

City of Whitesburg, KY: Downtown Section of the Tanglewood Downhill Trail Conceptual Master Plan

Prepared for the City of Whitesburg, KY

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The Community Design Assistance Center (CDAC) is an outreach center in the College of Architecture and Urban Studies at Virginia Tech that assists communities, neighborhood groups, and non-profit organizations in improving the natural and built environments. Assistance is provided in the areas of landscape architecture, architecture, planning, and interior design. Working with communities, the conceptual planning and design provides communities with a graphic vision of their project that can then be used for grant applications and fundraising for the next steps toward implementation.

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Mountain Heritage Festival

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AND

All those who volunteered time for the betterment of the Whitesburg community



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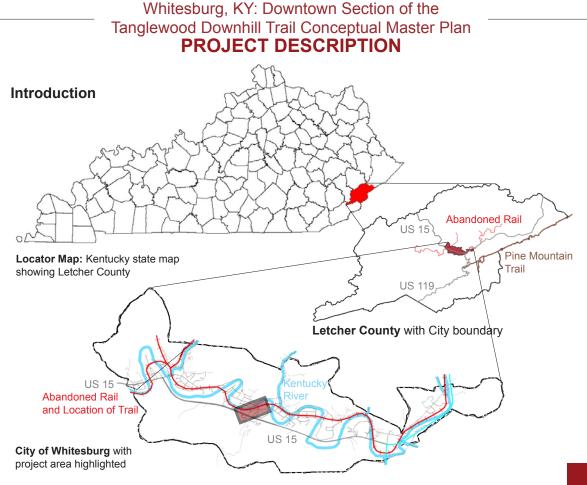
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The City of Whitesburg is located within Letcher County, in the eastern portion of the Commonwealth of Kentucky. Set in Appalachia along the Pine Mountain, Whitesburg is home to many natural resources including lumber, coal, and the Jefferson National Forest, which includes the Pine Mountain Trail that ultimately connects to the Appalachian Trail. Mountainous topography and the winding Kentucky River define Whitesburg and its development.

The Tanglewood Downhill Trail is a pedestrian and cyclist trail proposed to transect through the City of Whitesburg, primarily along an abandoned railway bed. This trail connects important destinations within Whitesburg, as well as connecting Whitesburg to contextual destinations such as the Pine Mountain Trail.

Because the location and route for the Tanglewood Downhill Trail was predetermined by the City, CDAC's association with the trail consisted of three 'focal area' destinations along the trail, in addition to wayfinding and welcoming signage for Whitesburg along the length of the trail. These focal areas include the Farmers Market area, East Main Street, and a Downtown Trailhead.



PROJECT DESCRIPTION

The Downtown Section of the Tanglewood Downhill Trail Conceptual Master Plan project aims to visualize Whitesburg as a Trail Town and achieve a cohesive downtown experience along the trail, encourage economic growth, and enhance pedestrian experiences. This project comes in the wake of many new programs and efforts, positive energy, and progressive projects. The following list exemplifies such efforts and includes the connectedness of the Tanglewood Downhill Trail, Whitesburg's Trail Town Initiative, the Whitesburg Health Department, East Main Street and downtown revitalization, the Farmers Market, as well as a Healthy Living Initiative.

In anticipation of Trail Town Certification, the City of Whitesburg applied for a grant from the Kentucky Division of Forestry's (KDF) Restoring Environmental Quality (REQ) grant program for conceptual design work. With the assistance of this grant, the City of Whitesburg accepted a design proposal for the Community Design Assistance Center to assist the city with the following goals and objectives, as outlined by the city and city stakeholders:

- 1. To create a vision toward their desire for 'Trail Town Certification';
- 2. To plan for the downtown section of the Tanglewood Downhill Trail;
- 3. To plan downtown streetscape and greenspace improvements;
- 4. To conserve, protect, and enhance community natural resources;
- 5. To provide opportunities for 'Healthy Living' and alternative modes of transportation;
- 6. To visualize a downtown gateway experience;
- 7. To provide places where the city could showcase local arts and culture:
- 8. To locate an access to the Kentucky River;
- 9. To conceptualize signage and wayfinding design along the Downtown Section of the Tanglewood Downhill Trail

Source: Whitesburg, KY Application, dated March 25, 2015



PROJECT DESCRIPTION

The goals and objectives, as outlined by the City of Whitesburg and city stakeholders align with CDAC's core goals and principles of design for communities that CDAC partners with, as evidenced by CDAC's mission statement below. The CDAC team worked closely with the Whitesburg community throughout the design process in order to provide the most appropriate design concepts for the Whitesburg community.



PROJECT DESCRIPTION

Whitesburg, A Trail Town

The Community Design Assistance Center worked with the City of Whitesburg and community members to develop a conceptual design for the downtown Whitesburg section of the Tanglewood Downhill Trail. This report was prepared to document the design process and to describe each of the design concepts for the City of Whitesburg.

Key components of a Trail Town include:

- 1. *Trailhead*: where users can access the trail leading from town to a trail
- 2. Access Trail: connector routes between the town and a trail
- 3. Gateways: the points at which trail users enter the heart of a town
- 4. *Central Business District*: an area offering specific goods and services for trail users
- 5. *Nodes*: specific points along or near the trail that will be highly utilized and trafficked.

Examples of necessary goods, services, and desires of trail users in a Trail Town include: affordable lodging, clothes dryers, potable water, trail and town signage, trail and town maps, grocery store, safe camping, local outdoor outfitter, basic first aid, shower and bathroom facility, and a variety of restaurant types.

The City of Whitesburg is planning to improve and extend a pedestrian and bicyclist oriented greenway trail, Tanglewood Downhill, which travels linearly through the city and along many portions of the Kentucky River. The city's existing greenway begins at an existing trail, near the intersection of Highway 15 and Hazard Road. It passes the Housing Authority, Whitesburg Middle School, West Whitesburg Elementary School, and residential properties as it converges with the North Fork of the Kentucky River and arrives downtown at the Farmers Market. From this point, trail planners aim to connect Whitesburg's downtown district to the Pine Mountain Scenic Trail (part of the Great Eastern Trail). The City of Whitesburg located the extensions of the existing trail along the abandoned Kentucky Union Railway path. Although none of the railway infrastructure currently exists, the railway path serves as a reminder of the past railway culture, in addition to the rich and vibrant cultures of art, mountain, hydrology, ecology, and geology, and local narratives that exist in Whitesburg.



PROJECT DESCRIPTION

The Tanglewood Downhill Trail offers local citizens the opportunity to incorporate exercise into their daily activities in addition to providing social, environmental, and economic benefits to the City of Whitesburg. This greenway trail will provide opportunities for social interactions for Whitesburg citizens and tourists along the key destinations along Tanglewood Downhill. The greenway aims to improve and celebrate the ecological conditions, particularly that of the Kentucky River. This trail also has the ability to improve the economy of Whitesburg through added tourism from visitors of the Pine Mountain Scenic Trail as well as creating more pedestrian traffic to retail and commercial destinations downtown and along the trail.

CDAC's design development focused upon three areas in Whitesburg: the Farmers Market and Letcher County Veterans Memorial Museum, East Main Street, and a Downtown Trailhead. For these three sites, CDAC was tasked with developing design concepts that aim to provide a vision for Whitesburg as a Trail Town by considering locations for signage such as information kiosks, wayfinding, clearly marked trail access points, and maps. In addition to signage, a trail-friendly character must be achieved by providing amenities such as wide sidewalks, safe walking and biking paths, bicycle racks.

For a detailed description of a Trail Town, please refer to "Trail Towns: Capturing Trail-Based Tourism" and "Kentucky Trail Towns: A How-to-Guide for Communities," found in the Appendix.



The Tanglewood Downhill Trail arrival at the Farmers Market.



Naturalistic portions of the Tanglewood Downhill Trail weave through steep topography.



PROJECT DESCRIPTION

Farmers Market and Veterans Museum Site Description

The Farmers Market and Letcher County Veterans Memorial Museum area is bounded to the north by the North Fork of the Kentucky River and westwardly defined by the pedestrian bridge over the river. Main Street serves as the southern border for this site. The Farmers Market and Letcher County Veterans Memorial Museum site ends eastwardly at the five-way intersection of the access road to this site, Main Street, College Drive, and East Main Street.

Three interest groups in the Whitesburg community utilize this space for their respective events and programs, including the proposed Farmers Market, Veterans Memorial Museum, and Mountain Heritage Festival. The design concepts in this report are respectful to the requests and needs from the interest groups.

East Main Street Site Description

The East Main Street site is primarily a streetscape project, aiming to linearly connect East Main Street with the existing eastern portion of the Tanglewood Downhill Trail. The businesses along East Main Street have been historically unsuccessful and many buildings remain vacant. This streetscape design will attract people to East Main Street and promote economic activity in addition to providing residents and visitors of Whitesburg with an exiting outdoor public environment. Street-scale amenities for East Main Street are important to achieving Trail Town Certification for Whitesburg because the Tanglewood Downhill Trail is apart of the street.

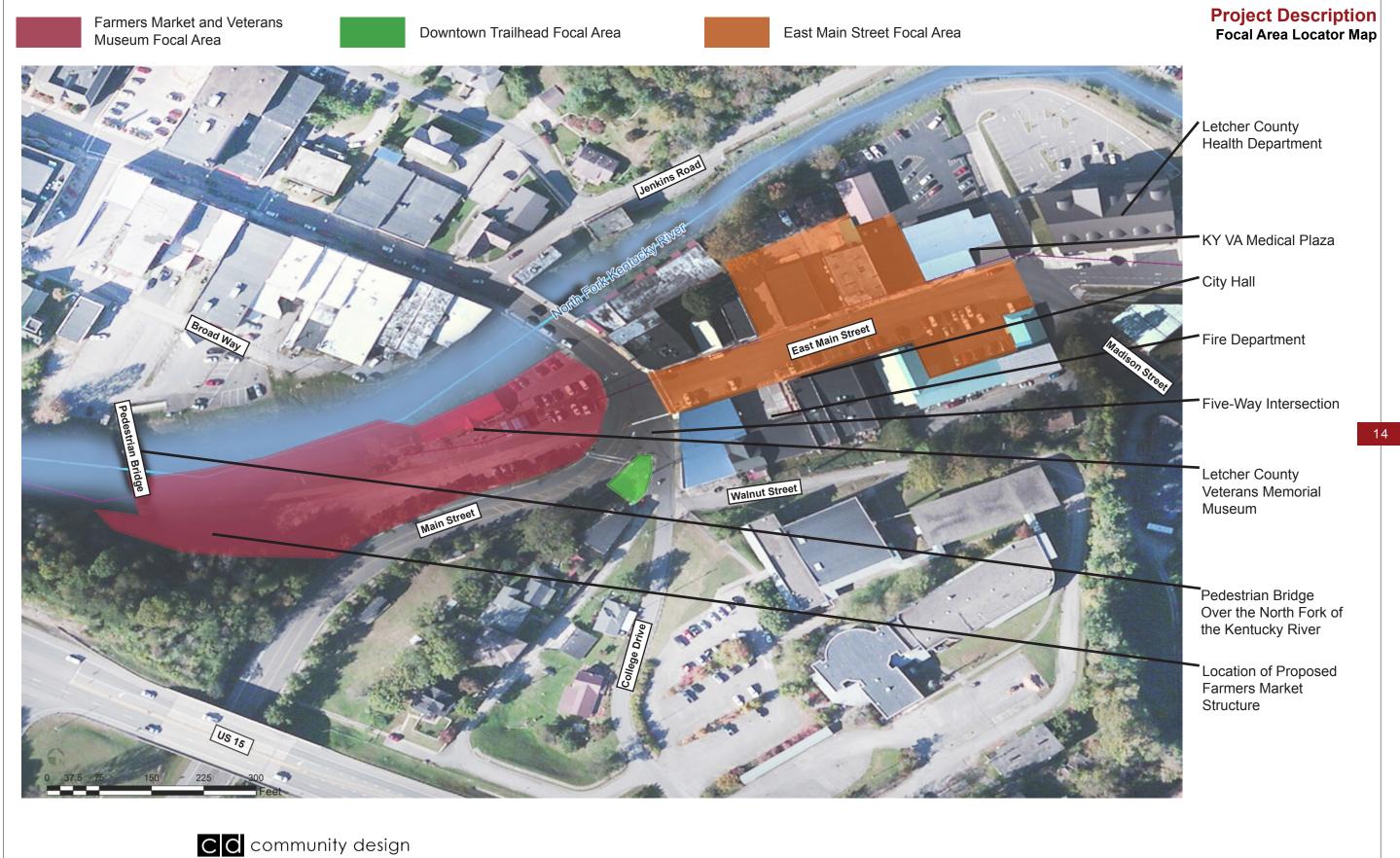
Downtown Trailhead Site Description

Funding for the realignment of Main Street and the five-way intersection currently exists for Whitesburg; however, the plans for this realignment are not yet finalized. The site and design for the Downtown Trailhead responds to a Main Street realignment that creates more of a standard four-way intersection of Main Street, East Main Street, and College Avenue. The access road into the Farmers Market and Letcher County Veterans Memorial site will be relocated and replaced with Main Street. Outlined in green on the following page, the space between College Avenue and Main Street is the location for the Downtown Trailhead.

A trailhead is a crucial element of a Trail Town, as it provides an identifiable place for both residents of Whitesburg and visitors to gather. The trailhead is a landmark that signifies the centralized location along the Tanglewood Downhill Trail that is downtown Whitesburg.

The map on the following page depicts the location of each of the project areas.





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DESIGN PROCESS

The design process for the Downtown Tanglewood Downhill Trail Conceptual Master Plan began with an initial site visit to Whitesburg in June 2015. The CDAC team met with area project stakeholders, who were identified by the city, to discuss concerns and desires for the project; toured Whitesburg and the surrounding area and gathered information about the sites such as soil samples and existing conditions details. This analysis process allowed CDAC team members to gain a better understanding of the Whitesburg area and the opportunities and constraints of the sites. The information later influenced design decisions in each concept. Please see the Appendix for the June 29, 2015 meeting notes as well as a soil sampling map and test results.



Lara Browning and Melissa Philen tour Whitesburg with community member Robert Hatch



CDAC team members make note of existing conditions in Whitesburg along the Tanglewood Downhill Trail.



Sarah Gracey of the KDF and CDAC team members tour Whitesburg.



Robert Hatch guides CDAC staff and Sarah Gracey through downtown Whitesburg.

A one-hour, CDAC office charette was held in order to brainstorm initial design ideas from other student designers at CDAC. The ideas, opportunities, and themes discussed in the charette meeting were incorporated into the conceptual design work on the following pages.



CDAC charette with Melissa Philen, Carter Gresham, Jess VanNoy, Joe Niland, and Shane Gray.



CDAC student designers discuss Whitesburg design possibilities.



DESIGN PROCESS

Throughout the beginning stages of this project, the CDAC team worked closely with the stakeholders group to better understand their respective visions for the community. A set of preliminary conceptual design alternatives was developed after consideration from all Whitesburg stakeholders. On August 20, 2015, the CDAC team presented and discussed the preliminary conceptual designs with members of the Whitesburg community in a public forum setting. Two versions of each of the three focal areas were presented at this meeting. Please see the Appendix for notes from the Preliminary Design Presentation Meeting Notes.

The feedback and concerns from the two versions of each focal area from this community meeting were incorporated into the refinement of the conceptual designs. One final conceptual design for each focal area was presented to the Whitesburg community on October 19, 2015 in a similar public forum setting.



Shane Gray and Joe Niland present final design concepts to the Whitesburg community.



Presentation boards of final design concepts at the final community meeting.



Melissa Philen speaks with Sarah Anderson, WYMT Mountain News.



Whitesburg community members review final presentation boards at the final community meeting.

The final conceptual plans for each focal area, shown on the following pages, were presented to project stakeholders and members of the Whitesburg community on October 19, 2015.



PART 1: FINAL CONCEPTUAL DESIGNS

FINAL CONCEPTUAL DESIGN: FARMERS MARKET AND VETERANS MUSEUM SITE

Design Description

The Farmers Market and Veterans Museum Site currently is a vast parking lot and paved area directly adjacent to the North Fork of the Kentucky River. This space is shared with the Letcher County Veterans Memorial Museum and the Mountain Heritage Festival, held annually during the last week of September.

Without designated parking spaces, vehicles park haphazardly. There exists a considerable opportunity to provide public space for community interaction. There is no safe river access as the slopes of the river banks are tremendously steep and rocky. An awkward and confusing intersection of five roads is located at the eastern terminus of the Farmers Market area. Because vehicles at this intersection are traveling at low speeds, few accidents occur in this place, yet a pedestrian scaled environment appears unsafe and character of this area can be enhanced significantly.

This design concept for this site incorporates the future Farmers Market structure, as designed by Richardson Associates Architects, and provides public space and amenity opportunities for trail users and Whitesburg residents. The final conceptual master plan for the Farmers Market and Veterans Memorial Museum is a gateway experience for both citizens as well as visitors of Whitesburg. Local arts, culture, and values of the city are exemplified in this plan through signage, and specific landscape elements that fit the needs of many active local groups and organizations that utilize this space, during all times of the year. These local interest groups and their respective desires can be found on pages 20-22.

Whitesburg has seen an increased rate of obesity among residents and is working to provide opportunities for a healthier lifestyle. In these design proposals, landscapes have been create to promote healthy living, through elements such as a public, outdoor fitness station, edible landscaping, and new walking trails.

The vehicular access from the five way intersection to the Farmers Market area has been removed. The entrance into the Farmers Market space has been relocated to Main Street, near the Mountain Heritage Festival stage. Rumble strips, a planted median, and changes in paving materials serve as identifiable elements of a pedestrian crossing and aide in the slowing of traffic as vehicles enter Whitesburg from US Highway 15.

The final conceptual master plan for the Farmers Market and Veterans Museum Site, supportive drawings, interest group initiatives, and plant selections can be found on the following pages.



- Whitesburg, KY: Downtown Section of the Tanglewood Downhill Trail Conceptual Master Plan $\,-\,$ FINAL DESIGN: FARMERS MARKET AND VETERANS MUSEUM SITE **Master Plan** Parking Lot Structured for Efficiency Flatstone Curbs and Median Planted with Seasonal Annuals Paver Crosswalk, typ. Alternative Downtown Trailhead Location, See Page 37 Planted River Terraces Serviceberry **Alternative Parking** Blueberry Configuration, See Page 30 Elderberry Persimmons Cafe Tables Bella Home Vehicle Turn-Around Grape Vine Arbor and Salmonberry Furnishings Overhead Water Misters Paw Paw Existing Memorial Dogwood Tanglewood Downhill Trail Existing Museum Artifacts **Downtown Trailhead Location,** See Page 35 Rhubarb Herb Garden **Extended Median with** Whitesburg Welcome Sign **Existing Woodland** Red Maple Quercusx warei Existing Bradford Pear Existing Lawn Mixed Alliums; Flatstone Curbs and Cloves and Spices Median Planted with Bicycle Rack latstone Curbs and Seasonal Annuals Median Planted with Exercise Station Paver Crosswalk, typ. Seasonal Annuals **Existing Mountain** Heritage Festival Stage Pedestrian Crossing Flashing Sign Rumble Strip

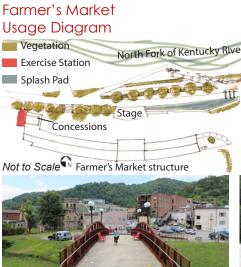


FINAL CONCEPTUAL DESIGN: FARMERS MARKET AND VETERANS MUSEUM SITE

Interest Groups

Farmers Market Interest Group

The conceptual master plan incorporates the future Farmers Market structure, as designed by Richardson Associates Architects, which is ADA accessible. This conceptual master plan incorporates three handicap parking spaces for use in the Farmers Market. Access to the North Fork of the Kentucky River has been included in the master plan with terraces, stairs, and a ramp across from the Farmers Market structure. Edible landscaping is planted between the terraces that step down toward the river, allowing for easy access from the stairs and ramp. Edible plants are also located along the banks of the river for people to freely pick and enjoy. A splash pad for children (and adults alike) is placed in front of the Farmers Market structure, along the Tanglewood Downhill Trail, so that parents may watch their children at a close distance, while still engaging the Farmers Market space. It is envisioned that the splash pad would have spraying geysers, hoops, and vertical misters. An outdoor exercise station is proposed directly off of the trail to encourage people to stop and utilize the equipment while traveling along the trail. The performance stage, as proposed by Richardson Associates Architects, is blended with edible landscaping as well as the splash pad. Landscape furnishings such as tables, chairs, benches, and bicycle racks are proposed near the Farmers Market Structure to encourage people to stay at this place, even when Farmers Market events are not in progress. A paving pattern, as drawn in the plan, is suggested in front of the Farmers Market structure to create a more pedestrian aesthetic, while still allowing for vehicles to turn around at the circle.



This pedestrian bridge connects downtown Whitesburg, existing parking, and the Tanglewood Downhill Trail to the Farmers Market area.

Amenities: - Splash pad

- Exercise station
- River access
- Edible plantings
- Overhead water misters
- Stage
- Bike racks
- Herb garden
- Tanglewood Downhill access point
- Pedestrian crossings
- Grapevine arbor
- Interpretive signage



The Tanglewood Downhill Trail travels along this area and bypasses a pedestrian bridge over the North Fork of the Kentucky River.



FINAL CONCEPTUAL DESIGN: FARMERS MARKET AND VETERANS MUSEUM SITE

Letcher County Veterans Memorial Museum Interest Group
The Letcher County Veterans Memorial Museum boasts 10 parking spaces all less than ten feet from the Museum's front entrance. Two of these parking spaces have been retained for handicap accessibility. The 10 parking spaces are in addition to two parking lots to the side of the museum and across the Tanglewood Downhill Trail. A more grand gesture for the main entrance is proposed around the existing granite memorials and stones, as well the historical artifacts, such as retired vehicles and uniforms, owned by the museum. The existing museum structure is shown with the existing red roof; the planned future additions to the museum structure are shown in white, on either side of the existing building. A memorial loop walk is proposed around the parking lot, complete with a linear display and reorganization of memorials for viewing and interpretation along the walk.



- 10 total parking spaces(2 handicap parking spaces)
- Distinguished front entrance with flags and existing memorials
- Memorial loop walk showcases artifacts and memorials
- ັ້ລ Building additions are shown
- $\stackrel{\Phi}{\sim}$ Historical vehicles remain in their existing locations
 - Rail caboose is relocated



The Veterans Memorial Museum offers many historical artifacts that draw visitors to the building. Expansion of the building has been considered in the site plan. Careful tree selection avoids overhead power line and tree height conflicts.



The war memorial stones are a somber reminder of conflict. The site plan and design for this space can instill similar feelings and notions of remembrance, yet provides a more dignified site design.



FINAL CONCEPTUAL DESIGN: FARMERS MARKET AND VETERANS MUSEUM SITE

Mountain Heritage Festival Interest Group

The desires of the committee, who organizes the annually celebrated Mountain Heritage Festival in Whitesburg, are accommodated in this plan. The final concept features no curb cuts underneath where the 30'x360' vendor tent is placed. The actual size of the vendor tent is proportionally illustrated on the plan. With security measures, the future Farmers Market structure could also be utilized as vendor or community gathering space during the festival. The existing festival stage located across Main Street is retained and also incorporated into the overall site plan.



Desires:

- Festival vendor tent fits in existing parking lot
- Existing location of the Mountain Heritage Festival stage and hillside amphitheater is retained
- Pedestrian crossings are provided across Main Street from stage to tent area
- Use of proposed farmers market structure for craft vendors

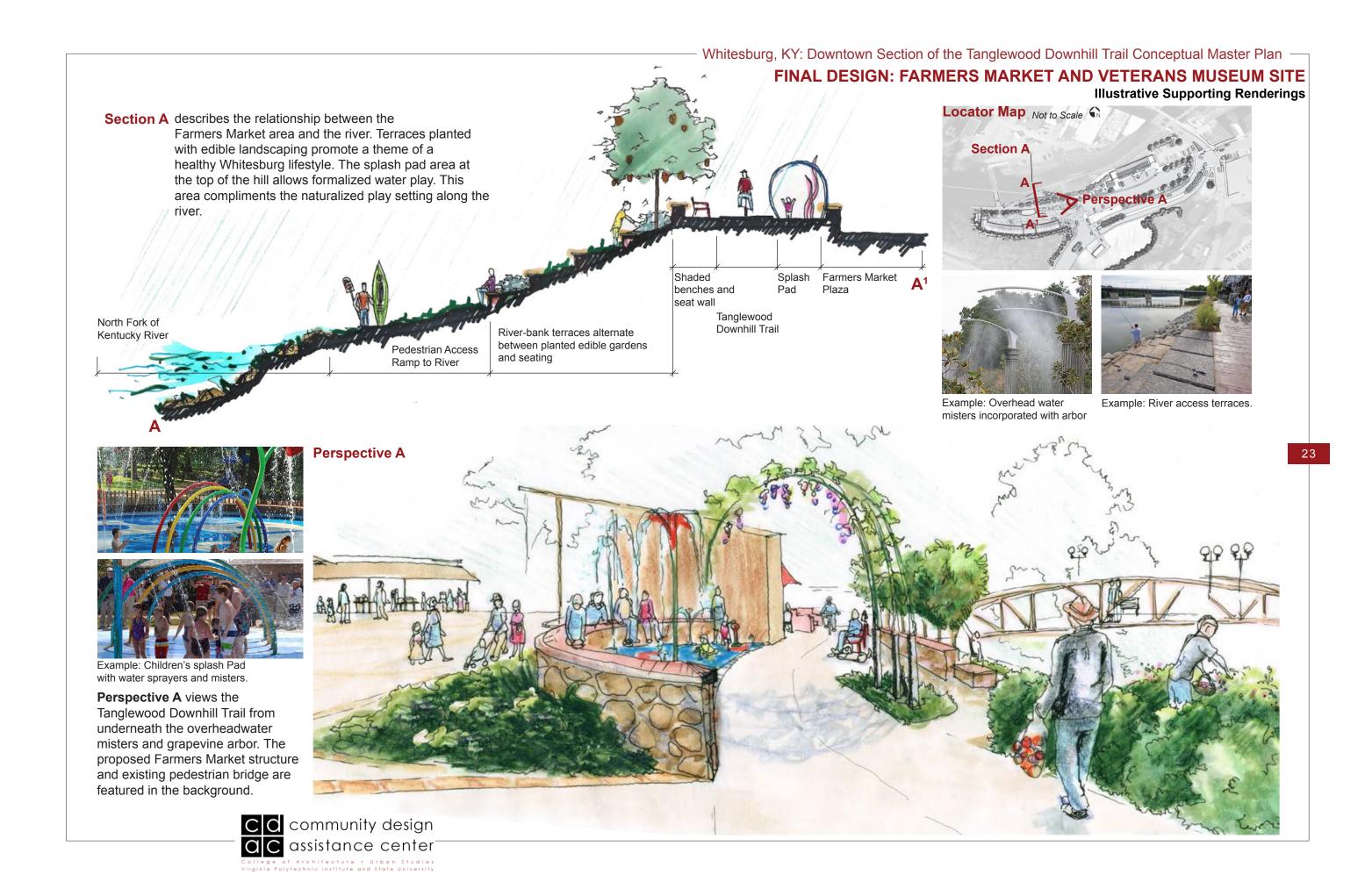


The Mountain Heritage Festival stage located across Main Street.



An expansive parking lot is the location of the Mountain Heritage Festival tent.





Perspective C



Perspective C illustrates a view toward the concession area of the Farmers Market structure, where the pedestrian bridge crosses the North Fork of the Kentucky River. An exercise station is proposed behind the structure. This area provides lingering opportunities with cafe seating and adjacent seat walls, while also offering safe bike storage.



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FINAL DESIGN: FARMERS MARKET AND VETERANS MUSEUM SITE

Perspective D

Illustrative Supporting Renderings

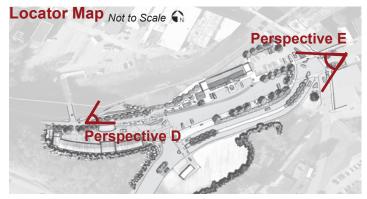


Depicts the proposed river access trail and terraces with edible landscaping. This area provides a place for people to access the river as well as sit and watch the river and associated activities. The North Fork of the Kentucky River is an important asset to the City of Whitesburg and should be incorporated into the urban experience. A safe river access point provides a more viable opportunity for current river uses such as the duck race during the Mountain Heritage Festival to be more viable. In addition, a river access point has the opportunity to attract visitors and visitor dollars to Whitesburg via eco-tourism possibilities.

Perspective E

Illustrates the proposed intersection of Main and East Main Street. This perspective, looking from East Main Street toward the Veterans Memorial Museum area, demonstrates how the proposed trailhead locations will become a community focal point. Additionally, the Letcher County Veterans Memorial Museum shares the focal point at the Main Street intersection. The existing memorial park sign and statues associated with the Veterans Memorial Museum have been expounded upon in this conceptual plan, sharing an axis with East Main Street. The mountains in the background of this perspective highlight the new character and identity of Whitesburg that is achieved in this conceptual design.

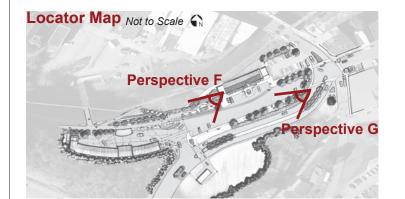
Changes in paving materials, the Main Street planted median, and street trees along East Main Street provide necessary street infrastructure to achieve a pedestrian oriented street environment that is pleasing, safe, and encourages people to get outside and interact with the Whitesburg community.





FINAL DESIGN: FARMERS MARKET AND VETERANS MUSEUM SITE

Illustrative Supporting Renderings







Perspective F shows a portion of a loop-trail, designed to interpret existing historic memorabilia displayed by the Veterans Memorial Museum in its current location. The incorporation of interpretive signage and benches offer opportunities to learn about local history and to reflect upon the significance of Veterans' contributions. The Tanglewood Downhill Trail passing by the memorial allows an opportunity for trail users to stop and learn about local history. The Farmers Market structure can be seen in the background.

Perspective G shows another portion of the Veterans Museum loop-trail and demonstrates how pedestrian amenities can be incorporated into the Main Street crossing and existing parking lot. The planted median along Main Street helps to slow traffic coming from US 15. The relocation of the entrance to the Farmers Market and Veterans Memorial Museum provides a more pedestrian oriented and safe intersection alternative to the existing five way intersection.



FINAL CONCEPTUAL DESIGN: FARMERS MARKET AND VETERANS MUSEUM SITE

Planting Selections

Edible Planting

Amelanchier alnifolia (Serviceberry)

An attractive, small, multi-branching tree with edible berries. Berries can be eaten alone or made into pies, jams, or other foods. The low branching structure will not impede circulation on East Main Street.



Asimina triloba (Pawpaw)

A great plant for foliage effect due to its long slender leaves. The fruits are greenish yellow maturing to black and have a slight banana-like taste.





Diospyros virginiana (American Persimmons)

This native species will never win a beauty contest, but it possess an inherent toughness that assures survival under difficult conditions. Bold fall foliage is complimented in the fall by pale orange edible fruit.





Sambucus nigra subsp. Canadensis (Elderberry)

Large shrub developing into a small tree. 6 to 10 inch wide creamy flowers in June and July. Black-purple fruit in August and September can be made into jellies and wine.





Vaccinium corymbosum (Blueberry)

A strong, multi-stemmed shrub of handsome and fine ornamental landscape value. Fruits ripen in late July and August.





Rubus spectabilis (Salmonberry)

Found in moist environment close to stream banks, small berries similar to blackberries ripen and are ready for consumption in mid-June to late July.





Vitis labrusca (Northern Fox Grape)

A creeping vine that can be utilized as wall plants to provide foliage color and texture. Wide, dull green leaves turn a rich scarlet in the fall. The vine habit of this plant will compliment the water misters above the trail and add character to the Farmers Market space.





Alliums

Scallions, Shallots, Chives, Onions, Leeks, and Garlic





Herbs:

Rosemary, Sage, Thyme, Mint, Oregano, Parsley, and Dill





Non-Edible Planting

Acer rubrum (Red Maple)

Red flowers appear in early spring and are then followed by red fruit. The smooth gray bark is particularly attractive. Red fall color is distinctive and memorable.



Sassafras albidum (Common Sassafras)

Distinctive fall color and leaf shape. The bark provides an interesting texture and interest in the winter with its deep furrowed ridges. Yellow flowers develop in April before the leaves.



Quercus x warei 'Nadler'

A hybrid tree of Quercus robur (English Oak) and Quercus bicolor (Swamp White Oak). This tree grows well in urban conditions and is very suitable as a street tree. Its upright columnar form does not inhibit pedestrian or vehicular circulation beneath the tree.







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FINAL CONCEPTUAL DESIGN: EAST MAIN STREETSCAPE

Analysis

Whitesburg's East Main Street has a host of design issues, which can be improved upon. The few pedestrian amenities, vacant buildings, no clear public spaces, and dilapidated public infrastructure create a street environment that is not pleasant to occupy when a pedestrian in this area. An excessive amount of parking is located along East Main Street and is not usually fully utilized on a typical day in Whitesburg. The conceptual design proposed in the forthcoming section addresses these issues by visualizing a pedestrian-scaled corridor and comfortable downtown experience along the proposed trail.



Pedestrians along East Main Street (left of picture) currently have very little room to walk in the midst of vehicular traffic.



East Main Street is currently a vast sea of pavement, cars, and unorganized parking.

Opportunities

East Main Street has many positive opportunities for design. The Whitesburg City Hall, fire department, and newly constructed health center bring an important civic structure to the corridor. The street serves as a connector to the Farmers Market area and the western portions of the Tanglewood Downhill Trail. This proposed streetscape will provide greenspace, handicapped parking, and amenities for bikers and pedestrians. The conceptual design aims to provide a unique identity for the City of Whitesburg as a Trail Town, improve the downtown streetscape, provide greenspace, and provide an improved area for pedestrians to walk.



The bridge at the western terminus of East Main Street provides an aesthetic connection to the rest of downtown and the Farmers Market area.



The North Fork of the Kentucky River travels behind East Main Street and connects Whitesburg linearly.



