Technical Assistance for Sustainable Communities: Building Blocks

Boulder, Colorado—March 4-5, 2013

To: Ilana Preuss, Roger Millar, Ella Krivitchenko from Smart Growth America and the City of Boulder, Colorado
From: Mandi Roberts, Otak, Inc.
Date: June 20, 2013 (Final)
Re: Suggested Next Steps as Outcome of Technical Assistance

Cool Planning Workshop Overview

As a result of the City of Boulder, Colorado being awarded a Smart Growth America (SGA) technical assistance grant, representatives from SGA held an evening presentation on March 4, 2013 and a day-long workshop on March 5, 2013 in the community. The overall goal of the technical assistance was to identify opportunities for integrating sustainability and preserving community character while enhancing economic competitiveness and quality of life with future growth in Boulder.

The interactive community workshop series focused on identifying specific smart growth strategies and tools for implementation in Boulder from the Cool Planning Handbook, developed by Otak, Inc., a planning and design firm based in the Pacific Northwest and a member of SGA’s technical assistance team. Representatives from Otak helped facilitate the workshop sessions, along with a representative from SGA.

The evening of March 4, members of the community attended an introductory session on Smart Growth topics. On March 5, various representatives from the City of Boulder and other agencies and organizations attended a day-long workshop to explore more in-depth ideas and opportunities for Boulder. Workshop attendees participated in interactive discussions, tours of redevelopment opportunity areas of the community, and identification of potential ideas, tools, and strategies for Boulder, including a map-based exercise in the afternoon. Representatives from the Otak team, including urban planner, Mandi Roberts, and urban designer, Martin Glastra van Loon, gave presentations highlighting case studies and possible strategies for Boulder.
Applying Cool Planning Handbook Tools in Boulder

The Cool Planning Handbook is a guide developed to help cities, towns, and communities identify tools and strategies for mitigating and slowing climate change at the local level. While the handbook was developed for the Oregon State Transportation and Growth Management Program, its guidance can be applied nationally and internationally, and in 2012, the handbook was awarded a national American Planning Association award for excellence in best practices.

The handbook presents a variety of smart growth approaches with an emphasis on:

- Reducing carbon emissions and improving sustainability through smart decisions about land use planning, transportation, and local redevelopment and investment; and

- Adopting policies and developing guidelines to better shape the community’s future.

The handbook can be downloaded at: http://www.oregon.gov/energy/gblwm/docs/cool_planning_handbook.pdf

Workshop facilitators in Boulder presented smart growth strategies from the Cool Planning Handbook with a focus on specific opportunities for Boulder. The workshop addressed a specific set of topics from the handbook to help Boulder plan for the future and enhance community livability and economic sustainability. Six main topics were explored:

- Getting Centered
- Making Streets More Complete
- Making Way for Pedestrians
- Making Your City Bike Friendly for All
- Making Way for Transit and Transit-Oriented Development
- Putting Parking in Its Place

This memorandum summarizes each of these focus areas, along with related suggestions and comments from the workshop. The workshop also explored innovative ideas for Boulder and planning and implementation approaches that can help Boulder stay at the leading edge of smart growth best practices in the United States.

One of the most important outcomes of the workshop was acknowledgment that the Boulder community’s motivation for action is often centered around quality of life, human health, and economic influences. Climate change and how to address it locally is less tangible.

The idea that the character of all of Boulder could be “one big campus” as a highly walkable community was another key point.

Another important focus of the workshop related to identifying a framework of activity centers/nodes with connecting multi-modal corridors as a focus for infill and redevelopment activity.

Defining specific actions and performance measures that can be integrated into Boulder’s climate action planning, Transportation Master Plan...
Plan update and other initiatives is to be an important outcome of this workshop.

Refer to other “Big Ideas for Boulder” generated at the Cool Planning Workshop on page 16.

**GETTING CENTERED**

One of the most important ways for a community to grow smart is to create places that bring a mix of land uses and transportation facilities closer together, with more focus in the city center, as well as neighborhood and district activity centers and hubs. Increasing density in these centers, within Boulder’s service area, coupled with introducing more mixed land uses, brings more people closer and reduces travel distances between home and work, school, community services, shopping, recreation, and other activities. Communities can also realize economic benefits as a result of lower costs for infrastructure, utilities, and public services.

Many people are willing to pay premium prices to live in well-planned, well-designed higher density communities. For these people, the benefits from the convenience and accessibility exceed the costs. The value of such convenience is sometimes called the “density dividend.”

Staying centered means focusing on and investing in your city center and community activity centers to keep them economically vibrant, attractive, and sources of pride within the community. These are the places that provide a rich combination of commercial, residential, and public uses that serve the community. Strong centers reduce the amount of driving people have to do because people can walk, bike, or take transit to conduct their business and run their errands. To maintain and enhance downtowns and other centers, a commitment to redevelopment and preservation is important, along with avoiding sprawl and commercial strip development.

Some cities are planning toward a model that creates “20-minute neighborhoods,” including Portland, Oregon. Within these 20-minute areas (10-minute/half-mile walking radius creating a 20-minute/one mile circle), residents are able to access the goods and services they need, run errands, and complete most of their daily trips. In Boulder workshop participants discussed raising the bar even higher and creating “10-minute neighborhoods with 5-minute walking radii.”

![Image](image.png)

Cool Planning Workshop participants on a walking tour, March 5, 2013

*Source: Smart Growth America*

Boulder has a vibrant and successful downtown, and workshop participants placed a high priority on preserving and further investing in downtown to retain and enhance this character, as well as identifying neighborhood and district activity centers that can emerge as compact, mixed use service centers in the community, and as
areas where growth can be focused with integrated land use and transportation solutions.

