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# BUTLER 2040

initial visit



AERIAL SQUARE

FIG\_APPENDIX\_230\_1\



COURTHOUSE

FIG\_APPENDIX\_230\_2\



SQUARE

FIG\_APPENDIX\_230\_3\



HOUSE

FIG\_APPENDIX\_230\_4\



GAZEBO

FIG\_APPENDIX\_230\_5\



ENTRY TO BUTLER

FIG\_APPENDIX\_230\_6\



PUBLIC POOL

FIG\_APPENDIX\_230\_1\



CURRENT STREETS

FIG\_APPENDIX\_230\_2\



CURRENT STREETS

FIG\_APPENDIX\_230\_3\



CURRENT STREETS

FIG\_APPENDIX\_230\_4\



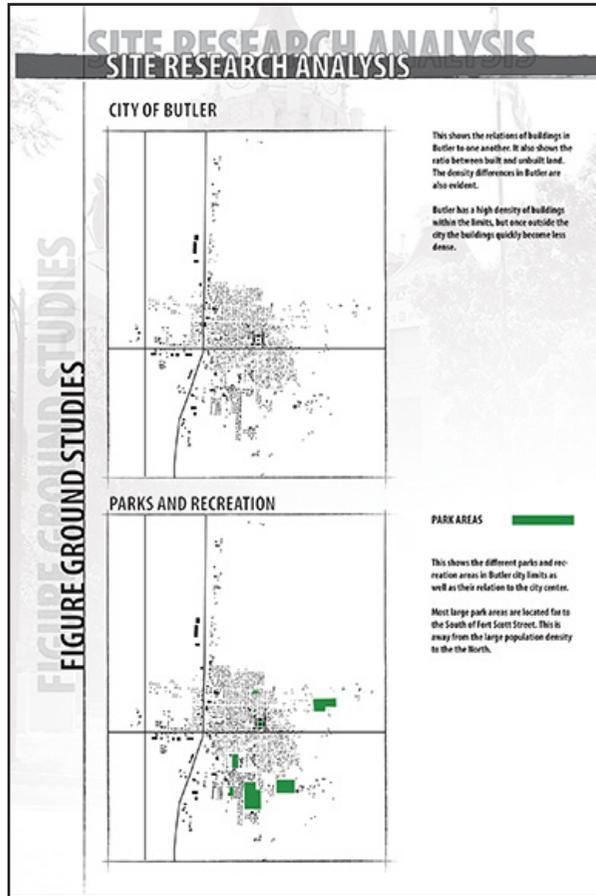
TYPICAL VIEWS

FIG\_APPENDIX\_230\_5\

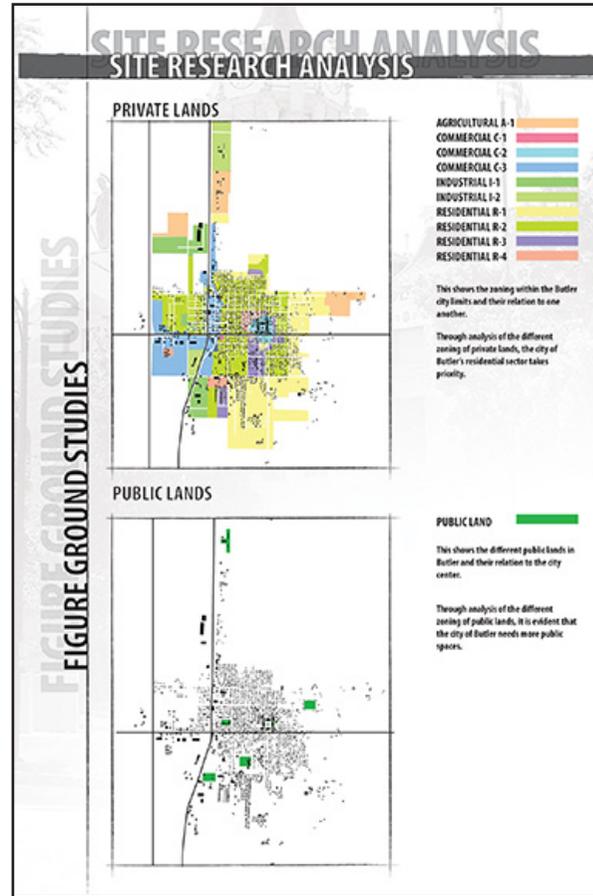


MAJOR PARK

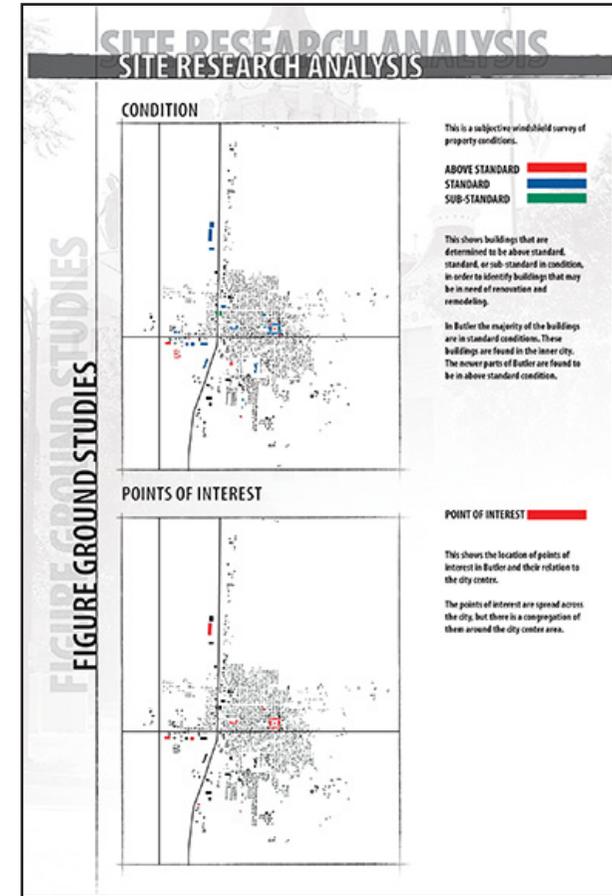
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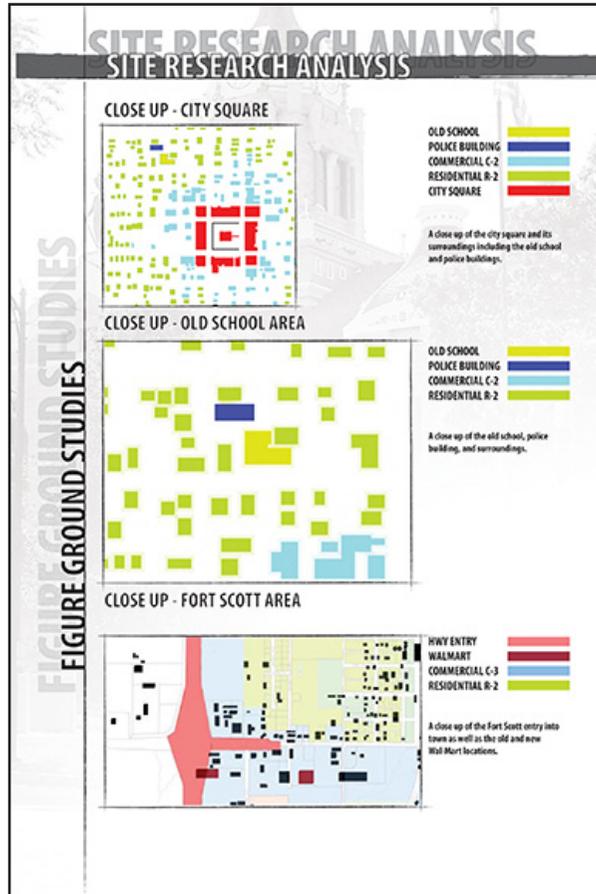
FIG\_APPENDIX\_232\_1



