2014 TRANSPORTATION PLAN PLANNING PUBLIC WORKSHOP

Town of Crested Butte

What has been done so far…

- Issue Mapping
- Goal Setting
- Traffic study over summer July 31- August 2
- Existing Conditions Study

Why are we planning?

- The last plan Transportation Plan was in 1998
- Maintain the sense of Community we enjoy
- Analyze Transportation Needs
- To prioritize and budget for Transportation Projects
- Provide solutions to Transportation Issues

Transportation Plan Goals

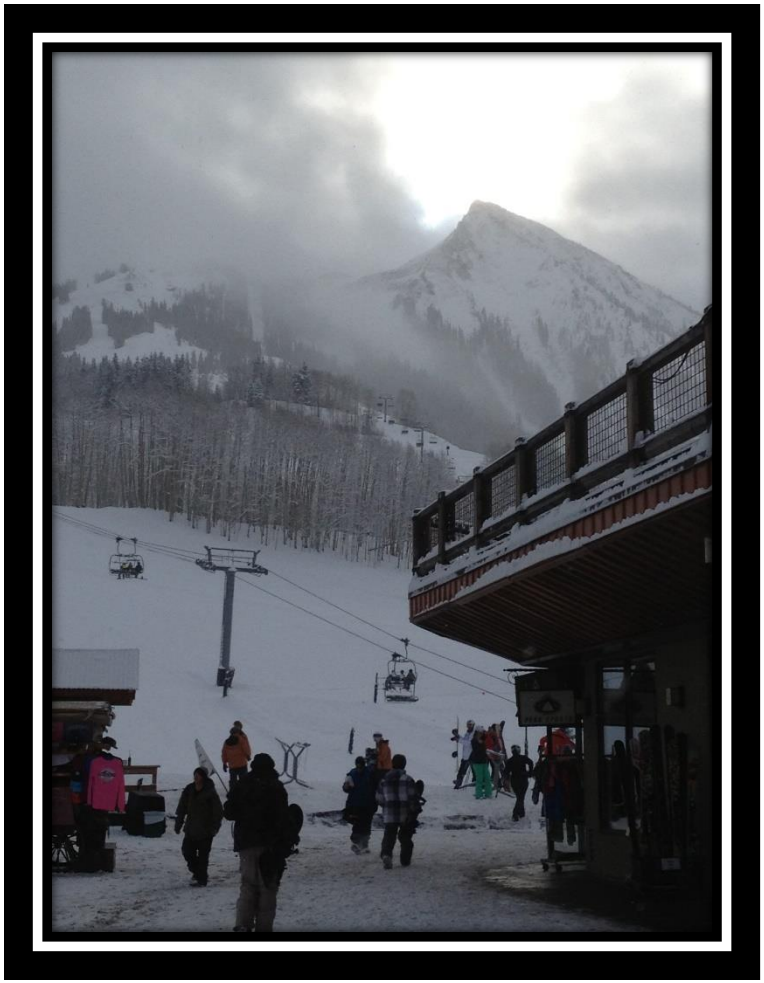
- Free and reliable public transportation that is available to both residents and visitors
- Maintaining the safe pedestrian and bike oriented community where the use of a car is optional
- Continue the use of Town as the hub to surrounding trail network
- Free parking that allows visitors and residents to walk, bike, or take transit to destinations around Town

Goals for tonight's meeting

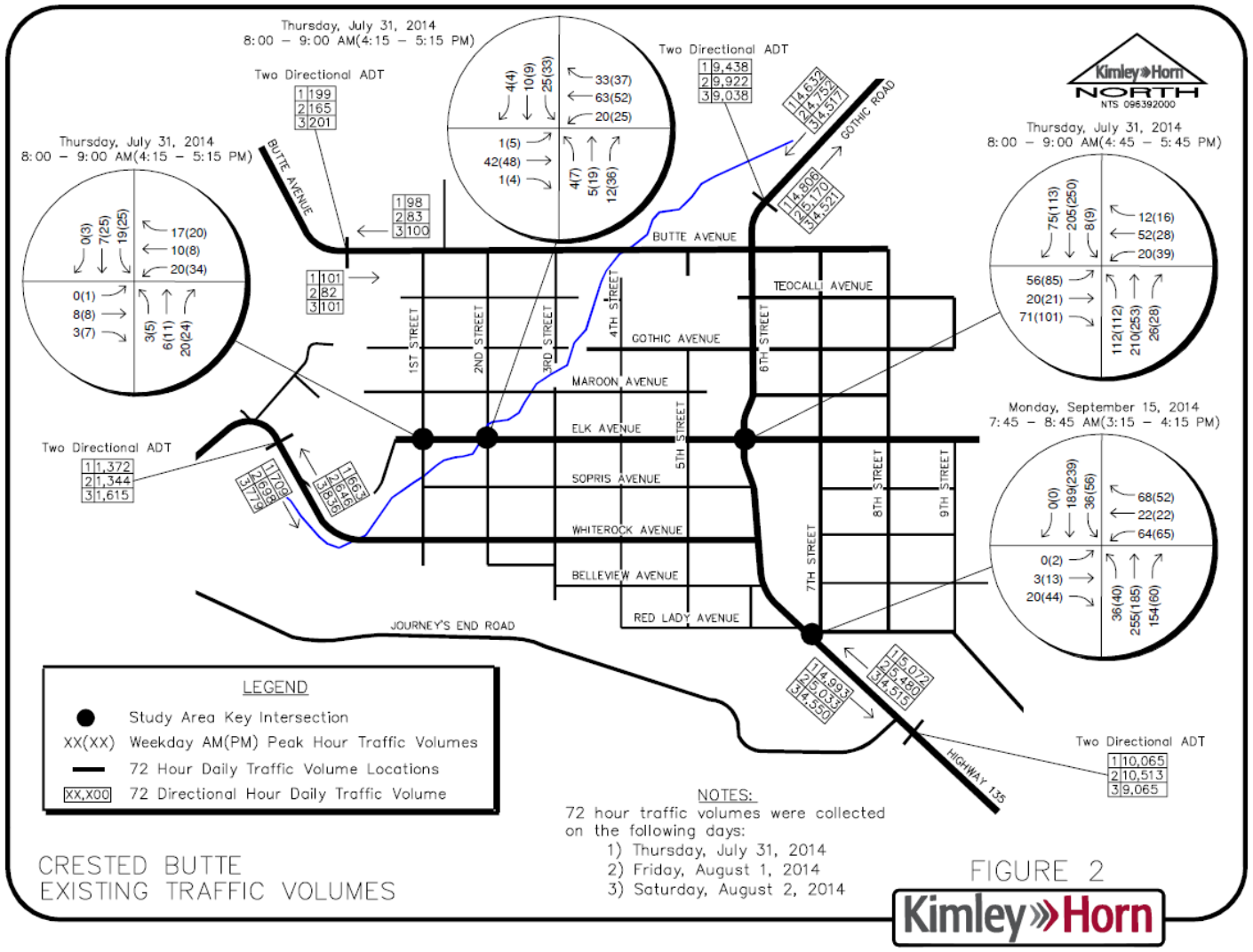
- Vet out Possible Solutions
- Refine the Transportation Issues
- Set Priorities

What are Regional Influences?

