



# WASATCH BOULEVARD

## Master Plan



July 2019

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# INTRODUCTION & SUMMARY

The Wasatch Boulevard Master Plan is a project led by the City of Cottonwood Heights that will guide the future evolution of Wasatch Boulevard and the communities it serves. The Plan focuses on the corridor between Interstate 215 and the mouth of Little Cottonwood Canyon and addresses transportation, land use, and other aspects of the corridor. The project is a partnership with Wasatch Front Regional Council in collaboration with the Utah Department of Transportation (UDOT), and ongoing partnership between the City and UDOT is critical to achieving the vision set forth in this plan.

This planning effort seeks to develop an understanding of the values and priorities along the Wasatch Boulevard corridor; to paint a comprehensive picture of the current conditions and future trends on the corridor; to brainstorm, develop, and test ideas for improving the corridor; and to develop a long-range vision for the corridor and strategies to achieve the vision.

To achieve these objectives, the Plan is comprised of four main sections. These are:

- **Plan Foundations** sets out the goals and performance measures that communicate the priorities and values for the corridor. This section also recounts the project background and summarizes the project process.
- **Corridor Study** provides an in-depth analysis of how well the corridor is performing according to the corridor goals.
- **Concepts & Scenarios** presents a series of alternative concepts and scenarios of how the corridor could achieve the goals.
- **Recommendations** presents the Plan’s recommended course of action for the vision and strategies that will best achieve the corridor goals in a comprehensive and balanced way.

In the following summary, the Recommendations are presented first, followed by a summary of the project process, which includes the Plan Foundations, Corridor Study, and Concepts and Scenarios.

# Recommendations

The recommendations of the Wasatch Boulevard Master Plan focus on a set of Planning Objectives, each containing specific strategies. These objectives point to a Preferred Scenario for Wasatch Boulevard that balances the achievement of the seven Corridor Goals.

## Planning objectives

The focus of this Preferred Scenario is a series of three planning objectives that respond to both the team evaluation and public feedback. We believe these objectives are the best and most balanced way for this plan to balance among the different priorities for the corridor.

### Objective 1: Shape a canyon-oriented, Walkable Urban Place at the Gravel Pit.

Strategies:

- Envision development in a walkable, connected layout that incorporates many of the following concepts:
  - ◇ High-density / high-intensity uses;
  - ◇ Market-supported mix of uses;
  - ◇ Walkable streets;
  - ◇ Highly connected internal street networks;
  - ◇ Recreational amenities (e.g. trails, gathering areas, activity areas, etc.);
  - ◇ Pedestrian access across Wasatch Boulevard to the Old Mill area, where feasible;
  - ◇ Connection to and supportive access onto a future Bonneville Shoreline Trail east of the development;
- In line with regional needs and priorities, encourage the creation of a major transit center near the mouth of Big Cottonwood Canyon serving as the terminus of a major bus route, both to the north (1-215/Wasatch Boulevard, Foothill Drive, Downtown Salt Lake City, airport, etc.) and as a hub for canyon transit service with major park-and-ride resources;
  - ◇ A transit center should be complementary to the overall development on the site, should involve local and regional partners (especially the Utah Transit Authority), and should be accompanied by supportive land uses such as retail and food/beverage opportunities.

- Support increased capacity on 6200 South/ Wasatch Boulevard in a creative way that also supports walkability, transit opportunities at the Gravel Pit, and active transportation along the corridor.
- Continue to develop a strong working partnership with UTA to achieve the transit changes envisioned along the corridor.

### Objective 2: Create a connected network of pathways and trails for transportation and recreation, along the entire corridor.

Strategies:

- Build connected shared use pathways on Wasatch Boulevard
- Improve Wasatch Boulevard crossings by improving existing crossings and adding new ones.
- Leverage existing trails and paths into a larger network.
- Develop trail corridors running through the neighborhoods.
- Create trail and pathway connections to Gravel Pit development.
- In the long-term, create of a string of parks on the network.

### Objective 3: Balance livability, roadway capacity, and sustainable canyon access south of Big Cottonwood Canyon.

Strategies:

- Add roadway capacity sensitively as needed.
- Strongly consider using flex shoulders, with future consideration of Bus Rapid Transit (BRT).
- Slow Wasatch Boulevard.
- Improve neighborhood access.
- Consider roundabouts and other traffic calming measures.
- Make local street connectivity improvements.
- Preserve and enhance the on-street bike facility.
- Use native landscaping.
- Employ medians where feasible.
- Limit additional canyons parking.
- Preserve and enhance key views.

## Preferred Scenario

The three planning objectives suggest a Preferred Scenario that looks like the one pictured to the right, in Figure 0.3. Objective 1 shapes a walkable, urban, recreation- and canyon-oriented Gravel Pit development. Objective 3 shapes the segment of the corridor south of Big Cottonwood Canyon with a balance among the needs of the local neighborhoods, regional traffic, and canyon travelers. Objective 2 shapes a pathway network that ties the corridor, its communities, activity centers, and open spaces together.

### WASATCH BLVD. CORRIDOR GOALS

- **Goal 1:** Preserve and enhance the character and livability of existing residential neighborhoods.
- **Goal 2:** Move people through the corridor reliably and safely.
- **Goal 3:** Increase travel choices along the Wasatch corridor.
- **Goal 4:** Enhance opportunities for recreation along the corridor.
- **Goal 5:** Preserve and enhance the scenic and natural qualities along the corridor.
- **Goal 6:** Promote and prioritize sustainable solutions to Wasatch Canyon access at a local and regional scale.
- **Goal 7:** Identify potential land uses and locations for new development or redevelopment along the corridor.

## Preferred scenario performance

Like the Alternative Long Range Scenarios, the Preferred Scenario was evaluated against the Wasatch Boulevard Corridor Goals and performance measures. The evaluation process yields a score for the scenario for each goal, and an overall score.

As Figure 0.1 demonstrates, the Preferred Scenario balances achievement of the seven goals. The scenario does contribute more for some goals (moving people and new development) than others (preserving and enhancing neighborhoods, improving canyon access). This is in part because of the differences in opportunities of this plan for affecting each of the goals. For some goals - specifically the neighborhood and canyon access goals - this plan has less ability to provide improvement; all of the scenarios show a limited amount of contribution compared to the moving people and development goal.

However, the contribution of the scenario to each goal is significant, and as Figure 0.2 demonstrates, compares well with the highest scoring scenario for each.

	GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7	OVER-ALL
Preferred Scenario	0.47	1.17	0.60	0.78	0.49	0.42	1.23	0.73

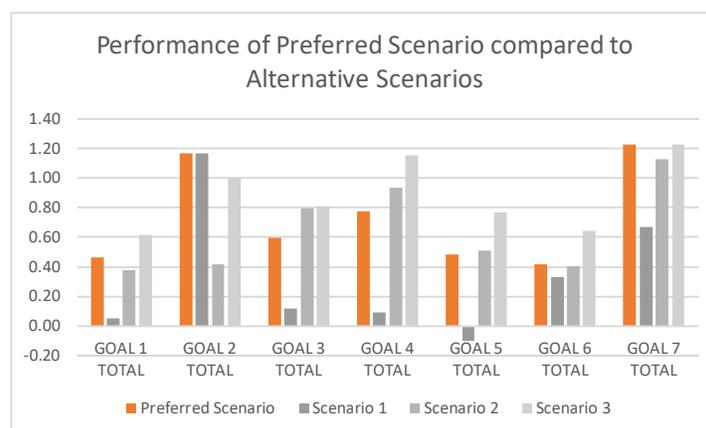


Figure 0.1 Summary of evaluation of Preferred Scenario (top) and Figure 0.2 Performance of Preferred Scenario compared to Alternative Scenarios (bottom).

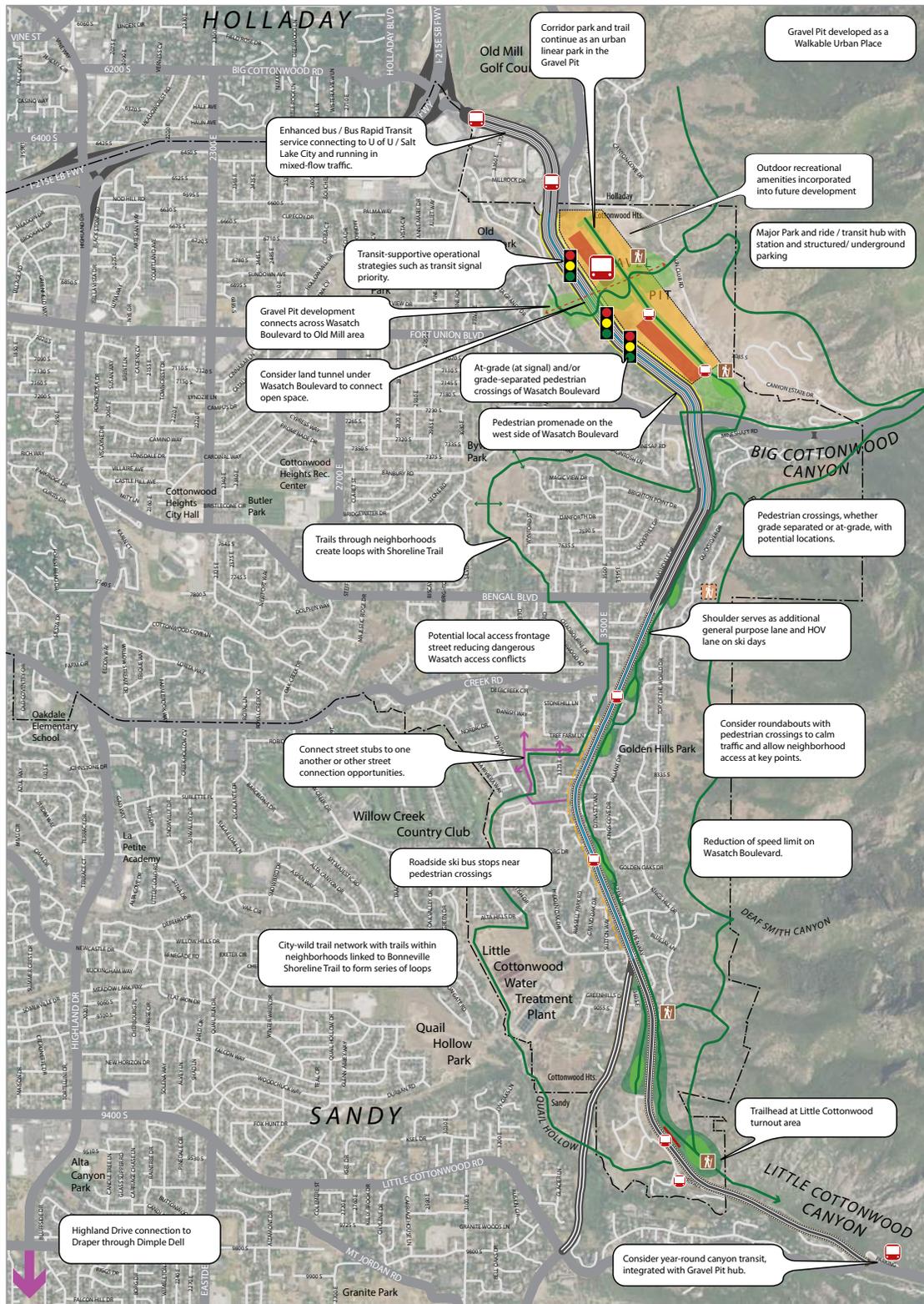
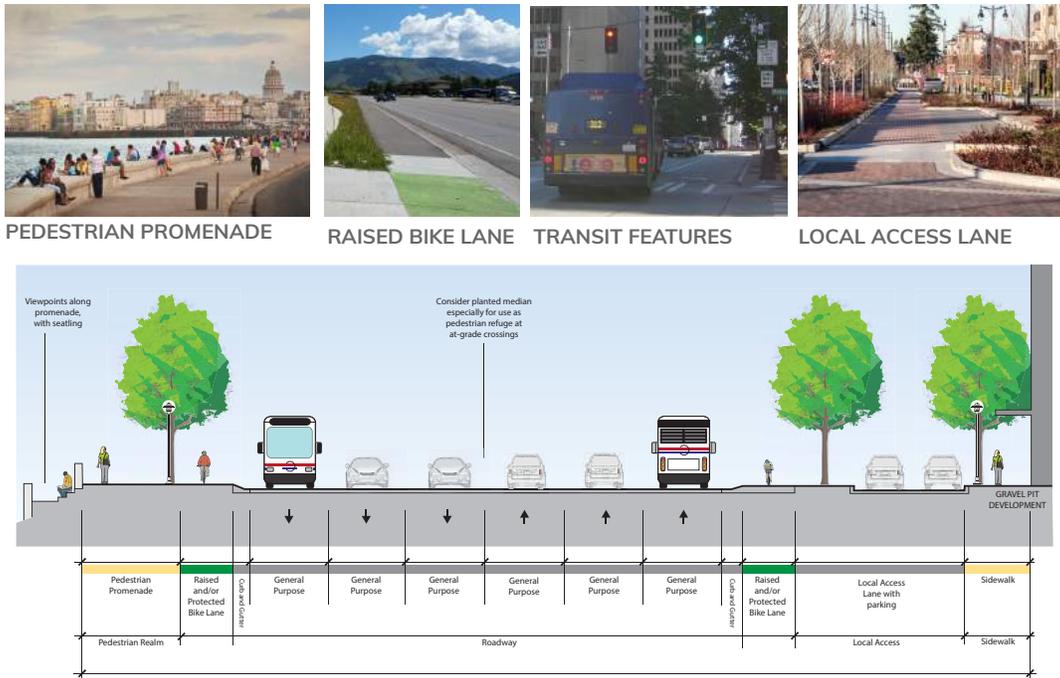


Figure 0.3: Preferred Long Range Scenario.

## Recommended Wasatch Boulevard cross section concepts

In line with the three planning objectives and the Preferred Scenario, the project team recommends the following street cross section concepts for key segments of Wasatch Boulevard:

### At future Gravel Pit development



### South of Bengal Boulevard



Figure 0.4 Cross section concept for Wasatch Boulevard at the Gravel Pit development (top) and Figure 0.5 Cross section concept for Wasatch Boulevard south of Bengal Boulevard (bottom).

## The Preferred Scenario **preserves and enhances the character and livability of existing residential neighborhoods** by:



Focusing new development focused on Gravel Pit area, preserving character of existing corridor neighborhoods.



Linking neighborhoods together through shared use pathways and trails along Wasatch Boulevard.



Reducing the barrier of Wasatch Boulevard with improved pedestrian and bicycle crossings.



Minimizing the pavement width of Wasatch Boulevard roadway as much as possible, despite the additional lane capacity.



Improving resident access onto Wasatch Boulevard through a slower street, features such as roundabouts, and warnings for canyon traffic not to block the intersections.



Creating a proactive, assertive development review process that will provide residents with a chance to shape the development of key parcels within neighborhoods.



Lowering the speed of Wasatch Boulevard through a new design and a lower posted speed.

## The Preferred Scenario **moves people through the corridor reliably and safely** by:



Adding a transit-prioritized lane in each direction on Wasatch Boulevard in Segment 1, increasing the corridor's capacity to move people more reliably.



Adding a lane or shoulder for peak traffic use in each direction on Wasatch Boulevard in Segment 3, increasing the corridor's capacity to move people more reliably.



Initiating an enhanced bus or bus rapid transit line north along the Valley's east side and terminating at or near the Gravel Pit, providing a high-capacity transit possibility to carry people from the Gravel Pit to major activity centers, reflecting a strong travel market. Cottonwood Heights will work closely with UTA to achieve this increased service and infrastructure.



Improving and emphasizing transit access along the corridor through road design and function (e.g. flex lanes, transit preemption, BRT, etc.).



Slowing the speed of Wasatch Boulevard south of Big Cottonwood Canyon.



Implementing traffic calming features such as medians and roundabouts.



Enhancing visibility of pedestrians and cyclists at crosswalks at major intersections.

## The Preferred Scenario **increases travel choices along the corridor** by:



Continuing to develop a close relationship with UTA to provide higher levels of service and infrastructure along the corridor and to give consideration to emergent transportation trends.



Initiating an enhanced bus or bus rapid transit line north along the Valley's east side and terminating at or near the Gravel Pit, providing a robust transit alternative to carry people from the Gravel Pit to major activity centers.



Implementing transit-supportive roadway and operational features between Gravel Pit and I-215 can improve transit travel times between Gravel Pit hub and I-215.



Shaping the Gravel Pit as a walkable urban place that provides a unique walking and riding lifestyle choice for people living in this new place.



Creating a network of paths and crossings along the corridor will make short trips easier to take on foot and bike and improve transit access.

## The Preferred Scenario **enhances opportunities for recreation along the corridor** by:



Creating a network of paths that is a venue for recreation for all types of interests and abilities – paved and dirt trails, routes to parks and loops.



Connecting the corridor's activity centers and communities to the Cottonwood canyons.



Encouraging the creation of a major recreational amenity and/or mountain recreation park in the Gravel Pit development creates a recreational focus and hub.



Completing the Bonneville Shoreline Trail and associated new access points, tying Cottonwood Heights into a regional recreation network.



Implementing the city's Bicycle and Trails Master Plan by enhancing the on-street bike lane and lowering of vehicle speeds to improve conditions for road cyclists.

## The Preferred Scenario **preserves and enhances the scenic and natural qualities along the corridor** by:



Concentrating new development in the Gravel Pit.



Emphasizing the natural Wasatch foothill landscape, reinforcing scenic aspects of the corridor important to people.



Preserving key views along the corridor.



Lending a more human scale to the corridor through a pathway system, traffic calming, slower vehicle speeds, and roadway design (landscaped medians, parkstrips, etc.).



Creating walkable frontage and streetscape in the Gravel Pit development, including along Wasatch Boulevard, will create a more attractive character on the northern segment of the corridor.



Building a pedestrian promenade on the west side of Wasatch across from the Gravel Pit, creating a scenic resource.

## The Preferred Scenario **promotes and prioritizes sustainable solutions to Wasatch Canyon access at a local and regional scale** by:



In partnership with UTA, shaping a vibrant canyons hub, with a wealth of park-and-ride spaces, high-quality transit center, frequent transit service to the key canyons destinations, and complementary land uses such as retail and restaurants, hotel rooms, and on-site recreation.



Implementing flex shoulders on Wasatch Boulevard south of Bengal Boulevard that are open to transit and HOVs only on peak ski days, providing a way to incent trip reduction in the canyons and emphasizing more efficient means of transportation year round.



Improving communication about canyon and parking conditions.



Implementing resident access improvements.

The Preferred Scenario identifies potential land uses and locations for new development or redevelopment along the corridor by:



Focusing development in the Gravel Pit, which balances neighborhood preservation, moving people, transportation choices, recreation, scenery, and canyon access.



Acknowledging the potential for a high amount of development in a way that balances the corridor goals.



Identifying a process for development along the corridor south of Big Cottonwood that allows the City to be proactive in working with public to define development that meets corridor goals and goals of other City policy.

# Planning process summary

## Plan Foundations

Plan Foundations is comprised of the intent and background of the Wasatch Boulevard Master Plan. The key foundation of the plan is the set of seven Corridor Goals developed by the project team with the input of stakeholders and the public.

## Project background

The Wasatch Boulevard Master Plan was conceived by the City of Cottonwood Heights as a comprehensive vision for the corridor from I-215 to the mouth of Little Cottonwood Canyon. This vision would direct City decisions in the communities and opportunity sites along the corridor. It would also help communicate City priorities to other corridor stakeholders, especially the Utah Department of Transportation, which manages Wasatch Boulevard.

## Project process

The Wasatch Boulevard Master Plan was created through a 10-month process in 2017-18. The process was built around 1) a collaborative Project Management Team comprised of City of Cottonwood Heights staff, staff from WFRC and UDOT, and a consultant team; and 2) a series of public events in which the project management team presented project materials to the broader community to inform and seek feedback.



## Wasatch Boulevard Corridor Goals

The Wasatch Boulevard Corridor Goals are a set of priorities and desired outcomes for the Wasatch Boulevard corridor. They are intended to be a foundation for the Plan as well as to guide work on the corridor beyond the scope of the project.

- **Goal 1:** Preserve and enhance the character and livability of existing residential neighborhoods.
- **Goal 2:** Move people through the corridor reliably and safely.
- **Goal 3:** Increase travel choices along the Wasatch corridor.
- **Goal 4:** Enhance opportunities for recreation along the corridor.
- **Goal 5:** Preserve and enhance the scenic and natural qualities along the corridor.
- **Goal 6:** Promote and prioritize sustainable solutions to Wasatch Canyon access at a local and regional scale.
- **Goal 7:** Identify potential land uses and locations for new development or redevelopment along the corridor.

The goals are used for a variety of purposes:

- They are a simple way to communicate what is important to achieve along the corridor;
- They help the Wasatch Boulevard Master Plan team focus study of the corridor on what is most important;
- They help generate ideas for opportunities to achieve the goals on the corridor;
- They provide a framework for evaluating different alternatives and concepts; and
- They help stakeholders on the corridor monitor progress along the corridor.

Each goal is represented by a set of performance measures. Performance measures are qualitative or quantitative metrics that allow one to assess with relative objectivity how well a goal is being met.

## Corridor Study

The Corridor Study presents existing and projected future conditions of the corridor as well as a “baseline” analysis of how the corridor is currently achieving the Corridor Goals. The following is a summary of the assets, challenges, and opportunities for each goal.

### Goal 1: Preserve and enhance the character and livability of existing residential neighborhoods.

**Assets** for Goal 1 focus on the well-established neighborhoods in the area, valued views of the mountains and valley, and access to open space. **Challenges** include the disconnection of the neighborhoods from one another, the conflicts with Wasatch Boulevard traffic, and a poor pedestrian environment on Wasatch Boulevard. **Opportunities** include a better design for Wasatch Boulevard that serves and helps connect neighborhoods; places to increase street connectivity; more recreational amenities; better Wasatch Boulevard access management; and ensuring that new development fits within the character of existing neighborhoods.

### Goal 2: Move people through the corridor reliably and safely.

Goal 2 **assets** focus on the adequacy of most corridor segments to move people through 2024 and the wide right-of-way that provides flexibility for the corridor. However, **challenges** are that two key corridor segments, Segment 1 and Segment 3, are over capacity now and especially in the future, largely due to growth at the Gravel Pit. And, under the existing trends the corridor is dependent on private single occupant vehicles to move people. The corridor faces a separate challenge for peak ski days, where it reaches an over capacity condition due to congestion of winter recreational traffic. **Opportunities** include additions of roadway lane capacity on Segments 1 and 3 in the near term and long term, but also several options for increased transit service, especially connecting the Gravel Pit to regional destinations such as downtown Salt Lake City; there is the opportunity to explore creative approaches to capacity increases that also incent higher vehicle occupancy for ski traffic; there is the opportunity to explore options to alleviate local dependence on Wasatch Boulevard by increasing regional (i.e. Highland Drive) and neighborhood street connectivity.

### Goal 3: Increase travel choices along the Wasatch corridor.

Goal 3 **assets** focus on the walkability and bikeability of neighborhoods surrounding Wasatch Boulevard. However many **challenges** exist, including the lack of a pedestrian facility on Wasatch Boulevard, an overall poor pedestrian environment, the high vehicle speeds on the corridor that endanger active travelers, lack of crossings of Wasatch Boulevard, lack of street connectivity, lack of transit service, and a land use pattern creating a dependence on driving.

**Opportunities** for Goal 3 include creating pedestrian facilities or multi-use paths along Wasatch Boulevard to connect the neighborhoods dependent on it, improvements of crossings and intersections for active travelers; increased connections among neighborhoods, increased transit service; and development that emphasizes transportation choices.

### Goal 4: Enhance opportunities for recreation along the corridor.

**Assets** for Goal 4 include the area’s parks, trails, public lands and other open space resources; the regional attraction of road cycling along Wasatch Boulevard. **Challenges** include the disconnection of these recreational amenities; the barrier and high vehicle speeds of Wasatch Boulevard itself for pedestrians and cyclists. **Opportunities** include incorporation of safe pedestrian and cycle crossings along Wasatch Boulevard, a safer, more comfortable pathway along Wasatch Boulevard, a linear park along some segments of the corridor, additional trailheads accessing the planned Bonneville Shoreline Trail; and development of the Gravel Pit site as a recreational nexus, both to enhance recreation connections and create new recreational amenities.

**Goal 5: Preserve and enhance the scenic and natural qualities along the corridor.**

Goal 5 **assets** include the corridor’s scenic resources - the wide variety of views along the corridor – from the mountains to the valley to the buildings along the street; and the Wasatch Mountain landscape which interacts with the corridor. **Challenges** include the disconnection of the Wasatch Mountain landscape from the corridor’s public realm; the lack of a human-scaled streetscape on the corridor; the preservation status of the Cottonwood creeks below Wasatch Boulevard; and the undergrounding of the smaller Wasatch drainages in the corridor neighborhoods. **Opportunities** to achieve Goal 5 include the protection and enhancement of key viewsheds; the utilization of appropriate regional landscape design approaches to extend the natural hillside landscape into the roadway and over the highway corridor; use of appropriate materials to help improve the natural and visual experience of the roadway; the preservation and restoration of Cottonwood creeks below Wasatch Boulevard; development of the Gravel Pit site to integrate and connect the Wasatch Mountain landscape and the Big Cottonwood Creek corridor.

**Goal 6: Promote and prioritize sustainable solutions to Wasatch Canyon access at a local and regional scale.**

Goal 6 **assets** include the four park and ride lots on the corridor, as well as additional park and ride lots further west that do not fill up nearly as much; a consolidated ski bus network that debuted in the 2016-17 season to a successful ridership increase; and overall high demand for canyon transit in the winter. **Challenges** include the finding that park and rides along the Wasatch Boulevard corridor are generally at or over capacity on winter weekends; means of communicating which lots have available space is limited; there is no summer transit service; park and ride facilities are generally utilitarian and often bare-bones, with limited connections to complementary land uses or other facilities; UDOT struggles with traffic and parking enforcement on peak ski days. **Opportunities** to achieve Goal 6 include utilizing the Gravel Pit development potential to create a major intermodal park and ride hub at or near the site; reducing the need for parking in the first place by capturing trips internally within Gravel Pit or other new development; the creation of park and ride facilities/carpool lots integrated with

complementary land uses such as services and eating/drinking establishments; transit-only lane for ski days; and strategies to reduce impacts of canyon travel on neighborhoods.

**Goal 7: Identify potential land uses and locations for new development or redevelopment along the corridor.**

Goal 7 **assets** are the few sites on the corridor identified as topographically-favorable; the largest site is the Gravel Pit on the north end of the corridor. The **challenges** for Goal 7 include ensuring that development fits within existing neighborhoods and views and other neighborhood aspects are preserved; ensuring that new development does not continue the weaknesses of existing development, including dependence on automobiles and disconnection; and acquiring sites for park-and-rides, trailheads, and parks and recreation. **Opportunities** to achieve Goal 7 focus on the Gravel Pit as a development site, where many of the other corridor goals can be achieved, but also include other places to add neighborhood amenities, walkability, and complementary development. Development sites could weave together neighborhoods otherwise isolated from one another by creating a better environment along Wasatch Boulevard.

**Public Open House 1**

The first public open house was held on November 16, 2017, at Cottonwood Heights City Hall. The open house informed attendees about the project, discussed the Draft Corridor Goals, presented corridor analysis information, and most importantly received feedback and ideas about the project. Approximately 50 people attended the meeting, providing feedback and comments. In addition, an Online Open House tool provided additional opportunities for the public to take part. 116 people took the survey, on-site and online, many providing additional comments about various ideas and project concerns. In addition, several people submitted comment forms through the project web page. These results provided the project team with confidence in moving forward with the Corridor Goals and direction in developing the ideas into concepts and scenarios.

## Concepts and Scenarios

The concepts and scenarios explore ways to achieve the Corridor Goals. The project team took the opportunities identified in the Corridor Study and developed them into concepts for -

- Wasatch Boulevard street improvements - i.e. the “cross section”;
- Corridor treatments such as streetscape, transit service, neighborhood access, and sustainable canyons access;
- Network improvements off Wasatch Boulevard but supporting it - for aspects such as streets, trails, and natural systems;
- Small area concepts for the four areas identified as potential development areas (Gravel Pit, Big Cottonwood Canyon mouth; Swamp Lot/Golden Hills; and Little Cottonwood Turnout); and
- Intersection improvements.

In order to explore the relationships among these concepts, the project team integrated them into a series of Alternative Long Range Land Use and Transportation Scenarios. These scenarios focus especially on the relationships between land use and transportation choices on the corridor. And, in addition to showcasing these different concepts, these scenarios are meant to convey alternative “personalities” for the corridor.

The Wasatch Boulevard Master Plan Alternative Scenarios are:

### Scenario 1: “Current Plans”

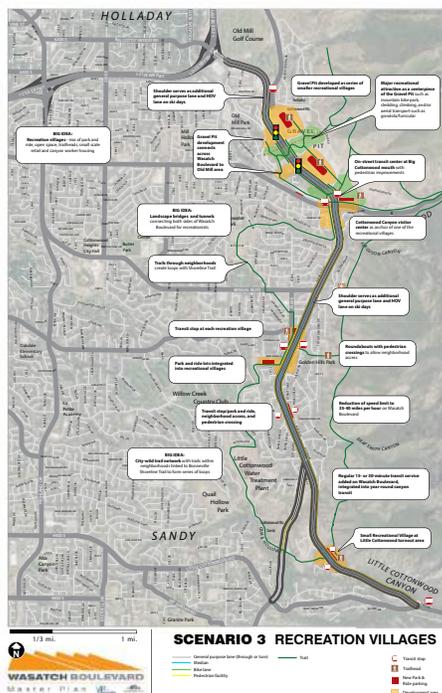
Scenario 1 emphasizes the guidance of existing plans. These include the Regional Transportation Plan; the 2016 Gravel Pit Study; and the 2012 Cottonwood Canyons Parking Study. The other key piece of Scenario 1 is a series of smaller, targeted changes to achieve the Corridor Goals.

### Scenario 2: “East Meets West”

Scenario 2 focuses most new development on the corridor in the Gravel Pit area, with the rest of the corridor characterized by a parkway and associated linear park. The scenario leverages the demand for office, retail, housing and hospitality and a regionally singular site to create a walkable urban place at the Gravel Pit. This Gravel Pit development would include the major Cottonwood canyons transportation hub and base center and would be served by a bus rapid transit line. The Gravel Pit development would be complemented to the south by an East-Coast style parkway with a western native landscape. Scenario 2 avoids adding general purpose traffic lanes to Wasatch Boulevard south of the Gravel Pit by improving regional, community, and local street connectivity.

### Scenario 3: “Recreation Villages”

Scenario 3 revolves around a series of small “Recreation Village” centers along the corridor. These Recreation Villages would be places that address many of the identified needs of the corridor - neighborhood amenities and connections, sustainable canyon access, and recreation. Scenario 3 includes a flexible way to add vehicle capacity through “flex” shoulders, which can accommodate rush hour traffic as well as carpools/transit on peak ski days. Scenario 3 also slows down Wasatch Boulevard.



Example of Long Range Scenario diagram.

## Concept and Scenario evaluation

Finally, in order to understand how well the concepts and scenarios achieve the project Corridor Goals, the project team undertook an evaluation of each scenario and concept. Figure 0.6 compares the scenarios against the Corridor Goals.

Conclusions of this evaluation include:

- Scenario 3 is strong across all goals – it adds capacity to move people while also responding to community-focused goals and lessening development/traffic pressure on the northernmost segment of the corridor.
- The strongest concepts when considering all goals tend to be ‘land use’ or small area plan concepts, focused on Gravel Pit and Swamp Lot/Golden Hills area.
- The strongest concepts tend to have low precedent locally.
- Some concepts with more precedent also scored well – these tend to be those focused on active transportation and recreation, such as the multi-use paths, linear park, and Bonneville Shoreline Trail implementation.
- Moving more people through the corridor will likely depend on increasing roadway capacity. Goal 2 was the one goal in which Scenario 1 scored the highest, though Scenario 3 was very close.

- But innovative/appropriate transit and transportation demand management (TDM) improvements can complement any capacity increases. These are important for achieving a wider range of goals.
- None of the scenarios completely “fix” the mobility issues in Segment 1, especially at the I-215 interchange.

## Open House 2

The project team held a second public open house on March 19, 2018. The open house presented the corridor concepts and three scenarios through map diagrams, example images of other places, potential street cross sections, and illustrative small area plan concepts. The team solicited input through green (“like”) and red (“don’t like”) dots on the concepts and scenarios and a survey asking attendees about their support of the concepts and scenarios. The team also placed the open house materials and survey online. 50 people responded to the survey.



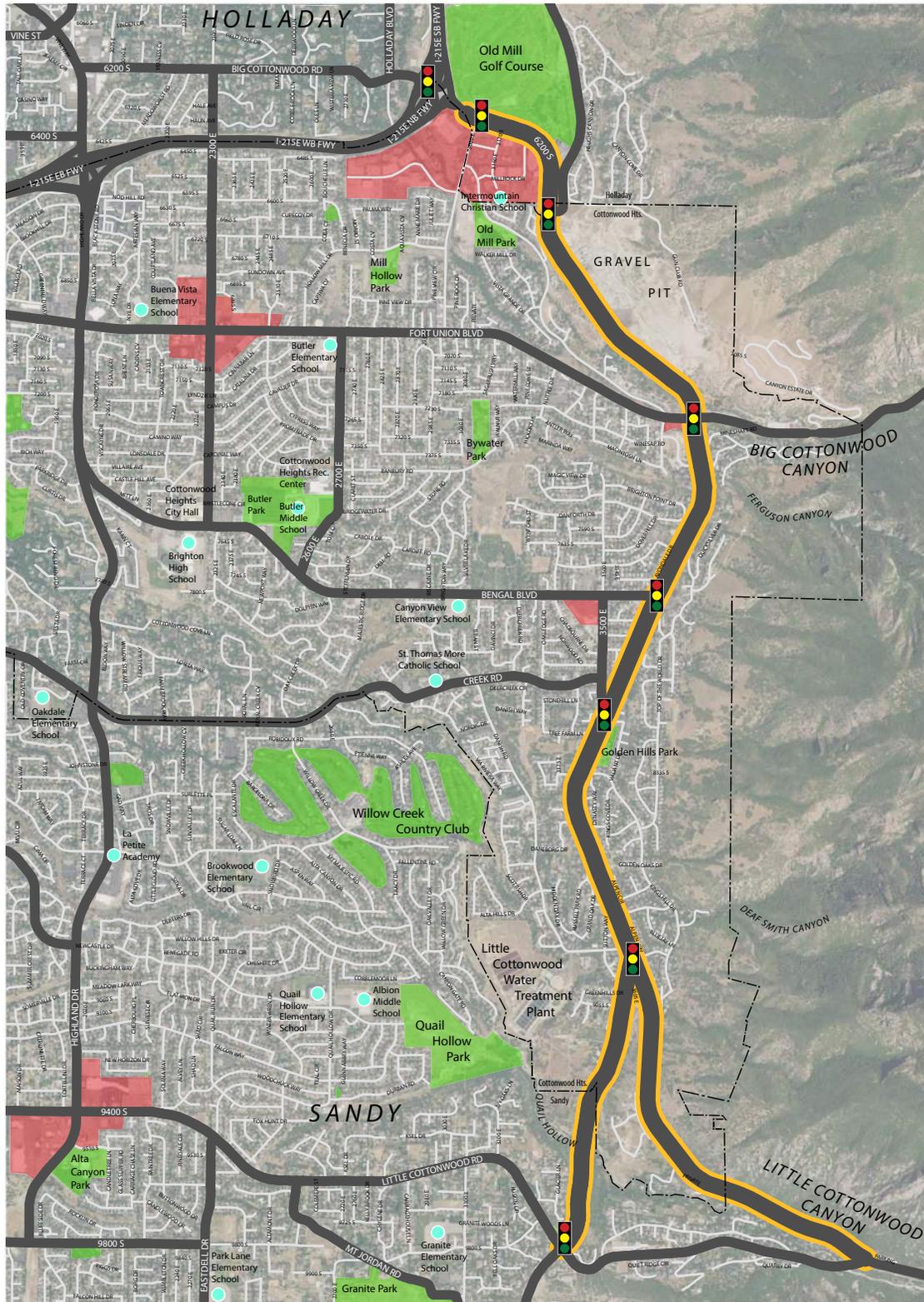
Open House 2.

		GOAL 1 TOTAL	GOAL 2 TOTAL	GOAL 3 TOTAL	GOAL 4 TOTAL	GOAL 5 TOTAL	GOAL 6 TOTAL	GOAL 7 TOTAL	UNWEIGHTED OVERALL	SURVEY WEIGHTED OVERALL
	Existing condition	1.33	1.00	0.68	1.50	1.88	0.80	1.50	1.24	1.23
Contribution to the goal	Scenario 1: "CURRENT PLANS"	0.05	1.17	0.12	0.09	-0.10	0.33	0.67	0.33	0.31
	Scenario 2: "EAST MEETS WEST"	0.38	0.42	0.80	0.93	0.51	0.40	1.13	0.65	0.61
	Scenario 3: "RECREATION VILLAGES"	0.62	1.00	0.81	1.15	0.77	0.64	1.23	0.89	0.85
Projected performance	Scenario 1	1.38	2.17	0.79	1.59	1.77	1.13	2.17	1.57	1.53
	Scenario 2	1.71	1.42	1.47	2.43	2.38	1.20	2.63	1.89	1.83
	Scenario 3	1.95	2.00	1.49	2.65	2.64	1.44	2.73	2.13	2.08

Figure 0.6: Summary of evaluation of Alternative Long Range Scenarios.

## Preferred scenario and Draft Plan

Following Open House 2, the project team took the community feedback and the scenario and concept evaluation and developed a Preferred Scenario. This scenario and related planning objectives are presented above in “Recommendations.” The team assembled all the project work products into a Draft Plan.



**BASEMAP**

- Transit Center/  
Park & Ride
- Recreation Area/  
Open Space
- School
- Commercial Center
- Study Corridor
- Corridor traffic signal

Figure 1.1: Map of Wasatch Boulevard Master Plan study area.

# PART 1 PLAN FOUNDATIONS

The Plan Foundations section conveys the beginning points for the Wasatch Boulevard Master Plan. These foundations were developed from previous planning and community outreach efforts as well as work among the Project Management Team and the public to develop a set of Corridor Goals.

## 1.1 Project Background

The Wasatch Boulevard Master Plan was conceived by the City of Cottonwood Heights as a comprehensive vision for the corridor from I-215 to the mouth of Little Cottonwood Canyon. This vision would direct City decisions in the communities and opportunity sites along the corridor. It would also help communicate City priorities to other corridor stakeholders such as the Utah Department of Transportation (UDOT), which manages Wasatch Boulevard itself; the adjacent communities of Holladay and Sandy; the Utah Transit Authority; and Wasatch Front Regional Council. The project process was set up for these stakeholders to collaborate on the corridor vision and priorities.

The Wasatch Boulevard Master Plan is one of several current efforts along the greater Wasatch Boulevard corridor area. Salt Lake County has begun an update of its Wasatch Canyons General Plan, which will guide future development and preservation in the canyons. UDOT is undertaking a Little Cottonwood Canyon Environmental Impact Study that will assess and program transportation improvements on S.R. 210 from the mouth of Big Cottonwood Canyon, along the Wasatch Boulevard corridor, and up Little Cottonwood Canyon. UDOT is also working on a project to add a northbound bypass lane to approach the I-215 interchange, bypassing the 3000 East signal. UDOT recently constructed intersection improvements at the “Y” intersection of Wasatch Boulevard and Little Cottonwood Road.

The Wasatch Boulevard Master Plan process coordinated and collaborated with each of these efforts.

## 1.2 Plan Process and Community Engagement

The Wasatch Boulevard Master Plan was created through a 10-month process in 2017-18. The process was built around 1) a collaborative Project Management Team comprised of City of Cottonwood Heights staff, staff from WFRC and UDOT, and a consultant team; and 2) a series of public events in which the project management team presented project materials to the broader community to inform and seek feedback.

The first step of the project process was the development of a set of Corridor Goals and performance measures. The second was developing the Corridor Study and its baseline analysis of the corridor performance measures and resulting identification of assets, challenges, and opportunities. The third was the development of alternative long range corridor concepts and scenarios. The fourth and final step was the development of a Preferred Scenario and planning objectives for the corridor.

The public outreach events occurred at the Corridor Study and Alternative Concepts and Scenarios stages of the project. Open House 1 introduced the project to the public, queried the public on their support of the draft corridor goals, and presented the corridor study findings. Open House 2 presented and sought feedback on potential corridor concepts and three alternative long range scenarios. For more information on each of the open houses, see Parts 2 and 3.

# 1.3 Wasatch Boulevard Corridor Goals

The Wasatch Boulevard Corridor Goals are a set of priorities and desired outcomes for the Wasatch Boulevard corridor. They are intended to be a foundation for the Plan as well as to guide work on the corridor beyond the scope of the project.

The goals began from a conversation among the Project Management Team - which included the City of Cottonwood Heights, UDOT, the Wasatch Front Regional Council, and the consultant team - at the kickoff meeting to the Wasatch Boulevard Master Plan. The goals also had input from the Cottonwood Heights community via the feedback from a set of workshops conducted by the City and Brigham Young University students prior to the Master Plan effort. The goals were then refined by Cottonwood Heights staff and the consultant team, reviewed by the Project Management Team, stakeholders, and the public to produce the final draft. The Corridor Goals are shown at right in Figure 1.3.

The goals are used for a variety of purposes:

- They are a simple way to communicate what is important to achieve along the corridor;
- They help the Wasatch Boulevard Master Plan team focus study of the corridor on what is most important;
- They help generate ideas for opportunities to achieve the goals on the corridor;
- They provide a framework for evaluating different alternatives and concepts; and
- They help stakeholders on the corridor monitor progress along the corridor.

The project team acknowledges that the goals will be most effective if shared by a wide range of stakeholders and should encompass a comprehensive range of values and desired outcomes on the corridor.

As part of Open House 1, the public was asked to rate the importance of each of the seven corridor goals. All goals received positive ratings, though some were more important overall than others. Figure 1.2 below shows the results of this survey. As it shows, Goal 1 (Preserve and enhance neighborhoods) was the most popular goal among survey takers, who tended to be residents of communities near the corridor. Goals 5 (Preserve and enhance the scenic qualities) and Goal 6 (Sustainable canyon access) were also popular. However, all the goals received overall positive ratings.

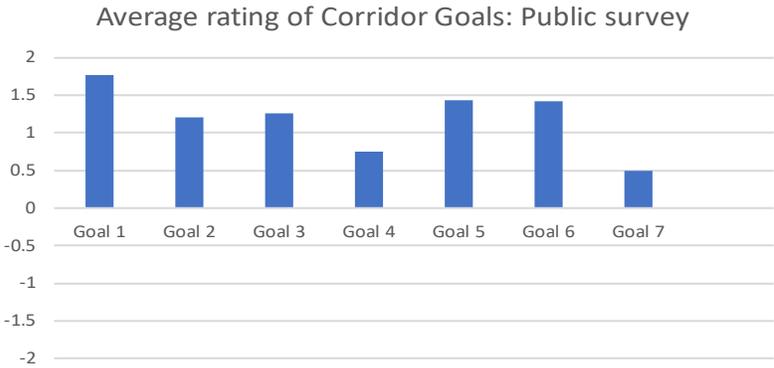


Figure 1.2: Average rating of Corridor Goals by public survey. Ratings ranged from “-2” (do not support) to “2” (support), with “0” as neutral.

## WASATCH BOULEVARD CORRIDOR GOALS

- 1 | Preserve and enhance the character and livability of existing residential neighborhoods.
- 2 | Move people through the corridor reliably.
- 3 | Increase safe travel choices along the corridor.
- 4 | Enhance opportunities for recreation along the corridor.
- 5 | Preserve and enhance the scenic and natural qualities along the corridor.
- 6 | Promote and prioritize sustainable solutions to Wasatch Canyon access at a local and regional scale.
- 7 | Identify potential land uses and locations for new development or redevelopment along the corridor.

Figure 1.3: Wasatch Boulevard Corridor Goals.

# 1.4 Performance Evaluation

A key aspect of using the Corridor Goals is to be able to measure how well they are being achieved. Goals are often broad; they represent principles or outcomes intended to be inclusive to many different groups of people and values. But with the broadness of goals often comes vagueness.

And so a key second element of the Corridor Goals is the identification of a set of performance measures. Performance measures are qualitative or quantitative metrics that allow one to assess with relative objectivity how well a goal is being met. Performance measures can represent a core aspect of a goal. For example, the goal of “a better pedestrian environment” may have a performance measure of the width of the sidewalk. Performance measures can also represent complementary or even conflicting aspects of a goal. For example, the goal of “a better transportation system” may have performance measures of both traffic level of service and public transit level of service.

One of the purposes of having a set of goals is to understand the tradeoffs in making planning decisions, and performance measures are a key part of clearly seeing these tradeoffs.

After drafting the goals, the project team developed a set of performance measures for each goal. Each goal has between two and six performance measures. These performance measures provide Cottonwood Heights and its partners with a tool to understand how it is doing currently, but also to measure ongoing progress in achieving its Wasatch Boulevard Corridor Goals.

The performance measures are as follows:

**Goal 1: Preserve and enhance the character and livability of existing residential neighborhoods.**

*Performance measures:*

- Preservation of built environment character (land use; street character; building aspects)
- Impact of corridor traffic (conflict points, cut-through)
- Connectivity of active transportation networks

**Goal 2: Move people through the corridor reliably and safely.**

*Performance measures:*

- Corridor vehicle travel time
- People moving through the corridor
- Peak hour intersection level of service
- Volume per capacity of roadway segments
- Transit travel time and effectiveness of available transit options
- Frequency and likelihood of crashes along the corridor

**Goal 3: Increase travel choices along the Wasatch corridor.**

*Performance measures:*

- Quality of bicycle environment along the corridor
- Quality of pedestrian environment along the corridor
- Quality of the transit network on the corridor
- Internal and external street connectivity

**Goal 4: Enhance opportunities for recreation along the corridor.**

*Performance measures:*

- Amount and diversity of recreational

opportunities

- Recreational access and connectivity

**Goal 5: Preserve and enhance the scenic and natural qualities along the corridor.**

*Performance measures:*

- Preservation and enhancement of key views from Wasatch Blvd. and surrounding areas.
- Amount, quality, and connectivity of preserved natural open spaces.
- Aesthetics of street itself: greening, human scale, local character.

**Goal 6: Promote and prioritize sustainable solutions to Wasatch Canyon access at a local and regional scale.**

*Performance measures:*

- Meeting of park and ride demand on the corridor
- Canyon transit service
- Quality of transfer points/hubs
- Ease/effectiveness of maintenance and enforcement

**Goal 7: Identify potential land uses and locations for new development or redevelopment along the corridor.**

*Performance measures:*

- Amount of opportunity for new development (commercial square feet and residential units)
- Contribution toward achievement of other Corridor Goals
- Location of potential development opportunities

These goals and performance measures are the framework of the next Plan section, the Corridor Study.

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# PART 2 CORRIDOR STUDY

## 2.1 Introduction

This section summarizes the results of the first phase of the project, to paint the comprehensive picture of the corridor. The following Corridor Study presents existing and projected future conditions of the corridor as well as a “baseline” analysis of how the corridor is currently achieving the Corridor Goals.



## 2.2 Corridor Overview

The Corridor Overview provides a picture of the fundamental aspects of the corridor, including the infrastructure, street right-of-way, definition of character segments, planned projects and land use, and forecasted transportation demand.

### Corridor infrastructure

#### Urban to rural spectrum of lane configurations

The makeup of Wasatch Boulevard corridor is highly varied from end to end. It begins in the north as a complex Single Point Urban Interchange (SPUI) with channelized turning lanes controlling traffic on and off of 3000 East. It continues southward as a five-lane roadway, then reduces to four lanes for a brief period between Fort Union and Bengal Boulevards, and continues as a two-lane roadway to the “Y” intersection where it splits as two two-lane strands to Little Cottonwood Canyon and 9800 South. The corridor changes southward from an intensive urban corridor to a rural-feeling two-lane roadway.

#### Eight signalized intersections

The corridor contains eight signalized intersections that are relatively equally spaced from I-215 to 9800 South. The intersection operations generally have more complex phasing, with more dedicated turn phases, at the north end of the corridor, and increasingly less complex phasing toward the south.

#### Turn lanes and pockets

The north end of the corridor contains a continuous center turn lane until Big Cottonwood Canyon, south of which the turn lane appears sporadically as a turn pocket.

#### Bike lane

The corridor includes a bike lane for most of its length. The bike lane begins at the intersection of 6200 South and Wasatch Boulevard and running to the mouth of Little Cottonwood Canyon. The bike lane varies drastically in width.

#### Shoulder

A shoulder exists along most of the corridor, which also varies drastically in width.

#### Transit stops and park-and-rides

The corridor contains several transit stops. The most significant of these are four park-and-ride facilities used primarily for the winter ski bus routes running up Big and Little Cottonwood Canyons. The regular UTA bus stops are clustered in the Cottonwood Corporate Center area and in the area south of Bengal Boulevard, where the 307 commuter route loops through the neighborhood.

### Existing right-of-way

#### Highly varied right-of-way

The available right-of-way of the corridor, managed by the Utah Department of Transportation (UDOT), varies from around 50 feet to over 200 feet. The right-of-way does not necessarily narrow where the roadway narrows in the south.