Workshop illustration related to the option of creating 20-minute neighborhoods
Source: City of Boulder

Key Strategies for Getting and Staying Centered:

- Provide a combination of land uses and services that are readily accessible by transit, walking, and bicycling:
  - Focus on the main streets and activity centers
  - Avoid strip commercial
  - Avoid spreading economic viability too thinly
  - Create a more walkable city, particularly strengthening walkability of downtown, campus, and other activity areas

- Housing trends are shifting to more compact development and a variety of housing types to fit diverse income levels. The next generation of home buyers is seeking to live in neighborhoods where they can walk and where their commute time can be greatly reduced. This means that communities need to provide a variety of housing choices to fit the different needs of the community. Remember no “one size fits all.”

  In Boulder, there is concern over the lack of housing and housing choices, with a daily influx of 55,000 commuters coming to and from Boulder for work who live in areas outside the city and in other communities. If additional housing opportunities are provided in Boulder, including a variety of housing choices affordable to a diversity of incomes, this percentage of in-bound commuters could be reduced.

- Shift to more compact, higher densities of housing in downtown and activity center areas, especially those served by transit.

- Provide a full mix of land uses (schools, post offices, grocery stores, hardware stores, beauty salons, restaurants, cafes, bakeries, coffee shops, theaters, libraries, cultural events, various retail shops, etc.) within walking distance to serve the neighborhood.

- Concentrate density and development cost-effectively and in areas of sufficient infrastructure—this is the “density dividend.”
  - Lower density = more traffic; higher density = less traffic
  - More compact = better access to services, amenities, schools = less traffic
There is a growing demand for well-designed, compact places.

The more compact built environments are, the less distance needed for providing infrastructure, utilities, and services = operational cost efficiencies and smarter public investment.

The East Boulder business park/light industrial area was an important focus of discussions in the workshop. There is an opportunity to repair suburban sprawl, redevelop broad expanses of existing paved parking areas, and created more neighborhood and commercial centers in this area. The need to extend the finer grain street grid of downtown into East Boulder was mentioned several times.

**MAKING STREETS MORE COMPLETE**

One of the most important methods for reducing greenhouse gas emissions at the local and regional level is to change the way people travel. According to Boulder’s Community Greenhouse Gas Inventory (available at [www.bouldercolorado.gov](http://www.bouldercolorado.gov)), transportation related activities account for 21.3 percent of greenhouse gas emissions in Boulder (based on 2010 data).

Overall in the United States, according to the Environmental Protection Agency, transportation related activities account for 28 percent of our greenhouse gas emissions. The chart on the next page depicts estimated average emission rates by type of vehicle per mile.

Continuing to create complete streets and make existing streets more complete by providing facilities that support all modes of travel and encouraging travel behavior that reduces the level of vehicle miles traveled (particularly by single occupant vehicles) are important actions Boulder can take.

![Emissions Chart](image)

Public street and road rights-of-way serve a critical role in livable communities, making up approximately 30 to 40 percent of the public realm in our communities. This is critical public space that serves a multitude of purposes. Streets should be viewed as...
corridors for moving people, not for moving cars. People should have the opportunity to move by walking, bicycling, using transit, or driving. All streets should provide a basic level of service for all modes.

In Boulder, as in other communities, there is an opportunity to take this approach further, by studying the network and fine tuning some corridors for specific purposes based on land use context and existing and projected travel patterns. For example, workshop participants discussed the need for dedicated transit corridors ("real" bus rapid transit), where fast, frequent transit service could move in exclusive, dedicated lanes/HOV lanes parallel to regular traffic, having a travel time advantage over regular traffic. Streets that are attractive for walking and bicycling because of lower volumes of traffic could become areas of focus for investment in a higher level of pedestrian and bicycle treatments.

Some workshop participants were interested in the potential to prioritize some roads and not others for bikes (north-south connections). There also was an interest expressed in the potential for bike/pedestrian/transit-only corridors like in the Beltline area.

It is also important to recognize the role streets and roadway corridors serve in supplying urban services, utilities, and managing stormwater runoff. Streets also function as places for green investment—not only trees and landscaping, but green infrastructure solutions. They serve a particularly important role in providing public parking, and on-street parking is one of the best methods for calming traffic and providing a buffer between street traffic and pedestrians. It also enhances business activity and creates a vibrant, active environment in downtowns and activity centers.

Workshop participants also were interested in opportunities to think of streets as “places” and for some streets in Boulder to be used for social purposes on occasion, such as for parades and festivals. Looking at opportunities to create more shared street blocks for festivals, markets, and other events was of interest.

Transforming urban arterials and thoroughfares that have traditionally served a more single-purpose of moving cars, into multi-functional corridors that move people in a variety of ways creates more livable, desirable and attractive communities.

**Key Strategies for Making Streets More Complete:**

- Maximize the number of people and functions that streets serve.
- Avoid creating new single-function thoroughfares that predominantly serve motor vehicle traffic.
• Provide wider sidewalks, curb extensions, crossing improvements, and other pedestrian treatments to create and enhance walkable districts.

• Provide streetscaping, trees, street furniture, pedestrian-scale lighting and other features to create an attractive environment for walking, bicycling, and transit use.

• Provide a basic level of service on all streets for all modes, while further analyzing the network for opportunities to create transit-friendly, bike-friendly, and pedestrian-friendly corridors that may emphasize these modal uses.

MAKING WAY FOR PEDESTRIANS

Successful communities across America are increasingly defined by their walkability. Everyone is a pedestrian, but all too often, walking is not a safe and convenient option for getting to work or school or meeting daily travel needs. In Boulder, the mission is to take the highly walkable environment of downtown and University of Colorado campus areas and spread that sensibility to the greater community.

The more walking trips people can make, the less driving they have to do, and as such less greenhouse gas emissions are generated. Several agencies and organizations are exploring green transportation initiatives and the green transportation traffic pyramid was discussed in the Boulder workshop, representing walking as the preferred options for green transportation at the widest/top portion of an inverse pyramid graphics. Two examples are provided below—one from www.ethicalenergy.net and one from the City of Copenhagen, Denmark.
At the Cool Planning Workshop, Boulder’s Walk Score mapping (www.walkscore.com), illustrating how the walking environment differs throughout the community (see page 9) was presented and discussed. While some areas of Boulder have all the right treatments for pedestrians, other areas, particularly outlying employment areas and neighborhoods, still need better connected sidewalks, crossing improvements, and other pedestrian treatments. Even some sidewalks in downtown and campus areas could be wider to serve higher volumes of pedestrians and people walking in groups or twosomes walking side-by-side.