FINAL CONCEPTUAL DESIGN: EAST MAIN STREETSCAPE

Design Description

As part of the Healthy Living Initiative and the City's desire for Trail Town Certification, the conceptual plans included in this report for East Main Street aim to provide streetscape and greenspace proposals to visualize downtown Whitesburg as a destination. Street amenities for pedestrians and bicyclists, such as generously proportioned sidewalks; green spaces; street trees; safe street crossings; bicycle racks, repair stations, and clearly identifiable bicycle lanes were considered. Parking has been restructured along East Main Street. Parallel parking provides a street edge condition, which allows for both vehicles and alternative modes of transportation to coexist. Handicap accessible parking is proposed in areas close to key destinations. Multi-modal transportation is important in a downtown environment because it is a publicly shared place belonging to the community as a whole. Below is a summarized list of the benefits of multi-modal transportation, as outlined by the American Planning Association.

Physical Activity

- **1.** Dedicated street features increase walking and biking opportunities for community members and visitors.
- **2.** Aesthetic streets provide transportation elements that help keep people interested as they walk or bike.

Economic Improvement

- 1. Streetscape improvements can increase property values.
- **2.** Walkers and bikers spend more time around town and notice more businesses than drivers do because they are moving at a slower speed.
- **3.** An attractive community with streetscaping can bring in more spending.

Social Cohesion

- **1.** Walkable streets provide opportunities for social interaction.
- **2.** Street-scale features enhance the sense of community and community pride.
- **3.** Multi-modal transportation provide opportunities for people who do not drive.

"Benefits of Street-Scale Features For Walking and Biking"
Source: https://www.planning.org/nationalcenters/health/streetscale/pdf/walkingbikingfinalreport.pdf



FINAL CONCEPTUAL DESIGN: EAST MAIN STREETSCAPE

As suggested by the Whitesburg community, a consistently vacant building is proposed to be demolished and relocated to a new location that will further add to the wall of building fronts along East Main Street. A park and plaza is suggested in place of the demolished building, across the street from the Whitesburg City Hall. The new park includes amenities for pedestrians and trail users such as a water fountain, bicycle maintenance station and benches. This park is on axis with the center of the City Hall building and draws attention to the importance of the civic building.

An alternative concept with the retention of the proposed demolished building is also included on the following page, and contains a smaller green space and plaza.

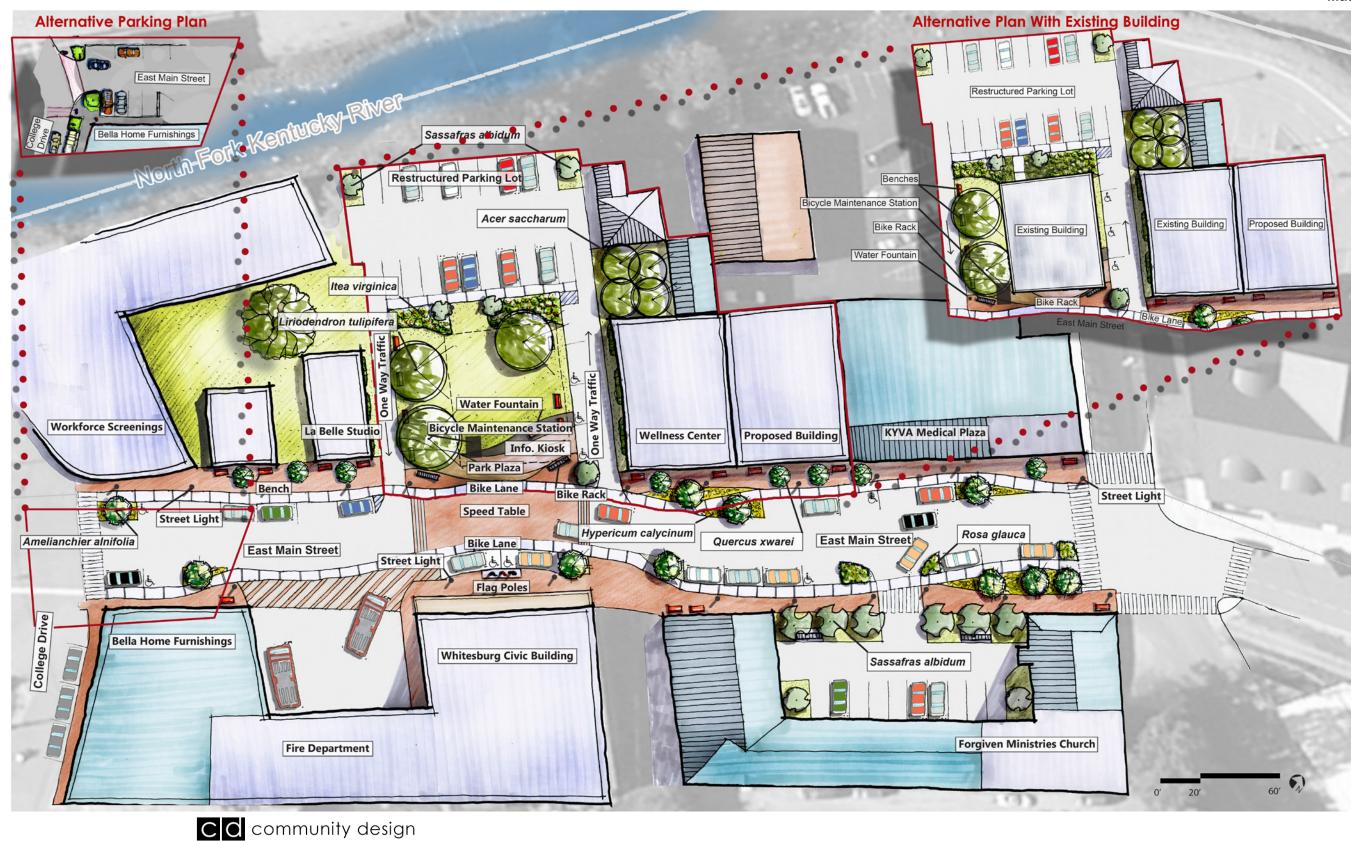
Also contributing to safe pedestrian crossings throughout East Main Street is an elevated speed table. This will allow for people to safely cross the street from the park to City Hall while also slowing the speed of cars. This speed table can be constructed in such a way to allow for the passage of tractor trailers and large trucks that deliver goods to the businesses on East Main Street.

The master plan, alternative plan, supportive drawings, as well as plant and material selections for East Main Street, can be found on the following pages.

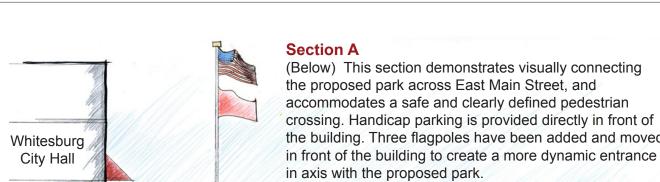


FINAL DESIGN: EAST MAIN STREETSCAPE

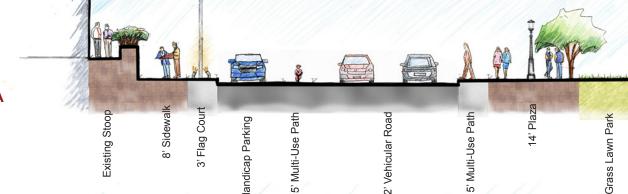
Master Plan

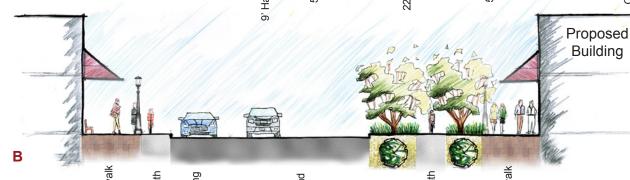


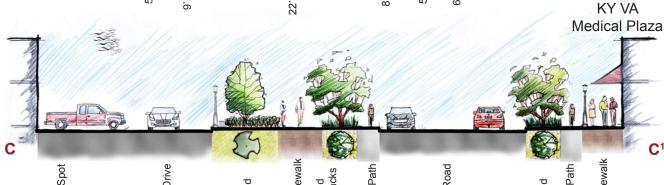
OC assistance center



the building. Three flagpoles have been added and moved







9 C C community design assistance center Architecture + Urban Studies

FINAL DESIGN: EAST MAIN STREETSCAPE

Illustrative Supporting Renderings



Section B

(Left) This section depicts a section of East Mai Street to the east of the City Hall. It includes street parking, a multi-use path, and significant pedestrian sidewalks on both sides of the street. The street trees create a canopy of branches over the multi-use path, providing both an interesting and memorable place.

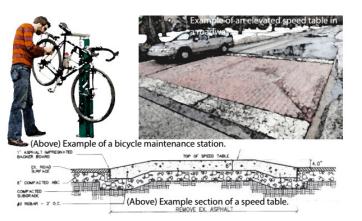
Section D

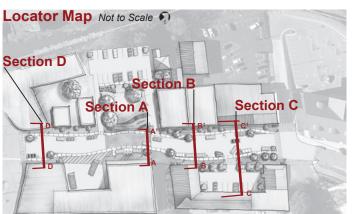
(Above) Planted street bumpouts which provide structure to the parallel parking along East Main Street. Crosswalks are provided at 33 the intersection to the west to create a safe and inviting environment for people while maintaining vehicular functionality.

Section C

 B^1

(Below Left) This section shows the easternmost section of this plan shows the existing parking lot that serves the Forgiven Ministries Church and other building occupants. The parking has been restructured and along with a planted frontage to the parking lot entrance. These plantings create a continuous street wall condition that encloses the street corridor and lessens the feeling of an expansive paved parking lot, while also offering bike parking to cyclists commuting to downtown. Parallel street parking has been added on East Main Street to make up for the loss of parking spaces where trees are proposed.





Perspective A

(Left) This perspective showcases the proposed speed table and surrounding streetscape in front of the Whitesburg City Hall. This area is designed to be a focal point for the City of Whitesburg. This design is functional for all types of transportation types and forms a visual relationship between City Hall and the proposed park across East Main Street.

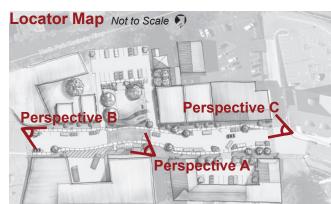
Perspective B

(Below) Curb bumpouts encourage drivers to be aware of activities and people in the street as well as the subtle curvilinear nature of the street, as opposed to the current, straight-shot condition of East Main Street. These bumpouts form parallel parking spaces along the street as well as opportunities for shade tree plantings and attractive landscaping.



Perspective C

(Left) The KYVA Medical Plaza and newly constructed Letcher County Health Department serve as a terminus for the East Main Streetscape design as well as a transition into the eastern portions of the Tanglewood Downhill and destinations within Whitesburg. Street trees and gracious sidewalks allow for people to feel safe and comfortable when visiting the shops along the street and encourages pedestrian traffic, increasing economic and social vitality.







FINAL CONCEPTUAL DESIGN: EAST MAIN STREETSCAPE

Planting and Material Suggestions Planting

Amelanchier alnifolia (Serviceberry)

An attractive, small, multi-branching tree with edible berries. Berries can be eaten alone or made into pies, jams, or other foods. The low branching structure will not impede circulation on East Main Street.





Liriodendron tulipifera (Yellow Poplar)

The state tree of Kentucky. Easily identified by its characteristic flower and leaf shape. An effective urban tree due to its drought tolerance.



Itea Virginiaca (Virginia Sweetspire)

This wet tolerant small shrub is capable of handling water runoff from the restructured parking lot, in an effort to filter polluted water from the parking lot before entering the North Fork Kentucky River.



Acer Saccharum (Sugar Maple)

Nothing short of spectacular fall color and an upright rounded form. Tolerates less than ideal growing conditions typically found in an urban environment.



Ouercus x warei 'Nadler'

A hybrid tree of Quercus robur (English Oak) and Quercus bicolor (Swamp White Oak). This tree grows well in urban conditions and is very suitable as a street tree. Its upright columnar form does not inhibit pedestrian or vehicular circulation beneath the tree.



Sassafras albidum (Common Sassafras)

Distinctive fall color and leaf shape. The bark provides an interesting texture and interest in the winter with its deep furrowed ridges. Yellow flowers develop in April before the leaves.



Rosa glauca (Redleaf Rose)

Bluish green leaves, overcast with reddish purple hues. Pink flowers bloom in June and do not have an overly powerful fragrance like many roses. Tolerant of dry contritions that present hazards to plant success in urban street environments.



Hypericum calycinum (Aaron's Beard)

A small stature ground cover. Handsome evergreen foliage and beautiful yellow flowers are a favorite among butterflies. The leaves compliment the base of the multi-branching serviceberry.



Materials



Pre-Cast Concrete Pavers

A brick colored paver will compliment many of the brick buildings downtown. This is proposed for use in sidewalks.



Stamped Concrete

The bike lanes are concrete with a stamped pattern. Stamped concrete provides an interesting material at a lower cost.



Whitesburg Benches

All benches in this plan are proposed as replicas of the existing Whitesburg city benches.



PARKING AND WALKING IN WHITESBURG

Overview

Walking distances may seem greater and undesirable when walking from a parking spot in Whitesburg that is not directly in front of a downtown destination. However, the proposed walking distances from parking spots to many destinations in downtown Whitesburg are manageable and reasonable. Parking has been restructured and relocated in order to provide residents and visitors of downtown Whitesburg with a pedestrian friendly public environment.

Walking times in outdoor environments can seem long, particularly when the outdoor environment is of poor quality. A vehicular dominated landscape makes walking times seem far longer. Improvements to street infrastructure make for a more pleasant and enjoyable walk. Please see the Appendix for a list of benefits of multi-modal transportation and pedestrian based streets and public areas.

For people who need to park close to a place or business, handicap parking is located in front of all key destinations in downtown Whitesburg, such as the proposed Farmers Market structure, downtown trailhead, City Hall, and the park across East Main Street from City Hall.

In order to better serve the Whitesburg community, a parking and walking comparison was presented during the second presentation of designs. This comparison correlated walking distances in downtown Whitesburg to a typical parking spot in the Whitesburg Walmart® parking lot, in relation to the Walmart® building. This comparison also related walking distances in downtown Whitesburg to that of the length of the Mountain Heritage Festival tent, because this tent is of local importance.

- *These are estimates of proposed parking versus existing parking. For a more in-depth parking analysis of Whitesburg, zoning and building use must be taken into consideration.
- *Parking counts occurred where designs propose change or enhance the walkability of the downtown area.
- *This study is not inclusive of alley parking or parking areas that do not coincide with proposed design changes.



PARKING AND WALKING IN WHITESBURG

As illustrated below, the distance across the Whitesburg Walmart® parking lot from where most people park to the Walmart® building is roughly 190 feet. Comparatively, the length of the Mountain Heritage Festival Tent is longer than the length of the Walmart® building, at 360 feet. To better understand the walking distances that people regularly travel from parking space to front entrance of the Walmart® building, 190 foot red lines have been imposed on the conceptual master plans of both the Farmers Market and Veterans Memorial Museum Site as well as the East Main Streetscape design.

Parking lot landscapes are visually bleak and uninviting. With the proposed streetscape improvements of East Main Street and pedestrian features of the Farmers Market and Veterans Memorial Museum Site, 190 feet is a minimum distance. Walking further distances across Whitesburg will aide in the healthy initiative goals outlined in the Project Description portion of this report.

The 190 foot walking distance impositions as well as existing and proposed parking space counts for the Farmers Market and Veterans Memorial Museum Site and East Main Streetscape can be found on the following pages.



assistance center

Polytechnic Institute and State University

PARKING AND WALKING IN WHITESBURG

Farmers Market and Veterans Memorial Museum Site

Existing Parking:

-Standard Parking Spaces: 95

-Handicap Spaces: 2

Proposed Parking:

-Standard Spaces: 86

-Handicap Spaces: 5

Change in Parking:

-Total Parking Space Change: -6 Spaces (-6%)





PARKING AND WALKING IN WHITESBURG

East Main Streetscape

39

Existing Parking:

-Standard Parking Spaces: 78

-Handicap Spaces: 2

Proposed Parking:

-Standard Spaces: 51 -Handicap Spaces: 7

Change in Parking:

-Total Parking Space Change: -22 Spaces (-27%)





FINAL CONCEPTUAL DESIGN: DOWNTOWN TRAILHEAD

Design Description

The intersection realignment option that creates a more standard four-way intersection, provides an opportunity for a new trailhead. This trailhead would greet visitors and local residents when entering the city from both Main Street from US 15 and College Drive. This downtown trailhead is located in the greenspace between Main Street and College Drive. This concept provides Tanglewood Downhill Trail users with the necessary components of a trailhead.

This conveniently located downtown trailhead offers informational and wayfinding signage about the trail and the larger Whitesburg area. Providing signage is not only important for informing people about the trail and places to go, it can also provide advertising for local businesses and destinations in Whitesburg. In addition to the signage, the trailhead also includes pedestrian and bicyclist amenities such as bicycle racks and repair stations, open lawn space, and large sidewalks connecting to East Main Street and as well as the Farmers Market and Letcher County Veterans Memorial Museum area. A wooden pavilion is proposed underneath large shade trees to offer people places to gather and linger. The pavilion serves an anchoring point and centralizing element for the trailhead and allows for a place where visitors to Whitesburg and local residents may intermingle.

Although pedestrian and bicyclist transportation is celebrated in a downtown trailhead setting, vehicular access and parking must also be considered. Two handicap parking spots are located closest to the wooden pavilion for convenient access into the trailhead. Four standard parking spots are also provided. Parking in other locations in downtown Whitesburg, such as the East Main Streetscape, may also be utilized for extra parking.

The concept plan and illustrative supporting renderings and planting and material suggestions can be found on the following pages.





FINAL CONCEPTUAL DESIGN: DOWNTOWN TRAILHEAD

Planting and Material Suggestions Planting

Platanus occidentalis (American Sycamore)
A stately tree found in both wet and dry
conditions, this species features beautiful multicolored exfoliating bark and large, noble leaves. A
noble tree in the landscape.



Liatris aestivalis (Summer Gayfeather)
This plant tolerates less than ideal conditions and features beautiful dark purple flowers clustered together to form what appears to be one massive conical flower at the top of a singular stem.

Because this plant grows less than one foot off the ground, a blanket of purple flowers will serve well as a ground plane condition.



Clethra alnifolia (Summersweet Clethra)
During the summer months, the sweet floral fragrance of this plant can permeate through an entire garden. Its habit is densely rounded and suckering. This species will spread quickly and forms a low lying ground cover, even on banks for erosion control.



Anemone canadensis (Canadian Anemone) A herbaceous perennial with notable white flowers provide a pleasant contrast to this plant's dark and glossy leaf character.



Materials

Pre-Cast Concrete Pavers
A brick colored paver will compliment many of the brick buildings downtown. This is proposed for use in sidewalks.



Stamped Concrete
The bike lanes are concrete with a stamped pattern. Stamped concrete provides an interesting material at a lower cost.



Material selections for the Downtown Trailhead are chosen to reflect those of the East Main Streetscape Design in this report.



FINAL CONCEPTUAL DESIGN: DOWNTOWN TRAILHEAD

Alternative Downtown Trailhead Location

Another option of the Main Street realignment is for the relocation of the Farmers Market and Veterans Memorial Museum road access from the Main Street and College Drive intersection to between the proposed Farmers Market Structure and the existing Mountain Heritage Festival stage. In response to this, an alternative location for the downtown trailhead is shown below. This trailhead would include the trailhead informational and wayfinding signage as described in the previous trailhead description on page 36. This alternative trailhead location serves as a focal point and visual terminus for both the East Main streetscape as well as the Letcher County Veterans Memorial Museum's space. The location for the alternative trailhead is oulined in red below.



Not to Scale





WAYFINDING SIGNAGE CONCEPTS

Design Description

Signage is crucial in the branding of a city or town. It is important to design signage that reflects a theme or culture found throughout the community. The CDAC team learned about Whitesburg through conversations with residents and research. Whitesburg history, culture, values, and contextual surroundings were considered during the design process and incorperated into the final wayfinding signage concepts.

Gateway Signage

The gateway signage is designed to reflect Whitesburg's setting in eastern Kentucky. Corten steel is cut curvilinearly to replicate the meandering watercourse of the North Fork Kentucky River, which weaves through the city and historically defined industry and development patterns. A waterfall fountain cascades over natural rock, behind the corten steel, and evokes feelings of tranquility and peace, through the babbling river representation in the fountain. This sign is showcased atop a slab of Italian stone, which serves as a historical reference to the Italian immigrants of Whitesburg, who cut and laid stone throughout the city.

Placemaking

The placemaking signage is reminiscent of the nature motif included in the gateway signage; however, in a more urban template and context. The upright features of the sign makes the sign less formal and more identifiable to particular areas in Whitesburg where the sign is placed. The placemaking signage brings information of Whitesburg and the Tanglewood Downhill Trail down to a human scale and encourages and facilitates exploration. The water feature on this sign cascades down the sides into a rock pond at the bottom of the sign, where the water is then recycled in a pump system. For use of this sign along the Tanglewood Downhill Trail, the water feature portion of this sign is not encouraged due to potential maintenance issues.

Wayfinding

The wayfinding signage encompasses ideas from a previously thriving logging industry of Whitesburg. Using local lumber, these sculpturesque signs celebrate local history. Interchangeable signs allows for easy business logo and sign changes over time.

The final wayfinding signage concepts as well as a signage locator map can be found on the following page.



Signage and Locator Maps

East Main Street



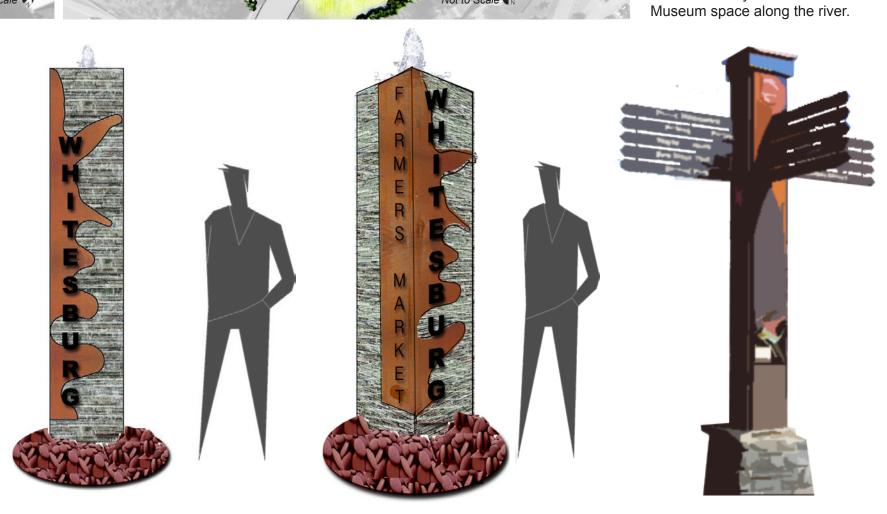
Farmers Market Conceptual Design Showing the Alternate Trailhead Location

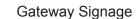


As a response to the multiple Main Street realignment proposals in this report, an alternative location to the Downtown Trailhead signage is shown. The trailhead signage should be located at the terminus of East Main Street with the shown Main Street configuration. This is a visually prominent location for trailhead signage and also encourages people

to visit the Farmers Market and Letcher County Veterans Memorial

Wayfinding Signage



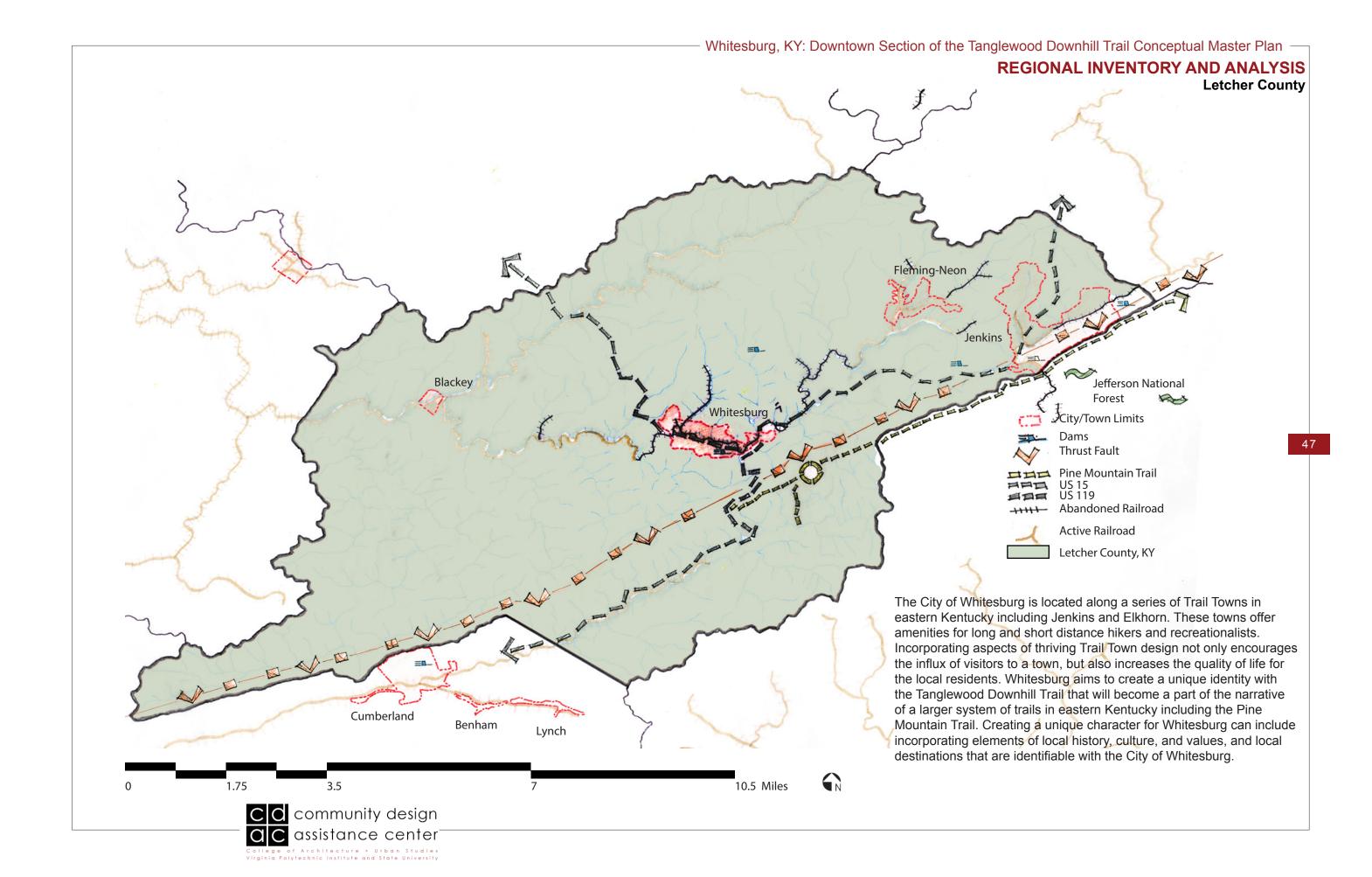


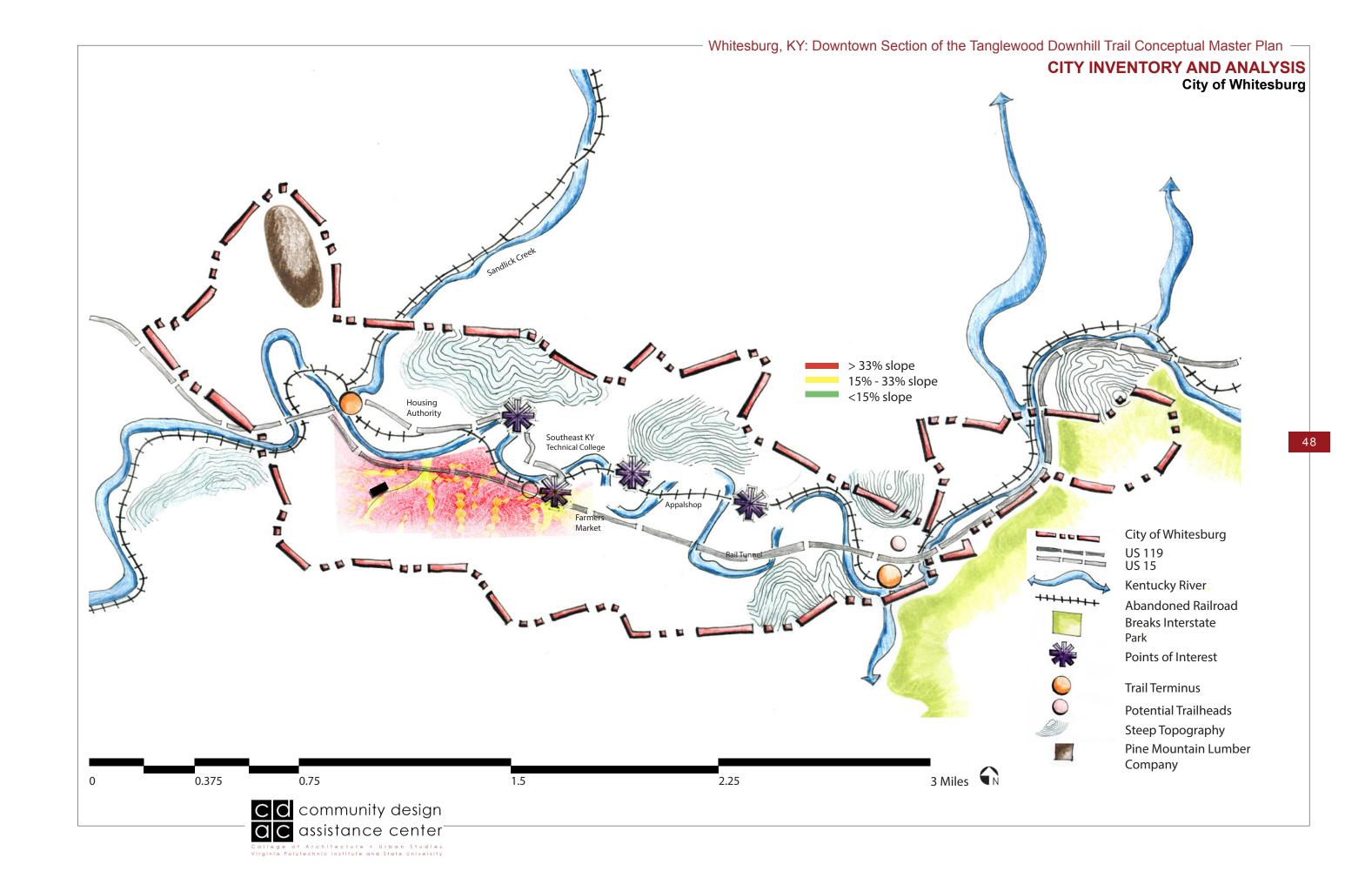


Placemaking Signage



PART 2: ANALYSIS AND PRELIMINARY DESIGN

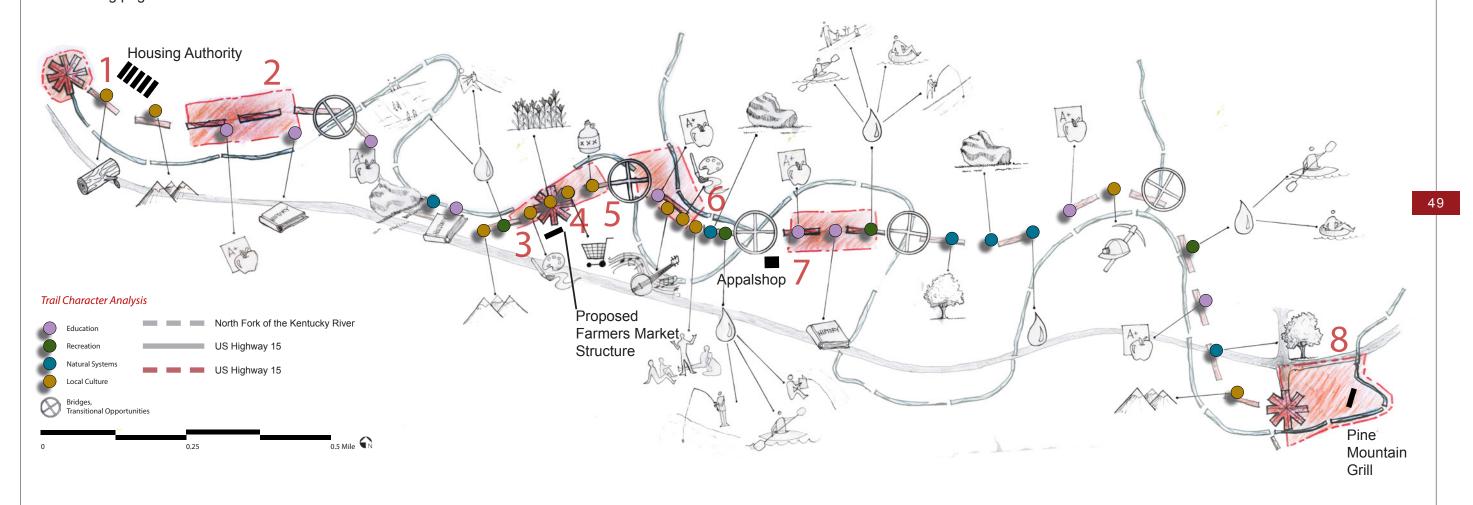




CITY INVENTORY AND ANALYSIS

Trail Character Mapping

When imagining a broad scale identity for the Tanglewood Downhill Trail, examining individual and small scale components of the trail is essential. The icons represent local themes or concepts that are evident on a more local scale to suggest character along the Tanglewood Downhill Trail. These themes, which are relevant to both the Trail and Whitesburg, can be translated into a broad scale thematic progression that evolves, transforms, and tells a story along the trail. These narratives also may serve as marketing and branding purposes. The themes may serve well for location and landmark identification as well as wayfinding along the Trail. Interest areas are identified with red numbers along the Tanglewood Downhill Trail and are explained on the following page.