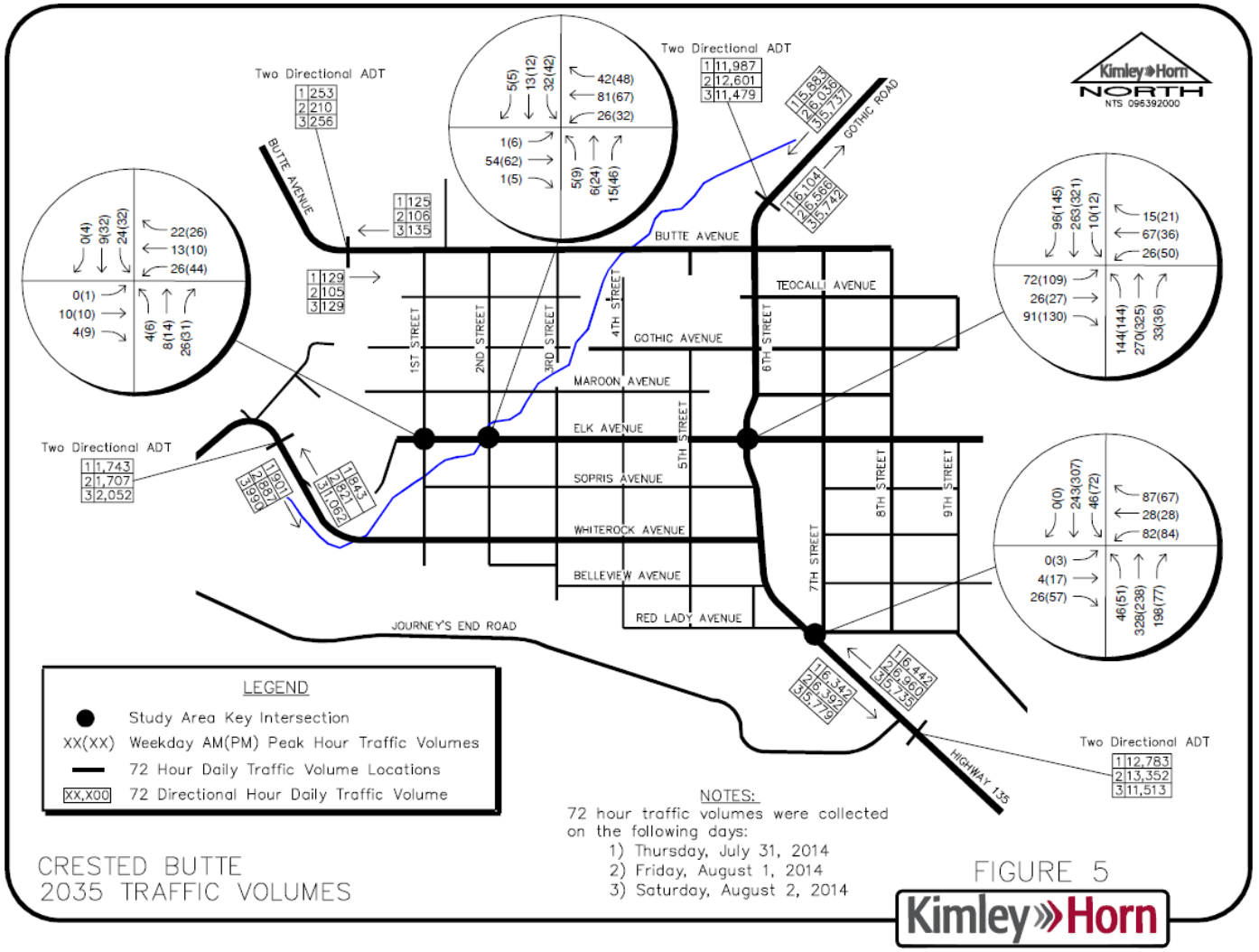
- Mt. Crested Butte
- Crested Butte South
- Gothic corridor
- Slate River Valley
- Irwin/Kebler Pass
- Airport
- Special Events
- Others?



Traffic Volumes – Current Year



Traffic Volumes – year 2035

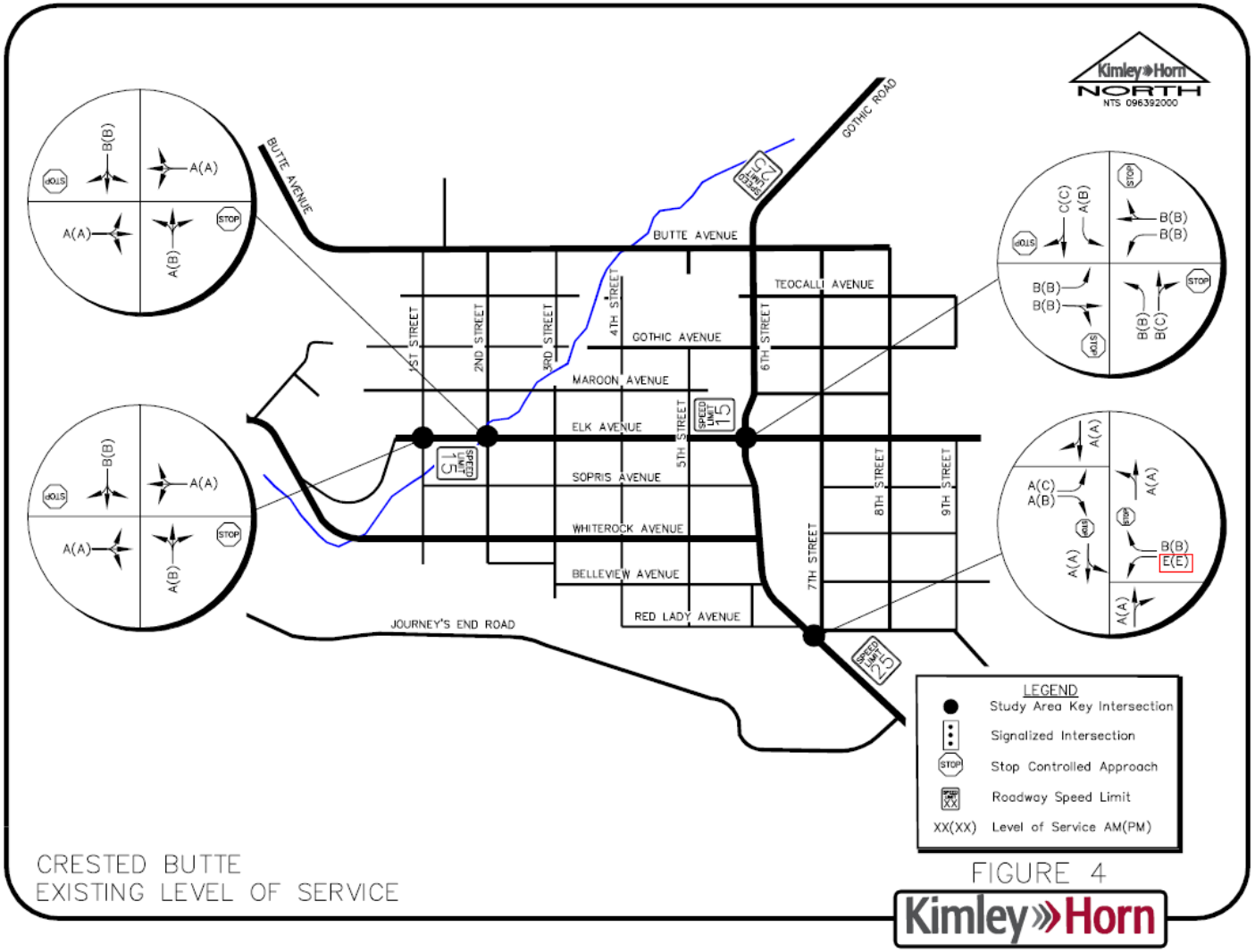


Level of Service (delay)

