

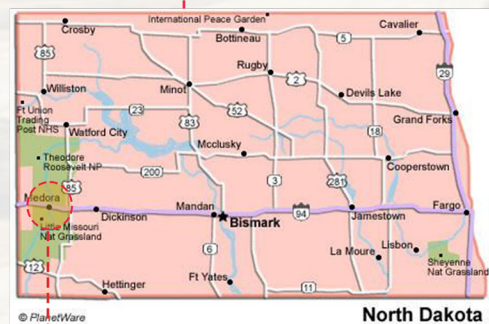
ENHANCING WALKABILITY IN MEDORA

Analyzing Mobile Phone Data to Improve Walkability and Identify Critical Infrastructure Needs in Medora, ND.

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This thesis focuses on Medora, North Dakota, which is undergoing rapid growth in its city life. We realize the need to improve city walking and determine what critical items the city requires. As the city grows, it is critical to have places where people can stroll freely, making the city a good and sustainable place to live.


Medora, North Dakota, renowned for its natural beauty and cultural charm, adapts to its growing popularity and impending urbanization by enhancing infrastructure through mobile data-driven pedestrian routing for safer, efficient pathways amidst the construction of the Theodore Roosevelt Presidential Library, aiming to foster a vibrant, sustainable community. With the library project set to create numerous jobs and attract thousands of monthly visitors, the town recognizes the need to improve walkability, amenities, and infrastructure. By identifying high-traffic zones and implementing upgrades such as safe crossings, parks, plazas, bicycle lanes, and storm water management facilities, Medora aims to sustainability accommodate its increasing tourist numbers while preserving its unique character.

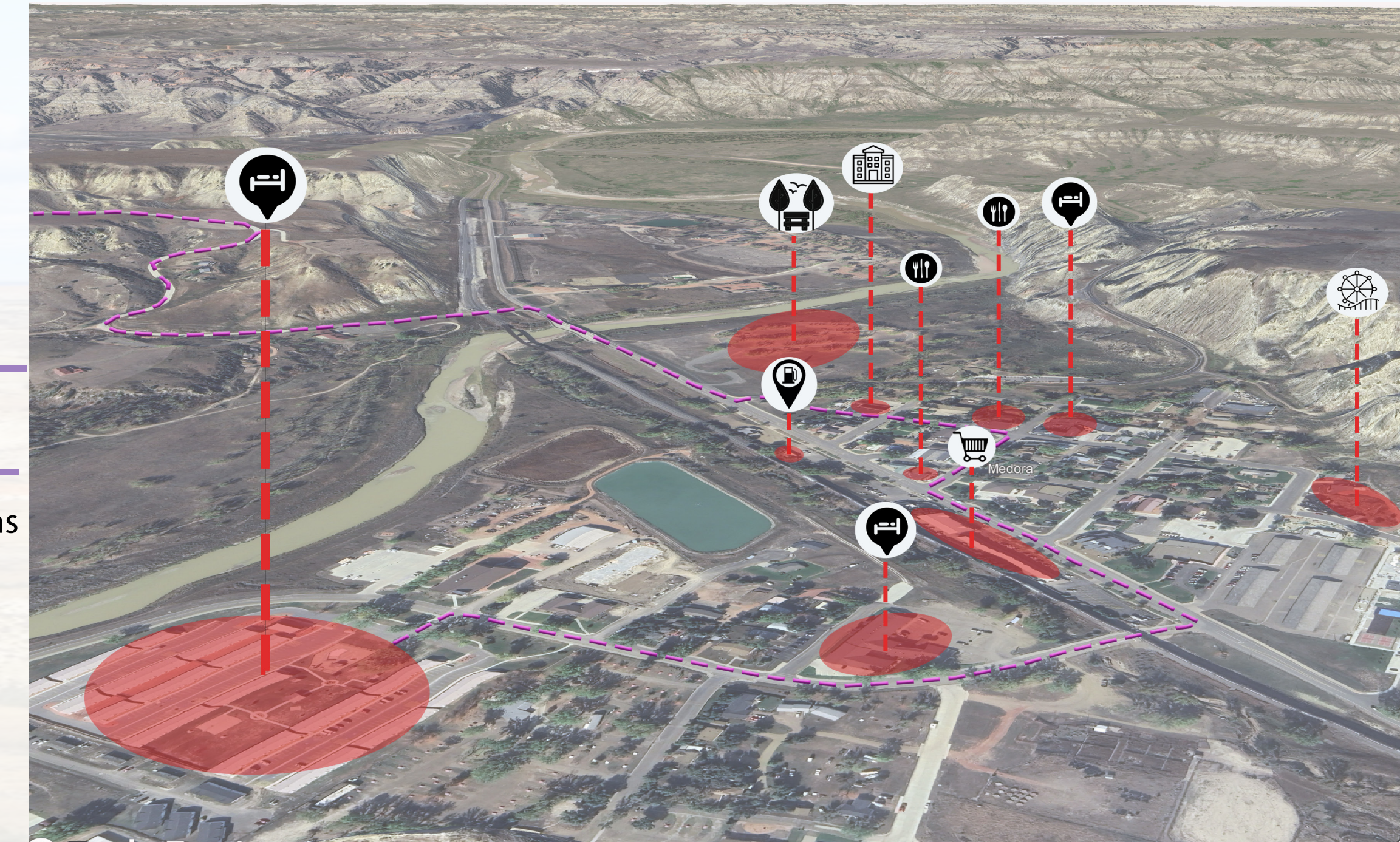


Category	No of Visitors per Year (2022)
Traveler Accommodation:	128071
Shopping/Grocery :	1295867
Amusement Park :	111642
Gasoline Station:	159943
Restaurant :	275265
Hall :	50234