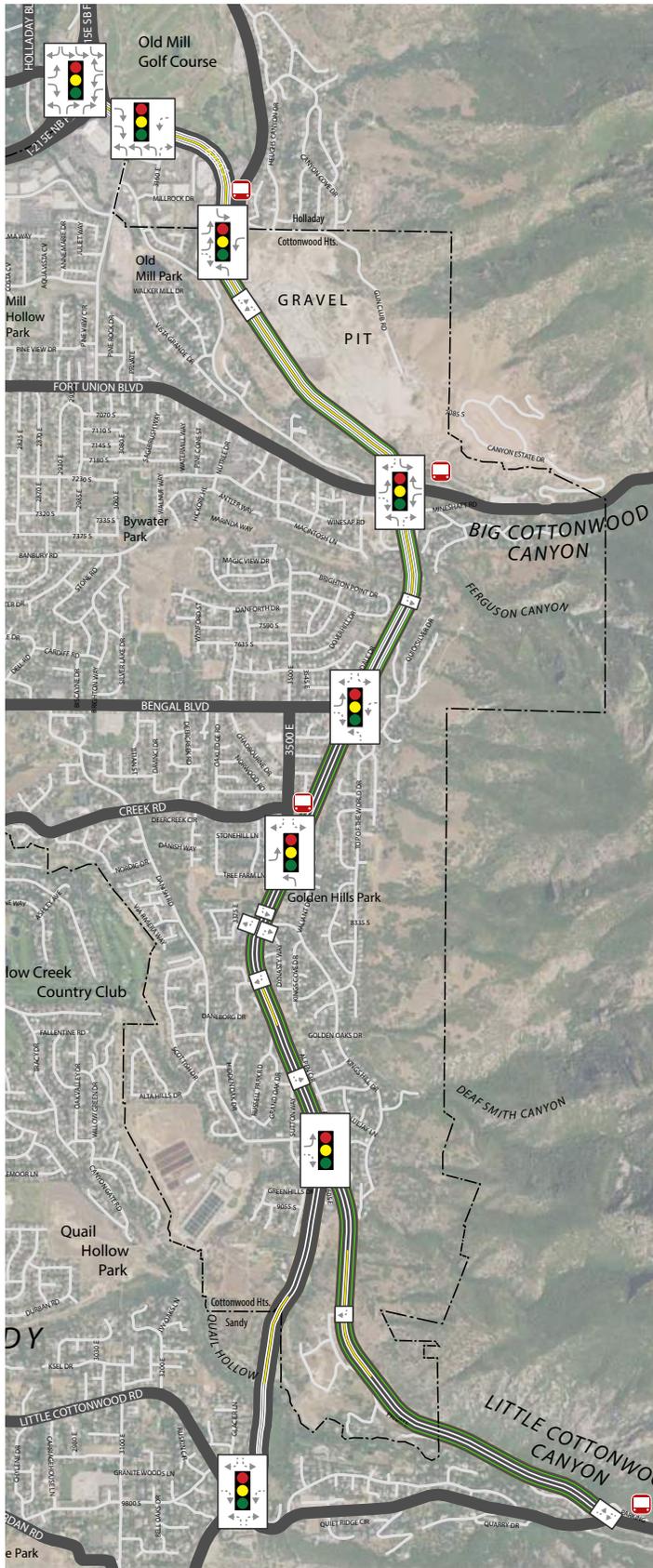
#### Generally a lot of extra space

In general, the corridor right-of-way is much wider than the existing built street. For example, in the southern end of the corridor the built street is just over 30 feet, while the right-of-way is 150 feet.

#### Constrained areas

A few short constrained segments exist along the corridor, including just south of the Wasatch Boulevard-6200 South intersection (as narrow as 55 feet) and just south of Golden Hills Park (77 feet).

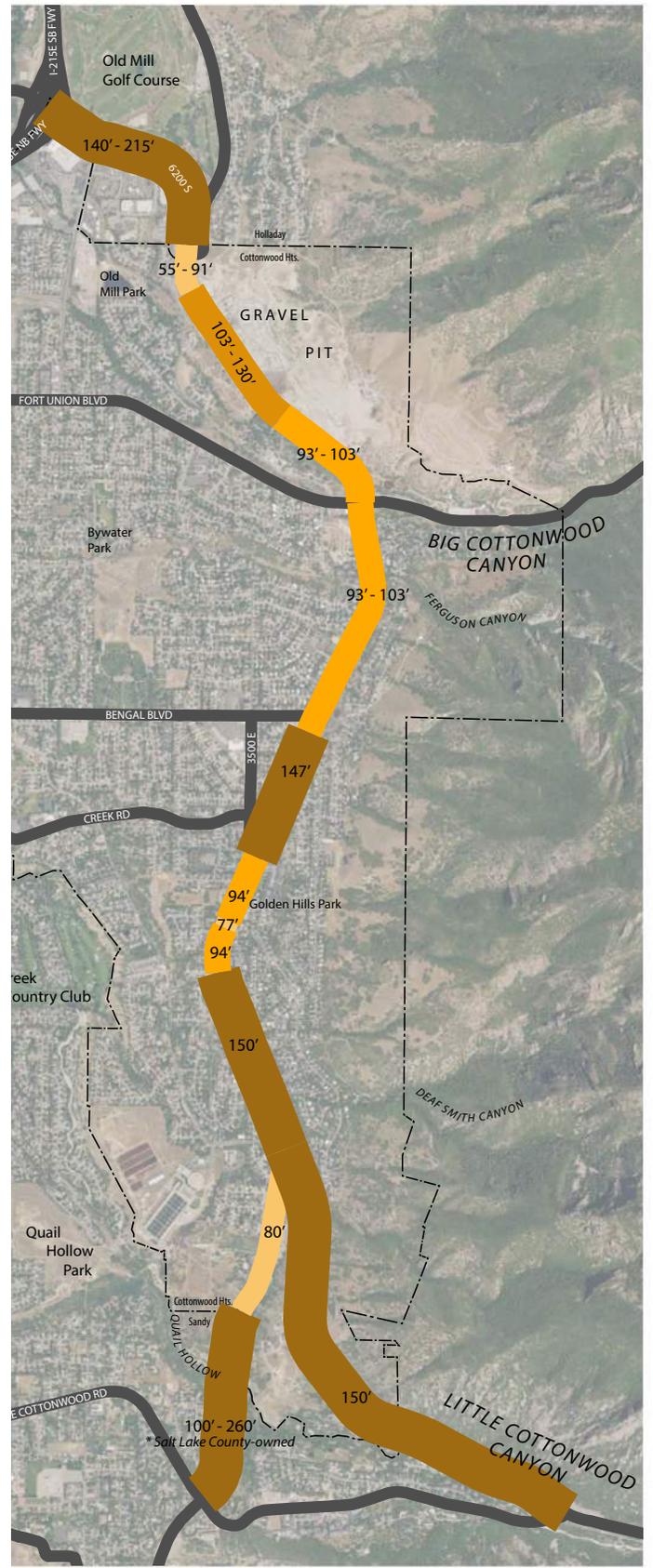
Figure 2.1: Corridor Infrastructure



**CORRIDOR ROADWAY INFRASTRUCTURE**

- Existing corridor traffic signal
- Existing left turn lane with/without dedicated signal phase
- Existing right turn lane with/without dedicated receiving lane
- Existing mixed flow travel lane
- Existing center left turn lane
- Existing bike lane
- Existing park and ride facility

Figure 2.2: Corridor Right-of-Way



**CORRIDOR RIGHT-OF-WAY**

## Character segments

The corridor can be divided into four general character segments that encapsulate many aspects of the corridor, including the street itself, its use, and the communities on either side of it. Figure 2.3 identifies and describes these segments, and the drawings on the following pages show the existing street cross sections.

### Segment 1: Corporate Center/Old Mill/Gravel Pit

**Urban artery to existing and planned centers:** Segment 1 of the corridor is a major urban artery serving one of the region's most significant employment centers in Cottonwood Corporate Center. It is also the route that will serve a major planned mixed-use development planned for the current "Gravel Pit" quarry.

**Highway character:** The character of the road in this segment is of a UDOT 5-lane roadway, with 50-mile-per-hour and higher speeds, shoulders, managed access, and little pedestrian accommodation.

**Employment land use:** In general, the dominant character of this segment is employment and commercial, with open space (Old Mill Golf Course, Big Cottonwood gulch) also coming into play.

### Segment 2: Big Cottonwood to Bengal

**Four lanes:** This segment is largely defined by the reduction of the roadway to four lanes south of Big Cottonwood Canyon/Fort Union Boulevard.

**Road cut:** For this segment, the road heads uphill relatively steeply and cuts through the ridge separating the Big and Little Cottonwood drainages, creating a trough-like character for the road. This road cut, the relative lack of accesses, and the continued high speeds make this a challenging segment for cyclists.

**Backing residential neighborhoods:** Segment 2 has much different land uses than Segment 1. South of Fort Union Boulevard, the dominant land use is single family residential. However, most of the neighborhoods on either side of Wasatch Boulevard in this segment lack connection to the street because homes mostly back onto it and lack accesses to it.

### Segment 3: Golden Hills

**Two lanes:** South of Bengal Boulevard, the roadway reduces again to two lanes. The roadway begins to take on more of the character of a rural byway.

**More integrated residential neighborhoods with frequent accesses:** In this segment, the neighborhoods on either side of Wasatch Boulevard are more integrated with it, with more frequent access points and some homes fronting onto it. For some small subdivisions, Wasatch Boulevard is the only external access.

**Community uses:** This segment features two community uses that start to lend the area around 3500 East the character of a potential "center" – Golden Hills Park and the fire station.

**Increasing open space:** This segment features areas of open space alongside the roadway, much of it still in its natural state of "scrub" oak woodlands. Much of this open space is along steep hillsides.

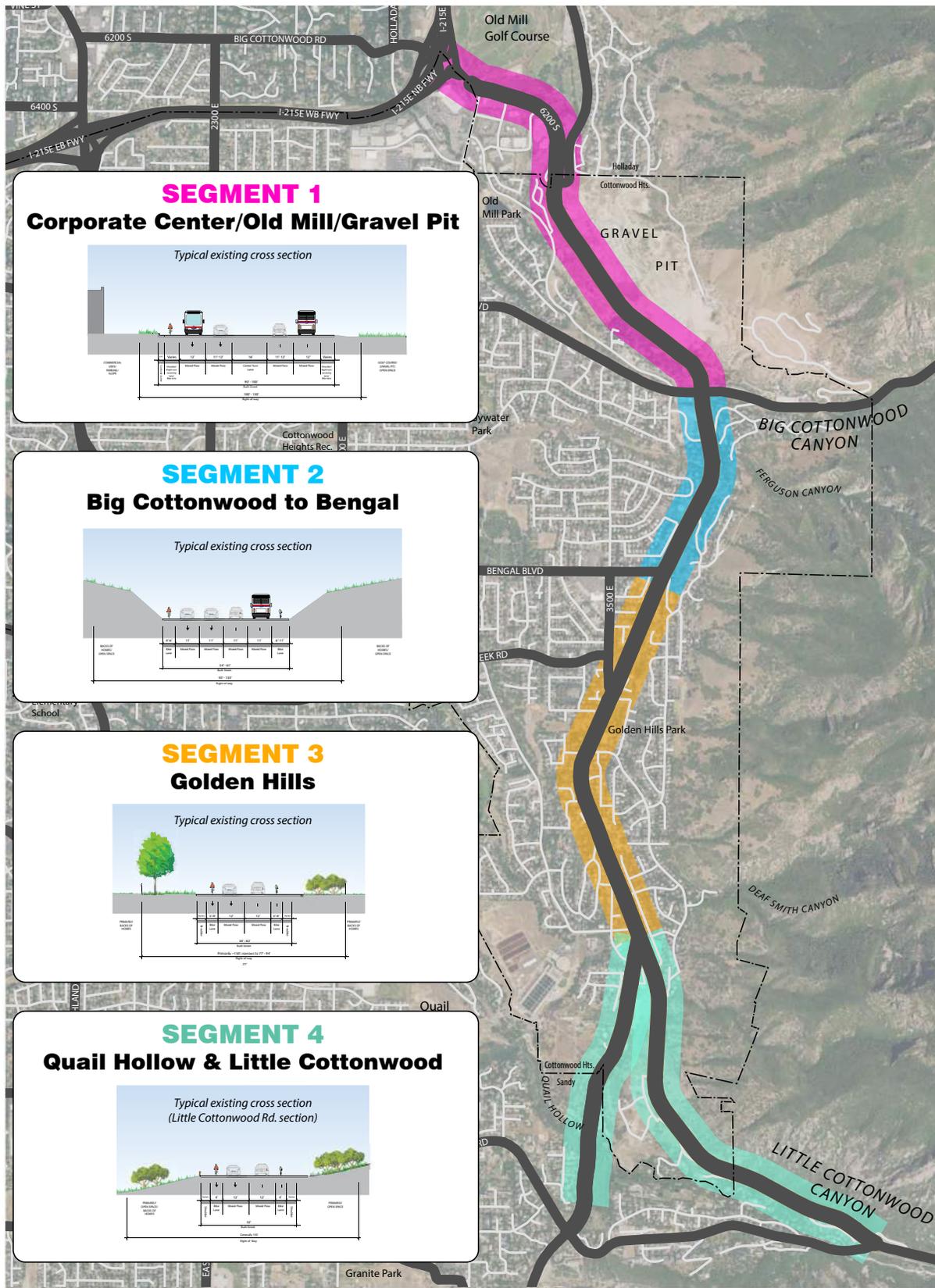
### Segment 4: Quail Hollow and Little Cottonwood

**Largely open space:** The two southern strands of the corridor are combined in this fourth segment due to their common character: a rural-feeling two-lane roadway running mostly through open space.

**Topography:** This segment is influenced by the more dramatic topography of the area around the mouth of Little Cottonwood Canyon, with the Little Cottonwood drainage as the dominant landform.

**Occasional and increasing subdivisions:** There are growing numbers of lower density residential subdivisions along this segment, including the Giverny development between the two strands of this segment.

Figure 2.3: Corridor Character Segments



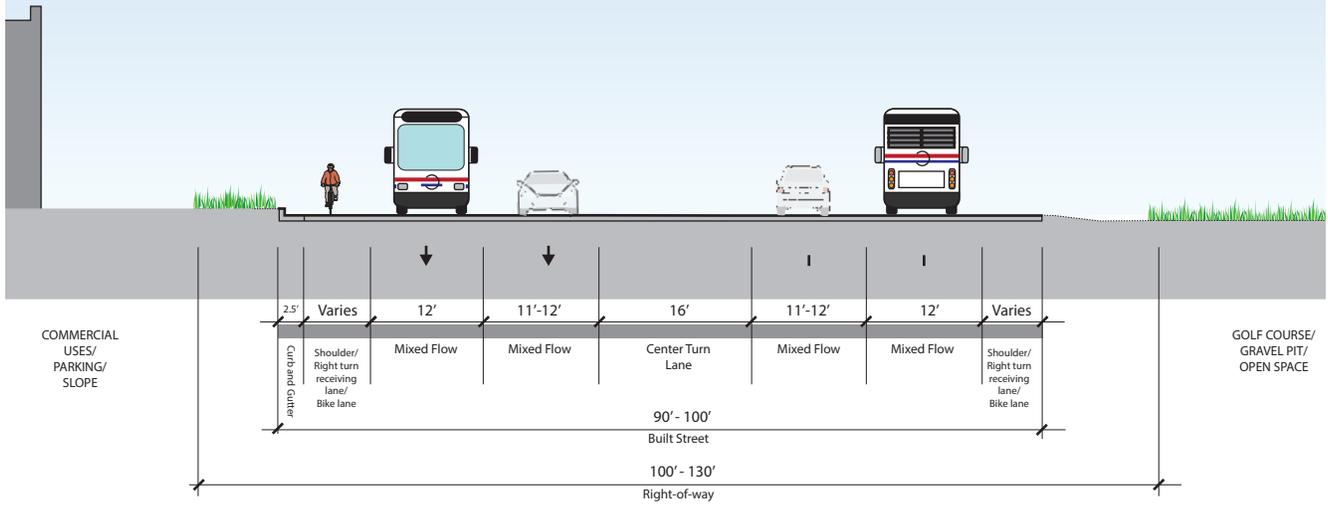
**CORRIDOR SEGMENTS**

Based on common community and roadway character, the project team proposes considering the Wasatch Boulevard corridor in four segments, identified and called out above.

1/3 mi. 1 mi.

**WASATCH BOULEVARD**  
Master Plan

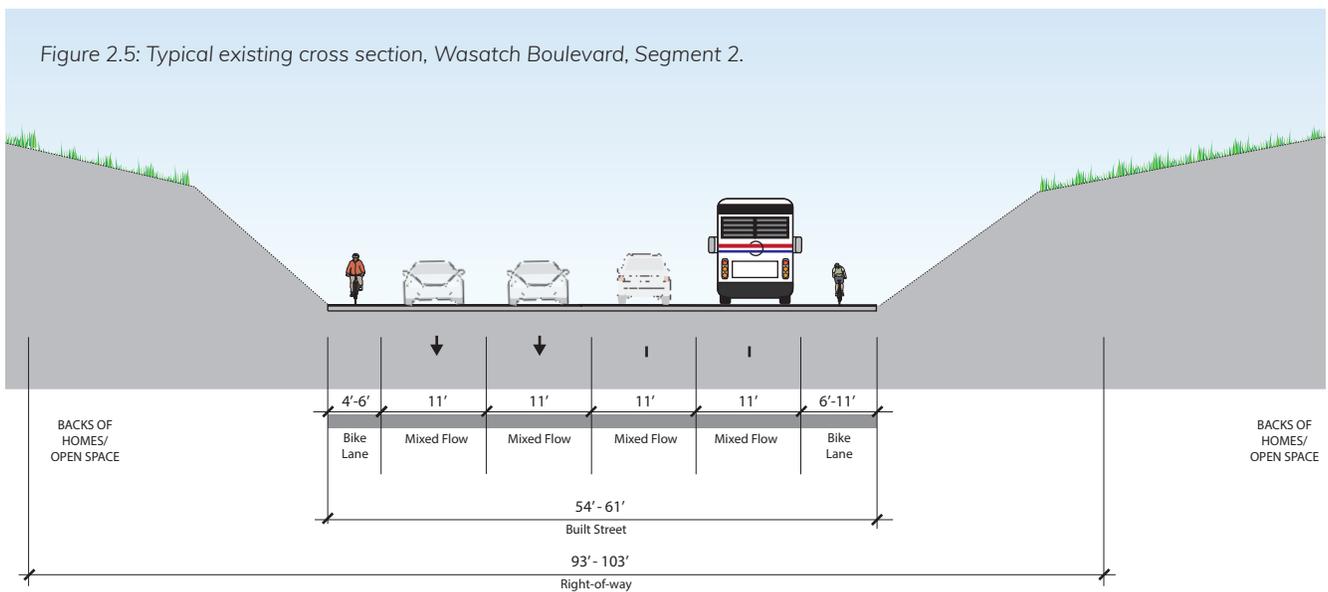
Figure 2.4: Typical existing cross section, Wasatch Boulevard, Segment 1.



## 6200 South/Wasatch Boulevard

Between I-215 and Fort Union Blvd.  
LOOKING NORTH

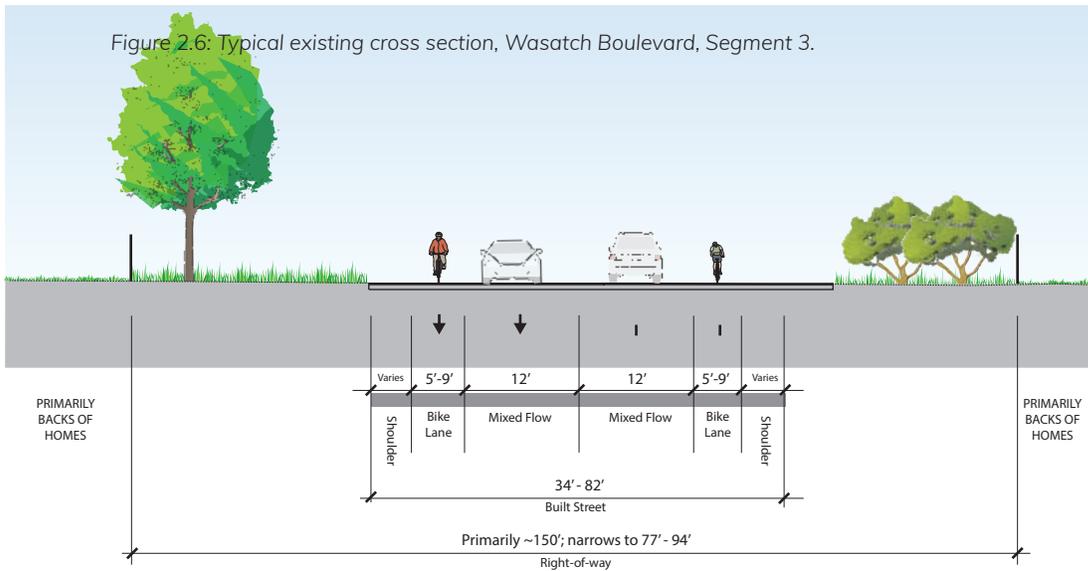
Figure 2.5: Typical existing cross section, Wasatch Boulevard, Segment 2.



## Wasatch Boulevard

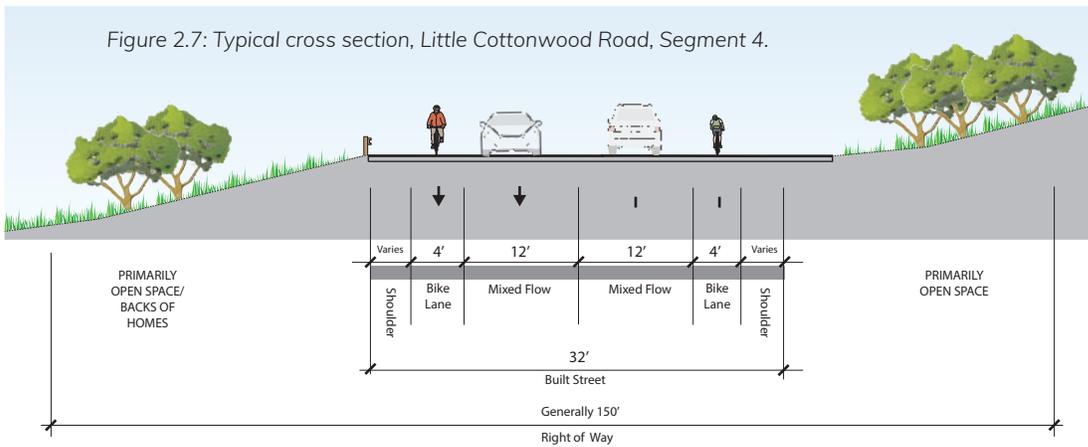
Between Prospector Dr. and Bengal Blvd.  
LOOKING NORTH

Figure 2.6: Typical existing cross section, Wasatch Boulevard, Segment 3.



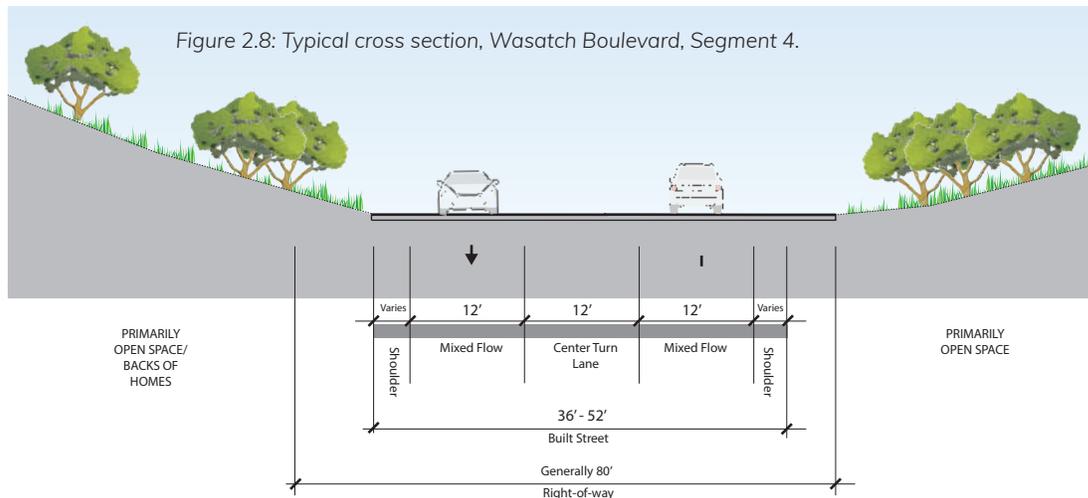
**Wasatch Boulevard**  
Between Bengal Blvd. and Little Cottonwood Road  
LOOKING NORTH

Figure 2.7: Typical cross section, Little Cottonwood Road, Segment 4.



**Little Cottonwood Road**  
Between Wasatch Blvd. and Little Cottonwood Canyon mouth  
LOOKING NORTH

Figure 2.8: Typical cross section, Wasatch Boulevard, Segment 4.



**Wasatch Boulevard**  
Between Little Cottonwood Road and 9800 South  
LOOKING NORTH

## Planned/in process projects

**Added lanes:** There are both near-term and long-term plans to add lanes to the Wasatch Boulevard corridor. Near-term plans include: UDOT's intent to extend the second southbound lane and potentially an additional northbound lane between Bengal Boulevard and the mouth of Little Cottonwood Canyon. This project is largely in response to peak ski day congestion of winter recreational traffic heading toward Little Cottonwood Canyon. The project is funded but not designed. UDOT intends to add a third northbound lane to 6200 South between its intersection with Wasatch Boulevard and I-215 to handle the peak periods of traffic from Cottonwood Corporate Center and the future Gravel Pit project.

Long-term plans include Wasatch Front Regional Council's Regional Transportation Plan identifies a project to add a lane in each direction to Wasatch Boulevard south of Bengal Boulevard.

**Gravel Pit:** The roughly 100-acre "Gravel Pit" quarry on the east side of Wasatch Boulevard is facing a transition in the near future. Estimates are that mining will cease in the next several years, after which the City of Cottonwood Heights envisions the area transitioning to a mixed use development that capitalizes on its location at the mouth of Big Cottonwood Canyon, the strong area market for office, an emerging market for hospitality, and the scenic views. In 2016, Cottonwood Heights and Wasatch Front Regional Council completed a study of opportunities at the Gravel Pit, which recommended a mixed use development with up to 2,000,000 square feet of office space, up to 3,000 residential units, up to 250,000 square feet of retail, and upwards of 150 hotel rooms.

**Canyon Centre:** The node at the intersection of Wasatch Boulevard and Fort Union Boulevard/Big Cottonwood Canyon has a range of opportunities. The one planned project in this area is the Canyon Centre development. Canyon Centre is an 11-acre mix of office space, hospitality, retail-restaurant space, residential, and open space. The project is planned in two phases.

**Giverny and southern corridor growth:** The southern end of the corridor features potential for growth both in Cottonwood Heights and Sandy. Currently, the one active project is Giverny, a subdivision between the two southern strands of the corridor.

**Knudsen Corner Park:** The City of Holladay has plans to build a park on land it owns between I-215 and the Holladay Boulevard/6200 South intersection. The park has been designed to include a playground and passive play areas, but also a trailhead with parking, which could be an asset to the active transportation and recreational networks of the Wasatch Boulevard corridor.

Figure 2.9: Key Planned/In-Process Projects



**KEY PLANNED PROJECTS**

## Planned land use

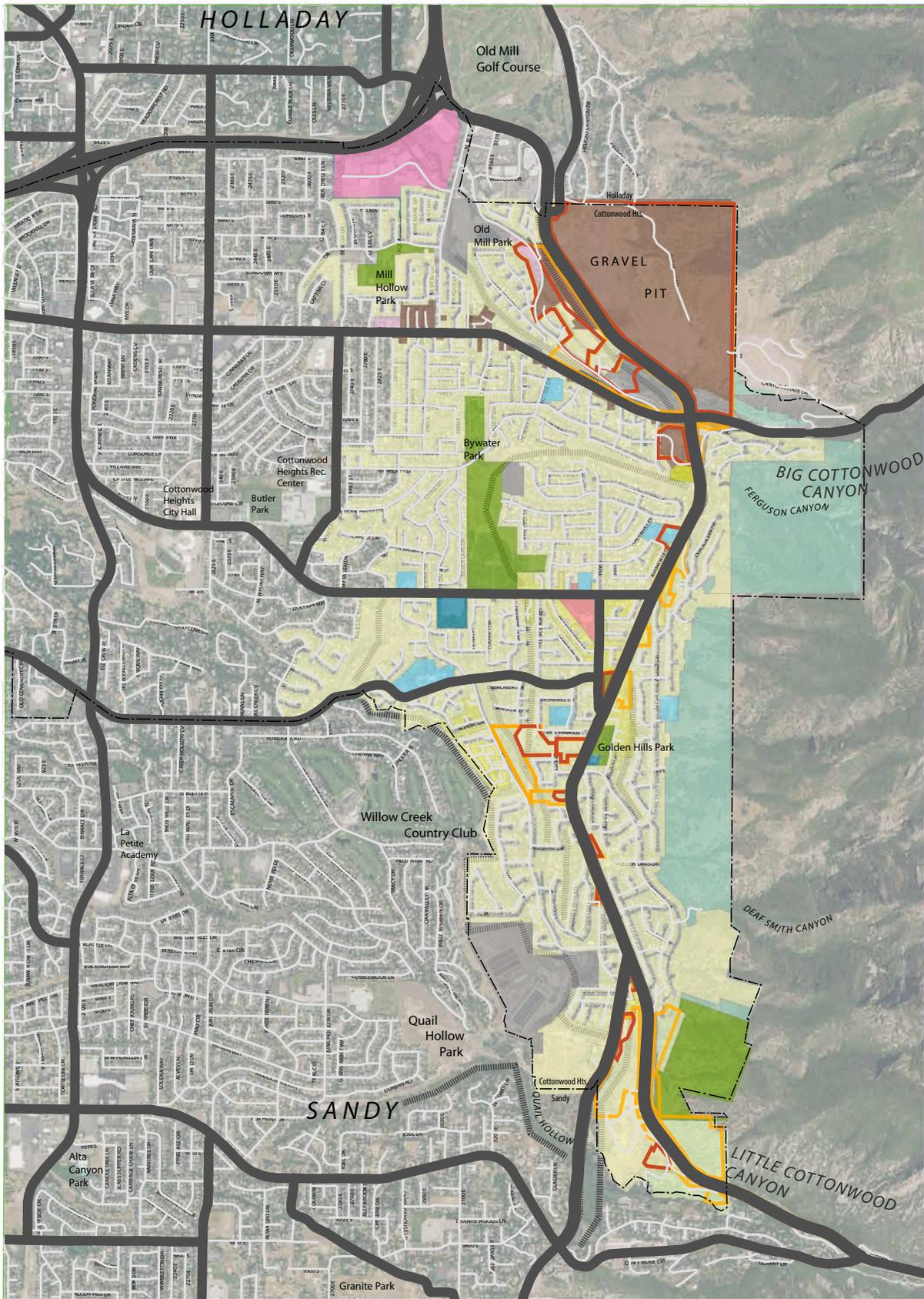
The City of Cottonwood Heights General Plan establishes a high-level pattern of planned land use (see Figure 2.10). Within the Wasatch Boulevard corridor, most areas are predominantly single-family residential neighborhoods envisioned to remain in their current land use. Several open spaces and the Cottonwood Corporate Center are also envisioned to remain in its current land use, and the foothill areas along the eastern edge of the City are classified as Sensitive Lands.

The major exception to this theme of preservation is the Gravel Pit area, which is classified as Mixed Use and which is expected to develop using the City's Planned Development District ordinance.



The Cottonwood Heights General Plan envisions the preservation of both the Wasatch Boulevard corridor's residential neighborhoods and the foothill open space above them.

Figure 2.10: General Plan Land Use Designations



1/3 mi. 1 mi.

**WASATCH BOULEVARD**  
Master Plan

**Built Environment Analysis: Proposed Land Use**


## Property ownership

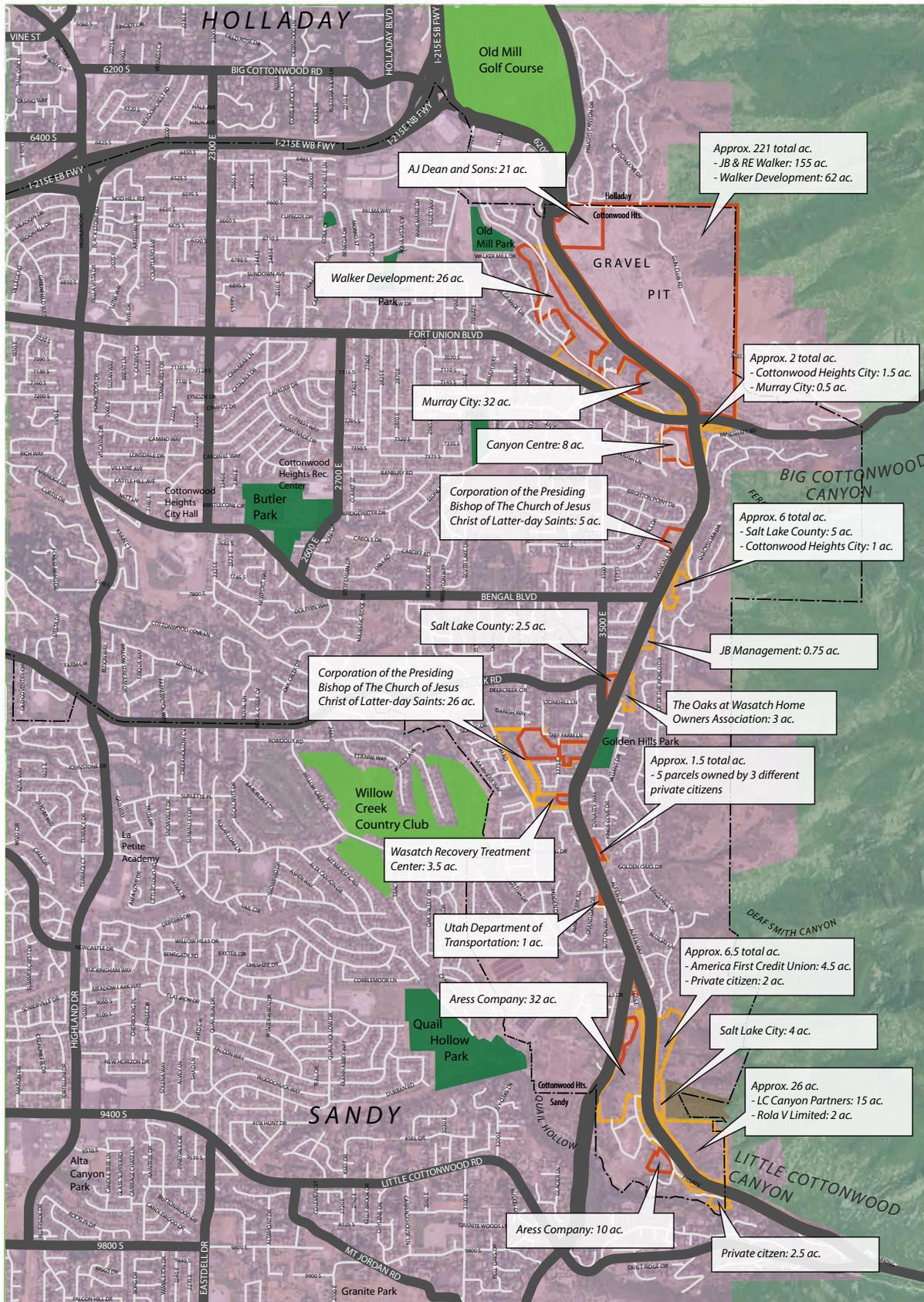
The Wasatch Boulevard corridor is a unique mix of private and public land ownership, as well as properties that are built-out and those that are undeveloped. Figure 2.11 shows the key property ownership trends:

East of the corridor, there is a distinct line between nearly all private ownership (residential neighborhoods) and nearly all public ownership (Wasatch Mountains, under jurisdiction of U.S. Forest Service).

The corridor has some notable properties in public ownership, including Quail Hollow Park, Golden Hills Park, Old Mill Park, and other nearby parks, as well as the Old Mill Golf Course, a Bureau of Land Management-owned parcel at the southern end of the corridor, the Salt Lake County-owned “Swamp” park and ride lot, and some important land at the mouth of Big Cottonwood Canyon.

The Wasatch Boulevard right-of-way is so wide (up to 200 feet) that the Utah Department of Transportation should be considered a key property owner.

Figure 2.11: Property Ownership



1/3 mi. 1 mi.

**WASATCH BOULEVARD**  
Master Plan

**Built Environment Analysis: Property Ownership**

Public Parks	Golf Courses	Private Land	Forest Service Land	BLM Land	Civic Land	Topographically Favorable Opportunity Zones
						Topographically Impacted Opportunity Zones

## Forecasted transportation demand

The project team analyzed current and future projected transportation demand on the Wasatch Boulevard corridor. The tool the team used to develop these projections was the Wasatch Front Regional Council's travel demand model Version 8.2. A travel demand model collects population and job growth projections for future years and planned transportation improvements and uses that information to predict the amount of travel that will be desired between areas of the region and on specific streets and highways.

The team coordinated with the City of Cottonwood Heights to refine the model's estimates of growth in the model's Traffic Analysis Zones (TAZs). The team then ran the model for the 2014, 2024, and 2040 years, with the 2024 and 2040 years reflecting no improvements to Wasatch Boulevard.

Key results of this modeling effort are:

For 2014 (Figure 2.12): In the existing condition, traffic in the northernmost link of the corridor (I-215 to 3000 East) - over 45,000 vehicles per day - is roughly 10 times the traffic in the southernmost link (Little Cottonwood Road) - about 4,500 vehicles per day. Generally, the traffic lessens as one moves further south.

The northernmost link in the corridor has nearly double the traffic of the next link southward, reflecting the enormous volumes of vehicles accessing the Cottonwood Corporate Center.

The eastern strand of the southernmost link, Little Cottonwood Road, attracts far less traffic (one third) than the western strand and has much less traffic than anywhere else on the corridor.

For 2024 (Figure 2.13): Most of the corridor traffic growth is projected to occur in Segment 1, likely due to the initial development added to the Gravel Pit site. The rates of growth in this area are what one would expect from a quickly growing part of the region. Growth in the rest of the corridor is relatively light - 9 to 14 percent for most segments south of Big Cottonwood Canyon.

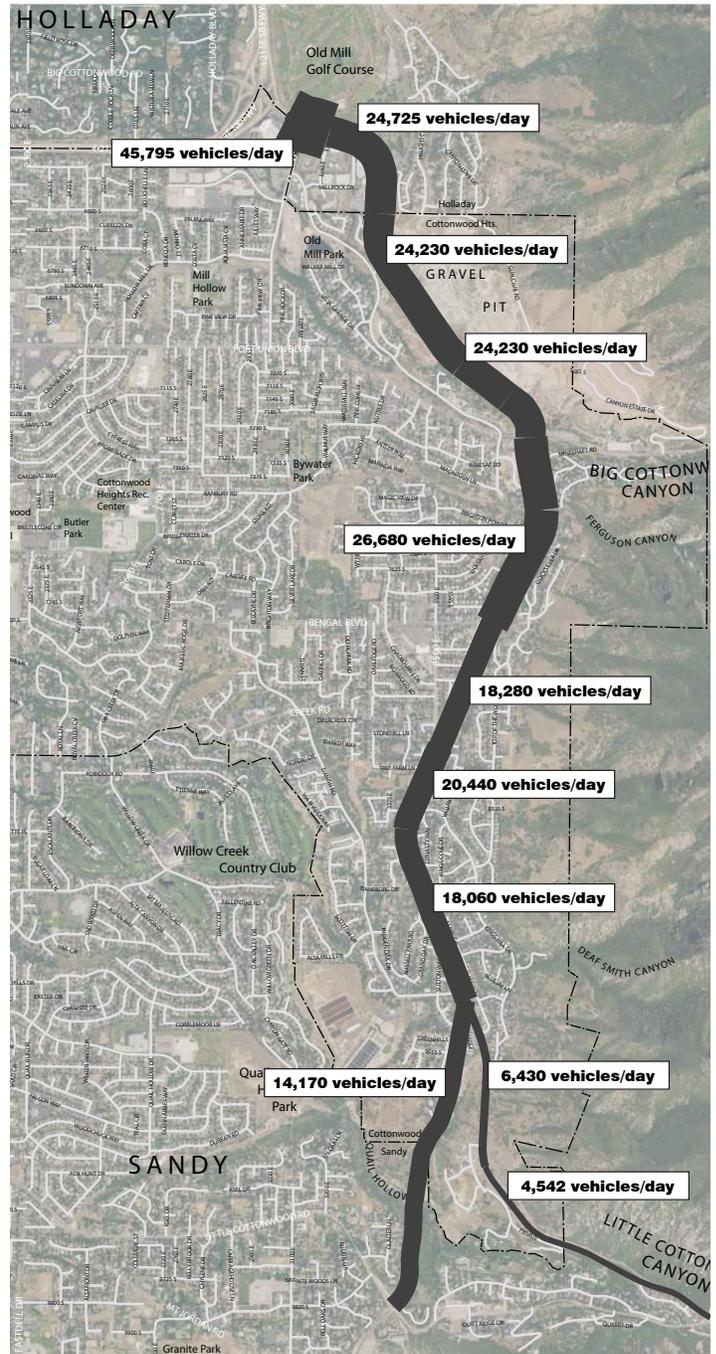
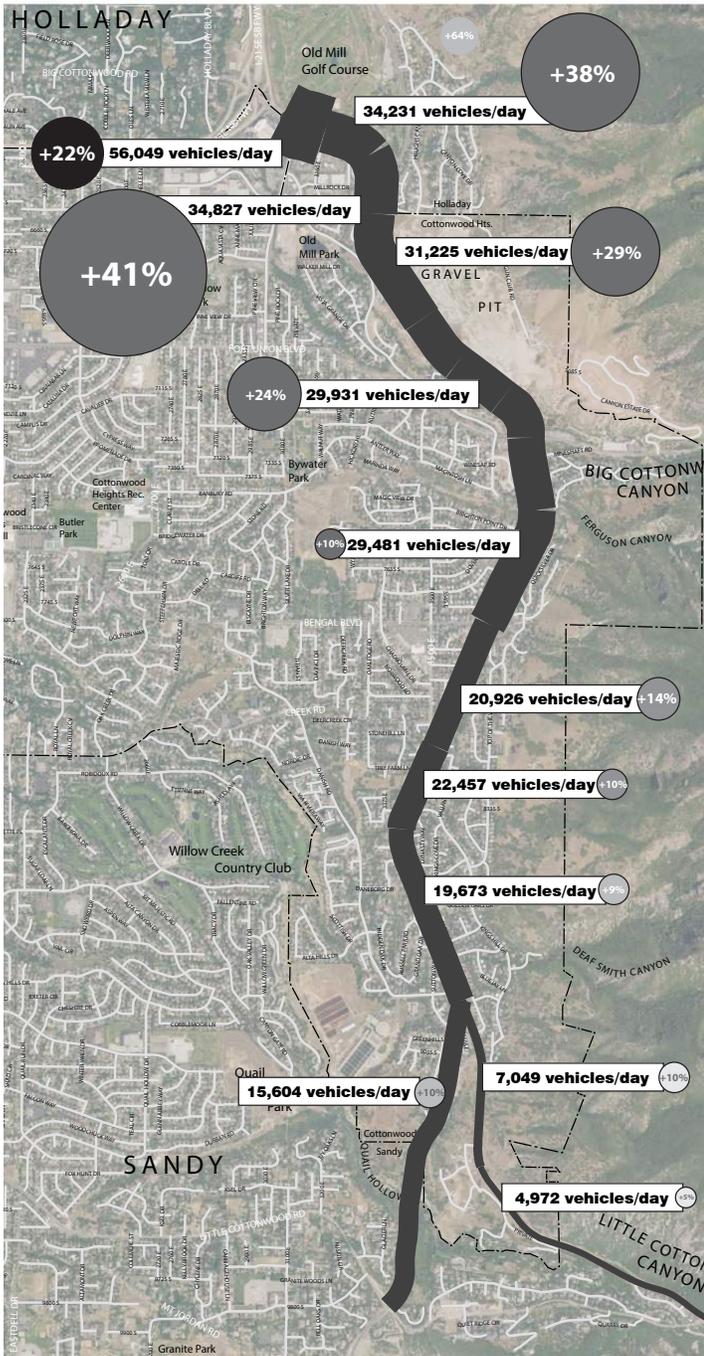


Figure 2.12: Current Estimated Corridor Travel Demand (2014)

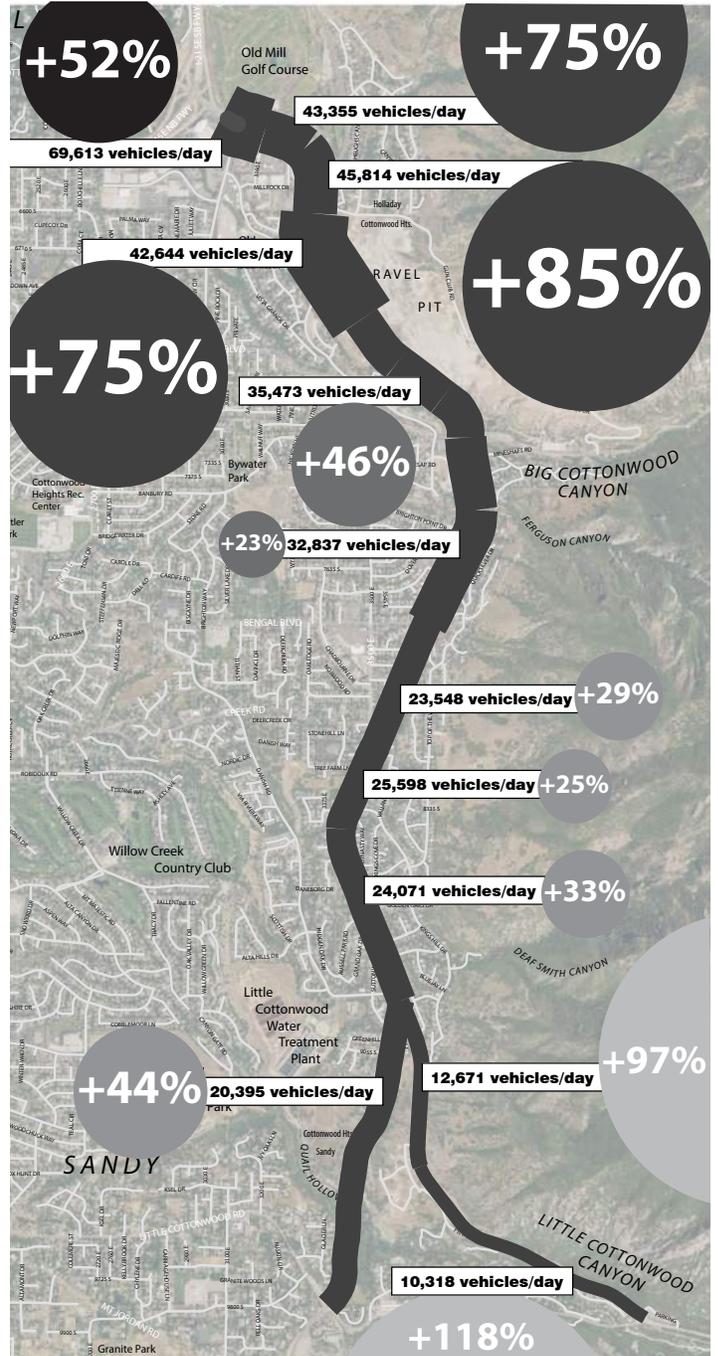
For 2040 (Figure 2.14): From 2024 to 2040, the corridor traffic projects to continue to grow at similar rates to the previous period. By 2040, the links of the corridor most affected by the Gravel Pit development grow by 75 to 85 percent from 2014, continuing the high growth. By 2040, the western strand of the southernmost link projects to grow by nearly half.



Forecasted traffic growth from 2014

+XX%

Figure 2.13: Forecasted 2024 Corridor Travel Demand



Forecasted traffic growth from 2014

+XX%

Figure 2.14: Forecasted 2040 Corridor Travel Demand

## Travel markets

There are several ways to characterize the travel markets of Wasatch Boulevard. Using the Wasatch Front Travel Demand Model, three travel markets can be described:

1. Trip purpose – what are the trip purposes of the travelers using Wasatch Blvd?
2. Route choice – of the travelers using Wasatch Boulevard, which routes do they take to arrive at Wasatch Boulevard?
3. Regional origin/destinations – of the travelers using Wasatch Boulevard, where do they come from and where are they going?

For all three market characterizations, the Project Team used the segment of Wasatch Boulevard adjacent to the Gravel Pit to develop the data.

Table 2.1 below shows the trip purposes of traffic using this section of Wasatch Blvd. As shown, on a daily basis, 42 percent of the traffic is commuting to and from home. Another 26 percent of traffic is non-commuting, but has a home as one end of the trip. Note that the “home” end of a trip can be located anywhere in the model geography, not necessarily in Cottonwood Heights. An estimated 18 percent of traffic is truck traffic, including many different vehicles types ranging from package delivery trucks to multi-trailer semis.

Table 2.1: Trip Purpose of Wasatch Boulevard Travelers

Purpose	% of Total Daily Traffic
Commute to/from Home	42%
Other Trip to/from Home	26%
Non-Home Based	9%
Trip to/from Home to School/College	4%
Truck/Commercial Traffic	18%

Figure 2.15 provides another view of the traffic using Wasatch Boulevard. Taken from a point on Wasatch Blvd adjacent to the gravel pit (north of Fort Union), the figure shows the percentage distribution of that traffic elsewhere in the region. For example, 63 percent of daily traffic on Wasatch Boulevard also uses I-215. 20 percent of daily traffic on Wasatch Boulevard also use Foothill Drive, proximate to the University of Utah. As expected, smaller percentages are shown further away from Wasatch Boulevard.

Finally, Figure 2.16 shows the areas that traffic using Wasatch Boulevard comes from or goes to. By far the largest “traffic generator” is the area labeled as “South-east SL”, which includes the areas within the Wasatch Boulevard study area. The next highest area, “North-east SL”, includes part of downtown Salt Lake City as well as the areas proximate to the University of Utah.

Note the data in Figure 2.16 do not include traffic going to or coming from Big or Little Cottonwood Canyons, as they are external to the travel demand model geography.