CITY INVENTORY AND ANALYSIS

Trail Character Mapping Interest Areas

- 1 The corner of Hazard Road and the Tanglewood Downhill Trail serves as the westernmost terminus for the trail. This area should serve as an identifiable gateway for the trail into Whitesburg. A thematic scheme of lumber heritage could be incorperated in this area due to the area's close proximity to the Pine Mountain Lumber Company.
- 2 Also along Hazard Road, is a stretch of the Tanglewood Downhill Trail that bypasses both Whitesburg's Elementary and Middle Schools, as well as the Southeast Kentucky Community and Technical College. Recreational amenities such as a basketball and tennis courts, swimming pool, skate park are also located in this area.
- 3 The downtown area of Whitesburg along Main Street is home to many of Whitesburg's attractions and notable features such as the proposed Farmers Market area. This area is a transitional zone from a stark change of scenery from the wooded trail to an urban downtown environment.
- 4 The Letcher County Veterans Memorial Museum is located along the bank of the North Fork of the Kentucky River and is a positive attraction for both residents of Whitesburg as well as visitors to the area. The themes exemplified in both the Farmers Market and the Veterans Memorial Museum can serve as identifying elements and themes in the landscape design.
- 5 The five-way intersection is the central road intersection of downtown Whitesburg. Many of Whitesburg's most prominent local businesses are located along these streets. This intersection is a crossroad and transitional area from the trail to other parts of downtown Whitesburg.
- 6 The Letcher County Recreational Center is located in area six, along with a historic bridge over the river that was built in 1912. This area is currently on of few places in Whitesburg to safely access the river from a moderately sloped bank.
- 7 The Appalshop is an important landmark for not only Whitesburg, but for all of Appalachia along the east coast. The Appalshop celebrates Appalachian culture, traditions, and values, and regularly showcases these aspects of Appalachia through art and music.
- 8 The Pine Mountain Grill area along the North Fork of the Kentucky River, currently, is the easternmost terminus of the current plans for locating the Tanglewood Downhill Trail. However, preliminary ideas to continue the trail through the Whitesburg area have been discussed by Whitesburg stakeholders. At the intersection of US 119 and US 15, the Tanglewood Downhill Trail is proposed to extend to the Pine Mountain Trail.



FOCAL AREA INVENTORY AND ANALYSIS

Farmers Market and Veterans Museum Site

The Farmers Market and Veterans Museum Site is the land from the proposed Farmers Market building extending to the intersection of US 15, Main Street, East Main Street, College Drive, and the access road and parking for the Farmers Market. The North Fork of the Kentucky River winds along this area, located down a steep embankment north of the Farmers Market area, just behind a Veterans Museum and military vehicle display. In addition to the military vehicle display, a rail caboose that is associated with the abandoned Kentucky Union Railway is located parallel to the river. The Mountain Heritage Festival is held annually in this location as well and utilizes a stage and open space across Main Street for performances during the festival. Currently, two parking lots serve this facility, one east of the Veterans Museum, and another across a pedestrian bridge that crosses the North Fork of the Kentucky River. This pedestrian bridge serves as an access point to the Farmers market area from the northwestern area of Whitesburg.

The Farmers Market and Veterans Museum Site is a complex place with many activities and programs occurring at the same time. This place has the opportunity to be a focal point and highlight of the town as a pedestrian oriented facility where people can both gather and pass through on the way to other key destinations in Whitesburg. The pedestrian bridge over the river is a key visual landmark in Whitesburg and the landscape should facilitate its use. Views from the northern parking lot must be maintained so that people have a more clear understanding of where to park during large events in the area. Views into downtown Whitesburg and the rest of the Tanglewood Downhill Trail from this area must also be considered. The river bank is currently is mostly inaccessible due to its steep slopes. Therefore, some form of access to the river is necessary in order to promote recreation and social opportunities associated with the Kentucky River. Access, gateways, and landmarks associated with the Veterans Museum should also be celebrated and honored. Vehicles exiting US 15 into Whitesburg come in close proximity to the Farmers Market and pose danger to pedestrians crossing Main Street, particularly to the Mountain Heritage Festival's stage. The current parking conditions in the eastern parking lot pose an issue to both pedestrian and vehicular circulation on the site and restructuring of the parking should be considered.

A map of the Farmers Market and Veterans Museum Site inventory and analysis can be found on the following page.

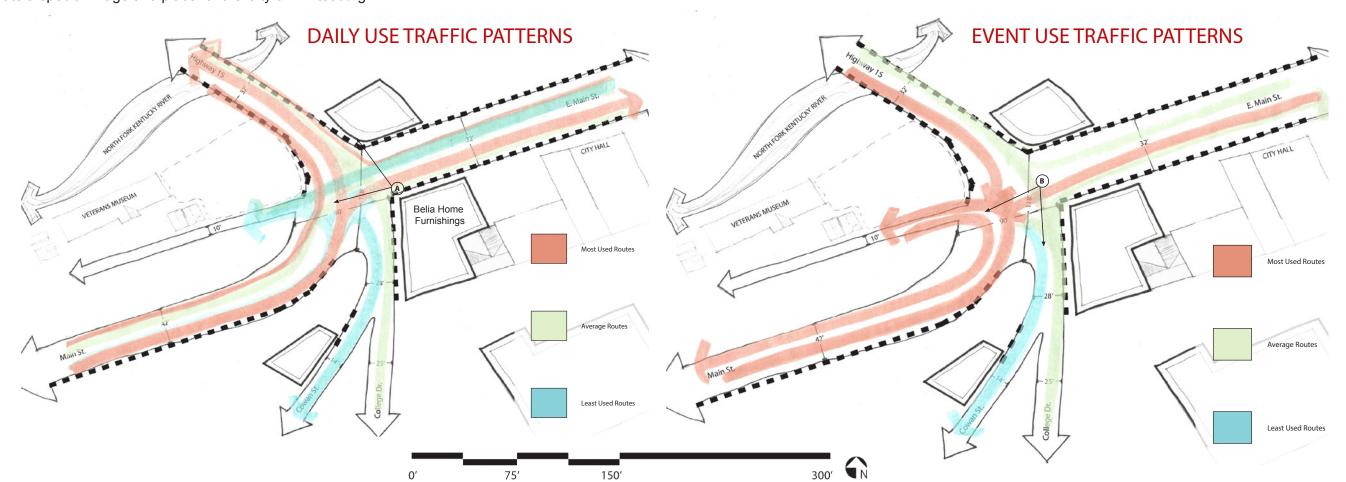


FOCAL AREA INVENTORY AND ANALYSIS Farmers Market and Veterans Museum Site Tanglewood Downhill Trail Proposed Farmers Market Structure Main Street Pedestrian Danger Areas Gateway and Landmark Opportunities Preservation of Views Parking Lot Veterans Memorial Museum Pedestrian Road Crossing Kentucky River Pedestrian Access Pedestrian Gathering and Staying Opportunities Steep Slopes **Unstructured Parking** Need for Traffic Calming Busy Intersection and Danger for Drivers and Pedestrians View A: Area of proposed Farmers Market Structure by Richardson and Associates. Mountain Heritage Festival View B: Veterans Memorial Museum, associated historical artifacts, and East Main Street. **C** C community design

assistance center

College of Architecture + Urban Studies

Virginia Polytechnic Institute and State University





View A:
The intersection of Main
Street and East Main
Street in Whitesburg.
Pedestrians seem to stick
out and do not belong
in this setting. Vehicles
dominate the street and
this environment does not
lend itself to a pedestrian
friendly environment.



View B:
Main Street and College
Drive in Whitesburg. This
intersection is very large in
order to accommodate five
roads intersecting at nonstandard angles. A more
typical 'T' intersection at
90 degrees fosters more of
a communal environment
where pedestrians and
drivers can inhabit the same
space equally.



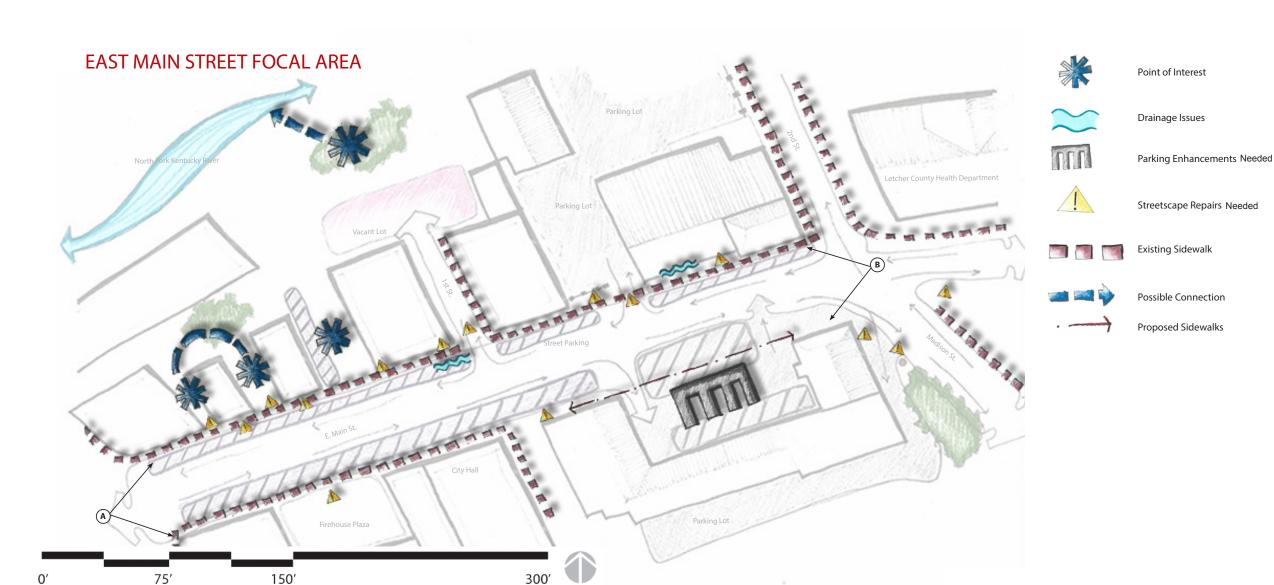
Local arts and culture of Whitesburg can be incorporated into site design, such as these murals in downtown Whitesburg. The historic stone, laid by Italian immigrants in the Whitesburg area, can also serve as a basis for design decisions.



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FOCAL AREA INVENTORY AND ANALYSIS

East Main Street



East Main Street is the governmental center of Whitesburg as well as the seat for Letcher County. The government and public service departments such as the police and fire stations are located here in close proximity to the retail and restaurant area of downtown Whitesburg. East Main Street, which is not well suited for pedestrian travel, is identified by little sidewalk character, no vegetation, and large amounts of asphalt paved areas. Vehicles park on the edges of the road in areas usually delineated for pedestrian traffic and alleys between buildings are blocked with parking. This portion of Main Street is a transitional zone from the Farmers Market to the less urban portions of the Tanglewood Downhill Trail. This street could serve as both a mediator between trail characters as well as serve the people working in the government offices and City Hall on East Main Street.

View A: East Main Street viewed eastward with Bella Home Furnishings (right) and Workforce Screenings (left).



View B: East Main Street viewed westward, near the Letcher County Health Department, with KYVA Medical Plaza (right).





Art Alleys on East Main Street









visitors using the trail. Art alleys are one way to utilize vacant alleys in a way that shows off the city's culture, heritage, history, and local art talent. Art alleys can be perma or temporary installations or. A combination of both permanent and temporary installations can be used to keep the street scene exciting, "Art Walks" could draw in the visitors





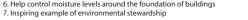




Rainwater Harvesting and Rain Barrels

Benefits of Rain Barrels:

- 1. Rainwater is better for plants and soil
- 2. Independent water source in times of drought or water restrictions
- 3. Reduce runoff pollution
- 4. Contribute to erosion prevention efforts
- 5. Cut down on the amount of water that must undergo expensive and energy-intensive sewage treatments
- ${\it 6. Help control \ moisture \ levels \ around \ the \ foundation \ of \ buildings}$







Gateway Valley Development | Ornida, CA

The Gateway Valley Development is a community that connects the residents to the surrounding natural systems and open spaces and provides a multitude of community amenities including a trail system. The development is an integrated system of multi-purpose environmental corridors that provide a convenient and beautiful means of scenic walks, surface drainage routes, and connections into a









This project exemplifies exceptional analysis and careful consideration for both environmental and historic cultural contexts in the mountainous landscape of coastal central California, Ecological zones, surface drainage areas, and potential wildlife movement corridors were preserved and enhanced and became the armature of the analysis and design process and led to a long term sustainability future. The site experienced mining abuse and environmental restoration was a predominate issue and the work was largely considered a reclamation project. Steep topography and large rock outcroppings were a challenge when designing the trail system, however they were used as an



Virginia Polytechnic Institute and State University

$^{\circ}$ Whitesburg, KY: Downtown Section of the Tanglewood Downhill Trail Conceptual Master Plan $\,-\,$

Blending Pedestrian and Vehicle

CASE STUDIES AND DESIGN PRECEDENTS







A prominent issue at the proposed trailhead on Main Street is pedestrian safety. Many local residents use the Tanglewood Downhill greenway to get to the bank and the shopping center across US 15, however there is no safe place to cross. Plantings could add a green quality to the street as well as act as a traffic calmer, giving right-of-way priority to pedestrians. For example, the US 15 middle turn lane could be utilized as a planted median and provide a safer alternative to crossing the road.

Street bumpouts can also make street crossings safer for pedestrians. At the Main Street trailhead, enough space currently exists in the road's right of way to utilize the space in an

College Avenue | Blacksburg, VA







mindful of the pedestrian environment

College Avenue is a primary pedestrian corridor connecting the Virginia Tech campus with downtown Blacksburg.

calmly pass by.

- 1. Single driving lane allows for wider sidewalks and a more pedestrian oriented environment.
- 2. Wider sidewalks provide space for seating and plantings, including stormwater infiltration.
- 3. The avenue can easily be closed to traffic for special events and festivals.
- 4. The use of brick and stone reflects the surrounding architecture and general character of Virginia Tech.

A unique feature of the College Avenue promenade is the sharp turn in the street directly in front of where the street meets the Virginia Tech campus. The turn in the street is a traffic calming method used by the designers to inhibit drivers from traveling at high speeds in the pedestrian area. The turn is also placed well within a larger context because this change from a straight street character symbolizes the entrance to the Virginia Tech campus and brings attention to the gateway from downtown to campus. Material choice delineates the street from pedestrian walkways, yet allows for safe crossing.

Trailhead and Gateway Design







Kiosk and signage materials are crucial to the success of trails and identifying a trail character. Kiosks and signage provide information about the trail itself, where it goes, how long it is, etc. In Whitesburg, the Farmers Market and various nterpretive stations should be showcased and could attract local residents and tourists alike.

The kiosk itself can reflect the local materials, heritage, ecology, and culture of Whitesburg, as well as possibly highlight the talent of local artists.



A gateway can attract the attention of people passing by the nearby shopping center as well as the highway. Gateways may serve a community well for branding and marketing purposes. In addition, a structure or sculptural piece can also create a landmark for the trail and attract visitors of Whitesburg to utilize the trail. The trailhead at highway 15 can create a positive image and make a statement for the City of Whitesburg.



A unique path can demand attention and entice people to take a walk. The left image is a path that mimics the movement of water through a desert. In Whitesburg, a path similar to this has the opportunity to reflect the environmental or social qualities of the area such as geologic eferences, coal heritage, or the arts mmunity in Whitesburg.

Trail Town | Salida, CO

Town Art Salida's buildings are covered with a variety of murals that speak to the history, culture, and charm of the town. The murals serve to tell visitors stories about the town's history. as signs for the current use of the buildings, and also as artifacts and historical references to the town's history.

River Trail The Arkansas River serves as the center of activity of the town in regards to art culture, and recreation. It also serves as a trailhead for Salida; all trails diverge from the river The Kentucky River in Whitesburg is a valuable asset to the City and should be incorporated in creative ways in the daily lives of trail users.







PRELIMINARY CONCEPTUAL DESIGNS

Farmers Market and Veterans Museum Site and Main Street Realignment, Concept 1

Main Street currently enters the Whitesburg downtown district and arrives at a five-way intersection. This proposal suggests realignment of Main Street, squaring the intersection to make it more manageable and easy to maneuver. This will become more of a standard intersection where both pedestrians and drivers are safer. Bringing Main Street closer to the Letcher County Veterans Memorial Museum creates a large, flat park space adjacent to private residence. To the west of Main Street, the Farmers Market is located across from an outdoor stage as proposed by Richardson Associates Architects, creating a beautiful space for local Whitesburg residents and visitors to gather and enjoy the open-air market. The park across Main Street from the Farmers Market is connected by a speed table traffic-calming device, resembling an elongated speed hump. Pedestrians have the option to cross the road atop this speed table, without stepping down from the sidewalks and curbs on either side. The new Main Street features a planted median with shade trees and welcome signage, inviting people into the core of downtown Whitesburg. Parking is decreased to accommodate these changes; however, Farmers Market visitors have the option to park in the parking lot across the river, utilizing the pedestrian bridge for accessibility. The existing performance stage for use during the annually celebrated Mountain Heritage Festival, has been relocated to allow for a larger, more connected park space with the rest of the City.

The master plan and supportive illustrative renderings for the Farmers Market and Veterans Museum Site and Main Street Realignment, Concept 1 can be found on the following page.



PRELIMINARY CONCEPTUAL DESIGNS

Farmers Market and Veterans Museum Site and Main Street Realignment, Concept 2

Given the proximity to downtown, the Tanglewood Downhill Trail, and Kentucky River, the Farmers Market and Veterans Memorial Museum site is a promising location for a design that allows for the interaction between trail visitors and people in Whitesburg, The existing parking lot leading into the proposed Farmers Market structure has been rearranged and organized in this conceptual design to reflect the meandering and winding pattern of the Kentucky River, keeping the majority of parking spots for both Farmers Market events as well as daily use in downtown Whitesburg. The unstructured parking for the Letcher County Veterans Memorial Museum is now more formal and serves both the museum and downtown Whitesburg. A story in the landscape is told by moving the artifacts, such as a tank and several Humvees of the Letcher County Veterans Memorial Museum, and showcasing them in a linear pattern along the proposed access road for the Farmers Market. The museum now has a stately front entrance and a more integrated design within the site. The stones memorializing the men and women serving in branches of the armed forces now line the entrance and serve as a grand, yet somber, entrance to the museum. Main Street has been realigned away from the existing Farmers Market parking lot and now meets the intersection of East Main Street at a standard 90-degree angle. College Avenue has also been restructured with a one lane road leading into the town near the proposed realignment of Main Street. Roads have not been removed, but realigned. The street reorganization for downtown Whitesburg and the Farmers Market area is safer for both pedestrians and drivers: this design proposal aims to create a more interactive and cohesive downtown environment for both parties.

The concept plan and supportive illustrative renderings of the Farmers Market and Veterans Museum Site and Main Street Realignment, Concept 2 can be found on the following page.



PRELIMINARY CONCEPTUAL DESIGNS

East Main Streetscape, Concept 1

East Main Street is at the heart of the community, therefore it should be welcoming to both pedestrians and drivers alike. Each of the businesses deserves a space to "break out" into the streetscape. This concept changes the size of East Main Street to a much more comfortable 24 foot wide section from curb to curb and drastically increases the size of pedestrian zones. Meandering paths move along the length of East Main Street, creating a new pedestrian experience in Whitesburg. In addition, interpretive signage scattered throughout the sidewalks tell of the rich history of the city and its inhabitants. Finally, parallel and perpendicular parking is integrated into the street for ease of access to the businesses and offices along East Main Street.

The concept plan and supportive illustrative renderings for East Main Streetscape, Concept 1 can be found on the following page.



College of Architecture + Urban Studies
Virginia Polytechnic Institute and State University

PRELIMINARY CONCEPTUAL DESIGNS

East Main Streetscape, Concept 2

Currently, East Main Street contains excessive parking and limited space for pedestrians to safely maneuver from building to building. A more manageable 38 feet wide street with 15 feet wide lanes, including an 8 foot wide median, invites visitors and residents for a shady stroll down the street. A parking lot adjacent to the Forgiven Ministries Church is re-purposed as park space, creating a gathering space in the downtown core. Parallel street parking is limited, encouraging visitors to use existing parking lots located at the rear of the buildings. With 10 feet wide sidewalks and clear sight lines, pedestrians feel safer moving through the downtown district.

The concept plan and supportive illustrative renderings for East Main Streetscape, Concept 2 can be found on the following page.



College of Architecture + Urban Studies Virginia Polytechnic Institute and State University

CONCLUSION

The Community Design Assistance Center worked with the City of Whitesburg to develop a vision for Whitesburg as a Trail Town and aid in re-visualizing key elements of the city.

The Tanglewood Downhill Trail provides many opportunities to link different portions of Whitesburg together linearly via a healthy and sustainable alternative to personal vehicular transportation. The construction and marketing of the Tanglewood Downhill Trail has the potential to aide Whitesburg in gaining Kentucky Trail Town Certification. Obtaining this prestigious title will group Whitesburg with other successful towns and cities in Kentucky and mutually benefit both existing residents of Whitesburg as well as visitors to Whitesburg and Letcher County.

The Community Design Assistance Center team has developed design concepts for the Farmers Market and Veterans Memorial Museum Site, The Downtown Trailhead, and East Main Streetscape with the hopes of looking ahead to a more functional, enjoyable, and exciting future image for the City of Whitesburg. These can be used by the city when applying for grants for funding the next steps toward their vision. The Tanglewood Downhill Trail is a tremendous asset for Whitesburg and the ideas and designs for the focal areas along the trail are progressive and aim to provide Whitesburg with a unique image to those of surrounding towns and cities in eastern Kentucky.





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STAKEHOLDER MEETING NOTES

June 29, 2015 at 1:00 p.m., Whitesburg City Hall Homemade lunch provided for the meeting by Grow Appalachia

In Attendance:

- Valarie Horn: Community Farm Alliance, Appal-TREE Project, Grow Appalachia, Letcher County Farmers Market
- Abigail Maggard: Letcher County Farmers Market
- Janet Dailey: Letcher County Farmers Market, Appal-TREE-UK
- Holly Boggs: Appal-TREE
- Angie Mullins: Attorney at Law
- Bill Richardson: Architect
- Josephine D'Amato Richardson: Kentucky Arts Council
- Derek Barto: Letcher County Parks and Recreation Director, Whitesburg City Council
- David Narramore: Letcher County Tourism Commission
- Elizabeth Barret: Appalshop, Inc.
- Lee Anna Mullins: Mountain Heritage Festival Chairman
- Snehal Parikh: Letcher County Tourism
- Sarah Gracey: Kentucky Division of Forestry
- Robert Hatch: Front Porch Associates
- Jill Orthman Hatch: Front Porch Associates, Consultant to the City of Whitesburg

Whitesburg: Background Information and History

- Town of Whitesburg
 - o Was a trading and commerce center before coal
 - Lewis Brothers Wholesale
 - Lumber Mill located along Kentucky River near Whitesburg
 - o County Historical Society, possesses more information about town and region
 - o Town was represented in the Letcher County Historic Society
 - o Four libraries in Letcher County, each evoking local pride in the community
 - Repository for Genealogy
 - Statue of Martin Van Buren Bates in Whitesburg library
 - o Battle of Whitesburg took place at Middle School football field location
 - Civil War camp located near Marathon station along highway 15
- Transportation
 - Railroads
 - Laid by local families in the area
 - Allowed access and egress in geographical area, 1910-1911
 - A caboose that is associated with the original rail where the proposed trail is located is next to the Veterans Museum
 - Driving Tour on Highway 23



STAKEHOLDER MEETING NOTES

- o Proposed Extension/ Welcome Center off of Highway 15 and Stone Avenue.
 - Destination for hikers/bikers/travelers
 - Storage facility for Civil War reenactment equipment
 - Memorial park will celebrate veterans
 - Bronze statue to celebrate Martin Van Buren Bates
- Natural Resources
 - o Pine Mountain Range
 - Letcher County is the headwaters of three rivers: Big Sandy, Kentucky, and Cumberland River
 - Pine Mountain State Scenic Trail
 - Connection to Great Eastern Trail
 - Unique climate and ecosystem
 - o Kentucky River runs through town, multiple railroad bridges pass over river
 - o Whitesburg is located in the 100 year storm floodplain of the Kentucky River
- Arts
 - o Cultural center: arts, music (fiddle and banjo), color, quilting, diversity
 - Stonework around the city was made possible by Italian immigrants
 - Locally quarried cut sandstone and granite

Current Town Conditions:

Trail Specific Issues:

- Whitesburg City trail is a part of a larger trail system of Pine Mountain
 - 7-8 miles of trail
 - Plant identification stations along trail
 - Desire to entice Pine Mountain Trail users into Whitesburg
- The proposed trail travels through a rail tunnel
- Downtown Whitesburg:
 - o Streetside Café Grill (music venue)
 - o Icing on the Cake, lunch
 - Summit City (music venue)
 - Considered to be the most family and children oriented part of the trail
 - Children oriented design
 - Downtown trail travels close by to the lower hospital park
 - Fourth of July festival, fireworks
 - Concerts
 - Public walking track
- Businesses
 - o New moonshine distillery in the old auto building near the new health center
 - o MCHC Health Care purchased the high school and is planning to have offices inside
 - The Heritage Council identifies 82 downtown buildings of cultural significance



STAKEHOLDER MEETING NOTES

- Safety Concerns
 - o Five way stop in the downtown is dangerous for all parties involved
 - Lighting along the trail
 - o Accessibility to the Rec Center
 - o Emergency vehicle access to the trail
 - Growing population of both walkers and bikers on the same path
- Arts
 - Local story telling
 - Handmade arts and crafts
 - o Quilting
 - Basket weaving
 - o Bluegrass music influence
 - o Dulcimer in Knot County
- Signage, Wayfinding, and Landmarks
 - o Design of kiosks, including the railroad kiosk and importance of rail tunnel
 - o Interpretive signage: history, music, art, etc. of the area
 - Desire of continuity of design with Jenkins and Elkhorn while maintaining uniqueness
 - o Trail Committee will chose signs
- Details
 - Signage for disabled people
 - Cut stone sandstone and granite

Farmers Market: Desires and Concerns

- General Notes:
 - o Farmers Market and a following brunch at Summit City is a Saturday tradition
 - Local architect, Bill Richardson, designed market building
- Accessibility:
 - More physical access to the river from the Farmers Market
 - An aesthetic pedestrian experience between the market and the Housing Authority properties
 - social programs currently in place for residents to shop at the Farmers Market at a reduced cost
 - 5 p.m. 8:30 p.m. receives the most foot traffic on the trail
 - o Free meals are given to minors at the Farmers Market; need a place for them to sit
 - Incorporate and promote visibility to the parking on the other side of the bridge where available parking is located
 - Incorporate the existing Veterans Museum; consider handicap accessibility
- Details:
 - Extra rock that can be found on some of the historical buildings in the city are stockpiled near the future site of the Farmers Market structure
 - Clearly label edible plantings and connections to the trail such as the "blueberry trail", interpretive signage
 - o Bicycle racks, bicycle repair stations, tables, benches, and other outdoor furniture



STAKEHOLDER MEETING NOTES

Programming:

- o Outdoor exercise equipment, Promote fitness: walking, biking, jogging, etc.
- Provisions for a river play hole
- Splashpad or circuit planned water spray systems along the trail for children to keep them moving toward the farmer's market
- o Stage for music across street, large lot allows ample gathering space
- o Farmers market area must allow for the Mountain Heritage Festival:

Mountain Heritage Festival: Desires and Concerns

- General Notes:
 - o An annual celebration that has been happening for 33 years
 - o Last week in September
 - Recognized as a top 10 festival in Kentucky
 - o 5,000-10,000 people in attendance
 - The largest tent is 30'x360' and hold 75-80 vendors in 8'x8' booths, each with individual electric outlets
 - The smaller tent is 30'x50' and holds 8-12 vendors
- Accessibility
 - o Vendors drive around tent for set-up and parking occurs elsewhere
 - o Seating and ADA accessibility to the festival stage is needed
- Counting Creek Music Festival
 - Tourism opportunity for Whitesburg
 - o Keeps roughly 200 people in town for one week each year

Appalshop

- Local art and music
 - o Strong literary, spoken word, and storytelling history
 - Harry Caudill
 - Jim Webb
- Appalshop branding



STAKEHOLDER MEETING NOTES

General Considerations, Ideas, and Concerns

- o Vegetative buffer behind the Wal-Mart shopping center
- ADA and disabled persons accessibility
- Utility company storing transformers and other electrical equipment where proposed trail is located
- o Opportunities to learn from the families that have lived in the rail area for generations
- Opportunity to create a unique identity so that people have the ability to connect with and remember their landscape
- Possible Design Case Studies:
 - Lexington Farmers Market: Paving and stone details
 - Wise County Farmers Market
- o Solar powered idea

Relevant Concepts for Design:

- Geology and locally quarried stone
- Railroad industry
- Local art and craft
- Plant and wildlife diversity
- Mountain heritage
- Moonshine
- Headwaters and hydrology
- Social community/trading and commerce
- Local narratives

PRELIMINARY DESIGN PRESENTATION MEETING NOTES

August 20, 2015 at 5:30 p.m., Appalshop Theatre

In Attendance:

• Kentucky Division of Forestry

Peter Stutts, State Urban Forestry Coordinator

• CDAC Design Team

Melissa Philen, Project Manager Joe Niland, Student Designer Shane Gray, Student Designer

• Attendants representing the Community:

Maxine Quillan, Historical Society

Jack Quillan

Donna Boggo, Tourism

Darrell Holbrook, Tourism, Veteran's Museum

Danile King, Citizen

Leigh Lewis Blankeneckler, Citizen

Greg Fields, Citizen of Whitesburg

Josephine Richardson, Business owner

Shad Baker, Extension/Tanglewood Trail

Sandy Hogg

David Narramore, Letcher Co. Tourism

Michael Mullins

Jim Webb, Landowner/Tourism Encourager/Interested citizen

Katie Eagle, Landowner/Tourism Encourager/Interested citizen

C.M. Caudill

Jerry Wil

Lee Anna Mullins, Mountain Heritage Festival

Ike Patteron, Landowner

Valerie Horn, Farmers Market

Robert N. Lewis, Mountain Heritage Festival

Bold Debby Snud, Resident

Kyle Smith, Citizen

Caroline Rubens, Resident

Ada Simsh, Appalshop

Elizabeth Barret, Appalshop

Alexander Gibson, Appalshop

Jim Dentinser, Citizen

Jennifer Honeycutt, Resident

Herby E. Smith, Appalshop

Mark Kidd, Landowner



PRELIMINARY DESIGN PRESENTATION MEETING NOTES

Preliminary Design Concepts for (3) Focal Areas

Farmers Market

- Expressed concern about placing a traffic light at the intersection of Main and East Main Streets
- Lee Anna Mullins: Stage where performances take place needs the hillside embankment as a natural amphitheater (less of total changes) to site.
- Stage for Mountain Heritage Festival- stage faced toward hill for acoustics, maintain lower conversation levels.
- Suggestion: final, conceptual design should describe how one would enter the Farmers Market
- Darrell Holbrook: stated that he has plans for Veteran's Memorial Museum. Will only talk in a
 face-to-face meeting. Agreement that the design team will move forward into final design
 development while considering the Veterans Memorial Museum's needs. Need access to their
 plans.
- Question: Will there be a sign or paving pattern to delineate trail in from of Farmers Market? wanting an obvious delineation of the trail.
- Someone noted a proposed park plan for the caboose (located at the Veterans Museum)
- Community favors the splash pad and caboose locations in Farmers Market Design option #2 (Reflecting Local Narratives)
- If a Mountain Heritage Festival tent is next to Veterans monuments: there may be issue with what happens to memorials.
- Suggestion: Use Farmers Market structure for Mountain Heritage Festival, Lee Anna agreed that they could utilize the structure if it could be made secure
- General consensus: Community likes the Farmers Market Design option #2 (Reflecting Local Narratives)
- For the festival: a homemade access bridge is built every year for those who have an disability

General consensus:

- Farmers Market concepts: Likes bottom, design option #2, however, blend designs as follows:
- Design option #1:
 - o PROS
 - green median appeared "welcoming"
 - minimal elevation change
 - no curbs
 - the interaction of spaces.
 - o CONS
 - Lack of space at Veterans Museum
- Design option #2:
 - o PROS
 - Parking for businesses and museum
 - Downtown heritage needs flat area
 - Dignity for Veterans museum
 - Splash pad (precedent study mentioned= Town of Jackson Brethet City)
 - Children's play area
 - CONS
 - Stage and splash pad need to be separate
 - Intersection still confusing



PRELIMINARY DESIGN PRESENTATION MEETING NOTES

Streetscape (Intersection of Main/East Main Streets)

- Round-about: Traffic engineer currently studying/surveying/analyzing the city's Main/East Main Street intersection and will recommend 3 conceptual designs: circle, square, etc.
- Vote taken: Those in support of a round-about (vehicular-focused) intersection- 12/ Those in support of a 4-way stop (pedestrian-focused) intersection- 14
- Likes design that organizes 5-way intersection into a 4-way stop
- Wants design that reflects a pedestrian friendly, safe, trail-crossing

General Consensus:

• CDAC team will continue to look at the 4-way stop option.

East Main Street Concepts

- Expressed concern about removing some parking
- Discussion about raising the physical activity level of city's residents, walking from parking to businesses would encourage healthy lifestyles
- Decision to remove some parking and allow close access to businesses to be parking for those with a disability.
- Include a study aimed to learn how design impacts parking counts; place in final report, we will address # of parking spots on a plan (and include in the analysis portion of the report)
- Include a map of potential wayfinding signs in town and along route within study area
- Include a sign to locate historical society
- Forgiven ministries parks in lot along main street (Discussion about how the Forgiven Ministries could park in the lot behind the health offices)
- Brown-reddish strip, could be used to delineate the fire and rescue services where trail crosses the service drive
- Expressed desire for parking in from of the Home furnishing store
- Preferences to concepts? Meandering path and road most interesting to audience

General consensus:

• East Main Street Concepts: Likes top, design option #1, meandering road and path design and allows for more parking on street and within the Forgiven Ministries lot.