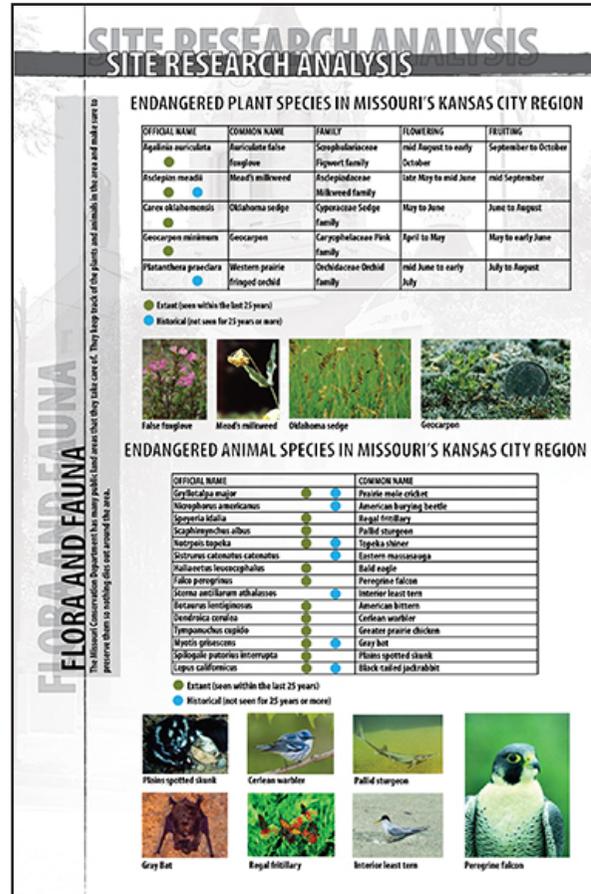
FIG\_APPENDIX\_232\_2



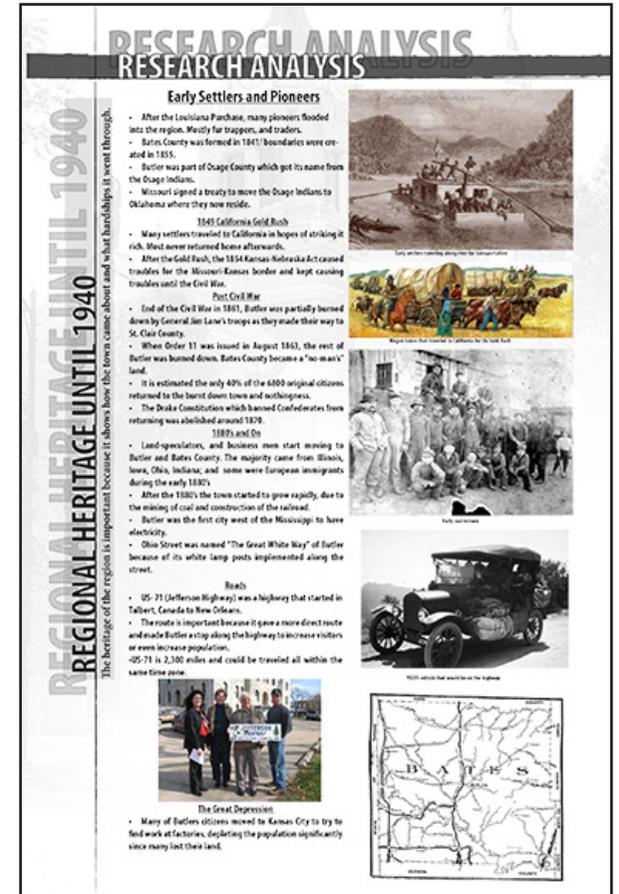
FIG\_APPENDIX\_232\_3



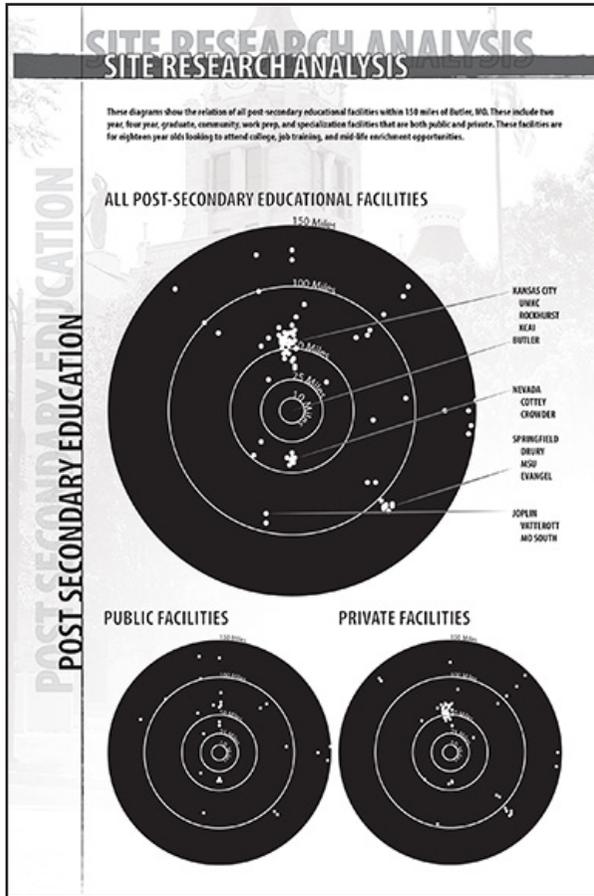
FIG\_APPENDIX\_233\_1



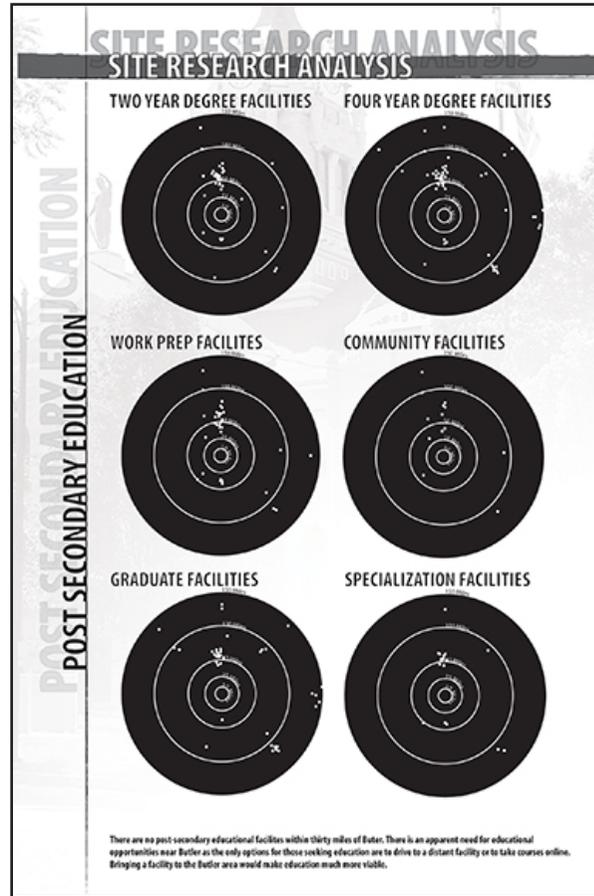
FIG\_APPENDIX\_233\_2



FIG\_APPENDIX\_233\_3



FIG\_APPENDIX\_234\_1



FIG\_APPENDIX\_234\_2



FIG\_APPENDIX\_234\_3

## SITE RESEARCH ANALYSIS

### SITE RESEARCH ANALYSIS

#### ROADS, RAILS & WATERWAY

Roads, highways, and waterways help the community to understand how the landscape between the city and other regions.

**ROAD CONNECTIONS**

US-71 is a north south United States highway that follows the alignment of the Jefferson Highway, which was constructed in 1926. This highway is the best connection from Butler to regional cities. US-71 is a four lane highway that begins south off Interstate 44 at Fidelity, MO and runs through Kansas City.

Highway 54, 12 and 18 do not directly connect to Butler but are the best connection between US-71, US-13 and US-69 near Butler MO.