Figure 2.15: Regional Route Choice of Traffic Using Wasatch Boulevard

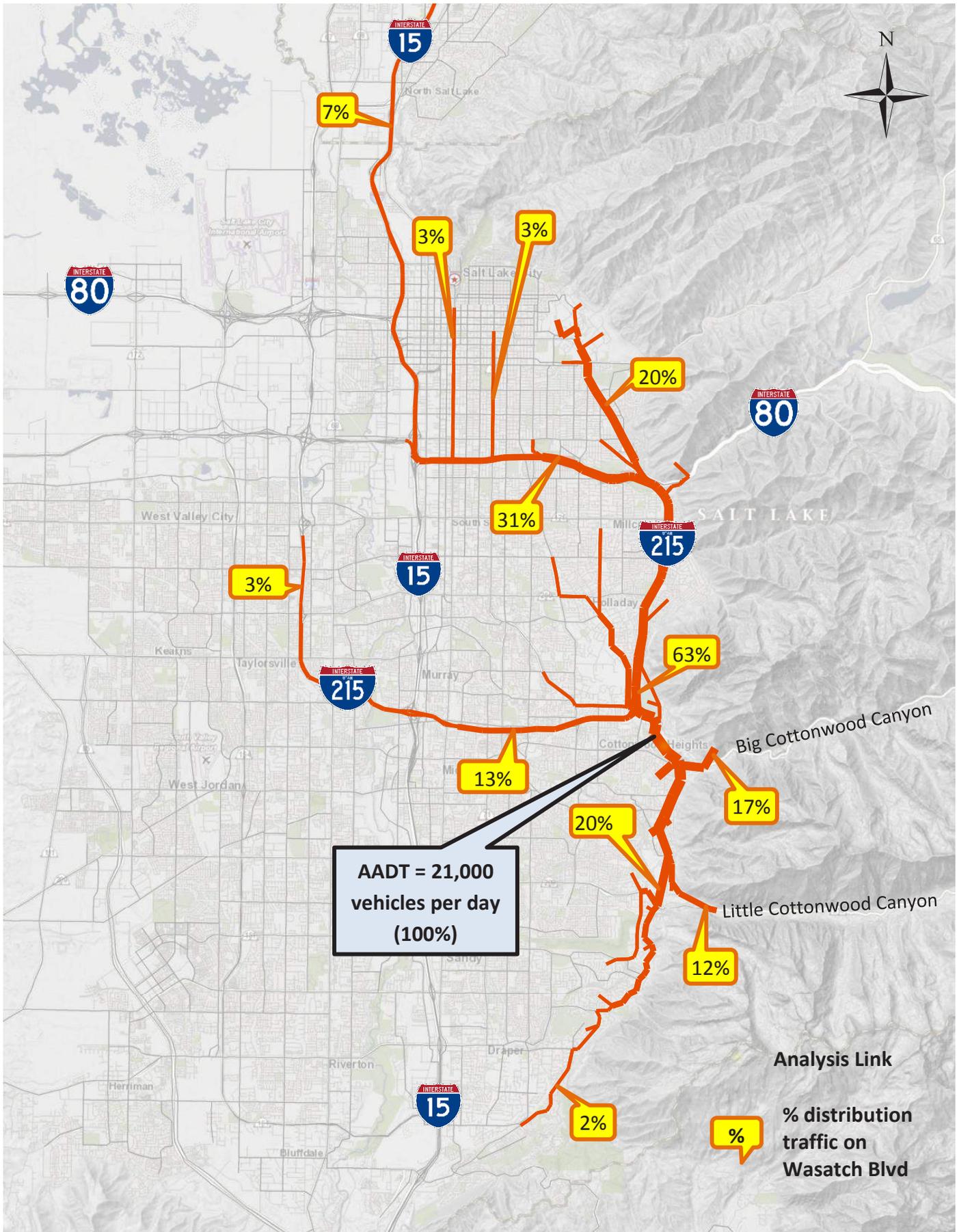
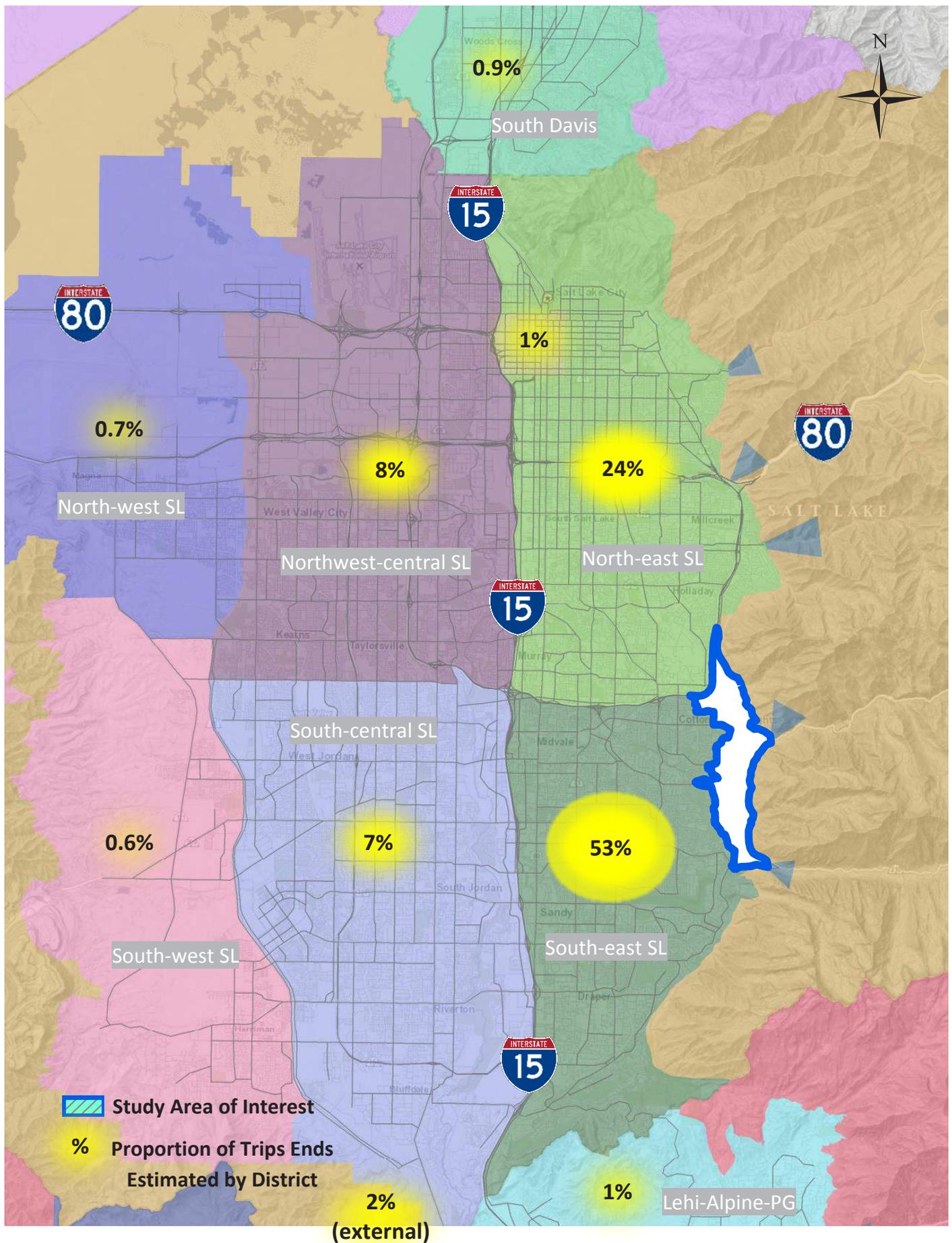


Figure 2.16: Regional Origins and Destinations of Traffic Using Wasatch Boulevard



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## 2.3 Goal 1: Preserve and enhance the character and livability of existing residential neighborhoods.

### Preservation of built environment character (land use; street character; building aspects)

#### Overview of metric

Preservation and enhancement of residential neighborhood character requires a thorough understanding of several factors. These begin with an assessment of the underlying land form and environmental conditions of the area (see Figure 2.37 in the Goal 5 discussion), continuing with assessments of existing and proposed land use (See Figure 2.17), settlement patterns, built form, and ownership/age characteristics of the neighborhoods (Figures 2.11 and 2.19).

The corridor has significant impact on the quality of life of the surrounding neighborhoods, uses, nodes and destinations. The evaluation of opportunities to preserve the built-environment and potential new development areas are described below and illustrated in the accompanying maps.

#### Evaluation

##### *Land Form and Key Environmental Conditions*

Wasatch Boulevard traces the foothills of the Wasatch Mountains, which rise dramatically upward to the east. Within Segments 1-3, the roadway is sited far enough to the west from the steepest slopes that small neighborhoods and development areas are formed east of the roadway. In contrast, the roadway in Segment 4 is located adjacent to steep mountain slopes, effectively eliminating any possibility of development to the east. The areas west of the roadway are dominated by a range of neighborhoods set into the naturally-sloping lower foothills.

Big and Little Cottonwood Canyons contain fast-moving creeks, which are the primary drainages of the corresponding watersheds. Wasatch Boulevard slopes downward toward crossing points near the mouth of each canyon from a high elevation point approximately 1/3 mile south of the Big Cottonwood crossing. This is also where the watershed that divides the two canyon

drainages crosses the highway. Smaller drainages extend westward down minor canyons and ravines between the Cottonwood canyons. All are eventually piped when they meet development. Daylighting these waterways to accommodate potential trails should be evaluated.

##### *Land Use*

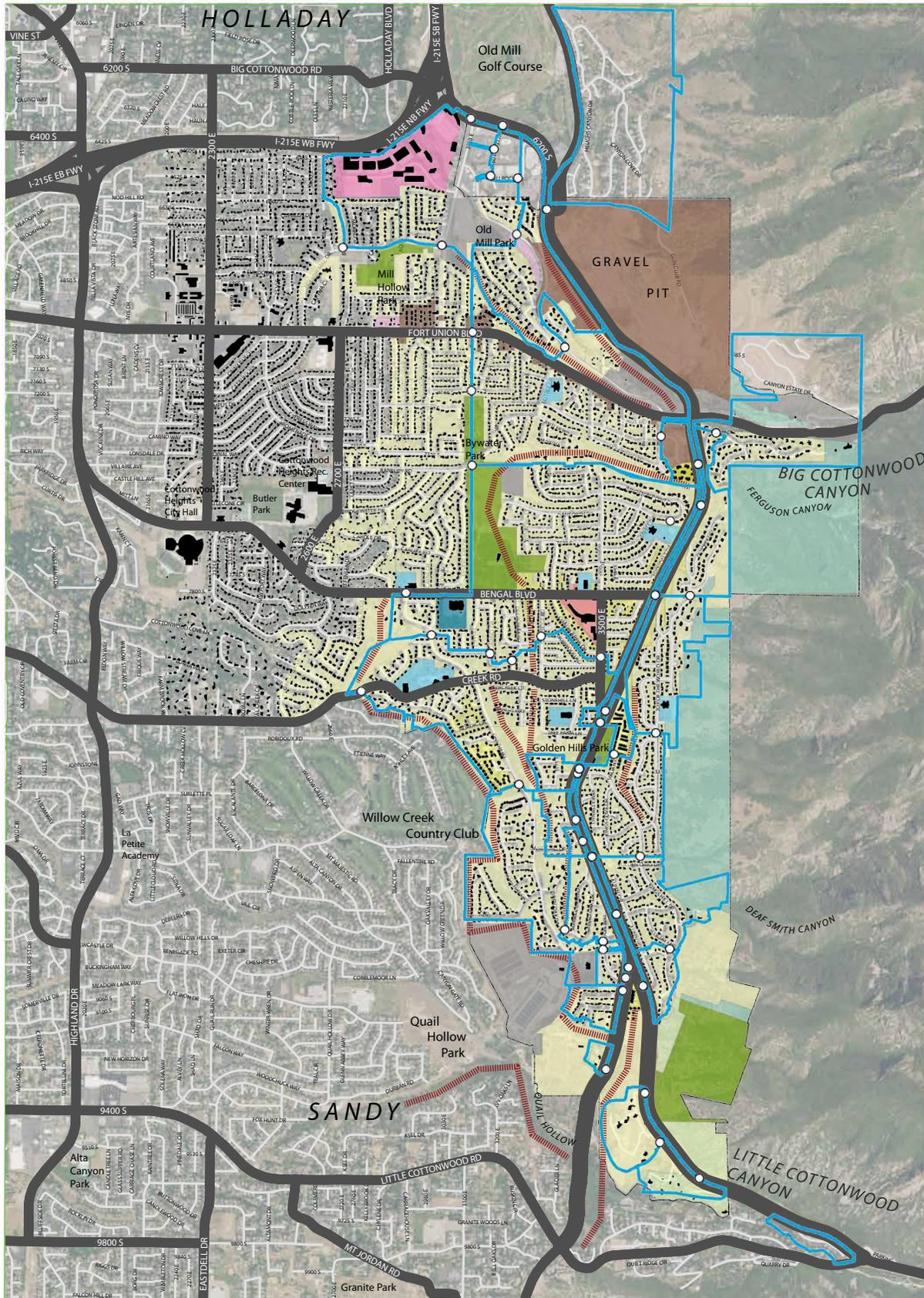
The study area is nearly built-out. It is dominated by low-density, well-established single-family neighborhoods on both sides of the corridor. Exceptions include the Gravel Pit (Segment 1), which is currently active and slated for significant mixed-use development once the gravel has been removed; vacant areas with and without undevelopable steep slopes; Canyon Centre, which is currently being redeveloped with a mix of commercial and residential uses; and undeveloped natural and sensitive lands associated with the nearby mountains, Cottonwood Creeks and sensitive sites.

Support uses include schools, civic uses, religious facilities, a neighborhood commercial center and two parks in the downhill neighborhoods west of Wasatch Boulevard. A church and Golden Hills Park are the only non-residential uses in the uphill neighborhoods east of Wasatch Boulevard. There are several undeveloped and underutilized sites along the boulevard, some of which are more suitable than others for development and alternative use. The upper foothills that are located in the eastern extents of the community are classified as sensitive and are generally not suitable for development.

##### *Neighborhood Characteristics*

The neighborhoods adjacent to the corridor mirror the steep hillsides where they are located, and the suburban development pattern that prevailed when they were constructed. Individual homes are laid out with consistent front and side yards and located along a sinuous road system. Neighborhood patterns are difficult to comprehend when traveling through the subdivisions, and individual neighborhoods are difficult to distinguish, which is due in large part to the twisting and curving roads and the homogeneous pattern

Figure 2.17: Corridor Communities



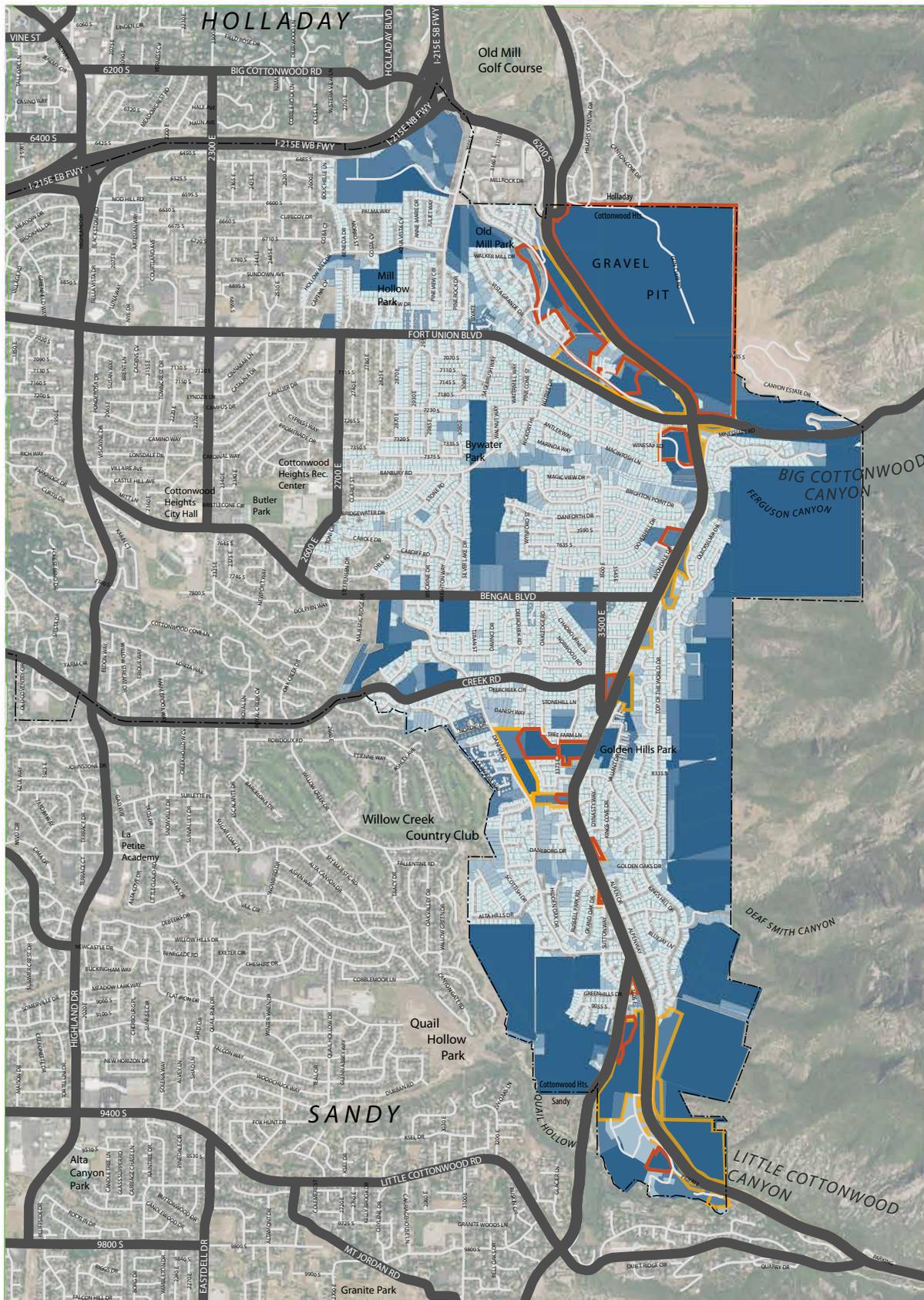
1/3 mi. 1 mi.

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Master Plan

**Built Environment Analysis: Existing Communities**

Civic	Mixed Use	Neighborhood Commercial	Office	Residential Office	Utility	Access Shed Boundary	Access Point
Religious	Residential - High Density	Residential - Med. Density	Residential - Low Density	Open Space	Sensitive Lands	Access Shed Boundary	Access Point
						Pedestrian Barrier	

Figure 2.18: Parcel Size



1/3 mi. 1 mi.

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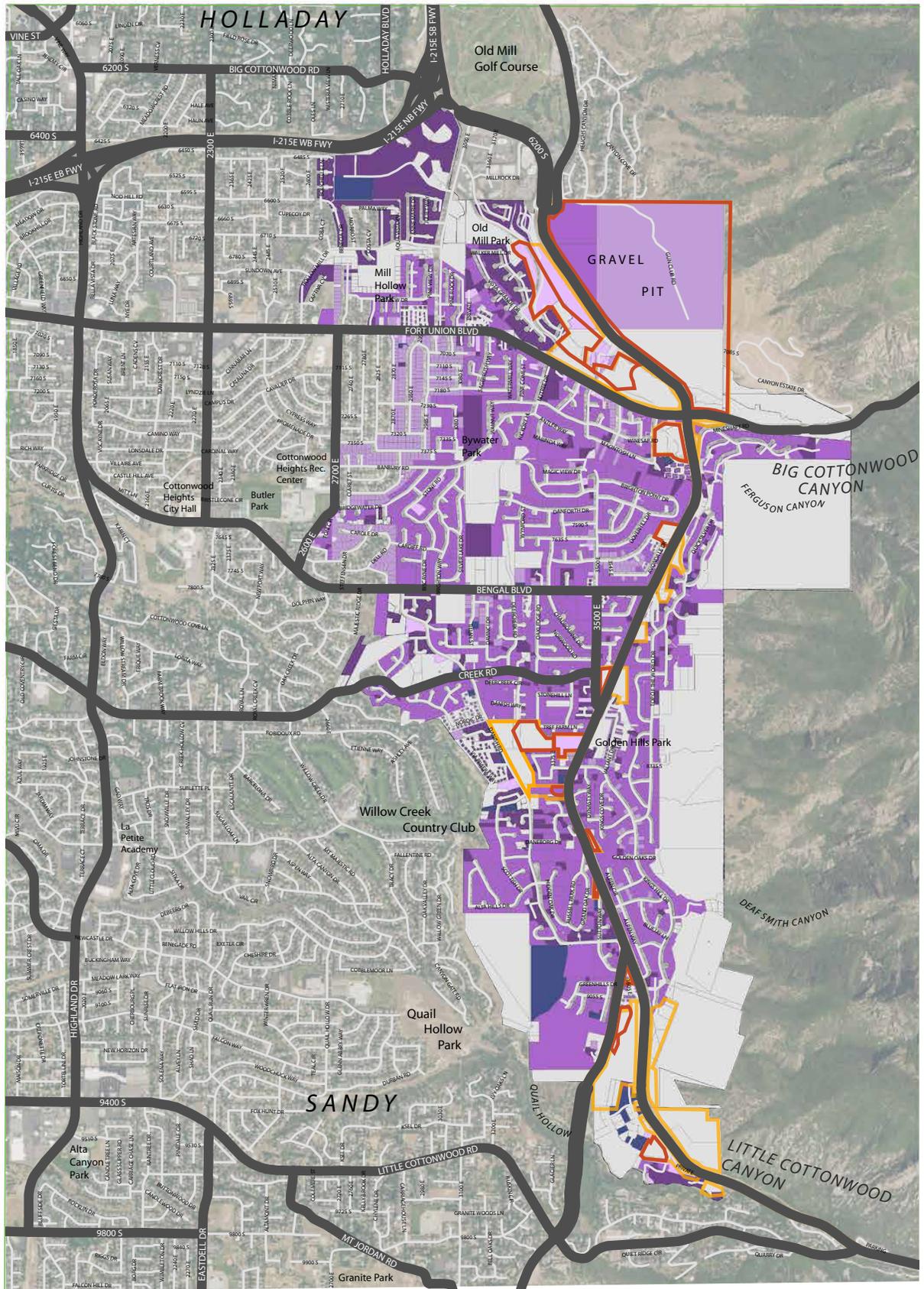
**Built-Environment Analysis: Settlement Pattern/  
Parcel Size**

Parcel size (in acres)

< 0.5	0.51 - 1	1.1 - 2	2.1 - 5	5 <
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Topographically Favorable Opportunity Zones (dark blue)  
Topographically Impacted Opportunity Zones (orange)

Figure 2.19: Property Age



1/3 mi. 1 mi.

**WASATCH BOULEVARD**  
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**Built-Environment Analysis: Property Age**

Parcel size (in acres)

No data	Before 1967	1968 - 1990	1990 - 2010	After 2010
---------	-------------	-------------	-------------	------------

Topographically Favorable Opportunity Zones (Red outline)  
Topographically Impacted Opportunity Zones (Yellow outline)

and style of homes. Most homes that are located immediately adjacent to Wasatch Boulevard are accessed from adjacent side streets, resulting in the backs of buildings, backyards, trees and tall fences fronting the roadway.

### *Settlement Pattern/Parcel Size, Property Ownership and Property Age*

Single-family residential parcels less than one-half acre dominate, echoing the established suburban development pattern. Slightly larger lots are found in the Golden Hills area east of Wasatch Boulevard, near Bywater Park, along Bengal Boulevard and near Danish Road. Large lots greater than five-acres are generally relegated to undeveloped and sensitive sites, parks, open space, civic, commercial and public utility sites.

The buildings in the area are relatively young and homogeneous, with the overwhelming bulk of development occurring between 1967 and 1990. The area was previously occupied by large farmsteads and extensive swaths of open land. Most land in the study area is privately-owned, with the bulk of public properties in the established neighborhoods limited to typical civic and institutional sites. The Bureau of Land Management manages a small parcel located in the southeastern foothill area, and large public holdings associated with Little Cottonwood Canyon and the Wasatch Mountains just beyond the east city limits are under the jurisdiction of the U.S. Forest Service.

### **Impact of corridor traffic (conflict points, cut-through, noise, air pollution)**

#### **Overview of metric**

Impact of corridor traffic measures how vehicle traffic along the Wasatch corridor affects the quality of life of residents of adjacent neighborhoods. Potential negative effects include conflict points between local and through-traffic, cut-through traffic, noise, and air pollution.

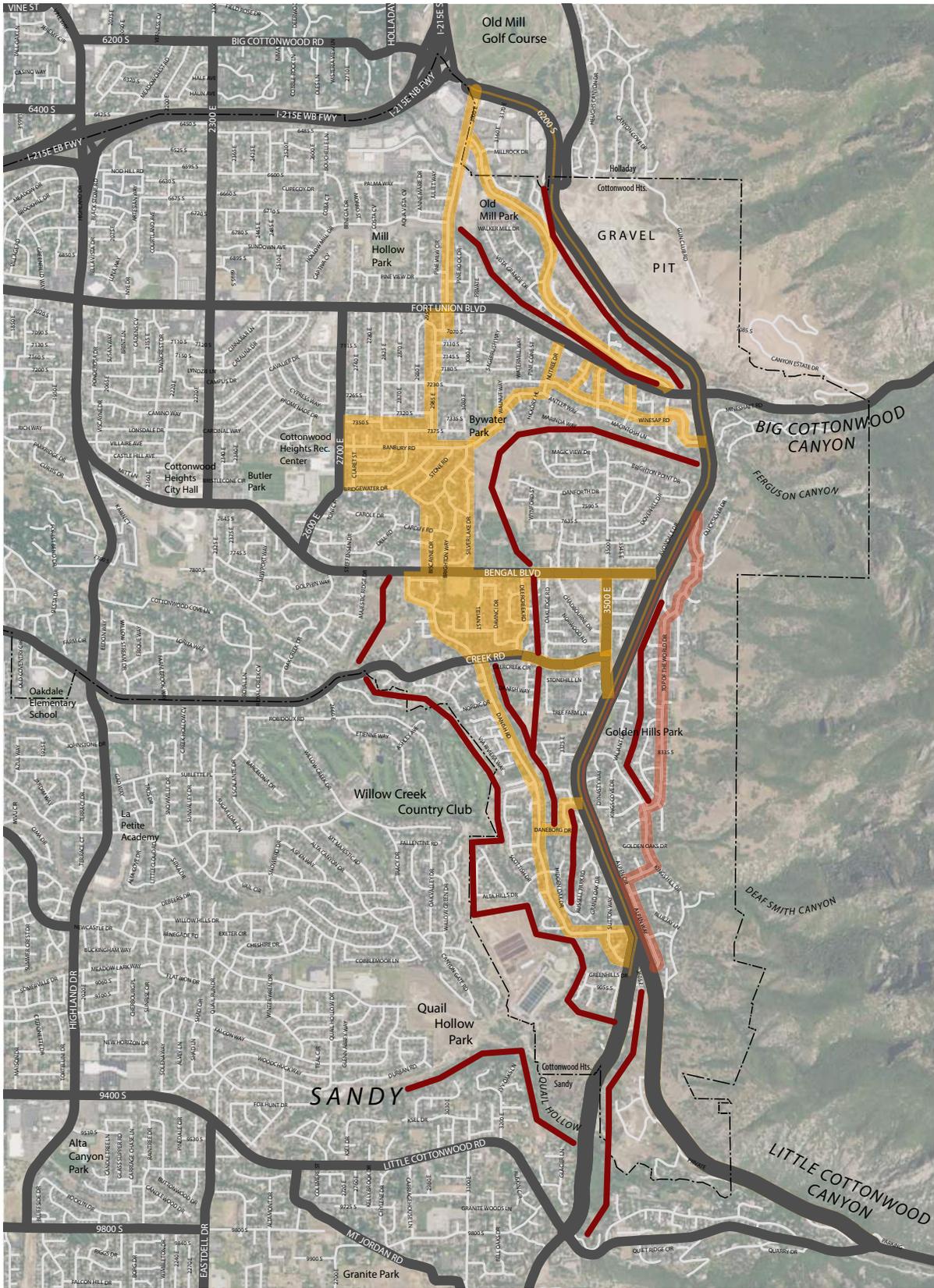
#### **Evaluation**

This metric is most relevant to Segments 2 and 3 – these are the areas where the corridor runs through consistent residential neighborhoods. The



The communities and the way they interface with Wasatch Boulevard change substantially from the north end of the corridor to the south.

Figure 2.20: Potential Cut-Through Traffic



1/3 mi. 1 mi.

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Master Plan

**POTENTIAL CUT-THROUGH TRAFFIC**

- Corridor route from 3000 East to "Y" intersection.
- Alternative routes from 3000 East to "Y" intersection.
- Barrier to corridor area connectivity
- Corridor route from Prospecter to "Y" intersection.
- Alternative routes from Prospecter to "Y" intersection.

largest effect of corridor traffic on neighborhoods currently is likely the potentially dangerous conflicts created at the unsignalized access points along Wasatch Boulevard. For many of the smaller subdivisions along the corridor, Wasatch is the only access out of the neighborhood.

Cut-through traffic is particularly an issue for winter recreational traffic – peak ski days see the most significant congestion on Segments 2 and 3. Cutting through the neighborhoods isn't easy, with a disconnected street network limiting through routes, but Figure 2.20 shows these potential routes on both sides of the corridor. Potential cut-through traffic is an issue.

### Connectivity of active transportation networks

#### Overview of metric

This metric assesses how well residents can get around their neighborhoods on foot, by bike, and other active modes. One of the focal points of this metric is the degree to which Wasatch Boulevard is a barrier for residents on either side of it.

#### Evaluation

Wasatch Boulevard appears to be a major barrier for people crossing it. Places where traffic stops in Segments 2 and 3, where residential neighborhoods are concentrated, are spaced far apart, at minimum 1/2 mile to as much as 1 mile.

The signalized intersections that stop traffic are in general very poor crossings for people walking and bicycling. The project team evaluated each of the eight signalized intersections for pedestrian and bicyclist quality. The scores of the intersections were as low as 6 out of 100 and none was higher than 49 out of 100.

The pedestrian environment along Wasatch Boulevard is very poor. The primary reason the lack of a pedestrian facility along the street, except in a few places. In Segments 2 and 3, the pedestrian environment is not as poor as the other segments, with some stretches of sidewalk, a narrower roadway, wider shoulder, and lower vehicle speeds but without a consistent dedicated facility the corridor is not safe for people on foot.

At the same time, the neighborhoods along the corridor are disconnected from one another. Figures 2.29 to 2.31 (in the Goal 3 discussion) are an analysis of the “access sheds” of the corridor – the areas served by different Wasatch Boulevard access points. The project team analyzed both the internal and external connectivity of each of these access sheds. Most significantly, the team found that in general, the corridor access sheds are very poorly connected to one another, which creates a series of small areas only connected to Wasatch Boulevard, which exacerbates the issues identified above with local-through traffic conflicts and poor pedestrian and bicyclist crossings and environments along Wasatch Boulevard.

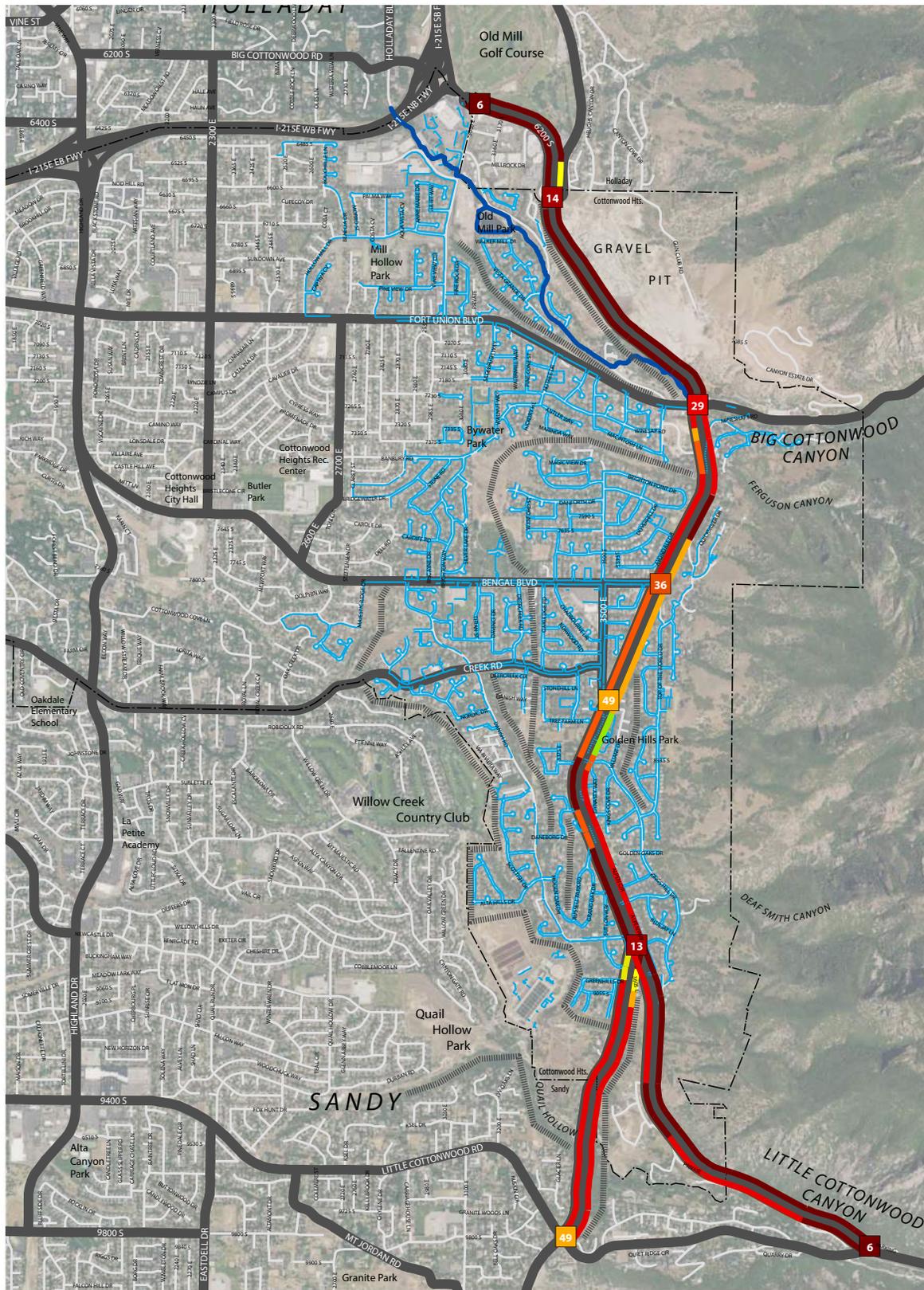
One asset to local active transportation networks is the growing network of bike facilities in the area. As Figure 2.22 indicates, the City of Cottonwood Heights has built or planned bike facilities on many of the streets feeding Wasatch Boulevard.

In addition, most streets in the residential areas along the corridor do have sidewalks – except for Wasatch Boulevard itself.

#### Goal 1 Assets

- Well-established popular neighborhoods on both sides of Wasatch Boulevard
- High quality, valued mountain and valley views from many places in the neighborhoods
- Access to open space and the Wasatch Mountains via trailheads such as for Ferguson Canyon
- Not a lot of cut-through traffic options likely keeps traffic out of many neighborhoods
- Sidewalks on most streets
- Growing network of bike facilities
- Moderate sound levels from corridor traffic

Figure 2.21: Pedestrian Network

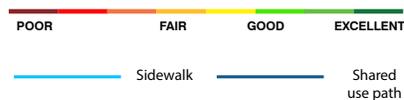


1/3 mi. 1 mi.

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## PEDESTRIAN NETWORK

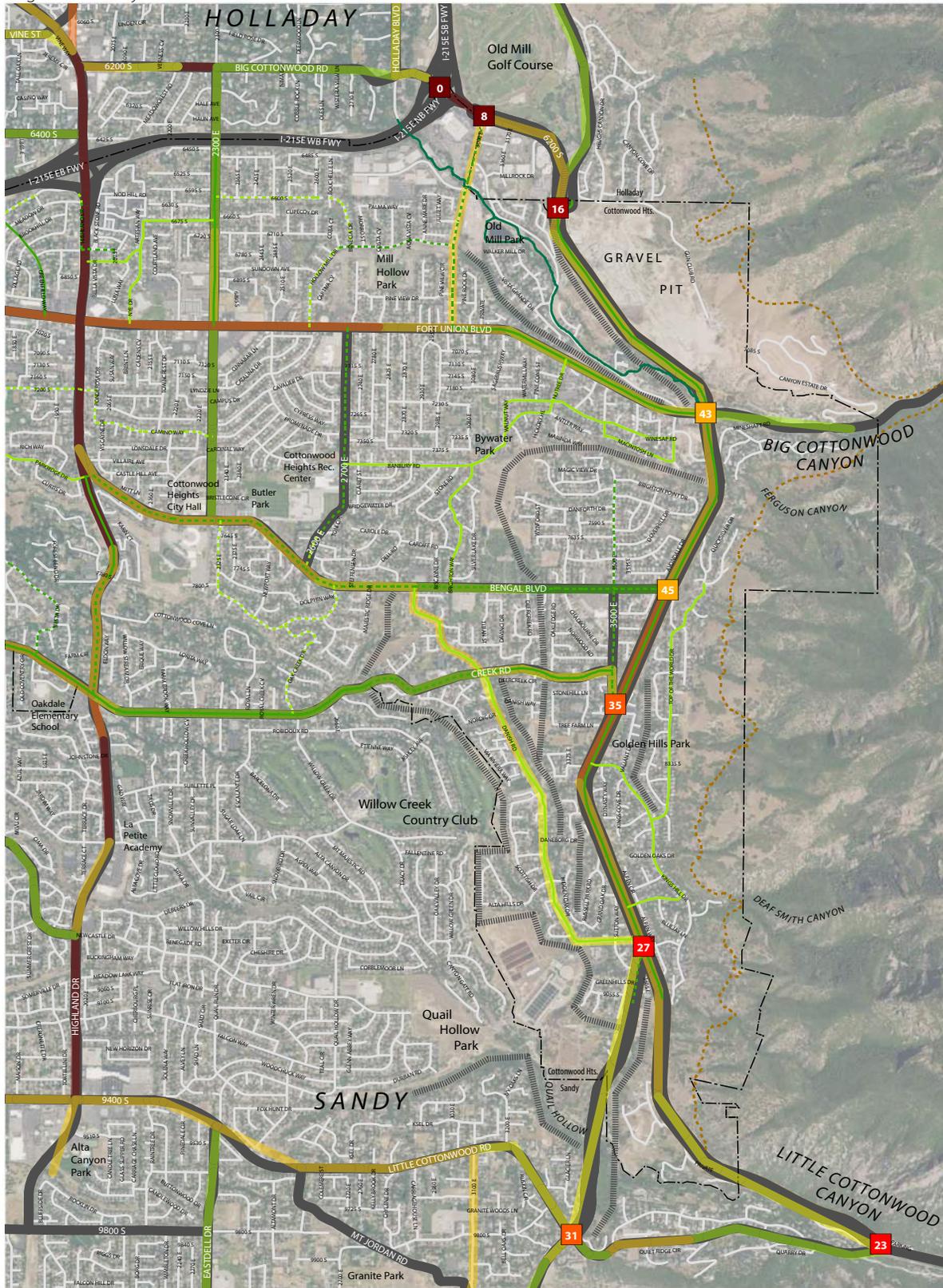
Quality of pedestrian realm  
(criteria include sidewalk, buffer, amenities, condition, relationship to land use)



Quality of major intersections for pedestrians  
(criteria include speed limit, crosswalks, and visibility)



Figure 2.22: Bicycle Network



1/3 mi. 1 mi.

**WASATCH BOULEVARD**  
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### BICYCLE NETWORK

Quality of bicycle environment on major streets  
(criteria include XXX, XXX, and XXX)

POOR FAIR GOOD EXCELLENT

Class II Bike Lanes  
Existing Planned

Class III Bike Routes  
Existing Planned

Shared use path

Planned Bonneville Shoreline Trail

Quality of major intersections for cyclists  
(criteria include speed limit, facilities, and turning conflicts)

0 100  
WORST BEST

Bicycling barrier

## Goal 1 Challenges

- A primary challenge is to ensure the development and redevelopment does not negatively impact the viability and continuity of existing neighborhoods.
- With a few notable exceptions, the existing vacant and under-developed sites are relatively small and steep. Fitting potential new development into the established single-family profile and character is a significant challenge.
- Lack of some neighborhood amenities in some areas, such as parks and commercial nodes, especially in the southern part of Segment 3.
- Conflicts between local and through traffic on Wasatch Boulevard, exacerbated by poor connectivity
- Inability of residents to walk or bike between “access-sheds,” and over-reliance on Wasatch Boulevard
- Barrier of Wasatch Boulevard for people on foot and bikes
- Poor pedestrian environment along Wasatch Boulevard, with no dedicated facility for most of the corridor
- While a bike lane runs along most of Wasatch Boulevard, vehicle volumes and speeds make it only for the brave – likely not the appropriate facility for this corridor for most cyclists

## Goal 1 Opportunities

- Substantial enhancement and preservation could be achieved through a carefully re-designed roadway and associated streetscape treatments, which could transform the highway into a beautiful boulevard that is functional and meets transportation needs.
- Develop additional parks at opportunity areas throughout the corridor.
- Redesign Golden Hills area as a neighborhood center, with appropriate amenities, traffic calming, and improved active transportation access.
- Improve 3500 East corridor as a neighborhood center, with improved active transportation access and open space amenities.
- Distinguish neighborhoods and provide better access through them with a wayfinding/ signage system.
- Develop/formalize street and/or active transportation connections between Bengal access shed and area to the west, utilizing street stubs/cul-de-sacs.
- Leverage sidewalks in neighborhoods and excess right-of-way on Wasatch Boulevard with a high-quality pedestrian facility on Wasatch Boulevard connecting neighborhoods and their sidewalks.
- Manage access between Wasatch Boulevard and the local street accesses – this could be done with reduced speed limits, acceleration lanes, additional signals, or local access lanes pooling local traffic to fewer, safer access points that can be more controlled.
- Create a safer, more comfortable bicycling experience along Wasatch Boulevard, likely separated from vehicle traffic. Leverage the large amounts of right-of-way to consider a shared use path that could also be for pedestrians. This facility could also be a nexus and connection point for bikeways on cross streets, the Bonneville Shoreline Trail and the Big Cottonwood Trail.
- Create safer pedestrian crossings, especially in Segments 2 and 3 at Bengal Boulevard, 3500 East, and the Little Cottonwood/Wasatch Boulevard intersection.
- Roadway improvement projects should not increase the daily or peak hour noise levels.
- Consider adding additional crossings to reduce crossing spacing to at most ½ mile. These additional crossings could be paired with access management improvements to conflicting local/through traffic.
- Create active transportation connections among disconnected access sheds. There may be places in residential neighborhoods where paths can be “punched through.” Some subdivisions have stub streets that can connect to new or existing development.
- Ensure that infill developments are carefully considered and are better connected internally and externally.
- Create a neighborhood traffic calming program that dissuades regional traffic from cutting through neighborhoods; emphasize other commuter routes such as Highland Drive.

## 2.4 Goal 2: Move people through the corridor reliably and safely

### Corridor vehicle travel time

#### Overview of metric

Corridor vehicle travel time measures how long it takes a motor vehicle to travel the length of the corridor, defined as from I-215 on 6200 South to the mouth of Little Cottonwood Canyon via Little Cottonwood Canyon Road, during the p.m. peak commute period. Both individual segments (between signalized intersections) and the full corridor are analyzed.

#### Evaluation

The metric was assessed by several field tests during the weekday p.m. peak period by the project team in Fall 2017. The average time for the full corridor north to south direction was 8 minutes, 49 seconds.

### Ability to move people through the corridor

#### Overview of metric

This metric identifies how many people can and do move through the corridor, both in private vehicles and on transit. Measuring the amount of people moving through a corridor is a balance between how many people can move through the corridor and how many people are actually moving through the corridor. While both private autos and public transit vehicles can transport capacities of passengers, it is rare on many corridors that they do so. Consequently, the person capacity of the corridor is dependent not only on how much infrastructure there is (roadway lanes; transit service) but on how attractive are both the route and different modes such as transit and carpooling. The number of people moving through the corridor is in some cases limited by the amount of people it is “pulling” onto it, and in other cases limited by its capacity. A reasonably reduced speed limit does not have a significant effect on level of service (i.e. wait time at intersections) along the corridor.

#### Evaluation

Travel demand modeling identifies vehicle volumes for each segment of the corridor, as well as a breakdown of single-occupant and high-occupancy vehicles. Assuming an average high-occupancy of 2.25 passengers and drawing on standard “rules of thumb” for arterial roadway vehicle capacities, the project team developed an estimate of the number of people able to currently move through the corridor for the existing condition and in 2024 and 2040. In some segments, these numbers put the corridor over capacity, so travelers are discounted from these totals to bring the corridor to an estimated capacity at an acceptable level of service (a volume over capacity of “D”). Transit riders are added to these totals.

2024: Estimated numbers of well-served corridor travelers in key segments:

I-215 to 3000 East: Approximately 48,200 people move along the corridor at an acceptable level of service, only 73 percent of the need, which is limited by roadway general purpose lane capacity.

Wasatch/Millrock/6200 South to Big Cottonwood Canyon: Approximately 36,745 people move along the corridor, which is under the roadway capacity.

Bengal Boulevard to 3500 East: Approximately 15,000 people move along the corridor at an acceptable level of service, only 60 percent of the need, limited by roadway general purpose lane capacity.

2040: Estimated numbers of well-served corridor travelers in key segments:

I-215 to 3000 East: Approximately 48,200 people still move along the corridor at an acceptable level of service, now only 59 percent of the need, limited by roadway general purpose lane capacity.

Wasatch/Millrock/6200 South to Big Cottonwood Canyon: Approximately 48,000 people move along the corridor, now not meeting the need – only 96 percent, limited by roadway general purpose lane capacity.

Bengal Boulevard to 3500 East: Approximately 15,000 people still move along the corridor at an acceptable level of service, now only 53 percent of the need, limited by roadway general purpose lane capacity.

Observations from this analysis include:

- With transit service very light on most of the corridor, transit riders make up a very small part of the total corridor travelers.
- With transit ridership insignificant and high-occupancy vehicle percentage a near constant at about 14-18 percent through the three horizon years, the number of people able to move through the corridor is almost directly a function of number of vehicles and the roadway capacity to move them.
- In general, the corridor transports the most people on the northernmost sections and fewer as one moves south, until the number of people moving through the southernmost segment is less than 10 percent of the people moving through the northernmost.
- In each horizon year, travelers moving through Segment 3 of the corridor (between Bengal Boulevard and Little Cottonwood Road) are exceeding capacity; however, with more carpooling and attractive transit service, the capacity of this segment could be much greater.
- In Segment 1, (I-215 to Wasatch Boulevard), the estimated number of corridor travelers is estimated to be under capacity currently and in 2024 and grows to reach its capacity with current infrastructure in 2040.
- In the No-Build scenario, the person capacity of the corridor does not increase significantly through the three horizon years, with HOV percentage staying flat and transit service/ridership not increasing appreciably.

## Volume per capacity of roadway segments

### Overview of metric

Volume per capacity of roadway segments estimates how well motorists driving segments of the corridor currently and in the future horizon years of 2024 and 2040 are served in the p.m. commuter traffic peak. The metric is evaluated on a scale of level of service A-B (at half or less or capacity); level of service C (between half and three quarters of capacity); level of service D (between three quarters and full capacity); level of service E (between full and one and a quarter times capacity); and level of service F (over one and a quarter times capacity). A simpler classification could distinguish between below capacity (A-D) and above capacity (E-F).

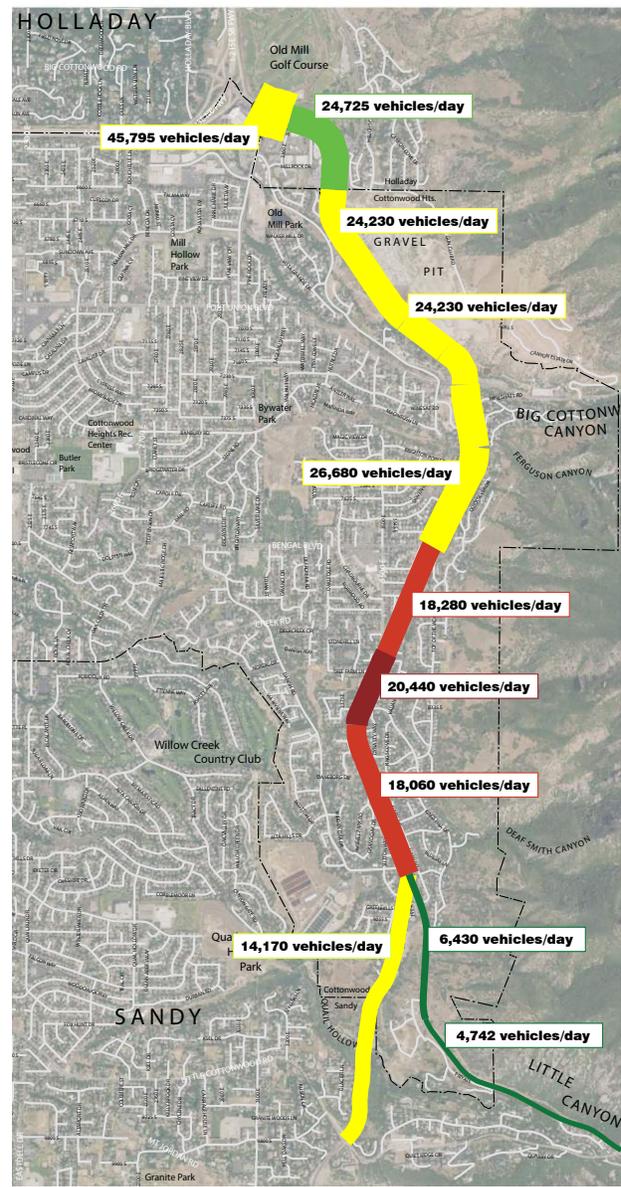
### Evaluation

The project team evaluated this metric for the existing condition as well as for 2024 and 2040 forecasts.

**Existing condition:** In the existing condition, all segments are below capacity (Level of Service D or better) except for those in Corridor Segment 3, between Bengal Boulevard and Little Cottonwood Road, which are over capacity. The piece of this segment in the middle, just south of 3500 East, is over 1.25 times over capacity. This is likely due to the lane reduction south of Bengal Boulevard. Most of the rest of the corridor is between 75 and 100 percent of capacity.

**2024:** The 2024 forecast is very similar to the existing condition, with Segment 3 over capacity and the rest of the corridor largely between 75 and 100 percent of capacity. This is largely due to small levels of traffic growth in the southern three segments of the corridor. The higher levels of growth in Segment 1 (up to 41 percent) are absorbed in the existing roadway capacity in that segment.

**2040:** The 2040 forecast predicts significant traffic growth for many parts of the corridor. Most importantly, this growth pushes Segment 1 over capacity. In addition, Segment 2 is estimated to go over capacity, and Segment 3 is predicted to be far over capacity (greater than 125 percent).