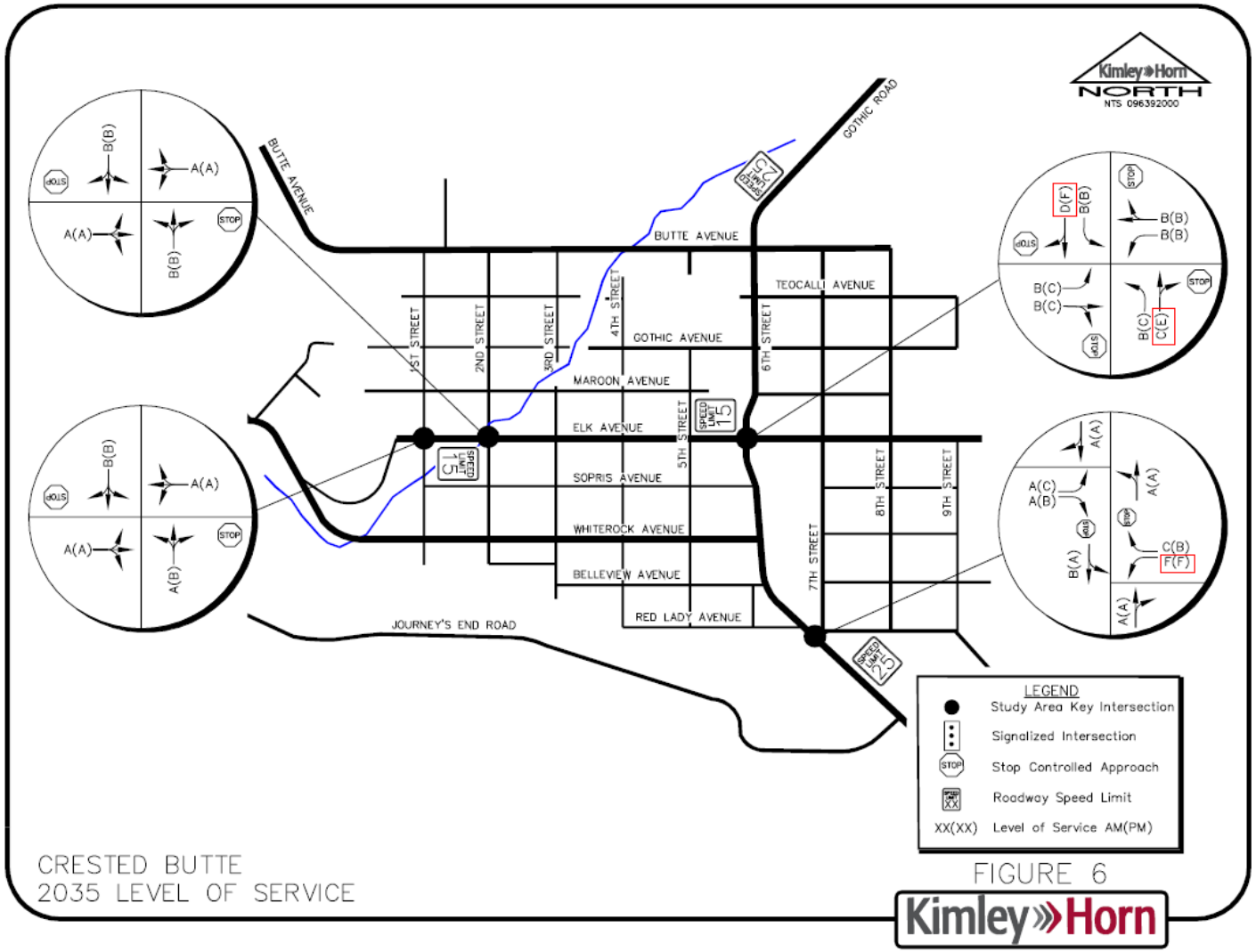
Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

Definitions provided from the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2010.

Current Year Levels of Service



2035 Projected Levels of Service



Observations

- Roadways handle current and projected traffic
- Intersections generally handle the volumes of vehicular traffic except:
  - LEFT TURN exiting Red Lady turning south has a poor level of service
  - RIGHT TURN exiting Red Lady turning north
  - SOUTHBOUND and NORTHBOUND traffic at the 4 way stop

Traffic Engineering

- Intersection Operations may be improved by:
  - Traffic Signal
  - Roundabout
  - Network changes which reduce projected volumes

Roundabouts

- Roundabouts become an especially attractive solution because of their higher capacities and lower delays.
- A substantial part of the operational benefit of a roundabout compared to an all-way stop intersection is obtained during the off-peak periods
- From a safety perspective, U.S. research has identified that the conversion of a 4 Way Stop intersection to a roundabout results in an insignificant difference in safety performance
- Roundabouts may also offer other benefits to 4 Way Stop intersections, including use as a gateway treatment or for community enhancement.

Roundabouts

Exhibit 1-9
Roundabout Category Comparison

Design characteristics of the three roundabout categories.

Design Element	Mini-Roundabout	Single-Lane Roundabout	Multilane Roundabout
Desirable maximum entry design speed	15 to 20 mph (25 to 30 km/h)	20 to 25 mph (30 to 40 km/h)	25 to 30 mph (40 to 50 km/h)
Maximum number of entering lanes per approach	1	1	2+
Typical inscribed circle diameter	45 to 90 ft (13 to 27 m)	90 to 180 ft (27 to 55 m)	150 to 300 ft (46 to 91 m)
Central island treatment	Fully traversable	Raised (may have traversable apron)	Raised (may have traversable apron)
Typical daily service volumes on 4-leg roundabout below which may be expected to operate without requiring a detailed capacity analysis (veh/day)*	Up to approximately 15,000	Up to approximately 25,000	Up to approximately 45,000 for two-lane roundabout

*Operational analysis needed to verify upper limit for specific applications or for roundabouts with more than two lanes or four legs.