**RAIL CONNECTIONS**

The Saint Louis San Francisco railway is a connecting railway into Butler. This railway is a direct connection to Kansas City. The rail is used for freight only. This rail is considered a class II railroad. Meaning it is a mid-sized freight hauling railroad. It's a railroad with revenues greater than \$26.5 million but less than \$237.7 million. There are no other railways near Butler. The next closest rail to Butler is the Missouri Kansas and Texas line, which is east of Butler and runs from Clinton to Nevada to Fort Scott.




**Waterway Connections**

There are no waterways that connect Butler to other nearby cities. Butler contains only a few small lakes just outside of the city. Kennedy and Butler Recreational Lake are located east of the town. The nearest lake big enough for any type of commercial activity would be the Montrose Lake and conservation area. The closest river is the Marais Des Cynes river. It is 8 miles south of Butler. There are two other rivers in close proximity to Butler, the South Grand river and the Osage river.



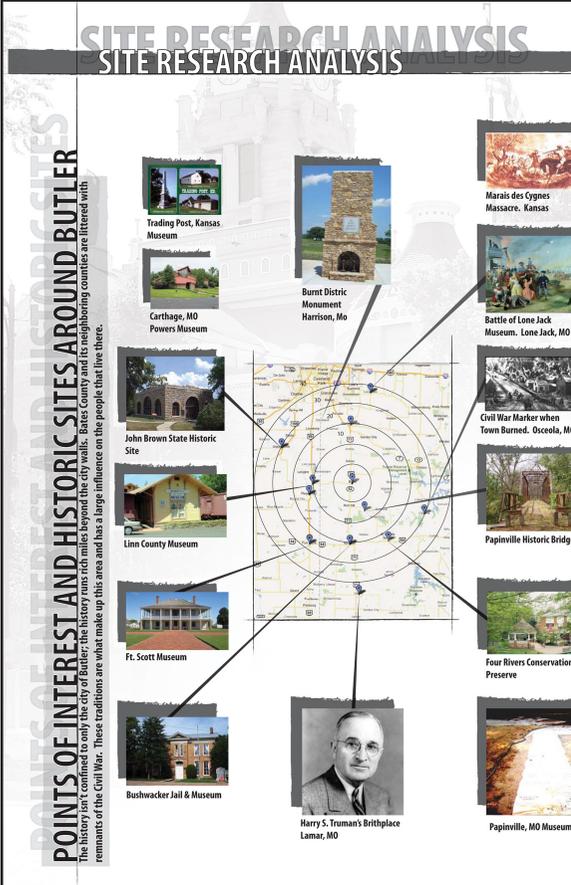
FIG\_APPENDIX\_235\_1

## SITE RESEARCH ANALYSIS

### SITE RESEARCH ANALYSIS

#### POINTS OF INTEREST AND HISTORIC SITES AROUND BUTLER

The history isn't confined to only the city of Butler; the history runs rich miles beyond the city walls. Bates County and its neighboring counties are littered with remnants of the Civil War. These traditions are what make up this area and has a large influence on the people that live there.





