1
Pipe 5073	8	14.1
Pipe 5074	6	0.0
Pipe 5075	6	0.0
Pipe 5076	14	-1928.8
Pipe 5077	8	24.5
Pipe 5090	16	3429.6
Pipe 5091	6	0.0
Pipe 5092	10	124.0
Pipe 5095	12	-2010.4
Pipe 5278	10	-124.0
Pipe 5310	16	482.4
Pipe 5431	8	3.4
Pipe 5466	8	-106.4
Pipe 5467	8	16.0
Pipe 5483	6	-14.7
Pipe 587	6	0.0
Pipe 599	6	-6.0
Pipe 600	6	-165.4
Pipe 601	6	0.0
Pipe 610	6	-2.3
Pipe 624	6	-1.6
Pipe 625	6	-1.4
Pipe 7601	6	-3.6
Pipe 9007	8	-269.2
Pipe 9008	6	-8.4
Pipe 9009	14	-1689.4
Pipe 9010	12	321.1
Pipe 9011	6	0.0
Pipe 9012	6	-10.3
Pipe 9013	8	-10.3
Pipe 9014	8	-249.1
Pipe 915	6	0.0
Pipe 916	6	0.0
Pipe 917	6	0.0
Pipe 9500	8	137.8
Pipe 9501	6	0.0
Pipe 9502	6	0.0
Pipe 9503	6	-17.7
Pipe 9511	6	0.0
Pipe 9512	8	86.4

Link ID	Diameter	Flow
	(in)	(gpm)
Pipe 1734	8	248.1
Pipe 196	6	-1.3
Pipe 198	6	-2.5
Pipe 199	6	0.0
Pipe 2032	6	2.4
Pipe 2038	8	-9.6
Pipe 2040	8	-43.9
Pipe 2041	6	-0.5
Pipe 2042	8	0.9
Pipe 2043	8	-4.4
Pipe 230	6	6.7
Pipe 2419	6	0.0
Pipe 2422	6	-2.6
Pipe 2424	6	-1.2
Pipe 2425	6	3.7
Pipe 2430	6	-3.4
Pipe 2432	8	-302.4
Pipe 2434	8	157.6
Pipe 2435	8	304.3
Pipe 244	6	0.0
Pipe 2440	10	-760.9
Pipe 2441	6	-1.0
Pipe 2442	6	-0.1
Pipe 2443	6	0.3
Pipe 2444	8	141.3
Pipe 2445	8	-111.3
Pipe 2446	6	-1.5
Pipe 2447	8	209.5
Pipe 2448	8	530.5
Pipe 2449	6	-1.4
Pipe 245	6	0.0
Pipe 2450	8	-113.4
Pipe 2646	6	-0.2
Pipe 2647	6	-5.8
Pipe 2648	6	-2.8
Pipe 2649	6	2.2
Pipe 2650	6	5.2
Pipe 2651	6	-50.6
Pipe 2652	6	-2.0
Pipe 2653	6	-1.1
Pipe 2654	6	-1.7
Pipe 2655	6	-0.6
Pipe 2656	6	-1.8
Pipe 2657	6	-6.6
Pipe 2658	6	-1.8

Link ID	Diameter	Flow
	(in)	(gpm)
Pipe 9912	8	-83.9
Pipe 9913	12	-607.9
Pipe 9914	14	-1545.0
Pipe 9916	6	-17.5
Pipe 9984	8	137.8
Pipe 9996	6	-20.6
Pipe 9998	6	-11.9
Pipe P1107	12	730.5
Pipe P1129	8	-30.6
Pipe P1131	8	-119.4
Pipe P1133	8	-47.9
Pipe P1149	8	27.1
Pipe P1151	8	27.1
Pipe P1153	8	27.1
Pipe P1363	8	244.3
Pipe P1365	8	239.1
Pipe P1669	8	-54.0
Pipe P1671	8	196.0
Pipe P2089	8	-198.5
Pipe P2091	8	-309.7
Pipe P2093	8	-326.3
Pipe P2095	8	-323.1
Pipe P2097	8	299.8
Pipe P2105	10	-763.6
Pipe P2107	8	-113.2
Pipe P2109	8	202.1
Pipe P2111	8	206.1
Pipe P2115	8	143.9
Pipe P2117	8	320.4
Pipe P2293	10	-1090.2
Pipe P2295	10	-852.2
Pipe P2297	10	-35.1
Pipe P2299	10	-659.6
Pipe P2301	10	-452.0
Pipe P2303	10	-35.3
Pipe P2307	10	-29.5
Pipe P2309	10	-35.3
Pipe P2311	10	-565.8
Pipe P2313	8	-214.0
Pipe P2317	8	-31.0
Pipe P2319	8	-27.7
Pipe P2321	8	-81.6
Pipe P2323	8	-112.4
Pipe P2325	8	-71.8
Pipe P2327	8	-73.3