Signage/branding:

- Desire for rustic trail signage to locate community markers (historic and civic): Incorporate Battle of Whitesburg,
 - cemetery (across Sand lick cemetery- across football field), hospital, depot once located on Farmers Market site
- Downtown signage materials and branding ideas:

Materials: Italian hand-cut stone, rustic wood Coal industry could be incorporated in theme

3-secctions of the Tanglewood Downhill Trail can be represented in 3 colors

Color coded sections, red -the color currently used for downtown benches



SOIL ANALYSIS

Sample Location and Results

Soil Sample SiteFarmers Market Area

pH BpH P ppm K ppm Ca ppm Mg ppm Zn ppm Mn ppm Cu ppm Fe ppm B ppm CEC meq/100g % Acidity % Base Sat % Ca Sat % Mg Sat % K Sat P Rating K Rating Ca Rating 8.04 N/A 2 17 5175 94 3.4 3.3 0.1 0.2 0.3 26.6 N/A 100 96.9 2.9 0.2 L- L VH





SOIL ANALYSIS

Explanation of Soil Analysis

Rory Maguire, Extension Nutrient Management Specialist, Virginia Tech Steve Heckendorn, Soil Test Laboratory Manager, Virginia Tech

The accompanying Soil Test Report (and supplemental Soil Test Notes, when provided) will help you assess your plant's need for fertilizer and lime.

The "History of Sampled Area" section restates the information you filled in on the Soil Sample Information Sheet you submitted with the soil sample.

The "Lab Test Results" section shows the relative availability of nutrients numerically and if appropriate, as a rating. The rating may be interpreted as follows: L=Low, M=Medium, H=High, VH=Very High, EH=Excessively High (soluble salt test only), DEF=Deficient, or SUFF=Sufficient, and sometimes a "+" or "-." When soils test Low, plants almost always respond to fertilizer. When soils test Medium, plants sometimes respond to fertilizer and a moderate amount of fertilizer is typically recommended to maintain fertility. When soils test High to Very High, plants usually do not respond to fertilizer. If there is no rating for a nutrient, the adequacy of that nutrient in the soil for the plant you specified has not been determined.

The following is an explanation of the symbols and abbreviation used in the report:

Report Symbols and Abbreviations

 $P = phosphorus \hspace{1cm} K = potassium \\ Ca = calcium \hspace{1cm} Mg = magnesium \\ Zn = zinc \hspace{1cm} Mn = manganese$

Cu = copper Fe = iron

B = boron SS = soluble salts

lb/A = pounds per acre ppm = parts per million

meq = milliequivalent g = gram

pH = acidity Sat. = saturation N = nitrogen P_2O_5 = phosphate K_2O = potash % = percent

Est-CEC = estimated cation exchange capacity
AG = agricultural limestone (dolomitic or calcitic)

Fertilizer Recommendation

The fertilizer recommendations may be used for the same crop for two to three years. After this time, it is advisable to retest the soil to determine if significant changes have occurred in nutrient levels. When the soil tests Very High for phosphorus or potassium and no fertilizer for these nutrients is recommended, you should retest the following year to determine if fertilizer will be needed. Due to the variability associated with sampling, fertilizer application rates may be varied by a plus or minus 10 percent.

No soil test is performed for **nitrogen** because this element is too mobile in the soil for laboratory results to be useful. Nitrogen fertilizer recommendations are based on the crop/plant to be grown, the previous crop, and when applicable, the soil's yield potential. Comments on the report and other enclosed Notes, if any, will have further information regarding nitrogen.

Lime Recommendation

If needed, a lime recommendation is given to neutralize soil acidity and should last two to three years. After that time, you should have the soil retested. The measured soil test levels of calcium and magnesium are used to determine the appropriate type of limestone to apply. If neither dolomitic nor calcitic lime is mentioned, or "Ag" type or "agricultural" limestone is stated on the report, then it does not matter which type is used. When no information on the Soil Sample Information Sheet was provided regarding the last lime application, the lab assumed you have not applied lime in the past 18 months. If this is not correct, contact your Extension agent for advice on adjusting the lime recommendation to take into consideration recent lime applications. Do not over lime! Too much lime can be as harmful as too little. For best results, apply lime, when possible, several months ahead of the crop/plant to be planted to allow time for more complete soil reaction.

www.ext.vt.edu



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SOIL ANALYSIS

Methods and Meanings

For more detail on the lab procedures used, visit www. soiltest.vt.edu and click on "Laboratory Procedures."

Soil pH (or soil reaction) measures the "active" acidity in the soil's water (or hydrogen ion activity in the soil solution), which affects the availability of nutrients to plants. It is determined on a mixed suspension of 1:1, volume to volume ratio of soil material to distilled water

Virginia soils naturally become acidic, and limestone periodically needs to be applied to neutralize some of this acidity. A slightly acid soil is where the majority of nutrients become the most available to plants, and where soil organisms that decompose organic matter and contribute to the "overall health" of soils are the most active. When a soil is strongly acidic (< 5.0-5.5), many herbicides lose effectiveness and plant growth is limited by aluminum toxicity. When soils are overlimed and become alkaline (> 7.0), micronutrients, such as manganese and zinc, become less available to plants.

For most agronomic crops and landscaping plants, lime recommendations are provided to raise the soil pH to a slightly acid level of between 5.8 and 6.8. Blueberries and acid-loving ornamentals generally prefer a 4.5 to 5.5 pH, and an application of liming material is suggested when the soil pH drops below 5.0. For the majority of other plants, lime may be suggested before the pH gets below 6.0. This is to keep the soil pH from dropping below the ideal range, since lime is slow to react and affects only a fraction of an inch of soil per year when the lime is not incorporated into the soil. If the soil pH is above the plant's target pH, then no lime is recommended. If the pH is well above the ideal range, then sometimes an application of sulfur is recommended to help lower the pH faster; however, most of the time, one can just let the soil pH drop on its own.

A Mehlich buffer solution is used to determine the **Buffer Index** to provide an indication of the soil's total (active + reserve) acidity and ability to resist a change in pH. This buffer measurement is the major factor in determining the amount of lime to apply. The Buffer Index starts at 6.60 and goes lower as the soil's total acidity increases and more lime is needed to raise the soil pH. A sandy soil and a clayey soil can have the same soil pH; however, the clayey soil will have greater reserve acidity (and a lower Buffer Index) as compared to the sandy soil, and the clayey soil will require a greater quantity of lime to be applied in order to raise the soil pH the same amount as the sandy soil. A reported

Buffer Index of "N/A" means that it was not measured since the soil (water) pH was either neutral or alkaline and not acidic (soil pH \geq 7.0) and therefore requires no lime.

Nutrients that are available for plant uptake are extracted from the soil with a Mehlich 1 solution using a 1:5 vol:vol soil to extractant ratio, and are then analyzed on an ICP-AES instrument. An extractable Mehlich 1 level of phosphorus from 12 to 35 pounds per acre (lb/A) is rated as medium or optimum. A medium level of potassium is from 76 to 175 lb/A. Medium levels of calcium and magnesium are 721 to 1440 and 73 to 144 lb/A, respectively. Calcium and magnesium are normally added to the soil through the application of limestone. It is rare for very high fertility levels of P, K, Ca and Mg to cause a reduction in crop yield or plant growth. Levels of micronutrients (Zn, Mn, Cu, Fe and B) are typically present in the soil at adequate levels for plants if the soil pH is in its proper range. See Soil Test Note 4, at www.soiltest.vt.edu/stnotes, for documented micronutrient deficiencies in Virginia.

Soluble Salts (S.Salts) or fertilizer salts are estimated by measuring the electrical conductivity of a 1:2, vol:vol ratio of soil material to distilled water. Injury to plants may start at a soluble salts level above 844 ppm when grown in natural soil, especially under dry conditions and to germinating seeds and seedlings. Established plants will begin to look wilted and show signs related to drought. This test is used primarily for greenhouse, nursery and home garden soils where very high application rates of fertilizer may have led to an excessive buildup of soluble salts.

Soil Organic Matter (SOM) is the percentage by weight of the soil that consist of decomposed plant and animal residues, and is estimated by using either the weight Loss-On-Ignition (LOI method) from 150° to 360°C, or a modified Walkley-Black method. Generally, the greater the organic matter level, the better the overall soil tilth or soil quality, as nutrient and water holding capacities are greater, and improved aeration and soil structure enhance root growth. The percent of organic matter in a soil can affect the application rate of some herbicides. Soil organic matter levels from 0.5% to 2.5% are ordinary for natural, well-drained Virginia soils. A soil organic matter greater than 3% would be considered very high for a cultivated field on a farm, but can be beneficial. Due to relatively large amounts of organic materials being commonly added to gardens, the soil organic matter in garden soils can be raised into the range of 5% to 10%.



SOIL ANALYSIS

The remaining values that are reported under the "Lab Test Results" section are calculated from the previous measured values and are of little use to most growers.

Estimated Cation Exchange Capacity (Est-CEC) gives an indication of a soil's ability to hold some nutrients against leaching. Natural soils in Virginia usually range in CEC from 1 to 12 meq/100g. A very sandy soil will normally have a CEC of 1 to 3 meq/100g. The CEC value will increase as the amount of clay and organic matter in the soil increases. This reported CEC is an estimation because it is calculated by summing the Mehlich 1 extractable cations (Ca + Mg + K), and the acidity estimated from the Buffer Index and converting to units commonly used for CEC. This is also an Effective CEC since it is the CEC at the current soil pH. This value can be erroneously high when the soil pH or soluble salts level is high.

The percent **Acidity** is a ratio of the amount of acidgenerating cations (as measured by the Buffer Index) that occupy soil cation exchange sites to the total CEC sites. The higher this percentage, the higher the amount of reserve acidity in the soil, and the higher the amount of acidity there will be in the soil solution and the lower the soil pH will be. A reported Acidity% of "N/A" means that a buffer index was not determined, and the acidity is probably less than 1 meq/100g and/or 5%, and the soil pH is alkaline (greater than 7.0).

The percent **Base Sat**uration is the ratio of the quantity of non-acid generating cations (i.e., the exchangeable bases, Ca, Mg, and K) that occupy the cation exchange (CEC) sites.

The percent **Ca**, **Mg**, **or K Sat**uration refers to the relative number of CEC sites that are occupied by that particular nutrient and is a way of evaluating for any gross nutrient imbalance.

Additional Information

For questions and more information, contact your local Virginia Cooperative Extension (VCE) office or go to www.ext.vt.edu. Contact information for your local Extension office appears on the upper left of your soil test report.

Conversion Factors

(Some Values are Approximate)

- 1 acre = 43,560 square feet
- 1 pound of 5-10-5, 5-10-10 or 10-10-10 fertilizer = 2 cups
- 1 pound of ground limestone or ground dolomitic limestone = 1.5 cups
- 1 pound of aluminum sulfate or magnesium sulfate = 2.5 cups
- 1 pound of sulfur = 3.3 cups
- 1 quart = 2 pints = 4 cups
- 1 pint = 2 cups = 32 tablespoons
- 1 tablespoon = 3 teaspoons
- 1 bushel = 35.24 liters = 1.25 cubic feet

Pounds per 100 square feet x 0.54 = lbs per cubic yard

100 square feet = 5 feet x 20 feet, 10 feet x 10 feet, or 2 feet x 50 feet

1,000 square feet = 50 feet x 20 feet, 10 feet x 100 feet, or 25 feet x 40 feet

Pounds per 100 square feet x 436 = pounds per acre

Pounds per 1,000 square feet x 43.6 = pounds per acre

Pounds per acre x 0.0023 = pounds per 100 square feet

Pounds per acre \times 0.023 = pounds per 1,000 square feet



"TRAIL TOWNS: CAPTURING TRAIL BASED TOURISM"

TRAIL TOWNS

Capturing Trail-Based Tourism –

A GUIDE FOR COMMUNITIES IN PENNSYLVANIA

A project of Allegheny Trail Alliance

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JOE BENDEL

(1931 - 2003)

Mayor of McKeesport and Civic Leader

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A GUIDE FOR COMMUNITIES IN PENNSYLVANIA

— Capturing Trail-Based Tourism —

Capturing Trail-Based Tourism —

C C community design
C C assistance center

"TRAIL TOWNS: CAPTURING TRAIL BASED TOURISM"

ELCOME

This guide is designed to help leaders in these communities, these "Trail Towns," take advantage of the economic opportunity that rides or walks into town. It will help you transform your town into a more inviting and memorable tourist destination, and in the process, make your town a better place for your own residents to live, work and play.

The Trail Towns Guide will take you through an organization process; help you work with or create a local group focused on downtown revitalization; give you the tools to identify what your town needs to become a Trail Town; give you ideas as you start your town's revitalization; and give you tips on how to make your hard work last over time. However, please remember that the contents of this guide are suggestions. Feel free to modify or adapt these ideas in ways that best work for you. Be creative. After all, your approach should be as unique as your town.

This guide is not designed to help a community build a trail, but rather to enhance a community that already has a trail in or near it. It focuses on communities near non-motorized, multiple purpose trails, such as towpaths and rail trails. Although there are many different types of non-

rail trails. Although there are many different types of non-motorized trails, the needs of trail users have many elements in common once they becc

motorized trails, the needs of trail users have many elements in common once they become pedestrians on your downtown's sidewalks.





SECTION 1: WHAT IS A TRAIL TOWN?

towpath, water trail, or hiking trail—trail users can venture off the trail to enjoy the scenery, services, and heritage of the nearby community with its own character and charm. It is a safe place where both town residents and trail users can walk, find the goods and services they need, and easily access both trail and town by foot or vehicle. In such a town, "Trail Town" is a destination along a long-distance trail. Whether on a rail trail the trail is an integral and important part of the community.

How do you begin to build a Trail Town? It is important to understand that the initiative has to come from within your community. And becoming a Trail Town is as

SECTION 2: THE TRAIL TOWN AND MAIN STREET

much about local attitude as it is about physical improvements. Consider these points

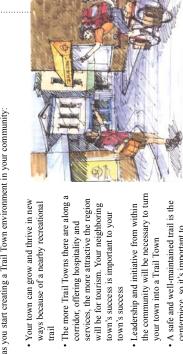
· Your town can grow and thrive in new

ways because of a nearby recreational

A Trail Town is a vibrant place where people come together. It may have a bike shop, an ice cream parlor, casual restaurants, a grocery store, and quaint local shops. It has wide sidewalks, clean streets, bike racks, and benches at convenient locations. It has places to rest for the night. It generously meets the needs of both the trail users and the town residents. A Trail Town is a friendly place that encourages trail users to visit and welcomes them with warm hospitality. Trail Towns are not stand-alone communities; they are linked by the trail corridor. Trail users may be passing through a town on a day trip or long-distance trek, or may drive to a community and park to access a river or trail. Trail users want to explore interesting places in their travels and will need services that your town can provide. Basic elements of a Trail Town strategy include:

- · Enticing trail users to get off the trail and into your town
- · Welcoming trail users to your town by making information about the community readily available at the trail
- · Making a strong and safe connection between your town and the trail
- · Educating local businesses on the economic benefits of meeting trail
- Recruiting new businesses or expanding existing ones to fill gaps in the
 - goods or services that trail users need
 - Promoting the "trail-friendly" character of the town
- Working with neighboring communities to promote the entire trail corridor as a tourist destination.

and offers opportunities to study nature or local history. This Any trail, long or short, is a valuable asset to a community. It provides free recreation for people of all ages and fitness levels, guide is oriented to towns that connect to long-distance trails, ones that attract travelers from outside the local community and are not used solely by nearby residents. Studies show that the longer a trail is, the farther people will travel to visit it, the longer they will stay, and the more money they will spend. A day-tripper will spend four times as much as a local user will spend, and an overnight visitor will spend twice the amount that a day-tripper



services, the more attractive the region

corridor, offering hospitality and

will be for tourism. Your neighboring

town's success is important to your

town's success



trail-building and maintenance group cooperate with and support the local

A safe and well-maintained trail is the

centerpiece, so it's important to your town into a Trail Town

· Leadership and initiative from within

- A core bicycle- and pedestrian-friendly philosophy should be adopted by your
 - · Trail users should be accommodated both physically and socially within the
- · A work plan, your blueprint, should be developed, then chipped away at as
 - funds and energy allow. Make changes as successes (or failures) happen.
- Goods and services for trail users will be appealing to other types of tourists

• Local law enforcement agents can be important ambassadors in your town

nize themselves for this effort. A great way to organize your local community effort is to start with one of the most well-known and successful revitalization programs—The The first step to take advantage of the tremendous community and economic development benefits of being a Trail Town is for members of the local community to organize the community that the community to organize the community to organize the community that the National Main Street Center's "Four Point" or "Main Street Approach." and along the trail

The "Four Point" or "Main Street Approach" offers a complete outline for downtown revitalization that has been successful in more than 1,700 towns and cities throughout the United States. The following four points are the keys to the success of the "Main Street Approach."



"TRAIL TOWNS: CAPTURING TRAIL BASED TOURISM"

downtown area can be eased by using the basic formula of a hands-on, volunteerdriven program and an organizational structure consisting of a board and committees such as historic buildings and traditional downtown layout—is just part of the story. An inviting atmosphere created through attractive window displays, professional sign-age, well-maintained sidewalks, accessible parking areas, appropriate streetlights, and inviting landscaping conveys a visual message about what a Trail Town is DESIGN gets a Trail Town into top physical shape. Capitalizing on its best assetsand what it has to offer. to direct the program.

ing consensus and cooperation among the groups that have an important stake in the

ORGANIZING gets everyone working toward the same goal. The tough work of build-

ing existing downtown businesses expand and by recruiting new ones to respond to today's market, Main Street programs help convert unused space into productive ECONOMIC RESTRUCTURING finds a new purpose for the town's enterprises. By help-

property and increase the competitiveness of business enterprises.

PROMOTION sells the image and promise of a Trail Town to all prospects. Marketing the downtown's unique characteristics to local customers, investors, new businesses, and visitors requires an effective promotion strategy. It forges a positive town image through advertising, retail promotions, special events, and marketing campaigns carried out by the local volunteers.



SECTION 3. ORGANIZING TO CREATE A TRAIL TOWN

tion, you may feel that you need more help or technical assistance than is available Some fundamental information should be gathered as you start organizing your Trail Town effort. To be successful, it's important to have the right team assembled from your community to plan and implement this initiative. As you go through this secwithin your community. You may want to seek help from your county or state community development agency. A good place to start is contacting your county's planning department.

Now, take a few moments to write your answers in the space provided

Define the Trail Corridor

Ä

- Is there a long-distance recreational corridor in close proximity (within two miles) to your town? ☐ Yes ☐ No
- What kind of trail is it?
- What is its name?
- How long is it?
- Who manages the trail?
- Who is the key contact or Liaison for the trail?
- Frail Liaison Phone No.: **Irail Liaison:**

Frail Liaison E-mail:

Assess Local Capacity A vibrant Trail Town program could be part of your business district revitalization plan. You need to understand community's ability to plan and implement any new programs or ideas

Does a downtown or business district revitalization organization currently exist in your town? (If you are uncertain about this question, contact your local municipal office. They should be able to provide you with this information.) ☐ Yes ☐ No

If YES, list the name of the organization, the Downtown Contact person and his or her phone number.

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Org	
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Downtown Contact:

Downtown Contact Phone No.:

Downtown Contact Email:

Tanglewood Downhill Trail Conceptual Master Plan "TRAIL TOWNS: CAPTURING TRAIL BASED TOURISM"

Whitesburg, KY: Downtown Section of the

revitanzation ?	e whole municipality or a ratown)?
 2. what kind of organization is doing downtown revitation? □ "Main Street" organization □ Chamber of Commerce □ Merchants Association □ Other: Specify 	 Is the organization regional (operates within the whole municipality or a larger area) or local (operates only in your downtown)? Local
w hat kind of organization is of □ "Main Street" organization □ Chamber of Commerce □ Merchants Association □ Other: Specify	Is the organization larger area) or loca
√i	ε.

Does the organization implement its activities using the National Main

Is the organization an IRS recognized 501(e) 3 non-profit corporation? ☐ Yes Street Center's "Four Point" or "Main Street Approach? ° D □ Yes S.

for communities that do not have a central business district revitalization organization If you answered No to question B.1 you may want to contact the Pennsylvania Getting Ready for Downtown Revitalization. This is a handbook specifically designed in place and would like to learn more about the process. It is also an excellent resource for communities that have had less than satisfactory results with earlier downtown Downtown Center, www.padowntown.org, to obtain a copy of their workbook revitalization efforts. The Catalyst is a community member who organizes the Trail Town program. If a downtown/business district revitalization organization already exists in your town, the Catalyst could be someone that is currently affiliated with it.

Are you willing to serve as the Catalyst to start a Trail Town effort in your community? 9

°Z □ □ Yes 7. If you are not, do you know someone that may be willing to serve as the

Potential Catalyst A:	Phone No.:	Potential Catalyst B:	Phone No.:



that the community understands the plans and needs of the trail organization. This will make it easier to provide a high-quality experience for the visitor and for the The Catalyst and the Trail Liaison should work in close concert. It is important

Once you have answered these questions, you are positioned to start the process of creating a Trail Town in your community.

Trail Town concept and how it can be integrated into the on-going efforts. If a downtown/business district revitalization organization already exists, the Catalyst should call the Downtown Contact person to discuss the The **Trail Liaison** also should be at this meeting.

then the Catalyst should work with the local business community and the If a downtown/business district revitalization organization does not exist, local municipal government to help organize an introductory meeting to forward with the idea of becoming a Trail Town and putting together a explore the possibility of creating one. Appendix B has references to groups you can contact about getting started. The discussion at the meeting will help determine the level of local interest in moving Steering Committee to begin working on the idea locally 7

kick-off meeting can be found in Appendix A.4. A sample agenda for a

process to gauge interest in making Trail Town changes in your community, he or she should be prepared to group currently exists in the community. If one does prepared to play an active Although the primary job take a lead role in the planning and implementation ly true if no revitalization exist, the Catalyst should be of the Catalyst is to start the process. This is particularrole with the organization.

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you may know very well; others, you may not know at all. However, in order to be successful, the local downtown revitalization program must involve as many interested groups and individuals as possible from throughout the community.

Create or Enhance Your Local Organization: Everyone in your community has a stake in the downtown's future. Residents, businesses, property owners, government officials, and non-profit organizations are part of your downtown universe. Some Downtown revitalization requires the cooperation and commitment of a pro-active, broad based coalition of public and private groups, including

Spend time taking an inventory of existing community groups. Identify key people in these groups and figure out who gets results within the community. It is helpful to meet with those whose goals match yours and brainstorm ways to unite the

community around this effort G. Find the Resources to

nomic development are high priorities for county, state,

Implement Your Trail Town Ideas: Community and ecofunding available to assist ing a clear and compelling request that demonstrates

and federal governments, and there may be public you. The key is articulat-

involved. Find out if your stakeholders will offer help on different projects and keep

them well informed.

your community has for this transformation. This process of developing broad-based and youth groups come together so everyone knows what is happening. Decide who in your community has something to gain. They are your stakeholders and get them

F. Build Partnerships: Bring people together at the very beginning to see what ideas local interest and "buy-in" is as important as your final plan. Have church, service,

- Local trail organizations
 - Businesses
- · Civic groups
- · Historical societies
- Local government
- Consumers / customers / visitors · Financial institutions

 - and many others

e desired revitalization of the business district will be built. For others, it will be important part of a larger vision. In either case, the Trail Town goals must be For some communities, the Trail Town concept will be the primary vision upon which integrated into the strategies and activities of the various committees the an

involves mobilizing volunteers to carry out activities. Different groups have different interests in the downtown. Try to make your volunteer base as broad as possible. Involving all concerned groups will increase the range of ideas and will help to ensure an adequate Develop the Local Volunteer Base: Becoming a Trail Town also source of future volunteers.



name for your organization-something that lets people know what you do and Explain to them what you are doing and book of clippings of your Trail Town E. Get the Message Out Locally: Create a marketing committee and a catchy is easily remembered. Develop a relationship with your local media, especially the newspaper's editorial board. how they can help you. Keep a scrapactivities to record your progress.

over time, and legislative

staff can help you understand current initiatives.

> Subscribe to newsletters put out by your local organizations to keep track of their interests. Submit articles to them, good photo opportunity. Offer to speak at community events and meetings on especially stories that can provide behalf of your organization.



value and long-term return to the community. Get in touch with your state and federal House and Senate members and ask them for guidance. Funding opportunities and programs change H. Take One Step at a Time: Your Trail Town development will progress and evolve that might have a good "bang for the buck." Use your resources prudently on projects that are well thought out and their potential impact thoroughly evaluated. over time. Spend some time evaluating your town's strengths and weaknesses and try to create a new vision for your town. Generating ideas is an exciting and energizing but not all ideas will, or should, be implemented. The activities that your town takes on should be evaluated by their outcomes, not outputs. Sustained increased business activity in your downtown is an outcome; a kick-off parade is an output. You may want to start your implementation with a small project with good potential, one process,



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town. What time of the year is your trail used? Assess the Physical Character of Your Trail: The next step in preparing a plan for **SECTION 4. TRAIL TOWN DESIGN ISSUES**

trict and how they relate to your trail. This challenges a visitor might encounter. You

will help you understand your trail and the can use the Physical Assessment Worksheet found in Appendix A.2 to help assess the characteristics of the relationship between

your Trail Town is to assess the physical characteristics of your central business dis-

information for targeting these specific audiences for marketing campaigns or in Knowing who is using your trail and when they are using it can provide helpful planning local festivals. For instance, some trails may be used by hikers yearround, by cyclists mostly in the late spring, summer and fall, and cross-country skiers in the winter. You may want to identify the usage cycle of your trail for each type of user by utilizing the worksheet in Appendix A1.

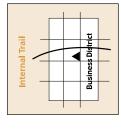
An important element you will need to assess is your physical trail-to-town relationship. You will need to understand both the linear distance and elevation 3. Trail Geography

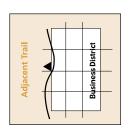
your town's business district. The linear distance can be described in one of the following three ways:

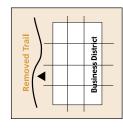
Removed Trail

ally goes directly through the central business district of a community. There might be an when you know you have reached a town. It is Internal Trails are those where the trail actuimportant to guide visitors to the services that might not be right along the trail. "gateway moment" obvious

Removed Trails are those where the trail is located up to two miles away







on the trail

area, usually within 1/2 mile from the edge of the business district. The town can be seen from district. The trail user must get off the trail to Adjacent Trails are those that have a trail located immediately adjacent to a downtown the trail, but perhaps not the central business get to town. In such communities, it is important to create a gateway—an attention-getter—and supplement it with good wayfinding signage brochures, or other means to encourage and direct the trail users to visit your downtown.

be visible from the trail, making it more central business district. The town may not challenging to entice trail users to the town. Fown maps placed at the trailhead can indicate from the the goods and services that are offered and wayfinding signage can guide trail users into your

Know Your Seasons

The next item you will want to determine is when visitors are coming into your

challenges that exist between the trail and

Trail Towns can thrive along long-distance trails, which link communities through one or more counties or states. These trails tend long excursion, but some may be on the trail

your trail and your town.

Internal Trail

for multiple days. Most users will require

to be used by those seeking at least a day-

distance trails attract tourists, especially those with interesting structures, surrounded by natural beauty, or near places of historic

some degree of goods and services. Long-

Adjacent Trail

interest. Generally, the longer the trail, the farther visitors will travel to use it; and the farther they come, the longer they stay and the more they will spend.

Type of Trail in Your Town

The first item to evaluate in assessing the physical aspects of your Trail Town is to determine the **TYPE** of trail that is running through, or in close proximity to, your central business district. The general categories are as follows:

- Cycling
- Hiking and walking
 - Observing nature
 Horseback riding
- Winter use (cross-country skiing, snow shoeing) Commuting
 - River/Water use (canoeing, kayaking, rafting)

It is very likely that the trail in your community is not exclusively one type of trail, and it may be used by different users at different times of the year. Use the worksheet in Appendix A.1 to indicate the various types of users who are likely to be on your trail during the course of a year. It is also useful to determine the approximate number of people who will use the trail and visit your town during the course of the year. This analysis will be important information to share with business leaders so they understand the trail clientele. It will also be important in achieving the desired attendance for special community events.

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vertical distance. A good learning exercise for your Trail Town committee would be to start at the trail, walk or cycle to your central business district, then walk or cycle It is also important to understand the change in elevation between town and trail, the back to the trail. Topography is easily overcome in a motorized vehicle. You need to understand first-hand what your non-motorized visitors experience 2

Another aspect of geography that should be analyzed is RANGE, which refers to tions that bring in tourists. As the range between trailheads increases, the more likely goods and services will be welcomed by trail users. It is important that merchants, law enforcement, and the local post office be familiar with the total length of the trail distance from other nearby trailheads as well as distance from other sites or attracand the distance to the next towns and access points on the trail. This will ease concerns for trail users and will prepare the post office for trail users who wish to send or receive packages. By looking at your town on a map, you can determine what other activities may occur near or along the trail that are in relatively close proximity to your business district. For example, if a state game land is located near your town, you may have hunters who will use your town as a starting point. Subsequently, the range of goods and services you offer in your town may be expanded to meet the unique needs of these hunters as well as year-round trail users.

Identifying Key Connecting Elements

business district, the next step is to identify and map the key connecting elements between the trail and your business district. These key elements are identified and Now that you have identified the physical attributes between the Trailhead and the defined below. Each of these items should be identified on a Trail Town planning

- Trailhead: The areas where users can access the trail. This area is accessible by road and usually provides parking and some amenities for trail users (toilets, information, and rules)
- Portal: The point at which users of the trail exit the Trailhead with the intent of visiting the nearby community.

Trailhead

Frail Elements

Pathway: The corridor that trail users follow from the portal to the central business district.

> Pathway Gateway

Porta

- Gateway: The point at which trail users enter the business district of a community.
- Center: The central business district of the community that may serve as a hub of goods and services for the trail user.

Center

Nodes

Nodes: Specific points of interest along or near the Pathway or in the Center that will be visited or utilized by the users of the trail

The Trailhead or Access Area: Establishing a Trailhead is normally a responsibility of in examining each of these elements, it is important to understand the function and the the trail building organization. However, the Trailhead is also the site where the trail user may first come in contact with your Trail Town. It is the point where the user will As a result, it is important for your organization to work closely with the local trail make his or her initial and most important decision: whether to come into your town inter-relationship between each. A brief discussion of these elements follows:

group to ensure that the necessary amenities are in place to make the Trailhead a high

Together, your organization

quality facility.

facilities. It is also a great place to station a op clear, appropriate information for visitors and make it available at the Trailhead. You and the local trail organization should develmay also wish to work together to provide certain amenities such as water and toilet volunteer greeter, who can answer questions about the trail and town.

tral business district, the Portal may be the The Portal: This point is the spot where the trail user begins his or her journey to visit the various places in your community. The Portal may also function as the Gateway on an internal trail. In the case where the Portal is adjacent or removed from the cen-

begins that will direct the trail users to various tourist and businesses in your community. In either case, the Portal should be a welcoming point that clearly begins the process of directing the trail user through your community. point at which a wayfinding signage system

finder system is installed, it should clearly describe where places of interest (such as its cleanliness, safety, lighting levels, physical condition, and trail user interaction with local traffic. Also, keep in mind local home and business owners who are located alongside the Pathway. Will they welcome trail users or dislike the increased bicycle The Pathway: The Pathway is the corridor that links the Portal at the Trailhead to the center of your community. The Pathway may be relatively short, or in some cases extend for a few miles. The trail user follows the Pathway to get to the various visitor and businesses in your community. It is the route that will be defined by your wayfinder signage system if you have installed one. The Pathway should be assessed for raffic near their property? Efforts should be made to address their concerns. If a waybed & breakfasts, historical sites, etc.) are located if outside of the downtown area. The Gateway: This is the point at which the trail user enters into your central business district. It will ideally be located at the edge of your business district that is closest to the Trailhead along a well-developed Pathway. The Gateway should welcome the rail-user, and other visitors, into your central business district. It should also be the point where directional signage to individual tourist attractions and business goods and services within the district should begin.



restaurants for bicycle users, or hitching posts for equestrian trail users? Is tl outdoor seating at restaurants? Other issues that should be addressed in the Ce include the availability of items such as ATM machines, pay phones that accept cr should be assessed for its cleanliness, safety, lighting levels and physical condition will help trail users enjoy their experience. For example, are there bike racks at cards and public restrooms. A checklist of Center amenities for your Trail Tow The Center: The Center is your business district. It is a collection of business amenities that may be of interest to the trail user. The Center, like the Pathy particular, the Center should also be assessed on the availability of amenities included in Appendix A.3, which provides worksheets that will help develop organize your new Trail Town plan

B. Evaluate Public Amenities: The next step in the Trail Town assessment process is

to make a more in-depth evaluation of the amenities that trail users will encounter

spend on the trail (a public shower re or local lodging), or to all trail u socio-economic characteristics of y Nodes: These are specific points ei in the Center or along the Path visitor. They may include busine (medical supplies, water, a casual dii wish to promote in your communit that are of particular interest to the that cater to the specific user (a bic repair shop), lifestyle interests of trail user (a hobby shop or an ant shop), the duration of time the user restaurant, snack food, etc.) Before possible to identify all of the Nodes is important for you to understand trail user (see Section 5).

connecting trail elements, use a maj the locations of these six compone This can help you to get a better ide traffic through your town on this ma Once you have identified the prev sketch of your town and trail to idea how they relate to each other. You also try to plan the flow of trail-rel sketch.

physical characteristics of the r tionship between your trail and y several areas where your commu could make improvements to become town, you will probably have identi more trail-friendly. These items sho be clearly defined and planned for In completing this assessment of part of your Trail Town action strate

 Directional wayfinder signage where visitors can see them · Clearly identified bike paths that are well maintained your community. Such amenities may include: · Portal and Gateway signage or indicators Pedestrian-friendly sidewalks Well-marked crosswalks This list represents only a Local medical services Marketing materials · Public restrooms Local maps Camping

small portion of the public munity or your Trail Town organization might provide to trail users. This listing is also dependent on the A more complete listing of ties that should be assessed in your community is in the Business Checklist section amenities that your comthe types of public ameninature of your trail users of Appendix A.3.

It should also be noted here that not only physical amenities, but local laws and

community to develop trail-friendly amenities. When conducting your public amenity assessment, these local rules and regulations should also be evaluated. regulations will also impact the development of public amenities and may affect your town's visitor readiness. In particular, zoning laws regulating outdoor vending, sidewalk encumbrances, and off-premises signage may impact the ability of your Reference materials for sample ordinances can be found in Appendix B.2.

governments will be able to undertake all of the steps necessary to ensure that all of the public amenities are adequately dealt with. In this arena, your Trail Town ity of the local or county government. Given budgetary limitations, not all local All of the items detailed in this section would normally fall under the responsibilorganization can be an invaluable partner working with local government in completing such projects by providing financial resources and encouragement.