Roundabouts

Exhibit 2-5
Summary of Roundabout Advantages and Disadvantages

Advantages	Disadvantages
Non-Motorized Users	
• Pedestrians must consider only one direction of conflicting traffic at a time. • Bicyclists have options for negotiating roundabouts, depending on their skill and comfort level.	• Pedestrians with vision impairments may have trouble finding crosswalks and determining when/if vehicles have yielded at crosswalks. • Bicycle ramps at roundabouts have the potential to be confused with pedestrian ramps.
Safety	
• Reduce crash severity for all users, allow safer merges into circulating traffic, and provide more time for all users to detect and correct for their mistakes or the mistakes of others due to lower vehicle speeds. • Fewer overall conflict points and no left-turn conflicts.	• Increase in single-vehicle and fixed-object crashes compared to other intersection treatments. • Multilane roundabouts present more difficulties for individuals with blindness or low vision due to challenges in detecting gaps and determining that vehicles have yielded at crosswalks.
Operations	
• May have lower delays and queues than other forms of intersection control. • Can reduce lane requirements between intersections, including bridges between interchange ramp terminals. • Creates possibility for adjacent signals to operate with more efficient cycle lengths where the roundabout replaces a signal that is setting the controlling cycle length.	• Equal priority for all approaches can reduce the progression for high volume approaches. • Cannot provide explicit priority to specific users (e.g., trains, emergency vehicles, transit, pedestrians) unless supplemental traffic control devices are provided.

Roundabouts

Roundabouts

Intersection Treatments – add turn lanes

The Case for Parking as an Economic Development Platform

Why Parking?

This project just won't 'pencil' Downtown

- Parking viewed as civic "infrastructure"
- Parking as a vehicle for "Public/Private Partnerships"
- Parking as a revenue generator/contributor to Downtown

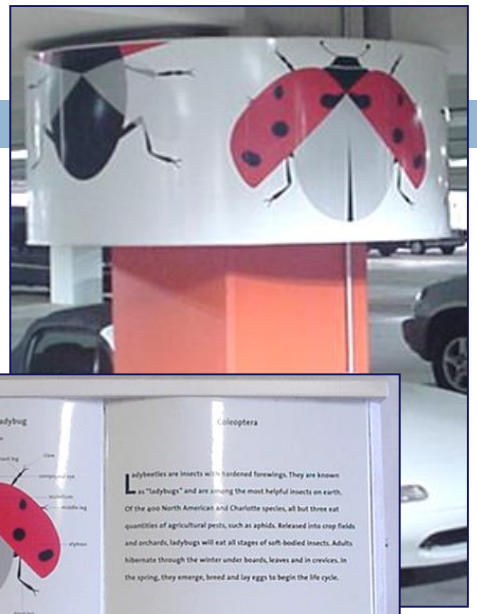
Why Parking?

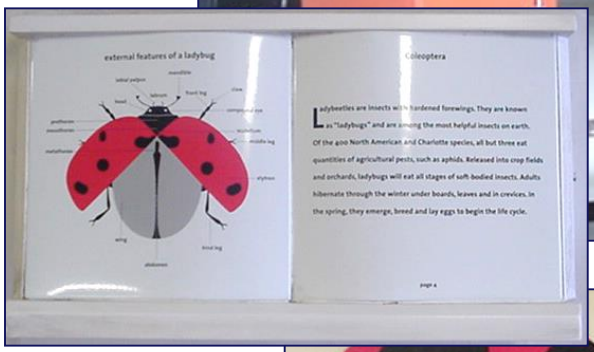
A platform to accomplish other civic goals:

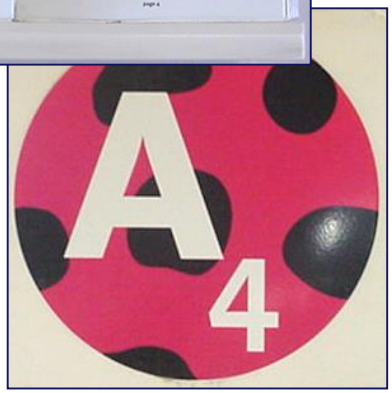
- Urban Parks
- Green Space
- Public Gathering Places

Why Parking?

- A platform to accomplish other civic goals:
  - Public Art







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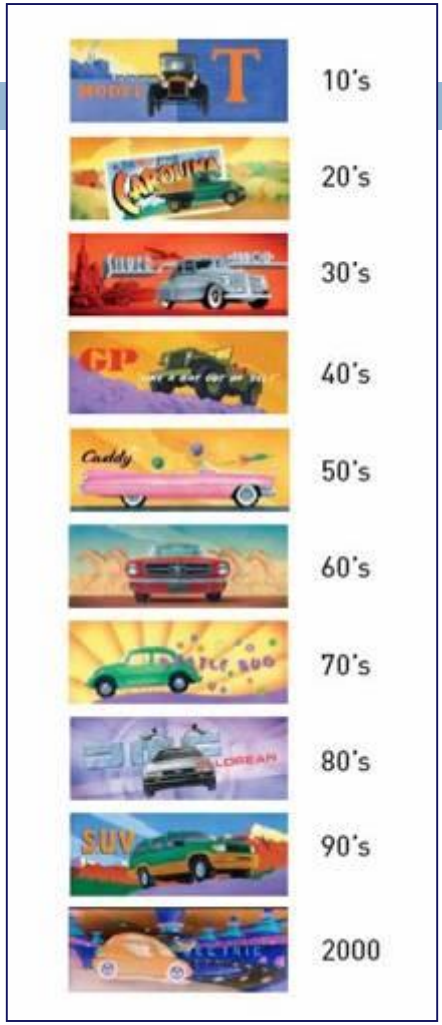

Why Parking?

- A platform to accomplish other civic goals:
  - Urban Design Standards
  - Mixed-use Developments
  - Street Level Retail

Why Parking?

- A platform to accomplish other civic goals:
  - Architectural Expression

Why Parking?

- A platform to accomplish other civic goals:
  - Urban Design Standards
  - Mixed-use Developments
  - Street Level Retail

Parking Design Approach

Parking facilities **book-ended** with other uses

Design Approach Example

City of Greenville, SC **Spring Street Garage**

Why Parking?

- A platform to accomplish other civic goals:
  - Urban Design Standards
  - Mixed-use Developments
  - Street Level Retail

Why Parking?

- A platform to accomplish other civic goals:
  - Urban Design Standards
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  - Street Level Retail

Parking Design Approach

Parking facilities **stacked** between other uses

Design Approach Example

LoDo District Downtown Denver, CO **Wynkoop Garage**

Why Parking?

- A platform to accomplish other civic goals:
  - Urban Design Standards
  - Mixed-use Developments
  - Street Level Retail

Parking Design Approach

Parking facilities **'below'** with other uses

Design Approach Example

The City of Greenville, SC **Terrace at Riverplace**

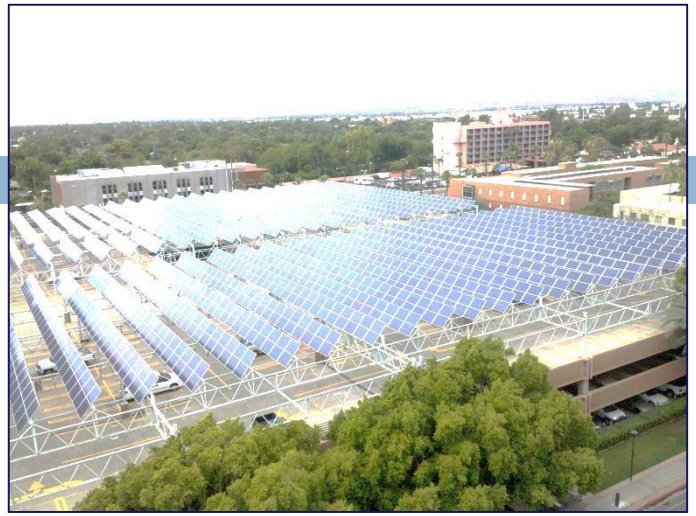
Why Parking?