THANKSGIVING POINT AREA PLAN
Sewer System (Amended)

Design Criteria

- Minimum Pipe Size = 8" dia.
- Minimum Pipe Slope = 0.4%
- ERU = 3.8
- Design Flow:

Residential –	100 gallons per person per day 3.8 per Capita/Unit Peak Factor of 4
Commercial/Office -	30 gallons per person per day 1 person per 250 sqft of building floor area Peak Factor of 4

Summary of Results

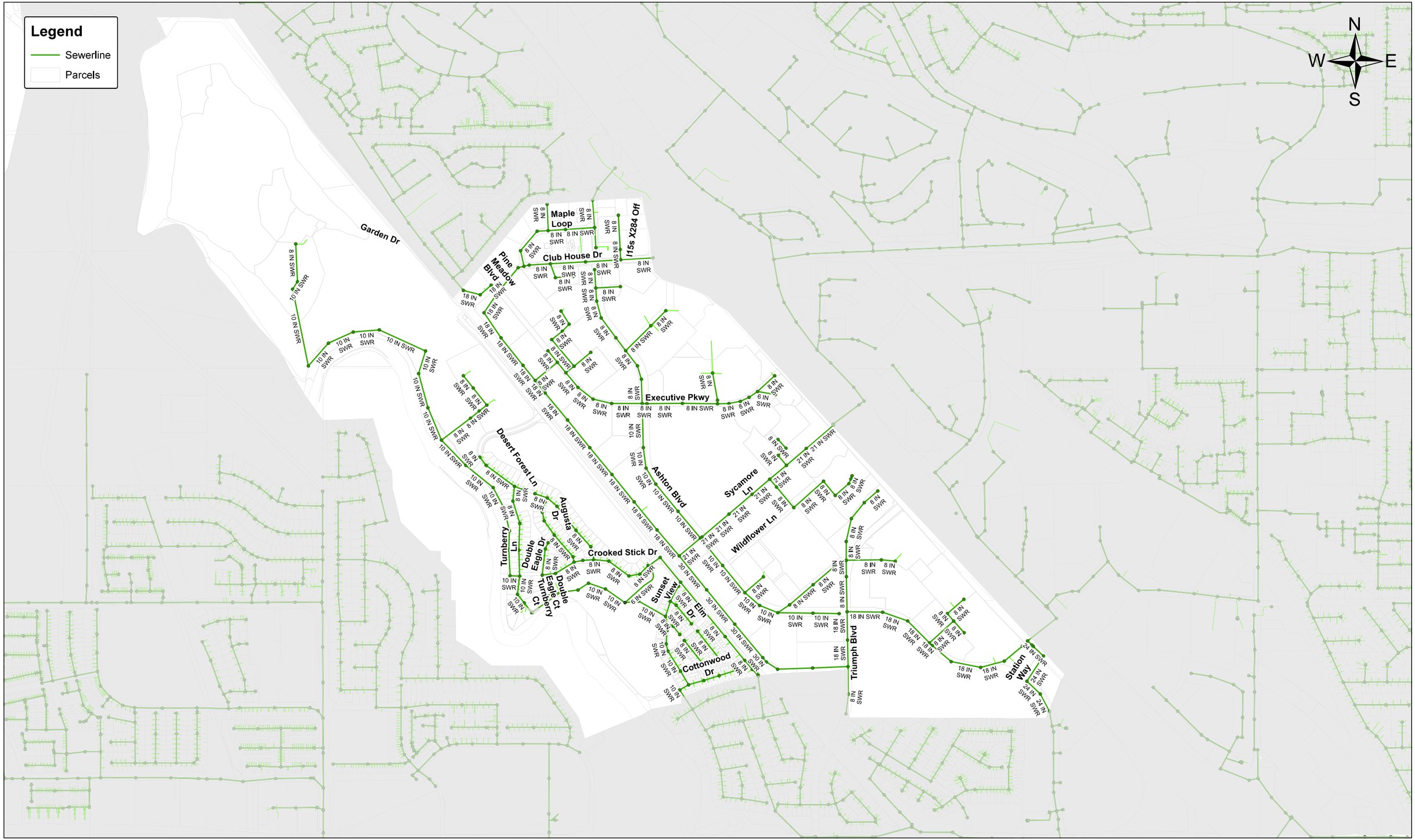
Area #1- Cornbelly's area to connect to existing 21" main in Sycamore Lane.
Flow = 1502 gpm, (3.35cfs), Capacity 10" min. @ 3.0% min. slope

Area #2- Areas North of Executive Parkway to connect to existing 8" main in Executive
Flow = 200 gpm

Area #3- UTA area to connect to existing 10" main in Ashton Blvd.
Flow = 307 gpm Capacity

The sewer system for the area that is included in the Thanksgiving Point Area Plan amendment has adequate capacity for the proposed amendments including the additional residential. The offsite system located at the southwest area of the City is in need of upgrades to accommodate the future master planned development along the west side of the City.