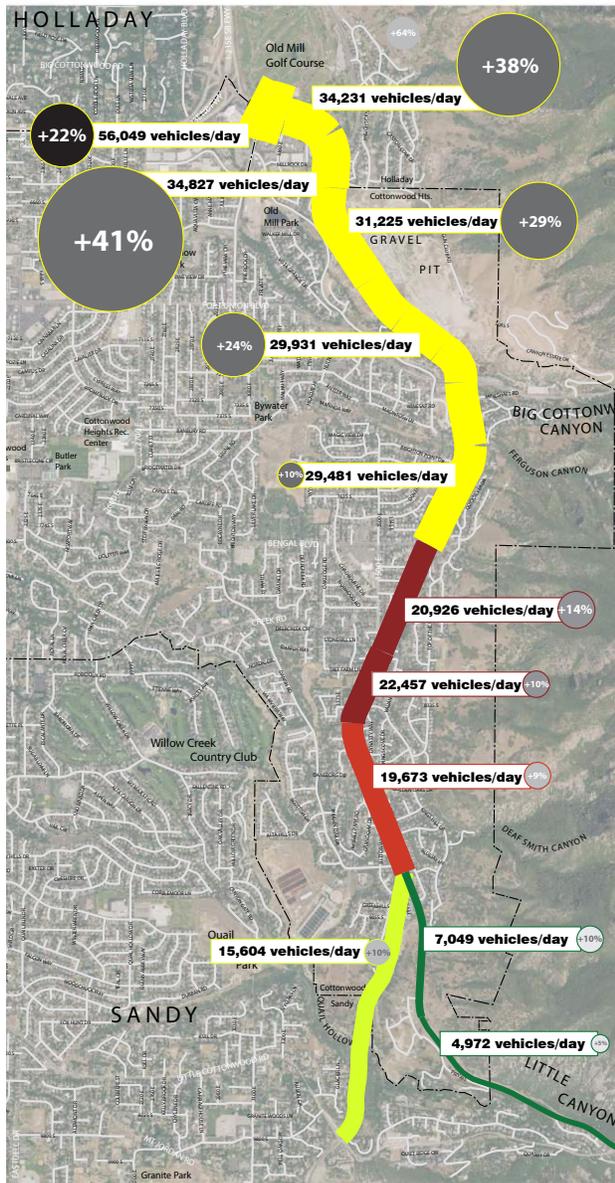


### CURRENT CORRIDOR TRAVEL DEMAND

P.M. peak hour level of service (volume/capacity)



Figure 2.23: Current Corridor Travel Demand (2014)

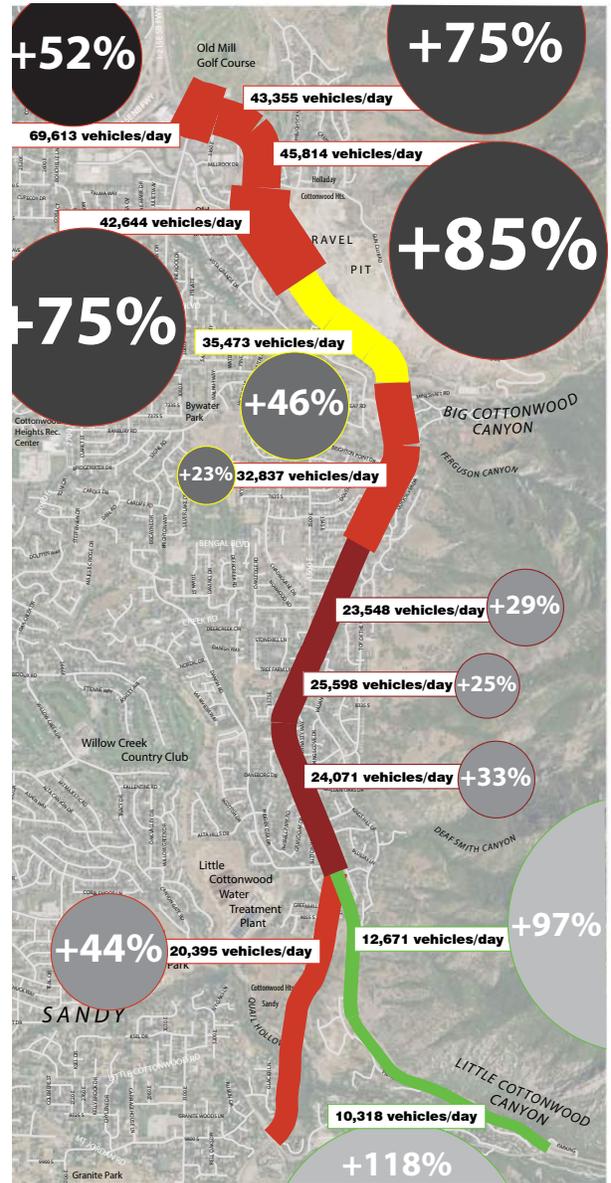


**FORECASTED 2024 TRAVEL DEMAND**

Forecasted PM. peak hour level of service (volume/capacity)      Forecasted traffic growth from 2014



Figure 2.24: Forecasted 2024 Corridor Travel Demand



**FORECASTED 2040 TRAVEL DEMAND (NO BUILD)**

Forecasted PM. peak hour level of service (volume/capacity)      Forecasted traffic growth from 2014



Figure 2.25: Forecasted 2040 Corridor Travel Demand

## Peak hour intersection level of service

### Overview of metric

Peak hour intersection level of service measures the delay experienced by motorists at each of the corridor's eight signalized intersections during the p.m. peak commute traffic period.

### Evaluation

For this evaluation, the project team estimated the average p.m. peak hour delay for the existing condition and the forecasted 2040 condition. For the existing condition, the team used previously collected data from a variety of studies. The team used the WFRC travel demand model to apply a growth factor for the 2040 estimate.

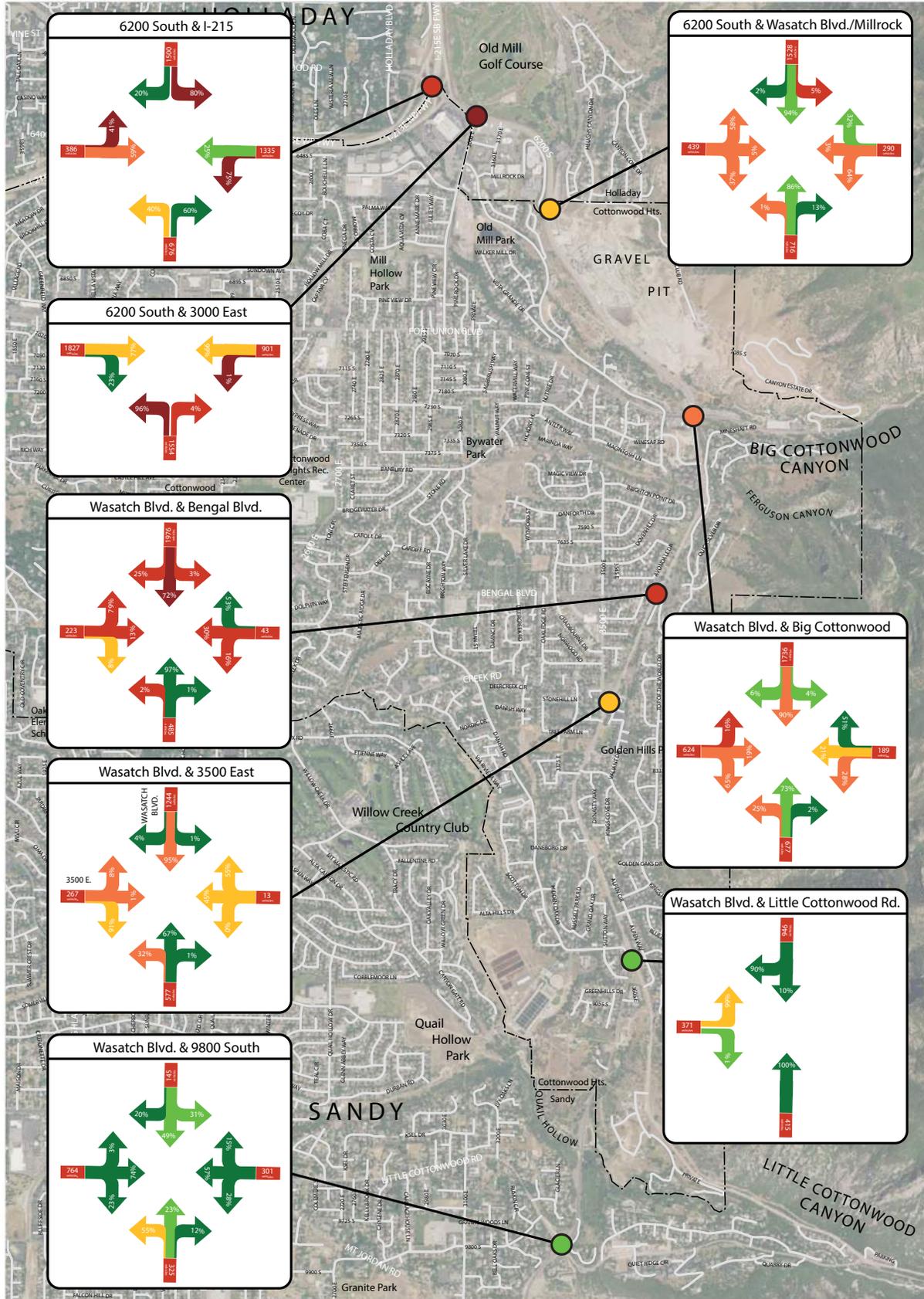
Existing condition: The existing p.m. peak period analysis (Figure 2.26) identifies several intersections as failing (Level of Service E or worse). These include I-215 and 3000 East, the most high-volume intersections in the corridor. The problems at these intersections are focused on the left turn off 3000 East and left turns on and off I-215. Bengal Boulevard is also failing. The problem at this intersection is focused primarily on southbound through traffic having a Level of Service F delay.

The southern intersections do not appear to present as much of a problem for peak hour traffic.

2040: In the 2040 forecast (Figure 2.27), five of the eight northern intersections are failing (LOS F). In the northern area, this largely reflects the addition of traffic resulting from Gravel Pit development into these intersections without any capacity increases or operational adjustments. This forecast places a high amount of pressure on the I-15 and 3000 East intersections, as well as the 6200 South-Wasatch Boulevard/Millrock intersection, where traffic growth from 2015 to 2040 is predicted to be as much as 218 percent and large volumes of through traffic must split green time with increased volumes of cross traffic, most of it turning onto the corridor. The Big Cottonwood/Fort Union intersection reflects the growth of traffic in all directions, including coming down from the canyon. The issue at Bengal is still focused on the southbound through traffic.

Again, the southern intersections remain at an acceptable level of service in the 2040 horizon year, except for the through southbound movement at 3500 East.

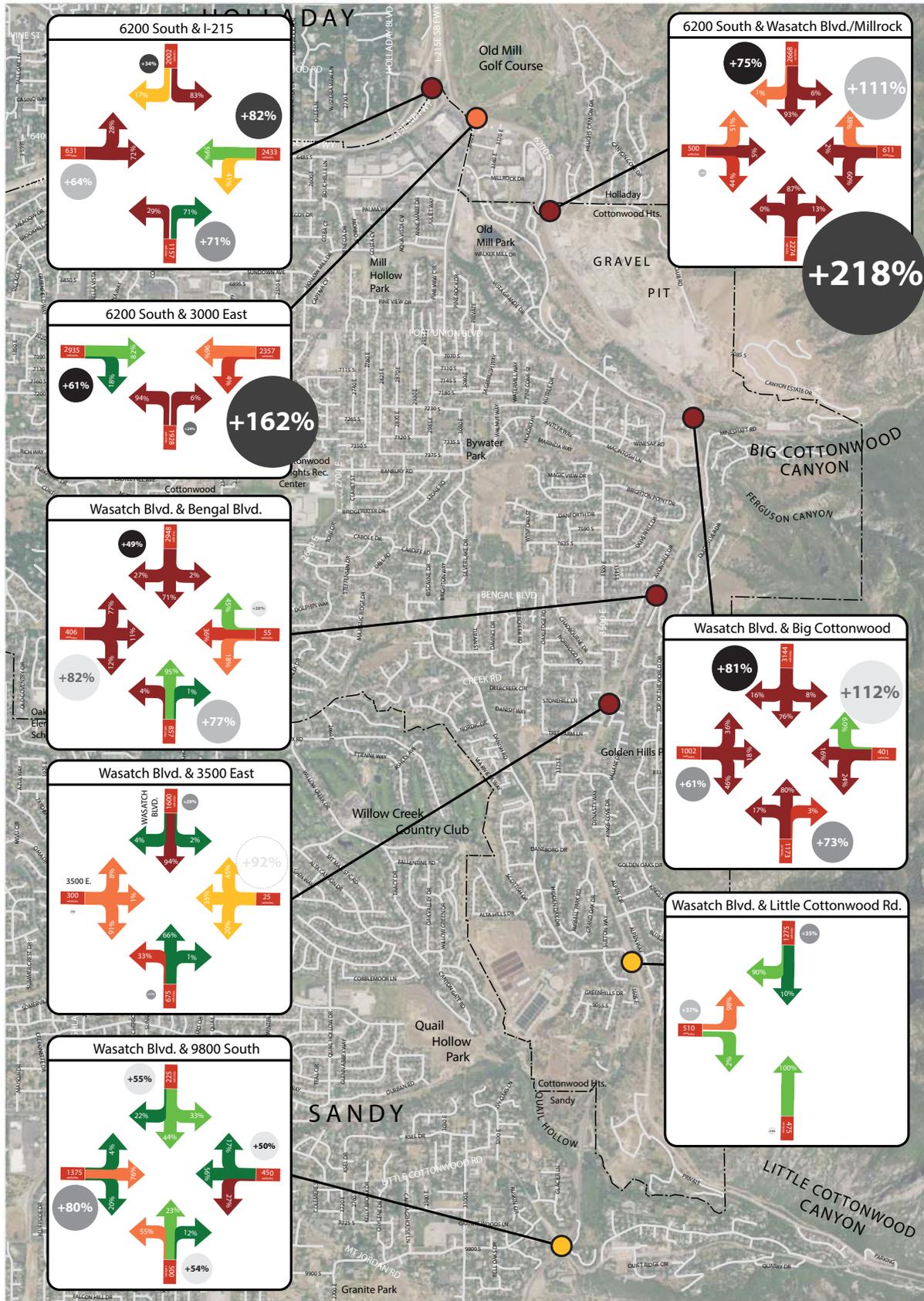
Figure 2.26: Existing P.M. Peak Period Intersection Vehicle Traffic Level of Service



**TRAFFIC LEVEL OF SERVICE  
PM PEAK HOUR 2015**



Figure 2.27: Forecasted 2040 P.M. Peak Period Intersection Vehicle Traffic Level of Service



**TRAFFIC LEVEL OF SERVICE**  
PM PEAK HOUR 2040

PM Peak-Hour Intersection Level of Service



PM Peak-Hour Roadway LOS



## Goal 2 Assets

- Most corridor segments appear to be moving people adequately in the existing condition and through 2024.
- The eastern strand of Segment 4, the southernmost link of the corridor, is under capacity for all the horizon years, even with over 100 percent growth.
- Most of the corridor contains a wide right-of-way that presents additional space to add roadway capacity or other improvements.

## Goal 2 Challenges

- Under the existing conditions and trends, the corridor is dependent on private, single occupant vehicles to move people.
- Segment 3 (Bengal Boulevard to Little Cottonwood Road) is over capacity in the p.m. peak period. This is largely due to the reduced number of lanes to one each direction south of Bengal Boulevard.
- In 2040, most off the corridor projects to be over capacity, both in terms of intersections and corridor links.
- Planned development at the Gravel Pit site projects to add traffic pressure to the northernmost three intersections, tripling the traffic traveling north in this part of the corridor the p.m. peak.
- The corridor faces a separate challenge for peak ski days, where it reaches an over capacity condition due to congestion of winter recreational traffic. This congestion includes the eastern strand of Segment 4, which is otherwise well under capacity.
- Transit service is very light on the corridor, and land use patterns are largely not conducive to transit.
- Because of low street connectivity both within and among neighborhoods, much of the area on either side of the corridor are dependent on Wasatch Boulevard for all travel.
- Frequent accesses from local streets and driveways in Segment 3 could create friction with and slowdown of corridor through traffic.

## Goal 2 Opportunities

- UDOT Region 2 currently plans to add a second southbound lane to Wasatch Boulevard from Bengal Boulevard to the mouth of Little Cottonwood Canyon. This lane could alleviate traffic congestion both in the p.m. peak and on peak ski days.
- Year-round transit is currently underutilized on Wasatch Boulevard. If increased, there is a strong opportunity to use transit as an asset for reducing future congestion and managing roadway capacity.
- A full widening to two lanes each direction south of Bengal Boulevard, as called for in the Regional Transportation Plan, could further address traffic congestion in Segment 3.
- The concentration of p.m. trips originating from the Cottonwood Corporate Center presents an opportunity to increase transit service and ridership.
- Explore options to use a shoulder or lane flexibly between peak commute periods, peak ski days, and other periods for transit, high capacity vehicles, and bicycles. In the future, consideration could also be given to dedicated bus lanes (BRT) along the corridor.
- The prospect of dense development at the Gravel Pit site and need for mitigation of the impact of trips to and from it presents the opportunity to design and program the project to be highly transit supportive, working with Cottonwood Corporate Center and other stakeholders such as the ski resorts to increase transit service and ridership dramatically on the northern sections of the corridor.
- Better turn management in general, especially in Segment 3.
- Explore near-term options to alleviate delay at the left turn on Bengal Boulevard to northbound Wasatch Boulevard.
- Explore near-term options to alleviate delay on left turn at 3000 East.
- A local access lane in Segment 3 could reduce potential friction between local street and home access and through traffic.
- Explore options to alleviate local dependence on Wasatch Boulevard by increasing neighborhood street connectivity.
- Increase regional street connectivity by connecting streets such as Highland further south.

## 2.5 Goal 3: Increase travel choices on the corridor

### Quality of pedestrian environment along the corridor

#### Overview of metric

This metric assesses the quality of the environment along the Wasatch Boulevard corridor for walking as a transportation mode. It is evaluated largely by a quantitative measurement of the pedestrian environment on both sides of the street. This evaluation incorporates several criteria, including the presence and width of a sidewalk or other dedicated pedestrian facility, presence and nature of a buffer from the roadway, presence of street trees and other amenities, the condition of the environment, and the way the adjacent land uses interface with the pedestrian environment.

#### Evaluation

In general, the pedestrian environment along Wasatch Boulevard is very poor. The primary reason is the lack of a pedestrian facility along the street, except in a few places. But even with a sidewalk, the pedestrian environment is challenged by other factors. These include the vehicle speeds (50 mile per hour speed limit through most of the corridor) and volumes and the way the neighborhoods and districts along the corridor face onto the street. In many cases, development backs onto Wasatch Boulevard, creating an unpleasant wall or fence for people to walk along. In other situations, large segments of vacant land create long distances of empty space. In many places, the roadside area is poorly maintained.

The pedestrian environment is worst in the northern part of the corridor (Segment 1), where the highest volumes of high-speed traffic combine with no dedicated pedestrian space. However, the issue may be most acute in Segments 2 and 3 where Wasatch creates a major barrier and disconnection point for people walking in the residential neighborhoods (see Goal 1 discussion).

The only higher quality segment of pedestrian environment is at Golden Hills Park and the adjacent fire station, where a wide path is buffered from the roadway and has shade and amenities.

Wasatch Boulevard's intersections also present an extremely challenging environment for pedestrians. In the project team's analysis of the signalized intersections, none scored more than a 49 out of 100, due to the high speeds of traffic, lack of high visibility environments, length of crossings, and a lack of pedestrian facilities creating good corner environments. The crossings at the northern end of the corridor scored as low as 6 out of 100. In addition these crossings are far apart – one half to one mile apart in the residential segments of the corridor.

The potential of a new mixed-use development at the Gravel Pit creates both the need and impetus for a quality pedestrian environment on Wasatch Boulevard along the Gravel Pit site.

## Quality of bicycle environment along the corridor

### Overview of metric

Similar to the pedestrian environment metric this performance measure evaluates the quality of the environment along Wasatch Boulevard for people riding bikes. This metric is evaluated quantitatively – through the Bicycle Compatibility Index (BCI) – and qualitatively by observations and field research.

### Evaluation

Wasatch Boulevard has a dedicated bike facility – which ranges in width – for most of the corridor. This provides a dedicated space for many of the recreational cyclists for which Wasatch is a popular route. Largely because of this dedicated facility, the BCI for the corridor is mostly in the “fair” range.

However, with the high speeds and volumes of traffic on many segments of Wasatch Boulevard, a standard unbuffered bike lane is not likely the most appropriate facility for the street, and is not the right facility for attracting less-dedicated, experienced, and skilled riders to bike the corridor.

In addition, for how popular the corridor is for cyclists, one could make the argument for more wayfinding, amenities and access to destinations.

## Quality of transit service on the corridor

### Overview of metric

This metric assesses the quality of transit as a choice for traveling along the Wasatch corridor. It is evaluated by looking at the location and frequency of service as well as the quality of bus stops and other transit infrastructure along the corridor.

Note: this performance measure does not assess ski bus service – that is evaluated as part of Goal 6.

### Evaluation

In general, transit service is very light on the Wasatch Boulevard corridor. It becomes less intensive and almost nonexistent in the southern parts of the corridor. There is not a bus route that runs along all or even a significant part of Wasatch Boulevard. Instead, the Wasatch corridor intercepts routes coming from elsewhere.

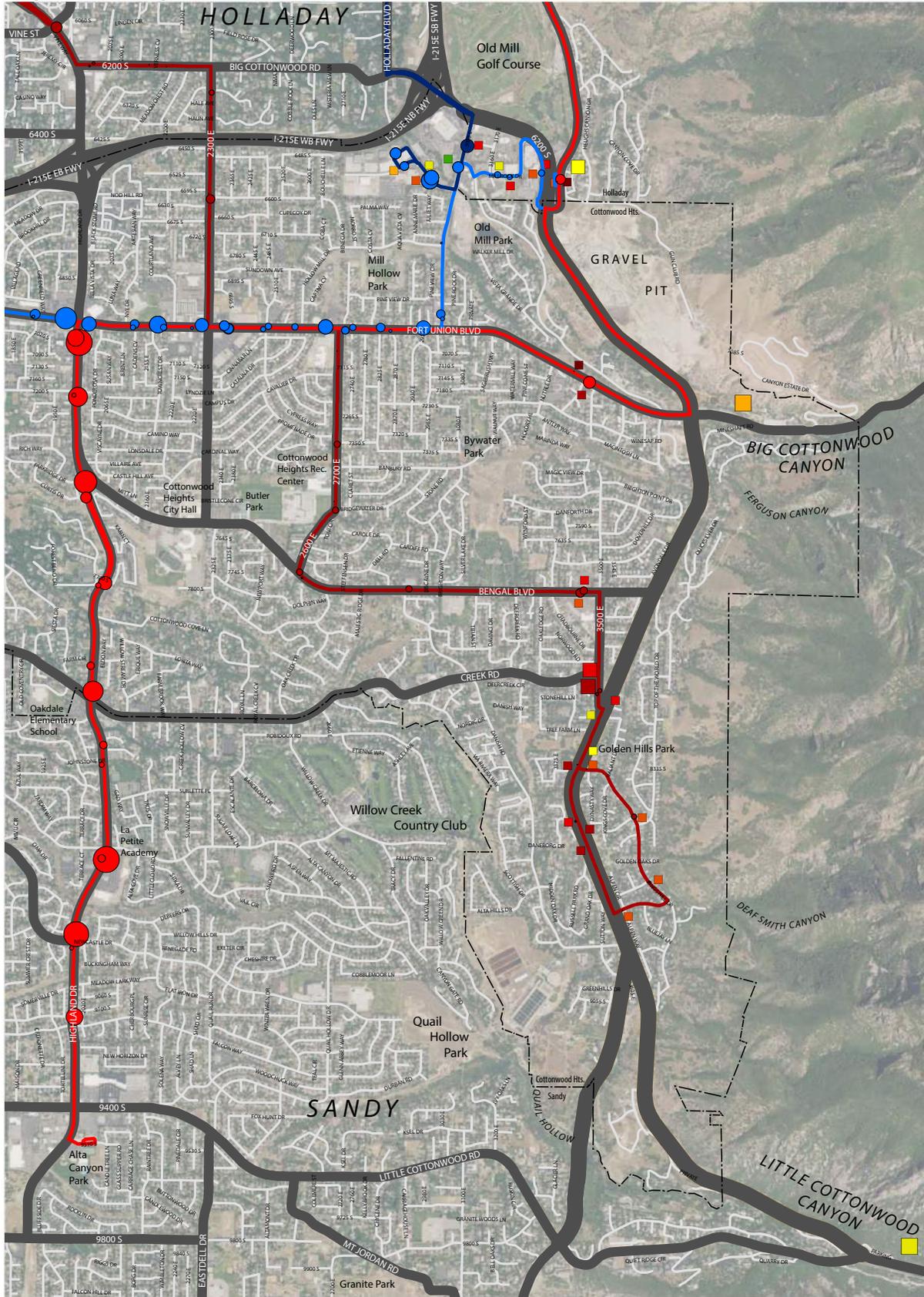
Most of the service reaching the Wasatch corridor is fast bus commuter service at the beginning and end of each day – the 354 in the Fort Union area and the 307 in the Segment 3 part of the corridor.

The Cottonwood Corporate Center is the one place along the corridor that has a convergence of routes and offers a relatively high level of service. This area is served by the 72 and 223 routes heading west and north respectively. However, ridership at these stops is still low compared to other employment centers, with few stops reaching over 10 boardings per day.

In general, bus stop quality is very low – most stops scored low to very low in their provision of key transit waiting environment elements. Again, an exception to this is at the Cottonwood Corporate Center, where some of the stops are very high quality and feature more rider amenities and are more connected to the land uses they serve.

UTA is considering a more important role for Wasatch Boulevard in the regional transit network, as it is one of few north-south connections in the southeast part of the valley. The added employment, residents, shoppers and visitors that could come with a mixed-use Gravel Pit development would create added impetus for transit on at least the northern part of the corridor.

Figure 2.28: Existing Transit Network



1/3 mi. 1 mi.

**WASATCH BOULEVARD**  
Master Plan

**TRANSIT NETWORK**

Corridor area bus routes	Daily boardings	Bus stops	Quality
Blue line (223)	0.1	Extremely poor	Good
Red line (307)	1	Very poor	Very good
Orange line (354)	10	Poor	Mediocre
Light blue line (72)		Mediocre	Fair

## Travel behavior — mode splits of people in SOVs, HOVs, riding transit

### Overview of metric

This metric assesses how many people are choosing alternatives to driving cars by themselves on the Wasatch Boulevard corridor, in terms of high-occupancy private vehicles and transit ridership.

### Evaluation

The travel demand model estimates number of “HOV” vehicles (those with two or more occupants). Meanwhile, UTA keeps data on transit ridership, so these two data points inform how the project team analyzes this metric.

HOV use: The travel demand model identifies most of the corridor as having an HOV percentage of between 12 and 16 percent for both 2024 and 2040.

Transit ridership: UTA transit ridership data show that very few people use transit to travel the Wasatch Corridor, apart from the ski bus. Corridor stops average below 10 people per day and many less than one person, in contrast with the Highland and Fort Union corridors, which, while still low, carry significantly more people on transit. These other corridors have bus routes running their length.

## Internal and external street connectivity

### Overview of metric

This metric assesses street network connectivity as a function of transportation choice. Street network connectivity is important to transportation choice in a few key ways. First, higher street connectivity provides more potential routes from origin to destination. Second, higher street network connectivity enables safer and easier walking and bicycling; it is important to have a choice of transportation modes and these are key modes not only for themselves but also for the effectiveness of riding transit.

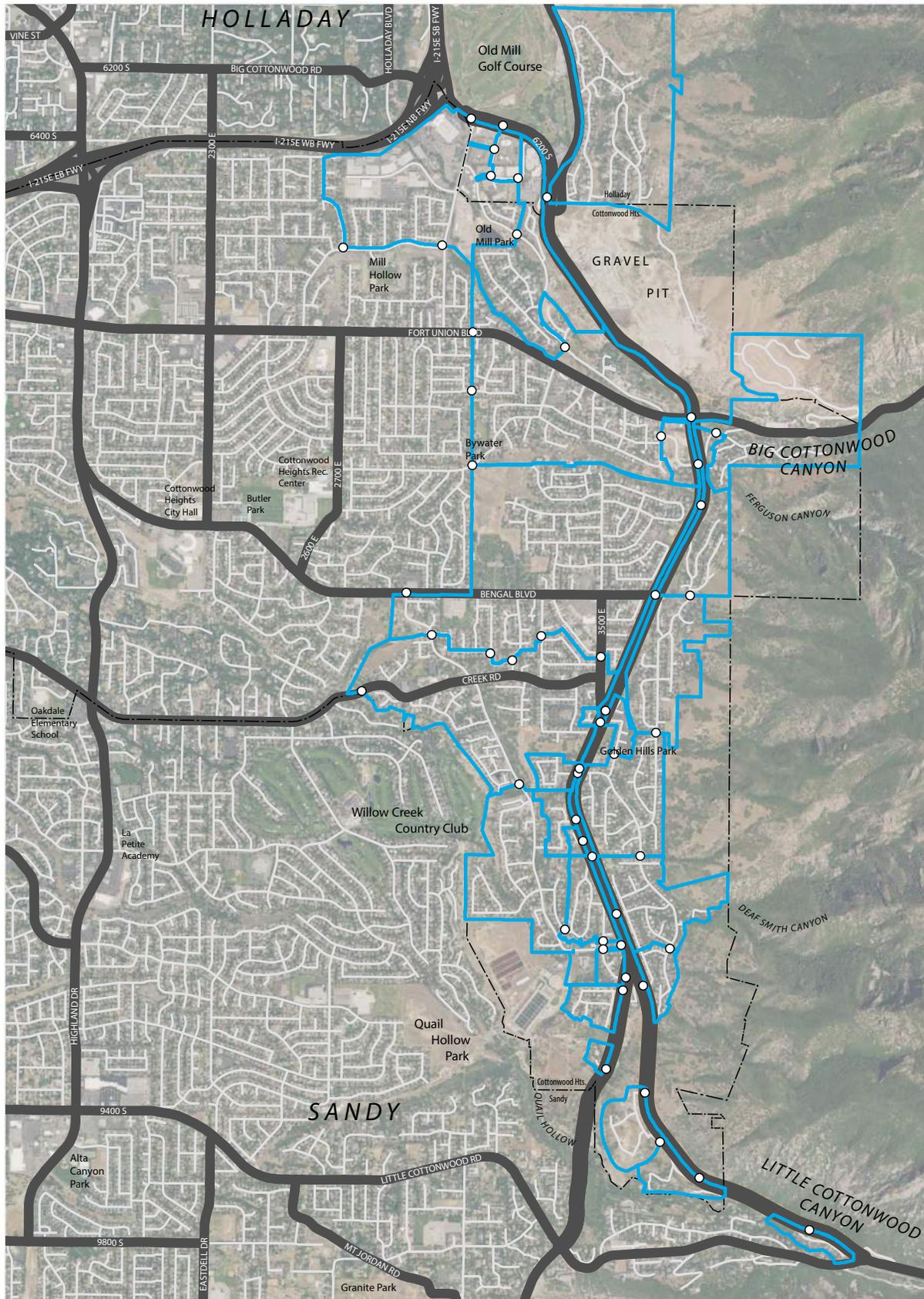
This metric is assessed by measuring connectivity along the corridor. The framework used for this is the series of “access sheds” along the corridor (Figure 2.29). Access sheds are areas served by a specific access point along a corridor. There are 27 access sheds along the Wasatch Boulevard corridor and they range in size. Each access shed was evaluated for internal connectivity (links per node) and external connectivity (external connections per acre).

### Evaluation

The vast majority of the corridor access sheds are less internally connected than the standard for suburban neighborhoods established in the Utah Street Connectivity Guide (1.5 links per node) - see Figure 3.3. Most are between 50 and 100 percent of that standard. The ones less than 50 percent of the standard are mostly very small access sheds with many dead ends/cul-de-sacs.

The external connectivity of the access sheds is poorer in general than internal connectivity (see Figure 3.4) and this is a major concern for the corridor. No access shed scored above 15 percent of the standard of one external connection per acre (in addition to the connection to the corridor). Many access sheds, concentrated in Segment 3, had no external connections except for Wasatch Boulevard. Some very large access sheds have very low numbers of connections (such as Bengal Boulevard) while most access sheds are quite small in Segment 3 because of frequent accesses and poor connectivity. This poor external connectivity has implications for traffic, access management, and conflicts between local and through traffic (See Goal 1 discussion) but also for transportation choice. If the only exit of a neighborhood is onto one roadway with no pedestrian accommodation and low amounts of transit service, that presents a low amount of choice to travelers.

Figure 2.29: Corridor access-sheds



1/3 mi. 1 mi.

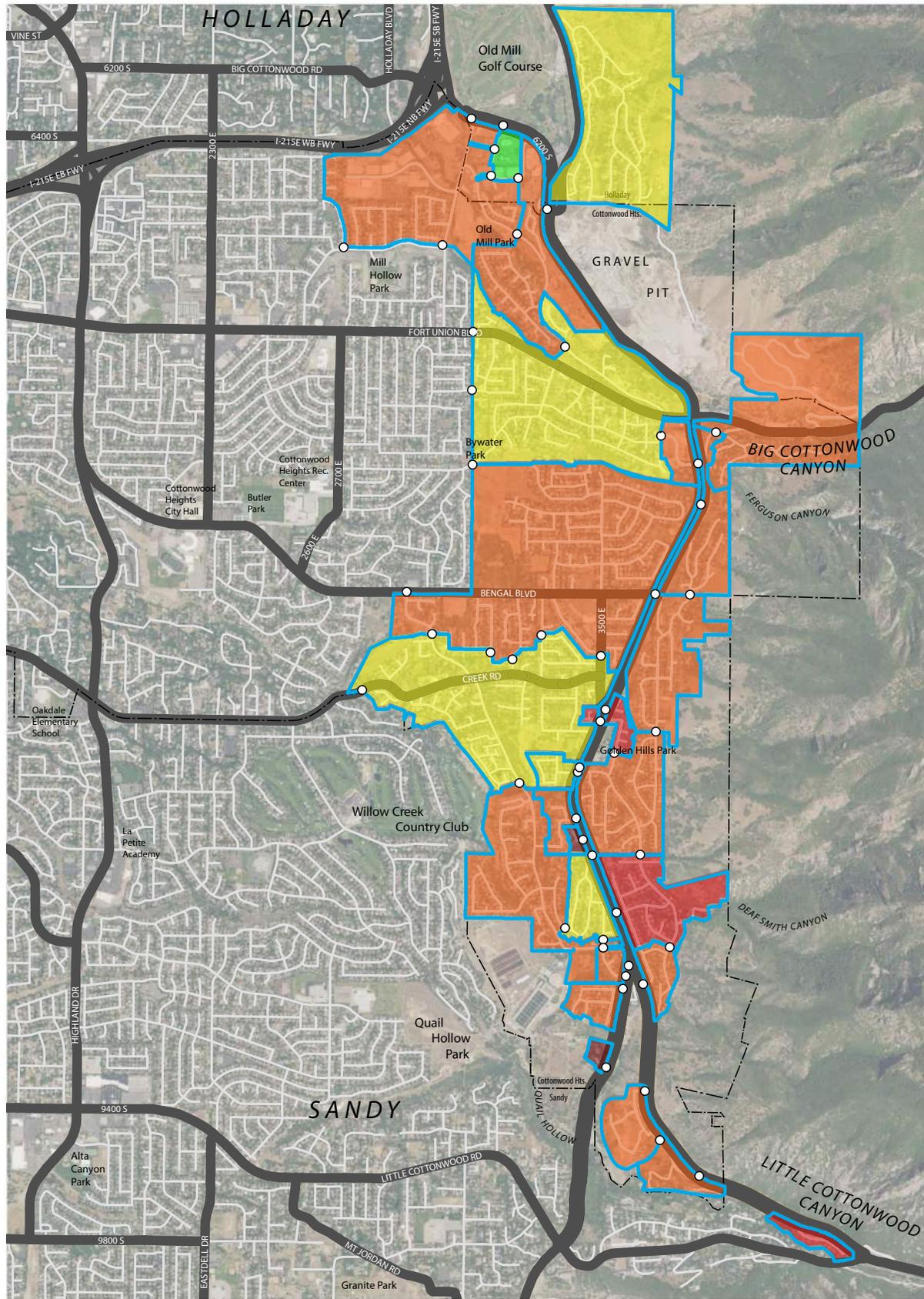
**WASATCH BOULEVARD**  
Master Plan

**ACCESS SHEDS**

- Access Sheds
- Access Points to Wasatch Blvd and between Access Sheds

**"Access shed"** describes an area that is served by an access point onto a street corridor. On corridors with many access points, access sheds are small; on corridors with few access points, access sheds are large. The concept of access sheds are important to Wasatch Boulevard because of the lack of connectivity among the access sheds and the resulting dependence on Wasatch Boulevard.

Figure 2.30: Internal connectivity of access-sheds



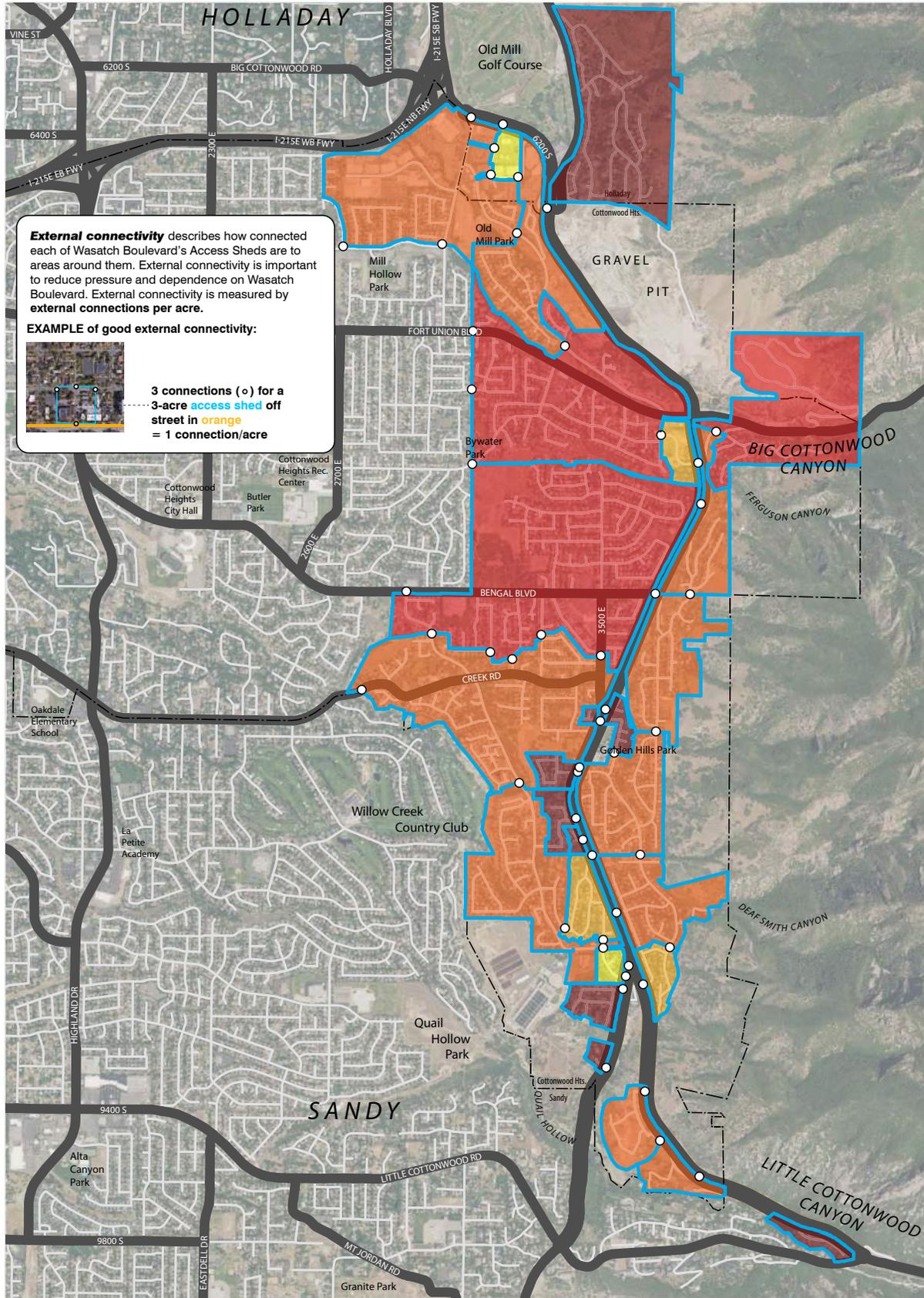
1/3 mi. 1 mi.

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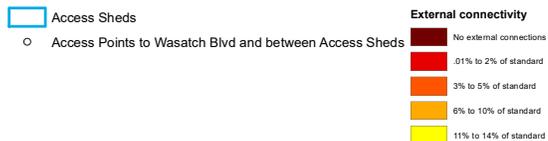
**ACCESS SHEDS: Internal connectivity**

- Access Sheds
  - Access Points to Wasatch Blvd and between Access Sheds
- Internal connectivity**
- 0% of standard
  - 25% to 49% of standard
  - 50% to 67% of standard
  - 68% to 99% of standard
  - 100% of standard

Figure 2.31: External connectivity of access-sheds



**ACCESS SHEDS: External connectivity**



## Frequency and likelihood of crashes along the corridor

### Overview of metric

This metric assesses how likely crashes are to occur along the corridor.

### Evaluation

The existing condition evaluation of this metric assesses the last five years of crash data available on the Wasatch Boulevard corridor (2012 to 2016). The project team developed maps of crashes along the corridor in this time period, categorized by type – rear-end, side swipe, single vehicle, and others. The team also analyzed pedestrian and bike related crashes as well as severe crashes.

The following are findings from this analysis:

- The yellow color in the “towers” of crashes along the corridor are rear-end crashes and often reflect congestion.
- The highest number of crashes are at the far

northern end of the corridor, which also has the most traffic.

- The Fort Union/Big Cottonwood Canyon intersection appears to have an abnormally high amount of crashes. There are high speeds at this intersection and lots of turning.
- The 9800 South-Little Cottonwood Road intersection also has an abnormally high number of crashes, as well as a large concentration of bicycle-related crashes.
- Bicycle and pedestrian related crashes are relatively light in the rest of the corridor.
- The frequent “towers” of crashes in Segment 3 reflect the frequent corridor access points.

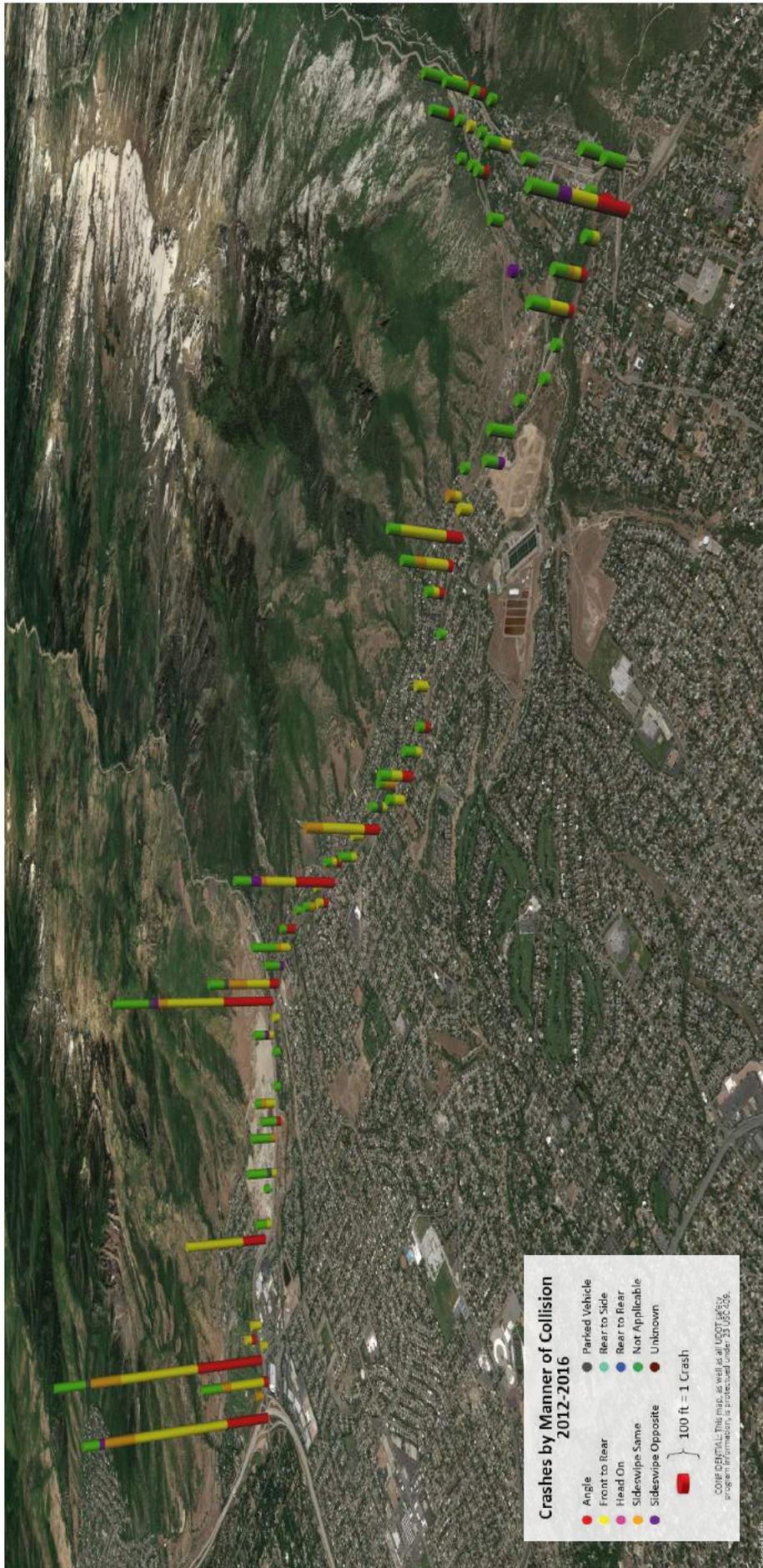
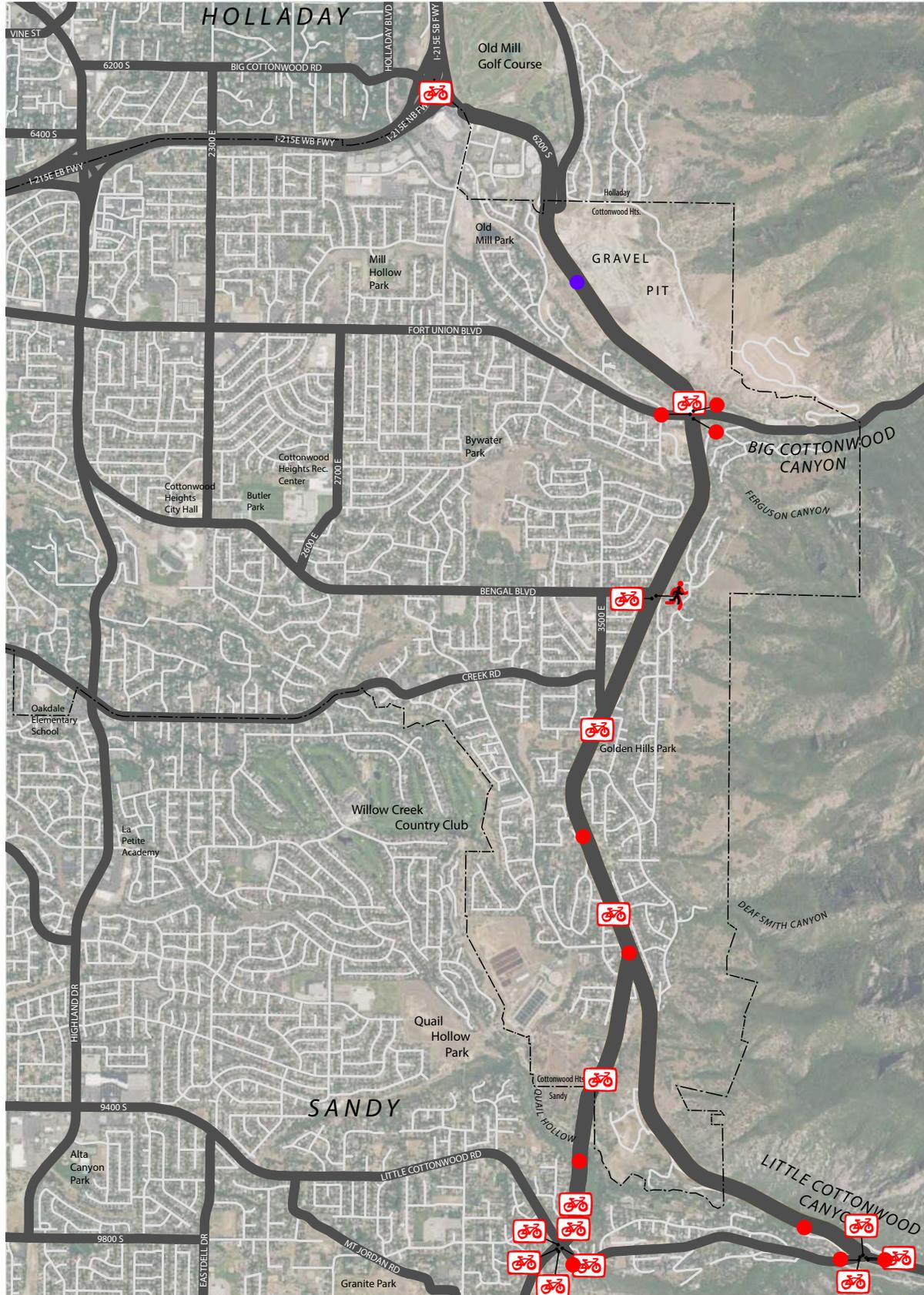


Figure 2.32: Number of Crashes by Location and Manner of Collision

Figure 2.33: Fatal, Severe, and Bicyclist and Pedestrian Related Crashes



**TYPES OF CRASHES**

2012 - 2016

- Fatal Crashes
- Severe Injury Crashes
- 🚶 Pedestrian-Involved Crashes
- 🚲 Cyclist-Involved Crashes

1/3 mi. 1 mi.

**WASATCH BOULEVARD**  
Master Plan

### Goal 3 Assets

- The streets in neighborhoods alongside the corridor mostly have sidewalks.
- At Golden Hills Park and the adjacent fire station, a wide path is buffered from the roadway and has shade and amenities.
- Many cross corridors that intersect with Wasatch Boulevard are walkable and bikeable – many of these are in Segment 3 and include Bengal Boulevard, 3500 East, and Creek Road.
- Wasatch Boulevard has a dedicated bike facility for most of the corridor, providing a space for many of the recreational cyclists for which Wasatch is a popular route.
- The Cottonwood Corporate Center is the one place along the corridor that has a convergence of transit routes and offers a relatively high level of transit service.
- The potential of a new mixed-use development at the Gravel Pit creates both the need and impetus for a quality pedestrian environment on Wasatch Boulevard along the Gravel Pit site.
- Some neighborhoods have street “stubs” that could facilitate connections to adjacent future development.

### Goal 3 Challenges

- The street lacks a pedestrian facility along the street, except in a few places.
- Vehicle speeds and volumes are high for most of the corridor.
- Development backs onto Wasatch Boulevard, creating an unpleasant wall or fence for people to walk along.
- The roadside area is poorly maintained.
- Intersections are very poor for pedestrians, even in the residential segments of the corridor.
- Crossings are far apart.
- With the high speeds and volumes of traffic on many segments of Wasatch Boulevard, a standard unbuffered bike lane is not likely the most appropriate facility for the street.
- The Wasatch Boulevard bike lane is not a consistent width, narrowing considerably in some segments of the corridor.
- The bike lane is not the right facility for attracting less-dedicated, experienced, and

skilled riders to bike the corridor.