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amenities that are available within the community. Such an assessment may include From a design standpoint, you may wish to conduct an assessment of visitor-friendly items such as:

user. Goods and services will be addressed in Section 5.

- · Bike racks or ski racks located outside businesses
- The extent to which restrooms are available to the public, not just for "customers only"
 - · Overall hours of operation and weekend hours
 - · The availability of outdoor vending machines.

Types of businesses likely to be used by trail visitors is included in Appendix A.3.

ties should be a part of your Trail Town plan. Businesses providing such amenities or friendly hours of operation are voluntary and hopefully many will realize Enhancement of existing businesses and the generation of new business opportunithe value from a self-interest perspective. Education, encouragement, and financial incentives may be needed, especially to encourage participation by small or marginal trail





SECTION 5. ECONOMIC RESTRUCTURING FOR A FRAIL TOWN

Assess Business Amenities: After looking at public amenities, the next area to be businesses that will be of interest to the trail user will largely depend on the characteristics of the individual trail and its primary visitors. In this regard, your organization can help local businesses to gain an understanding of the needs of the trail

evaluated are visitor amenities that the business community provides. The local

Economic restructuring is a "Main Street" term that refers to the functions of business expansion, business retention, and new business recruitment. It also deals with the key issue of market demographics. A "Main Street" mindset can play a critical function

A. Understand Your Trail User-Customer: In any downtown revitalization effort,

understanding your customer is one of the most important and most basic activi-A business cluster comprises those businesses that provide goods or services to a ties that a business cluster can undertake. common customer base.

場の下の氏人の耳

is important to consider two basic to understand your customer base. The first of these elements is the socio-economic characteristics of the individual customer base. Many trail tourists are affluent and well-educated. elements in order

erences of the customer base. These items relate to the choices that the customer base makes as a group in terms of items such as: The second element is the lifestyle pref-

- Number of times the activity was undertaken in the past year · Average dollars spent annually on the activity
 - · Dining and shopping preferences of the group.

understanding both the socio-economic and lifestyle preferences of the trailcustomer base, the local Trail Town organization can begin to make decisions about how best to attract these customers into the community's central business district. You may want to work with neighboring Trail Towns and commission a study to clearly define your potential markets. In determining how the local business community might respond to the needs of the trail user group, it is important to distinguish between basic needs and longer-term needs. Basic needs are the items that most trail-users will require on an average day trip. Longer-term needs are the goods and services required by multiple day users of places to eat. If your town is the starting point for a trip, a safe place to park a vehicle the trail, who, for instance, may need to wash clothes or make repairs to their bicycle. Even if they choose not to stay the night, they will still need water, a restroom, and is needed. There are related business opportunities for those goods and services that trail users may find of interest due to their broader lifestyle preferences. All of these elements present business growth opportunities for local Trail Towns.

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B. Assess Basic Trail User Needs: There are basic items that trail users will want access to on a regular basis. The function of assessing the extent to which the local community is providing all or most of the goods and services in this category falls to the committee that would be providing the economic restructuring function in the "Main Street" revitalization effort. A trail-user specific list of basic goods and services that this committee should look for in its town is included in Appendix A.3.

C. Assess Longer-Term Needs: In addition to the certain needs of daily trail users, your community may have the opportunity of benefiting from visitors who are on the trail for a multi-day journey or who travel from out of the region to use the trail. These users will have more specific needs, such as overnight lodging, e-mail access, laundry needs, etc. Assessing the capacity of the community to provide these more advanced goods and services would fall upon the shoulders of the economic restructuring committee. Appendix A.3 also provides a checklist of longer-term needs for the multi-day trail user. Overnight lodging is a key component to a community's

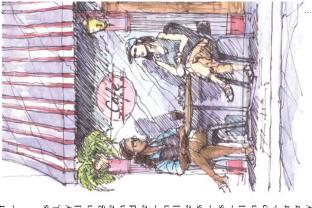
ingui roughig is a key component to a community so success in taking advantage of the economic impact of the trail.

D. Encourage Related Business Opportunities: The final grouping of potential business opportunities relates to those non-trail interests of the basic trail customer base. For instance, a Trail Town that has a large number of users who frequent a wildlife sanctuary alongside the trail may benefit from an art gallery that specializes in wildlife artwork. It's known, for instance, that active outdoor recreation enthusiasts are more likely than the average American consumer to visit hobby shops.

E. Assist the Local Business Community: You can assist the business community in a variety of ways with the economic restructuring function. An effective way to advance the economic restructuring is to develop an "economic

gardening" approach to the business development issues related to the trail. Using this approach, one or more members of the committee would develop an in-depth understanding of the characteristics of the trail user customer base and the trends in the activity itself. Then, through informational bulletins and educational sessions, the Trail Town concept is nurtured and grown in the committee may also wish to provide funding to ensure that magazines, books and publications that provide current information about the trail activity are available in the business section of the local library.

A second way to assist businesses is to develop local financial incentives and identify specific financial resources that will enable local businesses to take advantage of the potential offered by the trail. Such incentives may include façade grants that help to physically promote the image of a Trail Town or small business to so to expand a product line or service that is needed by the trail user, but is not currently available in the community.



SECTION 6. PROMOTING YOUR TRAIL TOWN

The "Main Street Approach" suggests that there are three components to any good business district marketing strategy. The first is to generate a general image for your town. The second is to hold special events that encourage existing and potential eustomers to come into your business district and explore its shops, restaurants and services. The final component is a retail promotion calendar that actually entices people to come into your downtown and purchase goods and services. All three of these are necessary to create an effective promotional campaign for your Trail Town.

A. Promote a Trail Town Image: The first element of your Trail Town promotional effort is to convince people that you have an active and welconing Trail Town environment in your community. This "top-of-mind" awareness, or "branding," of your town is a critical part of your strategy. By its nature, a Trail Town concept is based on drawing in tourists that extend beyond your local market. It is doubtful that your community will realize the full potential of the Trail Town concept unless the larger regional population base is aware of it and what it has to offer. Creating the logos, graphics, pirit ads, electronic ads, web sites, and other general marketing materials that brand your business district as

a Trail Town should be the function of your organization's promotions committee.

tions, and a tour of local trail user assets B. Hold Trail Town Events: Once this the next step is to get people, particularly existing and potential users of the local trail, into your town to explore. An effective way to do this is by holding special events. Special events that tie to your town's history or heritage can be beneficial and fun for residents and visitors alike. Such events might include a "kick-off" event when sufficient physical assets are in place that the Trail Town concept can be physically seen. Annual familiarization events held just before trail season that feature sessions such as trail safety classes, bicycle safety inspecmight be an example of the kind of special events that will attract potential trail users into your community. Work with historical society to develop an annual event that celebrates the corransportation. Folklorists, historians, or re-enactors can help bring your history brand identification has been established your local



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community. Pre- and post-season sales, special weekend sidewalk sales, holiday sales, and joint advertising by the local trail-related business cluster are all examples of retail promotions that the local Trail Town organization might organize in cooperation district, you want them to purchase goods and services in the businesses in your Conduct Trail Town Retail Promotions: Once people are coming to your business with local merchants and/or the local chamber of commerce.

be very effective, but also expensive. It is important that your Trail Town organization bers of commerce, local tourist promotion agencies, and perhaps most importantly, the It should be noted here that promotion and marketing of the Trail Town concept can forms partnerships with local businesses, local merchants associations, local chamtrail development organization to effectively market the Trail Town concept. Positive referrals, and word of mouth advertising are very important. Customers or the business to their friends. Hospitality training is important and may be available through your tourist promotion agencies. visitors who have a pleasant and rewarding experience will return and recommend

Your organization can brainstorm and draft your Trail Town Master Plan. Developing a plan for your town is essential because it becomes a blueprint for action, but it does require time, thoughtful consideration and debate, and prioritization A dilemma arises between spending too much time on developing a plan and impulsively run-ning out and implementing the first idea that ect ahead of adopting a plan, you can form a short list of key goals for your Trail Town and tackle an comes to mind. If you want to implement a proj-

- · Provide a Gateway Moment
 - Create a Sense of Place
- Develop a Welcoming Atmosphere
- · Establish the Right Mix of Services Promote Trail-Oriented Events.

indicates to trail users that they have entered your town. As they move through the Gateway, the space signifies the entrance to your central business district. In order to exists between the trail and your town. Consider the aesthetic quality of your town from the angle of the trail corridor. Does the town appear inviting? Be aware that Provide a Gateway Moment: The "Gateway Moment" is a physical feature that provide an effective "Gateway Moment," you must consider ways to attract people's attention to your community and to your town. Provide your visitors with a sense of excitement, and they will want to stop and visit. To do this, consider the signage that the Gateway to the town should physically greet your visitors with its landscape and immediate amenities.

SECTION 7. PULLING IT ALL TOGETHER—THE TRAIL TOWN **MASTER PLAN**

Once you have evaluated your town and identified some needs, the next step is to begin planning your town's future and begin some projects. It is important to show people that your organization is ready and willing to improve your town. This

government meetings, placing small amenities (benches, planters, etc.) around town that carry your group's name, and having meetings that are open to the public. Hopefully, the community will take an interest in what you are doing and commitment can be shown by attending local will help support the master plan.



While goals will vary from town to town, Trail Town organizations can include within their goal list the following components of community





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ing town banners on lampposts. It is very important before you begin this project to ask your townspeople what they would like to see happen to make their town more attractive or interesting. It is also important to consider maintenance, Engaging the help of gardeners in your community can give their talents a public showcase. Create a Sense of Place: Emphasize the assets that are unique to your town and beautify your central business district. Start small, perhaps by adding planters or plac-

reflect its railroad heritage; Canonsburg has a monument to Perry Como which plays his music; and Uniontown has built a square from other towns. For example, Hershey has The design should consider your town's history and the things that make it stand out ampposts topped with a Hershey Kiss design; atrobe flies green banners commemorating Rolling Rock beer, Youngwood's banners Meyersdale's downtown has a maple theme; nonoring General George Marshall

Brick sidewalks or accents add color and design to your streetscape. They can also be engraved to add history or to honor people who have contributed to your revitalization project. Planters add a natural feel to your downtown, and when placed in the roadway,

such as in a middle left turn lane, can aid in traffic calming. Tree planting can create a warm and inviting atmosphere in your town and should be done with guidance from professional landscape architect.

trap it. When choosing planters for your sidewalks, pick ones that are taller than four feet or shorter than two feet as sidewalk planters around waist level will be used as and choose a grate design that will allow trash to fall through the grate and will not Cleanliness should be kept in mind. Make sure there are plenty of trash receptacles benches, trash cans, and ash trays. Heavy concrete planters are best to prevent theft.

and telephone poles all add clutter to your main street, preventing it from having a relaxed atmosphere. Running telephone lines underground or along alleyways will enhance the appearance of your main street. Reduce the number of parking meters on your street by placing two on one pole, or if there is a lamppost next to a space, place a meter on it. Replace any basic utilitarian lampposts on Main Street with something Next, take a look at your street-level infrastructure. Parking meters, overhead lines, more decorative and historical.

altered over time, hiding the original storefront, covering the second story, and bricking up windows. Restoring a building's façade can be costly; fortunately, if your town chooses to join the "Main Street Program," funding may be available to assist. mural on a building's walls will tell your visitors your town has begun work. Façade work is a top priority in the "Main Street Program." Handsome buildings might be Improving the look of your downtown's buildings is a long-term project, but a painted

Develop a Welcoming Atmosphere: Begin by creating a community that is safe for walking and cycling. Visitors should feel safe while riding their bicycles, crossing your streets, and exploring your town. This can be accomplished by calming automobile traffic and providing amenities that trail users might appreciate and need. Some examples are:

- · Paint or repaint crosswalks at all intersections in town
- · Limit the use of Right-Turn-on-Red, which often presents a hazard to pedestrians
- Direct walkers and bicyclists using signage, brochures, even paint footprints
 - or icons that lead them to special attractions
 - Add traffic signs warning motorists of pedestrian traffic
- · Add pedestrian signals that give people of all ages enough time to cross the street
 - Create bike lanes on the street (See Appendix B.4)
- Make sure your streets are well-lit at night, especially to and from Place benches in your downtown
- Build shared-use paths for bicyclists and pedestrians to avoid dangerous popular destinations
- Provide street parking that will narrow the street, calming traffic, and act as a barrier between street and sidewalk traffic intersections
- · Extend curbs and sidewalks at pedestrian crossings to improve their visibility and decrease crossing distances

Build concrete medians in the road that provide pedestrians refuge

ng your streets. A fire truck will have a very difficult time navigating a turns, so be certain that curbs leading to single-lane, one-way streets street that is too narrow, costing it valuable time. It will also make wide important to make cyclists as safe as possible. Contact your Remember to keep in mind emergency vehicle access when redesignare wide enough for it to get through. It is

When PennDOT begins a new project, they have a bicycle and pedestrian checklist (see Appendix B.3) that they must go through; however, bicycle and pedestrian issues are only considerations. Without enough emphasis and support on the importance of sidewalks or that paved PennDOT bicycle/pedestrian coordinator for assistance in planning shoulders are needed, they might not be included in the project.

will help, but aggressive drivers may take exception to driving behind a bicyclist. More experienced bicyclists will be more likely to ride closer to traffic, adding to their Creating bike lanes, painting crosswalks, and adding pedestrian signals risibility, but making it harder for people to drive around them



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PA Department of Community & Economic Development PA Department of Community & Pennsylvania Pedalcycle and Pedestrian Advisory Committe Westmoreland County Burean of Parks and Recreation Economic Development Larry Ridenour, L.A. Greenways Coordinator James A. Segedy, Ph.D., AICP, AIA Ball State University Western PA Wheelmen Prudence Larson Shaw Weil Associate Tohn Schubert Ned Williams Ellen Kight Heritage Area fack Nolan Jack Paulik Mary Shaw Ed Talone **ACKNOWLEDGEMENTS** members of Ball State University's Community Based Projects: Sal Impellitteri, Michael Johnson, Elena Singh, Andrew Tarcin Michael Finley, Bill Fontana, George Fetkovich, Art Director Maryland Department of Planning Schiff Printing, Pittsburgh, PA PA Department of Transportation PA Department of Transportation Gornick, Heather Momyer **Trail Towns Technical Advisors** Mary Gomick, Michele Apollo Design Group and Anne Richardson George Beckman. L.A. Lisa Byers Delta Development Group Alexander J. Graziani of Westmoreland County Research, Writing and Lawrence Bilotto David Bachman Bill Atkinson Chief Illustrator Lohren Deeg Manual Printing Manual Design **Editing Team** inda McKenna Boxx, Chair 24 Department of Transportation rail Towns Steering Committee Schuylkill River Greenway, Assn ²ennsylvania Downtown Center 24 Department of Conser and Natural Resources Anna Breinich, AICP and Natural Resources East Coast Greenways David Kahley The Progress Fund Keith Swenson Chris Johnston Ken Edmonds Randy Cooley Meredith Hill Eric Bugaile Bill Fontana Tracy Stack Council involving bicycles at least as severely as drivers responsible for two-car accidents. A Establish the Right Mix of Services: Once the trail tourist has entered your town, it Your local government needs to be willing to punish drivers responsible for accidents is important to provide the right businesses and services that will accommodate the important. You may want to make certain that there is a full-service bicycle shop near a weekend festival with street performers playing music, or you might organize a can become the vehicle and tool used to help you further speed limit in downtown areas is usually 25 mph. Making drivers aware of bicyclists through traffic signs that reinforce a "Share the Road" mentality might not be enough. needs of your visitor. Easily accessible grocers, ice cream stands, and restaurants are the trail while any business with a bicycle rack near the entrance would be appreciated. Camping areas near the trail, or a historic home that has been turned into a bed E. Promote Trail-Oriented Events: You can organize events in your town that trail users and your community will enjoy and want to be a part of. For example, you might have community bike ride along the trail. Perhaps you might work with a local micro-brewery and develop a trail themed been for Octoberfest. Whatever means you can find of promoting the trail will ultimately promote your community. The trail develop your own town as a place where people enjoy visit-A cyclist's speed on a paved road can be 10-20 miles per hour while the vehicular town whose drivers are aggressive towards bicyclists will quickly get a bad reputa-

tion. Also, be certain that bicyclists are held accountable to traffic laws as well.

and breakfast in the central area of town, may also be options.

these changes. Reviewing your plan allows you to see what has been accomplished, what was done that might not have In Conclusion: remember that a plan for your town should year. Budgets, people, and trends are constantly changing Accomplishments should be celebrated and new ideas should projects that have come to their planned conclusion and to cut projects that are not working. Make sure you keep your not be a static document, but rather should be reviewed every and your town's plan may need to change to accommodate be integrated into the plan. This is also the time to wrap up elected officials at the local, state, and federal level apprised fulfilled its potential, and what has exceeded expectations. of your progress and your challenges. Finally, you must consider how you will maintain the improvements you have made. Funding and community support to take on additional projects may be diminished if completed projects are not cared for adequately.

Your new Trail Town will be an inspiration to new tourists and visitors. But more focused and remember to take small steps instead of attempting to tackle everything all at once. It may not be a quick process, but it can be a steady process. importantly, it will help renew your own community's sense of pride and identity.





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USAGE OF TRAIL BY MONTH AND USER WORKSHEET

Different user types will use the trail at different times. This table will help you track who is on the trail, what events to have and when, and what special seasonal offerings your community may want to provide.

Trail Corridor Name

See Section 4, A.1 and A.2 for more information on trail user types and trail seasons

			Cyclist	Hiker	Exercise	Equestrian	Nature	Winter	Winter RiverWater Commuter	Commuter		
					Walker		watcher	II aveter	11 avener	Hallic		Community
		January										(eg: North t
		February									A	
		March									В	
a	С	April									С	
С	C	May									D	
С	C	June									E	
SS	or	July									ī	
ist	nr	August									g	
ar	ทบ	September									Н	
nc	nit	October									I	
е	у	November									f	
ce	de	December									7	
n	esi	Estimated #										
te	gı	of Yearly Users									1. I is In	1. I is Internal; A is Adjac
r	1										II R (I	If R (Removed) note di

X=No users of this type on trail
1=Low months for users of this type on trail
2=Moderate/Average months for users of this type on trail
3=Heavy months for users of this type on trail
4=Peak month for users of this type on trail

PHYSICAL ELEMENTS OF TOWNS ALONG YOUR CORRIDOR WORKSHEET

Geography1 Approximate Distance From Previous Town miles Name o South) The Counties the Corridor Serves Length of the Corridor

Topography2

ent; R is Removed. See The Trail Towns Guide Section 4.3 for definitions.

2. L is Level; M is Moderate; S is Steep. See The Trail Towns Guide page 16.

This worksheet should help you understand your physical challenges and those of neighboring Trail Towns. It may show how you can collaborate to solve similar problems. For instance, if your town and several others are not located close to the trail, you may want to explore sharing a shuttle service, or perhaps hiring a transportation consultant to help improve access.

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TRAIL TOWNS

Self-Assessment for

YOUR COMMUNITY NAME

TRAIL TOWN SELF-ASSESSMENT

Introduction

There is a new interstate in your town, and its travelers, for the most part, are on bicycles! This interstate is YOUR TRAIL and this recreation and tourism corridor can become a lightening rod for new opportunities in your town. Visitors are hungry, need supplies, may want to spend the night and want to explore interesting towns along the trail. What they need is a "Trail Town."

To create a Trail Town, you need a dedicated core group of citizens that can envision a "healthy" downtown, both physically and economically, and organize fellow residents and merchants to join in. The Trail Town program is patterned on "Main Street" principles, so communities who have participated in the program will recognize the format. Communities who wish to learn more can contact the PA Downtown Center for information and training opportunities (www.padowntown.org).

The success of the Trail Towns also relies on communities becoming bicycle and pedestrian oriented. There is technical assistance available through your local PennDOT engineering district and your regional Metropolitan Planning Organization or Rural Planning Organization. A number of resources and websites are included throughout the manual, but, an especially helpful website is the League of American Bicyclists www.bicyclefriendlycommunity.org.

Building a Trail Town, like all things, happens step by step. The first step was building the trail to your community and now it is up to the community to entice the trail visitors off the trail and into the heart of your downtown. You need to help them have a satisfying experience, allow them numerous opportunities to spend leisure time and tourist dollars in your community, and to have them tell their friends about the great time they had on the trail and in your town.

fips on How to Use the Self-Assessment

Convene interested residents, merchants, local elected officials, and someone from the local trail
organization. Invite your Bicycle-Pedestrian Coordinator from your regional PennDOT engineering
district (in Pennsylvania ftp://ftp.dot.state.pa.us/public/pdf/YTPCD.pdf for your Bike-Ped Coordinator
contact information).

2. Set a date (and rain date) to do a walking tour of your town. Meet at the trail access area, divide into teams of two or three people (two is preferable), distribute the blue books, and determine a time and place to regroup. Encourage the use of cameras to capture the good, bad, and the ugly. Creating a slide show with these images can be a powerful tool to stimulate discussion and decision making.

Each team may wish to stop for a "coffee break" mid-tour to collect thoughts, record observations and begin to draw conclusions.

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U	J

DATE

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	I raffic & Access Is:
4. Allowing for two to three hours, depending on the size of your downtown area, reassemble the self-	General Access Between
assessment team to discuss general observations. What great assets does the town have that you would want to promote or enhance? What needs does your town have? Pick one or two items and develop	What is the distance between In blocks or miles:
an action plan to address them. Make sure someone is identified to take responsibility to move the plans forward. Another person should be commissioned to hold all the self-assessment booklets, and	Is there an easy grade bet (Hint: Ride bike—do you ne
consolidate all the answers and comments into a single report that can provide the basis for a long-term plan for the community.	Is it easy for visitors to find

TRAIL TOWNS SELF-ASSESSMENT CHECKLIST

If you have difficulty figuring out how to move forward, you can contact the Pennsylvania State Association of Boroughs (www.boroughs.org) and they can help develop community leadership and ocal capacity. Another good resource is Penn State's Rural Development program Record your progress and keep your local newspapers informed. Invite your local elected officials and legislators to help dedicate the new amenities that your town constructs or installs.

Revisit the summary report from time to time and add new projects to your busy lives. The visitors, and your residents, will be most appreciative of your efforts

A self-assessment guidebook to community development

know their teenagers will want to stop frequently—for food—and they're glad that the map shows towns It's a beautiful fall weekend and Roy and Mary Tandem decide to pack up the family and the bikes and decided to stay with a college buddy who has opened up a high-tech company in Your County. They head to Pennsylvania-to spend a few days biking on Your Trail. They have the trail maps and have about every ten miles along the trail.

The weather is glorious and everyone is having a great time, until the first flat tire and the realization that the pump was left in the car! Luckily the unfortunate incident happened right as they approached YOUR TOWN. Everyone dismounts and heads toward town.

What did they find?

where your town may need some enhancement. The " ~ " can be used to indicate a mid-ground answer, Please complete the following Trail Towns Self-Assessment guide to give yourself a better sense of like somewhat, or sometimes.

9 9 000000000 9 000000000 . Æ £ 00000000 £ _____ Do signals allow enough time for a child or older adult to cross the street? sen the business district and the trail? and access downtown from the trail? Are bike lanes and road shoulders free of potholes and debris? Do the majority of motorists respect pedestrians in crosswalks? Is there sufficient signage for finding businesses and services? ed to use your smallest chain ring?) Are the roadways swept and kept clean and free of debris? Are the sidewalks swept and kept neat and free of debris? Is there sufficient room on sidewalks to walk side-by-side? Are all sidewalks flat (vs. sloped) before driveway aprons? Can motorists easily find and access the trail from town? Are pedestrians highly visible to motorists at crossings? Are all sidewalks continuous (vs. stopping abruptly), Is there sufficient signage for getting around town? Is there adequate Wayfinder signage to the town? (unobstructed view for pedestrians and motorists) Is there adequate Wayfinder signage to the trail? Are steep sidewalks well maintained and even? ween trail and town? sues Checklist Do curb crossing ramps have a gentle slope? Do you feel safe when walking through town? Are there pedestrian walk/don't walk signals? Trail and Town Can visitors tell they've entered town? Is there a Wayfinder signage system? Are sign ordinances being enforced? Are the sidewalks in good shape? Can visitors tell they've left town? in the central business district? Are there bike lanes in town? Are crosswalks well marked?

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Whitesburg, KY: Downtown Section of the Tanglewood Downhill Trail Conceptual Master Plan

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Sin Br	3 (ł [2 (Does your town have the lonowing types of lood service:	3 (1 [2 [
Is there sufficient on-street parking?	J	J	J	Outdoor vending machines	J	J	J
Are off-street parking lots placed behind stores?				Grocery, or portable food			
Are sidewalks free from cars exiting driveways and parking lots?				Coffee shop			
Are there bike racks?				Ice cream			
Are bike racks placed in safe and secure areas?				Family-style restaurant			
Are hike racks nlaced in easy-to-find nlaces?				Fast food or chain restairant			
Are hilto unally along the property in the property of the pro	ן כ	ם נ	ן כ	Lagrana Local of Columbia II	ן כ	ן כ	ן כ
Are dike racks weir-placed to prevent interference with sidewark use?	J (J (J (Inornial cale with wait service	J (] [] [
Are bike racks simple enough for the rookie rider to use correctly?				Bar or tavern			
Are there creative bike racks, eg. combo bike rack/bench or dual use				Restaurant with liquor service			
of decorative metal fencing?							
Are there hitching areas for horses?				Does your town offer the following retail services?	YES	ì	9
				Bike rental			
Business Checklist				Bike equipment and repair			
Operations	YES	ì	ON.	Convenience/quick stop			
Is the central business district easily identified?				Drug store			
Do business hours match customers' needs (i.e. open on weekends)?				24 hour ATM			
Are downtown hisinesses clustered in a compact area?				Bookstore			
Are customers are after Marmly when they walk through the door?			ı 🗆	Laundromat			
And the constitution and state alone and mall loads	ן כ	ן כ	ן כ				
Are the merchandise and store clean and well kept?] [J (J (
Do businesses cross-promote?	J	J	-	Does your town offer these services and amenities?	YES	ì	9
Are there window displays that show off the community's heritage?				Hotel or Inn			
Do businesses encourage window-shopping?				Bed and Breakfast			
				Motel			
Accommodation & Amenities	ν Ε	1	2	Nearby camping			
	3	t	2	near by carried	ן [] [ן [
Do businesses offer out-of-town shipping for large items?				Emergency medical service available	J (J (J (
Are there public-accessible restrooms in the businesses?				Family medical services available	J (J (J (
Do businesses offer information on the town/region?				Shuttling service to nearby town (max 25 miles)	J	J	J
Can employees answer questions about the town or region?				Shuttling service to distant locations (max 250 miles)			
Do employees answer questions in a friendly manner?				Taxi service			
Do shops carry souvenirs, especially related to the town				Public park or green area			
(ec. Meyersdale manle syrin)				Restroom at the trail access point			
(ca) motor common trape of calc	I	J	I	Map/town information			
				Calendar of events			
Signs	YES	ì	9	Access to sublic amail convice (i.e. at library)			
Are businesses' signage clearly visible and well-designed?				Officiant track contain solving (1.0. at inclary)] [ן כ] [
Do the signs clearly state what is being sold?				Sumicient trash cans in town] [] [
De trie signs creanly state what is being some:	ן כ	ן [ן כ	Does the town use special events to encourage people to come to town?		J	3
Do businesses clearly indicate that they re opened?] [J (J (Do businesses use gimmicks or clever marketing tactics to			
Are business hours posted on front door or window?	J	J	-	invite people in? (eg: Free Ice Cream)			
				Does the town organize or promote town-to-town bike rides?			
				Is there a library, local historical society office, and/or museum in town?			



"TRAIL TOWNS: CAPTURING TRAIL BASED TOURISM"

SAMPLE AGENDA			Trail Town Meeting	. 20		Your Town, PA				1. Welcome: Mayor of Your Town		2. Introductions: Catalyst	3 Ovaniaw and History of the Trail Laison			4. General Vision for a Iraii Town Vision - Needs and Opportunities: Catalyst or Chamber of Commerce Executive	Catalyst of Citatilber of Collinetics Executive	 Committee Assignments Organization 	Design Economic Restructuring	Marketing		6. General Discussion		7 Set next meeting date	י. ספר ווספרווויון ממנס								
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		ı		J [] [ì				J (J	ì							ì										J (.	J	
		YES		J C	J [YES				J (5	YES							YES										_ [] [J	
Are these places open on weekends? Is the trail linked to downtown events and happenings? Is the town linked to trail events and happenings?	Design Checklist	Visual Appearance	Is there a sense of place and/or a unique identity to downtown?	Does the town appear economically healthy?	DOES THE TOWIT LEGISTICS: As a whole are you enjoying your walk of downtown?	Are walls and storefronts kept free of graffiti?	Buildings & Parking	Are all buildings occupied?	Is there evidence of building code enforcement?	Is there a solid strip of businesses? (eg: not broken up by parking lots.)	Are filstoric buildings restored and recognized ?	Are the structures in town in a good condition overall?	Store Fronts	Are store windows clean?	Are store windows lit at night?	Are store fronts maintained?	(eg: no broken glass, crumbling brick, peeling paint, etc.)	Do stores have flowers?		Streetscape & Amenities (street furniture)	Are there enough benches?	Are the benches well-placed?	(Are they in the shade, near high pedestrian traffic areas, etc.)	Are parks/green spaces well placed and used appropriately?	Do all parks have adequate bike racks and benches?	Are street trees used effectively?	Do restaurants offer outdoor seating?	Are there audible amenities—chimes, church bells, music, etc.?	Are there banners & hanging baskets?	Are there drinking fountains or sources for potable water?	Does the town use human-scale night lighting? Are sidewalks wide enough to accommodate nedestrians?	בים מימסיים אימס מיוסיפון ומ מכנסיון וויסימים הספסיון ומיוסי	

"TRAIL TOWNS: CAPTURING TRAIL BASED TOURISM"

RESOURCES

B.1. Pennsylvania Agencies and Organizations

Pennsylvania Downtown Center

Penn State Cooperative Extension & Outreach www.extension.psu.edu www.padowntown.org

Pennsylvania Environmental Council

PA Department of Conservation and Natural Resources www.dcnr.state.pa.us

U.S. Department of Transportation Bicycle and Pedestrian Program www.fhwa.dot.gov/environment/bikeped/index.htm

Bicyclist and Pedestrian Safety: PennDOT Bike Safe www.dot.state.pa.us/bike/web/index.htm

www.flagandbanner.com/fab/flag.asp www.flagline.com/id02A3046 www.gettysburgflag.com/attention.htm www.aaaflag.com

Federal Highway Administration Bicycle and Pedestrian Safety Research www.tfhrc.gov/safety/pedbike/pedbike.htm

PA Department of Transportation www.dot.state.pa.us (Link to "Regional Information")

PA Department of Community and Economic Development

www.inventpa.com

PA Department of Environmental Protection www.dep.state.pa.us

Pennsylvania State Representatives www.house.state.pa.us

Pennsylvania State Senators Pennsylvania Greenways www.pagreenways.org www.senate.state.pa.us

B.2. Planning and Implementation Resources Streetscape Links:

About Planning - www.aboutplanning.org Great Streets - www.greatstreets.org American Society of Landscape Architects - www.asla.org Pennsylvania Downtown Center - www.padowntown.org Pennsylvania Greenways - www.pagreenways.org Smart Growth Network - www.smartgrowth.org Project for Public Spaces - www.pps.org Carfree Cities - www.carfree.com American Planning Association - www.planning.org National Main Street Center - www.mainstreet.org Planning Resources:

Public Amenities (bike racks, benches, etc.): www.keystoneridgedesigns.com www.wabashvalley.com www.unitedrecept.com www.dero.com www.theparkcatalog.com ww.upbeatinc.com www.lacorss.com

www.fancystreetlight.com

Community Bridges: http://bridge.skyline.net/history

ww.ironsmith.cc.

community design assistance center

Bicycle and Pedestrian Checklist

Planning and Programming Checklist

Project_

П

SR	Segment	8	Offset
Team Members			
		De	Date
Item	Considerations	Check	Comments
Consistency with Bicycle/Pedestrian Planning Documents	It the transportation facility included in our related to bicycle and podestrain facilities identified in a master plan? MPOLIDD bitschool plan. Local planning documents. BicyclePA Routes. Statewide Bicycle and Podestrian Master Plan.		
	Will the transportation facility provide continuity and linkages with existing or proposed bicycle/pedestrian facilities?		
	Is the transportation facility included in or related to a regional/local recreational plan? Rails-to-Trails. Greenways. Local, State, National Parks.		
2. Evisting and Future Usage	Do bicycle/pedestrian groups regularly use the transportation facility? Bik clubs. Bicycle commuters. Hixing, walking, or running clubs. Standboarding or roller/blading groups. Bicycle touring groups.		
	General tourism/sightsceing. Does the existing transportation facility provide the only convenient transportation connection/inkage between land uses in the local area or and area or and uses in the local area or and area.		

Pennsylvania Municipalities http://sites.state.pa.us/govlocal.html?papowerPNavCtr=l30207#30214 Bicyclist and Pedestrian Communities:

http://www.dot.state.pa.us/Internet/pdHwyIntHS.nsf/frmTrafficCalming?OpenFrameset

Traffic Calming Handbook:

League of American Bicyclists www.bikeleague.org

www.americabikes.org America Bikes

Walkable Communities, Inc. www.americawalks.org America Walks

National Center for Injury Prevention and Control www.cdc.gov/ncipc/bike www.walkable.org

National Center for Bicycling and Walking www.bikewalk.org

Bikes Belong www.bikesbelong.org

region?

Could the transportation facility have favorable or unfavorable impacts upon the bike tourism/economy of an area/

Oregon Bioycle and Pedestrian Plan www.odot.state.or.us/fechserv/bikewalk/obpplan.htm City and State Plans and Resources: City of Madison, Wisconsin Bicycle Information www.ci.madison.wi.us/transp/bicycle.html

U.S. Department of Housing and Urban Development www.hud.gov/offices/cpd/about/conplan/local Pittsburgh City Planning Bicycling Plan www.city.pittsburgh.pa.us/cp/html/bicycling_plan.html

of the transportation facility?

Is there a higher than normal incidence of bacyclepdetstran creshes in the men?