The project will contribute the impact fees generated to the West Side sewer main project located at the southwest area of the City as outlined in the Lehi City Sewer System Master Plan.



THANKSGIVING POINT

EXISTING SEWER SYSTEM

0 250 500 1,000 1,500 Feet

1 inch = 500 feet

THANKSGIVING POINT AREA PLAN
Storm Drainage System (Amended)

Design Criteria

- Minimum Pipe Size = 12" dia.
- All grading plans for development will require the approval of Lehi City prior to construction. In addition to the requirements in the Area Plan, all parcels will be required to comply with Lehi City ordinances and specifications.
- Each lot will be required to have detention located on the lot and allow a limited amount of storm water to leave the site. Each lot will be required to detain with a release rate of 0.2 cfs per acre.
- The design is based on information from the Lehi City Drainage Study and compiled from as-built and design drawings within the Thanksgiving Point area.
- Use the 10-year design flow for flows in pipes and roadways: use the 100-year design flow for storm water detention.

Summary of Results

The area that is included in the Thanksgiving Point Area Plan amendment was re-evaluated for the master storm drain plan and for the existing and proposed developments. The overall areas are separated into 3 sub-basins based on development area and the existing storm drain outfall lines that are located under the railroad tracks to provide drainage to the west. (See sub-basin map) The areas included are both private and public development areas. The areas break down as follows:

Master Storm Drain Sub-Basin Areas

Sub-Basin	Development Area (acres)	Road Right-of-Way Area (acres)	Total Area (acres)
Area 1	157.8	12.0	169.8
Area 2	72.8	9.0	81.8
Area 3	102.3	9.5	111.8
Totals	332.9	30.5	363.5

The Design for each sub-basin along with the recommendations/conclusions for that area is as follows:

Area 1

- The flow from Area 1 flows into the existing 48" storm drain line along the back of the lots along the tracks and connects to the existing 60" drain that directs the water under the tracks and to the Thanksgiving Point Golf Course Pond.
- Public Roads = 12 acres
- Development Property = 157.8
- Total Flow Required = 45 cfs

Recommendation/Conclusion – Each lot will be required to detain storm water on the lot at a release rate of 0.2 cfs per acre. The roadway is being detained along the back of the lots along the railroad tracks. These basins need to be cleaned up and reconstructed to original designs.

Area 2

- The flow from Area 2 flows into the existing private storm drain system owned and maintained by Thanksgiving Point, under the railroad tracks and into the irrigation pond.
- Public Roads = 9 acres
- Development Property = 72.8 acres
- Existing 18" dia. pipe flow available = 12.9

Recommendation/Conclusion – Each lot will be required to detain storm water on the lot at a release rate of 0.2 cfs per acre. The drainage for the UTA site can be coordinated with the expansion of the future TOD to install an additional pipe under the tracks for the Trax Station. The additional piping could take the storm drain flow to the existing pond on the west side of the tracks. The station could also install additional detention within the TOD area to accommodate the detained flows and will be calculated at the time of development.