- The corridor lacks wayfinding and amenities for pedestrians and cyclists.
- Transit service is very light on the Wasatch Boulevard corridor, becoming less intensive and almost nonexistent in the southern parts of the corridor. In general, the Wasatch corridor intercepts routes coming from elsewhere.
- Transit ridership appears to be low at the Cottonwood Corporate Center compared to other employment centers.
- The majority of the corridor “access sheds” are poorly connected internally.
- The external connectivity of the access sheds is even poorer in general than the internal connectivity.
- Some very large access sheds have very low numbers of connections (such as Bengal Boulevard) while most access sheds are quite small in Segment 3 because of frequent accesses and poor connectivity.
- This poor external connectivity has implications for traffic, access management, and conflicts between local and through traffic but also for transportation choice.
- The Fort Union/Big Cottonwood Canyon intersection appears to be prone to crashes.
- The 9800 South-Little Cottonwood Road intersection appears to be abnormally prone to crashes, especially those involving bicyclists.

### Goal 3 Opportunities

- Create a pedestrian facility along Wasatch Boulevard to connect the neighborhoods dependent on it, and to connect the good pedestrian corridors intersecting with it.
- Create a multi-use path for both pedestrians and slower bicyclists.
- Improve intersections for pedestrians and cyclists.
- Consider additional pedestrian crossings in residential areas.
- Because of the lack of north-south corridors in the southeast part of Salt Lake Valley, Wasatch Boulevard should take on a stronger transit role.
- Explore options to use a shoulder or lane flexibly between peak commute periods, peak

ski days, and other periods for transit, high capacity vehicles, and bicycles. In the future, consider this flex space for dedicated bus lanes (BRT).

- Improve bus stops, especially at potential hub areas.
- Increase street connections among neighborhoods.
- Increase active transportation connections among neighborhoods.
- Leverage amenities and residential areas in Segment 3 to create a highly walkable area.
- Use street stubs to connect neighborhoods to one another.
- Leverage Gravel Pit opportunity to create a development highly supportive of all modes, increasing walkability, transit service, bicycling environment.
- Promote transportation demand management with ski resorts and Cottonwood Corporate Center.
- Create more visibility and traffic calming at 9800 South–Little Cottonwood intersection to reduce likelihood of crashes.
- Create safer conditions at Big Cottonwood/ Fort Union intersection to reduce likelihood of crashes.
- Create safer conditions at northern end of corridor where traffic is heaviest.
- Reduce conflict points between users entering Wasatch Boulevard and through traffic in Segment 3.
- Reduce speeds on Wasatch Boulevard between the Big and Little Cottonwood Canyons through street design and posted limits.
- New pedestrian facilities should be designed in a way to minimize the sound impact of nearby traffic (street trees/landscaping, proximity to roadway).
- Implement the City’s Bicycle and Trails Master Plan to improve conditions for cyclists.

## 2.6: Goal 4 Enhance opportunities for recreation along the corridor.

### Amount and diversity of recreational opportunities

#### Overview of metric

This metric evaluates the amount and range of opportunities for different types of recreation along the corridor. This includes programmed recreation at facilities like parks, recreation centers, and golf courses, as well as outdoor recreation like hiking, jogging, and bicycling.

#### Evaluation

The study area contains a range of existing recreational amenities. As illustrated in Figure 2.34, these include ten community parks of various sizes and two golf courses. Other recreational assets include the various sports fields and indoor recreation facilities associated with local schools, which may or may not be available for public use. Regional opportunities include extensive tracts of public land, trails and similar facilities associated with Big Cottonwood Canyon, Little Cottonwood Canyon and the Wasatch Mountains and hillsides.

The area also includes a limited recreational trail system, including a small trailhead located near the upper reaches of the Golden Hills neighborhood, which accesses Ferguson Canyon. Wasatch Boulevard and other roadways are designated bikeways. Additional trails and bike lanes are planned for future development, which will help connect the study area neighborhoods with parks, commercial sites, civic uses, nearby canyons and regional destinations. Although the Bonneville Shoreline trail has not been formalized in the foothills to the east, it is slated to serve as the main spine of the regional recreational trail network in the area.

The distribution of parks and school fields is generally good, providing most residents access to a park or school within a mile. While a mile is generally not considered an easily walkable distance, it should be noted that the area was developed with a focus on accommodating the needs of vehicles, and less attention on the needs of pedestrians and cyclists.

Golf courses provide limited recreational value, as they are pay-to-play facilities. However, they are significant open spaces that provide visual relief from the dominant residential development pattern.

### Recreational access and connectivity

#### Overview of metric

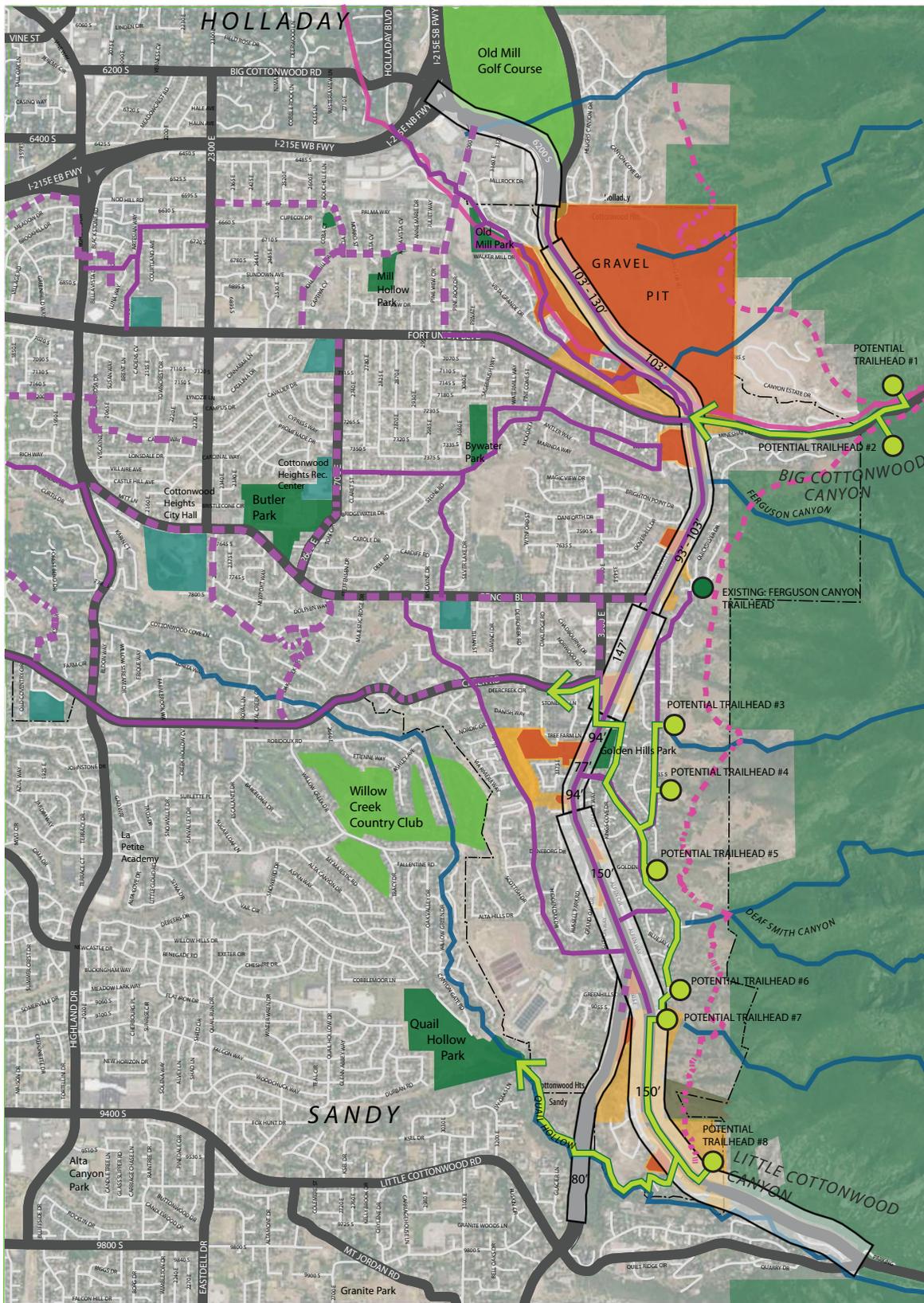
This metric evaluates the ability for people to access the recreation opportunities, and the degree to which those opportunities are connected to each other and to the community, especially for people traveling by active modes such as walking or bicycling.

#### Evaluation

Wasatch Boulevard is an important regional bicycle route, heavily used by recreational riders and to a lesser degree by commuters. However, the Wasatch Boulevard roadway is also a significant barrier that divides the study area. Pedestrians are particularly impacted when attempting to cross from one side of the fast-moving traffic. Little Cottonwood Creek, Big Cottonwood Creek area, and Fort Union Boulevard are also barriers, each forcing users to cross at designated crosswalks and at bridges, which limits access and increases travel distances.

The first segment of an east/west regional recreational trail is located along Big Cottonwood Creek west of Wasatch Boulevard. There are no comparable facilities for Little Cottonwood Creek, which is lined by residential uses that limit the easy implementation of a trail within the creek corridor.

Figure 2.34: Recreation Network



1/3 mi. 1 mi.

**WASATCH BOULEVARD**  
Master Plan

**PARKS, RECREATION, OPEN SPACE, AND TRAIL CONDITIONS/OPPORTUNITIES**

Parks	Golf Courses	Civic	Public Lands	Bike Lanes	Trails	Trailheads
			Forest Service	Planned	Existing	Potential
			BLM	Right of Way Widths	Potential Trail Linkages	

A small trailhead provides access to Ferguson Canyon; it is also a possible trailhead for Bonneville Shoreline Trail once it is established. Otherwise, trail access to the other ravines east of the study are undeveloped or informal, usually requiring access across private property. Daylighting of these drainages within developed areas is an interesting idea and should be carefully assessed, although their small size and location in well-developed neighborhood would be significant challenges.

Establishing trails up both Cottonwood canyons is a long-term challenge, as is the establishment of a coordinated trail along the lower extents of both drainages west of Wasatch Boulevard. Daylighting the smaller drainages west of the boulevard would be very challenging.

Potential neighborhood trailhead and trail access locations were assessed, as illustrated on the accompanying map and described below.

Potential Neighborhood Trailhead/Trail Access Point 1 - A designated access point/trailhead will be required on the north side of Big Cottonwood Canyon Road once the Bonneville Shoreline Trail is established. Options for providing safe connections to the south side of the roadway are uncertain.

Potential Neighborhood Trailhead/Trail Access Point 2 - A designated access point/trailhead is required on the south side of Big Cottonwood Canyon Road in proximity to the Bonneville Shoreline Trail crossing. Safe connections with the south side would be required.

Potential Neighborhood Trailhead/Trail Access Point 3 - Located south of an existing church, there is limited space to accommodate a large parking lot and trailhead. A small parking lot is feasible, which could be more appropriate for a site within a well-established residential neighborhood. An access point is also an option. The 42-acre site is for sale.

Potential Neighborhood Trailhead/Trail Access Point 4 - This site is located at the end of a small turnout road. It has similar potential as Site 3, with the exception that homes are located on the north and south sides of the roadway, which are potential conflicts with implementation.



Potential Neighborhood Trailhead/Trail Access Point 3



Potential Neighborhood Trailhead/Trail Access Point 5



Potential Neighborhood Trailhead/Trail Access Point 7

Potential Neighborhood Trailhead/Trail Access Point 5 – This is a relatively large undeveloped area with similar potentials as Site 3. The property is currently listed for sale.

Potential Neighborhood Trailhead/Trail Access Point 6 – this is a large undeveloped lot located in a well-established neighborhood. Construction of a parking lot would be challenging, although an access point is possible.

Potential Neighborhood Trailhead/Trail Access Point 7 – Located near the access to a minor drainage, it has similar potential as Site 3. Construction of a parking lot would be difficult, although an access point is feasible. The southern portion is for sale, which leads to a 127-acre plot.

Potential Neighborhood Trailhead/Trail Access Point 8 – A designated access point/trailhead will be required on the north side of Big Cottonwood Canyon Road once the Bonneville Shoreline trail is established.

## Goal 4 Assets

- 10 community parks, including Golden Hills Park directly on the corridor and Old Mill Park, Mill Hollow Park, Bywater Park, Butler Park, and Quail Hollow Park within the greater corridor area.
- Regional recreation attractions of public land to the east of the corridor.
- Big Cottonwood Creek drainage to the west of Wasatch Boulevard is an emerging recreational corridor, with a shared use path connecting the planned Knudsen Park in Holladay, Old Mill Park, and the mouth of Big Cottonwood Canyon.
- Most residents have access to a park within a mile of their homes.
- The Willow Creek and Old Mill golf courses.
- Attraction for recreational cyclists riding on Wasatch Boulevard as part of the larger regional network.
- Access to the greater Cottonwood Canyon areas.
- Bikeable corridors leading to Wasatch Boulevard, such as Bengal Boulevard and Creek Road.
- Wide right-of-way in most parts of the corridor
- “Blank slate” of the Gravel Pit area to integrate recreation.
- BLM-owned parcel along Little Cottonwood Road.
- Much of the vacant land in the study area is likely too steep for development; these areas could become recreational corridors

## Goal 4 Challenges

- Many recreation opportunities are disconnected from one another.
- Overcoming the physical barrier of Wasatch Boulevard for pedestrian and cycle access.
- High vehicle speeds on Wasatch Boulevard is a challenge for attracting a wide range of cyclists on the corridor.
- The cost of acquiring additional trailhead and access points to the future extension of Bonneville Shoreline Trail.
- A lack of neighborhood parks east of Wasatch Boulevard except for Golden Hills Park.

## Goal 4 Opportunities

- Incorporation of safe pedestrian and cycle crossings along Wasatch Boulevard route will greatly enhance active transit options.
- A safer, more comfortable pathway along Wasatch Boulevard.
- A linear park along some segments of the corridor, with either/both more natural areas and more active recreational areas.
- Additional trailheads accessing the planned Bonneville Shoreline Trail and Wasatch Mountain drainages east of the corridor such as Deaf Smith Canyon.
- Extension and enhancement of emerging Big Cottonwood Creek recreational corridor into Big Cottonwood Canyon, Wasatch Boulevard Corridor, and/or the greater Gravel Pit area.
- Developing the Gravel Pit as a recreational nexus, where trails such as the Bonneville Shoreline Trail and Big Cottonwood Trail meet, potential recreational activities are featured, and shuttles to winter and summer recreational hot spots pick up passengers.
- Grade-separated crossings to improve east-west recreation linkages.
- Recreational node at Golden Hills Park and the Swamp Lot, including a grade-separated pedestrian/bike connection across Wasatch Boulevard, and trailheads at the parking lots at both facilities. If the Swamp Lot and areas to the west are redeveloped, incorporation of trail and trailhead amenities should be required.
- Upgrade of the established streetside Ferguson Canyon trail in the Golden Hills Neighborhood to serve as a primary connection route to the Bonneville Shoreline Trail.
- Stronger connection to Quail Hollow Park via Quail Hollow and an access on Wasatch Boulevard and Little Cottonwood Road.
- Develop vacant land south of Bywater Park as an extension of the park with connections among the neighborhoods.
- Recreational trailhead, staging area and potential recreational use of BLM-owned parcel on Little Cottonwood Road.
- Daylighting Wasatch Mountain creek drainages through the corridor neighborhoods.

## 2.7 Goal 5: Preserve and enhance the scenic and natural qualities along the corridor.

### Preservation and enhancement of key views from Wasatch Boulevard and surrounding areas.

#### Overview of metric

Understanding the existing visual experience and opportunities as one travels on the highway is the focus of this assessment. The accompanying photo boards document key views and visual resources associated with the boulevard.

#### Evaluation

The Wasatch Mountains, as the dominant scenic feature of the Salt Lake Valley, is an iconic backdrop of the corridor. At the same time, perched high above the valley floor, Wasatch Boulevard also provides unparalleled viewing opportunities of the valley below. Views toward Utah Lake, Great Salt Lake, the Oquirrh Mountains and the Salt Lake City skyline are particularly clear from this location.

The visual experience along the roadway is



Views from Wasatch Boulevard feature both dramatic vistas of both mountains and the Salt Lake Valley.

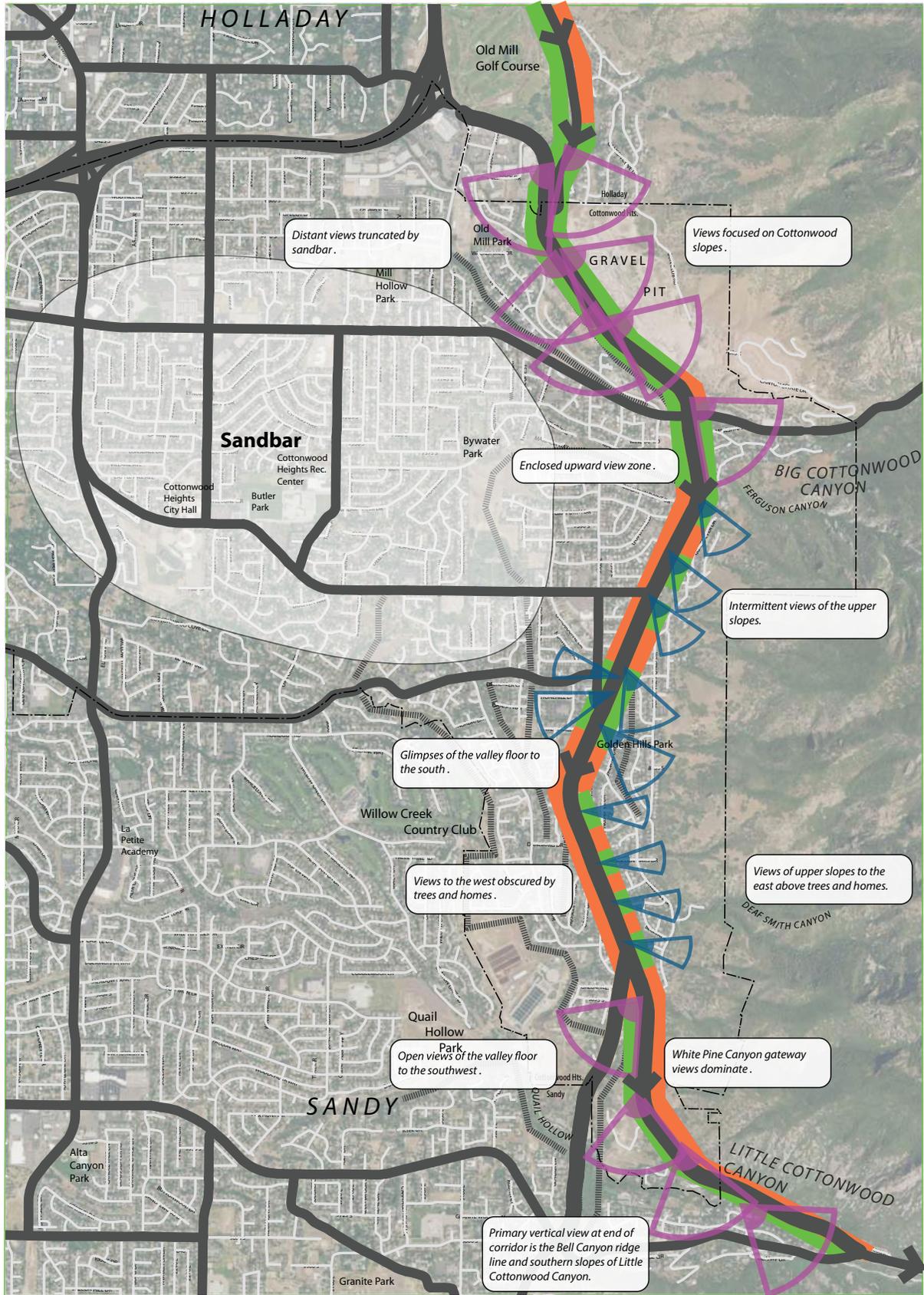
diverse, providing open vistas to the valley floor, focused views of peaks and ridges of the Wasatch Mountains, and views enclosed by trees and built forms that are focused on the roadway corridor itself. There are many areas where views are focused on commercial and industrial uses, as well as open views of a golf course and parking facilities.

As illustrated in the accompanying maps, the visual experience is significantly different depending on the direction one is traveling. In general, south-directed views are more open and expansive north of Big Cottonwood Canyon, becoming enclosed from the canyon crossing to the highpoint ridge 1/3 mile south of the canyon, and gradually opening with good westward views as one gently downward to the south, and concluding with dramatic views of the Bell Canyon ridgeline and Little Cottonwood Canyon.

In contrast, north-directed views are open to the valley floor near the mouth of Little Cottonwood Canyon, becoming enclosed to the east and west as one moves gently upward toward the south. Small westward openings between trees, vegetation, hills and built forms provide focused viewing windows of the valley floor to the west, with the steep Wasatch Mountains generally too high to be perceived. As one approaches the highpoint just south of Big Cottonwood Canyon, views of the near and far Wasatch ridgelines dramatically unfold, with open views of the valley floor, Great Salt Lake and distant mountain ranges dominating as one continues downward to the canyon crossing. North-directed views from Big Cottonwood Canyon to the north project limits are focused on the adjacent land uses to the east, with valley views punctuated by taller buildings and eventually obscured as one approaches the I-215 on-ramp.

As the highway is modified and improved, steps should be taken to enhance existing views, and reduce visual blockages by potential walls, trees and vertical edge treatments. West views highly impacted by development, natural landforms and vertical features such as trees and walls along the edges of the right-of-way.

Figure 2.35: Viewshed Analysis Traveling South

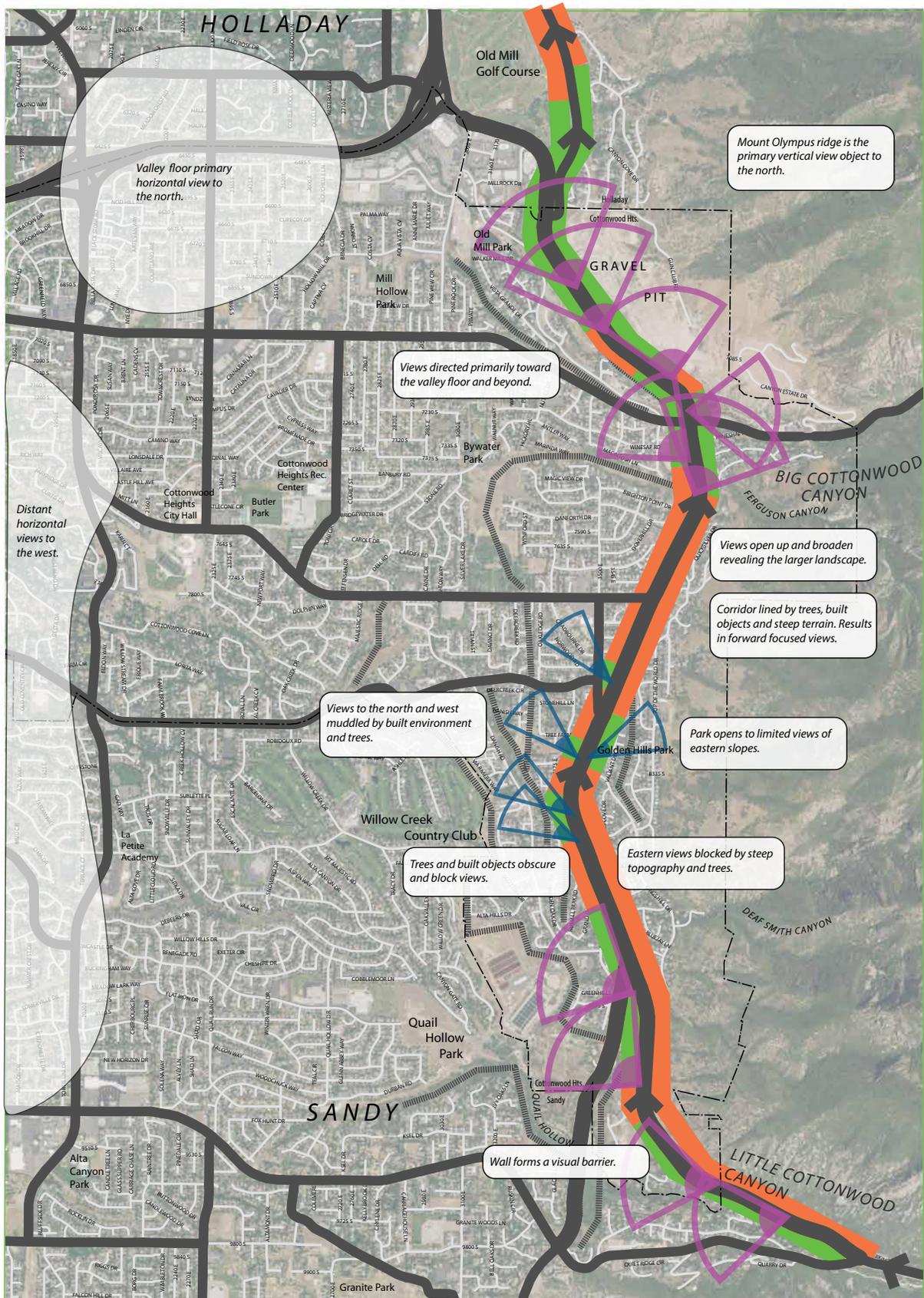


**CORRIDOR VIEWSHED ANALYSIS - TRAVELING SOUTH**



- ◁ Open Viewshed
- ▬ Visual Blockages and Barriers
- ▷ Focused Viewshed
- ▬ Visual Openings
- Direction of Travel

Figure 2.36 : Viewshed Analysis Traveling North



**CORRIDOR VIEWSHED ANALYSIS - TRAVELING NORTH**



## Amount, quality, and connectivity of preserved natural open spaces.

### Overview of metric

This metric evaluates the extent to which natural areas along the corridor are intact, have been preserved, and are connected.

### Evaluation

While most of the area alongside Wasatch Boulevard has been developed, substantial natural areas lie nearby the corridor. There are four main types of natural landscapes relevant to the corridor. The first is the steeply rising Wasatch Mountains and canyons to the east. The first swath of this area is privately owned, and further east is managed by the U.S. Forest Service. This area is contiguous and intact for the most part, though does not have any special protection status.

The Wasatch Boulevard corridor has a varying relationship to this landscape. In Segment 1, the Gravel Pit site lies between Wasatch Boulevard and the Wasatch Mountains. This relationship highlights the opportunity of a future Gravel Pit project to weave the Wasatch Mountain landscape into the development. In Segments 2 and 3, Wasatch Boulevard bows away from the mountains, with consistent residential neighborhoods lying in between. The interface between these suburban neighborhoods and the Wasatch Mountains is a nearly straight north-south line that runs in contrast to the natural contours of the landscape. Finally, in Segment 4, the Wasatch Mountains interface directly with Wasatch Boulevard in the form of a foothill landscape with gentle hillsides and stands of Gambel oak. In this segment, the land status of the Wasatch is more complex, with the Bureau of Land Management owning a small piece of property and small segments of natural foothills within the city limits that are in private ownership; these are classified by the City of Cottonwood Heights as sensitive land. Overall, while this landscape is intact and relatively well preserved, it is not well connected to much of the Wasatch Boulevard corridor, and the neighborhoods around it.

The second significant natural landscape in the corridor comprises the major creek drainages

of Big and Little Cottonwood Canyons. Both Cottonwood creeks emerge from their canyons and cross the Wasatch Boulevard corridor still above ground, in significant open space in a semi-natural, semi-protected state. Big Cottonwood Creek runs through the “Old Mill” area below Wasatch Boulevard before running through Cottonwood Corporate Center and then into Holladay. Little Cottonwood Creek runs alongside Wasatch Boulevard and residential areas before running through the Quail Hollow area and re-entering neighborhoods. In both cases, stretches of the Cottonwood creeks create corridors of connection but they are not complete, and the riparian quality of the creek corridors varies.

The third natural landscape is the smaller drainages that descend from the Wasatch Mountains to the neighborhoods along the Wasatch Boulevard corridor. These include Ferguson Canyon, Deaf Smith Canyon, Heughs Canyon in Holladay, and Bells Canyon in Sandy. These canyons have trails that range from relatively informal to well-traveled. These drainages primarily run underground once they reach development, and so are not intact, preserved or connected, except above the development of Salt Lake Valley.

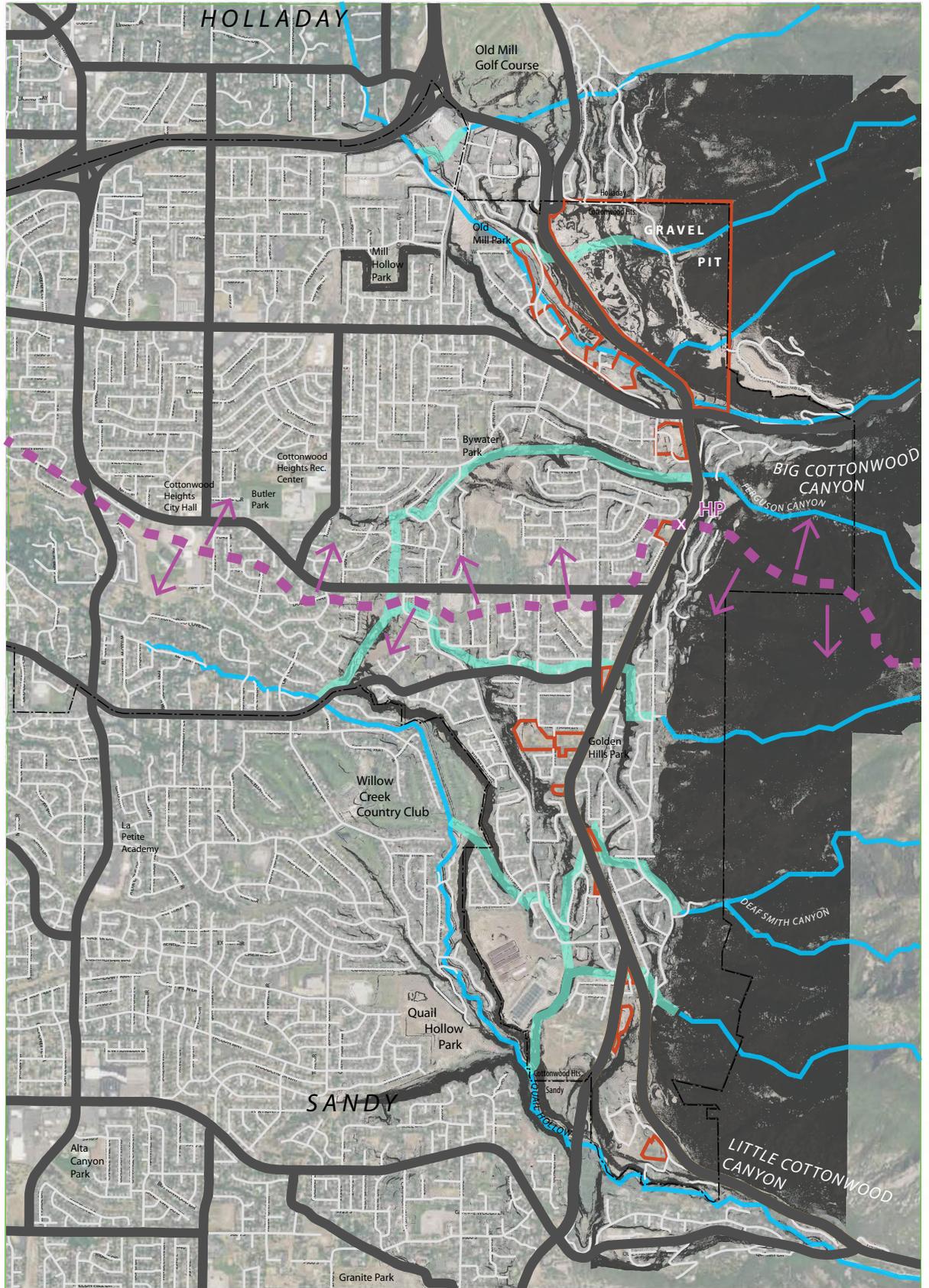
Finally, small “scraps” of natural foothill area dot the corridor, especially where land is too steep for development.

The Wasatch Mountains to the east of the corridor are likely the most intact natural landscape in the vicinity of the corridor, but their preservation is not as robust as it could be, and they are not well connected to other of the types of landscapes explored here due to the development along them.

The Cottonwood creeks, meanwhile, provide potentially the best opportunity to extend the Wasatch Mountains into the corridor area by increasing connection to the rest of the mountains, increasing protection and restoring the riparian areas.

Restoring, protecting and connecting the smaller drainages may be the most difficult challenge for the corridor’s natural landscapes, however this could provide some benefit to the neighborhoods.

Figure 2.37: Landform and Key Environmental Conditions



1/3 mi. 1 mi.

**WASATCH BOULEVARD**  
Master Plan

**Analysis of Landform and Key Environmental Conditions**

- Watershed Boundary Between Big and Little Cottonwood Creeks
- Direction of Water Flow
- Streams (Possible Trail Corridors)
- Buried Streams (Possible Daylighting Opportunities)
- Steep Slopes
- Topographically Favorable Opportunity Zones

Connecting the small spots of open space along the corridor and potentially combining them with other natural features such as the Cottonwood creeks or smaller drainages could create a natural network of value.

### **Aesthetics of street itself: greening, human scale, local character.**

#### **Overview of metric**

This metric evaluates the aesthetic aspects of Wasatch Boulevard itself. These include greening, the proliferation of trees and landscape on the corridor; human scale, the orientation of corridor to people; and the sense of local character.

#### **Evaluation**

The major asset the street currently has is in its greenery: Segments 2, 3 and 4 have different degrees of foothill Gambel oak and other tree stands alongside the roadway.

There are few human-scale aspects of the corridor, and the major challenge for this is the lack of a pedestrian facility. The one somewhat human-scale stretch is in Segment 3 at Golden Hills Park, where the park, fire station, and residences fronting the street create a sense of place that is at odds with the fast speeds of the traffic. Segment 1 is an especially inhumane environment with the quarrying activities and five lanes of fast moving traffic.

As the roadway is improved, landscape and streetscape treatments should be carefully executed to maintain a connection with the natural landscape and to enhance positive views. The treatment of the corridor edges is particularly important, including the placement of trees, berms, walls and other vertical elements. A general approach could be to do no harm, and to carefully analyze the impact of various design options as they relate to maintaining natural connections and views.



*Golden Hills Park provides a rare people-friendly environment directly on Wasatch Boulevard.*



*While Wasatch Boulevard's pedestrian environment is generally poor, the corridor benefits from greenery for much of its length.*



*Homes fronting directly on Wasatch Boulevard help create a human scale to the street.*

## Goal 5 Assets

- The wide variety of views along the corridor – from the mountains to the valley to the buildings along the street.
- The ability of views along the corridor to open up and close in as one moves along it.
- Specific iconic views: Mount Olympus to the north; Salt Lake Valley to the north; Bells Canyon Ridge to the South.
- The road right-of-way itself, which can be kept open to preserve key views along the corridor.
- Four types of natural landscapes: the Wasatch Mountains, the Cottonwood creeks, smaller Wasatch drainages, and spots of open space on the corridor.
- The connective quality of the Cottonwood creeks above and below Wasatch Boulevard.
- The intact quality of the Wasatch Mountain landscape above the corridor.
- The connection between the Wasatch Mountains and Little Cottonwood Creek at the southern end of the corridor.
- The potential of Wasatch creeks underneath the corridor neighborhoods.
- The presence of Gambel oak stands and other landscape along the corridor.
- The relative human scale of the Golden Hills Park/Swamp Lot area of the corridor.

## Goal 5 Challenges

- Balancing the desire to buffer visual and environmental impacts of traffic with desire of maintaining views and enhancing the overall visual experience as one travels along the highway.
- Some walls along the roadway block views.
- The disconnection of the Wasatch Mountain landscape from other natural features in the corridor area.
- The preservation status of the Cottonwood creeks below Wasatch Boulevard.
- The undergrounding of the smaller Wasatch drainages in the corridor neighborhoods.

## Goal 5 Opportunities

- Utilization of appropriate regional landscape design approaches to extend the natural hillside landscape into the roadway and over the highway corridor.
- Use of appropriate materials to help improve the natural and visual experience of the roadway.
- Protect key viewsheds
- Install medians throughout the corridor
- Frame key views
- Preserve and restore Cottonwood creeks below Wasatch Boulevard.
- Application of context-sensitive design techniques as approved by UDOT and FHWA.
- Develop the Gravel Pit site to integrate and connect the Wasatch Mountain landscape and the Big Cottonwood Creek corridor.

## 2.8: Goal 6 Promote and prioritize sustainable solutions to canyon access at a local and regional scale.

The Mountain Accord process established a Preferred Scenario that identified a set of transportation objectives for Big and Little Cottonwood Canyons. They include:

- 8,000 vehicles in the canyons on peak days (down from 11,000)
- 2.2 people per car (up from 1.8)
- 20 percent of people riding transit in the winter (up from 4 to 5 percent)
- The creation of summer transit
- 5,400 to 5,900 parking spaces in the Valley (up from 2,900)

The role of Wasatch Boulevard in achieving these objectives is to facilitate more people parking and riding transit and getting in carpools. Increased vehicular capacity is not identified as an objective, and reducing the number of vehicles in Little Cottonwood Canyon is at odds with the plan to add a second southbound general purpose lane to Wasatch Boulevard south of Bengal Boulevard.

The performance measures for this goal measure Wasatch Boulevard's contribution toward achieving these objectives, through more and better park and ride centers, increased canyon transit service, and ease and effectiveness of enforcement and maintenance.

### Degree to which need for park and ride spaces is met on the corridor

#### Overview of metric

This metric assesses the degree to which the need for park and ride spaces are met relative to the numbers of spaces on the Wasatch Boulevard corridor. The evaluation leans on the conclusions of the 2012 Canyons Parking Study.

#### Evaluation

Currently, there are a total of 460 spaces in the four park and ride lots along the corridor – the Wasatch/6200 lot; the Big Cottonwood Canyon mouth lot; the “Swamp” lot at 3500 East; and the Little Cottonwood Canyon mouth lot. In addition, the lot on Fort Union Boulevard just west of

Wasatch Boulevard contains 43 spaces, for a total of 500 spaces.

UTA data indicate that the four park and ride lots are between 78 and 119 percent full on Saturday afternoons in the winter, with the park and ride lots at the mouths being over capacity.

There is a clear need for more parking spaces in the valley and Wasatch Boulevard presents an opportunity to add more spaces near a regional freeway and close to the canyons at points served by canyon transit. The 2012 Canyons Parking Study recommended an increase of approximately 850 formal parking spaces along the greater Wasatch Boulevard corridor.

### Canyon transit service and ridership

#### Overview of metric

This metric assesses the level and quality of canyon transit service in the winter (which exists) and the summer (which does not), especially as it integrates with the Wasatch Boulevard corridor.

#### Evaluation

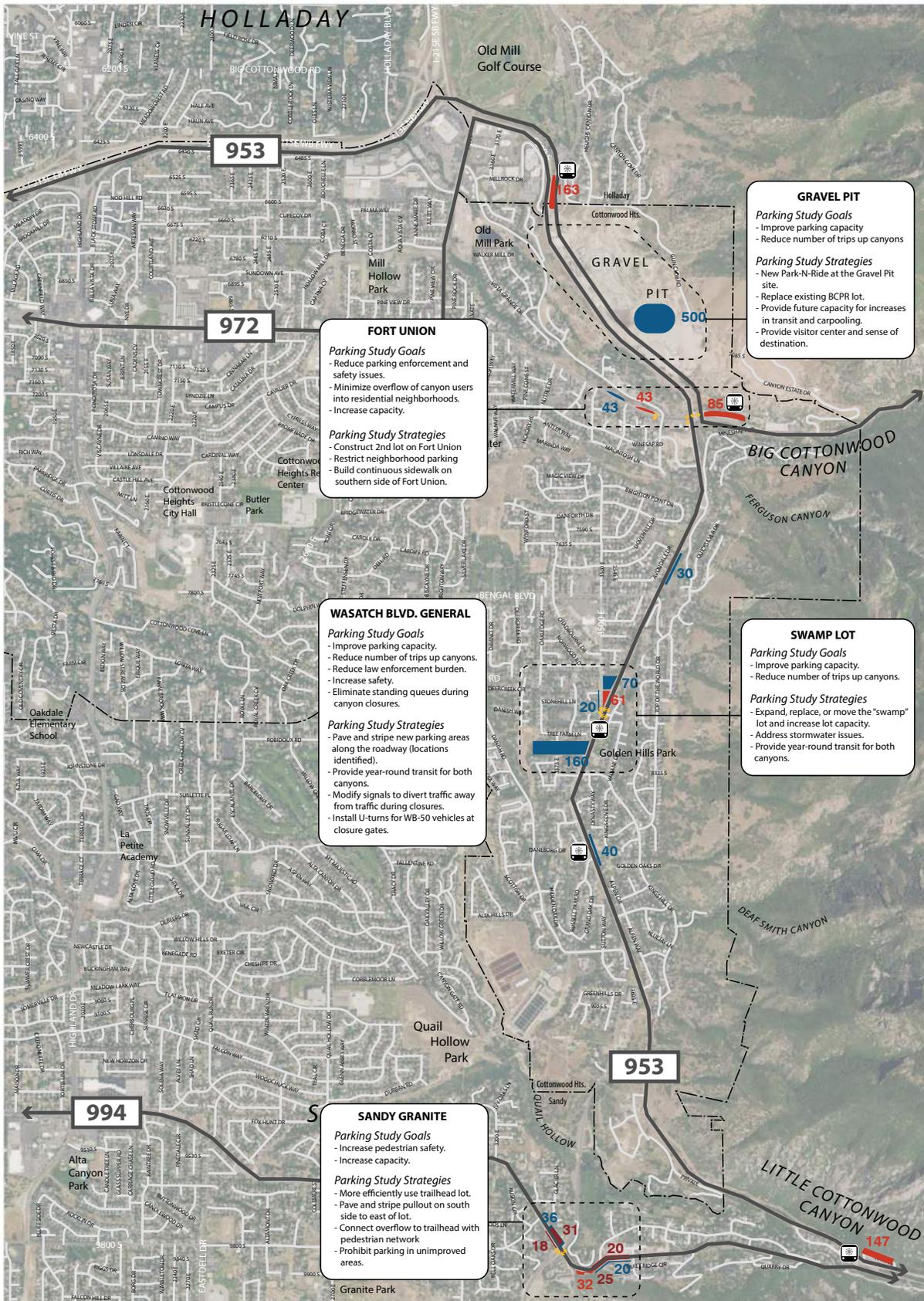
In the 2016-17 ski season, UTA changed its canyon transit service by reducing the number of routes to three and increasing frequency on those routes. The agency plans to continue a similar scheme for the upcoming 2017-18 season. The routes are:

953: Runs up Fort Union, up 3000 East, then down 6200 South/Wasatch Boulevard to the top of Little Cottonwood Canyon, serving all four Wasatch Park and rides.

972: Runs along I-215 to 6200 South/Wasatch Boulevard and up Big Cottonwood Canyon, serving the Wasatch/6200 South and Big Cottonwood mouth park and rides.

994: Runs up 9400 South and up Little Cottonwood Canyon, serving the Little Cottonwood Canyon park and ride.

Figure 2.38: Canyon Parking and Transit Network



### CANYON PARKING & TRANSIT NETWORK

- 20 Existing formal parking area / number of spaces
- 20 Existing informal parking area / number of spaces
- 20 Parking Study recommended new or expanded lot/ number of spaces
- 9XX 2016-17 Ski Bus route
- Corridor Ski Bus stop
- Striped/signalized pedestrian crossing at transit stop areas



The ski bus system is well-used. In the 2016-17 season, the agency saw a 30 percent increase in ridership. On an average Saturday, the 953, 972, and 994 have 750, 1222, and 1004 boardings respectively. This is a total of 2,976 boardings, and assuming each person boarded on the way up and down, this represents nearly 1,500 trips by transit out of the 20,000 per peak ski day, or about 7.5 percent, which is an increase from the 4 to 5 percent.

On the 953 route, which serves all four Wasatch corridor park and rides, approximately a third of riders boarded along the Wasatch corridor. For the 972, which serves two of the park and rides, that figure was about a quarter. The boardings at the park and rides, totaling 672 per day, are overall 146 percent of the number of parking spaces, indicating some turnover over the course of the day transferring, and/or drop-off.

These numbers show high demand for canyon transit and that with parking lots at bus stops at or over capacity, there is likely room to put more riders on these buses if more parking spaces are provided. With the current route system, developing more and better park and ride facilities could put more riders on buses from the Wasatch corridor.

Currently, no summer transit service is provided up the canyons. Much of the constraint is due to the dispersal of summer canyon destinations.

## Quality of transfer points/hubs

### Overview of metric

This metric assesses the quality of the transit hubs at the base of the Cottonwood Canyons on the Wasatch Boulevard corridor. Evaluation is based on the quality of park and ride lots as bus stops as well as other elements such as pedestrian access and complementary land uses.

### Evaluation

Wasatch Boulevard is home to four park-and-ride facilities that have the necessary pieces of these facilities – parking spots, circulation, waiting area, some transit information, shelters. However, these serve only as “bare bones” facilities where one can park and get on the bus. The four park and ride facilities scored as poor to moderate in the bus

stop evaluation. The high speed traffic on Wasatch Boulevard and other streets also challenge the park and ride experience.

While these facilities currently do the job, there is so much demand for parking and riding up the canyons and this will be a central part of the Wasatch corridor in coming decades that better hubs more integrated with surrounding land uses will create a better corridor overall. Stronger hubs along the Wasatch corridor could also potentially create a critical mass for effective summer transit. They could also synergize with neighborhood amenities in village-like settings.

## Ease/effectiveness of maintenance and enforcement

### Overview of metric

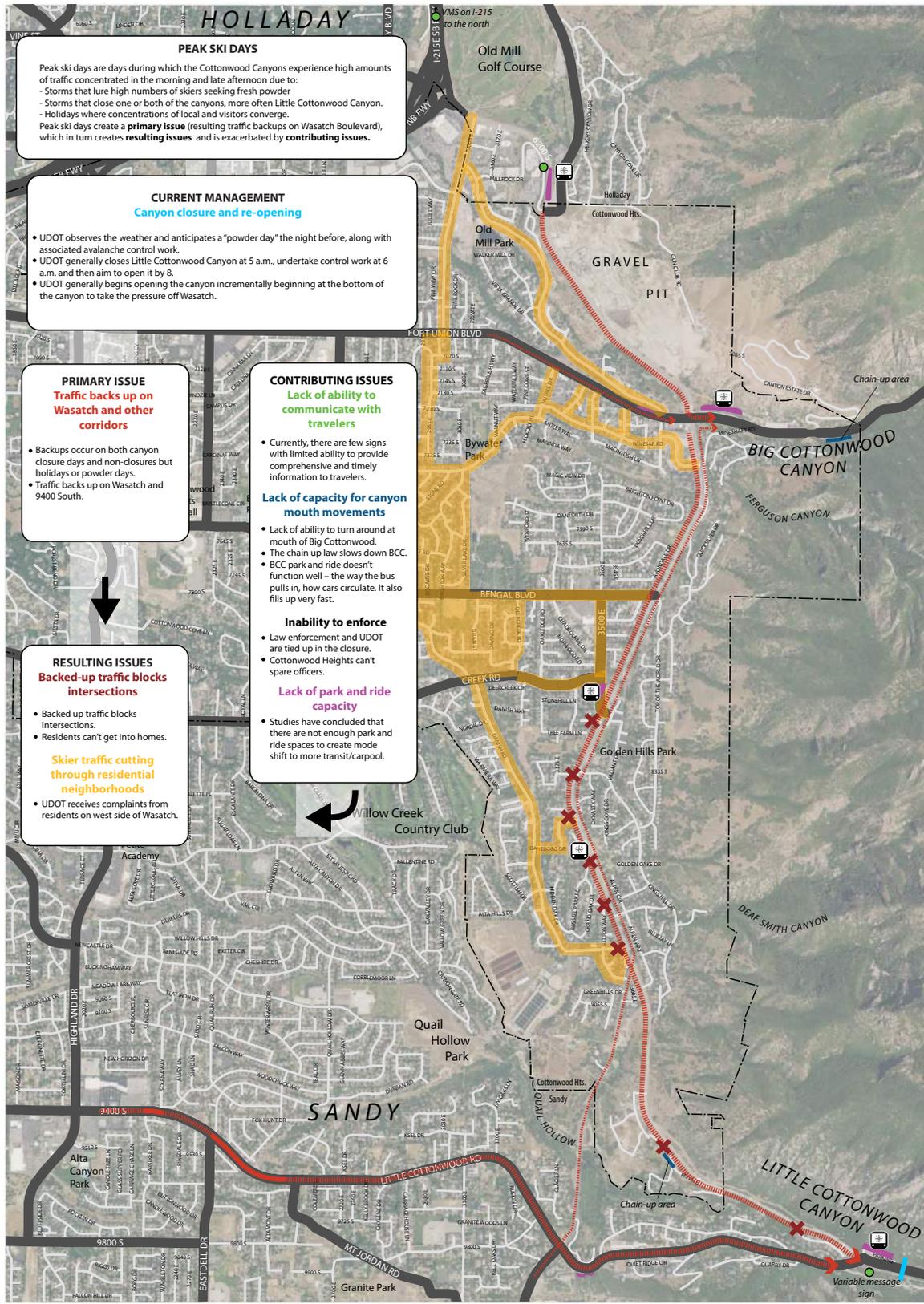
This metric assesses the ability for UDOT, Cottonwood Heights and other entities to enforce the laws that govern use of Wasatch Boulevard for Wasatch canyon access.

### Evaluation

UDOT struggles with enforcement of road laws and maintenance of the corridor in several different ways. First, motorists parking to ride the UTA ski bus park on stretches of Wasatch Boulevard and connecting streets where parking is illegal. Second, motorists block intersections critical to local residents accessing their homes. Third, the ability to enforce chain restrictions and keep traffic moving when autos need to turn around in the chain up area is often problematic, especially in Big Cottonwood Canyon; motorists often do not use the chain up area in Little Cottonwood Canyon. Finally, Wasatch Boulevard can be difficult to plow because it is clogged with traffic for much of the day during major snow storms. UDOT and Cottonwood Heights lack the resources to deal with these enforcement, operational, and maintenance issues. In addition, it is difficult to communicate with motorists heading to the canyons due to the overall lack of variable message signs.

Cottonwood Heights City and UDOT should work cooperatively to improve enforcement on the corridor by exploring solutions to reduce canyon traffic delays.