Is the transportation facility in a high-density hand use area that has pedestrian/bitscringly by a high-density hand use area that has pedestrian/bitscringory vehicle traffic?

3. Safety

Are there physical or perceived impediments to bicycle or pedestrian use Tourism Promotion Agencies, there physical or pe Chamber of Commerce region? Consider.

Local businesses

Pennsylvania Department of Transportation www.dot.state.pa.us

Pennsylvania Municipal Authorities

www.municipalauthorities.org

"TRAIL TOWNS: CAPTURING TRAIL BASED TOURISM"

Scoping Checklist Scoping Checklist Segment Team Members Right-of-Way Needs Diagram Right-of-Way Needs Diagram Sidewalks Shoulder/ Bike lane Bike lane Planter/Buffer Strips Median Planter/Buffer Strips Planter/Buffer Strips

Bicycle and Pedestrian Checklist

Element	Number	Width	Width Total Width
	Required	-	
Sidewalks			
Buffer Strips			
Shoulders			
Lanes			
Median			
Total Right-of-Way Required			
Fedestrian Facilities	ilities		

	Ap,	•	•	•	•	•
Considerations	Appropriate width:	1.5 m – 2.1 m (5'-7') for residential, commercial, and industrial.	2.5 m (8') minimum for high use areas/CBD.	2.1 m (7') width for bridges.	0.6 m (2') shy distance for vertical barriers.	1.2 m – 2.1 m barrier separating traffic from nedestrians on bridges
Check						
Comments						

"TRAIL TOWNS: CAPTURING TRAIL BASED TOURISM"

Bicycle and Pedestrian Checklist

Bicycle and Pedestrian Checklist

Bicycle Facilities

ck Comments																							
Check																							
Considerations	Appropriate width of bike lane: 1.5m (5') adjacent to curb 1.8m (6') standard.	Connectivity with other facilities. Bike lanes	Shared use trails	 Trail heads/parking areas. 	Maximize width of shoulders and	provide appropriate markings as per AASHTO Green Book.	3 m (10') vertical clearance from fixed	obstructions (excluding road signs).	Angle and smoothness of railroad	crossings. Avoid angles of incidence of	<70 degrees or re-design.	Bridge accesses provided/pinch points	avoided.	Parking parallel or angled.	Inventory existing bicycle facilities.	Intersection bike/ped crash history	reviewed.	Crossing distance is minimized.	Considerations for bikes making turns.	Bike detection.	Elevated push buttons.	Is the community considering traffic	calming as a means to curb speeding
Item	1. Bikelanes/Paved Shoulders														Signalized	intersections						Traffic Calming	

а	ľ
J	c

																								Retirement	homes	Schools	Medical	facilities	
Applicability of planter or buffer strips.	Connectivity with other pedestrian facilities.	Proximity to transit bike/ped	Transit stops.	Schools.	 Park & rides. 	Nursing homes.	Offices.	 Business environments. 	Athletic fields.	 Recreation facilities. 	Observe pedestrian patterns for special	needs such as:	 Midblock crossings. 	 Islands and refuges. 	 Night crossing activity. 	ADA needs and concerns.	Crosswalks provided and marked.	Intersection bike/ped crash history	reviewed.	Is there a dedicated pedestrian phase, if	so how long?	Crossing distance is minimized.	Ped heads and ped pushbuttons	ADA needs and concerns.					Is the community considering traffic calming as a means to curb speeding and cut-through traffic?
	idewalks (cont'd)																. Signalized	ntersections											. Traffic Calming

"TRAIL TOWNS: CAPTURING TRAIL BASED TOURISM"

Bicycle and Pedestrian Checklist

Bicycle and Pedestrian Checklist

Final Design Checklist

Itom	Conciderations	Chack	Commente
mont	Construction	CHOON	Comments
 Bikelanes/Bikeways 	Bicycle safe grates, RC-34, Sheet 5 of 9.		
	Manhole covers flush with roadway		
	surface.		
	Inlets flush with roadway surface.		
	Rumble strips type and placement.		
	Driveway aprons.		
	Conflicts eliminated with:		
	 Turns at intersections. 		
	 Through movements. 		
	 Bicycle and pedestrian conflicts. 		
	 Parked cars, angled vs. parallel. 		
	 Driveway aprons. 		
2. Signage	3m (10°) vertical clearance from signs		
	and structures.		
	"Share the Road Signs."		
	"Wrong Way Signs."		
	Lane stenciling.		
	Bike lane designation signs.		
	No parking signs.		
	Bike lane striped.		
	Transition from bike lane to bikeway.		
	Consistent width on roadways,		
	bridges, and intersections.		
	Overlap bike lane/shoulder stripe over		
	pavement joints.		
	Meet or exceed AASHTO criteria.		
Traffic calming	Consider traffic calming as a means to		
	improve pedestrian and general traffic		

4	\wedge	r

SR	Segment	Offset	
Team Members			
		Date	
	Pedestrian Facilities	ies	
Item	Considerations	Check	Comments
1. Sidewalks and Signalized	Crosswalks are at least 3 m (10°) wide.		
Intersections	Crosswalks are prominently marked using at least 6" line.		
	Pedestrian signals are provided.		
	Pushbuttons are provided and accessible.		
	rossing distan		
	Maximize pedestrian visibility at crossings.		
	Coordination of turn phases with walk/don't walk signs.		
	Proper lighting type and placement.		
2. ADA Kequirements	Pushbuttons accessible. Pushbuttons height 1.0m – 1.1m (3.5'-		
	4.0').		
	pushbuttons used.		
	1.5m (5') recommended passage (sidewalks).		
	5% maximum grade recommended (sidewalks).		
	2% cross-slope maximum.		
	Textured curb cuts.		
	2 curb cuts per corner at intersections.		
	Curb cuts flush with street surface 0.6cm (1/4" tolerance).		
	Running slope of new curb cuts 1 in 12 max.		
	Longer signal cycles.		
	Audible crossing signals.		
	Level landings on perpendicular curb ramps.		
	Proper head/shoulder clearance for visually impaired.		
	Coordinate utilities with ADA		
	requirements.		
	Analyze landscaning growth notential		
	for future obstructions.		
	Any conflicts with minimal distance that should be included in the project.		
	Coordinate and minimize signage conflicts.		
3. Traffic Calming	Consider traffic calming as a means to		
	safety.		



"TRAIL TOWNS: CAPTURING TRAIL BASED TOURISM"

Door-Zone bike lanes should do us all a favor and go away.

THE DOOR PRIZE TO AVOID

By John Schubert

to save yourself from serious personal injury or death. suddenly-opened car door while on a bicycle), don't ride this traffic control device. You don't have to imagine it. Imagine that many "bicycle advocates" avidly promote I'm talking about the door-zone bike lane. If you don't want a dooring accident (the act of being struck by a I magine a traffic control device you must disobey next to parked cars in a door zone.

of those rights is to claim vehicle operator, and one You have the rights of a way. The door zone isn't safe space on the road-

belief that bicyclists need the result of a misguided a door-zone bike lane is occur frequently. Some fatal. In my opinion, Dooring accidents are quite severe, and more than a few are

just for them, to feel validated, or to be encourspecial space, marked

to parked cars. The reason it's available is because only place to add bike lanes is the door zone, next available, so we can put paint on it, and by gum, it's too dangerous for motorist traffic. But it is prohibitive to widen narrow city streets, so the According to policy makers, it is cost

was probably safe to begin who don't know any better. bicycle facility design con-What do door-zone bike The door-zone bike lane troversies because it takes we can call it a bike lane! trap for uneducated riders with, and turns it into a stands apart from other an ordinary street, that

lane advocates tell cyclists? Ride slowly and be ready door without first checking Stay on the outside half of the bike lane. Be ready to swerve. Watch the insides Here's what I've read and for a person to open a car to jam on your brakes. heard:

of parked vehicles for signs on the fact that it's illegal Each of these bits of of activity inside. Rely behind.

advice is utterly useless. Most people don't ride slowly enough to stop

hour. So the fastest speed you can ride safely is the in time. My colleague, John Allen, a founder of for many riders is also around seven miles per slowest speed you can ride at all.

up. Chicago's department of transportation says so It says, "Keep track of traffic behind you so you'll at www.chicagocarto.com/bikemap/doorzone.html. know whether you have enough room if you must Be ready to swerve? No, I'm not making this swerve suddenly out of the 'Door Zone." This is an unsafe and nerve-wracking way to ride.

You can't see through headrests or tinted glass. Trying to do so is a dangerous distraction from the other things you should observe while riding.

Motorists make mistakes. We avoid accidents by evading each other's mistakes. But a door-zone point failure mode. If the motorist opens the door bike-lane accident is what engineers call a single at the wrong time, the rider has no way to avoid

Organizations, once nearly doored a rider because Moreover, a parked motorist can't always see visual check and the moment he opened the door. the rider had popped from the sidewalk onto the the approaching cyclist. Dan Gutierrez, director road during the time between Dan's rearward of the California Association of Bicyclist

I first encountered the arguments against doorwhat I could to make the gist of this article federal zone bike lanes about thirty years ago. In 1978, I for the United States Department of Energy. I did helped write a manual on bicycle facility design policy. Obviously, I didn't do enough.

have either had a dooring accident or have nearly A survey on the website of New York City's shows that roughly two thirds of the respondents Transportation Alternatives (www.transalt.org)

width of the door zone. He instructs his students to ride an estimated five feet from parked cars. Then In the bicycle safety class Gutierrez teaches, he has found that many riders underestimate the they get out the measuring tape and learn what

Policy makers don't seem to be interested in changing the situation regarding door-zone bike five feet really looks like.

of them. They published a bike lane design guide The city of Chicago has installed many miles

much of the personal car fleet in the United States drawings in the book are falsified. The cars in the lanes can be squeezed into a narrow city street. It drawing are well under five feet wide whereas is over six feet wide. In other words, they are achieves this magic through deceit: the scale door-zone bike lanes.

essay on the city's website was revised to omit the zone bike lanes, had a high-profile fatality on July candidate with a promising career in international in her path. After Laird's death, the pro bike-lane Cambridge, Massachusetts, a city with doorpart that said the bike lanes "indicate the correct relations, was killed when a SUV door opened 2, 2002. Dana Laird, a thirty-six-year-old PhD position" on the roadway.

Research Board haughtily rejected a very thoughtshow that without bike lanes cyclists would ride Boston City Bicycle Coordinator Paul Schimek unabashedly ideological in their rejections. One reviewer wrote. "There has been no research to Also in 2002, our nation's Transportation ful paper on door-zone bike lanes by former The reviewers who rejected the paper were further out from the door zone.

This is a bogus argument. If a traffic control defense to state that the dangerous behavior can exist without the presence of the traffic control device promotes a dangerous behavior, it is no device.

Before a door-zone bike lane is painted, you have the right to the whole dang road. Why give that up to ride in the most dangerous part?

Used with permission from Adventure Cyclist

ADVENTURECYCLING.ORG

"KENTUCKY TRAIL TOWNS: A HOW-TO-GUIDE FOR COMMUNITIES"

Section 3. Getting Organized to Create Your Trail Town Key Components

Section 2. Trail Town and Main Street

Section 1. What is a Trail Town?

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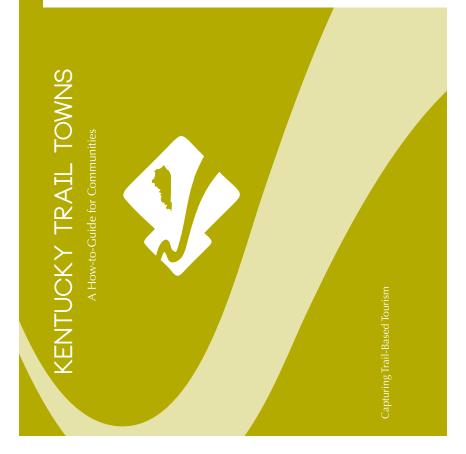
C. Create or Enhance Your Local Organization
D. Develop the Local Volunteer Base
E. Get the Message Out Locally
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C. Find the Resources to Implement Your Trail Town Concept
H. Take One Step at a Time

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Section 5. Economic Restructuring for a Trail Town

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C. Assess Longer-Term Needs
D. Encourage Related Business Opportunities
E. Assist the Local Business Community









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Section 6. Promoting Your Trail Town

Conduct Trail Town Retail Promotion

A. Promote a Trail Town Image B. Hold Trail Town Events C. Conduct Trail Town Retail Pro

Recreational trails and rivers can really help boost a community's tourism traffic. This guide is designec help leaders of these Trail Towns take advantage of the economic opportunity brought by the attraction destination as well as a better place for residents to live, work and play. The elements in this guide are suggestions. Feel free to modify or adapt these ideas in Assessments I & II to best suit your town. Affer $\dot{\epsilon}$ trails and rivers. It will help you transform your town into a more inviting and memorable tourist your approach should be as unique as your community.

Section 7. Pulling it All Together - The Trail Town Plan of Action Develop a Welcoming Atmosphere Establish the Right Mix of Services Promote Trail-Oriented Events A. Provide a Gateway Moment B. Create a Sense of Place C. Develop a Welcoming Atmosp D. Establish the Right Mix of Serv E. Promote Trail-Oriented Events

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Note: This guide utilizes information from the Trail Town Manual© – a publication of the Allegheny Trail Alliance – geo-tourism (a project of National Geographic) and other trail town∕Sense of Place project materials

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A HOW-TO-GUIDE FOR COMMUNITIES"

SECTION 1: WHAT IS A TRAIL TOWN?

the unique scenery, commerce and heritage that each trail town has to offer. It is a safe place where ooth residents of the town and trail users can walk or drive to find the goods and services they need Whether the trail is a hiking trail, water trail or rail trail, users can venture from the path to explore A Trail Town is a destination along a long-distance trail or adjacent to an extensive trail system.

casual restaurants, a grocery store and quaint local shops. It should also have wide sidewalks, clean streets, A Trail Town is a vibrant hub where people come together. It may have a bike shop, ice cream parlor, bike racks, hitching posts, watering facilities and restrooms, benches and places to rest for the night. It should generously meet the needs of both trail users and town residents. A Trail Town is a friendly place that encourages trail users to visit and welcomes them with warm hospitality. Trail Towns are not stand-alone communities. They are linked through the series of trails. Trail users may be passing through a town on a day trip or a long-distance trek or may drive to a community or park to

Trail users want to explore interesting places in their travels and will need services that your town can provide. Basic elements of a Trail Town strategy include:

Enticing trail users to take detours off the trail and into your town via a connector trail.

Welcoming trail users to your town by providing information about the community readily available on the trail.

Making a substantial path between your town and the main trail.

· Educating local businesses on the economic benefits of meeting trail tourists' needs.

Recruiting new businesses or expanding existing ones to fill gaps in the goods or services that trail users need.

Promoting the trail-friendly character of the town.

Working with neighboring communities to promote the entire trail corridor as a tourist destination.

ages and fitness levels and offers the chance to study nature or local history. This guide is tailored to towns that serve as gateways to large trail systems that attract travelers from outside the local community. Studies have shown that the longer/larger the trail system, the further people will travel to visit it and the more likely they are to stay longer and spend more money. A day-tripper will spend four times as much as a local user and an overnight visitor will spend twice as much as a day-tripper. long or short, is a valuable asset to a community. A trail can provide recreation for people of all

SECTION 2: TRAIL TOWN AND MAIN STREET

within the community. Becoming a Trail Town is as much about a unified mentality and spirit as it is physical How do you begin to build a trail town? It is important to understand that the initiative to do so comes from improvements. Consider these points as you start creating a Trail Town atmosphere in your community:

Your town can grow and thrive because of nearby recreational trails.

Trail Towns are gateways into national, state or other large trail systems.

• The more Trail Towns there are along a trail corridor that offer hospitality and services, the more attractive the region will be for tourism; your neighboring town's success is just as important as your own.

 A safe and well-maintained trail is the centerpiece, so it's important to cooperate with and support the Leadership and initiative from within the community will be necessary to turn your town into a Trail Town.

• A core bicycle, horseback riding, pedestrian and/or motorized vehicle (ATV) friendly philosophy should be local trail building and maintenance groups.

 Trail users should be accommodated both physically and socially within the town to feel adopted by your town.

. A plan of action should be developed and revised as time goes on and information is gained through completely welcomed.

 Local law enforcement agents can be important ambassadors in your town and along the trail. Goods and services for trail users will be appealing to other types of tourists and residents trial-and-error on what works best for your community.

that has been successful in more than 1,700 towns and cities throughout the United States. The following four with one of the most well-known and successful revitalization programs: The National Main Street Center's "Four Point" or "Main Street" approach. These approaches offer a complete outline for downtown revitalization tremendous community and economic benefits of being a Trail Town. A great way to achieve this is to start The first step is to have the members of the local community organize themselves to take advantage of the points are the cornerstones of the Main Street approach:

ORGANIZING gets everyone working toward the same goal. Building consensus and cooperation among the groups that have an important stake in the downtown area can be hard work, but eased by using the basic formula of a hands-on, volunteer-driven program. An organizational structure consisting of a board and committees can also be key to getting everyone on board with the revitalization.

"KENTUCKY TRAIL TOWNS: A HOW-TO-GUIDE FOR COMMUNITIES"

and traditional downtown layout is only a part of the story. An inviting atmosphere created through attractive street-lighting, well-placed bike racks, hitching posts, benches and inviting landscaping can convey a visual DESIGN gets a Trail Town into top physical shape. Capitalizing on its best assets, such as historic buildings window displays, professional signage, well-maintained sidewalks, accessible parking areas, appropriate message about what a Trail Town is all about and what it has to offer. ECONOMIC RESTRUCTURING finds a new purpose for the town's enterprises. By helping existing downtown businesses expand and by recruiting new ones to respond to today's market, Main Street programs help convert unused space into productive property and increase the competitiveness of business enterprises.

characteristics to local customers, investors, new businesses and visitors requires an effective promotion strategy. PROMOTION sells the image and promise of a Trail Town to all prospects. Marketing the downtown's unique It forges a positive town image through advertising, retail promotions, special events and marketing campaigns carried out by local volunteers.

Some fundamental information should be gathered as you start organizing your Trail Town effort. To be successful, it's important to have the right team assembled from your community to plan and implement this initiative. The office for Adventure Tourism will provide two services: (1) Assistance with recommendations on Trail Town Task force membership. (2) A kick-off presentation to task force members on the process and meaning of becoming a Kentucky Trail Town.

Now, take a few moments to write your answers in the spaces provided.

A. Define the Trail Corridor

NO. If yes, how close? 1. Is there a large trail system in close proximity to your town? YES 2. What kind of trail is it?

3. What is the trail's name?

How long is it?

5. Who manages the trail?

6. Who is the key contact or liaison for the trail?

Trail liaison phone number. Trail liaison e-mail Trail liaison

A vibrant Trail Town program could be part of your business district revitalization plan. You need to understand your local community's ability to plan and implement new programs or ideas B. Assess Local Capacity

1. Does a downtown or business district revitalization organization currently exist in your town? (If you are uncertain about this question, contact your local municipal office. They will be able to provide you with this information.)

9 Z

If YES, list the name of the organization, the downtown contact person and his or her phone number. Downtown contact phone: Downtown contact e-mail: Downtown contact:

YES

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downtown contact person to set up a meeting to discuss the Trail Town concept and how it can be integrated into the ongoing efforts. Trail users should also be at this meeting. If a downtown/business district revitalization organization already exists, the catalyst should call the

local business community and the local municipal government. The discussion at the meeting will help determine Should a downtown/business district revitalization organization not exist, the catalyst should work with the the level of local interest in moving forward with the idea of becoming a Trail Town and putting together a steering committee to begin working on the idea locally.

3. Is the organization regional (operates within the whole municipality or a larger area) or local (operates

only in your downtown area)?

REGIONAL

LOCAL

What kind of organization is revitalizing the downtown area?

'Main Street" Organization

Chamber of Commerce Merchants Association

Other: Specify

4. Does the organization implement its activities using the National Main Street Center's "Four Point"

'Main Street" approach?

5. Is the organization an IRS-recognized 501(c) 3 nonprofit corporation?

9

if no revitalization group currently exists in the community. If one does exist, the catalyst should be prepared catalyst is to start the process to gauge interest in making Trail Town changes in your community, he or she should be prepared to take a lead role in the planning and implementation process. This is particularly true A sample agenda for a kickoff meeting can be found in this folder. Although the primary job of the to play an active role with the organization.

the plans and needs of the trail organization. This will make it easier to provide a high-quality experience for The catalyst and the trail users should work in close concert. It is important that the community understands visitors and the community itself.

Create or Enhance Your Local Organization:

program must involve as many interested groups and individuals as possible from throughout the community. very well; you may not know others at all. However, in order to be successful, the local downtown revitalization Trail Town development requires the cooperation and commitment of a proactive, broad-based coalition of Everyone in your community has a stake in the town's future. Residents, businesses, property owners, government officials and nonprofit organizations are part of your town's universe. Some you may know public and private groups, including:

- Local Government Officials and Representatives
- Local Trail Organizations

 Civic Groups Businesses



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This is a handbook specifically designed for communities that do not have a central business district revitalization communities that have had less-than-satisfactory results with earlier downtown revitalization efforts. Another resource is the Kentucky Cultural Arts District (http://artscouncil.ky.gov/opportunities/newaboutculturalids.htm). If you answered NO to question B.1, you may want to contact the Kentucky Main Street Program to obtain a copy of their workbook, "Getting Ready for Downtown Revitalization" (http://heritage.ky.gov/mainstreet/). organization in place and would like to learn more about the process. It is also an excellent resource for Both programs provide guidelines to assist your community in providing needs to visitors and residents.

The catalyst for a successful Trail Town is a community member who organizes the Trail Town program. If a downtown/business district revitalization organization already exists in your town, your mayor may appoint it as the catalyst to organize the Trail Town task force or he/she may appoint a Trail Town task

6. Are you willing to serve as the catalyst to start a Trail Town effort in your community? YES

erform this duty?

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If you are not, do you know someone that may be willing to p					
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ŭ	Įa,	ţa	þe	þe	
are	Potential catalyst A:	Potential catalyst B:	Phone number A:	Phone number B:	
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"KENTUCKY TRAIL TOWNS:

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Consumers/Customers/Visitors

Economic Development

 Financial Institutions Local Media Many Others

Local Department of Transportation

 Historical Societies Extension Office Chamber of Commerce

Tourism Commission

AD Districts

Community and economic development are high priorities for county, state and federal governments, and there may be public funding available to assist you. The key is articulating a clear and compelling request Districts should be involved as they are great resources for funding and other services. Inform and involve your state and federal House and Senate members and ask them for guidance. Funding opportunities and that demonstrates value and long-term return to the community. Your regional Area Developement (AD) programs change over time, and legislative staff can help you understand current initiatives.

Your Trail Town development will progress and evolve over time. Spend some time evaluating your town's



G. Find the Resources to Implement Your Trail Town Concept

H. Take One Step at a Time:

of the business district will be built. For others, it will be an important part of a larger vision. In either case, the Trail Town goals must be integrated into the strategies and activities of the various committees. For some communities, the Trail Town concept will be the primary vision upon which the desired revitalization

1. Try to make your volunteer base as broad as possible. Involving all concerned groups

Becoming a Trail Town also involves mobilizing volunteers to carry out activities.

Develop the Local Volunteer Base:

an outcome; a kick-off parade is an output. You may want to start your implementation with a small project with good potential, one that might have good "bang for the buck." Use your resources prudently on projects that are well-thought-out and their potential impact thoroughly evaluated. energizing process, but not all ideas will, or should, be implemented. The activities that your town takes on strengths and weaknesses and try to create a new vision for your town. Generating ideas is an exciting and should be evaluated by their outcomes, not outputs. Sustained increased business activity in your town is

F. Build Partnerships:

Spend time taking an inventory of existing community groups (including church, school and youth groups). Decide who in your community has something to gain. They are your stakeholders, and you need to get them involved. Find out if your stakeholders will offer help on different projects and keep them well-informed. Bring people together at the very beginning to see what ideas your community has for this transformation. This process of developing broad-based local interest and "buy-in" is as important as your final plan. Identify key people in these groups and figure out who gets results within the community. It is helpful to meet with those whose goals match yours and brainstorm ways to unite the community around this effort.

SECTION 4. TRAIL TOWN DESIGN ISSUES

Assess the Physical Character of Your Trail (Assessment I):

The next step in preparing a plan for your Trail Town is to assess the physical characteristics of your central business district and how they relate to your trail. This will help you understand your trail and the challenges a visitor might encounter. You can use the Physical Assessment Worksheet found in Assessment 1 to help determine the characteristics of the relationship between your trail and your town.

trail systems attract tourists, especially when the Trail Town has interesting structures, is surrounded by natural on the trail for multiple days. Most users will require some degree of goods and services. Long distance/large Trail Towns can thrive along long-distance trails, which link communities through one or more counties or states. These trails tend to be used by those seeking a daylong excursion at the very least, but some may be beauty, or is near places of historic interest. As stated previously, the longer the trail, the farther visitors will travel to use it, and the farther they come, the longer they'll stay and the more they will spend

1. Identify Your Town's Trail

The first item to evaluate in assessing the physical aspects of your Trail Town is to determine the type of trail hat is running through or close to your central business district. The general categories are as follows:

- Hiking and walking
 - Observing nature
- Horseback riding
- River/water use (canoeing, kayaking, rafting)

users at different times of the year. Use worksheet A in Assessment I to indicate the various types of users who are likely to be on your trail during the course of a year. It is also useful to determine the approximate number It is very likely that the trail in your community is not exclusively one type of trail; it may be used by different people who will use the trail and visit your town during the course of the year. This analysis will be important nformation to share with business leaders so they understand the trail clientele. It will also be important in achieving the desired attendance for special community events.

Note: Meet with state/national park or forest trail managers and user groups to complete Worksheet A.

"Some men see things as they are and say, Why?" I dream of things that never were and say, Why not?"" - George Bernard Shaw, Jamously re-quoted by Robert F. Kennedy.

instance, some trails may be used by hikers year-round and by cyclists mostly in the late spring, summer and information for targeting these specific audiences for marketing campaigns or in planning local festivals. For The next item you will want to determine is when visitors are coming into your town. What time of the year fall. You may want to identify the usage cycle of your trail for each type of user by utilizing Worksheet B in is your trail being used? Knowing who is using your trail and when they are using it can provide helpful

Note: Meet with state/national park or forest trail managers and user groups to complete Worksheet B.

3. Trail Geography

An important element you will need to assess is your physical trail-to-town relationship. You will need to understand both the linear distance and elevation challenges that exist between the trail and your town's business district. The linear distance can be described in one of the following three ways:

- Internal Trail
- Adjacent Trail

Internal Trails are those where the trail actually goes directly through the central business district of a community. There might be an obvious "gateway moment" on the trail when you know you have reached a town. It is important to guide visitors to the services that might not be right along the trail Adjacent Trails are those that have a trail located immediately adjacent to a downtown area, usually within central business district. The trail user must be able to get to town. In such communities, it is important to 1/2 mile from the edge of the business district. The town can be seen from the trail, but perhaps not the create a gateway, an access trail or connector trail and supplement it with good navigational signage, brochures or other means to encourage and direct the trail users to visit your downtown. Removed Trails are those where the trail is located a few miles away from the central business district. The town may not be visible from the trail, making it more challenging to entice trail users to the town and, therefore, an access/connector trail will need to be constructed. Town maps placed at the trailhead can indicate the goods and services that are offered.

vertical distance. A good learning exercise for your Trail Town committee would be to start at the trail, walk or cycle to your central business district, then walk or cycle back to the trail. Topography is easily overcome It is also important to understand the change in elevation between the town and the trail – known as the in a motorized vehicle. You need to understand firsthand what your nonmotorized visitors experience.

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between each. A brief discussion of these elements follows: trailheads as well as distance from other sites or attractions that bring in tourists. As the range between which refers to distance from other nearby that merchants, law enforcement and the local post office be familiar with the total length of the trail and trailheads increases, the more likely goods and services will be welcomed by trail users. It is important the distance to the next towns and access points on the trail. This will ease concerns for trail users and geography that should be analyzed is range,

trail that is in relatively close proximity to your business district. For example, if a state wildlife management the range of goods and services you offer in your town may be expanded to meet the unique needs of these area is located near your town, you may have hunters who will use your town as a starting point. Subsequently, By looking at your town on a map, you can determine what other activities may occur near or along the hunters, as well as year-round trail users.

will prepare the post office for trail users who wish to send or receive packages.

they are about to enter your town.

4. Identifying Key Connecting Elements

Now that you have identified the physical attributes between the trailhead and the business district, the next step is to identify and map the key connecting elements between the trail and your business district. These cey elements are identified and mapped.

accessible by road and usually provides parking and some amenities for trail users (toilets, information, Trailhead: The areas where users can access the trail leading from town to a trail system. This area is

- Access Trail: Connector route between town and the major trail system or trail.
- Gateway: The point at which trail users enter the business district of a community. You could have more than one gateway.
- Center: The central business district of the community that may serve as a hub of goods and services
- Nodes: Specific points of interest along or near the gateway or in the center district that will be visited or utilized by the users of the trail

amenities are in place to make the trailhead a high-quality facility. Together, your organization and the local trail organization should develop clear, appropriate information for visitors and make it available at the trailhead. You may also wish to work together to provide certain amenities such as water and toilet facilities. disseminate people onto trails. It is the point to book trips and shuttles and acquire maps. As a result, it is important for your organization to work closely with the local trail group to ensure that the necessary The Trailhead: The trailhead is an area of activity, with parking, water and an information point to

In examining each of these elements, it is important to understand the function and the inter-relationship

The Access Trail: This is the connecting trail from town that meets up with the major trail system. It is also It is also a great place to station a volunteer greeter, who can answer questions about the trail and town.

The Gateway: This is the point at which the trail user enters your town. It will ideally be located at the edge of your business district closest to the trailhead. The gateway should welcome the trail-user into your central business goods and services within the district should begin. The galeway could be the access trail, where road cyclist, motorist or water trail users enter your town. Regardless, it is the point where trail users realize the point where trail users on the other end decide to take the access trail into your community. It is at this location signage and information should be provided indicating feet or miles into town and amenities they business district. It should also be the point where directional signage to individual tourist attractions and can expect.

users enjoy their experience. For example, are there bike racks at the restaurants for bicycle users, or hitching interest to the trail user. The center should be assessed for its cleanliness, safety, lighting levels and physical condition. In particular, the center should also be assessed on the availability of amenities that will help trail posts for equestrian trail users? Is there outdoor seating at restaurants? Other issues that should be addressed in the center include the availability of items such as ATMs, pay phones that accept credit cards and public The Center: The center is your business district. It is a collection of business and amenities that may be of restrooms. A checklist of center amenities for your Trail Town is included in Assessment II, which provides worksheets that will help develop and organize your new Trail Town plan.

snack food, etc.). Before it is possible to identify all of the nodes you wish to promote in your community, it is shower room or local lodging) or items of general interest to all trail users (medical supplies, water, restaurant, of the trail user (a hobby shop or antique shop), the duration of time the user will spend on the trail (a public visitor. They may include businesses that cater to the specific user (a bicycle repair shop), lifestyle interests Nodes: These are specific points either in town or along the way that are of particular interest to the trail important for you to understand the socio-economic characteristics of your trail user (see Section 5).

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town, you will probably identify several areas where your community can make improvements to become more trail-friendly. These items should be clearly defined and planned for as part of your Trail Town plan of action. Once you have identified the previous connecting trail elements, use a map or sketch of your town and trail to identify the locations of these five components. This can help you to get a better idea of how they relate to each other. You can also try to plan the flow of trail-related traffic through your town on this map or sketch. In completing this assessment of the physical characteristics of the relationship between your trail and your

Evaluate Public Amenities (Assessment II):

The next step in the Trail Town assessment process is to make a more in-depth evaluation of the amenities that trail users will encounter in your community. Such amenities may include:

- Well-marked crosswalks
- Pedestrian-friendly sidewalks
- Highly visible directional signage (including portal and gateway) Clearly identified bike paths that are well-maintained
 - Public restrooms
- Marketing materials
- Local medical services

organization might provide to trail users. This listing is also dependent on the nature of your trail users. A more complete listing of the types of public amenities that should be assessed in your community is in This list represents only a small portion of the public amenities that your community or your Trail Town the Business Checklist section of Assessment II.

the development of public amenities and may affect your town's visitor readiness. In particular, zoning laws regularing outdoor vending, sidewalk encumbrances and off-premises signage may impact the ability of your community to develop trail-friendly amenties. When conducting your public amenity assessment, talk with your planning and zoning director. All of the items detailed in this section normally fall under the It should also be noted here that not only physical amenities, but local laws and regulations will also impact esponsibility of the local or county government.

Given budgetary limitations, not all local governments will be able to undertake all of the steps necessary tr ensure that all of the public amenities are adequately dealt with. In this arena, your Trail Town organization can be an invaluable partner working with local government in completing such projects by providing financial resources and encouragement.

C. Assess Business Amenities:

characteristics of the individual trail and its primary visitors. In this regard, your organization can help the businesses to gain an understanding of the needs of the trail user. Goods and services will be addressed in After looking at public amenities, the next area of evaluation is visitor amenities that the local business community provides. The businesses that will be of interest to the trail user will largely depend on the Section 5.

From a design standpoint, you may wish to conduct an assessment of visitor-friendly amenities that are available within the community. Such an assessment may include items such as:

- Bike racks or hitching posts located outside businesses
- The extent to which restrooms are available to the public, not just for "customers only" Overall hours of operation and weekend hours

 - The availability of outdoor vending machines

Types of businesses likely to be used by trail visitors are included in Assessment II. Enhancement of existing businesses and the generation of new business opportunities should be a part of your Trail Town plan. Businesses providing such amenities or trail friendly hours of operation are voluntary and hopefully many will realize the value from a self-interest perspective. Education, encouragement and financial incentives may be needed, especially to encourage participation by small or marginal businesses.



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SECTION 5. ECONOMIC RESTRUCTURING FOR A TRAIL TOWN

retention and new business recruitment. It also deals with the key issue of market demographics. A "Main Economic restructuring is a "Main Street" term that refers to the functions of business expansion, Street" mindset can play a critical function.