Area 3

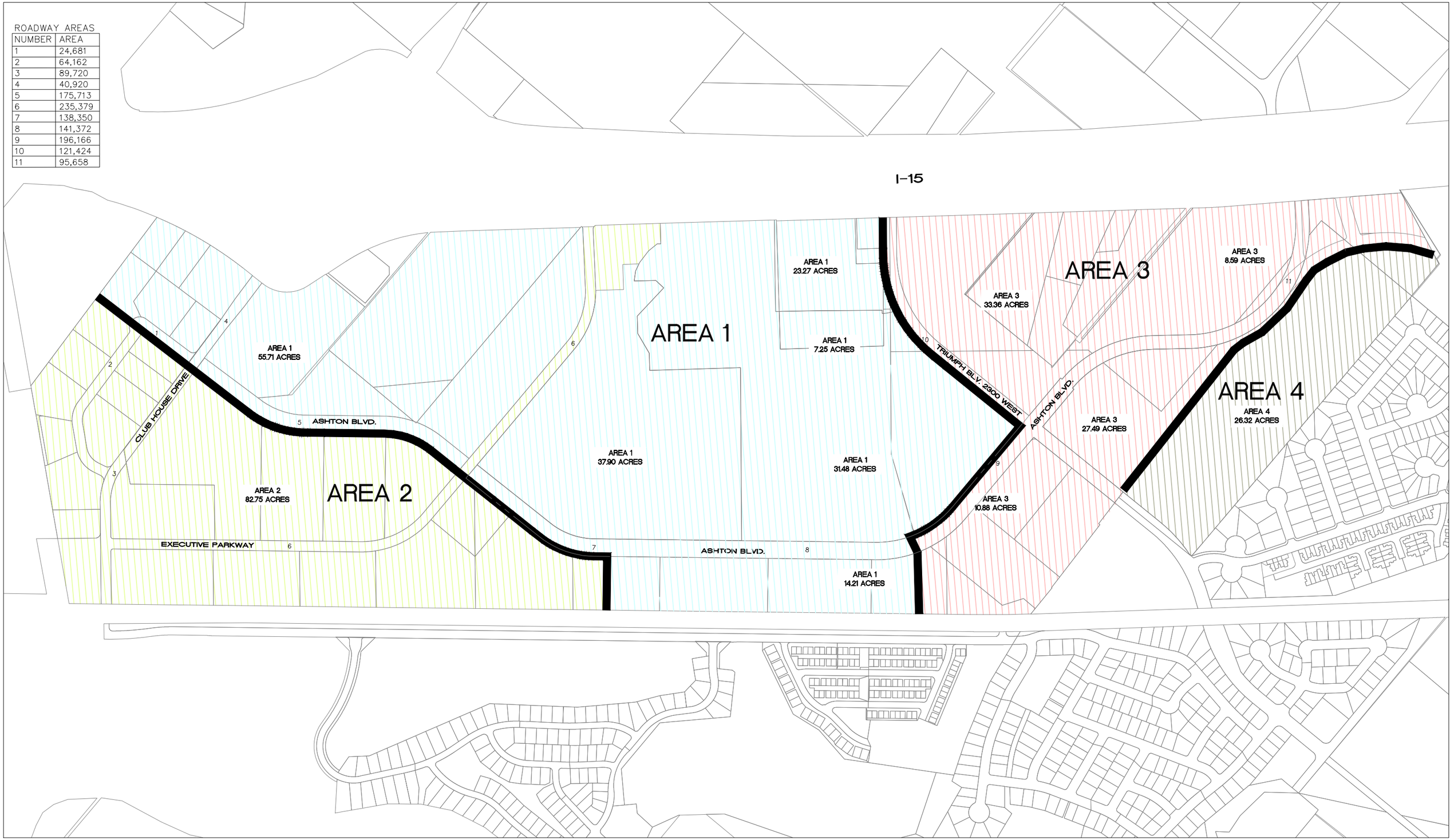
- The drainage from this area will flow into the existing storm drain along Ashton Blvd. and ultimately into the existing 60" dia. storm drain pipe that goes under the tracks. This area is also serving flows from the freeway and areas to the east including tail water from the Lehi Irrigation System. The flow then dumps into the Thanksgiving Point Golf Course Pond.
- Public Roads within the area = 9.5 acres
- Development Property = 102.3 acres
- Anticipated Flow Required = 26.51 cfs

Recommendation/Conclusion – The property will be required to provide detention on each parcel for the lots and allow 0.2 cfs/acre to drain into the system. The roads will drain into the lots along the tracks and be detained within the easement areas as defined by the subdivision plat for those lots. The resulting flow (26.51 cfs) will flow into the existing 60" pipe and be directed to the golf course pond.