Legends

-  Accommodation
-  Gasoline Stations
-  Shopping/Grocery
-  Restaurant
-  Amusement Park
-  Hall
-  Park

 Road Connecting all high potential points



1. High Potential Destination | Research Findings



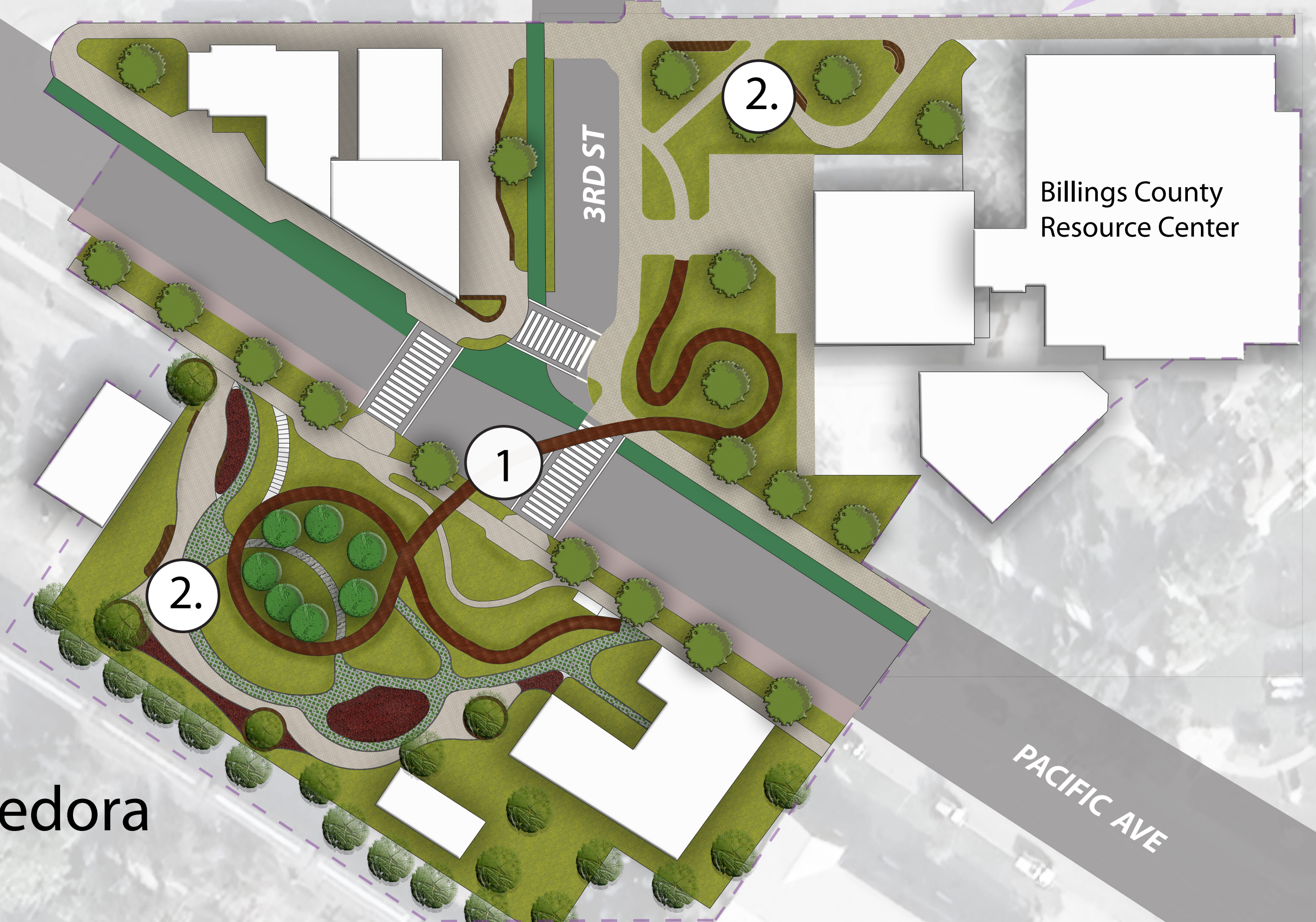
P0.2 Intersection Revival: Transforming Crossroads for Community



P0.1 Gateway Medora: Enhancing Arrival Experiences

KEY NOTES:

- 1. Pedestrian Bridge
- 2. Public Plaza



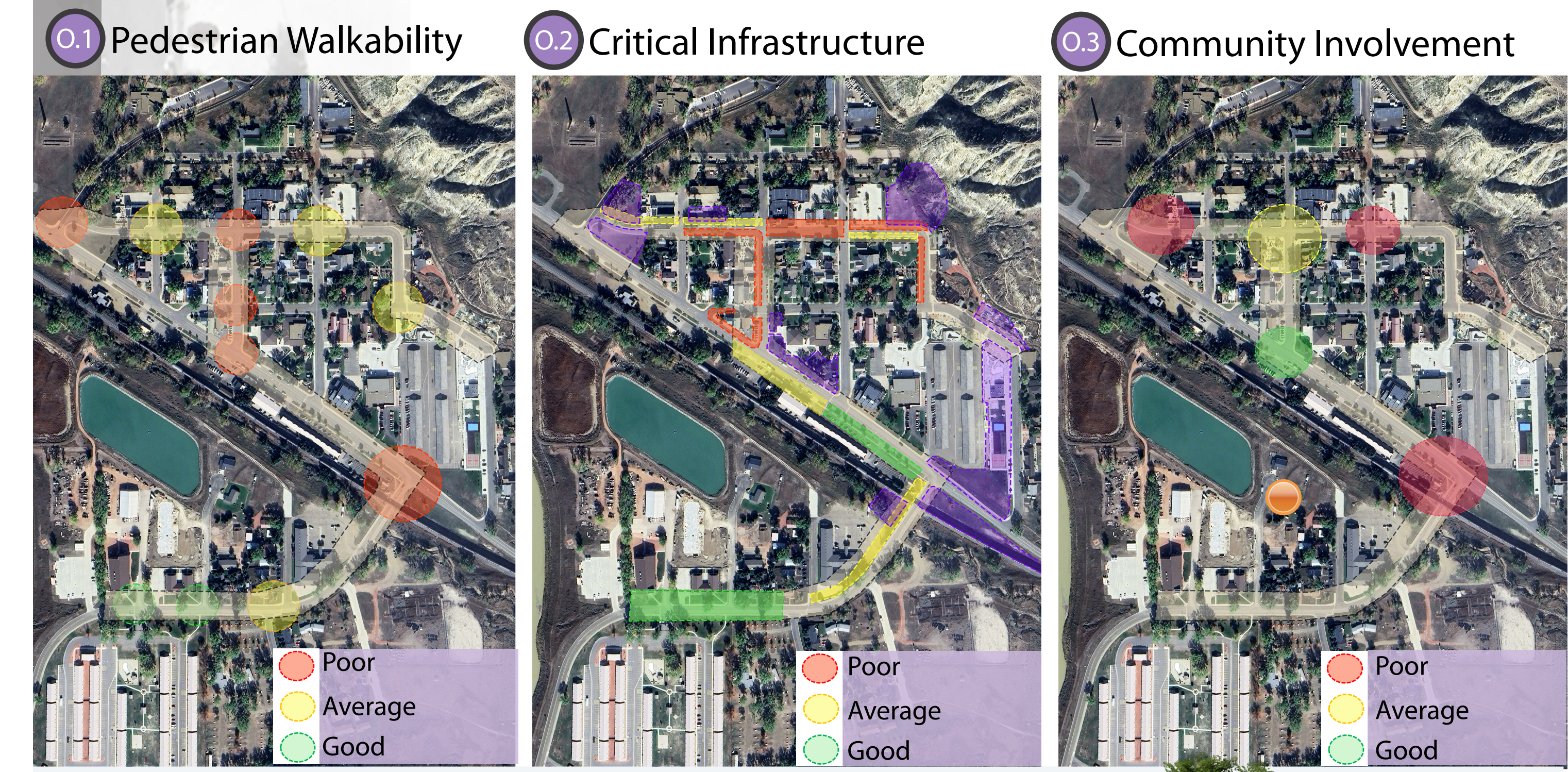
P0.3 Nature's Resilience Park: Innovating Storm water Management

- KEY NOTES:
- 1. Children's Playing Area
 - 2. Silcrete Rock Sitting Area
 - 3. Parking
 - 4. Storm water Collection