Figure 2.39: Peak Ski Day Management and Issues



## Goal 6 Assets

- The four park and ride lots on the corridor – Wasatch/6200 S.; Big Cottonwood Mouth; the Swamp Lot; and Little Cottonwood mouth, which together offer approximately 460 spaces.
- Additional park and ride lots further west that do not fill up nearly as much.
- Extra Wasatch Boulevard right-of-way and pavement that offers potential formalized additional parking areas.
- A consolidated ski bus network that debuted in the 2016-17 season to a successful ridership increase.
- Roughly 1,500 trips by transit out of the 20,000 per peak ski day, or about 7.5 percent, which is an increase from the 4 to 5 percent assessed in the latest Mountain Accord study.
- High demand for canyon transit in the winter.
- The canyon park and ride facilities have basic facilities such as shelters and pedestrian crosswalks for riders to cross streets.
- The corridor has some ability to communicate with motorists going to the canyons, along I-215 and near the Wasatch/6200 S. park and ride.
- The chain-up areas do provide a place for motorists to pull over and put chains on.

## Goal 6 Challenges

- The park and rides along the Wasatch Boulevard corridor are generally at or near capacity on winter weekends, with the two at the canyon mouths over capacity.
- Many parking spots, especially in the 9800 S. intersection/Bell's Canyon trailhead area, are informal.
- Riders are less likely to use park and rides to the west, even though they are served by the ski buses and generally have capacity.
- Means of communicating which lots have available space is limited.
- There is no summer transit service and challenges on how to create it with less concentrated destinations.
- Park and ride facilities are generally utilitarian and often bare-bones, with limited connections to complementary land uses or other facilities.
- UDOT struggles with traffic and parking enforcement on peak ski days, including blockage of residential accesses, illegal parking, and use and operations at chain-up areas.

## Goal 6 Opportunities

- Create new park and ride facilities at carefully specified locations.
- Explore small near-term parking additions as recommended by 2012 canyons parking study.
- Utilize Gravel Pit development potential to promote creation of a major intermodal park and ride hub at or near the site that satisfies much or all of the park and ride demand for the corridor and consolidate other existing park and ride lots.
- Seek to reduce need for parking in the first place by capturing trips internally within Gravel Pit or other new development by building lodging or housing for visitors and employees.
- Create park and ride facilities integrated with complementary land uses such as services and eating/drinking establishments.
- Improve pedestrian networks around park and ride facilities.
- Explore higher transit frequencies as park and ride capacity increases.
- Explore transit-only lane for ski days on Wasatch Boulevard.
- Install more variable messaging boards.
- Improve other means of communications with ski travelers.
- Improve geometry at canyon mouths to allow for chain up and turn around.
- Stripe warnings not to block residential accesses along Wasatch Boulevard.
- Regulate access to neighborhoods to solve blockage issue.
- Business parking to be used as ski parking for transit.
- Explore road connectivity within neighborhoods to provide residents with alternative ways in and out of their homes, especially on peak ski days.
- Explore the promotion and implementation of year-round transit designed around seasonal demand.
- Improve coordination of road closures between the City, UDOT, and adjacent cities to prevent negative impact to neighborhoods along the corridor.
- Drivers should be encouraged to avoid excessive idling. The City and UDOT should explore options to promote an idle-free corridor.

# 2.9 Goal 7 Identify potential land uses and locations for new development or redevelopment.

## Amount of opportunity for new development (commercial s.f. and residential units)

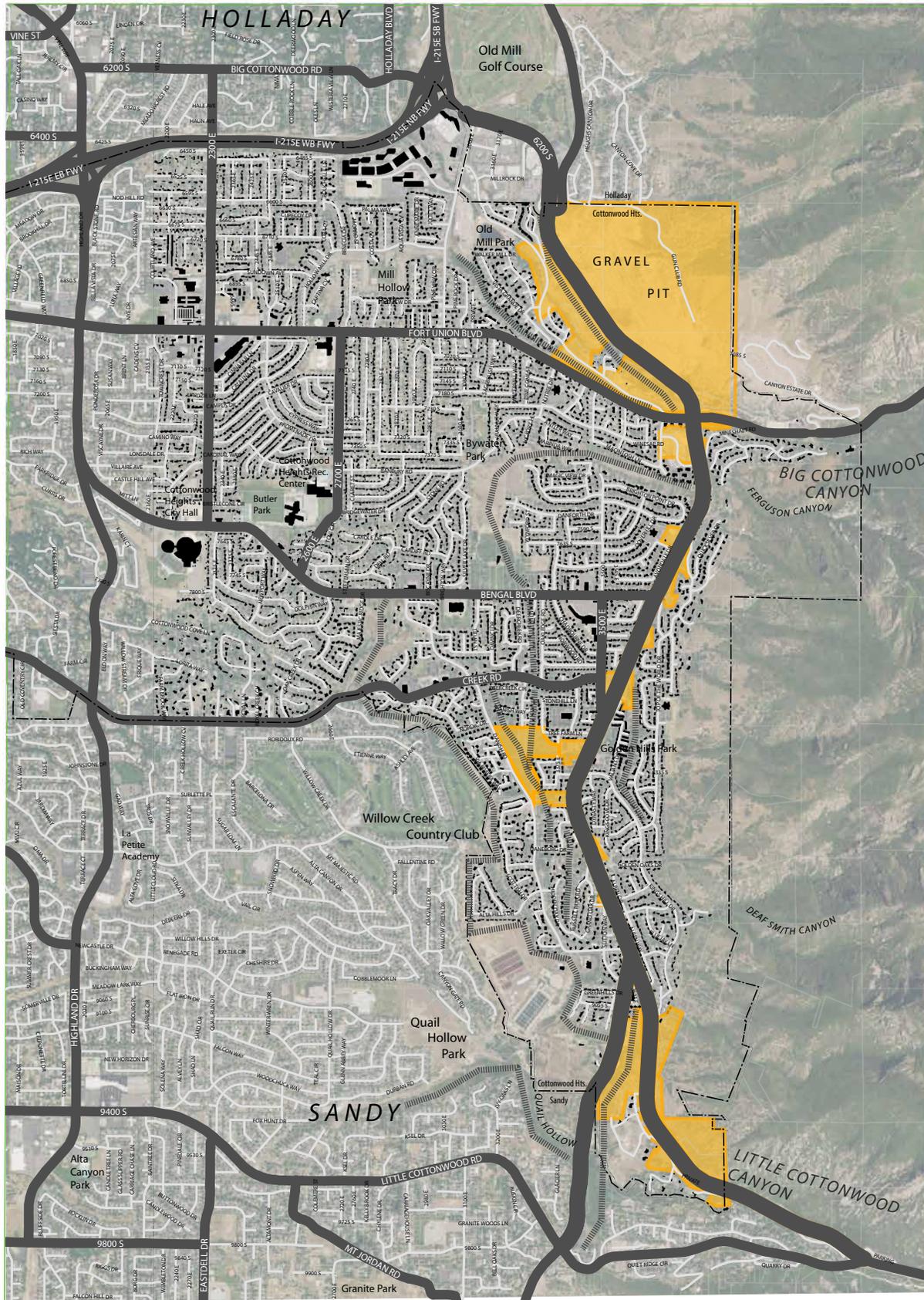
### Overview of metric

This metric evaluates the amount of new development opportunity available along the corridor. In addition to assessing the potential for development, the sites have been assessed for incorporating recreational facilities including trails, trailheads, park-and-ride lots, parks and plazas.

### Evaluation

For the baseline analysis, this metric is evaluated by identifying the best development opportunities along the corridor at a high level. The associated maps illustrate vacant and underutilized sites along the corridor. The size and ownership of each are assessed under Goal 1. To summarize, there are more than 20 individual sites, all of which are privately owned. They range from more than 200 acres (the Gravel Pit) to less than an acre. The maps also illustrate the development potential of each site, based primarily on topographic constraints.

Figure 2.40: Underutilized Land Opportunity Zones



1/3 mi. 1 mi.

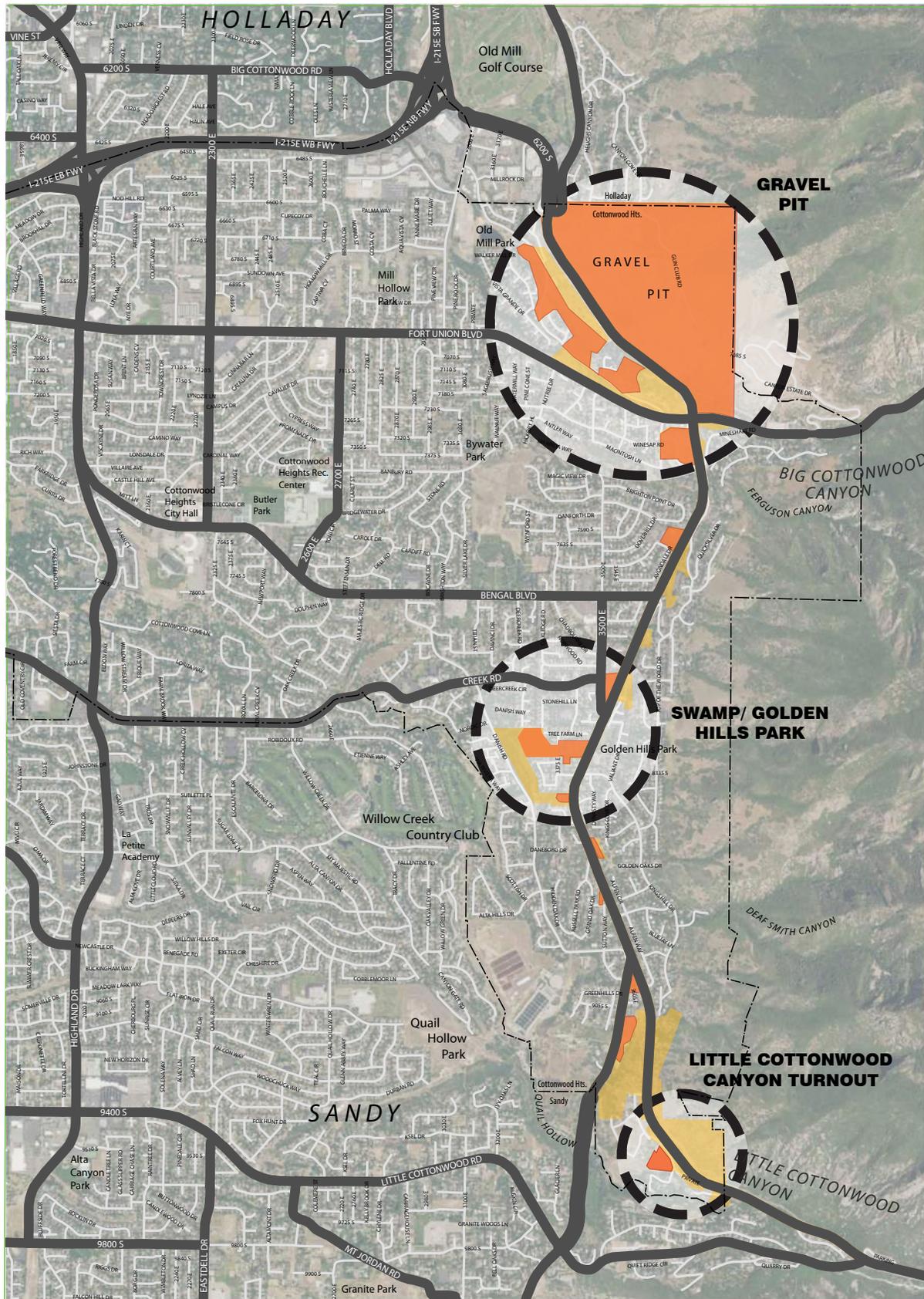
**WASATCH BOULEVARD**  
Master Plan

**UNDERUTILIZED LAND OPPORTUNITY ZONES**

Underutilized Land Opportunity Zone

Based on assessment of GIS data, aerial photographs and site reconnaissance. Includes vacant undeveloped sites as well as large sites with limited existing development.

Figure 2.41: Corridor Opportunity Districts



1/3 mi. 1 mi.

**WASATCH BOULEVARD**  
Master Plan

**Primary Opportunity Districts**

- Opportunity District
- Topographically Favorable Opportunity Zones
- Topographically Impacted Opportunity Zones

## Contribution toward achievement of other Corridor Goals

### Overview of metric

This metric evaluates how proposed new development would help achieve or detract from the other six Corridor Goals.

### Evaluation

The project team considered each of the three Corridor Opportunity Districts in terms of their potential of fulfilling or challenging the other six Corridor Goals. The table below considers both positives (+) and negatives (-) for each Opportunity District and each goal.

	Preserve and Enhance Neighborhoods	Move People	Safe Transportation Choices	Recreational Opportunities	Natural and Aesthetics	Wasatch Canyon Access
Gravel Pit	<ul style="list-style-type: none"> <li>+: Relatively removed from corridor neighborhoods</li> <li>+: Potential to add neighborhood amenities</li> <li>-: Care must be taken to integrate Gravel Pit with neighborhoods to north and southwest</li> </ul>	<ul style="list-style-type: none"> <li>+: Development at this site could create density and design to support heavier transit and parking and riding.</li> <li>-: This development could add a lot more traffic to the northern segment of the corridor.</li> </ul>	<ul style="list-style-type: none"> <li>+: The Gravel Pit development could create a network of walkable streets to support transit use.</li> <li>-: Auto-oriented development could exacerbate the current lack of choices and safety issues along Wasatch Boulevard</li> </ul>	<ul style="list-style-type: none"> <li>+: Development here could weave together the existing/planned trail corridors</li> <li>+: Development here could be the major staging area for Wasatch canyon recreation</li> <li>+: Development could contain actual recreation within it</li> </ul>	<ul style="list-style-type: none"> <li>+: This development could help restore the Gravel Pit landscape and link the Wasatch Mountains to the Big Cottonwood drainage</li> <li>-: Care must be taken to preserve mountain views</li> </ul>	<ul style="list-style-type: none"> <li>+: Opportunity for major supply of Park and Ride spaces</li> <li>+: Transform the park and ride experience</li> <li>+ Opportunity to reduce trips by adding employee housing</li> <li>-: Development here could exacerbate canyon access issues</li> </ul>
Golden Hills/ Swamp Lot	<ul style="list-style-type: none"> <li>+: Potential for neighborhood amenities</li> <li>-: Small site is a challenge to integrate with neighborhood scale</li> </ul>	<ul style="list-style-type: none"> <li>+: Opportunity for an improved transit hub.</li> <li>-: Potential to exacerbate traffic issues in this segment.</li> </ul>	<ul style="list-style-type: none"> <li>+: Site could create a nexus of walkability for the surrounding areas</li> <li>-: If not designed well, traffic could further reduce walkability here</li> </ul>	<ul style="list-style-type: none"> <li>+: Potential for recreational hub/ stopoff point with amenities for cyclists and others</li> <li>+ Potential for neighborhood park and recreation</li> </ul>	<ul style="list-style-type: none"> <li>+: Site could create a great streetscape for this segment.</li> <li>+: Site could weave in mountain landscape and/or daylighted creeks</li> </ul>	<ul style="list-style-type: none"> <li>+: Opportunity to expand parking supply</li> <li>+: Opportunity to improve transit stops</li> <li>+ Opportunity to reduce trips by adding employee housing</li> </ul>
Little Cottonwood Canyon Turn-out	<ul style="list-style-type: none"> <li>+: Create amenities in an area largely without them</li> <li>-: Challenge to integrate development into large lot development pattern</li> </ul>	<ul style="list-style-type: none"> <li>-: Potential to add traffic to the corridor</li> <li>-: Difficult to serve site with transit</li> </ul>	<ul style="list-style-type: none"> <li>+: Create a walkable segment of the corridor</li> </ul>	<ul style="list-style-type: none"> <li>+: Opportunity to create a trailhead to access planned Bonneville Shoreline trail and mountains in general</li> <li>+: Opportunity to preserve Little Cottonwood Creek</li> </ul>	<ul style="list-style-type: none"> <li>+: Opportunity to preserve foothill landscape</li> <li>-: Danger in blocking views and</li> </ul>	<ul style="list-style-type: none"> <li>+: Opportunity to add a park and ride location</li> <li>+ Opportunity to reduce trips by adding employee housing</li> <li>-: Development here could exacerbate canyon traffic</li> </ul>

### Goal 7 Assets

- Sites identified as topographically-favorable are the key assets for development and redevelopment.
- Three key areas are areas where topographically-favorable properties can be clustered and linked together and with other amenities. These three locations have the greatest opportunity for development and/or redevelopment, and are obvious locations to focus efforts.

### Goal 7 Challenges

- Ensuring that development fits within existing neighborhoods and views and other neighborhood aspects are preserved.
- Ensuring that new development does not continue the weaknesses of existing development, including dependence on automobiles and disconnection.
- Ensuring that new development's traffic impact is minimized and mitigated.
- Coordinating development efforts with individual property owners.
- Acquiring sites for park-and-ride, trailhead, parks/recreation and other non-commercial development needs.

### Goal 7 Opportunities

- Potential to add neighborhood amenities, ranging from commercial amenities to public gathering spaces.
- The Gravel Pit development site is likely large enough to add enough density to create more demand for transit and walking rather than driving.
- Potential for more integrated transit hubs along the corridor, with amenities, walkability, and complementary development.
- Development sites could weave together neighborhoods otherwise isolated from one another by creating a better environment along Wasatch Boulevard.
- Development can weave together different existing and planned trail corridors.
- Development can contain recreational facilities.
- Development can help transform Wasatch Boulevard into a recreational mecca, as a

"string of pearls."

- Development could help restore and connect natural landscapes in the area.
- Gravel Pit and Little Cottonwood Turnout areas could help connect mountains with Cottonwood creek landscapes.
- Potential to add more park and ride spaces.
- Potential to transform the park and ride experience from utilitarian to integrated with place.
- Potential for housing for canyon workers.
- Plans have been developed to direct development of the Gravel Pit and associated properties. Similar plans should be developed for the other two sites.

## 2.10 Community Open House 1

The Wasatch Boulevard Master Plan project team held a public open house on November 16, 2017, at Cottonwood Heights City Hall. The purpose of the meeting was to inform attendees about the project, discuss Draft Corridor Goals, present corridor analysis information, and most importantly receive feedback and ideas about the project. Approximately 50 people attended the meeting, providing feedback and comments. In addition, an Online Open House tool provided additional opportunities for the public to take part. 116 people took the survey, on-site and online, many providing additional comments about various ideas and project concerns. In addition, several people submitted comment forms through the project web page.



Participants provided feedback about the Goals (see page 12) and different ideas about achieving the corridor goals (see below for results.) These results provided the project team with confidence in moving forward with the Corridor Goals and direction in developing the ideas into concepts and scenarios.



### Top 10 most popular corridor ideas

Idea	# of supporters	% of respondents
Protect key views along Wasatch Boulevard	90	78%
Gravel Pit Park and Ride	74	64%
Focus all/most development at Gravel Pit	73	63%
Multi-use path along Wasatch Boulevard	71	61%
Transportation demand management program	71	61%
Gravel Pit as a recreational hub	65	56%
New Bonneville Shoreline Trailheads	65	56%
Manage motor vehicle access between Wasatch Blvd and neighborhoods	63	54%
New walking and bicycling connections among neighborhoods	62	53%
Integrate and connect the Wasatch Mountain landscape and BC creek at Gravel Pit	60	52%

Figure 2.42: Most popular corridor ideas according to Open House 1 survey.

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# PART 3 CONCEPTS & SCENARIOS

## 3.1 Overview

The concepts and scenarios explore ways to achieve the Corridor Goals. The project team took the opportunities identified in the Corridor Study and developed them into concepts for -

- Wasatch Boulevard street improvements - i.e. the “cross section”;
- Corridor treatments such as streetscape, transit service, neighborhood access, and sustainable canyons access;
- Network improvements off Wasatch Boulevard but supporting it - for aspects such as streets, trails, and natural systems;
- Small area concepts for the four areas identified as potential development areas (Gravel Pit, Big Cottonwood Canyon mouth; Swamp Lot/Golden Hills; and Little Cottonwood Turnout); and
- Intersection improvements.

In order to explore the relationships among these concepts, the project team integrated them into a series of Alternative Long Range Land Use and Transportation Scenarios. These scenarios focus especially on the relationships between land use and transportation choices on the corridor. And, in addition to showcasing these different concepts, these scenarios are meant to convey alternative “personalities” for the corridor.

The Wasatch Boulevard Master Plan Alternative Scenarios are:

1. “Current Plans”
2. “East Meets West”
3. “Recreation Villages”

Each scenario is depicted in three main ways:

- An **overview diagram** identifying the street configuration, corridor treatments, area connections, and land use concepts;
- A set of **Corridor Concepts** that describe key elements and show existing examples; and
- **Small Area Concepts**, which show how two key areas of the corridor might look under this scenario. The two key areas are at the Gravel Pit (Segment 1) and the “Swamp Lot” (Segment 3), because these present both the largest challenges and opportunities for the corridor.

Finally, in order to understand how well the concepts and scenarios achieve the project Corridor Goals, the project team undertook an evaluation of each scenario and concept.

## 3.2 Scenario 1: Current Plans

### Overview

Scenario 1 emphasizes the guidance of existing plans. These include the Regional Transportation Plan; the 2016 Gravel Pit Study; and the 2012 Cottonwood Canyons Parking Study. The other key piece of Scenario 1 is a series of smaller, targeted changes to achieve the Corridor Goals.

Concepts in Scenario 1 include:

#### *Wasatch Boulevard cross section*

- Segment 1 (“Gravel Pit”): 6 general purpose lanes with a center turn lane.
- Segment 3 (“Swamp Lot”): 4 general purpose lanes with center turn pockets.
- Multi-use path on one side, with priority to connect local accesses.

#### *Corridor treatments*

- Strategically focused streetscape in Segment 3, along new multi-use path segments.
- Medians forcing right turns out of neighborhoods; stripe warnings not to block local accesses.
- Keep existing transit route and stops (with potential 307 re-route); improve stop quality and improve pedestrian access to them.
- Create more visible, safer pedestrian crossings at existing signals.
- Series of combined pedestrian crossings (i.e. Hawks) and connections to neighborhood.
- Strategic trees or other walls to block noise.

#### *Network improvements*

- Additional active transportation connections between access sheds and across Wasatch Boulevard.
- Increase capacity of existing park and ride lots and near-term parking additions from 2012 Cottonwood Canyons parking study, as well as use existing commercial and institutional parking areas for canyons park-and-ride.
- Create staging area for closed Little Cottonwood Canyon with new Bonneville Shoreline Trailhead and improvement of Ferguson Canyon trailhead; priority for Bonneville Shoreline Trail implementation.
- Improved communication systems for canyon travelers.

#### *Small area concepts*

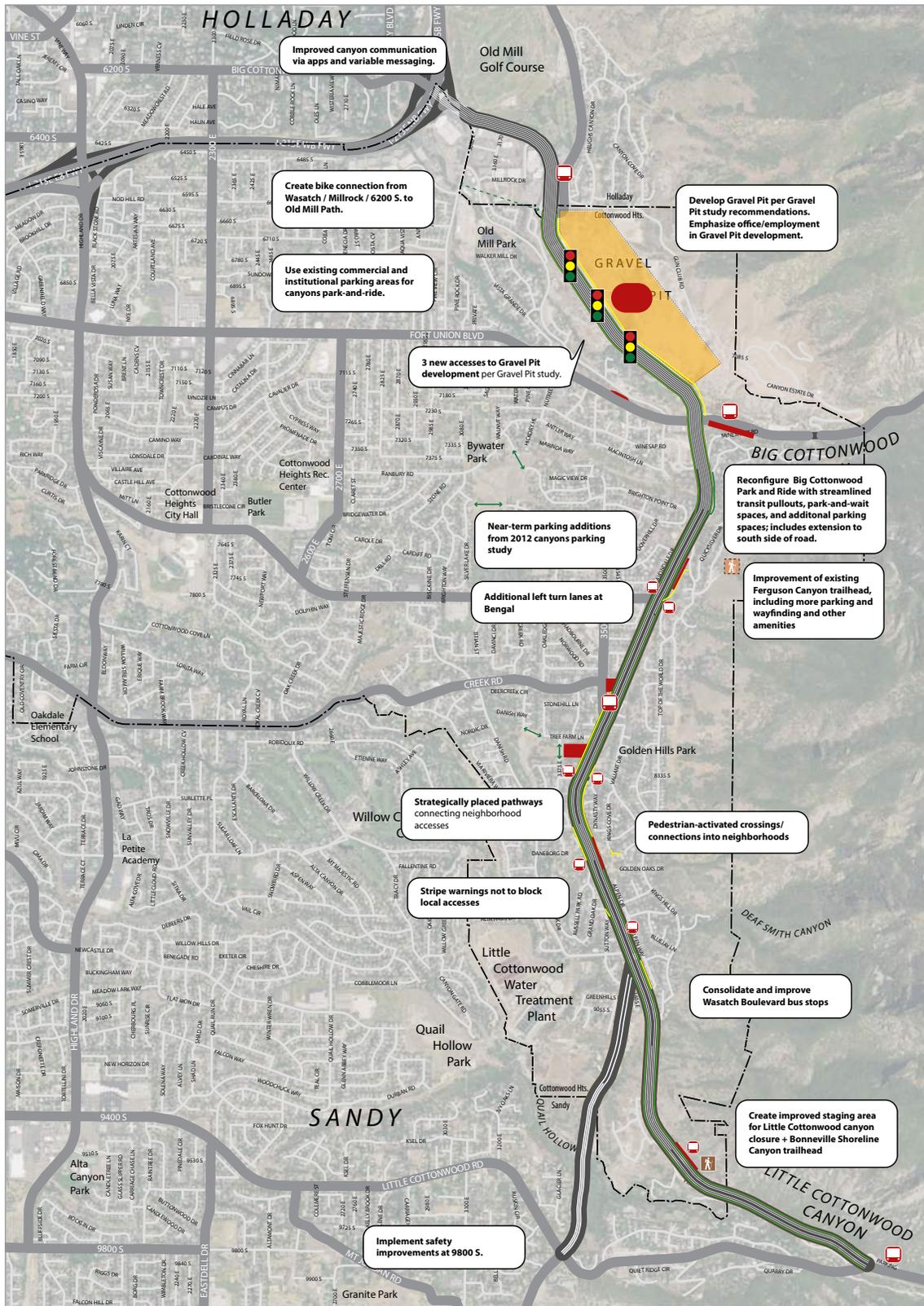
- Gravel Pit develops according to the Gravel Pit plan, with the emphasis on the office market.
- Big Cottonwood: small improvements to intersection and park and ride.
- Swamp Lot: Expansion of park and ride per canyon transportation study, parking at vacant lot
- Little Cottonwood Turnout: Staging improvements, expand parking per canyon parking study.

#### *Other*

- Intersection operational/turn improvements: Additional left turn lanes on Bengal; Extend 6 lanes into Segment 2, south of Big Cottonwood; Protected/permitted lefts at Big Cottonwood intersection.
- Traffic calming at 9800/Wasatch.

Scenario 1 is illustrated in the diagram in Figure 3.1 and in the following pages.

Figure 3.1: Diagram of Scenario 1.



## SCENARIO 1 CURRENT PLANS

- General purpose lane (through or turn)
- Trail
- Bike lane
- Pedestrian facility
- Transit stop
- Trailhead
- New Park & Ride parking
- Development area

## Key Corridor Concepts

### Shared use paths

Shared use paths are asphalt or concrete paths that are open to all or most active travelers: pedestrians, bicyclists, joggers, and others on foot and non-motorized wheels. The advantage of shared use paths is providing a separated and safe space where these users can comfortably mix for both transportation and recreation needs. Shared use paths typically are separated from motorized traffic by a buffer space and are often on their own alignment/right-of-way.



### Buffered bike lanes

Buffered bike lanes are on-street bike lanes that are separated from moving motorized traffic by an extra striped space of one or a few feet. While this additional buffer does not provide a physical separation, it does create a higher visibility of the bicycle facility and increased space between the cyclist and moving traffic.



## Pedestrian-activated crossings

Pedestrian-activated crossings are traffic signals that stop traffic to allow pedestrians to cross a street. The signals are activated by the pedestrian, usually pushing a button. These signals range in their level of traffic control from half traffic signals with a green, yellow, and red light, to flashing beacons that do not stop traffic but alert motorists to the presence of crossing pedestrians.

**HAWK BEACON**



**FLASHING BEACON**



**HALF SIGNAL**



**PELICAN**



## Raised bike lanes

Raised bike lanes are on-street bike lanes that are separated from the roadway by a curb, “raising” the lane to the level of the sidewalk or roadside area. Raised bike lanes can be immediately adjacent to the roadway or separated by a buffer. The curb can be beveled to allow for easy transition between the roadway and the raised bike lane.



## Small Area Plans

The Scenario 1 small area plans illustrate how the scenario might look in the two key areas along the corridors, the Gravel Pit and the Swamp Lot/Golden Hills.

### Gravel Pit area

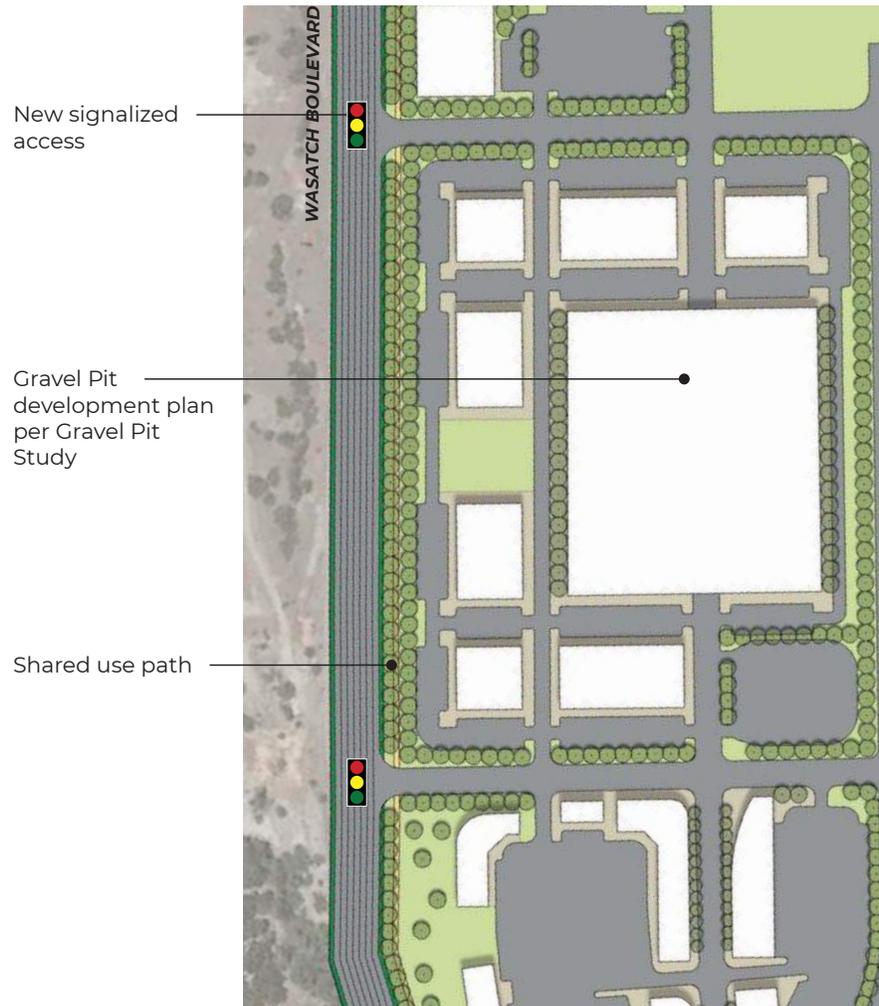
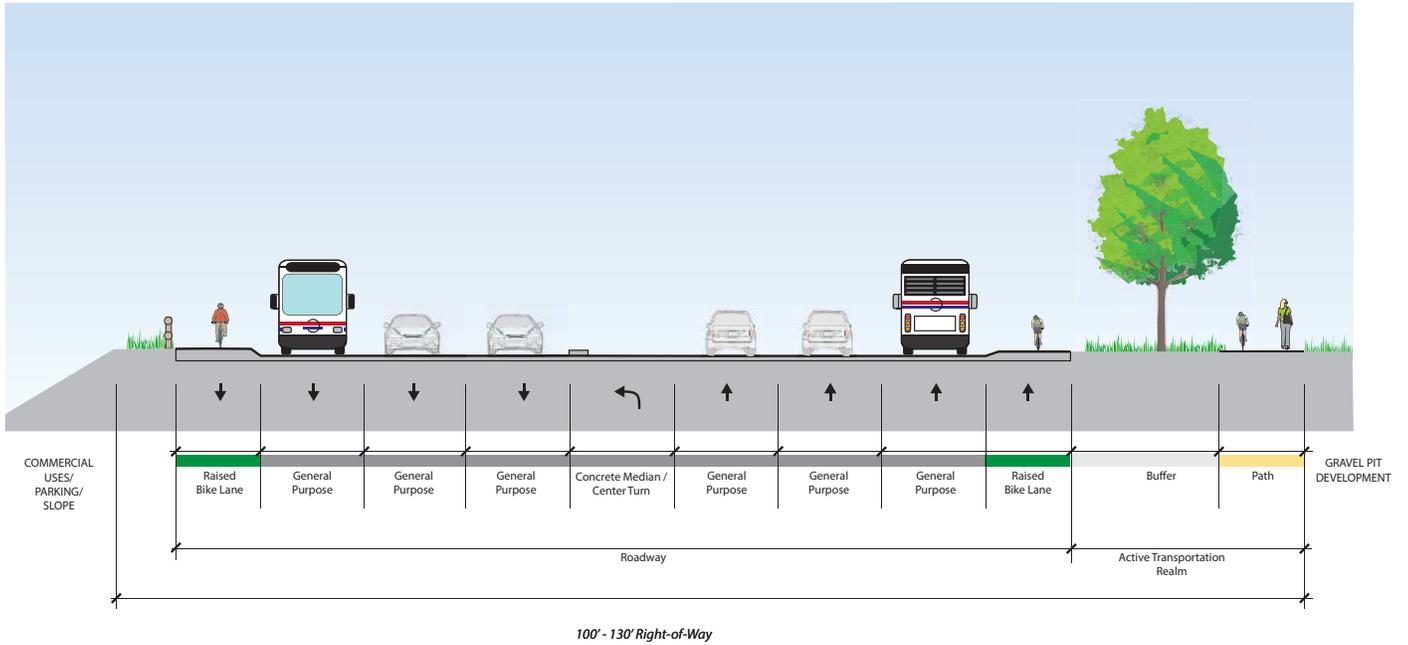


Figure 3.2: Illustrative concept of Scenario 1 at the Gravel Pit segment of the Wasatch Boulevard corridor.



**Wasatch Boulevard**  
 6200 South and Fort Union Blvd.  
 LOOKING NORTH

Figure 3.3: Illustrative concept of Scenario 1 Wasatch Boulevard cross section at the Gravel Pit segment of the corridor.

# Swamp Lot/Golden Hills area

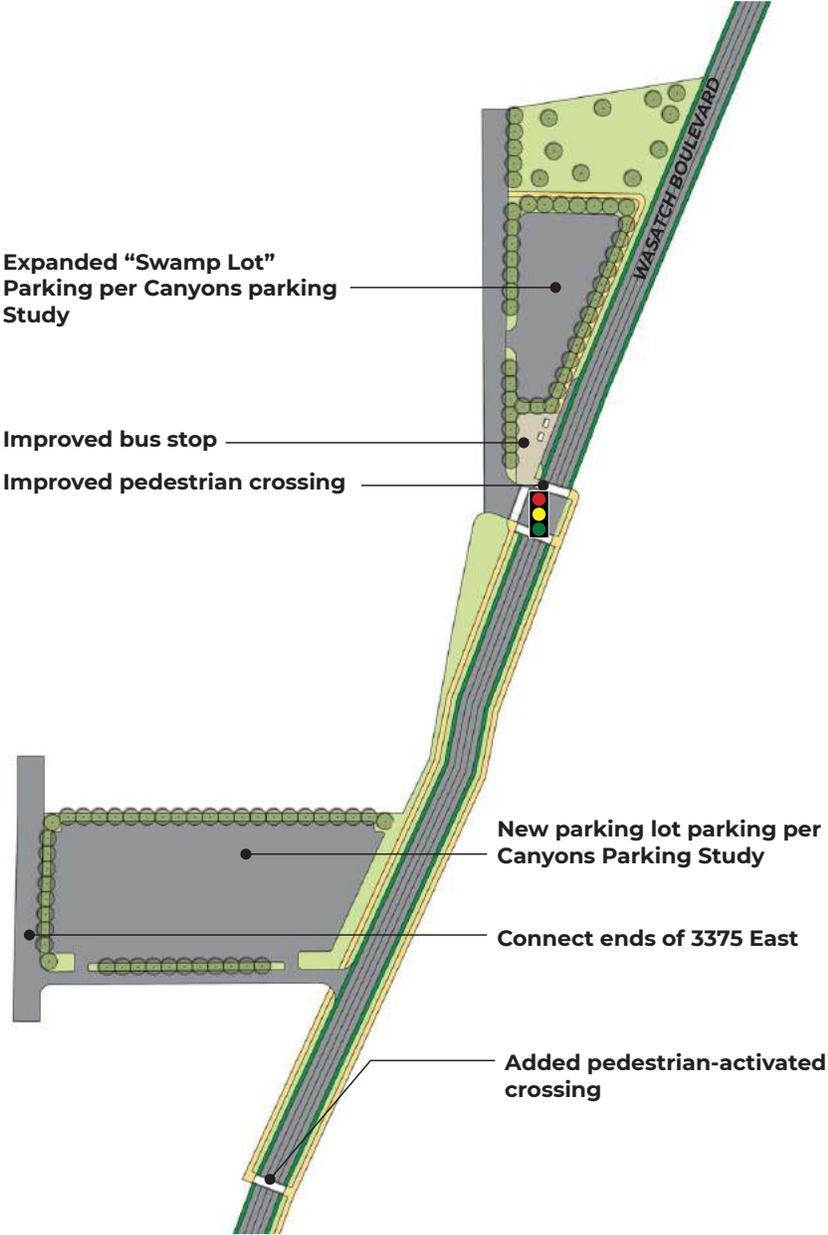
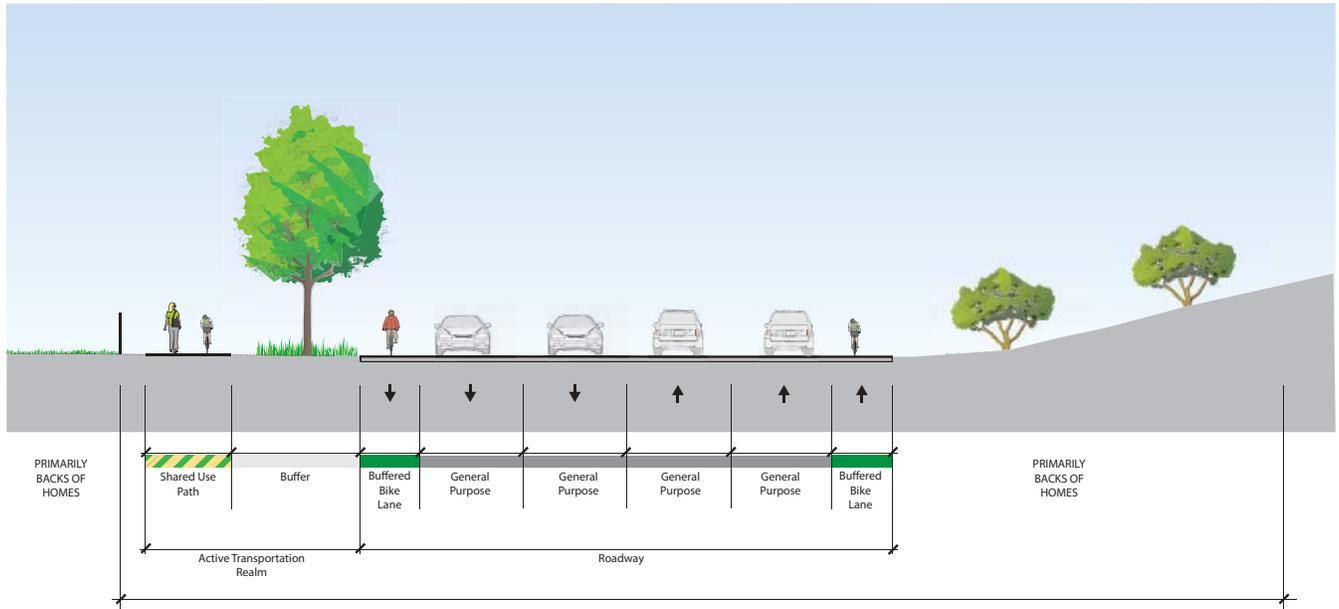


Figure 3.4: Illustrative concept of Scenario 1 at the "Swamp Lot" segment of the Wasatch Boulevard corridor.



*Right-of-Way: Primarily ~150'; narrows to 77' - 94'*

## Wasatch Boulevard

### Between Bengal Blvd. and Little Cottonwood Road

LOOKING NORTH

Figure 3.5: Illustrative concept of Scenario 1 Wasatch Boulevard cross section at the "Swamp Lot" segment of the corridor.

## 3.3 Scenario 2: East Meets West

### Overview

Scenario 2 focuses most new development on the corridor in the Gravel Pit area, with the rest of the corridor characterized by a parkway and associated linear park. The scenario leverages the demand for office, retail, housing and hospitality and a regionally singular site to create a walkable urban place at the Gravel Pit. This Gravel Pit development would include the major Cottonwood canyons transportation hub and base center and would be served by a bus rapid transit line. The Gravel Pit development would be complemented to the south by an East-Coast style parkway with a western native landscape. Scenario 2 avoids adding general purpose traffic lanes to Wasatch Boulevard south of the Gravel Pit by improving regional, community, and local street connectivity.

Concepts in Scenario 2 include:

#### *Cross section*

- Segment 1 (“Gravel Pit”): 4 general purpose lanes with center median.
- Segment 3 (“Swamp Lot”): 2 general purpose lanes with center turn pockets.
- Median HOV/transit lanes between I-215 and Gravel Pit.
- Multi-use path as part of a linear park between Gravel Pit and Little Cottonwood Canyon.
- Strategic local access lanes along the corridor.

#### *Corridor treatments*

- Urban streetscape at Gravel Pit, fronting onto Wasatch Boulevard.
- Linear park south of Gravel Pit with native landscape.
- Local access lanes leading to reduced number of direct Wasatch Boulevard accesses.
- Extension of potential reconfigured 248 Downtown/U of U/ Foothill/Wasatch Boulevard frequent bus route to termination at Gravel Pit, with potential future conversion to BRT.
- Grade separated crossings over Wasatch Boulevard parkway.

#### *Network improvements*

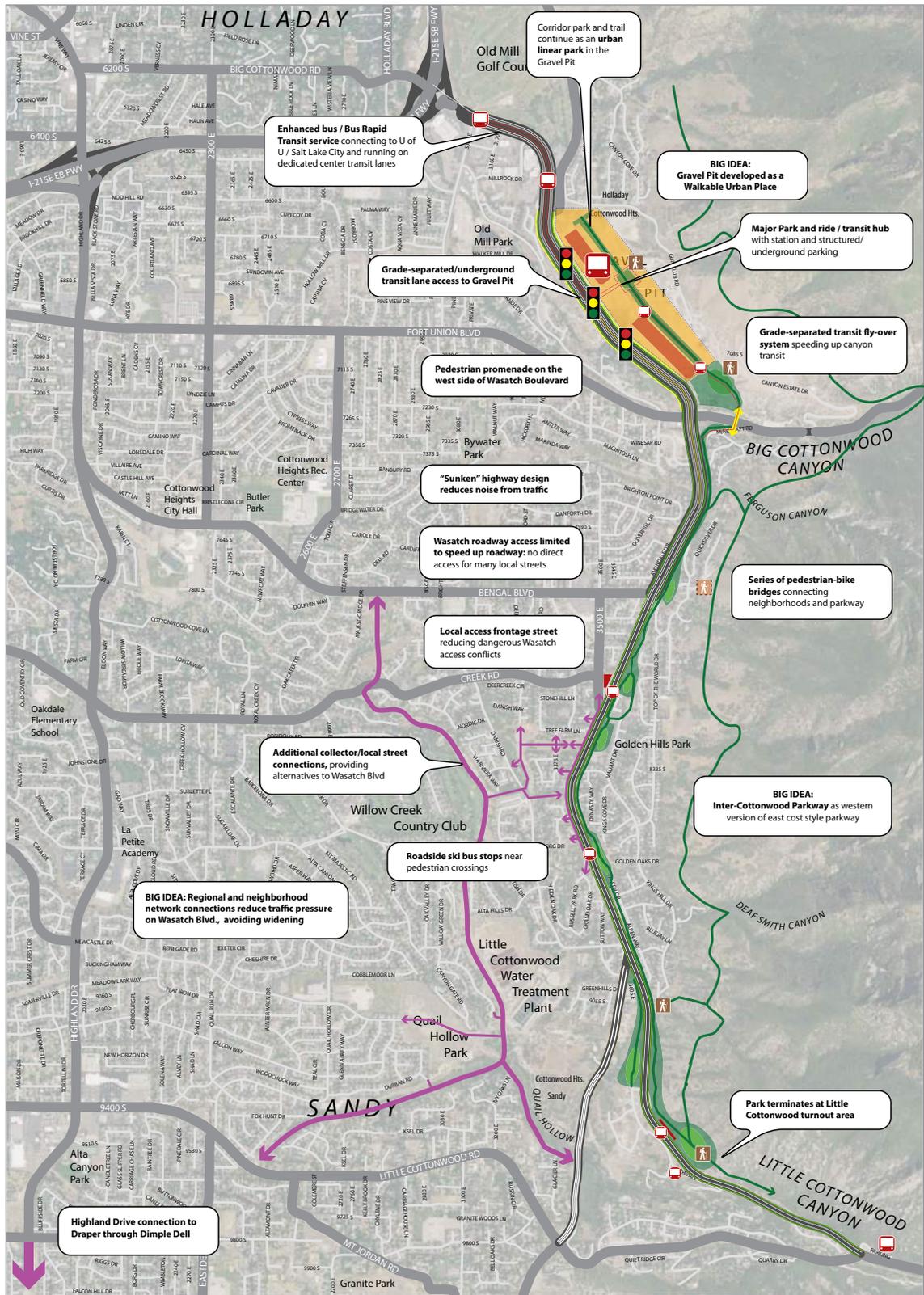
- Create a new north-south collector-level connection along Little Cottonwood Creek.
- Connect street stubs to one another and to other adjacent streets.
- At the Gravel Pit, develop a major intermodal park and ride hub that satisfies much or all of the park and ride demand for the corridor, integrated with supporting land use;
- A linear park along Wasatch Boulevard from Gravel Pit to Little Cottonwood creates the backbone of the recreational network; preserve natural areas along the corridor as part of the linear park.
- Explore daylighting creeks in linear park.

#### *Small area concepts*

- Gravel Pit: Walkable urban development, integrated transit hub - more emphasis on residential and hospitality and supporting retail; development on both sides of Wasatch.
- Big Cottonwood: combined with Gravel Pit as major node/development.
- Swamp Lot/Golden Hills: some active transportation improvements, becomes part of linear park; townhomes.
- Little Cottonwood Turnout: some active transportation improvements, becomes part of linear park.

Scenario 2 is illustrated in the diagram in Figure 3.6 and in the following pages.

Figure 3.6: Diagram of Scenario 2.



## SCENARIO 2 EAST MEETS WEST



## Key corridor concepts

### East Coast parkways: limited access roads with open space

Wasatch Boulevard could be developed in a similar manner as many of the highways on the East Coast - which emphasize both vehicle speed/efficiency and scenic resources/recreation. Examples of these include the Palisades Parkway, shown below. The vehicular/roadway element of the parkway would likely focus on limiting direct accesses onto Wasatch Boulevard; grade-separating cross paths or streets; enhancing the scenic experience of the roadway; and limiting the width of the roadway to keep a rural byway feel to the corridor.



### Bike and pedestrian trails and bridges

Another key element of a Wasatch Boulevard parkway would be a recreational corridor of pathways for pedestrians, cyclists and other active travelers. The experience of traveling along the corridor on foot, on a bike, or by another active mode would be separated from the roadway by a pathway with a major buffer and bike/pedestrian overpasses across the Wasatch Boulevard roadway.



### Parks

The pathways along the Wasatch Boulevard parkway would connect small parks of different sizes and programming, including existing recreational resources such as Golden Hills Park.



### Native Wasatch foothill landscaping

Another key element of a Wasatch Boulevard parkway would be continuation and enhancement of native Wasatch foothill landscape.



### Urban parkways

Finally, the parkway could transition to an urban version when traversing through more intensive areas, such as the Gravel Pit development.



## Walkable urban places

“Walkable urban place” is a term developed by urbanist Christopher Leinberger to contrast to the “drivable suburban place” typically found in suburban communities like Cottonwood Heights. Leinberger characterizes walkable urban places as “much higher density and a mix of diverse real estate types, connected to surrounding areas via multiple transportation options, such as bus and rail, bike routes, and motor vehicles.” Perhaps most of all, Leinberger writes, “for those living or visiting a walkable urban place, everyday destinations, such as home, work, school, stores, and restaurants, are within walking distance.” There is a major opportunity to create a walkable urban place at the Gravel Pit site, due to its potential as a Cottonwood canyons base hub as well as a regional employment, residential, retail, hospitality and entertainment center. The walkability of a walkable urban place would help to achieve most if not all, of the Wasatch Corridor Goals.

### **WELL-DESIGNED DENSITY**



### **WALKABLE, RIDEABLE STREETS**



### **GREAT PUBLIC SPACES**



## Pedestrian promenades

Pedestrian promenades combine an active transportation path with great scenery and public space. The result is an experience that emphasizes slow movement and enjoyment of views and people watching. Pedestrian promenades are often found in places with iconic city or regional views, such as waterfronts or riverfronts. Wasatch Boulevard presents one of these iconic views, along the Gravel Pit segment, toward both the Salt Lake Valley as well as up to the Wasatch Mountains.



## Innovative pedestrian bike bridges

The parkway and pedestrian/bike overpass concepts for Wasatch Boulevard present the opportunity to create one or more iconic, creative bridges over Wasatch Boulevard to define the corridor and the Cottonwood Heights community.



## Bus rapid transit & bus lanes

Bus rapid transit (BRT) is a type of public transportation that emulates the advantages of a rail transit system using much less expensive buses. Successful BRT systems approximate a rail system's speed, elegance, reliability, comfort, and dignity using elements such as dedicated lanes, traffic signal priority, off-board ticketing, and unique branding. The element most associated with BRT systems is dedicated lanes, which can be located in the center of the roadway or at the sides - each has advantages and disadvantages. The northern segments of the Wasatch Boulevard corridor have potential for a BRT system in the future because of the strong travel market between Cottonwood Heights and Salt Lake City's activity centers along I-215 and Foothill Drive, and the potential to develop the Gravel Pit as a walkable urban place and canyons transportation hub.



## Local access lanes and boulevards

Local access lanes are separated general purpose traffic lanes at the sides of major streets. They are intended to provide easier and safer roadway access to and from adjacent properties and neighborhoods. Local access lanes attempt to solve the conflict between fast-moving through-traffic and slow-moving traffic moving on and off the roadway. They also create a slow buffer between pedestrians and cyclists and high-speed motorized traffic. A street that includes local access lanes on both sides is often called a multi-way boulevard.