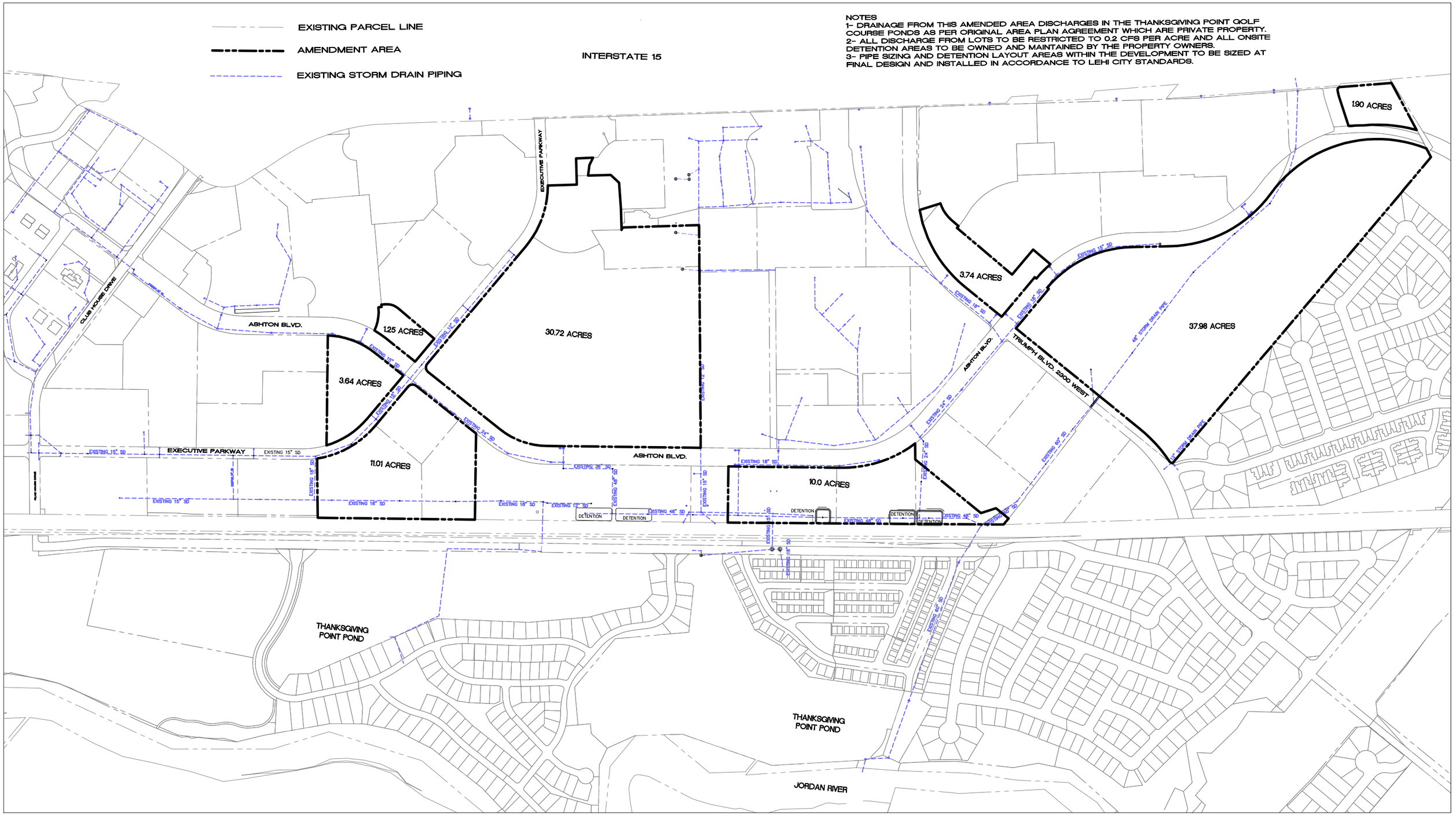
THANKSGIVING POINT STORM DRAIN SUB BASIN AREAS AND ROADWAY AREAS

ROADWAY AREAS

NUMBER	AREA
1	24,681
2	64,162
3	89,720
4	40,920
5	175,713
6	235,379
7	138,350
8	141,372
9	196,166
10	121,424
11	95,658



THANKSGIVING POINT EXISTING STORM DRAIN FOR REMAINING DEVELOPMENT AREAS



Fiscal Analysis

Thanksgiving Point Area Plan Amendment

Capital Improvement vs Projected Impact Fee

Culinary Water

Capital Improvements

Item	Quantity	Unit	Note	Unit Cost	Total Cost
Regional Facility (Sand Pit Tank)	800,000	Gal	Portion	$2	$1,600,000
1500 North 12" piping Extension (8" Project)	4,134	LF		$105	$434,070
Booster Pumping Station (Center Street)	1	LUMP	Portion	$700,000	$700,000
TOTAL					**$2,734,070**

Impact Fee Generation

Item	Quantity	Unit	ERU's	Impact Fee	Total Impact Fee
Residential	2,000	Unit		$1,194.07	$2,388,140
Commercial/Retail/Office	106.6	Acres	320	$1,194.07	$381,720
TOTAL IMPACT FEE FROM ADJUSTMENT					**$2,769,860**

Notes:

1- Costs include all engineering and surveying including contingency fees

2- Facilities have been or will be constructed by Lehi City and Impact Fees will be used to reimburse the Projects portion of the improvements

3- Culinary Impact fee assumes a 3/4" meter

Thanksgiving Point Area Plan Amendment

Capital Improvement vs Projected Impact Fee

Pressure Irrigation

Capital Improvements

Item	Quantity	Unit	Note	Unit Cost	Total Cost
Regional Facility (Sand Pit Storage)	1	LUMP	Acre Ft	$143,619	$143,619
TOTAL					**$143,619**

Impact Fee Generation

Item	Quantity	Unit		Impact Fee	Total Impact Fee
PI (Pervious Acre)	21	Acre	20% of Overall	$6,736.35	$143,619
TOTAL TOD					**$143,619**
TOTAL IMPACT FEE FROM ADJUSTMENT					**$143,619**