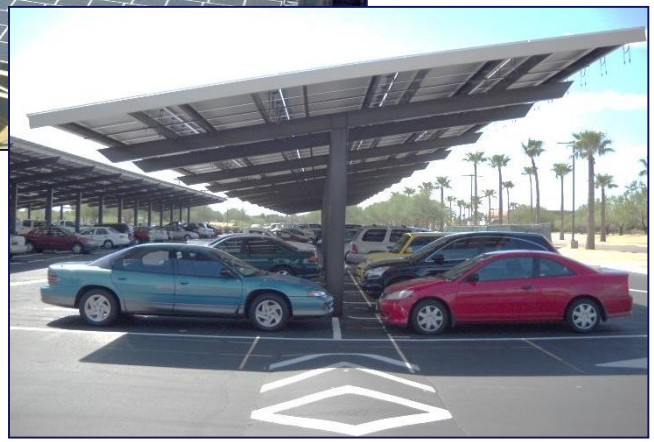
A platform to accomplish other civic goals:

- Historic Districts
- Architectural Integration
- Street Level Retail

Why Parking?

- A platform to accomplish other civic goals:
  - Energy Creation





ASU Solar Panels on Parking Garages

Why Parking?

- A platform to accomplish other civic goals:
  - Additional Support for Local Economic Development Programs and Generators
    - Shopping Districts
    - Business Improvement Districts

Why Parking?

- A platform to accomplish other civic goals:
  - **Integrated parking and transportation planning**
    - Development of intermodal facilities
    - Promotion of transportation alternatives
    - Support funding for overall downtown access strategies

MLK Intermodal Parking & Transit Facility - Sioux City, Iowa

Bike Lockers in Intermodal Parking & Transit Facility - Boulder, Colorado

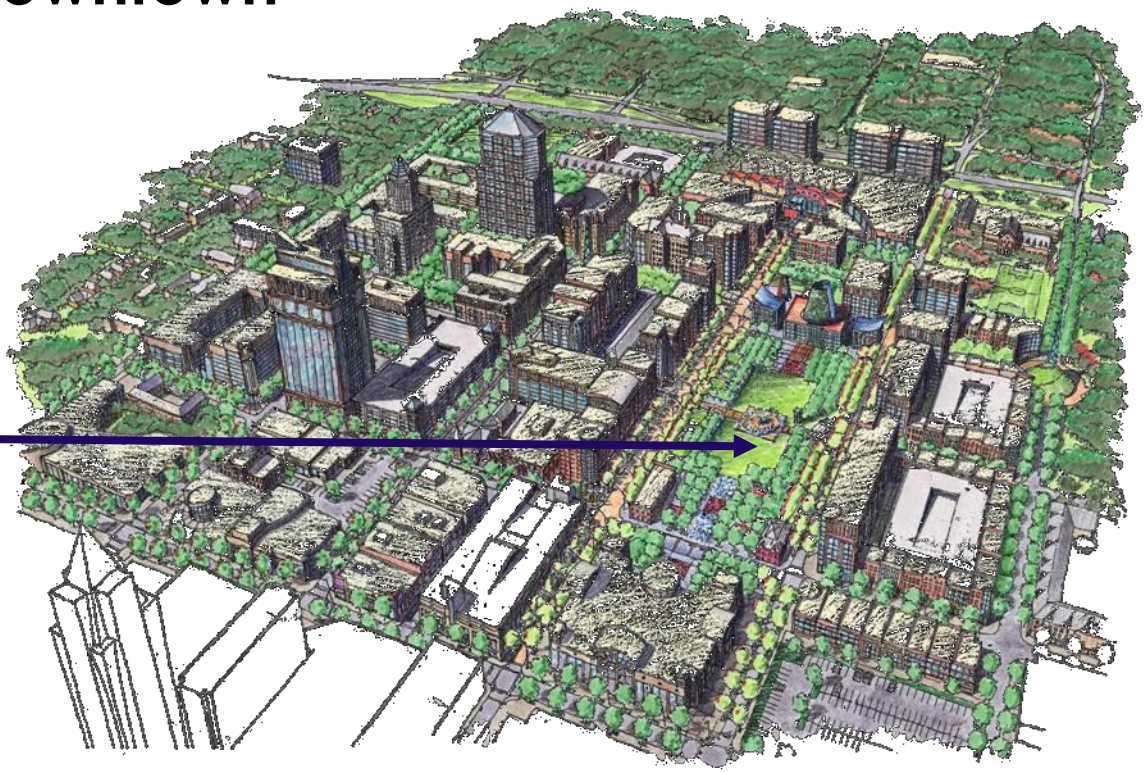
zipcar

THE BIKE STATION

Why Parking?

- A platform to accomplish other civic goals:
  - **Creation of Downtown "Attractor"**

Proposed Eight Acre Urban Park with a 2,200 space Garage in 4 Below Grade Levels

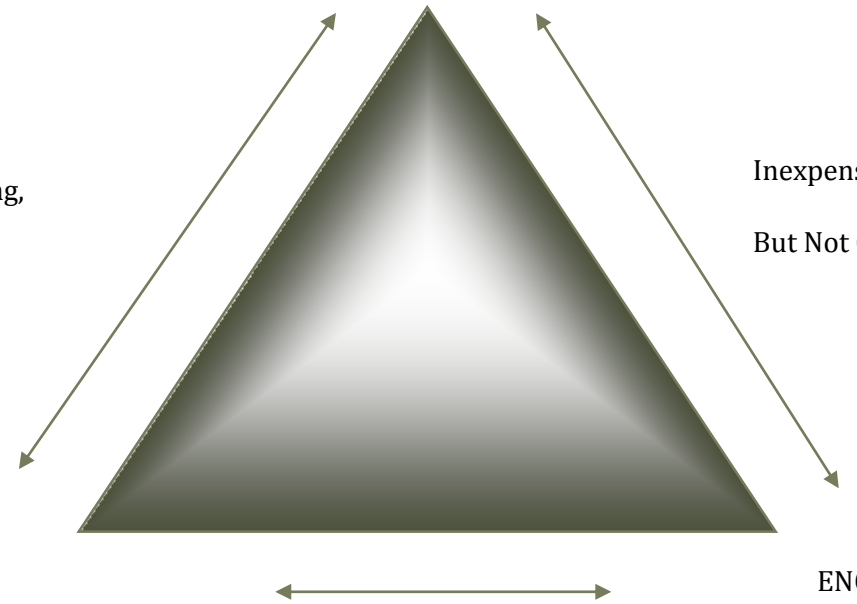


Parking 101

INEXPENSIVE

Inexpensive & Convenient Parking,

But Not Enough



Inexpensive & Enough Parking,

But Not Convenient

CONVENIENT

ENOUGH

Convenient & Enough Parking,

But Not Inexpensive

Why Parking?