## Transportation centers and plazas

Transportation centers are hubs for regional and citywide mobility, with a focus on public transportation - and connections to bicycling, walking, shared vehicle mobility options, and other modes. Transportation centers can also act as community hubs and public space when paired with well-designed plazas and complementary land uses oriented to the plaza and transportation center. The Gravel Pit site presents the opportunity to build a transportation center and plaza geared toward Cottonwood canyons access and visitation, especially in the context of the walkable urban place concept discussed above.



## Protected bike lanes

Protected bike lanes are on-street bike lanes that are separated from moving motorized traffic by a physical buffer such as a curb, median island, or parked cars. Protected bike lanes are best suited for streets with minimal accesses, driveways, and other curb cuts. Wasatch Boulevard has several such stretches without many accesses and currently has high vehicle speeds, so could be a good candidate for protected bike lanes.



## Small area concepts

The Scenario 2 small area plans illustrate how the scenario might look in the two key areas along the corridors, the Gravel Pit and the Swamp Lot/Golden Hills.

### Gravel Pit area

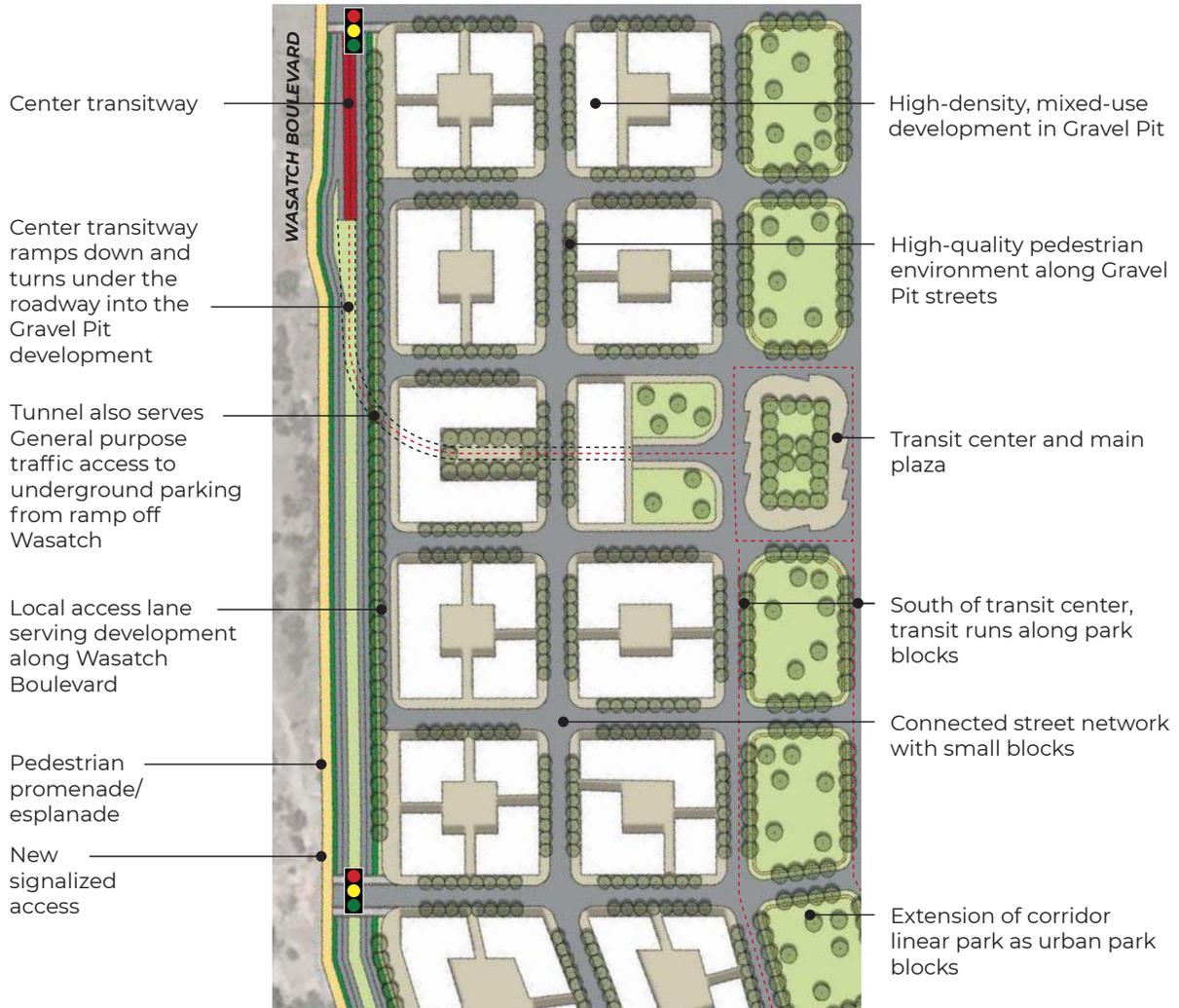
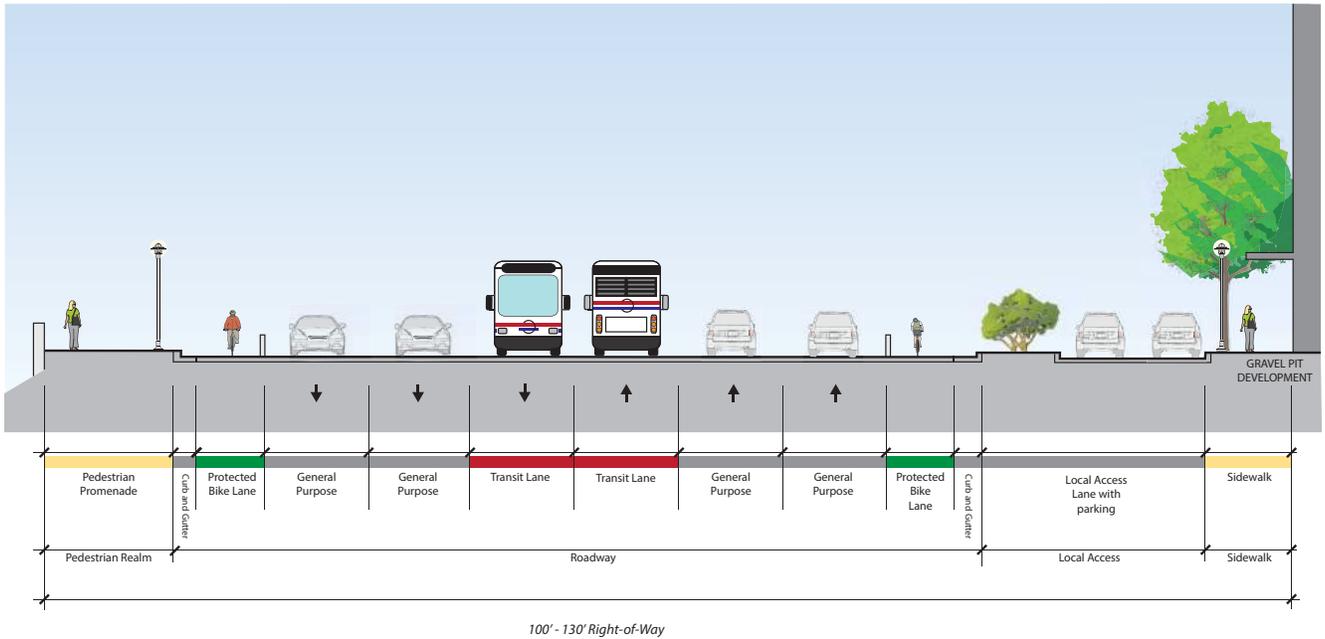


Figure 3.7: Illustrative concept of Scenario 2 at the Gravel Pit segment of the Wasatch Boulevard corridor.



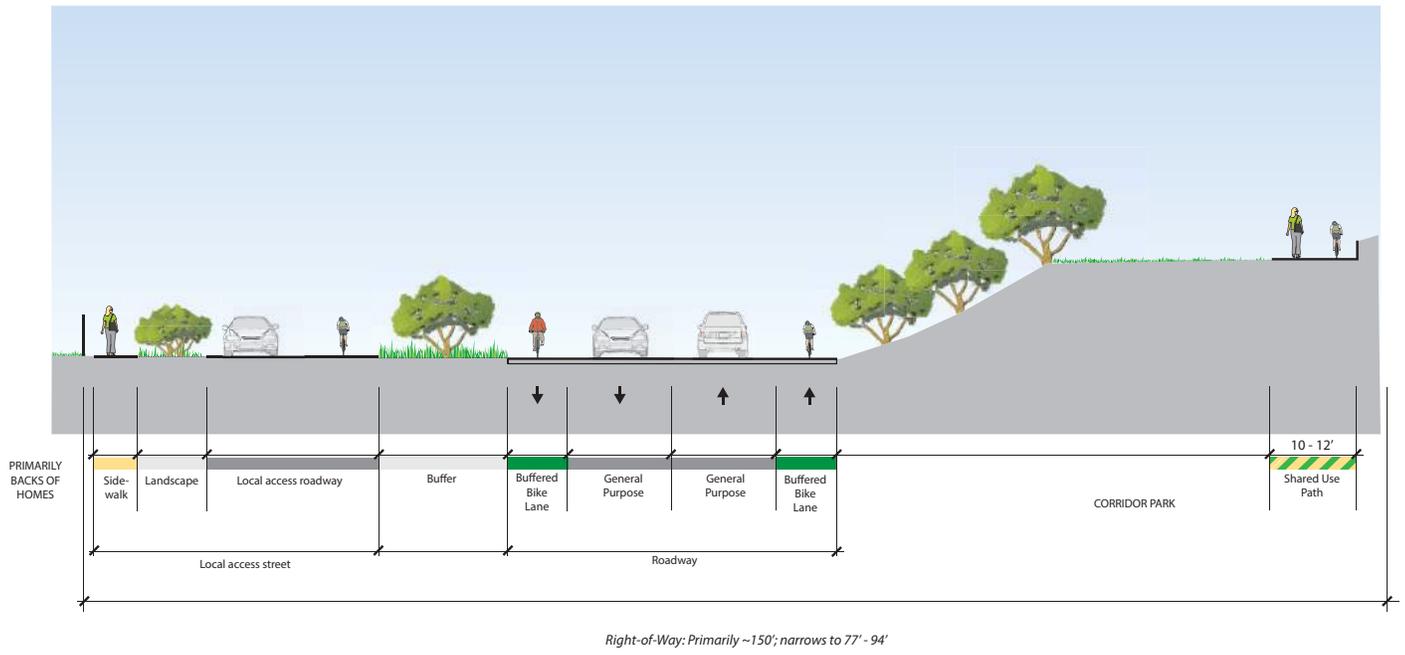
**Wasatch Boulevard**  
 6200 South and Fort Union Blvd.  
 LOOKING NORTH

Figure 3.8: Illustrative concept of Scenario 2 Wasatch Boulevard cross section at the Gravel Pit segment of the corridor.

# Swamp Lot/Golden Hills area



Figure 3.9: Illustrative concept of Scenario 2 at the "Swamp Lot" segment of the Wasatch Boulevard corridor.



## Wasatch Boulevard

Between Bengal Blvd. and Little Cottonwood Road  
LOOKING NORTH

Figure 3.10: Illustrative concept of Scenario 2 Wasatch Boulevard cross section at the "Swamp Lot" segment of the corridor.

## 3.4 Scenario 3: Recreation Villages

### Overview

Scenario 3 revolves around a series of small “Recreation Village” centers along the corridor. These Recreation Villages would be places that address many of the identified needs of the corridor - neighborhood amenities and connections, sustainable canyon access, and recreation. Scenario 3 includes a flexible way to add vehicle capacity through “flex” shoulders, which can accommodate rush hour traffic as well as carpools/transit on peak ski days. Scenario 3 also slows down Wasatch Boulevard.

Concepts in Scenario 3 include:

#### *Cross section*

- Segment 1 (“Gravel Pit”): 4 general purpose lanes with center median.
- Segment 3 (“Swamp Lot”): 2 general purpose lanes with center median and pockets plus median.
- “Flex” shoulders allowing general purpose traffic in peak traffic periods and high occupancy vehicles (HOVs) on ski days.
- Multi-use path on both sides, transitioning to enhanced sidewalk/raised bike lane in the villages.

#### *Corridor treatments*

- Urban streetscape at recreation villages - street trees, pedestrian amenities, improved bus stops; wayfinding signage oriented to villages, with natural streetscape in between.
- Roundabouts at major local accesses.
- Lower speed limit to 35-40 mph, especially in Segment 3.
- New 15-30 minute transit service on Wasatch Boulevard to serve east side of valley in north-south direction, with stops at each recreational village; this service would be integrated with a year round canyon service.
- On-street transit hubs near pedestrian crossings.
- Pedestrian crossings at roundabouts.

#### *Network improvements*

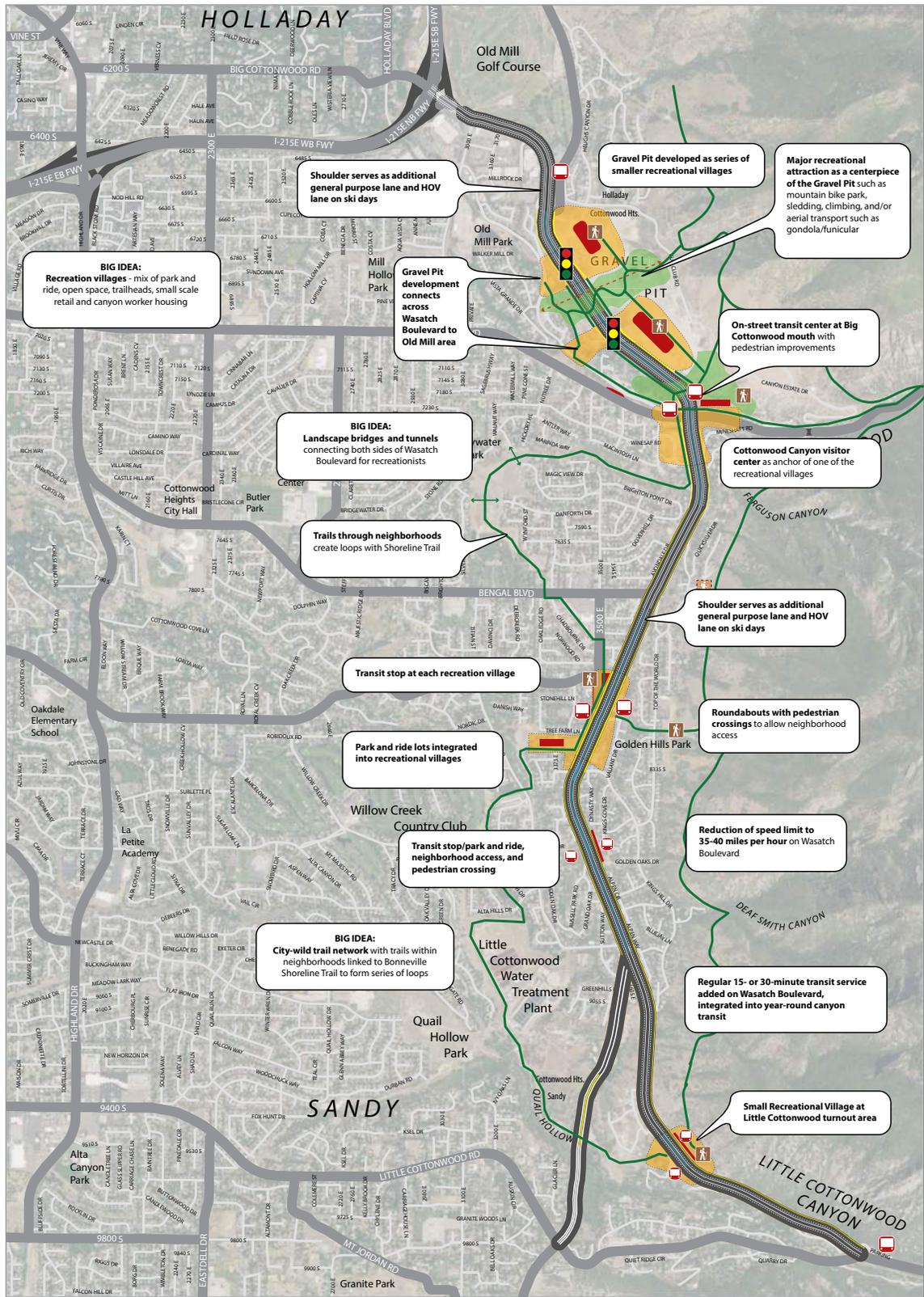
- Increase street connectivity in recreational villages.
- Park and ride structures/lots integrated into village centers, with improved stations for year-round canyon and regular transit; staging areas built into recreational villages.
- Extension and enhancement of emerging Big Cottonwood Creek recreational corridor into adjacent destinations.
- Recreation (such as mountain bike park) focused in Gravel Pit and other recreational villages, with connections from villages to Bonneville Shoreline Trail and other trails.

#### *Small area concepts*

- Gravel Pit: Large village center at Gravel Pit with less development, integrates recreation.
- Big Cottonwood Canyon: Medium village center, a distinct node from Gravel Pit, increase access and safety, reduce delay, streamline transit and improve placemaking.
- Swamp Lot: Small village center
- Little Cottonwood Pullout: small village center

Scenario 3 is illustrated in the diagram in Figure 3.11 and in the following pages.

Figure 3.11: Diagram of Scenario 3.



### SCENARIO 3 RECREATION VILLAGES

- General purpose lane (through or turn)
- Median
- Bike lane
- Pedestrian facility
- Trail
- Transit stop
- Trailhead
- New Park & Ride parking
- Development area

## Key corridor concepts

### Recreation villages

The recreation village is the key concept of Scenario 3. The intent of the recreation village is to create small-scale community centers that also provide hubs for outdoor recreation along the corridor. Recreation villages directly address the corridor goals - they enhance neighborhoods by providing amenities and connections, provide sustainable canyon access, create transportation choices, and enhance recreation.

#### SMALL-SCALE DEVELOPMENT INTEGRATED WITH OPEN SPACE



#### SMALL RETAIL AND FOOD ORIENTED TO OUTDOOR SPACES



The recreation village can be found in different incarnations in urban, rural, and resort settings. The specific recreation village components found include small-scale mixed use development with open space, small retail and food service oriented to outdoor spaces, trailheads, and parks. Transit, walkability, and canyon worker housing could also be elements of recreation villages along the corridor.

### **TRAILHEADS, PARKS, & OTHER RECREATIONAL AMENITIES**



### **ENHANCED TRANSIT STOPS & PEDESTRIAN CROSSINGS**



### **CANYON WORKFORCE HOUSING**



## Flex shoulders

Flex shoulders refers to the use of roadway shoulders for traffic during periods of heavy use. This practice is increasingly used to maximize existing roadway space without increasing capacity through additional lanes. On Wasatch Boulevard, there are conflicting directives for increasing roadway capacity and maintaining the residential character of surrounding neighborhoods - as well as increasing vehicle occupancy during peak ski days. Flex shoulders is one innovative strategy to balance among these priorities and to provide flexibility for neighborhood use of the street, commute traffic use of the street, and recreation traffic use of the street.

### SHOULDERS FOR INCREASING PEAK HOUR GENERAL TRAFFIC CAPACITY



### SHOULDERS FOR PEAK HOUR BUS AND/OR HOV



## Landscape underpasses and bridges

Landscape underpasses are a way for a trail or natural corridor to cross under a major roadway. On the Wasatch Boulevard corridor, there are opportunities to connect the Wasatch Mountain landscape with the creek corridors and trails to the west of Wasatch Boulevard.

### LAND TUNNELS



### LAND BRIDGES



### OTHER INNOVATIVE UNDERPASSES



## Mountain recreation parks

Mountain recreation parks are parks with concentrated, all or partially man-made amenities for mountain recreation sports such as mountain biking, rock climbing, or whitewater kayaking. The landscape and location of the Gravel Pit development presents a major opportunity for a mountain recreation park.



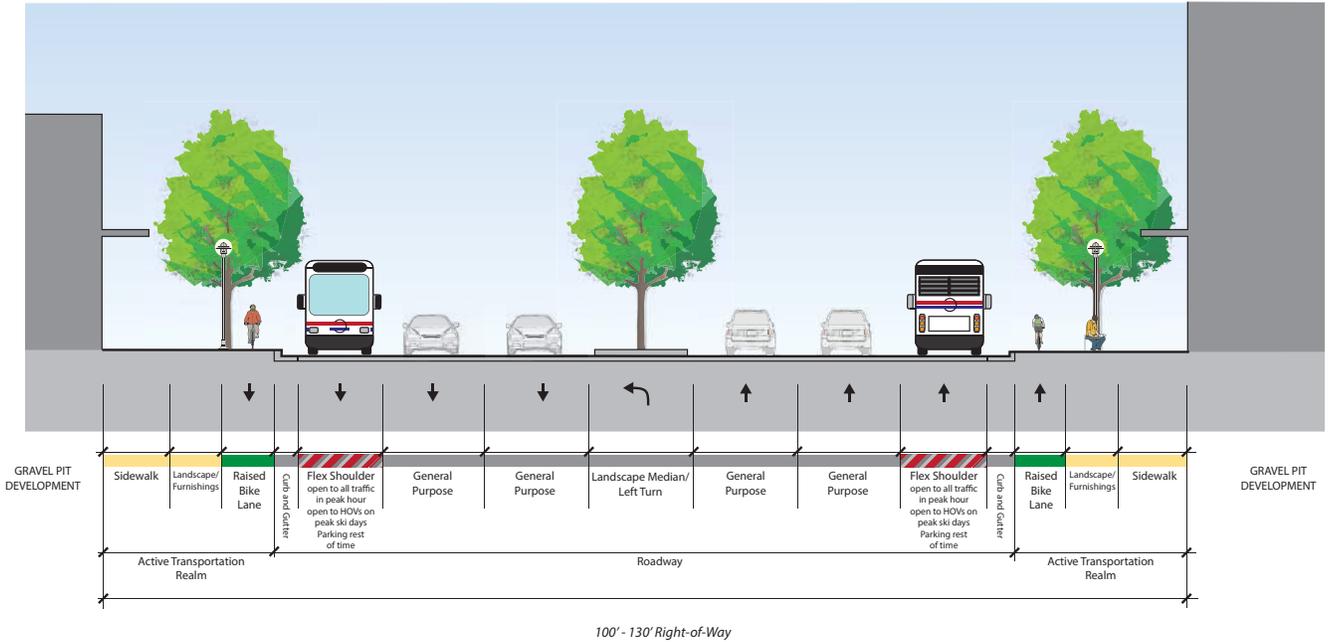
## Small area concepts

The Scenario 3 small area plans illustrate how the scenario might look in the two key areas along the corridors, the Gravel Pit and the Swamp Lot/Golden Hills.

### Gravel Pit area



Figure 3.12: Illustrative concept of Scenario 3 at the Gravel Pit segment of the Wasatch Boulevard corridor.



**Wasatch Boulevard**  
 6200 South and Fort Union Blvd.  
 LOOKING NORTH

Figure 3.13: Illustrative concept of Scenario 3 Wasatch Boulevard cross section at the Gravel Pit segment of the corridor.

# Swamp Lot/Golden Hills area

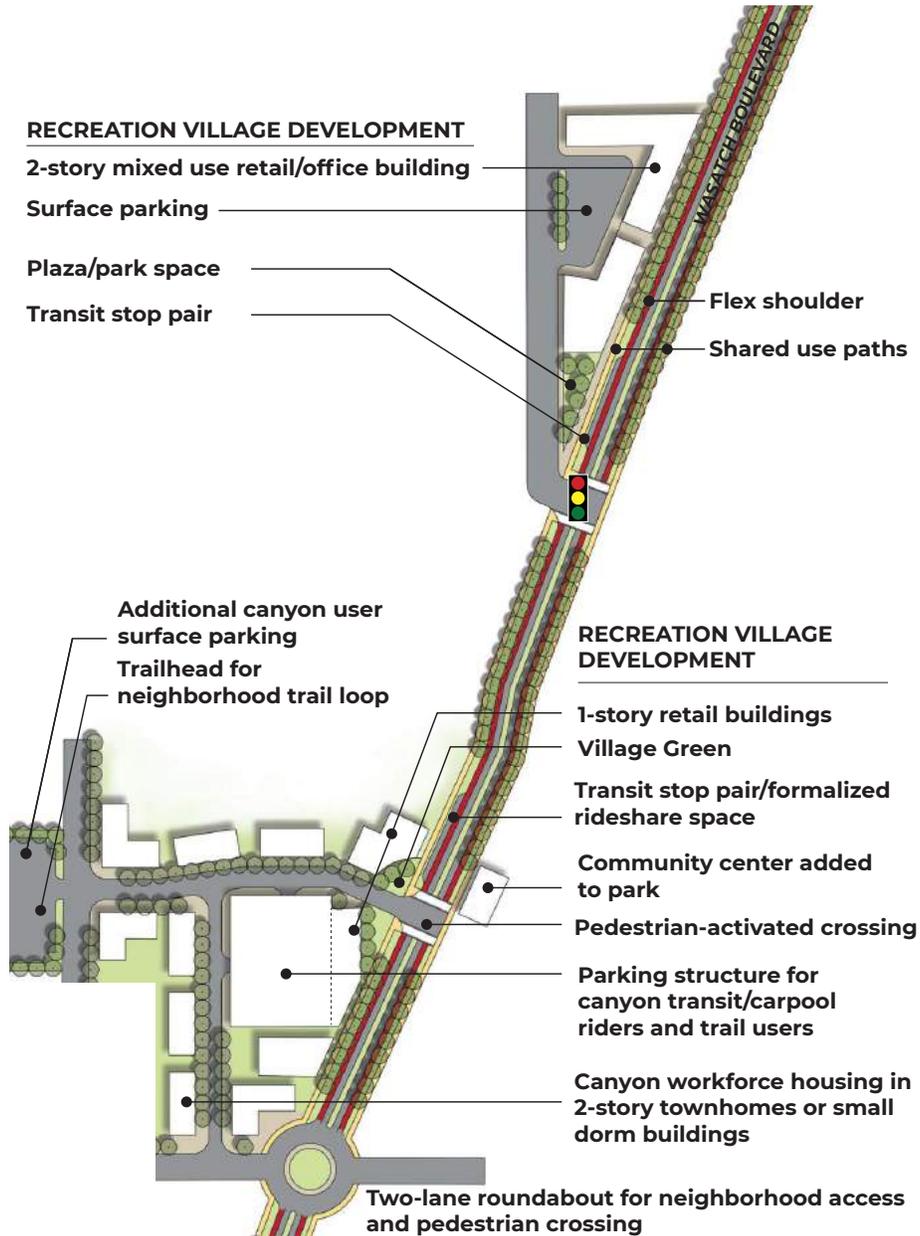
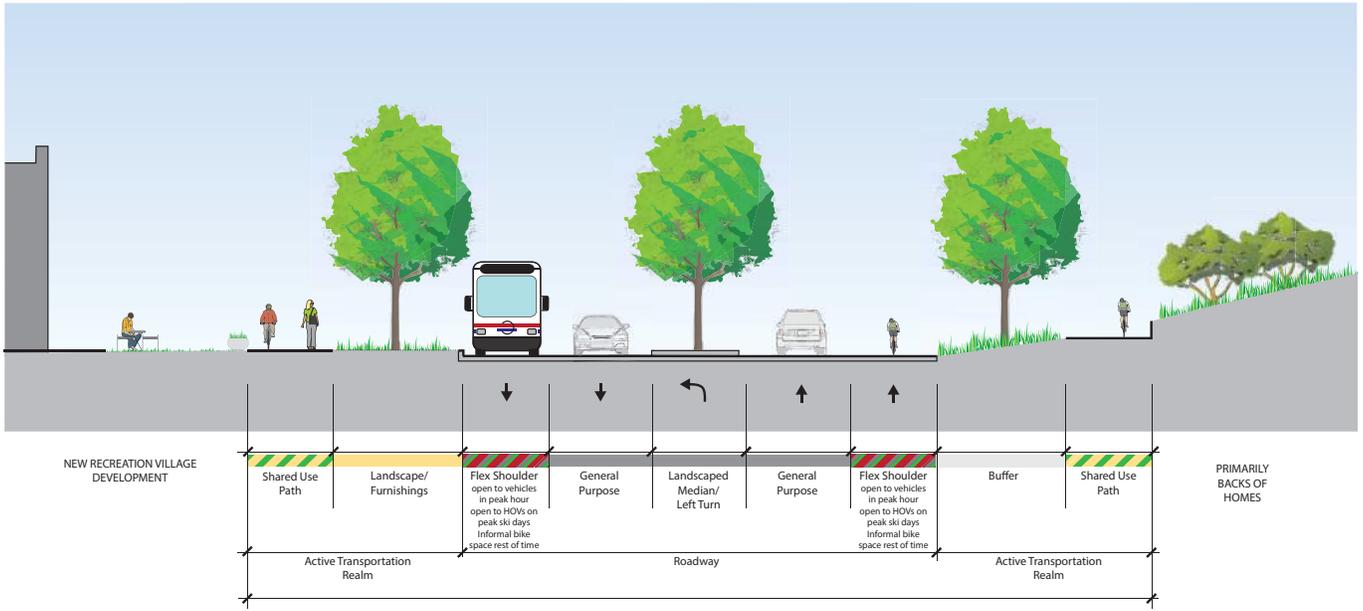


Figure 3.14: Illustrative concept of Scenario 3 at the “Swamp Lot” segment of the Wasatch Boulevard corridor.



Right-of-Way: Primarily ~150'; narrows to 77' - 94'

## Wasatch Boulevard

Between Bengal Blvd. and Little Cottonwood Road  
LOOKING NORTH

Figure 3.15: Illustrative concept of Scenario 3 Wasatch Boulevard cross section at the "Swamp Lot" segment of the corridor.

### 3.5 Concept and Scenario Evaluation

The second part of the concept and alternative long-range scenario phase of the project is an in-depth evaluation of the concepts and scenarios. The project team evaluated each concept and scenario against all seven Corridor Goals, using the performance measures for each. This allowed the team to compare each concept and scenario against one another as well as against the baseline scenario from Part 2 of this report.

#### Evaluation methodology

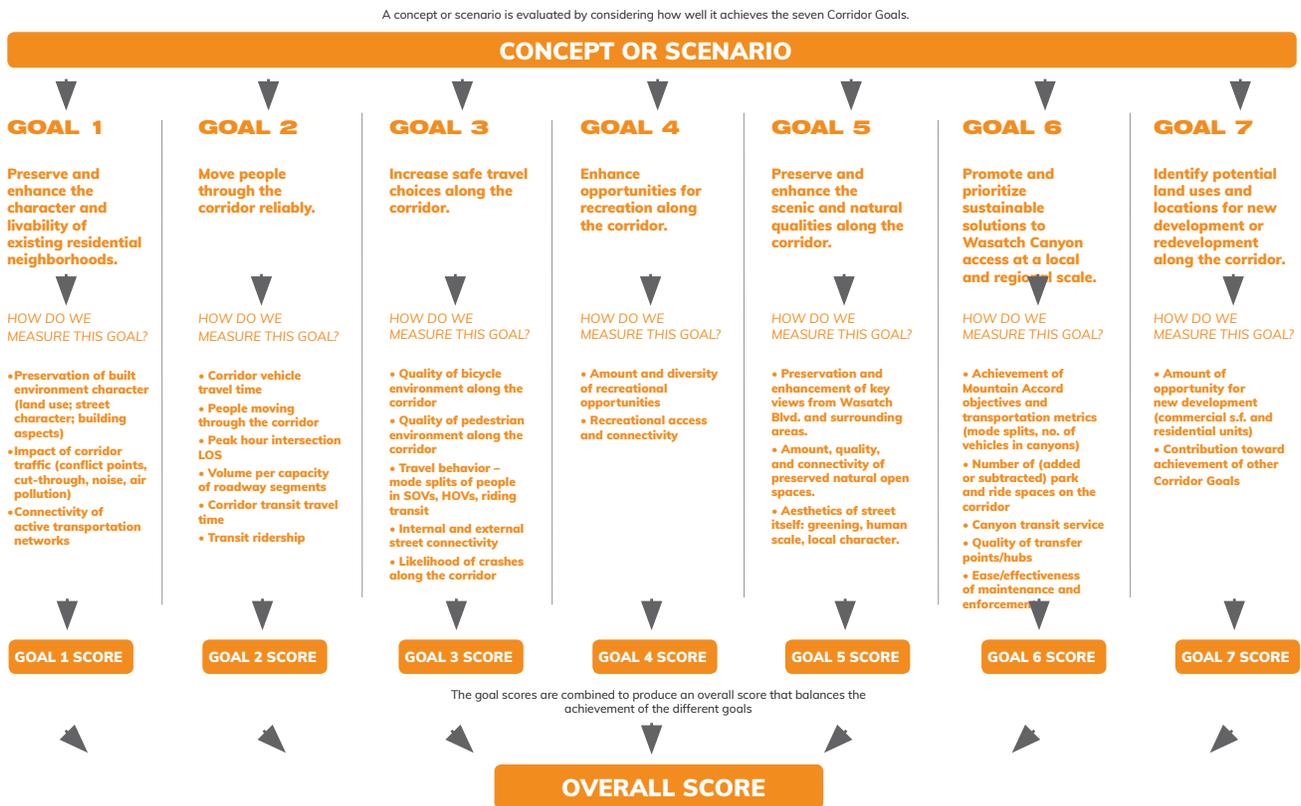


Figure 3.16: Summary of the methodology for evaluating the Concepts and Alternative Long-Range Scenarios.

Each performance measure was assessed on a five-point system where -2 signifies a major detraction from the goal, -1 signifies a minor detraction from the goal, 0 is neutral, 1 is a minor contribution to the goal, and 2 is a major contribution to the goal. The score of a given concept or scenario for each performance measure was aggregated into a score for each goal.

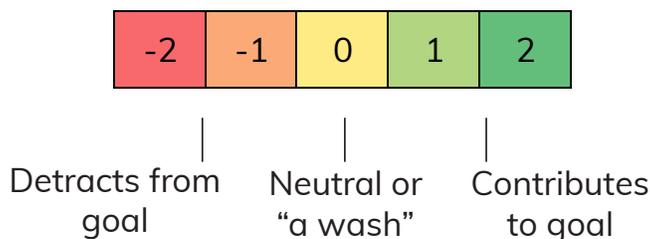


Figure 3.18 on the next page shows the full results of the evaluation. Figure 3.17 below summarizes the evaluation of each scenario, showing for each goal the existing performance of the goal, the estimated contribution by each scenario, and the projected performance under each scenario. The projected performance is the sum of the existing condition and contribution to the goal. The total score of each scenario is shown both with each goal weighted equally and weighted according to the public's prioritization of the goals shown on page 12.

		GOAL 1 TOTAL	GOAL 2 TOTAL	GOAL 3 TOTAL	GOAL 4 TOTAL	GOAL 5 TOTAL	GOAL 6 TOTAL	GOAL 7 TOTAL	UNWEIGHTED OVERALL	SURVEY WEIGHTED OVERALL
	Existing condition	1.33	1.00	0.68	1.50	1.88	0.80	1.50	1.24	1.23
Contribution to the goal	Scenario 1: "CURRENT PLANS"	0.05	1.17	0.12	0.09	-0.10	0.33	0.67	0.33	0.31
	Scenario 2: "EAST MEETS WEST"	0.38	0.42	0.80	0.93	0.51	0.40	1.13	0.65	0.61
	Scenario 3: "RECREATION VILLAGES"	0.62	1.00	0.81	1.15	0.77	0.64	1.23	0.89	0.85
Projected performance	Scenario 1	1.38	2.17	0.79	1.59	1.77	1.13	2.17	1.57	1.53
	Scenario 2	1.71	1.42	1.47	2.43	2.38	1.20	2.63	1.89	1.83
	Scenario 3	1.95	2.00	1.49	2.65	2.64	1.44	2.73	2.13	2.08

Figure 3.17: Summary of evaluation of the Alternative Long-Range Scenarios, compared to the existing condition.

Conclusions of this evaluation include:

- Scenario 3 is strong across all goals – adds capacity to move people while also responding to community-focused goals and lessening development/traffic pressure on Segment 1.
- The strongest concepts when considering all goals tend to be ‘land use’ or small area plan concepts, focused on Gravel Pit and Swamp Lot/Golden Hills area.
- The strongest concepts tend to have low precedent locally.
- Some concepts with more precedent also scored well – these tend to be those focused on active transportation and recreation, such as the multi-use paths, linear park, and Bonneville Shoreline Trail implementation.
- Moving more people through the corridor will likely depend on increasing roadway capacity. Goal 2 was the one goal in which Scenario 1 scored the highest, though Scenario 3 was very close.
- But innovative/appropriate transit and TDM improvements can complement any capacity increases. These are important for achieving a wider range of goals.
- None of the scenarios completely “fix” the mobility issues in Segment 1, especially at the I-215 interchange.

# Wasatch Boulevard Corridor Scenario Evaluation

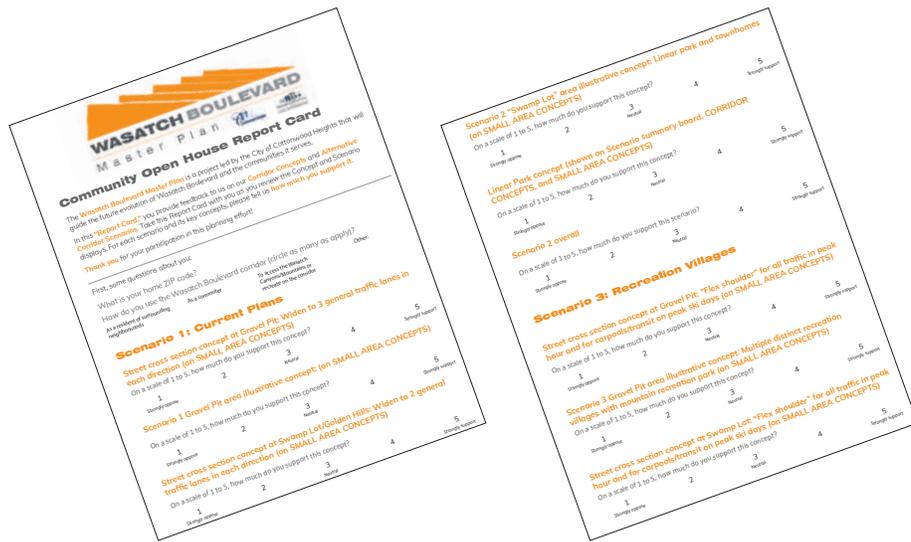
		Scenario		Description		GOAL 1		GOAL 2		TOTAL			
						Preserve and enhance the character and livability of existing residential neighborhoods.	Move people through the corridor reliably.	GOAL 1 TOTAL	GOAL 2 TOTAL				
		Scenario		Description		Relative to built environment	Relative to corridor condition	Relative to neighborhood	Relative to active transportation network	Relative to transit	Relative to multimodal safety		
Baseline	CORRIDOR		EXISTING (or BASE SCENARIO) CONDITION		Dark green = Excellent; Light green = Good; Yellow = Fair; Orange = Poor; Red = Very Poor								
	SEGMENTS	Corridor	Corridor	2.5	1.5	0	0.3333	1	0.5	1	0.5	1	
		Segment 1	Segment 1	1	2	0	1	1	1	1	1	1	
		Segment 2	Segment 2	1	1	0	1.3333	1	1	1	1	1	
		Segment 3	Segment 3	1	1	0	1.3333	0	0	0	0	0	
	INTERSECTIONS	Segment 4	Segment 4	1	2	0	0.6667	2	2	2	2	2	
		I-215	I-215	0	0	0	0	0	0	0	0	0	
		3000 E	3000 E	0	0	0	0	0	0	0	0	0	
		6200 S	6200 S	0	0	0	0	0	0	0	0	0	
		Big Cottonwood/Fort Union	Big Cottonwood/Fort Union	0	0	0	0	0	0	0	0	0	
Bengal		Bengal	0	0	0	0	0	0	0	0	0		
3500 E	3500 E	0	0	0	0	0	0	0	0	0			
Little Cottonwood Rd.	Little Cottonwood Rd.	0	0	0	0	0	0	0	0	0			
9800 S	9800 S	0	0	0	0	0	0	0	0	0			
<b>Potential Strategy Elements</b>													
Dark green = Strongly enhances; Light green = Somewhat enhances; Yellow = Neutral; Orange = Somewhat detracts; Red = Strongly detracts													
SCENARIO 1	Cross section	1	3	Multi-Use Path at strategic connective locations	0	1	1	0.667				0.00	
	Cross section Segment 1	1	3	6 lanes with center turn	0	1	-1	0	1	0	0	0.50	
	Cross section Segment 3	1	3	4 lanes	-1	-1	-1	-1	2	0	2	1.50	
	Corridor treatments - across barrier connections	1	2	Combined pedestrian crossings and connections to neighborhood	0	0	2	0.667	0	0	0	0	0.00
	Corridor treatments - streetscape	1	2	Strategic streetscape in Segments 1 and 3	1	0	0	0.333				0.00	
	Corridor treatments - traffic mgmt	1	2	Stripe warnings at local accesses	0	1	0	0.333				0.00	
	Corridor treatments - traffic mgmt	1	1	More acceleration lanes out of local accesses	0	0	0	0				0.00	
	Corridor treatments - transit infrastructure	1	2	Consolidate stops, improve stop quality, small pedestrian access improvements	0	0	0	0	0	0	0	0.00	
	Corridor treatments - transit service	1	2	Extend transit service to Gravel Pit development	0	0	0	0	0	0	0	0.00	
	Supporting network features - canyon access	1	2	Increase capacity of existing park and ride lots: Swamp Lot, Big Cottonwood Canyon Mouth	0	0	0	0	1	1	0	0.67	
Supporting network features - canyon access	1	2	Near-term new parking areas from 2012 canyons parking study	0	0	0	0	1	1	0	0.67		
Supporting network features - canyon access	1	2	Use existing commercial and institutional parking areas for canyons park-and-ride.	0	0	0	0	1	1	0	0.67		
Supporting network features - recreation	1	1	Improvement of Ferguson Canyon trailhead: more formal, more parking	0	0	0	0				0.00		
Supporting network features - recreation	1	1	Additional trailhead accessing the planned Bonneville Shoreline at LC pullout	0	0	1	0.333				0.00		
Small area concepts - BCC Mouth	1	2	Small improvements to intersection and park and ride - expansion to south side	-1	0	0	-0.333	0	1	1	0	0.50	
Small area concepts - Gravel Pit	1	2	Gravel Pit Study Plan	0	0	0	0	-1	0	-2	0	-0.75	
Small area concepts - LCC Turnout	1	2	Staging improvements, expansion of parking per canyon parking study.	0	0	0	0	0	1	0	0	0.25	
Small area concepts - Swamp Lot area	1	2	Expansion of park and ride per canyon transportation study and lot on LDS Church owned parcel	-1	0	0	-0.333	0	1	0	0	0.25	
Intersections - delay reduction	1	1	Additional left turn lanes on Bengal	0	1	0	0.333	1	0	2	0	0.75	
Intersections - delay reduction	1	1	Optimize protected/permitted left turns at Big Cottonwood	0	0	0	0	0	0	1	0	0.25	
Intersections - delay reduction	1	1	High T right lane added to WB 6200 South	0	0	0	0	1	0	0	1	0.50	
SCENARIO 1 TOTAL	1	39		-0.1	0.1	0.1	0.0	1.00	1.50	0.00	1.00	1.00	0.92
SCENARIO 2	Cross section	2	3	Multi-Use Path on one side as part of linear park	1	1	2	1.333				0.00	
	Cross section Segment 1	2	3	4 GP lanes with center transitway	0	-1	0	-0.333	0	1	0	-1	0.00
	Cross section Segment 1	2	2	Promenade/Esplanade	0	0	1	0.333				0.00	
	Cross section Segment 1	2	2	Protected bike lane	0	0	1	0.333				0.00	
	Cross section Segment 1	2	2	Local access lane at Gravel Pit	0	0	1	0.333	0	0	0	0	0.00
	Cross section Segment 3	2	3	2 lanes * assumes other network connections	1	-1	0	0	0	0	2	0	0.50
	Cross section Segment 3	2	2	Buffered bike lane	0	0	0	0				0.00	
	Cross section Segment 3	2	2	Local access lane and 3500 East signal relocation to King's Hill in Segment 3	1	1	1	1	0	0	0	0	0.00
	Corridor treatments - across barrier connections	2	2	Grade separated active transportation crossings over Wasatch Boulevard	0	0	2	0.667				0.00	
	Corridor treatments - streetscape	2	2	Enhanced sidewalk with urban streetscape at Gravel Pit	0	0	1	0.333				0.00	
Corridor treatments - streetscape	2	3	Linear Park with native landscape	2	1	1	1.333				0.00		
Corridor treatments - transit infrastructure	2	2	Major transit center at Gravel Pit, fewer stops the rest of the corridor	0	0	0	0	1	1	0	0.67		
Corridor treatments - transit service	2	2	Extension of Downtown/UJ Foothill/Wasatch route to termination at Gravel Pit, with potential future conversion to BRT	0	0	0	0	0	2	0	0.67		
Supporting network features - canyon access	2	2	Major intermodal park and ride hub at Gravel Pit that satisfies much or all of the park and ride demand for the corridor, integrated with supporting land use	0	1	1	0.667	1	1	0	0.67		
Supporting network features - regional streets	2	2	Extension of Highland Drive through Dimple Dell	0	0	0	0	0	0	0	0.00		
Supporting network features - regional streets	2	3	Collector connection along Little Cottonwood Creek alignment	-1	0	0	-0.333	0	0	0	0	0.00	
Small area concepts - BCC Mouth	2	2	Combined with Gravel Pit as node/development, with fly-over transit	-1	0	0	-0.333	1	0	0	0	0.25	
Small area concepts - Gravel Pit	2	3	Walkable urban place development with Gravel Pit plan program	0	0	2	0.667	0	1	-2	0	-0.25	
Small area concepts - LCC Turnout	2	2	Some active transportation improvements, becomes part of linear park	0	0	1	0.333	0	0	0	0	0.00	
Small area concepts - Swamp Lot area	2	2	Some active transportation improvements, becomes part of linear park, a few townhomes	1	0	2	1	0	0	0	0	0.00	
SCENARIO 2 TOTAL	2	46		0.2	0.1	0.8	0.367	0.00	0.00	2.00	0.00	-0.50	0.00
SCENARIO 3	Cross section	3	3	Multi-Use Path on both sides	1	1	2	1.333				0.00	
	Cross section Segment 1	3	3	4 GP lanes with flex shoulders	0	0	0	0	1	1	0	1	0.75
	Cross section Segment 1	3	2	Raised Bike Lane	0	0	1	0.333				0.00	
	Cross section Segment 3	3	3	2 lanes with flex shoulders	0	-1	0	-0.333	2	1	2	2	1.75
	Cross section Segment 3	3	2	Raised Bike Lane	0	0	1	0.333				0.00	
	Corridor treatments - across barrier connections	3	2	Landscape tunnels under Wasatch Boulevard at Gravel Pit	0	0	2	0.667				0.00	
	Corridor treatments - streetscape	3	3	Village streetscape	1	0	2	1				0.00	
	Corridor treatments - traffic mgmt	3	2	Roundabouts at local accesses with pedestrian crossings	2	1	0	1				0.00	
	Corridor treatments - traffic mgmt	3	2	Lower speed limit to 35-40 mph	1	1	1	1	-1			0	-0.25
	Corridor treatments - transit infrastructure	3	2	High-quality on-street stops at recreation villages, lower-level stops a few other places	1	0	1	0.667	0	1	0	0	0.33
Corridor treatments - transit service	3	2	New 15-30 minute service on Wasatch Boulevard to serve Eastside north-south, with stops at each recreational village, and integrated with year-round canyon service	1	0	1	0.667	0	1	0	0	0.33	
Supporting network features - canyon access	3	2	Park and ride structures/lots integrated into village centers, with improved stations for year-round canyon (and regular) transit.	0	0	1	0.333	1	1	0	0.67		
Supporting network features - canyon access	3	2	Year-round canyon transit service.	0	0	1	0.333	1	1	0	0.67		
Supporting network features - recreation	3	2	Mountain recreation park in Gravel Pit development	0	0	2	0.667				0.00		
Supporting network features - recreation	3	2	Urban corridor looped trail network meeting at recreational villages and connected to BST	1	0	2	1				0.00		
Small area concepts - BCC Mouth	3	2	Recreation village with on-street transit center	1	0	2	1	0	1	1	0	0.50	
Small area concepts - Gravel Pit	3	2	Two separate recreation villages that lower the amount of development in the Gravel Pit area	0	0	2	0.667	0	1	-1	1	0.25	
Small area concepts - LCC Turnout	3	2	Recreation village	-1	0	2	0.333	0	1	0	0	0.25	
Small area concepts - Swamp Lot area	3	2	Recreation Village running from King's Hill/8350 to north end of Swamp Lot triangle	1	0	2	1	0	1	0	0	0.25	
SCENARIO 3 TOTAL	3	42		0.474	0.105	1.316	0.632	-1.00	1.50	1.00	1.00	1.50	1.00
Base and additional concepts	Intersections - multimodal safety			Traffic calming and parking/path formalization at 9800/Wasatch	1	1	1	1	0	0	0	0.00	
	Intersections - multimodal safety			Create more visible, safer pedestrian crossings at existing signals.	1	0	1	0.667	0	0	0	0.00	
	Intersections - multimodal safety			Add bicycle safety measures at intersections	0	0	1	0.333	0	0	0	0.00	
	Land use policies			Transit First policy for Gravel Pit	0	0	1	0.333	1	1	0	0.67	
	Programs and partnerships			Charge for canyon access with pass program and HOV discounts	0	1	0	0.333	1	1	0	0.67	
	Programs and partnerships			TDM - ski resorts	0	1	0	0.333	1	1	0	0.67	
	Programs and partnerships			TDM - Cottonwood Corporate Center	0	0	1	0.333	1	1	1	1.00	
	Supporting network features - canyon access			Create staging area for closed Little Cottonwood Canyon.	0	1	0	0.333				0.00	
	Supporting network features - canyon access			Formalized "casual carpool"	0	0	0	0	1	0	0	0.33	
	Supporting network features - canyon access			Improved canyon communication network	0	1	0	0.333	1	0	0	0.33	
Supporting network features - canyon access			Snow sheds in Little Cottonwood Canyon	0	2	0	0.667	1	0	0	0.33		
Supporting network features - local streets			Connect 3375 East street stubs to one another and to Wasatch Blvd; Extend 3260 as a street or pathway to Danish Rd and 3375 East	0	0	1	0.333	0	0	0	0.00		
Supporting network features - local streets			Make street connections in area south of Bywater Park.	0	0	1	0.333	0	0	0	0.00		
Supporting network features - recreation			Build Bonneville Shoreline Trail through Cottonwood Heights	0	0	1	0.333				0.00		

Figure 3.18: Full evaluation of the Alternative Long-Range Scenarios and their concepts, compared to the existing condition.