2. Masterplan of Enhancing the Walkability in Medora

Scale: 1:40

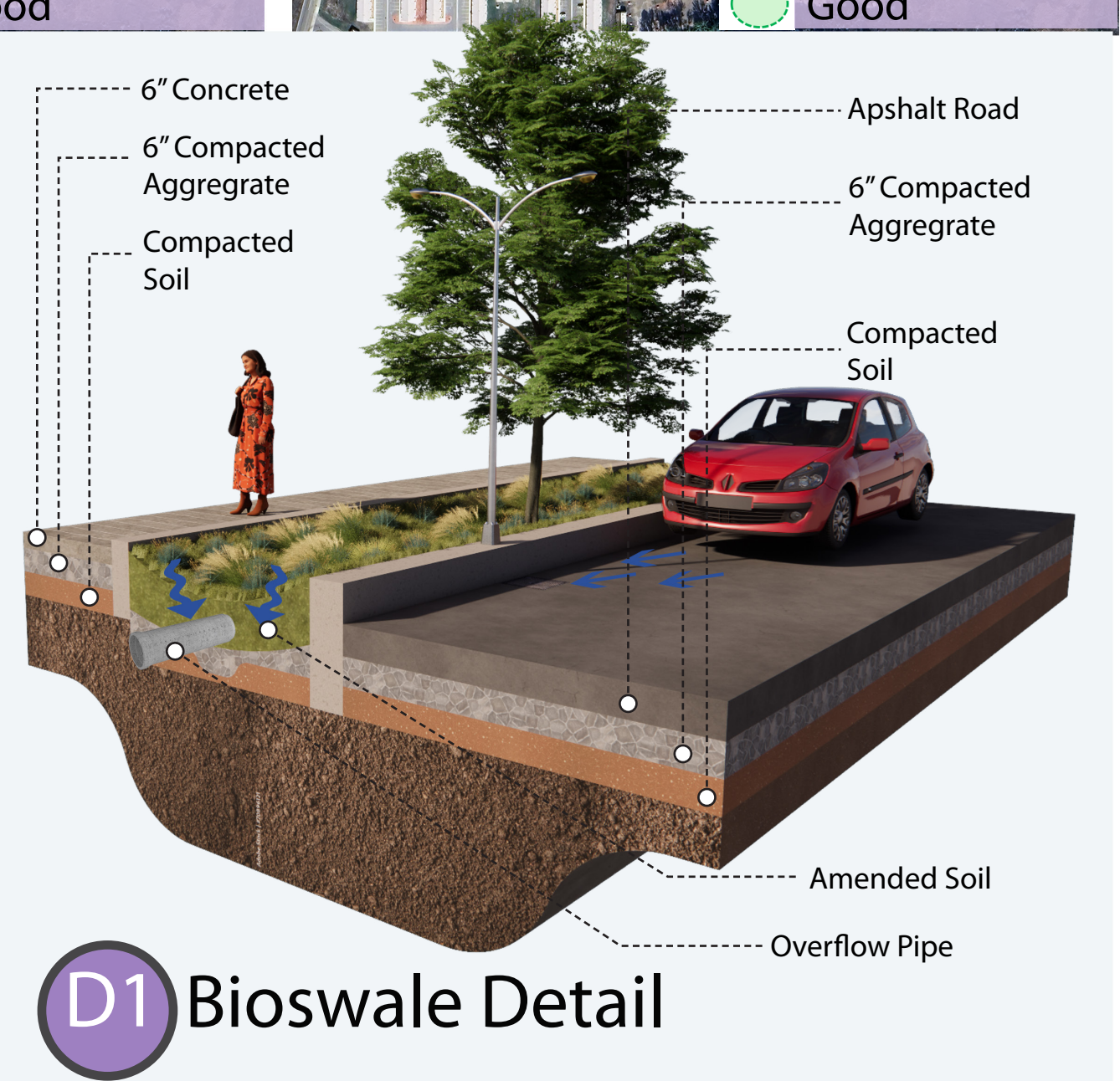


3. Site Analysis Summary

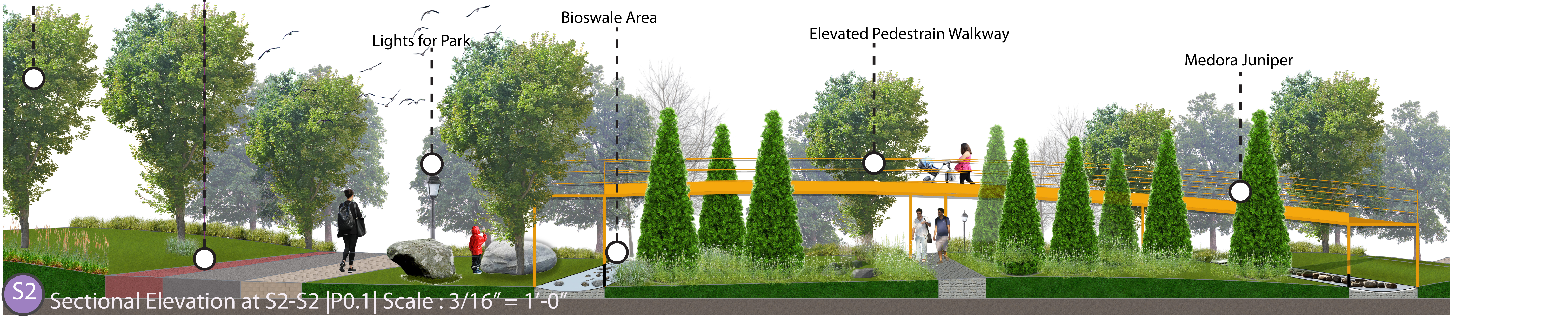