Notes:

1- Costs include all engineering and surveying including contingency fees

2- Facilities have been constructed by Lehi City and Impact Fees will be used to reimburse for the Projects portion of improvements

3- Quantity calculated as 20% of the overall acreage of 106.6 acres

Thanksgiving Point Area Plan Amendment

Capital Improvement vs Projected Impact Fee

Sewer System

Capital Improvements

Item	Total Contribution
Southwest Interconnect to1900 South City Trunk Line 42"	$1,766,365

Impact Fee Generation

Item	Quantity	Unit	ERU's	Impact Fee	Total Impact Fee
Residential	2,000	Unit		$761.43	$1,522,860
Commercial/Retail/Office	106.6	Acres	320	$761.43	$243,505
Total Impact Fee From Amendment					**$1,766,365**

Notes:

1- Costs include all engineering and surveying including contingency fees

2- Southwest Interconnect to be constructed by Lehi City and Impact Fees will be used to reimburse the Projects portion of the improvements

Thanksgiving Point Area Plan Amendment
Capital Improvement vs Projected Impact Fee

Storm Drain System

Capital Improvements

Item	Total Cost
Upgrade Connection to Thanksgiving Point Pond (Regional Facilities)	$148,281

Impact Fee Generation

Item	Quantity	Unit	Impact Fee	Total Impact Fee
All Uses	106.6	Acres	$1,391	$148,281

Total Impact Fee From Amendment **$148,281**

Notes:
1- Costs include all engineering and surveying including contingency fees
2- Capital improvements to be installed by developer and reimbursed by generated impact fees

Thanksgiving Point Area Plan Amendment

Capital Improvement vs Projected Impact Fee

Roadways

Capital Improvements

Improvements

Item	Total Cost
Triumph Blvd/2100 North SB and NB RT Pockets	$300,000
Triumph Blvd/2150 North Raised Median	$70,000
2100 Direct Connection for East Lots	$150,000
2100 Direct Connection for West Lots	$350,000
Right-of-way Contribution from Project	$670,000
TOTAL	**$1,540,000**

Impact Fee Generation

Item	Quantity	Unit	ERU	Impact Fee	Total Impact Fee
Residential	2,000	Unit		$708	$1,416,000
Commercial/Retail/Office	106.6	Acres	320	$1,163	$123,976
Total Impact Fee From Amendment					**$1,539,976**

Notes:

1- Costs include all engineering and surveying including contingency fees

2- Facilities to be constructed by Lehi City and Impact Fees will be used to reimburse the Projects portion of improvements

3- Right-of-Way for direct connections to 2100 North to be coordinated by Lehi City.

Additional Projects:

Project - Ashton Blvd / Triumph Blvd: Install EB and WB dual LT and a 3rd SB thru lane (Project – 2024)

Project - Ashton Blvd / Triumph Blvd: Add SB and WB RT pockets, dual EB RT lanes

Project - Sycamore Ln / Ashton Blvd: Signalize

Project - Station Main St / Ashton Blvd: Signalize

UDOT - Triumph Blvd/2100 North EB Dual LT and extend WB storage length

UDOT - SB Frontage Road / S.R. 92: Install second SB RT lane, remove inside thru lane

UDOT - Build Freeway

UDOT- NB Frontage Road / Triumph Blvd: Install SWB right-turn pocket

Lehi City - Triumph Blvd / 2100 North: Install SB and NB RT pockets

Lehi City/MAG - Triumph Blvd: Widen to 5 lanes south of 2100 North

Thanksgiving Point Area Plan Amendment

Capital Improvement vs Projected Impact Fee

Power

Capital Improvements

Improvements (From Lehi City Power Study)

Item	Quantity	Unit	ERU	Impact Fee	Total Cost
Transformers (See Note 3)	2	Ea		$1,300,000	$2,600,000
Switchgear (See Note 3)	2	Ea		$1,000,000	$2,000,000
Substation Property (See Note 3)	1	Lump		$1,200,000	$1,200,000
Substation Components (See Note 4)	2	Ea		$8,000,000	$8,000,000
TOTAL					**$13,800,000**

Impact Fee Generation

Item	Quantity	Unit	ERU	Impact Fee	Total Impact Fee
Residential	2,000	Unit		$1,484.64	$2,969,280
Commercial/Retail/Office	7,282	kVA		$247.44	$1,801,858
Total Impact Fee From Amendment					**$4,771,138**

Notes:

1- Panel size for apartments assumed to be 125 A per unit

2- Panel size for Commercial/Retail/Office areas assumed to be 125 A per ERU (3 Phase)

3- Costs paid upfront by developer and reimbursed with impact fee credits to the project