Workshop participants also emphasized the importance of enhancing connectivity to schools and senior centers (see Boulder Opportunities Map included with this memorandum).

Key Strategies for Making Way for Pedestrians:

- Foster human-scale development that emphasizes pedestrian rather than vehicular features.
- Promote pedestrian-oriented buildings and sites.
- Provide wider sidewalks where needed, pedestrian amenities, pedestrian scale lighting, street crossing facilities, and streetscapes that attract walking.
- Promote an environment where all development, recreation areas, and transportation corridors are accessible.
- Provide a connected, continuous network of sidewalks and shared use paths.
- Encourage small block development, which creates a more walkable network.
- Remove barriers to pedestrian access and connectivity. Continue to expand Boulder’s great system of attractive pedestrian/bicycle crossings, including grade-separated under crossings—a unique aspect of the community.
- Continue to apply every tool possible to help pedestrians cross streets throughout the community, including wider boulevards and arterials, including pedestrian signals, countdown displays, refuge islands, curb extensions, and other treatments.

Boulder is a university town and highly desirable place to live. Groups of pedestrians walk throughout the community year-round. Source: www.dailycamera.com
Boulder’s Walk Score Map (www.walkscore.com) – Green Areas are Most Walkable

Downtown 86  
University Areas 82+  
East Boulder 52  
East Foothills 62  
Boulder Overall 64

Compared to Walk Score Ratings:  
90-100  Walkers’ Paradise  
70-89  Very Walkable  
50-69  Somewhat Walkable  
0-49  Car Dependent

KEY QUESTIONS:
- How can Boulder become a “Walkers’ Paradise” throughout the entire community?  
- What does the community need to do to raise the bar even higher in creating walkability?  
- Where are the best opportunities for 20-minute (or 10-minute) neighborhoods/districts, where people can walk for most of their daily needs/errands?
MAKING YOUR CITY BICYCLE FRIENDLY FOR ALL

Boulder is already recognized nationally for its bicycle friendliness. The question posed in the workshop was how can Boulder reach an even higher level by continuing to improve and encourage bicycling opportunities to experience the bicycle-mode shares found in European communities such as Copenhagen and Amsterdam?

Boulder has a fantastic system of shared use paths and separated bicycle (and pedestrian) crossings that allow people to travel long distances throughout the community on bike. Discussions in the workshop focused on expanding and enhancing this system and connecting it to the surrounding region, as well as enhancing the basic street network for bicycling by adding more bike lanes, sharrows, bike boxes at intersections, and other in-street bike facilities.

Suggestions from the workshop also included studying the overall street network and identifying routes that could be further enhanced for bicycling and specific street corridors where bicycle travel could be emphasized and promoted (in addition to providing a basic level of service for bicycling on all streets and roadways).

Key Strategies for Making Boulder More Bicycle Friendly for All:

- Expand and enhance Boulder’s fantastic shared use path network to outlying areas. Identify and improve more “spoke” corridors to feed into the “hubs” of downtown and other activity centers.

- Consider the abilities and needs of all types of bicyclists and provide facilities that fit these. Commuter cyclists have very different needs from recreational cyclists, including families that may be out for a group bicycle ride.

- Further enhance intersection treatments for bicyclists.

- Further expand bike share program opportunities throughout the community, particularly where key connections between employment centers and downtown lunch spots, shopping, and errands can be made.
- Provide additional bicycle parking areas, strategically located for employment, business, and shopping districts.

- Consider various types of bicycle facilities appropriate for specific corridors in the community based on land use context and use patterns. For example, there may be more opportunities to develop cycle tracks along certain urban corridors. Sharrow can be added to more streets where motor vehicle traffic is slow and should be encouraged to share/mix with bicyclists.

- Match types of facilities provided to various needs and abilities – safe facilities for kids and grandparents.

- Look at day and night corridor use issues and safety enhancement opportunities.

- Make downtown better for bikes (evaluate issues related to one way streets, needs for more separated lanes, etc.)

### MAKING WAY FOR TRANSIT AND TRANSIT-ORIENTED DEVELOPMENT

Boulder has been a pioneer in developing and promoting local transit services. With the Hop-Skip-Jump and other services, transit is provided throughout the community including key corridors connecting University of Colorado campus areas and downtown. Workshop participants mentioned the need to explore ideas for advancing Boulder’s transit connectivity and creating more synergy between land use and transit service.

*The Hop-Skip-Jump transit system in Boulder is well-used by the community*  
*Source: GoBoulder*

The Boulder Junction transit-oriented development (TOD) project, currently under construction, will provide a great opportunity to set a precedent for creating higher-density transit neighborhoods at key locations in the community. It can become a model for how to create transit-oriented activity centers in other neighborhoods and districts throughout the community (along fast, frequent transit service corridors).
Because every transit trip begins and ends as a pedestrian trip, enhancing walkability throughout Boulder and providing safe, convenient, and pleasant walking connections to and from bus stops and transit stations has to continue to be a high priority.

Workshop participants also emphasized the importance of an ongoing, strong partnership with the Regional Transit District (RTD) and outlying communities in providing and operating transit services. Coordination with RTD on fine tuning and enhancing transit services attuned to the community as it grows and changes will be important. Some workshop participants suggested that the City of Boulder consider the pros and cons of taking on a stronger role in transit service/operations.

Expanding local service options, well-connected with regional bus rapid transit (BRT) service corridors was a high priority to encourage in-bound commuters to use transit on a daily basis. Further exploring ways to promote and prompt residents both inside and outside the community to take transit for various trips was an important emphasis in the discussions, including expanding the Eco-Pass program (to the full county—all residents and employees or possibly targeting specific user groups, applying Eco-Pass across all modes, etc.).