- A platform to accomplish other civic goals:
  - Creation of Downtown "Attractor"
  - Addition of Neighborhood Services

7th Street Station – Charlotte, NC

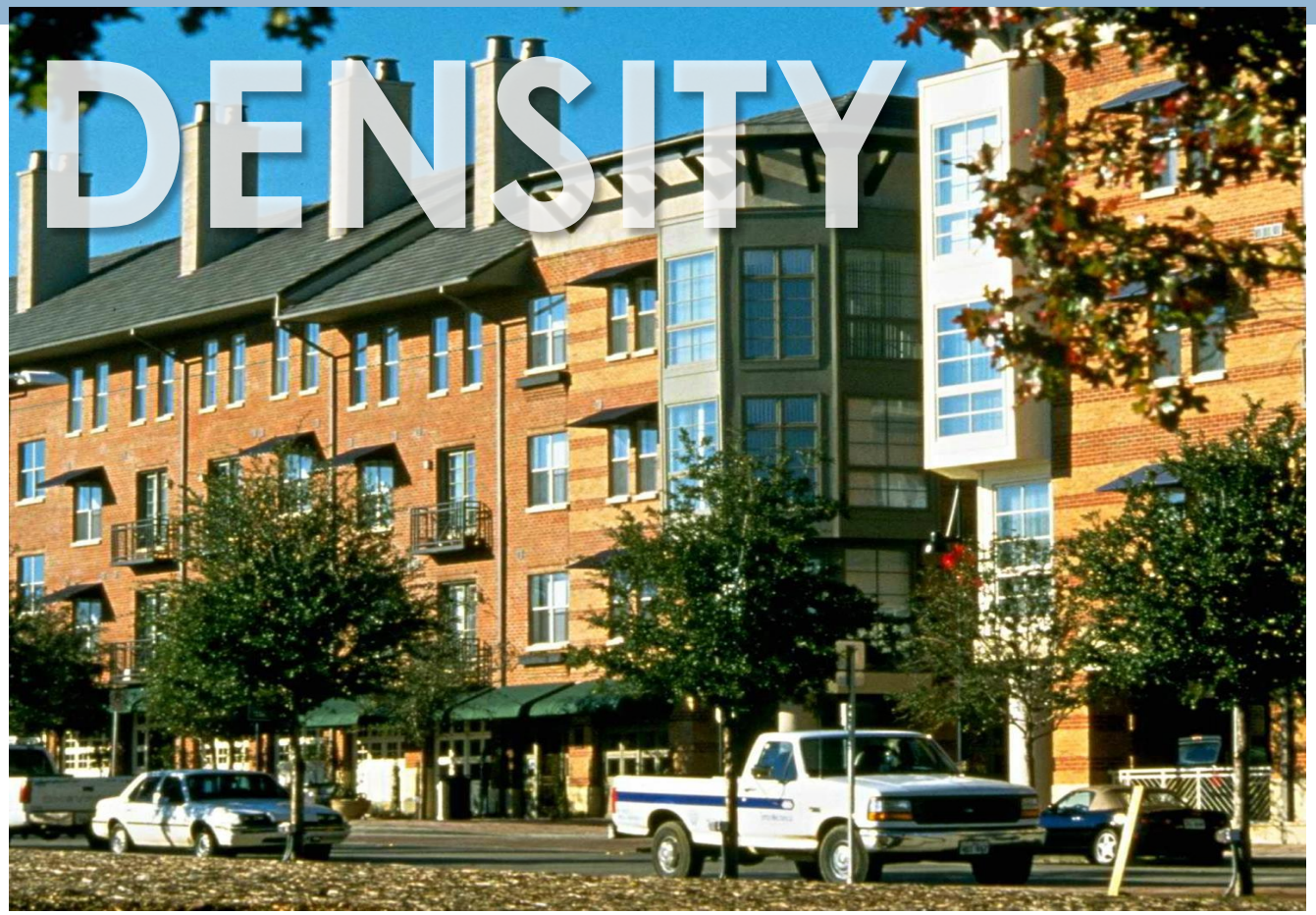
Parking deck with interactive light show that kids can activate by pressing the right combination of prompts.

Also includes a downtown neighborhood grocery store and a destination seafood restaurant.

Transforming the Parking Paradigm

- The Big Picture
- Parking was… Parking is…
- How the Paradigm is Shifting
  - Embracing Innovation
  - Leveraging Technology
  - Advancing Program Branding, Marketing & Communications
  - Community Partnering
  - Reinventing the Urban Environment
  - Creating Sustainable Parking and Transportation Programs
  - Enhancing the EXPERIENCE!