4- Costs included in regional impact fees and paid upfront by Lehi Power

Additional Project Costs: Direct assigned costs to developer

Distribution Circuits - 3 @ $800,000 = $2,400,000

Distribution Easements - TBD

Conduit/Excavation - TBD

Thanksgiving Point Area Plan Amendment

Capital Improvement vs Projected Impact Fee

Parks and Trails

Capital Improvements

Item	Quantity	Unit	ERU's	Unit Cost	Total Cost
Parks and Trails Impact Fee					$4,830,820

Impact Fee Generation

Item	Quantity	Unit	ERU's	Impact Fee	Total Impact Fee
Residential	2,000	Unit		$2,415.41	$4,830,820

Total Impact Fee From Amendment **$4,830,820**

Notes:

1- Developer to dedicate property for trails within the project boundaries.

2- See appendix for breakdown of Parks and Trails Projects and Cost Estimates

3- For regional trails and active transportation facilities, the City will seek additional funds through Mountainland Association of Governments and funds available through other governmental entities or grant sources.

Table of Land Uses

Thanksgiving Point

Table of Land Uses

Conditional: Use may be permitted if formally accepted by. Arch Committee and City at a public hearing

Permitted: The use shall be permitted by Ordinance within the boundaries of the property

Not Permitted: The use shall be restricted by Ordinance from being within the boundaries of the property(Blanks represent Not Permitted)

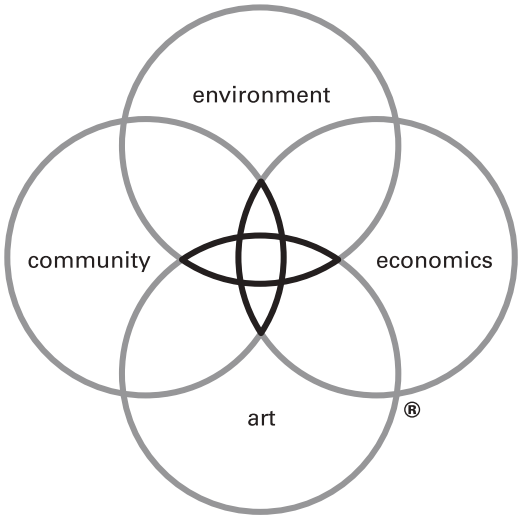
Residential Uses	TS TOD	Mixed-Use	Commercial	Educational	Business Park	Golf Course/Gardens	Single Family Res.
Accessory Dwelling Unit (refer to Lehi ADU Restricted Areas Map)							
Bed and Breakfast Inn	P	P	P				
Dwelling unit above ground floor	P	P					
Dwelling unit for caretaker/security guard (must be with in primary structure and not as an accessory unit)	P	P	P	P	P		
Juvenile Group Home							
Modular Home							
Mixed-use single family residential and commercial structure/project complying with the use and development standards	P	P					
Nursing Home			P				
Residential Facilities for Elderly Persons	P	P	P				
Residential Facilities for Persons with Disability	C	C		C			
Retirement Home/Center	P	P	P				
Single-Family Dwelling							P
Townhouses/Condominiums	P	P					
Mixed-use Commercial and Stacked Residential above Commercial	P	P					
Multi-family Dwelling	P	P					
Resort Uses	TS TOD	Mixed-Use	Commercial	Educational	Business Park	Golf Course/Gardens	Single Family Res.
Convenience store, with gasoline sales			P		P		
Convenience store, without gasoline sales	P	P	P	P	P		
Church (places of worship)	P	P	P	P	P		P
Cultural, artistic, and educational uses, such as museums, galleries, performing arts studios	P	P	P	P		P	
Golf Courses and Country Clubs						P	
Hotels & Motels	P	P	P		P		
Open Space, Trails and Greenways	P	P	P	P	P	P	P
Parks and Playgrounds	P	P	P	P	P	P	P
Public Buildings, Utility Buildings and Facilities	P	P	P	P	P	P	P
Restaurant	P	P	P	P	P		
Restaurant, fast food with drive up window(s)			P		P		
Schools	P	P	P	P	P		P
Sporting Facilities, Arenas	P	P	P	P	P	P	
Sports Field	P	P	P	P	P	P	P
Theater	P	P	P	P	P		
Non-Resort Commercial Uses	TS TOD	Mixed-Use	Commercial	Educational	Business Park	Golf Course/Gardens	Single Family Res.
Accessory buildings and uses incidental to an authorized use	P	P	P	P	P		
Adult day care	P	P	P	P	P		
Artisan Shop	P	P	P	P	P		
Athletic Instruction, including Dance, Gymnastics, and Martial Arts	P	P	P	P	P		
Automobile sales/rental			P				
Automobile service and repair			P				
Bakery, Retail	P	P	P	P	P		
Brewpub	P	P	P		P		
Building maintenance services							
Building Materials Supply Store with no outside storage			P		P		
Campground							
Car Wash			P				
Commercial Laundries, Linen Service, Diaper Service					P		
Commercial Parking Lot/Structure	P	P	P	P	P		
Commercial Recreations Facility	P	P	P	P	P		
Conference Center, Convention Center	P	P		P			
Child Day-care (Commercial)	P	P	P	P			
Construction Sales (No outside storage or yard)					C		
Construction Service					C		
Data Center (Less than 30,000 SF Footprint)		P	P		P		
Data Center					P		
Dog Care Facility	P	P	P	P	P		
Dry Cleaners	P	P	P	P	P		
Equipment Sales and Rental					C		