Workshop participants also suggested looking into a carbon credit program for transit and biking.

Looking for additional opportunities for transit-oriented development (TOD) and building synergy between land use and transit was also expressed as an important need in the community. This need matches well to the need for providing more housing, including a broader range of housing choices to fit various affordability levels in the community.

Given concerns about density, as well as community character in Boulder, setting clear expectations and design guidelines for the built form and urban design of TODs will be important. Recognizing that transit-oriented site development, density, and architecture can take many forms in supporting a viable local transit system is also critical. Many small-lot, cottage-style, row houses, townhouse, and attached duplex, four-plex, eight-plex housing developments fit the desirable density to support local transit service.

What is the density needed to support transit service? This is a common question for communities planning land use to support transit. The answer, to many people's annoyance, is that "it depends". Ridership can be affected by many factors besides surrounding land use density, including level of and frequency of the transit service provided, pedestrian and bicycle access to/from transit...
stops, availability of amenities, pass programs, marketing and promotions, and other influences.

According to Reconnecting America and Puget Sound Regional Council, as two sources, there is general consensus that 7 to 8 dwelling units per acre can support basic 30 minute bus service (efficient and reliable local transit systems). Other research suggests that a per capita of 20-30 persons per acre can be supportive of a local transit system.

For higher capacity transit (such as BRT, a minimum of 10 to 20 dwelling units per acre close to transit stations is the preferred density. For high volume/capacity and high frequency transit, such as light rail and premium BRT, densities exceeding 15 to 20 dwelling units per acre, as well as employment areas with densities of 50 jobs per acre and higher are preferred targets. Research on this subject is ongoing. For more information go to: http://www.reconnectingamerica.org/resource-center/transit-supportive-density/#sthash.myVtTczT.dpuf

**Key Strategies for Transit and Transit-Oriented Development:**

- Continue to foster a strong partnership with RTD and emphasize the specific transit needs of the community so that local and regional services can be fine tuned to fit those needs.

- Provide well-connected local and regional services to encourage more commuting by transit for those traveling to Boulder on a daily basis for employment.

- Explore additional ways to encourage and incentivize car pools, van pools and commute trip reduction partnering with local employers and businesses in Boulder (promoting tools such as telecommuting, on-demand transit services, car share programs, etc.).

- While reducing the inbound commute volume by single occupant vehicles is an important objective, finding ways to reduce the number of trips these employees make once in Boulder is also key. This may include extending local transit services to employment centers and incentivizing use through employer-subsidized Eco-Passes, exploring private sector shuttling and transit options, expanding car and bike share programs, and other activities. Workshop participants thought it would be important to evaluate local transit routes between outlying employment areas and downtown, as well as campus, to see how these routes could be improved and ridership increased.

- Nothing will promote transit use better among commuters than providing a travel time advantage. Give transit travel time advantages by providing...
exclusive transit lanes, queue jump signal functions, and other features along transit corridors.

- Refer to the Boulder Opportunities Map for corridors identified as important for fast, frequent transit service and transit/land use synergy opportunities.

- Evaluate zoning incentives to encourage TOD in desirable locations, such as bonus densities of 25 to 50 percent near transit stops, and determine if additional incentives are appropriate.

- Review/audit Boulder’s zoning provisions to review provisions related to store frontages along transit streets and consider options to ensure pedestrian entrances can be oriented to transit and parking areas.

- Determine if more incentives and restrictions (zoning) are needed in desired TOD areas/districts in the community (such as transit-supportive architecture, build-to lines bringing buildings close to sidewalks, weather protection, limitations on auto-oriented uses, etc.

- Review and update design standards related to TOD, emphasizing the wide range of density types and dwelling architecture that can be provided to support transit. Clearly illustrate the forms of design and architecture that are cohesive with Boulder’s character. Remember that design standards are better than design guidelines in achieving desired results.

- Consider establishing a hierarchy of TOD districts/corridors throughout Boulder. Some may be more oriented to single family housing with neighborhood service centers. Others may be more focused on multi-family and mixed use land uses at major activity centers, for example (like the Boulder Junction project).

- Enhance pedestrian connectivity to transit throughout city. Improve bus waiting areas with lighting, crossings, shelters, etc.

Boulder Junction/Depot Square transit-oriented development plan Source: City of Boulder
PUTTING PARKING IN ITS PLACE

One of the most important influences on travel behavior is the way parking is planned and managed in our towns and cities. That means local parking policies and practices can play a major role in reducing carbon emissions. Across the US, there are typically two vehicles for every three people (including children who don’t drive and all forms of personal transport with four wheels). In fact, when you calculate the total number of registered drivers in the US compared to the total number of personal motor vehicles, we have more vehicles than people. And since the mid-1900s, we’ve been designing communities more for cars than for people.

An over-abundance of parking in urban areas, and poor parking management practices actually can become a threat to downtown and business district vitality. People are drawn to places to shop and visit because of the array of attractions clustered together. Wide expanses of surface parking between uses, spreads attractions further apart and inhibits walkability.

In the Boulder Cool Planning Workshop, participants were interested in piloting parking management districts in downtown, campus areas, and ultimately other shopping and business districts. Work underway in Santa Monica, California was mentioned as a model, as well as Portland, Oregon’s recent deliberations to remove parking requirements in some transit-oriented districts.

Key Strategies for Parking Management:

- Change parking minimum requirements to parking maximum requirements—some cities have changed their minimum requirements for off-street parking to maximum requirements. Revised parking ordinances specify the maximum amount of off-street parking that can be built for any given development, rather than the least.

- Eliminate parking requirements in key areas to encourage alternative modes of transportation. In Portland, Oregon, for example, there is no parking requirement for sites located less than 500 feet from a transit street with at least 20-minute peak hour service.