## 3.6 Community Open House 2

The project team held a public open house on March 19, 2018. The open house presented the corridor concepts and three scenarios through map diagrams, example images of other places, potential street cross sections, and illustrative small area plan concepts. The team solicited input through green (“like”) and red (“don’t like”) dots on the concepts and scenarios and a survey asking attendees about their support of the concepts and scenarios. The team also placed the open house materials and survey online. 50 people responded to the survey.



Open House 2 “Report Card” survey (top) and open house event (bottom images)

Conclusions of this feedback included:

- No one scenario was the clear favorite – survey average ratings were closely grouped between slight opposition and neutral. There were aspects of all the scenarios that were popular. The scenarios scored in the following order (on a 1 to 5 scale):
  - ◇ 1 – Scenario 2 (2.84)
  - ◇ 2 – Scenario 3 (2.68)
  - ◇ 3 – Scenario 1 (2.50)
- Scenario 3 garnered the most attention/ interest by those placing dots on the open house displays – Scenario 3 concepts received 254 dots, compared to 192 for Scenario 2 and 122 for Scenario 1. Similar to the other scenarios, roughly half of those dots were green.
- The concepts that received the most dot attention were all the small area concepts for the Swamp Lot. All were less than half green, with the Recreation Village in Scenario 3 having only 8 percent green.
- There was opposition to any development south of Big Cottonwood Canyon. Reflecting the dots, the lowest scoring concept was the Recreation Village concept at the Swamp Lot (1.74), though the Scenario 2 concept also scored low (1.93), likely because of the townhomes.
- The most support in the survey was for an intensive Gravel Pit development, i.e. in Scenario 2. This concept also had substantial dot support (21 green dots, 60% of total). The Recreation Village at the Gravel Pit also had dot support (22 green dots, 88% of total).
- A major park and ride hub at the Gravel Pit was supported.
- Preferences on the roadway were not clear – no one cross section was the most popular.
- The one really popular idea for open house attendees was for a slower Wasatch Boulevard.
- The most popular path option was for a path on one side for the whole corridor (51%), though both sides was also relatively popular. (35%).



Figure 3.19: Examples of Open House 2 display boards with dots placed by open house attendees.

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# PART 4 RECOMMENDATIONS

## 4.1 Overview

The project team identified a Preferred Scenario for Wasatch Boulevard that balances the achievement of the seven Corridor Goals. The focus of this Preferred Scenario is a series of three planning objectives that respond to both the team evaluation and public feedback. We believe these objectives are the best and most balanced way for this plan to balance among the different priorities for the corridor.

The objectives are:

- Objective 1: Shape a canyon-oriented, walkable urban place at the Gravel Pit.
- Objective 2: Create a connected network of pathways and trails for transportation and recreation, along the entire corridor.
- Objective 3: Balance livability, roadway capacity, and sustainable canyon access south of Big Cottonwood.

Based on these objectives, the project team also defined a Preferred Scenario along the Wasatch Boulevard corridor.

The Recommendations section describes the objectives in detail, including the recommended strategies associated with each, and describes the Preferred Scenario as built from these objectives. Finally, it discusses how the Preferred Scenario achieves the Corridor Goals.

## 4.2 Objective 1: Shape a canyon-oriented, walkable urban activity center at the Gravel Pit.

The idea of an intense, walkable, mixed-use place also oriented to both canyon access and on-site recreation was popular with the public and was one of the highest-scoring concepts in the team’s evaluation. The Gravel Pit is a singular opportunity in Cottonwood Heights and the Wasatch Front. We believe the site can cater to all of the Wasatch Boulevard Corridor Goals. If done right, the site can be both a community gathering place, a regional employment center, a recreational mecca, and a vibrant base camp for the Cottonwood canyons - aspects of the development that can complement one another.

Strategies for this objective include:

### Similar program as Gravel Pit Study

The 2016 Gravel Pit site study identified market demand for a series of uses on the Gravel Pit site. These uses include 2 million square feet of office space, upwards of 150 hotel rooms, 3,000 residential units, and up to 250,000 square feet of retail. We recommend that this program be used as a baseline for planning the Gravel Pit area and adjusted accordingly as conditions evolve.

### But in walkable, connected format

However, this plan strongly recommends that the Gravel Pit development take on a highly walkable, urban character. This includes the following elements:

- High intensity – height standards should generally follow those recommended by the 2016 study. The City can consider whether to include a maximum dwelling units per acre and/or floor-area- ratio. It may not be necessary.

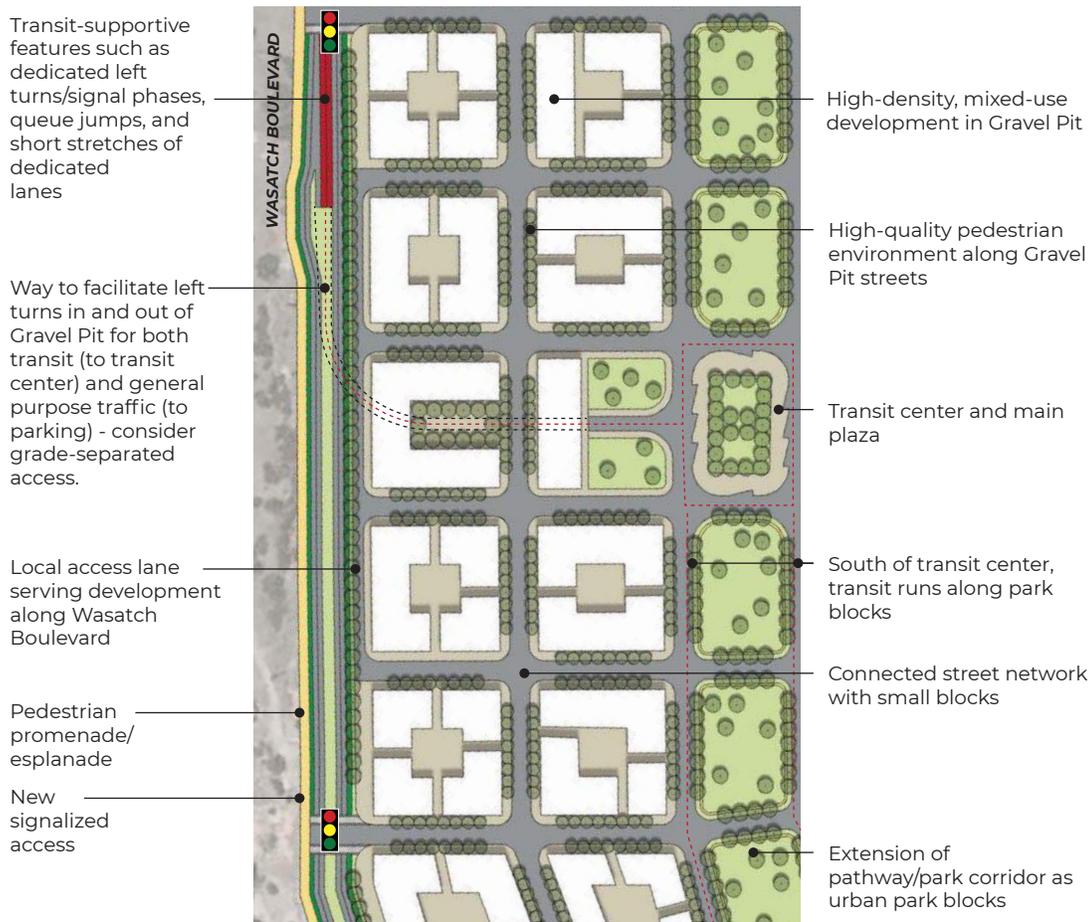


Figure 4.1: Illustrative concept for Gravel Pit segment of the Wasatch Boulevard corridor.

- Mix of uses - the City should seek to mix uses at as fine a grain as possible to allow for more walking, bicycling, and transit trips and fewer driving trips. Mixing can occur both vertically (for example retail; on the ground floor and residential or office above) or horizontally (single-use buildings next to one another). Strategies to mix uses is to focus less on regulating use in individual projects than form (form based codes) ; requiring a specific use on the ground floor, such as retail; and taking an active role in seeking a mix of different types of projects and uses in the Gravel Pit area.
- Walkable streets - internal streets in the Gravel Pit area should prioritize walkability. This means wide pedestrian realms amenitized with regular street trees and street furniture; short blocks; frequent street crossings; slow traffic; and, perhaps most of all, an engaging street-level private realm. Strategies to create this level of walkability include special design guidelines and standards for the Gravel Pit area; a form-based code shaping street frontages of private development; and street connectivity standards (see next bullet). Above all, buildings and the sites they sit on need to be oriented to pedestrians rather than automobiles, with parking in the back or at the sides of buildings, or in parking structures away from street frontage; and primary entries on the sidewalk.
- A highly connected, dense street network. Streets in the Gravel Pit development should be very connected, with a minimum connectivity index (link-node ratio) of 1.7 and maximum block lengths of 300 to 400 feet.
- A connected network of public spaces - the area as a whole should be connected by great public space, including plazas, parks, and especially walkable streets. In addition, the City should capitalize on the natural open space surrounding the site and bring this element into the development as public/recreational open space, invigorating the place with the energy of outdoor recreation.
- Incorporate emerging transportation technology - strongly consider the rapid evolution of new technology in transportation, including automation, connection and shared mobility, however prioritize investment in and use of these technologies for the public realm. For example, strongly consider how automated vehicle technology can be applied for moving people on transit, whether on regional or canyon routes through the Gravel Pit or first-last mile “microtransit” solutions.



Images demonstrating recommended character for the Gravel Pit development.

## Incorporate many of the “recreation village” ideas

Many of the ideas from the Scenario 3 “Recreation Village” concepts should be strongly considered for the Gravel Pit. These include:

- A significant recreational amenity, such as a mountain recreation park with activities such as mountain biking and/or rock climbing.
- Trailheads for the Bonneville Shoreline Trail and other links in the recommended pathway network (Objective 2 in this section).
- Active, public frontage onto the future Bonneville Shoreline Trail east of the development.
- Development oriented to recreational activities, such as day lodges and food and beverage services with outdoor areas.
- Connection across Wasatch Boulevard to the “Old Mill” area via grade-separated underpasses - see the “land tunnel” concept.

It is important to note that the Gravel Pit site has some constrained areas for building, including a major fault - creating the opportunity for these recreational concepts to inhabit the- unbuilt space.



Images demonstrating Recreation Village ideas for the Gravel Pit development area.



Figure 4.2: Illustrative concept for Recreation Village ideas for Gravel Pit segment of the Wasatch Boulevard corridor.

## Major transit center/terminus at or near the Gravel Pit

This plan recommends that the major transit and park-and-ride hub for Wasatch Boulevard and the Cottonwood canyons be located at or near the Gravel Pit - for both day-to-day transit use as well as ski/canyons transit. This transportation hub should have the following components:

- A transit center integrated with a central square, which would preferably be on-street. The center could include features such as on-street bus bays, shelters, real-time departure information and would be well-integrated with other public space amenities (such as an ice skating rink) as well as complementary land uses like food service.
- The transit center could be the southern terminus to an enhanced bus route to the north via I-215/Wasatch, Foothill Drive, and downtown Salt Lake City, which could transition to a bus rapid transit (BRT) line in the future as ridership and land use evolve together.
- The transit center should be the major hub, transfer point, and park-and-ride point for canyon transit service, and include a major park and ride resource (~2,000 spaces), either in structures or underground, assuming development intensity and property value justifies it.



Images depicting transit center and plaza concepts.

## Increase capacity on 6200 South/Wasatch Boulevard

To improve the movement of people on the Wasatch corridor, roadway capacity should be increased on the segment of Wasatch adjacent to the Gravel Pit and connecting to I-215. This plan's travel demand and traffic modeling show that adding an additional lane in each direction would address most of the traffic mobility needs created with the addition of the Gravel Pit development identified above. The traffic assumptions for the Gravel Pit include three new accesses on Wasatch Boulevard.

## Support walkability and transit on Wasatch Boulevard

Despite the increased roadway lane capacity recommended for Wasatch Boulevard, the street should still support walking, bicycling and transit use, through the following recommended strategies:

- Transit-supportive operational improvements linking the Gravel Pit with I-215 via Wasatch/6200 South - these could include queue jumps at signals, a transit signal bypass like the vehicle bypass being constructed at 3000 East; short segments of bus lane; special turn lanes and signals for buses; and transit signal priority. On the short segments of roadway between Wasatch and I-215, these improvements would likely provide a similar time savings benefit as full transit lanes, without some of the challenges.
- Potential canyon transit- and HOV-supportive features on Wasatch Boulevard.
- Raised bike lane on Wasatch Boulevard.
- Limited access to the Gravel Pit development off Wasatch Boulevard with a local access lane fronting development. This local access lane would allow building frontage on Wasatch Boulevard to be pedestrian-oriented.
- Medians in strategic locations to create more people-oriented character and pedestrian refuge for crossings.
- Consider promenade/shared use path on west side of Wasatch Boulevard, with public space and streetscape opportunities.



PEDESTRIAN PROMENADE

RAISED BIKE LANE

TRANSIT FEATURES

LOCAL ACCESS LANE

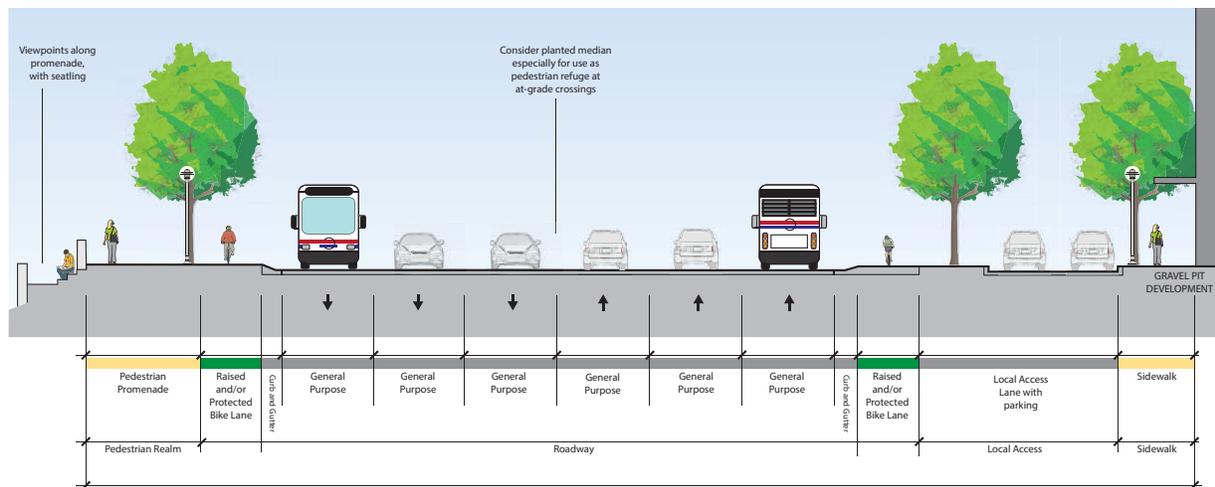


Figure 4.3: Illustrative street cross section concept for Wasatch Boulevard in the Gravel Pit area.

## 4.3 Objective 2: Create a connected network of pathways and trails along the entire corridor.

The Wasatch Boulevard corridor suffers foremost from disconnection - of its neighborhoods from one another, to community centers and the future Gravel Pit development site, from its neighborhoods to regional recreational amenities, and in the overall regional roadway network, which puts too much stress on Wasatch Boulevard. As we noted in the Corridor Study chapter, many Wasatch corridor neighborhoods are connected only to Wasatch Boulevard, and from there one must take a vehicle to get anywhere due to the unwalkable environment on Wasatch. This disconnection detracts from many of the Corridor Goals.

The best opportunity to address this shortcoming is to create a connected network of paths and trails - paved and dirt, for transportation and recreation, on-street and off-street, within neighborhoods and extending to community and regional destinations.

Unlike the recommended approach for the Gravel Pit, which proposes the creation of a place without precedent in Utah, this objective proposes more conventional projects.

### Shared use pathways on Wasatch Boulevard

The “trunk” of this network should be connected shared use pathways and crossings running the length of the corridor, on one or both sides, depending on location and spacing of crossings and neighborhood accesses.



### Wasatch Boulevard crossings

The largest challenge of this objective is likely finding the best way for people to cross Wasatch Boulevard, whether it at-grade or grade-separated crossings. Slowing down the speed would help this.



### Leverage existing trails and paths

Two major existing and planned trail corridors connect to the Wasatch Boulevard corridor - the Big Cottonwood Creek pathway running northwest from the mouth of Big Cottonwood Canyon; and the planned Bonneville Shoreline Trail east of the developed neighborhoods on the east side of Wasatch Boulevard, which is part of a regional trail corridor along the eastern edge of the Salt Lake Valley. These can be integrated into the pathway network recommended by this plan, and to connect it to neighboring communities.



Images depicting elements of a pathway network for the Wasatch Boulevard corridor.

## Neighborhood trail corridors

Consider the creation of two trail corridors through the neighborhoods west of Wasatch Boulevard that can easily link to the Wasatch Boulevard path network and Bonneville Shoreline Trail:

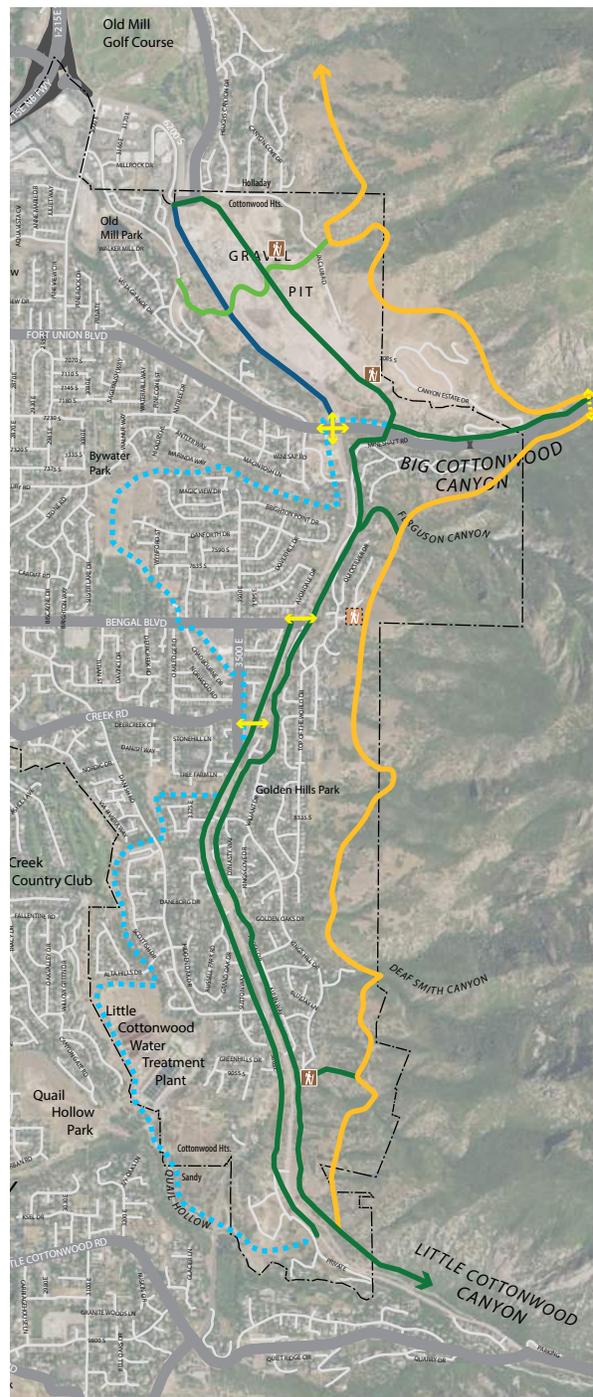
- A south trail that runs through Quail Hollow, along either side of Water Plant property, Little Cottonwood creek, Golf Course, connect to Danish Road, Extension of Deer Creek Road, and LDS Church parcel to connect to Wasatch Boulevard at Golden Hills Park.
- A north trail that runs from Canyon Centre into open space along the slope, into land south of Bywater Park, to 3500 East and to the Swamp Lot and Wasatch Boulevard.

## Connections to Gravel Pit development

The pathway network can be the key recreational and active transportation link between the Gravel Pit development and the rest of Cottonwood Heights. Because of the nature of Wasatch Boulevard and Big Cottonwood Canyon as barriers, the Gravel Pit site is naturally disconnected from the rest of the community; the pathway network can help connect it southward and westward.

## String of parks on the network

In the long term, capitalizing on opportunities, create a string of recreation and open space amenities around the path network.



### PATH & TRAIL CONCEPT

- Wasatch Boulevard pathway spine and connectors
- Bonneville Shoreline Trail planned alignment
- - - Neighborhood trails - potential alignments
- Gravel Pit trail connector / recreation park link
- Pedestrian promenade
- Key existing pedestrian/bike crossing location

Figure 4.4: Illustrative concept for a pathway network for the Wasatch Boulevard corridor.

## 4.4 Objective 3: Balance livability, roadway capacity, and sustainable canyon access south of Big Cottonwood.

South of Big Cottonwood Canyon, the key uses of the corridor are prone to come into conflict: residents enjoying their neighborhoods, commuters and other travelers using the roadway, and skiers and other recreational traffic heading to the Cottonwood canyons. This objective seeks to balance the needs of these user groups, reflected in the Corridor Goals.

### Add roadway capacity sensitively

The analysis of this plan indicated that, in order to move people reliably through the Wasatch Boulevard corridor at acceptable levels of service, the roadway needs to add more vehicle capacity. Alternative scenarios explored moving more people on the corridor through both transit and street connectivity, however those solutions fell short in the project modeling. Consequently, this plan recommends adding more capacity south of Bengal Boulevard, but in a way that is sensitive to and adds value to the surrounding neighborhood and contributes to sustainable canyon access. This sensitivity includes slower vehicle speeds (see below); creative ways to add capacity; a mechanism to prioritize high-occupancy vehicles and transit; safer neighborhood street access to Wasatch (see below); implementation of pathways (See Objective 3); streetscape and landscape improvements; and restricting the overall pavement width.

### Strongly consider using flex shoulders with future consideration for dedicated bus lanes (BRT)

One key idea along the lines of the recommendation above that should be strongly considered is the “flex shoulder.” This means employing the roadway shoulder to move peak time traffic. On Wasatch Boulevard/Little Cottonwood Road south of Bengal Boulevard, the shoulder would be open to all vehicles in peak hours (a.m. north/p.m. south) and HOVs/transit on peak ski days. In the future, the flex shoulders/ additional capacity could be used to create dedicated bus lanes.

### Slow Wasatch Boulevard

This plan recommends slowing both posted and design speed of the roadway. A slow Wasatch Boulevard is a key way to make the corridor safer

and more comfortable for residents and enhance neighborhood character - while maintaining vehicle and person throughput on the corridor. A reduction in corridor-wide traffic speeds does not necessarily mean increases in intersection delay and travel time. Often, slower traffic speeds are more effective at moving traffic more smoothly.

### Improve neighborhood access

Allow for easier and safer vehicular neighborhood access onto the roadway. Consider local access lanes in limited applications, where right-of-way allows.

### Consider roundabouts and other traffic calming measures

Consider one or more roundabouts at strategic locations that would slow traffic, allow safer/ easier neighborhood vehicular access to Wasatch Boulevard, allow for pedestrian crossing, create neighborhood gateways, and enhance community identity.

### Local street connectivity improvements

Implement local street connectivity improvements where possible, such as at Deer Creek Road.

### Preserve and enhance on-street bike facility

Preserve and make consistent the on-street bike facility – this could be a buffered bike lane or the flex shoulder concept described above.

### Use native landscaping

Native landscaping can preserve Wasatch foothill character and help create a parkway character for the corridor.

## Employ medians where feasible

Medians can slow traffic, enhance character, and create safer/more comfortable active transportation crossings.

## Preserve and enhance key views

Use street design to preserve, highlight, and enhance key views of the mountains and valley.

## Appropriate canyon access components

Add canyon access components to this segment of Wasatch Boulevard that complement the planned Gravel Pit development. Limit additional canyons parking areas south of Big Cottonwood Canyons.

## Year-round canyon transit service

There is potential for a year-round regular transit route on Wasatch Boulevard connecting from the

Gravel Pit development, along Wasatch, and up Little Cottonwood Canyon. Stops depend on the land use approach.

## Recreation village at Big Cottonwood Canyon

Big Cottonwood Canyon is the interface between Objective 1 and Objective 3 – should link the neighborhoods to the Gravel Pit (using the path system) while creating a transition and node supporting sustainable canyon access.

## Flexible, directed land use process

The land use component of this objective is challenging, especially at the key vacant/underutilized parcels such as the Swamp Lot and LDS-owned lot. The City should frame a process for determining the best development for these areas by outlining a proactive approach to achieving development that meets the corridor goals but that the public is comfortable with.



SHARED USE PATH

FLEX SHOULDER

MEDIAN

NATIVE LANDSCAPE

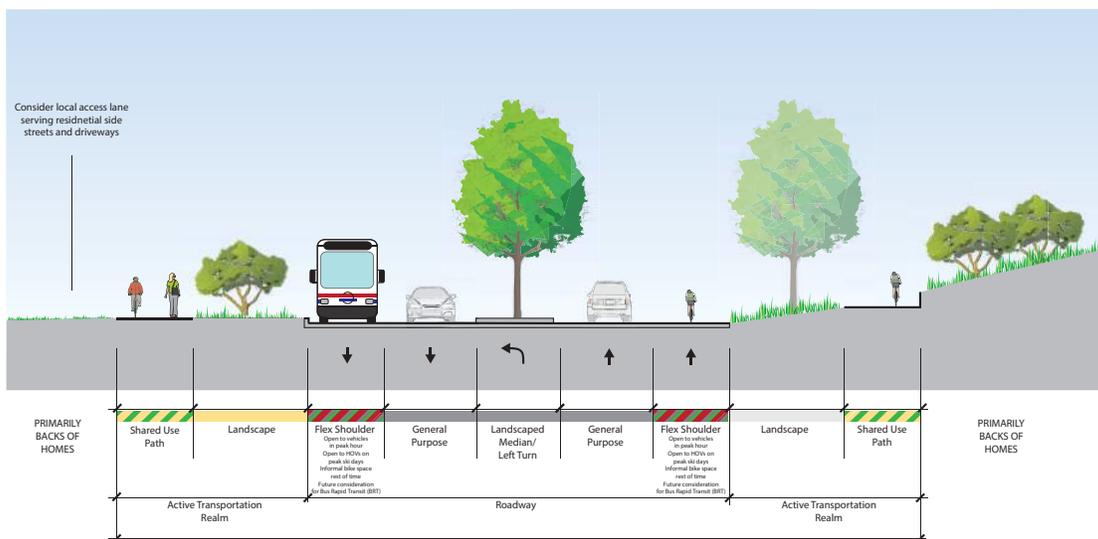


Figure 4.5: Illustrative street cross section concept for Wasatch Boulevard south of Bengal Boulevard.

## 4.5 Wasatch Boulevard Design Considerations: Creating a unified experience

This section conveys the intended overall character of the Wasatch Boulevard, as an outgrowth of the Corridor Goals and three Planning Objectives. In order to become a unified corridor, Wasatch Boulevard should be designed in a manner that elicits a special sense of place and the character of the area.

This begins with unique design treatments within the road right-of-way, including the medians, park strips, pedestrian and bicycle facilities, furnishings and landscape designs. All of these should be carefully coordinated to ensure the corridor is a complete experience. Likewise, the treatment of key public and private places adjacent to the corridor should be carefully considered to ensure that the corridor achieves a unified experience. For example, the design of the Boulevard adjacent to the Gravel Pit area should establish an urban setting in contrast to the more natural and park-like experience envisioned along the boulevard south of Big Cottonwood Canyon.

The following images and descriptions illustrate what Wasatch Boulevard can become through good design and careful implementation. The goal is to create a clear look for the areas south and north of Big Cottonwood Canyon, the former focused on the establishing an urban setting and the latter focused on creating a more natural place that merges with the adjacent foothills and mountain setting.



## Wasatch Boulevard North: The Gravel Pit Area

### Overview

The Gravel Pit area is envisioned to become an intensely developed area that merges city-like qualities with the unique mountain setting. In order to ensure the Boulevard matches this vision, a design aesthetic that embraces the natural hillside should be merged with urbane building materials and design that is suitable for a bustling place of commerce and mixed use development.

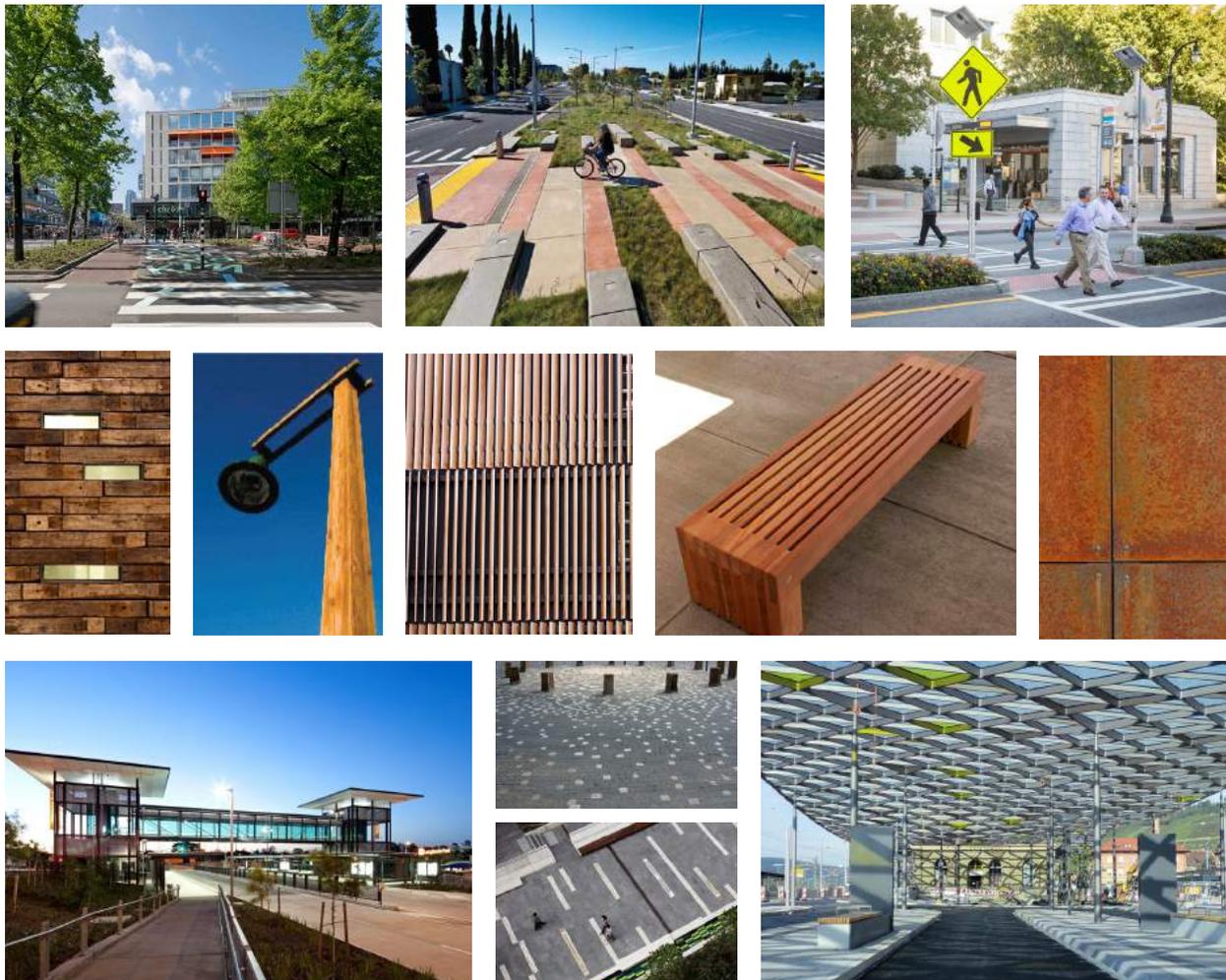


## Streetscape

The manner in which the streetscape in this portion of the corridor is treated will have significant impact on the establishment of a unified look for the corridor. As a high-intensity node and destination, the roadway should merge the natural and built environments, incorporating native trees and landscape materials in strict configurations, with carefully-selected furnishings and lighting that match the high-intensity and attractive buildings that are anticipated. Rows of street trees should be planted in the medians and the park strips, creating a bold appearance from near and far, while helping to steer visitors to their destinations. Care should be taken to maintain critical views of the nearby mountains and the valley floor below.

The edges of the streets should include a unified system of street lights, furnishings and hardscape treatments. Carefully laid out groupings of trees/shrubs and special gardens should help define entrances and gateways into the area.

The wide sidewalks, bikeways and walkways should be highly urban, matching the look and feel of the nearby buildings, transit center and plazas. Ground materials should be carefully selected to achieve a sense of permanence, helping to ensure the roadway fits with the surrounding landscape.



## Street Frontage

The street frontage should be highly walkable, establishing a close relationship between the pedestrian realm and the building facades and entrances. Buildings and yards should be directly oriented to the street. Trees, street furnishings, crosswalks, pathways and lighting should be coordinated with those of the corridor as whole, ensuring a unified look and appeal.



### Regional Recreational Hub

As one moves further into the site, the urban realm should transform into a place to play, explore, and recreate in the hillside setting, merging the urban environment with the natural and creating a special “draw” for the site.

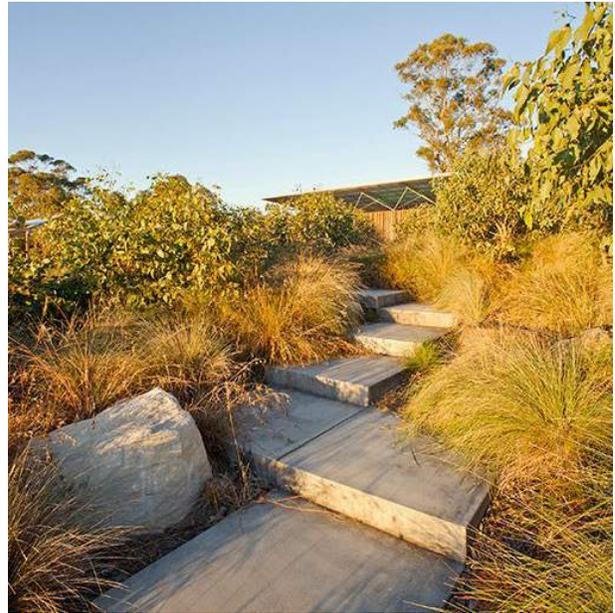


## Wasatch Boulevard South: Wasatch Mountain Parkway

### Overview

South of Big Cottonwood Canyon, Wasatch Boulevard should embrace the natural setting. The roadway will be carefully integrated into the hillside here, maintaining key views to the valley floor and hillside where warranted, and screening undesirable views through the use of carefully-placed vegetation and berms.

The design approach respects the mountain setting. A stylized design approach is used to create a roadway that embraces the natural hillside, creating a fully-realized parkway appropriate for the challenging setting. The result is a corridor that merges nature/mountain with home/yard/park.



## Streetscape

The streetscape should fully embrace the hillside environment, bringing the native palette of vegetation and trees front and center into the roadway. The medians, park strips and merge focus should be on the use of naturalistic clusters of trees, shrubs, perennials, and grasses that replicate the environment of the adjacent hillsides.

Street lights and furnishings should build upon the palette developed for the Boulevard adjacent to the Gravel Pit, introducing a wider range of nature-inspired design motifs. Hardscape treatments should be simple, utilizing asphalt, concrete, crushed stone to enhance the use of native trees and shrub clusters. Art and artistic embellishments should be incorporated as elements of surprise and whimsy.



*Street Frontage*

The street frontage should screen undesirable views, back yards and uncoordinated fences and walls. Where required, walls and fences should use natural, earthy materials including stone, weathered steel, wood and timber. The naturalistic use of trees and vegetation should be used that creates a unified corridor.



### *Parks, Open Spaces and Trails*

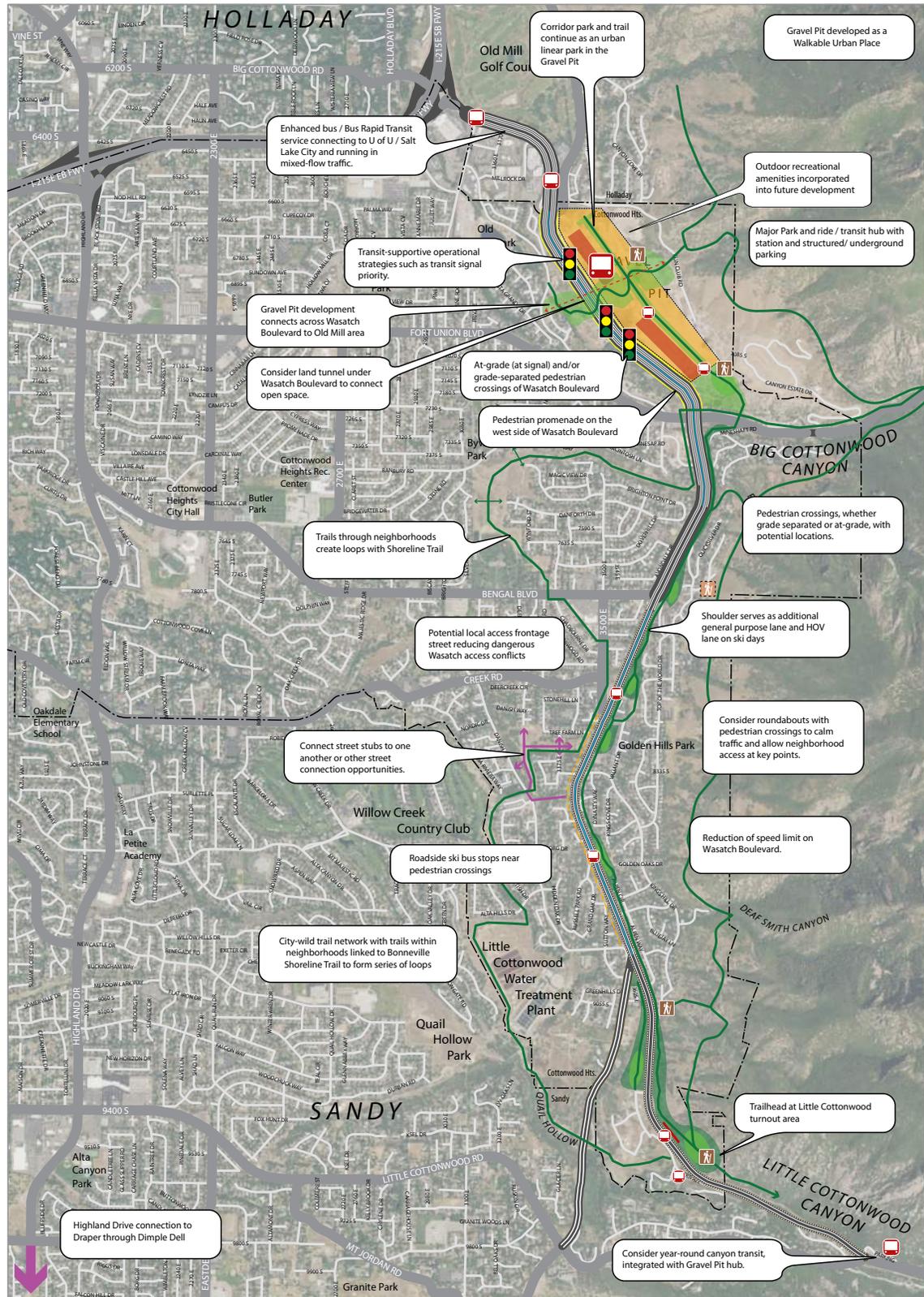
New and expanded parks, trails, open space corridors and street edges are anticipated, resulting in the creation of unified parkway experience where one can play, explore and gain access to regional recreation amenities within the context of the roadway.



## 4.6 Preferred Scenario

The three planning objectives suggest a Preferred Scenario that looks like the one pictured to the right, in Figure 4.6. Objective 1 shapes a walkable, urban, recreation- and canyon-oriented Gravel Pit development. Objective 3 shapes the segment of the corridor south of Big Cottonwood Canyon with a balance among the needs of the local neighborhoods, regional traffic, and canyon travelers. Objective 2 shapes a pathway network that ties the corridor, its communities, activity centers, and open spaces together.

Figure 4.6: Diagram of the Preferred Scenario for the Wasatch Boulevard corridor.



### PREFERRED SCENARIO

- General purpose lane (through or turn)
- Median
- Bike lane
- Pedestrian facility
- Potential zone for a local access lane
- Added street connection
- Trail
- Transit stop
- Trailhead
- New Park & Ride parking
- Development area

## 4.7 How the Preferred Scenario achieves the Corridor Goals

Like the Alternative Long Range Scenarios, the Preferred Scenario was evaluated against the Wasatch Boulevard Corridor Goals and performance measures. The evaluation process, summarized below, yields a score for the scenario for each goal, and an overall score:

### Evaluation methodology

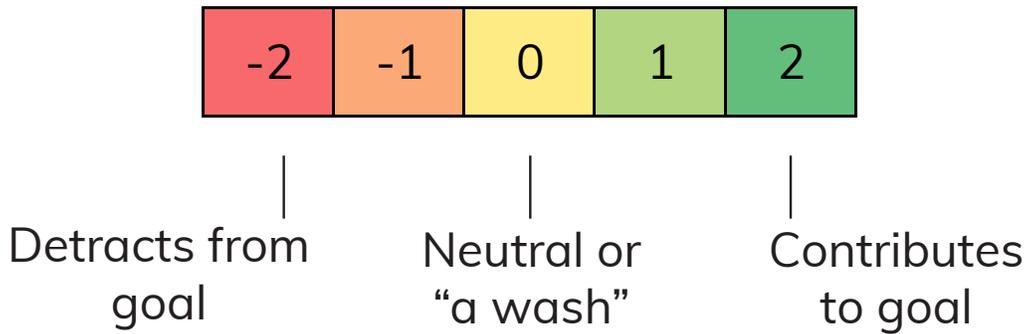


Figure 4.7: Summary of the methodology for evaluating the Preferred Scenario.

As Figure 4.8 demonstrates, the Preferred Scenario balances achievement of the seven goals. The scenario does contribute more for some goals (moving people and new development) than others (preserving and enhancing neighborhoods, improving canyon access). This is in part because of the differences in opportunities of this plan for affecting each of the goals. For some goals - specifically the neighborhood and canyon access goals - this plan has less ability to provide improvement; all of the scenarios show a limited amount of contribution compared to the moving people and development goal.

However, the contribution of the scenario to each goal is significant, and compares well with the highest scoring scenario for each.

The scenario also balances the concepts projected to be most effective - often new and challenging ideas - with those that are more easily implementable and acceptable to the public. While Scenario 3 was the strongest scenario in the team's evaluation, many of its concepts, specifically those relating to development south of Big Cottonwood Canyon, were opposed by members of the public providing feedback. Scenario 3 was also largely comprised of concepts without much precedent locally or in the region. The Preferred Scenario balances the newer concepts with more standard ideas.



		GOAL 1 TOTAL	GOAL 2 TOTAL	GOAL 3 TOTAL	GOAL 4 TOTAL	GOAL 5 TOTAL	GOAL 6 TOTAL	GOAL 7 TOTAL	UNWEIGHTED OVERALL	SURVEY WEIGHTED OVERALL	PRECEDENT RATING
	Existing condition	1.33	1.00	0.68	1.50	1.88	0.80	1.50	1.24	1.23	
Contribution to the goal	Preferred Scenario	0.47	1.17	0.60	0.78	0.49	0.42	1.23	0.73	0.69	2.02
	Scenario 1	0.05	1.17	0.12	0.09	-0.10	0.33	0.67	0.33	0.31	3.08
	Scenario 2	0.38	0.42	0.80	0.93	0.51	0.40	1.13	0.65	0.61	1.63
	Scenario 3	0.62	1.00	0.81	1.15	0.77	0.64	1.23	0.89	0.85	1.33
Projected performance	Preferred Scenario	1.80	2.17	1.27	2.28	2.36	1.22	2.73	1.97	1.92	
	Scenario 1	1.38	2.17	0.79	1.59	1.77	1.13	2.17	1.57	1.53	
	Scenario 2	1.71	1.42	1.47	2.43	2.38	1.20	2.63	1.89	1.83	
	Scenario 3	1.95	2.00	1.49	2.65	2.64	1.44	2.73	2.13	2.08	

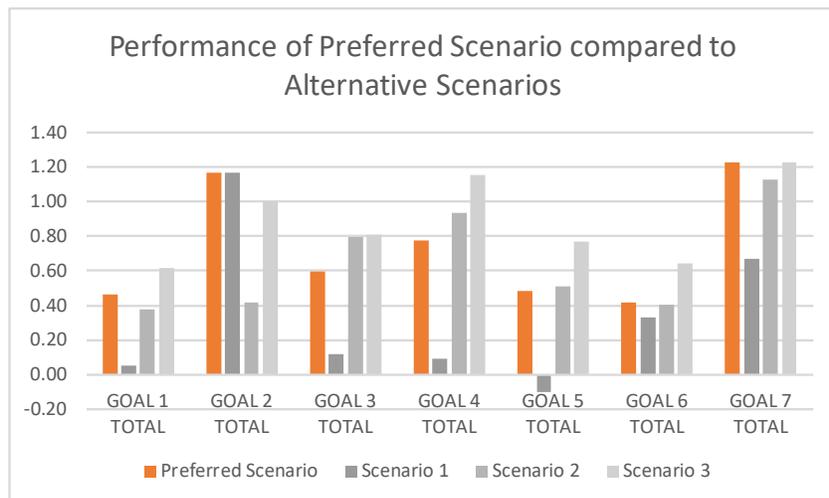
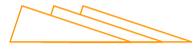


Figure 4.8 Summary of evaluation of Preferred Scenario (top) and Figure 4.9 Performance of Preferred Scenario compared to Alternative Scenarios (bottom).

## The Preferred Scenario **preserves and enhances the character and livability of existing residential neighborhoods** by:



Focusing new development focused on Gravel Pit area, preserving character of existing corridor neighborhoods.



Linking disconnected neighborhoods together through shared use pathways and trails along Wasatch Boulevard.



Reducing the barrier of Wasatch Boulevard with improved pedestrian and bicycle crossings.



Minimizing the pavement width of Wasatch Boulevard roadway as much as possible, despite the additional lane capacity.



Improving resident access onto Wasatch Boulevard through a slower street, features such as roundabouts, and warnings for canyon traffic not to block the intersections.



Creating a proactive, assertive development review process that will provide residents with a chance to shape the development of key parcels within neighborhoods.



Lowering the speed of Wasatch Boulevard, through a new design and a lower posted speed.

## The Preferred Scenario **moves people through the corridor reliably and safely** by:



Adding a transit-prioritized lane in each direction on Wasatch Boulevard in Segment 1, increasing the corridor's capacity to move people more reliably.



Adding a lane or shoulder for peak traffic use in each direction on Wasatch Boulevard in Segment 3, increasing the corridor's capacity to move people more reliably.



Initiating an enhanced bus or bus rapid transit line north along the Valley's east side and terminating at or near the Gravel Pit, providing a high-capacity transit possibility to carry people from the Gravel Pit to major activity centers, reflecting a strong travel market. Cottonwood Heights will work closely with UTA to achieve this increased service and infrastructure.



Improving and emphasizing transit access along the corridor through road design and function (e.g. flex lanes, transit preemption, BRT, etc.).



Slowing the speed of Wasatch Boulevard south of Big Cottonwood Canyon.



Implementing traffic calming features such as medians and roundabouts.



Enhancing visibility of pedestrians and cyclists at crosswalks at major intersections.

## The Preferred Scenario **increases travel choices along the corridor** by:



Continuing to develop a close relationship with UTA to provide higher levels of service and infrastructure along the corridor and to give consideration to emergent transportation trends.



Initiating an enhanced bus or bus rapid transit line north along the Valley's east side and terminating at or near the Gravel Pit, providing a robust transit alternative to carry people from the Gravel Pit to major activity centers.



Implementing transit-supportive roadway and operational features between Gravel Pit and I-215 can improve transit travel times between Gravel Pit hub and I-215.



Shaping the Gravel Pit as a walkable urban place that provides a fundamentally different walking and riding lifestyle choice for people living in this new place.



Creating a network of paths and crossings along the corridor will make short trips easier to take on foot and bike and improve transit access.

## The Preferred Scenario **enhances opportunities for recreation along the corridor** by:



Creating a network of paths that is a venue for recreation for all types of interests and abilities – paved and dirt trails, routes to parks and loops.



Connecting the corridor's activity centers and communities to the Cottonwood canyons.



Encouraging the creation of a major recreational amenity and/or mountain recreation park in the Gravel Pit development creates a recreational focus and hub.



Completing the Bonneville Shoreline Trail and associated new access points, tying Cottonwood Heights into a regional recreation network.



Implementing the city's Bicycle and Trails Master Plan by enhancing the on-street bike lane and lowering of vehicle speeds to improve conditions for road cyclists.

## The Preferred Scenario **preserves and enhances the scenic and natural qualities along the corridor** by:



Concentrating new development in the Gravel Pit.



Emphasizing the natural Wasatch foothill landscape, reinforcing scenic aspects of the corridor important to people.



Preserving key views along the corridor.



Lending a more human scale to the corridor through a pathway system, traffic calming, slower vehicle speeds, and roadway design (landscaped medians, parkstrips, etc.).



Creating walkable frontage and streetscape in the Gravel Pit development, including along Wasatch Boulevard, will create a more attractive character on the northern segment of the corridor.



Building a pedestrian promenade on the west side of Wasatch across from the Gravel Pit, creating a scenic resource.

## The Preferred Scenario **promotes and prioritizes sustainable solutions to Wasatch Canyon access at a local and regional scale** by:



In partnership with UTA, shaping a vibrant canyons hub, with a wealth of park-and-ride spaces, high-quality transit center, frequent transit service to the key canyons destinations, and complementary land uses such as retail and restaurants, hotel rooms, and on-site recreation.



Implementing flex shoulders on Wasatch Boulevard south of Bengal Boulevard that are open to transit and HOVs only on peak ski days, providing a way to incent trip reduction in the canyons and emphasizing more efficient means of transportation year round.



Improving communication about canyon and parking conditions.



Implementing resident access improvements.

The Preferred Scenario identifies potential land uses and locations for new development or redevelopment along the corridor by:



Focusing development in the Gravel Pit, which balances neighborhood preservation, moving people, transportation choices, recreation, scenery, and canyon access.



Acknowledging the potential for a high amount of development in a way that balances the corridor goals.



Identifying a process for development along the corridor south of Big Cottonwood that allows the City to be proactive in working with public to define a development that meets corridor goals and goals of other City policy.



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