A. Understand Your Trail User-Customer:

In any downtown revitalization effort, understanding your customer is one of the most important and most basic activities that a business cluster can undertake. A business cluster comprises those businesses that provide goods or services to a common customer base. It is important to consider two basic elements in order to understand your customer base. The first of these elements is the socio-economic characteristics of the individual customer base. Many trail tourists are affluent and well-educated. The second element is the lifestyle preferences of the customer base. These items relate to the choices that the customer base makes as a group in terms of items such as:

- Average dollars spent annually on the activity
- Number of times the activity was undertaken in the past year
- Dining and shopping preferences of the group

By understanding both the socio-economic and lifestyle preferences of the trail customer base, the local Trail fown organization can begin to make decisions about how best to attract these customers into the community's central business district. You may want to work with neighboring Trail Towns, tourism commissions and our tourism marketing region to clearly define your potential markets.

In determining how the local business community might respond to the needs of the trail user group, it is important to distinguish between basic needs and longer-term needs. Basic needs are the items that most trail-users will require on an average day trip.

park a vehicle is needed. There are related business opportunities for those goods and services that trail users may find of interest due to their broader lifestyle preferences. All of these elements present business growth onger-term needs are the goods and services required by multiple-day users of the trail, who, for instance, may need to wash clothes or make repairs to their bicycles. Even if they choose not to stay the night, they will still need water, restrooms and places to eat. If your town is the starting point for a trip, a safe place to opportunities for local Trail Towns.

B. Assess Basic Trail User Needs:
There are basic items that trail users will want access to on a regular basis. A trail-user list of specific goods and services that this committee should look for in its town is included in Assessment II.

community to provide these more advanced goods and services requires the Trail Town task force to work with agencies such as economic development, chamber of commerce and city/county planning for economic restructuring goals. Assessment II also provides a check<mark>list of longer-te</mark>rm needs for the multiday trail user. Overnight lodging C: Assess Longer-Term Needs: In addition to the certain needs of daily trail users, your community may benefit from visitors who are on the trail for a multiday journey or who travel from out of the region to use the trail. These users will have more specific needs, such as overnight lodging, e-mail access, laundry needs, etc. Assessing the capacity of the is a key component to a community's success in taking advantage of the economic impact of the trail

D. Encourage Related Business Opportunities:

The final grouping of potential business opportunities relates to those nontrail interests of the basic trail customer base. For instance, trail users generally seek authentic outdoor experiences and unique locations with great points of interest, enjoy local cultinary foods and seek the feel of small-community camaraderie.

They seek immersion into your local culture and look for authentic crafts, arts, performing arts and souvenirs.

Businesses should consider providing Kentucky products that use Kentucky Proud and Kentucky Crafted products. restructuring function. E. Assist the Local Business Community:
 You can assist the business community in a variety of ways with the economic. Contact: • Department of Agriculture for Kentucky Proud Products:

http://artscouncil.ky.gov/KentuckyArt/Event_Market.htm or call 502-564-8110 http://www.kyproud.com/ or call 502-564-4983
 Kentucky Crafted: The Market for Kentucky-made arts and crafts:

Another effective way to advance economic restructuring is to develop an "economic gardening" approach to the business development issues related to the trail. Using this approach, one or more members of the committee would develop an in-depth understanding of the characteristics of the trail user customer base and the trends in the activity itself. Then, through informational bulletins and educational sessions, the Trail Town concept is nurtured and grown in the community. Businesses that cater to this customer base will also flourish. The committee may wish to provide funding to ensure that magazines, books and publications that provide current information about the trail activity are available in the business section of the local library.

incentives may include façade grants that help to physically promote the image <mark>of a Trail Town or small</mark> business loans to expand a product line or service that is needed by the trail user, but is not currently resources that will enable local businesses to take advantage of the potential <mark>offered by the trail. Such</mark> A third way to assist businesses is to develop local financial incentives and identify specific financial available in the community.

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t should be noted here that promotion and marketing of the Trail Town concept can be very effective, but

turn up might start with their shirt sleeves." "The person who is waiting for something to

- Garth Henrichs

B. Hold Trail Town Events:

Once this brand identification has been established, the next step is to get people, particularly existing and potential users of the local trail, into your town to explore. An effective way to do this is by holding special events. Events that tie to your town's history, culture or heritage can be beneficial and fun for residents and safety inspections and tours of local trail-user assets are examples of the kind of special events that will attract potential trail-users into your community. Work with your local historical society or arts council to develop an annual event that celebrates the corridor's past, be it railroad, canal or river transportation. visitors alike. Such events might include a "kick-off" event or a grand opening of your Trail Town. Annual familiarization events held just before trail season that feature sessions such as trail safety classes, bicycle Folklorists, historians or re-enactors can help bring your history alive.

Conduct Trail Town Retail Promotions:

Once people are coming to your business district, you want them to purchase goods and services in the businesses in your community. Pre- and post-easons asles, special weeken sidewalk steas, holiday sales and joint advertising by the local trail-related business cluster are all examples of retail promotions that the local Trail Town organization might organize in cooperation with local merchants and/or the local chamber of commerce.

PROMOTING YOUR TRAIL TOWN SECTION 6.

promotion calendar that actually entices people to come into your downtown and purchase goods and services. All three of these are necessary to create an effective promotional campaign for your Trail Town. image." The second is to hold special events that encourage and invite existing and potential customers to come into your business district and explore its shops, restaurants and services. The final component is a retail The "Main Street Approach" suggests that there are three components to any good business district marketing strategy. The first requires working with your local tourist commission to promote the trail town "getaway

nature, a Trail Town concept is based on drawing in tourists that extend beyond your local market. It is doubtful that your community will realize the full potential of the Trail Town concept unless the larger regional population base is aware of it and what it has to offer. Creating general marketing materials that brand your business district as a Trail Town should be the function of your organization's promotions committee. Including the Trail Town logo on brochures, trail guides and all ads by your businesses will strengthen your recognition as a Trail Town and A. Promote a Trail Town Image:

The first element of your Trail Town promotional effort is to convince people that you have an active and welcoming Trail Town environment in your community. This "top-of-mind" awareness or "branding." of your velcoming Trail Town environment in your community. This "top-of-mind" awareness or "branding." of your strategy in which your local and state tourism agencies can assist. By its town is a critical part of your strategy in which your hocal may avained hexand your local market. It is doubtful improve your visitation.

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SECTION 7. PULLING IT ALL TOGETHER - THE TRAIL TOWN PLAN OF ACTION

placing small amenities (benches, planters, etc.) around town that carry your group's name, and having meetings that are open to the public. This will lead the community to take an interest in what you are doing Once you have evaluated your town and identified its needs, the next step is to begin planning your town's and will help support the master plan. Your organization can brainstorm and draft your Trail Town Master Plan. Developing a plan for your town is essential because it becomes a blueprint for action, but it does willing to improve your town. This commitment can be shown by attending local government meetings, future and get started on projects. It is important to show people that your organization is ready and require time, thoughtful consideration and debate, as well as prioritization.

A dilemma arises between spending too much time on developing a plan and impulsively running out and plan, you can form a short list of key goals for your Trail Town and tackle an easy project that meets one of mplementing the first ideas that come to mind. If you want to implement a project ahead of adopting a

While goals will vary from town to town, Trail Town organizations can include the following on their goal lists as components of community development:

- Provide a Gateway Moment
- Create a Sense of Place
- Develop a Welcoming Atmosphere Establish the Right Mix of Services
 - Promote Trail-Oriented Events

Provide a Gateway Moment:

The "Gateway Moment" is a physical feature that indicates to trail users that they have entered your town. As they move through the gateway, the space signifies the entrance to your central business district. In order to community and your town. Provide your visitors with a sense of excitement, and they will want to stop and quality of your town from the angle of the trail corridor. Does the town appear inviting? Be aware that the visit. To do this, consider the signage that exists between the trail and your town. Consider the aesthetic gateway to the town should physically greet your visitors with its landscape and immediate amenities. provide an effective gateway moment, you must consider ways to attract people's attention to your

perhaps by adding planters or placing town banners on lampposts. It is very important before you begin this project to ask your townspeople what they would like to see happen to make their town more attractive or interesting. It is also important to consider maintenance. Engaging the help of gardeners in your community can give their talents a public showcase. The design should consider your town's history and the things that make it stand out from other towns.

Emphasize the assets that are unique to your town and beautify your central business district. Start small,

B. Create a Sense of Place:

Brick sidewalks or accents add color and design to your streetscape. They can also be engraved to add history or to honor people who have contributed to your revitalization project. Planters add a natural feel calming. Tree planting can create a warm and inviting atmosphere in your town and should be done with to your downtown, and, when placed in the roadway such as in a middle left turn lane, can aid in traffic guidance from a professional landscape architect. Cleanliness should be kept in mind. Make sure there are plenty of trash receptacles and choose a grate design that will allow trash to fall through the grate, not trap it. When choosing planters for your sidewalks, pick ones that are taller than four feet or shorter than two feet. Sidewalk planters around waist level will be used as benches, trash cans and ash trays. Heavy concrete planters are best to prevent theft.

clutter to your main street, preventing it from having a relaxed atmosphere. Running telephone lines underground or along alleyways will enhance the appearance of your main street. Reduce the number of parking meters Next, take a look at your street-level infrastructure. Parking meters, overhead lines and telephone poles all add on your street by placing two on one pole, or if there is a lamppost next to a space, place a meter on it. Replace any basic utilitarian lampposts on Main Street with something more decorative and historical.

Improving the look of your downtown's buildings is a long-term project, but a painted mural on a building's second story, and bricking up windows. Restoring a building's façade can be costly; fortunately, if your town chooses to join the "Main Street Program," funding may be available to assist you. walls will tell your visitors your town has begun work. Façade work is a top priority in the "Main Street Program." Handsome buildings might be altered over time, hiding the original storefront, covering the

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Begin by creating a community that is safe for walking, cycling and/or horseback riders. Visitors should feel safe while doing these activities, crossing your streets and exploring your town. This can be accomplished by calming automobile traffic and providing amenities that trail users might appreciate and need.

- Paint or repaint crosswalks at all intersections in town
- Limit the use of Right-Turn-on-Red, which often presents a hazard to pedestrians
 Direct walkers, bicyclists and horseback riders using signage, brochures and painted footprints or icons that lead them to special attractions
- Add traffic signs warning motorists of pedestrian/bike/horseback traffic
- Add pedestrian signals that give people of all ages enough time to cross the street Create bike lanes on the street (contact KYTC for details)
 - Place benches in your downtown
- Make sure your streets are well-lit at night, especially to and from popular destinations
 Build shared-use paths for bicyclists and pedestrians to avoid dangerous intersections
- Provide street parking that will narrow the street, calming traffic, and act as a barrier between street and sidewalk traffic
- Extend curbs and sidewalks at pedestrian crossings to improve their visibility and decrease crossing distances
 - Build concrete medians in the road that provide pedestrians refuge when crossing

Remember to keep in mind emergency vehicle access when redesigning your streets. A fire truck will have turns, so be certain that curbs leading to single-lane, one-way streets are wide enough for it to get through. a very difficult time navigating a street that is too narrow, costing it valuable time. It will also make wide

bicycle/pedestrian coordinator for assistance in planning. When KYTC begins a new project, they will get input from the county judge executive and AD District. Ask your county judge and AD District to consider It is important to make cyclists as safe as possible. Contact your Kentucky Transportation Cabinet (KYTC) nowever, bicycle and pedestrian issues are only considerations. Without enough emphasis and support our needs, whether it is bike lanes, striping, curbing, etc. Their process considers community input; on the importance of sidewalks or paved shoulders, they might not be included in the project.

downtown areas is usually 25 mph. Make drivers aware of bicyclists through traffic signs that reinforce 4 cyclist's speed on a paved road can be 10 to 20 miles per hour while the vehicular speed limit in a "share the road" mentality.

D. Establish the Right Mix of Services:

Once the trail tourist has entered your town, it is important to provide the right businesses and services that will accommodate the needs of your visitor. Easily accessible grocers, ice cream stands and restaurants are business with bicycle racks near entrances would be appreciated. Camping areas near the trail or historic homes that have been turned into bed and breakfasts in the central area of town may also be options. important. You may want to make certain that there is a full-service bicycle shop near the trail, and any

E. Promote Trail-Oriented Events:

For example, you might have a weekend festival with street performers playing music, or you might organize You can organize events in your town that trail users and your community will enjoy and want to be part of promote your community. The trail can become the vehicle and tool used to help you further develop your a community bike ride along the trail. Whatever means you can find of promoting the trail will ultimately own town as a place where people enjoy visiting and living. Refer again to Section 6 for more ideas.

Remember that a plan for your town should not be a static document, but rather should be reviewed every year. Budgets, people and trends are constantly changing, and your town's plan may need to be revised to accommodate these changes. Reviewing your plan allows you to see what has been accomplished, what was done that might not have fulfilled its potential and what has exceeded expectations.

Accomplishments should be celebrated, and new ideas should be integrated into the plan. This is also the time to wrap up projects that have come to their planned conclusion and to cut projects that are not working. Make sure you keep your elected officials at the local, state and federal level apprised of your progress and your challenges Finally, consider how you will maintain the improvements you have made. Funding and community support quick process, but it can be a steady process. Your new Trail Town will be an inspiration to new tourists and visitors. But, more importantly, it will help renew your own community's sense of pride and unique identity to take on new projects may be diminished if completed projects are not properly cared for. Stay focused and remember to take small steps instead of attempting to tackle everything all at once. It may not be a

Note: Now that you have an understanding of the key components and process, please proceed to Assessment I.

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KY Tourism Arts & Heritage Cabinet http://commerce.ky.gov/cabinet/agencies.htm

Kentucky Environment and Energy Cabinet http://eec.ky.gov/Bges/default.aspx Kentucky Legislative Resources http://www.lrc.ky.gov/

Office for Adventure Tourism & Trail Town Development www.kentuckyunbridledadventure.com

Kentucky Department of Travel and Tourism www.kentuckytourism.com

Kentucky Department of Parks www.parks.ky.gov

Kentucky Department of Fish and Wildlife www.fwlky.gov

Kentucky Cultural Districts http://artscouncil.ky.gov/Opportunities/NEWaboutCulturalDs.htm Kentucky Main Street Program http://heritage.ky.gov/mainstreet/

Kentucky Cooperative Extension http://ces.ca.uky.edu/ces/

Kentucky Department of Economic Development http://www.thinkkentucky.com/

Kentucky Bike/Pedestrian Coordinator http://transportation.ky.gov/bike-walk/Pages/default.aspx Kentucky Area Development Districts http://www.kcadd.org/District_Contacts.html Kentucky Recreational Trails Association www.krta.ky.gov

Land between the Lakes National Recreation Area http://www.lbl.org/

Big South Fork National Recreation Area http://www.nps.gov/biso/index.htm

Mammoth Cave National Park http://www.nps.gov/maca/index.htm

Daniel Boone National Forest Districts http://www.fs.fed.us/r8/boone/





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Kentucky Marina Association www.kentucky-marinas.com (270) 388-2532

Pine Mountain Trail Conference www.pinemountaintrail.com (606) 633-2362

Sheltowee Trace Association www.sheltoweetrace.org (606) 584-7744

Jenny Wiley Trail Conference (606) 584-7744

Adventure Paddlers Association of Kentucky www.canoeky.com (800) 226-6359

Kentucky Bike and Bikeway Commission www.bicycleky.org (502) 564-7183

Kentucky Back Country Horseman www.kybch.com (859) 744-0397

Kentucky Horse Council www.Kentuckyhorse.org (859) 367-0509

Red River Gorge Climbers Coalition www.rrgcc.org (859) 422-3085

Eastern Kentucky Recreational Trails System 888-857-5263

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"THE BENEFITS OF STREET-SCALE FEATURES FOR WALKING AND BIKING"



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Whitesburg, KY: Downtown Section of the Tanglewood Downhill Trail Conceptual Master Plan

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AMERICAN PLANNING ASSOCIATION | Planning and Community Health Center

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INTRODUCTION

As the car became the dominant mode of transportation throughout the 20th century, the priority for cities and towns to support safe walking and biking—for either transportation or recreation—diminished. Designing our communities to efficiently move cars impacted the scale and form of our streetscapes and the connectivity of bicycle and pedestrian networks. Today, for example, walking represents less than three percent of commuting trips and, while its mode share is increasing, biking represents less than one percent of commuting activity.^A

As the costs of physical inactivity become increasingly evident, and as planners, public health professionals, and others working in the field of active transportation strive to promote walking and biking, the necessity of retrofitting and updating street facilities and sidewalk features is apparent. The benefits of incorporating infrastructure that supports active transportation into our streetscapes are many. While efforts to encourage walking and biking often focus on physical activity benefits, it is important to recognize that investments in these travel modes offer a wider set of potential co-benefits for communities.

This literature review focuses on the benefits that may arise from investment in different types of street-scale features, either independently or in combination. The review considers not only potential impacts related to physical activity—which have been treated extensively in the literature to date—but also a variety of co-benefits including social cohesion, crime prevention and public safety, multimodal traffic safety, mental health, and economic effects. The review links these co-benefits to various types of street-scale features that encourage walking and biking, such as sidewalks, bicycle lanes, traffic calming, crossing aids, aesthetics and placemaking, public space, street trees, green infrastructure, and street furniture.

This analysis provides background information and supportive data for **planners, transportation professionals, advocates,** and **policy makers** working to encourage community design that promotes active transportation. Through this report, individuals working locally will be able to highlight the co-benefits of street-scale interventions that support walking and biking.

Methodology

Definitions of features and co-benefits

This analysis focuses on nine street-scale features and related co-benefits. The features, defined in Table 1, are those that can be deployed at the street scale, rather than requiring deployment on a broader network scale. In addition to feature definitions, Table 1 also indicates the number of resources included in the literature review that address each feature.

Feature	Definition	Number of resources
Sidewalks	Maintained areas in the public right-of-way dedicated to pedestrian use, ideally at least five feet wide	57
Bicycle Facilities	Bike lanes, separated bike lanes (cycle tracks), shared lane markings (sharrows), off-road paths, and other facilities such as bike racks	49
Traffic Calming	Physical interventions in street design, including traffic circles and roundabouts, neck downs, center island narrowings, chicanes, speed bumps, and textured surfaces, among others, that can reduce speeds and traffic volumes, improving the experience and safety of users of nonmotorized transportation	53
Crossing Aids	Marked and unmarked crosswalks, pedestrian signals	32
Aesthetics and Placemaking	Public art, fountains, splash pads, decorative features, and other streetscape interventions that create human scale and sense of place	20
Public Space	Parks, plazas, and other spaces accessible to and usable by the public	16
Street Trees	Trees planted along the street or sidewalk to provide shade or for aesthetic purposes	38
Green Infrastructure	Green infrastructure features at the neighborhood or site scale, including greenways, rain gardens, riparian buffers, bioswales, pervious pavement, and green streets	10
Street Furniture	Small-scale features – generally in a fixed location – including bike racks, benches, bus shelters, and signs, which are both functional and create a sense of place	18



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The co-benefits examined in this review are identified and defined in Table 2. This table also includes the number of resources in the review that address each co-benefit.

Co-benefit	Definition	Number of resources
Physical Activity	Increased levels of physical activity, including walking and biking, for transportation or leisure purposes	65
Social Cohesion	Increased levels of social interaction, social support, collective monitoring, social trust, sense of community, shared cultural identity	36
Crime Prevention and Public Safety	Reductions in actual property and violent crime and perceptions of crime; improvements in public safety	17
Multimodal Traffic Safety	Reductions in frequency and/or severity of crashes or injury to pedestrians, bicyclists, and motorists; increased compliance with traffic regulations	34
Mental Health	Improvements in stress, anxiety, depression, energy levels, sleep quality, and fear of crime	22
Economic	Increased consumer spending, return on investment, job creation, tourism/visitors, and pedestrian and bicycle traffic for local businesses	31

Literature review

This literature review summarizes current evidence on the relationships between the street-scale features and co-benefits defined in Tables 1 and 2. To gain a broad understanding of these relationships, we considered a variety of resources both within and beyond the academic literature. A total of 152 resources were reviewed. The types of resources include:

- Academic journal articles
- Published books
- Reports by transportation and public health agencies, policy makers, and other groups
- Case studies of existing policies and projects

We used the street-scale features and co-benefits in Tables 1 and 2 as search terms in a variety of research databases. We also reviewed the reference lists of existing literature reviews on related topics—such as physical activity promotion, the built environment, and urban design—to identify resources that relate to the topic of interest for this review. Our review included resources that met the following criteria:

- Addressed the direct link between at least one street-scale feature and one co-benefit
- Presented either background information or empirical evidence for this link

We generally excluded resources that focused on broad measures of the built environment (e.g., larger street network connectivity, urban sprawl, metropolitan area density and land-use patterns) or on broad community benefits that cannot easily be attributed to specific street-scale interventions (e.g., larger environmental impacts, overall livability and sustainability, mobility). However, as we reviewed the background materials cited in many of our resources, we identified several studies that measured one or more street-scale features as part of an overall measure of the built environment (e.g., a walkability index). We included these resources as they were identified, provided that they met the other inclusion criteria.

Strengths and limitations of the review

As previously noted, this review captures only a subset of the co-benefits of active transportation investments: those that can be tied to a specific street-scale feature. Active transportation investments may have broader benefits beyond those considered in this review. Additionally, many of the case study resources focus on large cities that have invested extensively in multimodal transportation, such as New York City or Portland, Oregon, or on international locations, such as the Netherlands, whose experiences may not be broadly applicable to all areas of the United States.



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Despite these limitations, the literature review is based on a diverse set of resources—beyond the academic literature—that are relevant to broad audiences, including policy makers, planners, academics, and advocates. While some community benefits are not addressed, the review is focused in scope and summarizes a subset of the evidence that can be used to further support and justify active transportation investments.

Summary of Findings

Physical activity

Street-scale features can promote walking and biking, leading to increases in physical activity. While cultural and social influences play a role and while active transportation is not highly prevalent in the United States (25, 80), individuals are more likely to walk and bike when the built environment is more supportive of physical activity and provides more opportunities for active transportation to and from local destinations.

- Dedicated pedestrian facilities and related street-scale features increase walking. Most pedestrians choose to use
 sidewalks when they are available (36), and sidewalk availability in a neighborhood is positively associated with total amounts
 of walking (58). Residents of areas with features such as streetlights, pedestrian crossings, and traffic calming are likely to walk
 more (13). In a study of the Twin Cities in Minnesota, positive correlations were found between miles walked per day and the
 presence of sidewalks, as well as other street-scale features such as street lighting and traffic-calming measures. Additionally,
 transportation-related walking (i.e., walking to reach destinations) was positively associated with these street-scale features (25).
- Aesthetic and placemaking features are important elements of environments that encourage pedestrian activity.
 Features that create "streetscape texture"—including public art, street furniture, and buildings of different types, styles, and colors—help to maintain pedestrian interest (80). For example, a New York City study found that the presence of sidewalk cafes is positively associated with both walking and biking (53).
- **Dedicated bicycle facilities increase biking.** Dedicated bicycle facilities have been found to lead to an increase in bike trips (1, 75, 77). In a study of cycling and the built environment in King County, Washington, cyclists and noncyclists indicated that improvements to the cycling environment—including bike lanes and trails, and features such as lighting at night and bicycle racks—would encourage them to bike more (60). A study conducted in the East Village neighborhood in New York City found that protected bike lanes led to an increase in cycling, and study participants stated that they were more likely to bike with the addition of protected lanes (77).
- New bicycle facilities are likely to increase the overall amount of biking. Because sidewalks are more widespread than bike lanes or other bicycle facilities, investing in new bicycle facilities is more likely to have an impact on the *total* amount of cycling, whereas investing in new sidewalks will more likely affect where people walk (43).
- There are equity concerns related to where active transportation facilities are located. A study conducted in the central Puget Sound region found that, despite the lack of pedestrian infrastructure, between 400 and 800 people walked to suburban commercial centers during the workday. The study also found that pedestrians at these sites were disproportionately young and pedestrians of color, when compared to the corresponding census populations (36). A study in Michigan found that communities with walkable environments tend to have several characteristics: educated and homogenous populations, as well as available funding to support street-scale interventions (80). These demographic and socioeconomic differences may have implications for where and how active transportation facilities are built, promoted, and supported for diverse population subgroups.

Residential self-selection and physical activity

Residential self-selection—the idea that people who want to walk and bike may choose to live in neighborhoods that support walking and biking—has been examined extensively in the literature. This subset of the literature examines residential self-selection as a confounding variable in order to determine whether features of the built environment still have an impact on transportation behavior after controlling for neighborhood choice. Several studies have found that, when residential self-selection is accounted for, built environment factors remain significant predictors of active transportation (14, 15, 17). Studies that do not account for residential self-selection may overstate the benefits of built environment features.



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Social cohesion

Street-scale features can influence social cohesion by fostering social interaction, building community trust, supporting social equity, and creating a shared sense of identity.

- Walkable streets provide opportunities for social interaction. Street-scale features that encourage walking in the public realm can lead to opportunities for social interaction—planned or unplanned, one-time or repeated—with other members of a neighborhood or community (2, 16, 29, 42, 29, 50, 66, 72, 83). These types of interactions, especially when repeated over time, can build community cohesion and trust. A case study of three neighborhoods in Boston found that the following features had the greatest influence on social interaction: seating (both formal and informal), sidewalk width, building facades (e.g., nooks, small setbacks), shade/shelter (e.g., trees, awnings), and unique storefronts (59).
- Street-scale features promote "eyes on the street." Street-scale features can offer "natural surveillance" or "eyes on the street" (12, 29, 40), which supports community trust and deters both actual crime and fear of crime (72). The effects of neighborhood disorder can be buffered by strong, informal social ties (67). While walkable streets may also increase the number of "outsiders" (visitors) and present problems for social monitoring, this effect is generally outweighed by the effects of natural surveillance and residents of walkable neighborhoods tend to feel safer than residents of less walkable neighborhoods (26,29, 82).
- Walkable streets can enhance sense of community. Public spaces and attractive environments in which many people
 walk and cycle can create a unique sense of place and shared social identity (27, 42, 54, 83). A study of the Kentlands
 development in Maryland found street-scale features including block size, street landscaping, arrangement of buildings,
 pedestrian amenities, architecture, and street frontage (e.g., garage location) to be correlated with sense of community (42).
 Another study in Portland, Oregon, found walkable pedestrian environmental features to be associated with stronger sense of
 community, even after controlling for attitudes (54). Specific features such as public art (34, 71) and historic preservation (50)
 can build a shared sense of culture and history.
- Street-scale features can influence social support, and social support can encourage physical activity.

 Environments that encourage walking and cycling can increase social interaction and support. One study in the Netherlands found low quantities of green space to be associated with loneliness and perceived lack of social support (57), while another study in Miami found architectural features that promote visual contact (e.g., porches, windows, setbacks) to be correlated with higher social support among elderly residents (12). This relationship can also work in the opposite direction: Several studies have found social support to be an important predictor of walking, cycling, and overall physical activity (5, 7, 68). The relationship between environment, physical activity, and social support can therefore be a self-reinforcing cycle, albeit complex.
- Planning for walking and cycling supports social equity. Investing in street-scale features that support active transportation are particularly important for those who depend on alternatives to the automobile. These groups may include socioeconomically disadvantaged populations, disabled individuals, older adults, and children (20, 29, 30, 50, 72, 76, 78). Investments in active transportation can improve equity and access to economic opportunities (30, 50). Additionally, walkable streets can foster social interaction among individuals with diverse backgrounds (49), and thereby increase social trust.
- The act of creating community spaces can support social cohesion. While evidence shows that green spaces can support social cohesion once they are in place, the act of creating these spaces may also be important. Community-based creation of green spaces and community gardens (e.g., public involvement in planning, tree planting and garden-building events) can build social capital and empower community members to improve their neighborhoods (4, 81).

Crime prevention and public safety

Community members engaging in active transportation create street-level activity. This activity can have effects on *actual* crime and safety, as well as *perceptions* of crime and safety.

- **Greenery can increase actual and perceived safety.** While several studies note the perception that vegetation leads to higher crime rates by providing places for criminals to hide and crime to take place (44, 46), research has found that the greener a building's surroundings, the lower are both violent and property crime rates (46). Research has also found that tree density and grass maintenance increase the sense of safety in inner-city neighborhoods (44).
- Other street-scale features can increase actual and perceived safety. As noted in the social cohesion section above, both actual safety and perceptions of safety influence the decision to walk (72). This may occur due to "eyes on the street" and a greater sense of social trust, both of which can be supported by features that encourage street-level activity.



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- Interventions that do not lead to lower crime rates may have other safety-related benefits. A study of community gardens in Houston found that areas with community gardens have comparable crime rates to areas with similar demographic profiles; however, they are perceived by community members to be safer, and they may result in other positive outcomes such as less illegal dumping, less noticeable drug activity, and higher property values (31).
- Safety is not just an important co-benefit of active transportation—it is important to supporting active transportation. A study in New York City found that safety concerns can discourage active transportation in neighborhoods that otherwise have walkable urban form. For example, neighborhoods with high homicide rates have lower rates of active transportation (53).

Multimodal traffic safety

Street-scale interventions that create dedicated facilities for pedestrians and bicyclists, as well as those that are intended to calm traffic, can have safety benefits for all street users. Bicycle and pedestrian facilities can raise awareness and visibility of these travel modes within the transportation network and traffic calming measures can slow traffic speeds, thereby reducing the number of crashes that result in injury.

- **Pedestrian-specific infrastructure interventions improve safety.** Street-scale interventions that support walking lead to improvements in pedestrian safety (23, 35, 64). Specific interventions found to be highly effective include sidewalks, pedestrian refuge islands, exclusive pedestrian signal phasing, more intense roadway lighting, and single-lane roundabouts (64). Well-marked crosswalks also lead to a higher observance rate (i.e., compliance with crossing regulations) by both pedestrians and drivers (35).
- Cyclist-specific infrastructure interventions improve safety. Just as pedestrian-specific interventions improve safety, street-scale interventions designed for biking have positive safety implications for cyclists and other road users (6, 23, 65). Safety improvements have been observed following the implementation of sharrows (a shared lane marking that indicates to drivers that bicyclists are allowed to use the full lane), including increased driver awareness of cyclists, safer passing by drivers, and increased lane observation by cyclists (10, 23, 39, 69, 70). There is a lower rate of injury for bicyclists on cycle-tracks (physically separated bike lanes) than on roadways (55, 56, 75). Other street-scale interventions, including street lighting and proper maintenance of bicycle routes, have safety benefits for cyclists (65).
- Traffic calming measures improve safety. Traffic calming measures affect the speed and volume of traffic, which can improve safety for all street users by reducing the frequency and severity of crashes (22, 37, 51, 84). A meta-analysis of area-wide traffic calming-measures in eight countries found the overall rate of injury crashes to be 15 percent lower in these areas, with an average reduction of 25 percent on residential streets and 10 percent on main roads (22). This finding illustrates the benefit of implementing broad street-scale interventions, rather than installing traffic calming in just a small number of locations.
- The number of pedestrian and bicycle incidents may initially increase even as the *risk* of active transportation decreases. It is important to note that improvements to pedestrian and bicycle infrastructure may not immediately reduce the *total number* of collisions and injuries; indeed, if these improvements lead to an increase in walking and biking, they will also increase opportunities for collisions with automobiles (53). However, even if the total number of collisions remains stable or increases, the greater number of pedestrians and bicyclists means that the collision *rate* or *risk* per individual traveler is lower. This may occur due to a "safety in numbers" effect, in which drivers become more aware of pedestrians and bicyclists and these modes become a more integrated part of the transportation network. This effect may take time to appear, and bicycle facilities—particularly those that cross intersections—may be subject to an increased risk of "looked-but-failed-to-see" collisions between bicyclists and cars, which occur when drivers look for other vehicular traffic, but fail to see bicycle traffic (65).
- Perceptions of safety from traffic are important to increasing active transportation. Safety-related concerns are
 a commonly cited reason for deciding not to bike (65). A review of the literature on cycling in six European cities found
 perceptions of safety, along with comfort and continuity of the network, to be the key factors determining whether people
 will bike (38).
- There are equity concerns related to where street-scale features are installed. Neighborhoods with high percentages of low- or middle-income populations are less likely to have street-scale features, including sidewalks and traffic safety measures, which make walking safe and appealing. A study that examined more than 10,000 streets in 154 communities across the United States found that a variety of street-scale pedestrian and traffic safety features—including streetlights, sidewalks, marked crosswalks, and traffic-calming features—were more likely to be found in high-income areas than in their low- and middle-income counterparts (11).



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Mental health

Walking and cycling can have multiple benefits for both physical and mental health (72). Many characteristics of the neighborhood environment—particularly street trees and green spaces—are also associated with positive mental health.

- Walking promotes mental health. Walking is associated with reduced anxiety symptoms, better sleep quality, more positive affect (e.g., happiness, enthusiasm, contentment), and better cognitive performance (e.g., for children at school, for older adults) (13). These benefits may be greater when walking takes place in proximity to certain environmental features, such as greenery and water (13, 41). The benefits may also be greater among those who already have relatively poor mental health status (13).
- **Social cohesion promotes mental health.** As previously described, street-scale features can foster social cohesion and other forms of social capital. Higher social capital, in turn, is associated with improved mental health outcomes (29).
- Various aspects of walkability and neighborhood quality are associated with mental health. A study in King County, Washington, found higher neighborhood walkability—based on distance to and number of amenities, block size, dwelling unit density, and other factors—to be associated with reduced depressive symptoms in older men; this relationship was not found for women or for younger populations (8). Another study in South Wales found higher neighborhood quality—based on indicators such as litter, graffiti, vandalism, green areas, and aesthetics—to be correlated with greater mental health (3). Specific components of neighborhood satisfaction (safety and walkability, social network, and traffic noise) were positively associated with mental health in a study in Australia (48), and other researchers found perceived green space, noise, and safety to be correlated with mental health in Greenwich, London (33).
- Green spaces and street trees play an important role in mental health. Research shows that forest views have a more positive impact on mental health than urban views (47, 79), suggesting the value of incorporating green space into urban environments. Green spaces may have "restorative effects" on mental health, and in a nationwide survey in the United States, a "calming effect" was rated as the second most important benefit of street trees (behind shade/cooling) (52). Studies in the United States, Denmark, Australia, and Sweden have found neighborhood green spaces and street trees to be associated with lower symptoms of depression, anxiety, and stress (9, 21, 32, 61, 73, 74). In fact, one study in London found that for every one-unit increase in the density of street trees per kilometer of street, the antidepressant prescription rate decreased by 1.18 prescriptions per 1,000 residents (74). In a study in Chicago, levels of aggression, violence, and mental fatigue were higher among urban public housing residents living in "relatively barren" areas, compared to those living in areas with nearby trees and grass (45).
- Quality and distance are important considerations. The quality of green spaces (e.g., variation, maintenance, orderly arrangement, absence of litter, and general impression) may be more important to mental health than their quantity (21). Finally, because research shows that people may not go out of their way to access green spaces (32), incorporating green space into the urban fabric (and thus everyday life) is an important mental health objective. This relationship may be particularly important for socioeconomically disadvantaged populations. Lower-income neighborhoods tend to have lower levels of access to street-scale features that are positively associated with mental health, which further burdens these communities.