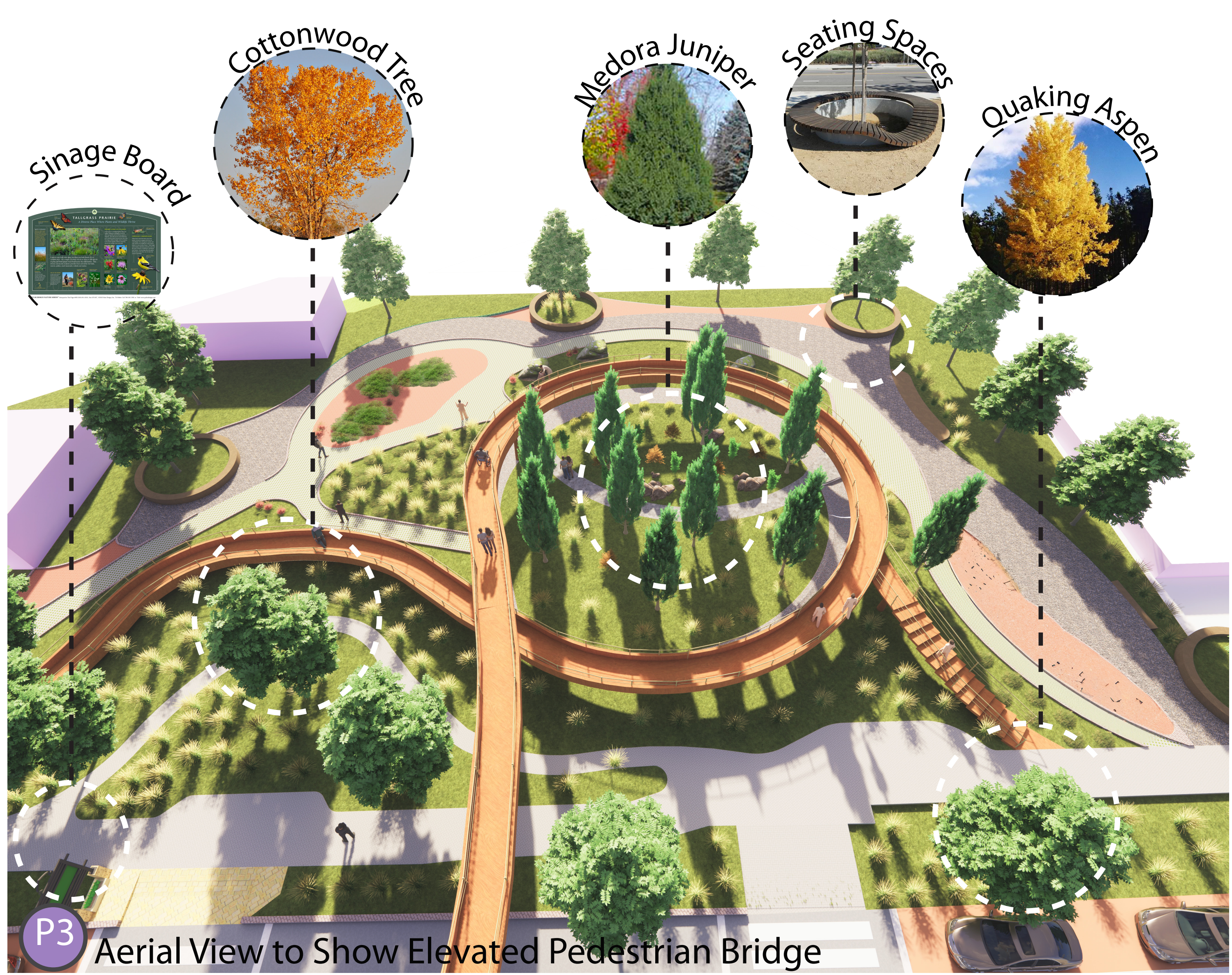
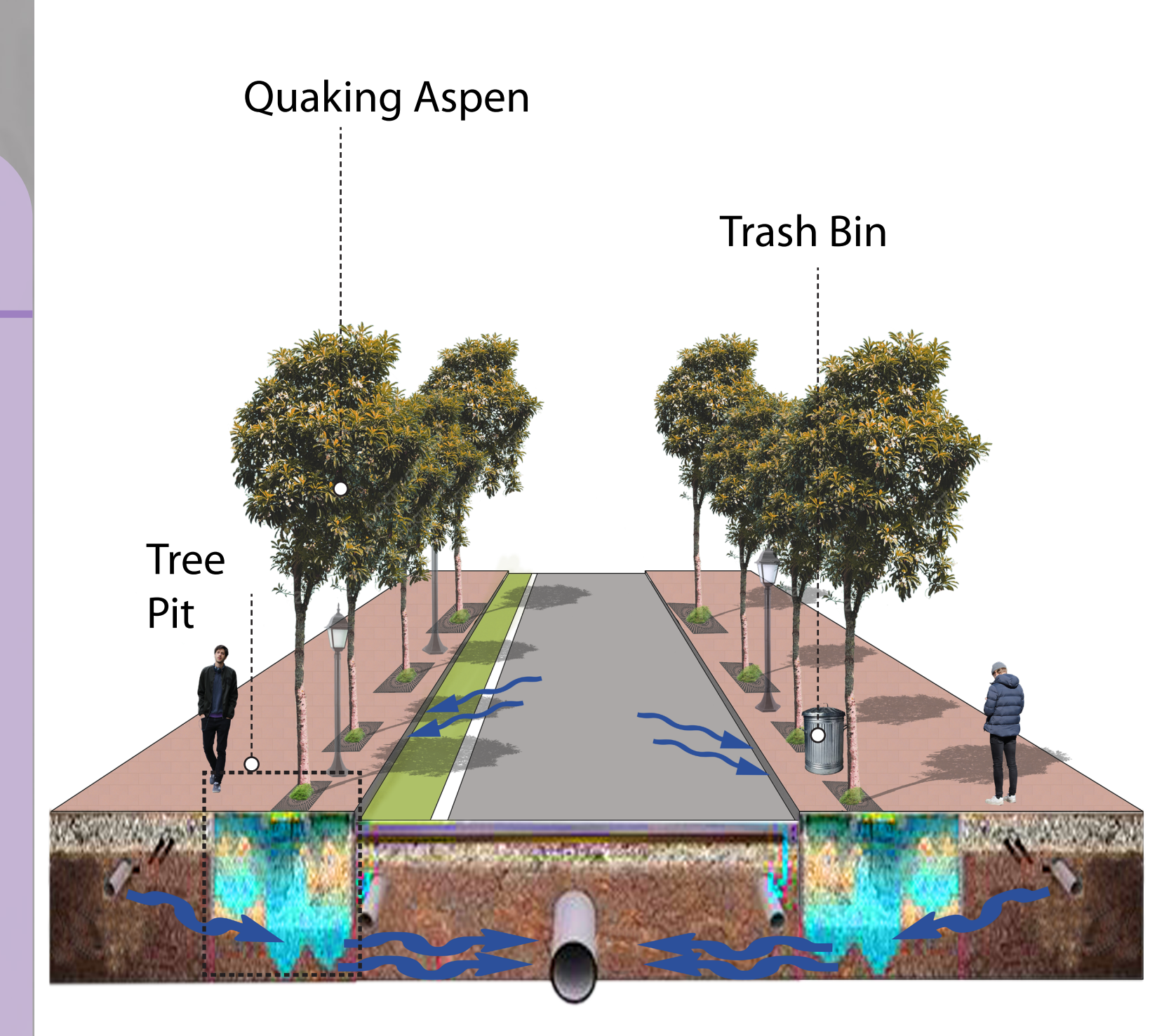
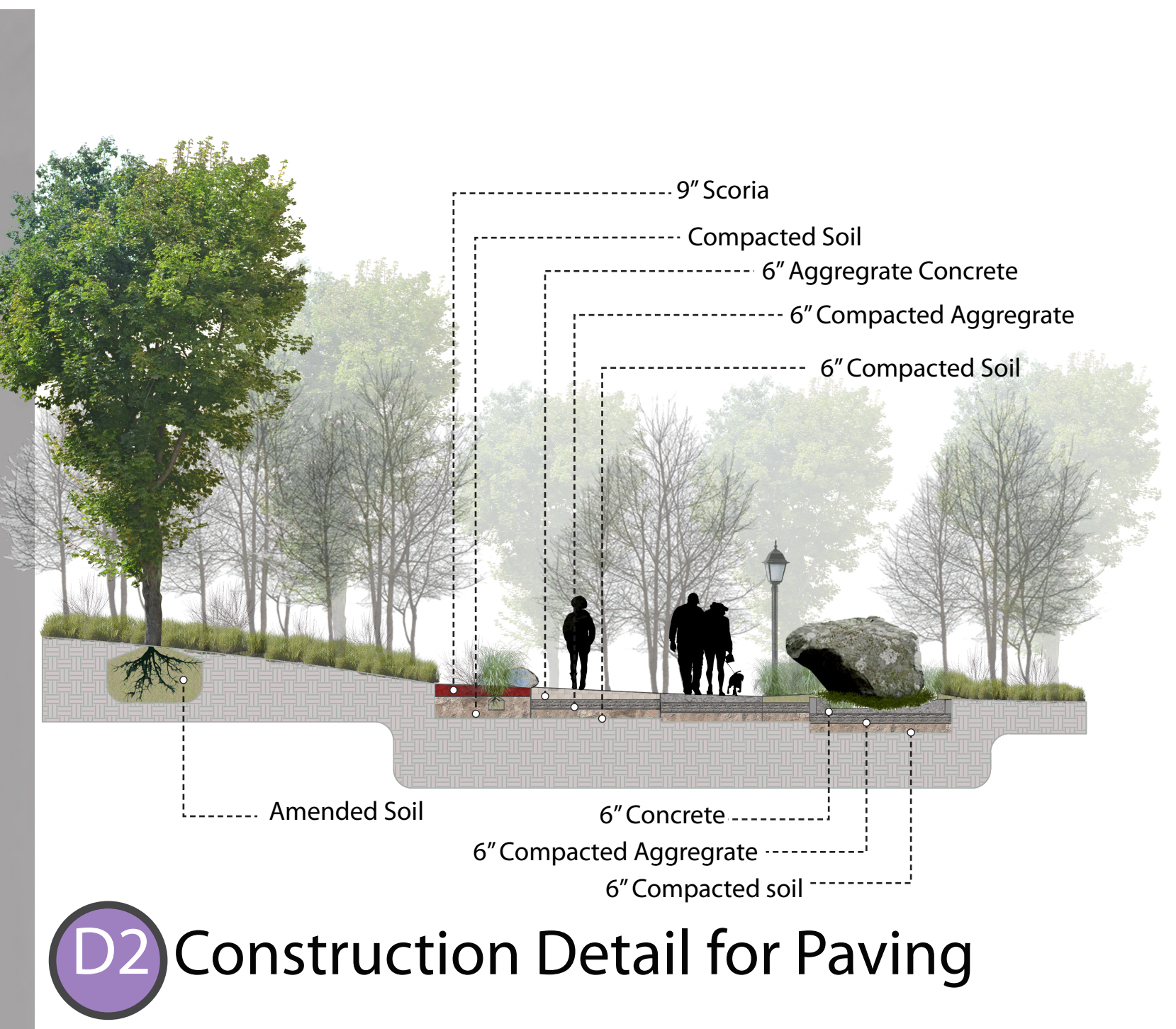
OBJ 1: Pedestrian discontinuity identified, requiring dedicated walkway; pathways need widening to 6 feet; insufficient buffer demands greenery; intersections lacking crossing markings necessitate redesign for safety in high-traffic areas.