Illustrations of concepts and ideas discussed at the Cool Planning Workshop Source: City of Boulder
Establish design standards for placement and architectural character of parking, including screening and landscaping of surface parking areas, and preferred building styles for parking structures.

Refer to *The High Cost of Free Parking*, by Donald Shoup, Planners Press, 2004, strategies related to parking pricing and programs such as developer “in lieu fees” that can be dedicated to a municipal parking fund.

Explore the potential for a transparent pricing system for parking city-wide, as discussed in the workshop.

Continue to provide bike stations and parking facilities for bikes. Consider potential locations for “mobility hubs” where transit services come together with bike share and bike parking facilities.

Promote and explore incentives for shared parking (such as theater and night club parking areas busy in the evenings sharing with commuter parking areas busy in the daytime). Workshop participants mentioned that schools and community centers are also potential places that can share parking with adjacent land uses.

Consider options for remote parking/park and ride areas outside of downtown that could be served by local transit (commuters from outlying areas drive to these locations and then take transit to their employment sites).
BIG IDEAS FOR BOULDER
A portion of the workshop focused on “Big Ideas for Boulder.” Workshop participants voted for their favorite ideas. The top ten Big ideas that drew the most votes are summarized below (in order of the highest number of votes listed first).

1. Analyze and study neighborhoods and subareas as pilot projects, toward the goal of creating new, unique districts (like EcoDistricts that combine all the great ideas discussed) as desirable places to live, work, learn, run errands, and play. Focus on opportunities near the east and south borders of the community.

2. Pursue the idea of accessible, 10-Minute Neighborhoods in Boulder (where people can make most of their trips within 10 minutes). Know and track metrics for measuring success in these areas.

3. Direct the City’s future residential growth into these new neighborhood centers.

4. Continue to coordinate with RTD and work to improve transit services, providing more frequent and reliable transit service to the community as it changes. Find additional sources of funding to support expanded transit service. Continue to place a priority on funding transportation options other than single occupant vehicle. Consider opportunities for the City to take a stronger role in transit services (and associated pros and cons).

5. Create a “real” bus rapid transit system on the diagonal and East Arapahoe, with premium features, dedicated lane for transit, and clear travel time advantages (e.g. signal queue jumpers, etc.).

6. Make the regional transit commute as fast as the single occupant vehicle commute (competitive travel time advantage).

Transit-Oriented Development comes in many forms; visual preference surveys can help identify desired community character.
7. Conduct a finer-grained level of analysis and planning to connect more people to transit. Clearly understand the needs and interests of the 55,000 inbound commuters (including the housing options/types that need to be provided; analyze by subgroup).

8. Take a new look at inclusionary zoning to provide workforce housing. Also consider allowing accessory dwelling units in walkable areas. Coordinate with Boulder’s Comprehensive Housing Strategy work in 2013.

9. Increase the diversity of housing and provide more choices at various levels of affordability so that more people can work AND live in Boulder.

10. Create age-appropriate neighborhoods, developments, and housing types for all generations in Boulder (Baby Boomers, Gen-Xers, Millennials, etc.)

BIG IDEAS FOR BOULDER AND COOL PLANNING WORKSHOP TOPICS

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<th>MAKE STREETS MORE COMPLETE</th>
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OTHER IDEAS, ACTIONS, AND STRATEGIES DISCUSSED FOR BOULDER

Many other potential ideas, actions, and strategies for Boulder were discussed and explored in the Cool Planning Workshop. These are summarized below.

Focus on Infill Redevelopment, Suburban Sprawl Repair Where Needed, and Land Use/Transportation Synergy

- Extend the character, street grid, and walkability of downtown and campus areas to other locations in Boulder, including areas to the east, south, and north.

- Enhance sidewalks, particularly in walking corridors – widen sidewalks and provide lighting and safety enhancements.

- Design and build for pedestrians, at pedestrian scale and with features that create an attractive walking environment. Update street design guidelines to include building face and adjacent development requirements.

- Use visual preference survey or similar tool to gain an understanding of preferences in the community and to educate the community about land use, density, and mix of uses. Is there a disconnect between the images people want to see and what the city guidelines and regulations produce? Need to analyze this.

- Connect nodes and corridors across the city.

- Look for opportunities for public investment to lead private through capital improvement projects, zoning, streamlined permitting, and other initiatives.

- Look for creative ways to phase and finance changes.

- Consider a focus on East Arapahoe as a pilot area for finer-grained plan and underutilized land. Someday connect East Arapahoe to east campus.

- Use Pearl Street as a connector for new neighborhoods to the east.

- Break up superblocks and enhance pedestrian access.

- Slow down highway 36 traffic – farther out for neighborhood redevelopment opportunities; consider ending the highway earlier (see Boulder Opportunities Map).

- Bus Rapid Transit (BRT) routes must have an advantage over general
traffic. Integrate bus rapid transit into downtown.

- Slow down/calm traffic on busy streets for pedestrian and give transit dedicated space.

- Consider scenario planning approach to neighborhood center/pilot planning areas. Scenarios could explore various options for growth and change.

- Identify the appropriate scale and mix of land uses for neighborhood centers. What is economically viable? Consider needs for small grocery, hardware, services. Also consider how schools, community centers, religious centers, and other civic spaces should fit into the neighborhood center to serve the surrounding citizens. How easy is it to add non-conforming corner store/cafés?

- The greenbelt adds distance between Boulder and outlying areas; need regional trails through to enhance access to city.