Financial Institutions and Services	P	P	P		P		
Financial Institutions and Services with drive through facilities			P		P		
Funeral home			P				
Hardware Store	P	P	P		P		
Health Care Facility	P	P	P	P	P		
Health Club	P	P	P	P	P		
Heliport			C		C		
Hospital (Small Animals)	P	P		P	P		
Laboratory, medical, dental, optical	P	P	P		P		
Launderette, Laundromat	P	P	P				
Light Office/Warehouse Combination			P		P		
Liquor Store/Bar/Private Club	P	P	P		P		
Manufactured homes sales and service							
Medical Research Facility	C	C	P	C	P		
Medical and Dental Clinics	P	P	P	P	P		
Moving and storage facilities							
Offices, professional	P	P	P	P	P		
Outdoor sales, display	P	P	P		P		
Outdoor storage of materials, products and equipment incidental an allowed use					P		
Personal services	P	P	P	P	P		
Pet Grooming Facility	P	P	P				
Plant Nursery with outside display		P	P	P	P		
Recreational vehicle sales and services with no outside storage			P				
Research and development facilities			P	P	P		
Retail facilities and services accessory to principal use	P	P	P	P	P		
Retail sale, general and goods establishments including general retail, departments store, grocery store, drug store, variety store	P	P	P	P	P		
Schools - Vocational Technical				P			
Climate Controlled Indoor Storage Units			P		P		
Temporary Construction buildings & yards (12 months maximum)	P	P	P	P	P		
Temporary sales office (12 months maximum)	P	P	P	P	P		
Veterinary Office, operating entirely within an enclosed building and keeping animals overnight only for treatment purposes	P	P	P		P		

Transportation, Communication, & Utilities	TS TOD	Mixed-Use	Commercial	Educational	Business Park	Golf Course/Gardens	Single Family Res.
Communication facilities and towers	C	C	C	C	C	C	P
Electrical substations, transmission lines	P	P	P	P	P	C	P
Oil & Gas transmission lines							
Utility lines, and structures	P	P	P	P	P	P	P

Manufacturing	TS TOD	Mixed-Use	Commercial	Educational	Business Park	Golf Course/Gardens	Single Family Res.
Brick manufacture							
Building materials storage and wholesaling					P		
Cabinet and woodworking shop							
Commercial storage or distribution (excluding junkyards and salvage yards)							
Concrete block manufacture							
Contractor's storage yard							
Gasoline and oil storage (wholesale)							
Heavy industrial assembly							
Light manufacturing and assembly which are not obnoxious or offensive by reason of emission of odor, dust, smoke, noxious gases, noise, vibration, glare, heat orother impacts nor hazardous by way of materials, process, product, or waste, and. which: a. do not process animal, vegetable or fish products or the rendering and refining of fats and oils; b. Encloses all equipment, compressors, generators and other ancillary equipment within a building or structure.					P		
Lumberyard							
Manufacture, processing or packaging of food and beverage products, personal hygiene products and cosmetics, drugs and pharmaceuticals and which are not obnoxious or offensive. by reason of emission of odor, dust, smoke, noxious gases, noise, vibration, glare, heat or other impacts, nor hazardous by way of a materials, process, product, or waste and where all activities are conduced within a completely enclosed building and where all equipment, compressors, and other ancillary equipment is enclosed.					P		
Printing and publishing facilities					P		
Repair shop, with no outside storage					C		
Recycling center							
Recycling collection stations							
Rock, sand gravel storage distribution							
Truck and large equipment sales and rental							
Tradesmen shops with no outside storage					C		
Truck and large equipment repair							
Truck freight terminal							
Warehousing and wholesale distribution with no outside storage					P		
Welding shop							
Resource Production							
Agriculture (Horticulture)	P	P	P	P	P	P	P

Data Center - A data center is a building, a dedicated space within a building, or a group of buildings used to house computer systems and associated components, such as telecommunications and storage systems



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