OBJ 2: The streets currently lack an adequate number of canopy trees. It is recommended to introduce additional canopy trees to enhance the overall street environment.

OBJ 3: While the existing parks include children's parks, golf playing areas, and memorial parks, there is a noticeable absence of community gathering spaces, playgrounds tailored for adults, and community libraries. Incorporating these elements would enrich the diversity and inclusivity of recreational spaces in the area.



P1 View at Stormwater Collection



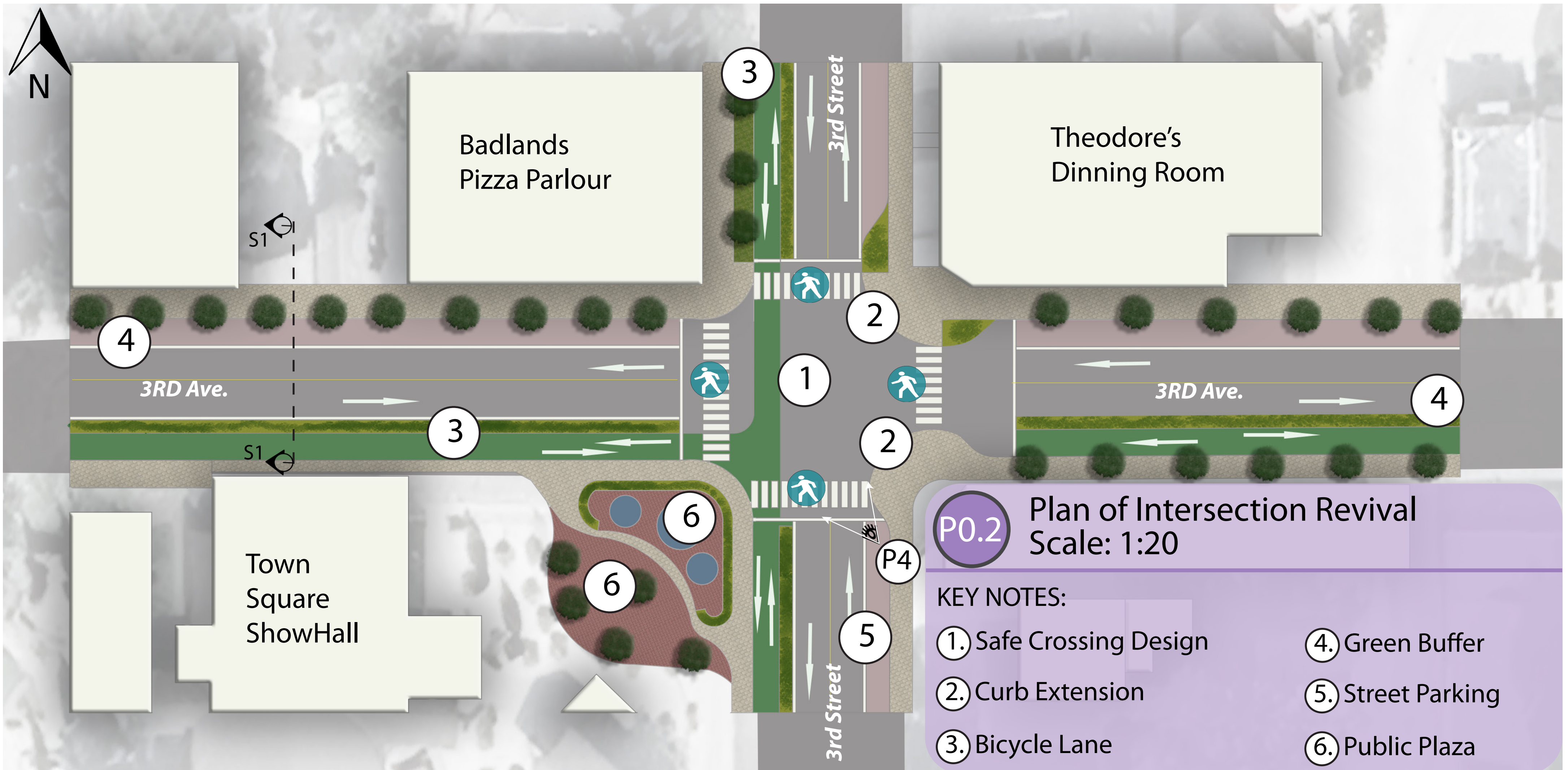


P4 Looking NW from 3rd Street to show Safe Crossing Design



P5 Looking NW from Sidewalk of Pacific Ave Showing Buffer between Street and Walkway

The bustling traffic on this street underscores its importance, yet it also highlights a concerning issue: the lack of safe crossings at intersections. Furthermore, there's a noticeable absence of community involvement spaces near these intersections. To address these challenges, increasing the pedestrian walkway and incorporating trees as a buffer between the street and sidewalk could greatly enhance safety and aesthetics. Additionally, implementing tree pits for water collection would serve both practical and environmental purposes. Furthermore, the addition of bicycle lanes would contribute to making the city more pedestrian-friendly and promote sustainable transportation options.