The Big Picture



The Big Picture

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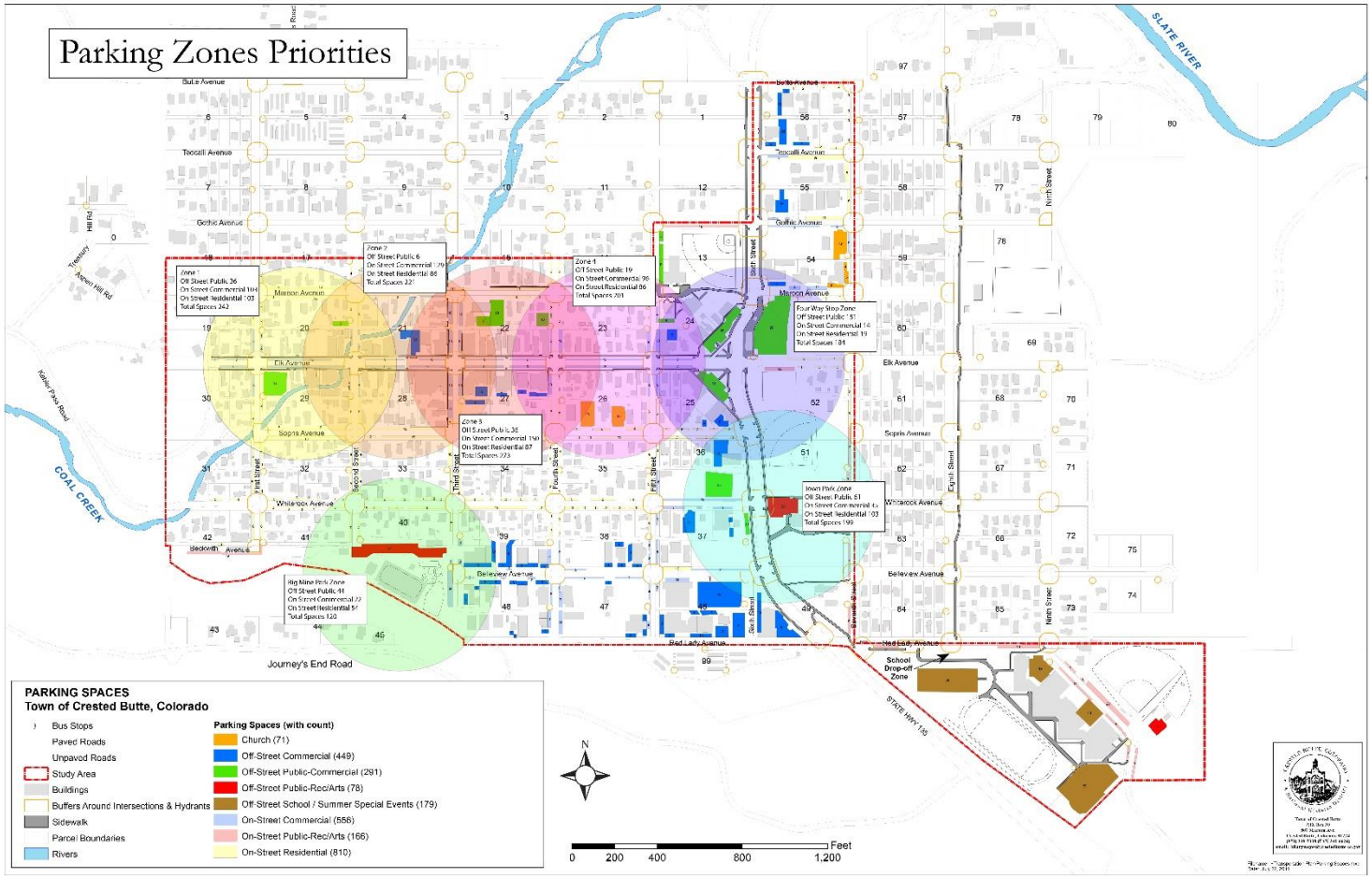
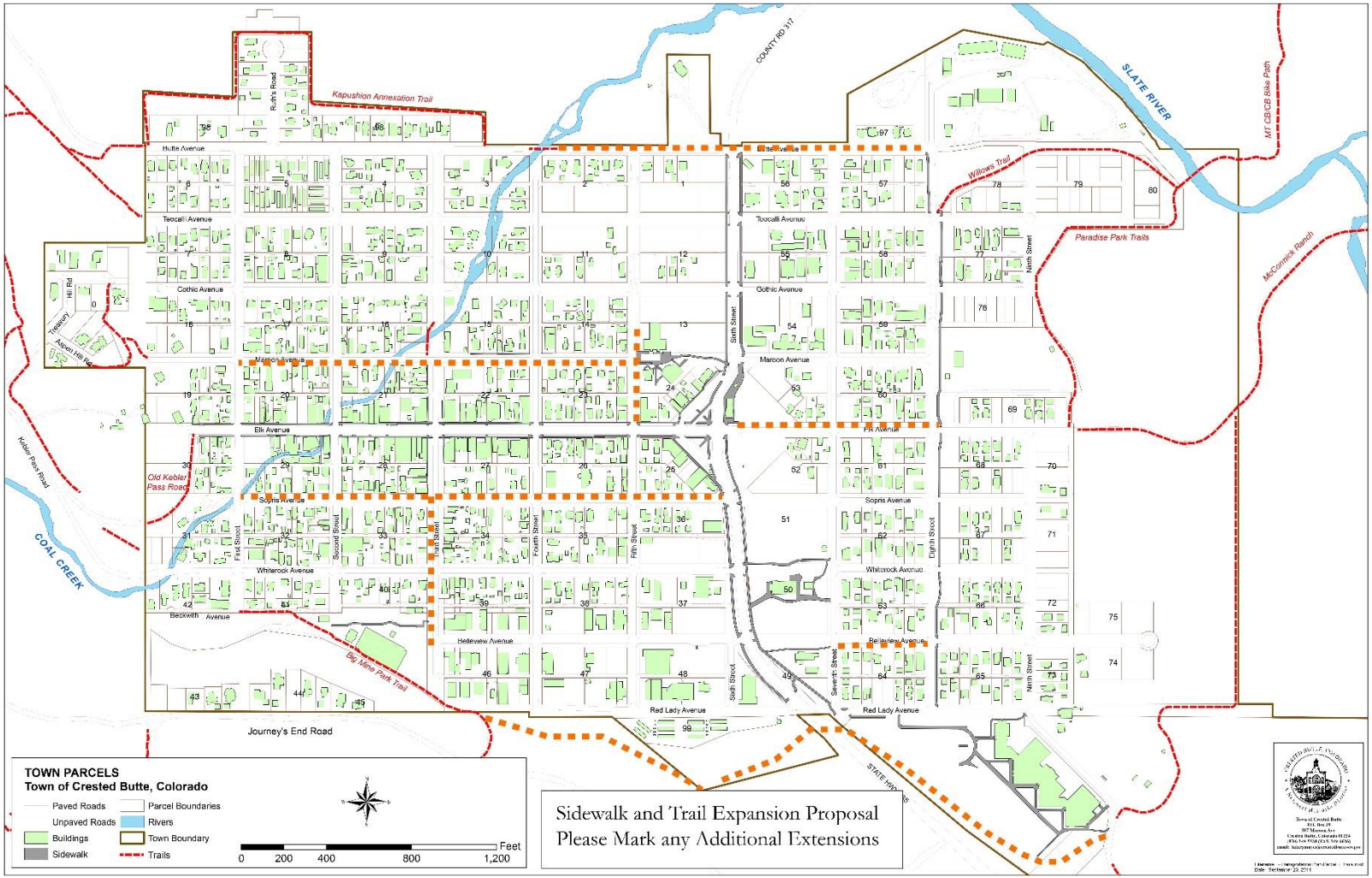
Parking Options Exercise



Parking Sushi Option Menu

- Additional Public Parking Lot Unpaved
- Additional Public Parking Lot Paved
- Parking Structure
- Compacting Stations to Free up Alley Parking
- Bike Parking
- Bike Storage
- Bike Share
- Enforcement of 2 Hour Parking
- Metered Parking
- Parking Management
- Transportation Alternatives
- Other: _____