- Potential locations for neighborhood/subarea/corridor planning studies include:
  - The Diagonal
  - North Broadway
  - East Campus
  - Other places that can support higher density connected with transit
  - Gunbarrel Town Center and transit/BRT extension

Some workshop participants suggested the need for pilot studies that identify implementation strategies for the specific subareas, neighborhoods, and corridors. The implementation strategies could then be tested for effectiveness. Integrating this study work for special locations with other ongoing planning work as possible would be an efficient approach. A “scenario planning” approach may also work well for these areas—looking at how these areas might change in certain time increments (10 years, 20 years, etc.). Scenarios evaluated can also look at different land use mixes, densities, etc. Some of the key considerations to evaluate in these areas as part of special studies include:

  - Walkability and connectivity—what is needed to create a more walkable, well-connected district or neighborhood where people can make most of their trips in a 10- to 20-minute zone?
  - Land use mix supported by transit, pedestrian, and bicycle facilities—are there or will
there be a mix of land uses so that people can work, learn, run errands, shop, and play within a short distance from where they live? And are there transit, pedestrian, bicycle facilities (or will there be) so that people do not always have to drive between activities?

○ Housing choices—can a range of housing options be provided to fit varying needs (those of different age groups for example) and affordability levels?

○ What parking policies are in place in these areas, or how should parking be better managed to achieve land use and climate action goals?

○ Are there special development incentives and regulations that should be adopted in these areas to encourage low impact development, green building, and amenities that will attract a diversity of residents?

○ Can the area function as a mini-activity center or neighborhood center, with a mix of retail, civic services, parks and recreation to support surrounding residents and employees? What land use provisions need to be adopted to support mixed use and creating a jobs-to-housing balance in these areas and city-wide?


Explore Energy Efficiency and District Energy Solutions

- Efficient energy solutions can be developed at the site, block, district, and community scales. District energy solutions that involve energy generated locally and distributed to nearby buildings and sites are being implemented throughout the US and abroad. The University of Colorado, Boulder is developing district energy, and the City of Boulder is interested in exploring district energy and alternative energy delivery solutions for the community.

- Implement zero energy district(s) with mention of an example in Fort Collins. Align district energy opportunities with redevelopment areas and look for retrofit opportunities in existing areas.

- Consider zoning for prefabricated homes with high renewable energy.

- Promote solar energy on all south-facing roofs

- Invest more in EnergySmart.

- Bring in large employers to discuss energy use and partnership
opportunities, and economic advantages.

- Relate cost information to businesses and residents (such as high energy costs versus lower costs with improved systems) in climate impact discussions and outreach messages.

**Green Infrastructure Solutions**

- Public infrastructure is becoming more environmentally-friendly across the US, with stormwater recycling and reuse to irrigate landscapes, lower energy street lighting systems, porous paving solutions that let surface water infiltrate, water-conserving streetscapes, and other treatments. Look for opportunities to implement more green streets in Boulder.

- Planting street trees can enhance Boulder character, but also help to moderate heat of surrounding paved surfaces in the summer and absorb carbon dioxide, a major culprit among the greenhouse gases that contribute to climate change. Look at the urban canopy in Boulder to help mitigate climate. Add to the canopy where needed in balance with water use.

**Community Health/Sustainability**

- Expand local food growing capacity through new innovations.

- Take a closer look at water use.

**Funding and Economic Considerations**

- Conduct a market-based analysis of where commercial can be supported (ties in with neighborhood centers and their relationship to other shopping centers in Boulder).

- Look for creative ways to finance and phase transportation system improvements and redevelopment incrementally.

- Carbon tax options? Correlate to direct impact of actions.

- Analyze the cost of no action versus the cost of action.

**Community Engagement and Regional Alignment**

- Build political will and community commitment to change by emphasizing human health, fiscal responsibility, economic wins, and quality of life in climate action planning—make the link between actions that mitigate climate change and how these benefit economic prosperity and quality of life, along with environment.

- Work with region and surrounding communities to strengthen transit and transportation connections outside of county. Add Boulder County planning to the discussion given that many older neighborhoods that are more affordable are in county jurisdiction.

- Put more focus on our youth – they are the future; consider what motivates their involvement; access to technology
is important. Get feedback on what transportation modes they value most.

- Understand the affects of the student population on economic conditions, as well as transportation patterns.

- Inspire people to join in process; look at community organizing techniques for planning purposes.

- Provide metrics and numbers to build understanding of why more households are needed in Boulder and how the addition of more housing will balance jobs-to-housing and achieve community-supported outcomes.

- Engage private sector businesses and developers in planning for Boulder; provide forums specifically for them.

- Get direct feedback from citizens about what is working and what isn’t working.

- See earlier note about using visual preference tool; also can explore town hall style voting systems where participants can view immediate results.

- Grassroots initiative can lead the way in creating 10-minute neighborhoods.

- Coordinate with surrounding regional jurisdictions and suburban areas. Consider strategies and communication messages that will build a stronger interest in and encourage people to live in urban areas vs. suburban and outlying areas.

### Boulder Opportunities Map

The composite map included with this workshop summary memorandum captures the group session work efforts aimed at defining key activity centers/neighborhood centers (nodes) and corridors (links) for further analysis and investment.

This map is conceptual and is provided for reference purposes so that ideas and concepts depicted can be further explored and analyzed in other future planning efforts. For example, several of the concepts can be further analyzed as part of the Transportation Master Plan update.

### Next Steps and Recommendations

The City of Boulder will be integrating the ideas, actions, and strategies generated at the Cool Planning Workshop into ongoing planning and implementation efforts. Planning activities underway, such as the Transportation Master Plan update, work on Boulder’s Energy Future initiative, next update to the Boulder Valley Comprehensive Plan, and various specific area planning efforts provide the opportunity to further the workshop outcomes.

Boulder will monitor its progress on integrating the workshop results into planning efforts and provide progress reports to Smart Growth America at six and twelve months from the workshop date.

Workshop participants expressed an important need to define specific and performance measures and metrics for climate action planning (as well as for the Transportation Master Plan update and other planning efforts).
Appendix

Additional information is provided in the appendix that may be useful to the City of Boulder as it moves forward with integrating the workshop ideas into ongoing planning efforts. The following information and reports are included:

- Examples of Performance Measures and Metrics (the City may be able to adapt these to fit its needs with future analysis or compare these to its metrics)
- Additional Resources (that Boulder can reference as part of ongoing planning and implementation efforts)

EXAMPLES OF PERFORMANCE MEASURES AND METRICS

Reduced Greenhouse Gas Emissions through Less Vehicle Miles Traveled in the Community and Other Sustainable Transportation Measures

Boulder should consider setting performance measures for reduced greenhouse gas emissions due to less vehicle miles traveled within (and to and from) the community. The US Environmental Protection Agency (EPA) provides statistics related to typical greenhouse gas emissions from motor vehicles.