Economic

Economic benefits are also associated with street-scale features for walking and biking. These benefits include higher property values, an increase in visitors, an increase in pedestrian and bicycle traffic near businesses, and job creation for construction and maintenance of bicycle and pedestrian facilities. Pedestrians and bicyclists may be more likely than motorists to stop at local establishments, as they are moving at a slower pace and may be more likely to notice shops or restaurants.

- Street-scale interventions have a positive impact on property values. Location in a walkable neighborhood has a positive impact on housing values, as does proximity to bike facilities; traffic calming measures can also improve property values (13, 24, 63, 43, 50, 51, 72). A Vermont Agency of Transportation study found that property values of homes in walkable neighborhoods were \$6,500 higher than those of homes in less walkable or more car-dependent neighborhoods (63), while homes within a half-mile of Indianapolis's Monon trail were found to sell for 11 percent more than comparable homes not near the trail (74)
- People who walk or bike to retail establishments spend more over time than people who drive to the same places.

 A Portland study found that when trips are examined by mode choice, people who drive spend the most per visit, but cyclists spend the most per month and make more frequent visits to different types of establishments, including bars, convenience stores, and restaurants (19). A survey of East Village shoppers in New York City similarly found that bicyclists spend the most per capita per week, followed by pedestrians, and that both bicyclists and pedestrians spend more than drivers or subway



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users. Bicyclists and pedestrians also visit the neighborhood more frequently than people arriving by cab, subway, or car (77). A survey of Toronto's Bloor Street found that pedestrians spent the most over the course of a month (and visited the area the most often), followed by bicyclists (24).

- Street-scale interventions create jobs. Investment in and maintenance of bicycle and pedestrian facilities creates both direct and indirect jobs (24, 28, 62, 63). A study of bicycle, pedestrian, and road infrastructure in Baltimore found that spending on bicycle and pedestrian facilities creates more jobs per \$1 million spent than road infrastructure, due to the percentage of expenditures spent on labor relative to materials and the relationship between construction and engineering costs (28). A study of North Carolina's Northern Outer Banks found that spending by bicyclists is responsible for creating or supporting 1,400 annual jobs (62), while Boulder, Colorado's bicycle economy is estimated to support 330 full-time jobs in manufacturing; education, advocacy, and outreach; and retail, rental, and repair (24).
- Access to bicycle facilities is a tool for recruiting workers. Proximity to bicycle facilities provides workers with the option of bicycle commuting and can be an important tool for attracting employees. As a result, some businesses are intentionally choosing locations near bicycle lanes and other bicycle facilities (1).

Conclusions

Street-scale features of the built environment can positively impact not only physical activity, but also a variety of other co-benefits that enhance community health and livability. As outlined in the sections that follow, these benefits have implications for policy and planning practice, as well as for future research.

Policy and planning implications

The key conclusions of this review are summarized below, with further consideration of their implications for policy and planning practice:

- Benefits for the Local Economy. Strategic investments in street-scale features can have benefits for the local economy. Pedestrians and bicyclists are more frequent visitors to a range of business types and, as a result, may spend more over time. These facilities can add value to surrounding properties, and investment in pedestrian and bicycle infrastructure can create both direct and indirect jobs. Benefits to the local economy should be incorporated into cost-benefit analyses and other decision-making processes for active transportation investments.
- **Equity Concerns.** Low-income neighborhoods are less likely to have environments where walking is safe and appealing. It is important for planners, policy makers, advocates, and others to consider equity of location and access when prioritizing locations for street-scale interventions. Focused interventions in disadvantaged neighborhoods and communities may help reduce disparities in safety, use of active transportation modes, and corresponding health outcomes such as obesity and mental health.
- **Facility Maintenance.** Just like roads, street-scale features that support walking and biking require ongoing maintenance. Benefits from street-scale interventions may also take time to appear, and it is therefore important that bicycle and pedestrian facilities and other street-scale features are maintained over time to ensure that their full potential is realized.
- Education and Awareness. While street-scale features can lead to an increase in walking and biking, as well as other cobenefits, there is a need for education and awareness efforts for the full benefits of these interventions to be realized. Currently, active transportation is not the norm in most communities in the United States, and education and awareness campaigns to promote a cultural shift are needed as a complement to infrastructure investments. Education and awareness campaigns are also important for safety, teaching users of all modes to interact safely as pedestrian and bicycle travel becomes more commonplace.
- **Increased Safety.** Street-scale interventions can have important safety benefits, both in terms of traffic safety (e.g., reduced crashes, increased driver awareness) and in terms of crime prevention and public safety. Both types of safety are important considerations in the decision to walk or bike, and have broader benefits for the surrounding community.
- **Perceptions of Safety.** While actual safety is an important co-benefit of street-scale features, *perceptions* of both multimodal traffic safety and crime prevention and public safety are also important. Individuals are more likely to engage in active transportation when they perceive the environment to be safe, and street-scale features that support perceptions of safety—such as streetlighting, street furniture, and aesthetic amenities—can go a long way towards increasing rates of physical activity for transportation or recreation.
- Where People Live. Individuals who prefer to walk or bike may be more likely to choose to live in neighborhoods that have features that support this preference. However, research has shown that the built environment and street-scale interventions can lead to more walking and biking even when residential self-selection is accounted for. As a result, and—even more



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importantly—for reasons related to equity, investments should not be limited to areas or neighborhoods that are likely to have the most vocal advocates for active transportation. Instead, investing in a broad range of communities can maximize the direct and indirect benefits of street-scale features and lead to more equitable planning and outcomes.

Part of the Larger Network. While this review has focused on the street scale, no project exists in isolation. Rather,
the success of individual projects depends largely on their integration into the larger network of pedestrian and bicycle
infrastructure. For example, a bike lane in isolation will have few benefits if not connected to a larger network of bicycle
facilities allowing for seamless travel. It is therefore important to consider street-scale features as part of the larger network and
to pursue coordinated plans and projects that lead to connected facilities. Similarly, while this review focused exclusively on
benefits that could be tied to specific street-scale interventions, individual projects and coordinated planning efforts may also
be justified based on larger network scale benefits, such as reduced health care costs, reduced traffic, and improved air quality.

Future research

In addition to the policy and planning implications discussed above, the findings of this review suggest several opportunities for future research.

- Additional Research on Street-Scale Features. While a wealth of research has addressed larger aspects of the built
 environment—such as road network connectivity, population density, jobs-housing balance, and urban sprawl—research at
 the finer scale of the streetscape has been more limited to date. Further research should be conducted to assess the impacts
 of specific street-scale interventions on walking, biking, and related co-benefits. This effort may be best undertaken through
 partnerships between researchers in the fields of planning, urban design, landscape architecture, economic development, and
 other social sciences.
- **Longitudinal, Intervention-Based Research.** The majority of studies reviewed for this report used cross-sectional research designs that examine different locations at the same point in time. Future research should examine data in the same places over time, particularly in areas that receive a streetscape or other environmental intervention. A crucial direction for future research is to examine the impacts of street-scale interventions that combine infrastructure investments with education and awareness campaigns intended to change behavior.
- Quantifying the Benefits. Many of the studies in this review were designed to determine whether an impact was present, but not to measure the magnitude of that impact. Further work to quantify the co-benefits of active transportation investments would be valuable for project evaluation efforts, cost-benefit analyses, and other aspects of the decision-making process.
- More Case Studies and Broader Contexts. There is a need for additional case studies on the co-benefits of street-scale
 interventions. The majority of resources included in this review were academic studies or agency reports, while relatively few
 were detailed case studies of interventions, policies, or programs in specific communities. Case studies may be helpful to
 highlight the planning processes and nuances that lead to project success. Additionally, many of the studies in this review
 focused on cities in other countries; on larger U.S. cities such as New York City or San Francisco; or on cities with strong walking
 and biking cultures, such as Portland and Seattle. Future work should examine broader and potentially more representative
 settings that will increase the applicability of findings.
- Equity Considerations. As noted throughout this report, the location of street-scale interventions raises important challenges and opportunities for social equity. On the one hand, interventions that generate local revenue and increase property values may raise concerns related to displacement and gentrification. On the other hand, street-scale interventions may also result in equity-related benefits such as expanded transportation options for those who rely on alternatives to car travel. These trade-offs have not been examined extensively with reference to street-scale features. Future research should examine the equity-related impacts of street-scale interventions and consider how equity challenges and opportunities can be most effectively addressed in practice.



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ENDNOTES

- A McKenzie, Brian. "Modes Less Traveled—Bicycling and Walking to Work in the United States: 2008–2012." U.S. Census Bureau, May 2014. https://www.census.gov/prod/2014pubs/acs-25.pdf.
- B Definitions of street-scale features are drawn from the literature as well as from American Planning Association . 2006. *Planning and Urban Design Standards*. Hoboken, New Jersey: John C. Wiley & Sons.
- C Definitions of co-benefits are broadly drawn from the resources included in the literature review.





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WORKS CITED

- 1. Andersen, Michael, and Mary Lauran Hall. 2014. Protected Bike Lanes Mean Business: How 21st Century Transportation Networks Help New Urban Economies Boom. People Powered Movement. Available at www.sfbike.org/wp-content/uploads/2014/04/Protected_Bike_Lanes_Mean_Business.pdf
- 2. Anquetil, Virginie. 2009. Neighbourhood social cohesion through the collective use of green spaces: A case study of EVA-Lanxmeer neighbourhood, Culemborg, the Netherlands. Available at www.eva-lanxmeer.nl/sites/default/files/kennis/files/NeighbourhoodsocialcohesionVirginieAnquet il poff
- 3. Araya, Ricardo, Frank Dunstan, Rebecca Playle, Hollie Thomas, Stephen Palmer, and Glyn Lewis. 2006. "Perceptions of social capital and the built environment and mental health." Social Science & Medicine 62, 3072–3083. Available at www.ncbi.nlm.nih.gov/pubmed/16439045.
- 4. Armstrong, Donna. 2000. "A survey of community gardens in upstate New York: Implications for health promotion and community development." *Health and Place* 6(4), 319–327. Available at www.sciencedirect.com/science/article/pii/S1353829200000137.
- Badland, H., M. Knulman, P. Hooper, B. Giles-Corti. 2013. "Socio-ecological predictors of the uptake of cycling for recreation and transport in adults: Results from the RESIDE study." Preventative Medicine 57, 396–399. Available at http://www.sciencedirect.com/science/article/pii/S0091743513002077.
- Barnes, Gary. 2004. The Benefits of Bicycling in Minnesota. Minnesota Department of Transportation. Available at www.lrrb.org/media/reports/200450.pdf.
- 7. Beenackers, M.A., S. Foster, and C.B. Kamphuis. 2012. "Taking up cycling after residential relocation: built environment factors." *American Journal of Perventative Medicine* 42, 610–615. Available at http://www.ncbi.nlm.nih.gov/pubmed/22608378.
- 8. Berke, Ethan M., Laura M. Gottlieb, Laura M., Anne Vernez Moudon, and Eric B. Larson. 2007. "Protective association between neighborhood walkability and depression in older men." *Journal of the American Geriatrics Society* 55:526–533. Available at http://www.ncbi.nlm.nih.gov/pubmed/17397430.
- 9. Beyer, Kirsten M.M., Andrea Kaltenbach, Aniko Szabo, Sandra Bogar, F. Javier Nieto, and Kristen M. Malecki. 2014. "Exposure to Neighborhood Green Space and Mental Health: Evidence from the Survey of the Health of Wisconsin." International Journal of Environmental Research and Public Health 2014, 11, 3453–3472. Available at http://www.ncbi.nlm.nih.gov/pubmed/24662966.
- 10. Brady, John, Jeff Loskorn, Alison Mills, Jennifer Duthie, Randy B. Machemehl. 2011. "Effects of Shared Lane Markings on Bicyclist and Motorist Behavior." ITE Journal 81(8), 33–38. Available at http://trid.trb.org/view.aspx?id=1126863.
- Bridging the Gap. 2012. "Income Disparities in Street Features that Encourage Walking." Available at www.bridgingthegapresearch.org/asset/02fpi3/btg_street_walkability_FINAL_03-09-12.pdf.
- 12. Brown, Scott C., Craig A. Mason, Tatiana Perrino, Joanna L. Lombard, and Frank Martinez. 2008. "Built Environment and Physical Functioning in Hispanic Elders: The Role of 'Eyes on the Street." 2008. University of Miami Scholarly Repository. Available at www.ncbi.nlm.nih.gov/pmc/articles/PMC2569086.
- C3 Collaborating for Health. 2012. Benefits of regular walking for health, well-being and the environment. Available at www.c3health.org/wp-content/uploads/2009/09/C3-report-on-walking-v-1-20120911.pdf.
- 14. Cao, X. 2006. "The Influences of the Built Environment and Residential Self-Selection on Pedestrian Behavior: Evidence from Austin, TX." Transportation 33 (1). Available at http://link.springer.com/article/10.1007%2Fs11116-005-7027-2#page-1.
- Cao, Xinyu, Patricia L. Mokhtarian, and Susan L. Handy. 2009. "Examining the Impacts of Residential Self-Selection on Travel Behavior: A Focus on Empirical Findings." Transport Reviews Vol. 28, No. 3.: 359–395. Available at www.reconnectingamerica.org/assets/Uploads/impactsresidentialselfselection.pdf.
- Cattell, Vicky, Nick Dines, Wil Gesler, and Sarah Curtis. 2008. "Mingling, observing, and lingering: Everyday public spaces and their implications for well-being and social relations." Health & Place 14 (2008) 544–561. Available at http://www.sciencedirect.com/science/article/pii/S1353829207000913.
- 17. Cervero, Robert, and Reid Ewing. 2010. "Travel and the Built Environment." *Journal of the American Planning Association*, Vol. 76, No. 3: 265–294. Available at http://www.tandfonline.com/doi/abs/10.1080/01944361003766766#.vdy9yflVhBc.
- 18. Clean Air Partnership. 2009. Bike Lanes, On-Street Parking, and Business: A Study of Bloor Street in Toronto's Annex Neighbourhood. Available at www.bikeleague.org/sites/default/files/bikeleague/bikeleague.org/programs/bicyclefriendlyamerica/bicyclefriendlybusiness/pdfs/toronto_study_bike_lanes_parking.pdf.
- 19. Clifton, Kelly, Sara Morrissey, and Chloe Ritter.2012. "Business Cycles: Catering to the Bicycling Market." TR News 280, May–June 2012. Available at http://kellyjclifton.com/Research/EconImpactsofBicycling/TRN 280 CliftonMorrissey&Ritter_pp26-32.pdf.
- Currie, Graham, Tony Richardson, Paul Smyth, Dianne Vella-Brodrick, Julian Hine, Karen Lucas, Janet Stanley, Jenny Morris, Ray Kinnear, and John Stanley. 2009. "Investigating links between transport disadvantage, social exclusion and well-being in Melbourne—Preliminary results." Transport Policy, 16, 97–105. Available at https://www.sciencedirect.com/science/article/pii/S0967070X09000092.



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- 21. de Vries, S., S.M. van Dillen, P.P. Groenewegen, and P. Spreeuwenberg. 2013. "Streetscape greenery and health: Stress, social cohesion and physical activity as mediators." Soc Sci Med 2013 Oct.; 94:26–33. Available at www.ncbi.nlm.nih.gov/pubmed/23931942.
- 22. Elvik, Rune. 2001. "Area-wide urban traffic calming schemes: a meta-analysis of safety effects." Accident Analysis & Prevention 33(3), 327–336. Available at www.ncbi.nlm.nih.gov/pubmed/11235794.
- 23. Fitzpatrick, Kay, Susan T. Chrysler, Ron Van Houten, William W. Hunter, and Shawn Turner. 2011. "Evaluation of Pedestrian and Bicycle Engineering Countermeasures: Rectangular Rapid-Flashing Beacons, HAWKS, Sharrows, Crosswalk Markings, and the Development of an Evaluation Methods Report." National Technical Information Service. Available at http://trid.trb.org/view.aspx?id=1100782.
- 24. Flusche, Darren. 2012. "Bicycling Means Business: The Economic Benefits of Bicycle Infrastructure Investments." League of American Bicyclists. Available at http://bikeleague.org/sites/default/files/Bicycling and the Economy-Econ Impact Studies web.pdf.
- 25. Forsyth, Ann, Mary J. Hearst, Michael Oakes, and Kathryn H. Schmitz. 2008. "Design Destinations: Factors Influencing Walking and Total Physical Activity." *Urban Studies*, Vol. 45, No. 9. Available at http://www.researchgate.net/publication/228627584 Design and Destinations Factors Influencing Walking and Total Physical Activity.
- 26. Foster, Sarah, Billie Giles-Corti, and Matthew Knuiman. 2010. "Neighbourhood design and fear of crime: A social-ecological examination of the correlates of residents' fear in new suburban housing developments." Health & Place 16 (2010) 1156–1165. Available at www.sciencedirect.com/science/article/pii/S1353829210001097.
- 27. Francis, Jacinta, Billie Giles-Corti, Lisa Wood, and Matthew Knuiman. 2012. "Creating sense of community: The role of public space." *Journal of Environmental Psychology* 32 (2012) 401–409. Available at www.sciencedirect.com/science/article/pii/S0272494412000461.
- 28. Garrett-Peltier, Heidi. Estimating the Employment Impacts of Pedestrian, Bicycle, and Road Infrastructure—Case Study: Baltimore. 2010. University of Massachusetts-Amherst Political Economy Research Institute. Available at www.downtowndevelopment.com/pdf/baltimore Dec20.pdf.
- 29. Giles-Corti, Billie; Sarah Foster, Trevor Shilton, and Ryan Falconer. 2012. "The co-benefits for health of investing in active transportation." New South Wales Public Health Bulletin 21(6) 122–127. Available at www.publish.csiro.au/?act=view_file&file_id=NB10027.pdf.
- 30. Gleeson, Brendan, and Bill Randolph. 2002. "Social disadvantage and planning in the Sydney context." *Urban Policy and Research* Vol. 20, No. 1, 101–107. Available at http://researchdirect.uws.edu.au/islandora/object/uws:5907.
- 31. Gorham, M.R., T.M. Waliczek, A. Snelgrove, and J.M. Zajicek. 2009. "The impact of community gardens on numbers of property crimes in urban Houston." HortTechnology 19(2): 291–296. Available at http://irrn.tamu.edu/publications/peer-reviewed-publications/2009/the-impact-of-community-gardens-on-numbers-of-property-crimes-in-urban-houston.
- 32. Grahn, Patrik, and Ulrika A. Stigsdotter. 2003. "Landscape planning and stress." *Urban Forestry and Urban Greening* 2, 001–018. Available at www.sciencedirect.com/science/article/pii/S1618866704700199.
- 33. Guite, H.F., C. Clark, and G. Ackrill, G. 2006. "The impact of the physical and urban environment on mental well-being." *Public Health* 120, 1117–1126. Available at http://www.ncbi.nlm.nih.gov/pubmed/17097120.
- 34. Hall, Tim, and lain Robertson. 2010. "Public art and urban regeneration: Advocacy, claims, and critical debate." *Landscape Research* 26(1), 5–26. Available at http://www.tandfonline.com/doi/abs/10.1080/01426390120024457?journalCode=clar20#.VemR8flVhBc.
- 35. Hauck, J. 1979. "Well-Marked Crosswalks Are a Pedestrian's Best Friend." Rural and Urban Roads 17(3), 26–28. Available at http://trid.trb.org/view.aspx?id=86851.
- 36. Hess, Paul, Anne Vernez Moudon, Mary Catherine Snyder, and Kiril Stanilove. 1999. "Site Design and Pedestrian Travel." *Transportation Research Record* 1674. Available at https://faculty.washington.edu/moudon/writing%20docs/sitedesign.pdf.
- 37. Huang, Herman F., and Michael J. Cynecki. 2000. "Effects of traffic calming measures on pedestrian and motorist behavior."

 Transportation Research Record 1705(1), 26–31. Available at www.pedbikeinfo.org/collateral/PSAP%20Training/gettraining_references

 Effects of traffic Calming.pdf.
- 38. Hull, Angela, and Craig O'Holleran. 2014. "Bicycle infrastructure: can good design encourage cycling?" *Urban, Planning and Transport Research: an Open Access Journal*, 2(1). Available at www.tandfonline.com/doi/abs/10.1080/21650020.2014.955210#.VLf0CCvF98o.
- 39. Hunter, William W., Libby Thomas, Raghavan Srinivasan, and Carol A. Martell. 2010. Evaluation of Shared Lane Markings. National Technical Information Service. Available at http://trid.trb.org/view.aspx?id=1097947.
- 40. Jacobs, Jane. 1961. The Death and Life of Great American Cities. Random House: New York.
- 41. Johansson, M., and T. Hartig. 2011. "Psychological benefits of walking: moderation by company and outdoor environment." Applied Psychology: Health and Well-being 3(3): 261–80. Available at http://onlinelibrary.wiley.com/doi/10.1111/j.1758-0854.2011.01051.x/abstract.
- 42. Kim, Joongsub. 2007. "Perceiving and valuing sense of community in a new urbanist development: A case study of Kentlands." Journal of Urban Design, 12:2, 203–230. Available at http://www.tandfonline.com/doi/abs/10.1080/13574800701306286?journalCode=cjud20#. VemSNPIVhBc.
- 43. Krizek, Kevin J. 2006. "Guidelines for analysis of investments in bicycle facilities." *Transportation Research Board* 552. Available at http://onlinepubs.rchrp/nchrp_rpt_552.pdf.



"THE BENEFITS OF STREET-SCALE FEATURES FOR WALKING AND BIKING"

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- 44. Kuo, Frances E., Magdalena Bacaicoa, and William C. Sullivan. 1998. "Transforming Inner-City Landscapes: Trees, Sense of Safety, and Preference." Environment and Behavior 30(1), 28–59. Available at http://eab.sagepub.com/content/30/1/28.abstract.
- 45. Kuo, Frances E., and William C. Sullivan. 2001. "Aggression and Violence in the Inner City: Effects of Environments via Mental Fatigue." Environment and Behavior 33(4), 543–571. Available at http://eab.sagepub.com/content/33/4/543.abstract.
- 46. Kuo, Frances E., and William C. Sullivan. 2001. "Environment and Crime in the Inner City: Does Vegetation Reduce Crime?" Environment and Behavior 33(3), 343–367. Available at http://willsull.net/resources/Sullivan-papers/KuoSullivan2001crime.pdf.
- 47. Lee, Juyoung, Bum-Jin Park, Yuko Tsunetsugu, Takahide Kagawa, and Yoshifumi Miyazaki. 2009. "Restorative effects of viewing real forest landscapes, based on a comparison with urban landscapes." Scandinavian Journal of Forest Research, 24: 227–234. Available at www. tandfonline.com/doi/abs/10.1080/02827580902903341#.VdY8E_IVhBc.
- 48. Leslie, Eva, and Ester Cerin. 2008. "Are perceptions of the local environment related to neighbourhood satisfaction and mental health in adults?" *Preventive Medicine* 47, 273–278. Available at www.ncbi.nlm.nih.gov/pubmed/18294682.
- 49. Litman, Todd. 2014. "Community Cohesion as a Transport Planning Objective." Victoria Transport Policy Institute. Available at www.vtpi.org/cohesion.pdf.
- 50. Litman, Todd. 2014. "Economic Value of Walkability." Victoria Transport Policy Institute. Available at www.vtpi.org/walkability.pdf.
- 51. Litman, Todd. 1999. "Traffic Calming: benefits, costs and equity impacts." Victoria Transport Policy Institute. Available at www.tpi.org/calming.pdf.
- 52. Lohr, Virginia I., Caroline H. Pearson-Mims, John Tarnai, and Don A. Dillman. 1994. "How urban residents rate and rank the benefits and problems associated with trees in cities." *Journal of Arboriculture*. Available at www.sfrc.ufl.edu/urbanforestry/Resources/PDF%20downloads/Lohr_2004.pdf.
- 53. Lovasi, Gina S, et al. 2013. "Aesthetic Amenities and Safety Hazards Associated with Walking and Bicycling for Transportation in New York City." Annals of Behavioral Medicine, 45(1), 76–85. Available at http://link.springer.com/article/10.1007/s12160-012-9416-z.
- 54. Lund, Hollie. 2002. "Pedestrian environments and sense of community." *Journal of Planning Education and Research* 21:301–312. Available at http://jpe.sagepub.com/content/21/3/301.short.
- 55. Lusk, Anne C., Peter G. Furth, Patrick Morency, Luis F. Miranda-Moreno, Luis F. Walter C. Willett, and Jack T. Dennerlein. 2011. "Risk of injury for bicycling on cycle tracks versus in the street." *Injury Prevention* 17, 131–135. Available at http://injuryprevention.bmj.com/content/17/2/131.full.pdf full.pdf
- 56. Lusk, Anne C.; Morency, Patrick; Miranda-Morales, Luis F.; Willett, Walter C.; Dennerlein, Jack T. 2012. "Bicycle Guidelines and Crash Rates at Cycle Tracks in the United States." *American Journal of Public Health* 103(7), 1240–1248. Available at http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2012.301043.
- 57. Maas, Jolanda, Robert A. Verheij, Peter P. Groenewegen, Sjerp de Vries, and Peter Spreeuwenberg. 2006. Green space, urbanity, and health: how strong is the relation? Journal of Epidemoil Community Health 60, 587–592. Available at http://jech.bmj.com/content/60/7/587.abstract.
- 58. McCormack, G.R., A. Shiell, B. Giles-Corti. 2012. "The association between sidewalk length and walking for different purposes in established neighborhoods." *International Journal of Behavioral Nutrition & Physical Activity* 9(92). Available at www.ncbi.nlm.nih.gov/pubmed/22853008.
- 59. Mehta, Vikas. 2009. "Look closely and you will see, listen carefully and you will hear: Urban design and social interaction on streets." *Journal of Urban Design*, 14:1, 29–64. Available at www.academia.edu/5182601/Look Closely_and_You_Will_See_Listen_Carefully_and_You_Will_Hear Urban Design and Social Interaction on Streets.
- 60. Moudon, Anne Vernez, Chanam Lee, Allen D. Cheadle, Cheza W. Collier, Donna Johnson, Thomas L. Schmid, Robert D. Weather. 2005. "Cycling and the built environment, a US perspective." *Transportation Research Part D: Transport and Environment* 10 (3), 245–261. Available at www.sciencedirect.com/science/article/pii/S1361920905000167.
- 61. Nielsen, Thomas Sick, and Karsten Bruun Hansen. 2007. "Do green areas affect health? Results from a Danish survey on the use of green areas and health indicators." Health & Place, 13(4), 639–650. Available at www.sciencedirect.com/science/article/pii/S1353829207000160.
- 62. North Carolina Department of Transportation. 2004. *The Economic Impacts of Investments in Bicycle Facilities: A Case Study of the Northern Outer Banks*. Division of Bicycle and Pedestrian Transportation. Available at www.ncdot.gov/bikeped/download/bikeped_research_eiafulltechreport.pdf.
- 63. Resource Systems Group. 2012. Economic Impact of Bicycling and Walking in Vermont. Available at http://vtransengineering.vermont.gov/sites/aot-program-development/files/documents/ltf/BikePedFinal%20Report%20Econ%20Impact%20Walking%20and%20Biking2012.pdf
- 64. Retting, Richard A., Susan A. Ferguson, Anne T. McCartt. 2003. "A review of evidence-based traffic engineering measures designed to reproduce pedestrian-motor vehicle crashes." *American Journal of Public Health* 93(9), 1456–1463. Available at www.ncbi.nlm.nih.gov/pubmed/12948963.
- 65. Reynolds, Connor C.O., Anne M. Harris, Kay Teschke, Peter A. Cripton, Meghan Winters. 2009. "The impact of transportation infrastructure on bicycling injuries and crashes: a review of the literature." *Environmental Health* 8(47). Available at www.biomedcentral.com/content/pdf/1476-069X-8-47.pdf.



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THE BENEFITS OF STREET-SCALE FEATURES FOR WALKING AND BIKING

- 66. Rissel, Chris E. 2009. "Active travel: a climate change mitigation strategy with co-benefits for health." New South Wales Public Health Bulletin 20(2), 10–13. Available at www.ncbi.nlm.nih.gov/pubmed/19261210.
- 67. Ross, Catherine E. and Sung Joon Jang. 2000. "Neighborhood disorder, fear, and mistrust: The burfering role of social ties with neighbors."

 American Journal of Community Psychology, Vol. 28, No. 4. Available at http://link.springer.com/article/10.1023%2FA%3A1005137713332#page-1.
- 68. Saelens, B.E., J.F. Sallis, and L.D. Frank. 2012/"Neighborhood environment and psychosocial correlates of adults' physical activity." *Medicine and Science in Sports & Exercise* 44, 637–646. Available at www.ncbi.nlm.nih.gov/pubmed/21946156.
- 69. Sando, Thobias. 2014. Operational Analysis of Shared Lane Markings and Green Bike Lanes on Roadways with Speeds Greater Than 35 mph. National Technical Information Service. Available at http://trid.trb.org/view.aspx?id=1307444.
- 70. Sando, Thobias, Michelle Angel, William Wesley Hunter, Deo Chimba, and Valerian Kwigizile. 2013. "Operational Analysis of 'Sharrows' on Roadways With Narrow Lane Widths." Transportation Review Board 92nd Annual Meeting Compendium of Papers. Available at http://trid.trb.org/view.aspx?id=1241529.
- Sharp, Joanne, Venda Pollock, and Ronan Paddison. 2005. "Just Art for a Just City: Public Art and Social Inclusion in Urban Regeneration." Urban Studies 42(5-6), 1001–1023. Available at http://usj.sagepub.com/content/42/5-6/1001.short.
- 72. Sinnett, Danielle, Katie Williams, Kiron Chatterjee, and Nick Cavill. 2011. Making the case for investment in the walking environment: a review of the evidence. University of the West of England. Available at www.livingstreets.org.uk/sites/default/files/file_attach/Making%20the%20 case%20full%20report%20%28web%29.pdf.
- 73. Sugiyama, T., E. Leslie, B. Giles-Corti, and N. Owen. 2008. "Associations of neighbourhood greenness with physical and mental health: do walking, social coherence and local social interaction explain the relationships?" *Journal of Epidemiology & Community Health*, 62:e9. Available at http://jech.bmj.com/content/62/5/e9.abstract.
- 74. Taylor, Mark S., Benedict W. Wheeler, Matthew P. White, Theodoros Economou, and Nicholas J. Theodoros. 2015. "Research note: Urban street tree density and antidepressant prescription rates—A cross-sectional study in London, UK." *Landscape and Urban Planning*, 136, 174–179. Available at www.sciencedirect.com/science/article/pii/S0169204614002941.
- 75. Thomas, Beth, and Michelle DeRobertis. 2012. "The safety of urban cycle tracks: A review of the literature." *Accident Analysis & Prevention* 52, 219–227. Available at www.sciencedirect.com/science/article/pii/S0001457512004393.
- 76. Timperio, A., D. Crawford, and A. Telford. 2004. "Perceptions about the local neighborhood and walking and cycling among children." Preventative Medicine 38(1). 39–47. Available at www.sciencedirect.com/science/article/pii/S0091743503002299.
- 77. Transportation Alternatives. 2012. "East Village Shoppers Study: A Snapshot of Travel and Spending Patterns of Residents and Visitors in the East Village." Transportation Alternatives. Available at https://transalt.org/sites/default/files/news/reports/2012/EVSS_Final.pdf.
- 78. Van Cauwenberg, Jelle, Veerle Van Holle, Dorien Simons, Riet Deridder; Peter Clarys, Liesbet Goubert, Jack Nasar, Jo Salmon, Ilse De Bourdeaudhuij, and Benedicte Deforche. 2012. "Environmental factors influencing older adults' walking for transportation: a study using walk-along interviews." International Journal of Behavioral Nutrition and Physical Activity 2012, 9:85. Available at www.ijbnpa.org/content/9/1/85.
- 79. Velarde, M.D., G. Fry, and M. Tveit. 2007. "Health effects of viewing landscapes Landscape types in environmental psychology." *Urban Forestry & Urban Greening* 6, 199–212. Available at www.sciencedirect.com/science/article/pii/S1618866707000416.
- 80. Vojnovic, Igor, Cynthia Jackson-Elmoore, Jodi Holtrop, and Sissi Bruch. 2005. "The renewed interest in urban form and public health: Promoting increased physical activity in Michigan." Cities 23(1), 1–17. Available at http://www.sciencedirect.com/science/article/pii/S026427510500079X.
- 81. Westphal, Lynne M. 2003. "Urban greening and social benefits: A study of empowerment outcomes." *Journal of Arboriculture* 29 (3), 137–147. Available at http://wiki.artemisiadesign.com/download/attachments/393223/westphal.pdf.
- 82. Wood, Lisa, Lawrence D. Frank, and Billie Giles-Corti. 2010. "Sense of community and its relationship with walking and neighborhood design." Social Science & Medicine 70, 1381–1390. Available at www.ncbi.nlm.nih.gov/pubmed/20189699.
- 83. Woolley, Helen, Sian Rose, Matthew Carmona, and Jonathan Freedman. 2004. "The value of public space: How high quality parks and public spaces create economic, social and environmental value." CABE Space (Commission for Architecture and the Built Environment). Available at http://webarchive.nationalarchives.gov.uk/20110118095356/http://www.cabe.org.uk/publications/the-value-of-public-space.
- 84. Zein, Sany R., Erica Geddes, Suzanne Hemsing, and Mavis Johnson. 1997. "Safety benefits of traffic calming." *Journal of the Transportation Research Board* 1578(1), 3–10. Available at http://library.ite.org/pub/e2742f06-2354-d714-514e-de01e77d5505.