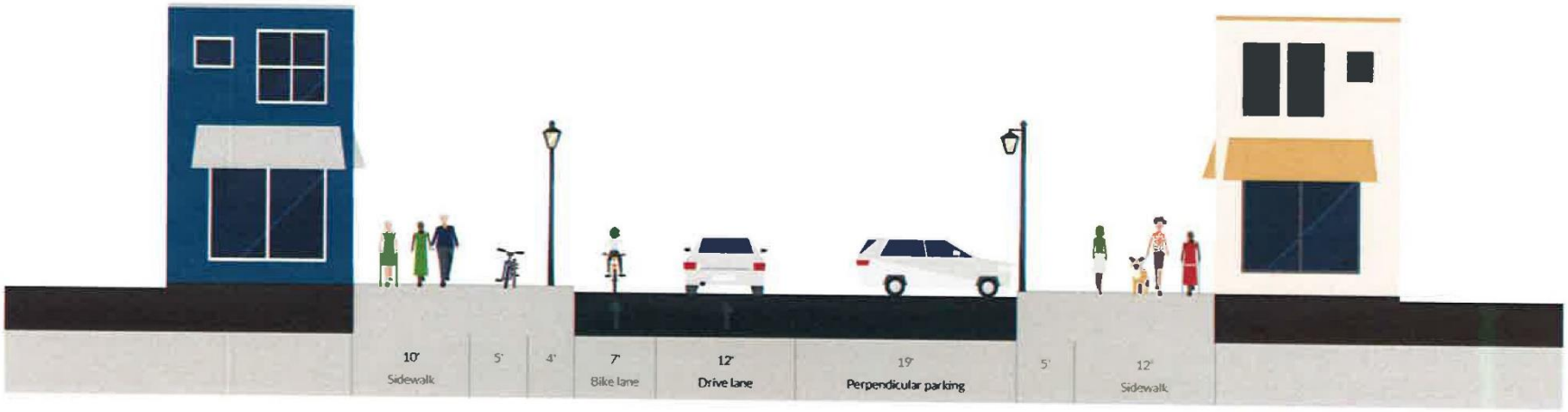
Pedestrian Connections Exercise



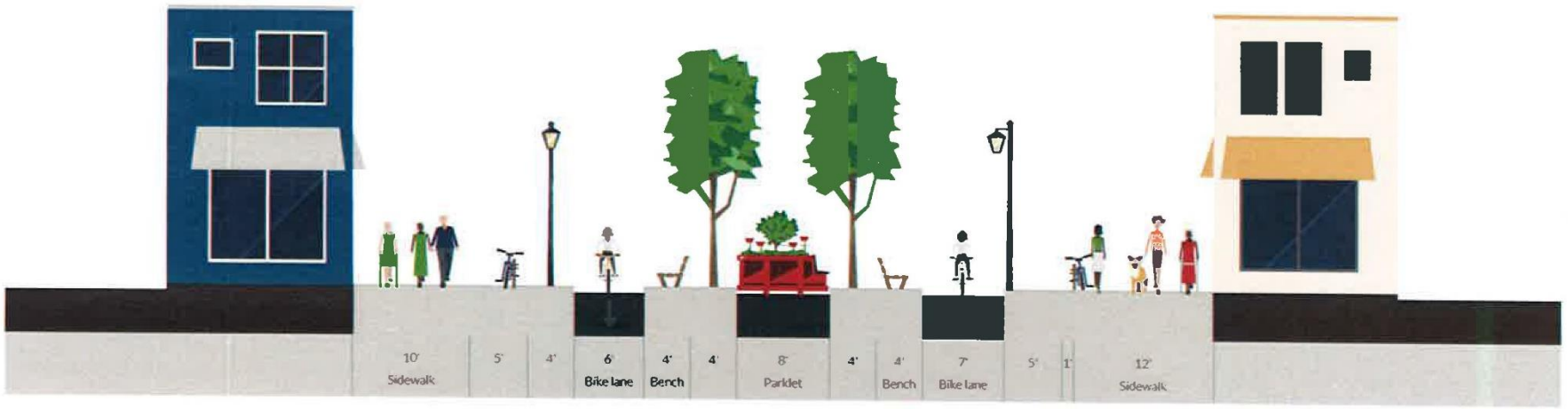
Elk Avenue Streetscape Improvements

- One-way with Bike Lane
- Pedestrian Mall
- Keep current configuration but implement other solutions to alleviate congestion

Elk Avenue One-Way



Elk Avenue Pedestrian Mall



Elk Avenue Current Configuration

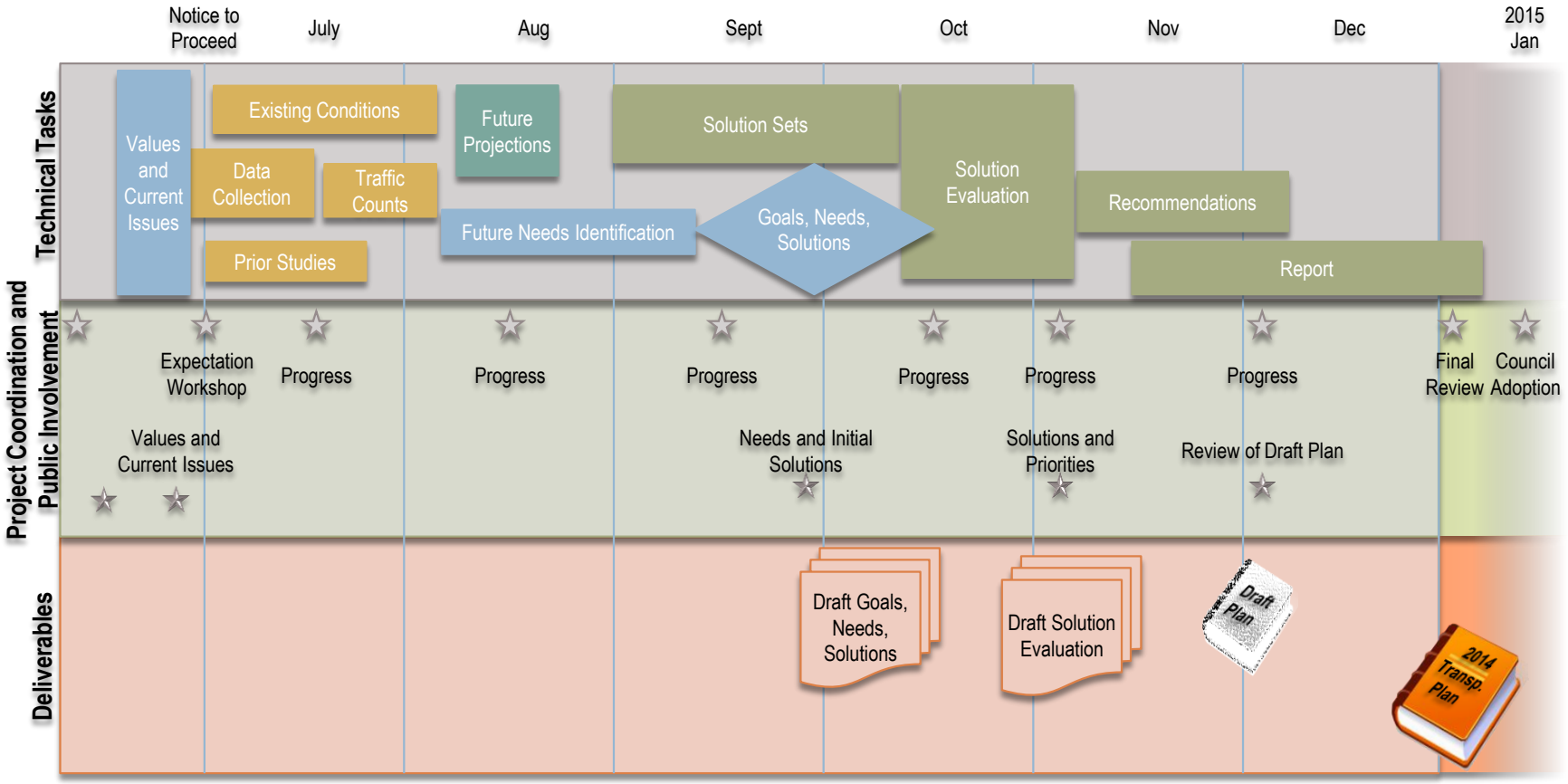
Snow Storage (Rank your Priority)

- Land Acquisition for Additional Snow Storage
- Additional Personnel and Equipment for Hauling, Pushing and Clearing Snow
- Land Use Controls to Ensure Adequate Snow Storage with Development
- Enforcement of Snow Removal Regulations
- Snow Melt Facility

Transit

- How do we incorporate transit into these solutions?
- What are the future infrastructure needs?
  - Bus stops
  - Storage
  - Transit Demand Management
  - Land Acquisition
  - Other?

Project Schedule



Next Steps

- Refine solutions
- Public Meeting Late October