- Average household carbon footprint in the US is estimated at 48 metric tons of CO$_2$/year; Boulder is below this average
- Single largest source for individual households is driving
- 4.8 to 5.1 metric tons of CO$_2$/vehicle/year (US Average)
- Average US trip length 9.7 miles
- Average trips per household/year in US = 3,466
- Average person miles traveled/year in US = 33,004
- US carbon footprint is five times the global average
- US = 17.96 metric tons of CO$_2$ per capita

Source: EPA website, March 2013; numbers are subject to periodic recalculations and updates

The EPA also provides guidance for sustainable transportation performance measures (see Guide to Sustainable Transportation Performance Measures, August 2011). Examples of potential performance measures that Boulder could adapt and integrate into the Transportation Master Plan update for example, include:

- Measure the share of jobs and population that fall within a given threshold of transit accessibility:
  - Distance to/from transit stops (percent of daily/peak period trips starting or ending within ¼ mile of a transit stop, for example.
  - Percent of population and employment within 0.4 miles of transit
- Households within five miles of park-and-ride lots or major transit centers.
- Measure destinations accessible to transit:
  - Share of population with good transit-job accessibility (# of jobs within # minutes travel time)
  - Number of households within a 30-minute transit ride of major employment centers
  - Percentage of work and education trips accessible in less than 30 minutes transit travel time.
  - Percentage of workforce that can reach their workplace by transit within a set time.
- Measure of transit, pedestrian, and bicycle mode shares (identify baseline, and set goals for increases in these mode shares with implementation of transportation master plan. Because Boulder already has high mode shares for transit, pedestrian, and bicycle travel, the community may want to reach even higher, looking at European models for example, as discussed in the workshop.
- Measure vehicle miles traveled (VMT) per capita and per employee.
- Measure carbon intensity:
  - Total transportation CO₂ emissions per capita
  - Passenger transportation CO₂ emissions per capita
  - Heavy-duty vehicle CO₂ emissions per capita
- Measure the community’s mix of land uses—the proportion of residents living in locations with mixed land uses:
  - Ratio of jobs to housing; population/employment mix index
  - GIS analysis of activity centers and land use mixes
  - Example: as part of its Blueprint land use visioning exercise, the Sacramento Area Council of Governments (SACOG) developed a mixed use development measure based on the ratio of employees to dwelling units at the Traffic Analysis Zone (TAZ) level. An optimum mix of jobs and housing is defined as a ratio of employees to dwelling units that is greater than 0.5 and less than 2.0.
  - Analyzing the potential to increase housing and the jobs to housing ratio in Boulder, setting goals for specific timeframes (five year, ten year, fifteen year, and twenty year) and establishing specific performance measures to monitor progress towards these goals is recommended.
- Measure transportation affordability; the annual cost of transportation relative to annual income, or calculated for different income groups.
- Measure benefits by income group, such as:
  - Access to other destinations such as health care, education, recreation
  - Work trip travel time and reductions
  - Non-work trip travel time and reductions
  - Other travel time measurements
  - Average distance to nearest transit stop
  - Availability of service and frequency of service
  - Availability of nighttime service
  - Number and quality of bus shelters
Also, Boulder citizens, as well as commuters to/from Boulder, could be encouraged to measure and track their individual greenhouse gas emissions and report reductions to a community website. The EPA and other entities provide individual greenhouse gas emissions calculators. (The EPA’s can be accessed at www.epa.gov/climatechange/ghgemissions/individual.html)

Refer to the Guide to Sustainable Transportation Performance Measures by the EPA for additional examples and analytical methods and data sources.

**EcoDistrict Performance Measures**

The following performance measures and metrics developed for EcoDistricts in Portland, Oregon can be adapted to measure the success of planning and policies for a healthy, sustainable community. Where appropriate, disparity by income, race/ethnicity, geography, age, ability, or gender should be considered for specific metrics. The actual metrics (percentage, rate, level, quantity, etc.) for the measures listed below can be set based on local objectives and preferences, comparing baseline conditions to desirable conditions. Measurement can occur through Geographic Information Systems (GIS) analysis, public surveys, and other methods.

**Equitable Development and Access to Opportunity**

- Equity ownership and profit-sharing opportunities in EcoDistrict developments (number of programs and participation rates)
- Pathway to opportunity and green economy jobs for EcoDistrict developments (number of jobs, program participation rates)
- Programs and policies are in place to prevent and mitigate displacement.
- Rate of involuntary displacement (neighborhood change indicator in Portland Plan)
- Rate of compliance with economic development incentive agreements
- Housing Diversity – mix of housing sizes and price ranges (e.g., achievement of target)
- Housing Affordability (e.g., percentage of cost burdened households, median housing price and rent/median income ratio)
- Percentage of home ownership
- Median household income
- Income disparity
- Percentage of children in poverty
- Percentage of population above self-sufficiency standard
- Percentage of residents satisfied with new development
- Number of local jobs
- Facility rental rates
- Building occupancy rates

**Community Cohesion, Inclusion, and Adaptive Governance**

- Percentage of residents who feel sense of community and neighborhood identity
- Percentage of residents who feel satisfied with the neighborhood
- Percentage of citizens engaged in civic life
- Social capital (measures for networks, norms, trust)
- Diversity of leadership in governance structures
- District decision-making structure fosters deliberation and consensus
- Engagement strategies encourage participation by diverse community members
- Rate of participation in EcoDistrict engagement efforts (surveys, meetings, etc.)
- Utilization of performance measures for policy, plan, and program design