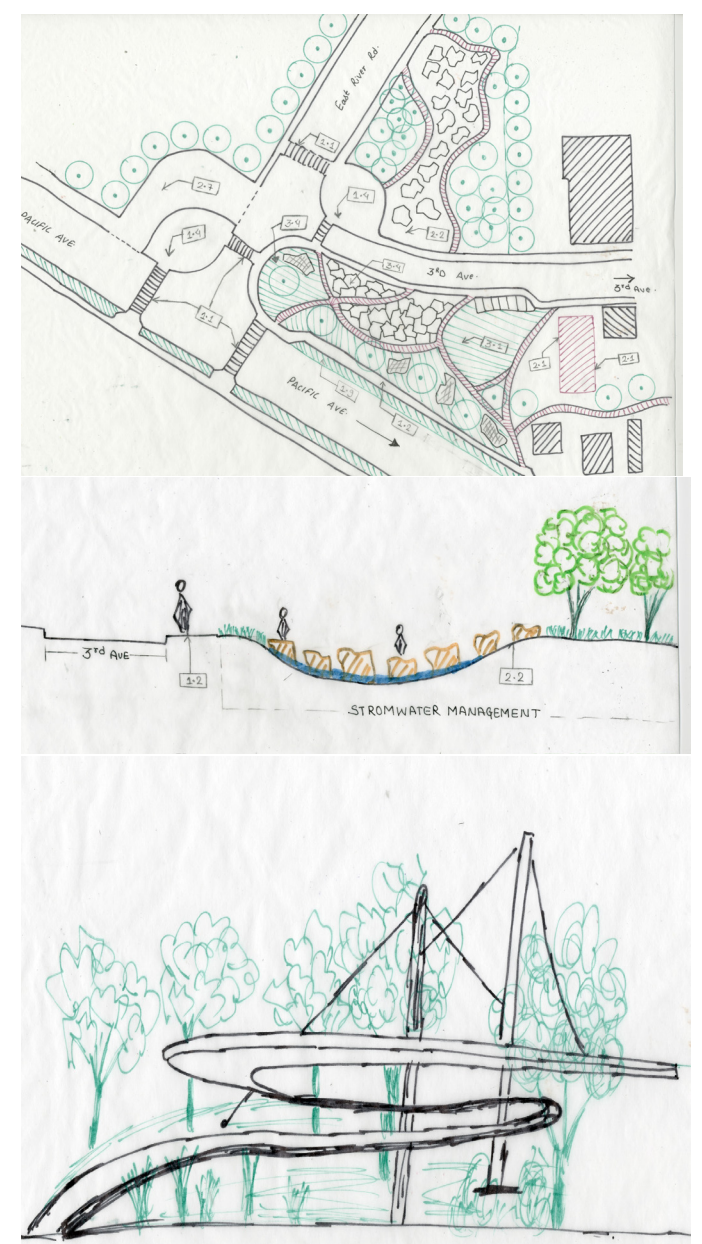




- KEY NOTES:**
- ①. Emergency Service Building
 - ②. Buffer Area
 - ③. Safe Crossing Design
 - ④. Passive Park
 - ⑤. Children's Playing Area
 - ⑥. Silcrete Rock for Sitting
 - ⑦. Signage Board
 - ⑧. Public Parking
 - ⑨. Stormwater Collection Area



Plan of Nature's Resilience Park
Scale: 1:35



Concept for Design



Native Shrubs

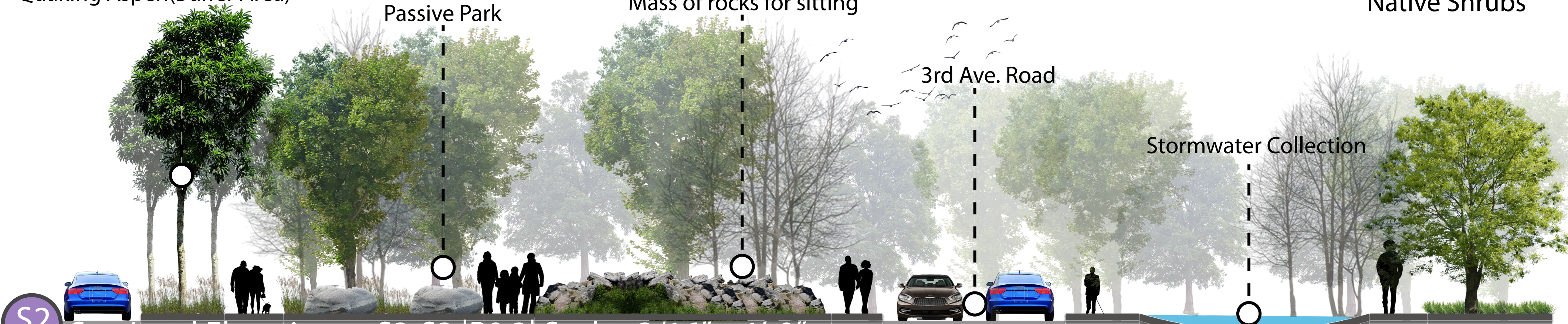
Quaking Aspen(Buffer Area)

Passive Park

Mass of rocks for sitting

3rd Ave. Road

Stormwater Collection



S2 Sectional Elevation at S3-S3 | P0.3 | Scale: 3/16" = 1'-0"