**Functionality, Resilience and Adaptability**
- Resilient, affordable, accessible supply of sustainably produced, healthful food
- Percentage of residents with access to full-service grocery stores, farmers’ markets and community gardens within 20 minutes by bike, walk, or transit
- Availability of land, rooftops, and other spaces to grow food (square footage per person, wait lists)
- Total number of fruit trees and edible landscaping (per capita)
- Availability of community kitchens
- Infrastructure for sharing (e.g., tool lending library, seed exchange, co-ops, community kitchens, web-based exchange) and participation rates
- Range/number of (public and private) facilities available to community members and organizations (participation/use rates, wait lists)
- Vibrant public spaces that are accessible and well-utilized
- Wait list for daycare facilities serving district
- Public school capacity to serve district at build-out
- Percentage of residents with access to social services within 20 minutes by walk
- Resident satisfaction with social services within 20 minutes by walk (average rating, percentage satisfied or very satisfied, etc.)
- Percentage of residents with access to retail and commercial services within 20 minutes by walk
- Resident satisfaction with retail and commercial services within 20 minutes by walk
- Percentage of residents with access to neighborhood parks and open space within 20 minutes by walk
- Resident satisfaction with access to neighborhood parks and open space within 20 minutes by walk
- Percentage of residents with access to recreation facilities within 20 minutes by walk
- Satisfaction with recreation facilities within 20 minutes by bike, walk, or transit
- Percentage of residents with access to community centers and libraries within 20 minutes by walk
- Satisfaction with community centers and libraries within 20 minutes by walk
- Percentage of residents with access to quality, affordable daycare within 20 minutes by walk
- Satisfaction with access, quality and affordability of daycare within 20 minutes by walk
- Percentage of students with access to quality, affordable afterschool and childcare programs
- Satisfaction with access, quality and affordability of after-school and childcare programs
- Distance to other vital neighborhood centers (travel time by walk)
- Percentage of properties where improved value exceeds land value
- Percentage of businesses locally owned

**Health and Well-Being**
- Health outcomes (possibly an index score or key metrics that relate to environmental influences of health, such as rates for obesity, diabetes, asthma, cancer, mental well-being)
- Perceived health status (including mental health)
- Percentage of residents exposed to toxins (indoor, outdoor)
- Traffic statistics/travel safety (e.g., accident rates per capita, per vehicle miles traveled (VMT) – for auto, bike, transit)
- Ambient noise
- Perception of safety (a time in your day where residents feel their safety is undermined)
- Percentage of residents satisfied with amount and type of natural features in the district
- Percentage of residents satisfied with park quality in the district
- Percentage of residents satisfied with closeness of parks or open space
- Percentage of residents who participate in neighborhood park and recreation programs
- Percentage of daycare facilities in district green certified (e.g., Eco-Healthy Child Care certification)

**Sources**
- *Portland Plan Handbook, City of Portland, Oregon*
- *EcoDistricts Toolkit, Portland Sustainability Institute, Portland, Oregon*

**ADDITIONAL RESOURCES**
Extensive publications and resources are available that can be referenced as part of ongoing planning and implementation in Boulder. Some suggested resources include:
- *Driving Urban Environments: Smart Growth Parking Best Practices*, Maryland Governor’s Office of Smart Growth
  [http://www.contextsensitivesolutions.org/content/reading/parking_md/resources/parking_paper_md](http://www.contextsensitivesolutions.org/content/reading/parking_md/resources/parking_paper_md)
- *Growing Cooler*, Reid Ewing, Keith Bartholomew, Steve Winkelman, Jerry Walters, and Don Chen, Urban Land Institute, 2008
- *The High Cost of Free Parking*, Donald Shoup, Planners Press, 2004
- *Higher-Density Development: Myth and Fact*, Urban Land Institute
• **Innovative Design and Development Codes**, a toolkit aimed at enabling smart development that can be tailored to the unique identities of different communities [http://library.oregonmetro.gov/files/design_dev_codes_toolkit.pdf](http://library.oregonmetro.gov/files/design_dev_codes_toolkit.pdf)


• **Parking Spaces/Community Places: Finding the Balance through Smart Growth Solutions**

• Reconnecting America Center for Transit-Oriented Development, research and information related to transit supportive densities: [https://www.transitorienteddevelopment.org](https://www.transitorienteddevelopment.org) and [www.reconnectingamerica.org/resource-center/transit-supportive-density/#sthash.myVtTczT.dpuf](http://www.reconnectingamerica.org/resource-center/transit-supportive-density/#sthash.myVtTczT.dpuf)

• **Re-Thinking Density to Create Stronger Healthier Communities**, a useful downloadable presentation from the American Multi-Housing Council [http://www.nmhc.org/Content/ServeContent.cfm?ContentItemID=3423](http://www.nmhc.org/Content/ServeContent.cfm?ContentItemID=3423)


• **Playbook for Green Buildings + Neighborhoods: Strategic Local Climate Solutions**, an online resource that provides guidance and resources on ways to advance green buildings neighborhoods and infrastructure [http://www.greenplaybook.org/](http://www.greenplaybook.org/)


• **Smart Growth Examples of Codes that Support Smart Growth Development**, US Environmental Protection Agency [http://www.epa.gov/dced/codeexamples.htm#trans](http://www.epa.gov/dced/codeexamples.htm#trans)


• **Transit-oriented Development**, Portland Metropolitan Service District (Metro), 2009, a good collection of TOD examples from the Portland area, complete with photos, design specifications, and a video [http://www.oregonmetro.gov/index.cfm/go/by.web/id=140](http://www.oregonmetro.gov/index.cfm/go/by.web/id=140)

• Transit Oriented Design Components [http://www.reconnectingamerica.org](http://www.reconnectingamerica.org)


• US Environmental Protection Agency website on greenhouse gas emissions: [www.epa.gov/climatechange/ghgemissions](http://www.epa.gov/climatechange/ghgemissions)