Trading Post, Kansas Museum



Carthage, MO Powers Museum



John Brown State Historic Site



Linn County Museum



Ft. Scott Museum



Bushwacker Jail & Museum



Burnt District Monument Harrison, Mo



Marais des Cynes Massacre, Kansas



Battle of Lone Jack Museum, Lone Jack, MO



Civil War Marker when Town Burned, Osceola, MO



Papinville Historic Bridge



Four Rivers Conservation Preserve



Papinville, MO Museum



Harry S. Truman's Birthplace Lamar, MO

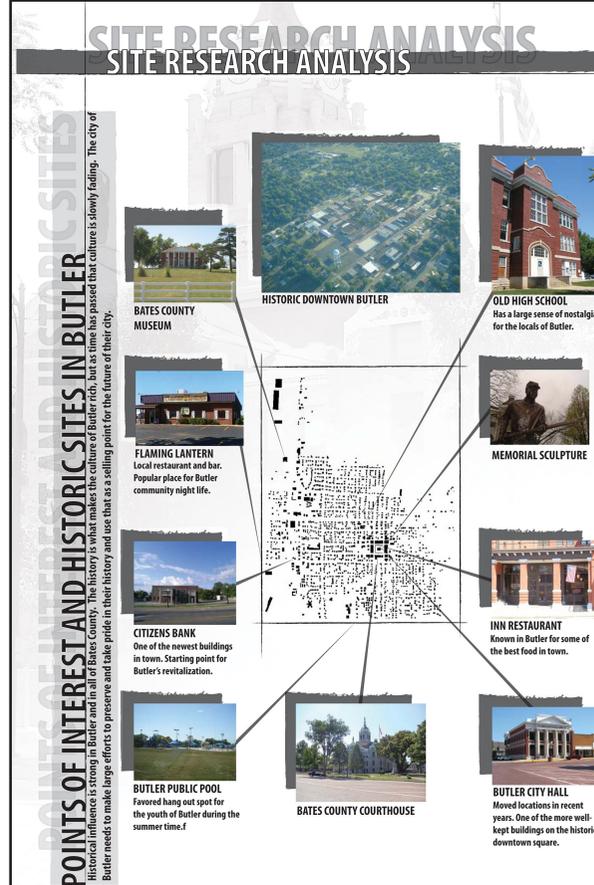
FIG\_APPENDIX\_235\_2

## SITE RESEARCH ANALYSIS

### SITE RESEARCH ANALYSIS

#### POINTS OF INTEREST AND HISTORIC SITES IN BUTLER

Historical influence is strong in Butler and in all of Bates County. The history is what makes the culture of Butler rich, but as time has passed that culture is slowly fading. The city of Butler needs to make large efforts to preserve and take pride in their history and use that as a selling point for the future of their city.





BATES COUNTY MUSEUM



HISTORIC DOWNTOWN BUTLER



OLD HIGH SCHOOL  
Has a large sense of nostalgia for the locals of Butler.



FLAMING LANTERN  
Local restaurant and bar. Popular place for Butler community night life.



MEMORIAL SCULPTURE



CITIZENS BANK  
One of the newest buildings in town. Starting point for Butler's revitalization.



INN RESTAURANT  
Known in Butler for some of the best food in town.



BUTLER PUBLIC POOL  
Favored hang out spot for the youth of Butler during the summer time.



BATES COUNTY COURTHOUSE



BUTLER CITY HALL  
Moved locations in recent years. One of the more well-kept buildings on the historic downtown square.

FIG\_APPENDIX\_235\_3

BUTLER 235  
2040

### SITE RESEARCH ANALYSIS SITE RESEARCH ANALYSIS

CIVIC & SOCIAL CLUBS & ORGANIZATIONS

Organization for Youth/ Kids

Social & Civic Groups in Butler & Other US States

International Organizations



Girls Scouts



Optimist



Masons



4H



American Legion



Rotary



Boys Scouts



Elks Lodge



**HOME OF THE BUTLER BEARS**  
Bear Backer- A Sports related Groups



Shriners

High School & Grade School Sports

- Football
- Soccer
- Wrestling
- Baseball

There are many Civic & Social Organizations in Butler, MO. The diversity of organizations provides an options for everyone in the community member to find a groups to match their interests.

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What other civic and social organizations exist in Butler? Please add the organizations name to the list on the lines provided below.

FIG\_APPENDIX\_236\_1

### RESEARCH STUDIES RESEARCH STUDIES

SIGNIFICANT ARCHITECTURE

Note: Identifying the significant architecture within the Butler city limits can help us recognize the role that historical elements play in the design process and redevelopment of Butler.

The significant architecture in Butler can be generally viewed as vernacular architecture—meaning that, at the time it was built, it sought to emulate building trends of the current times. It often includes local or regional patterns of design, decoration, and construction and takes on the form that most efficiently fits the use of the space.








CIVIC ARCHITECTURE

It is made obvious that Butler is concerned with historical preservation by looking at the styles and types of architecture implemented in the most valued structures. For example, Neo-Classical and Greek Revival architecture is evident in the use of a column to represent a strong presence, while it is also used to adorn windows and doors throughout the city. Neo-Classical and Greek Revival architecture was also a prominent building style in the late 1800s and early 1900s—a time in which Butler was just beginning to place its roots. It is evident that the historical architecture has become a symbolic representation of Butler's past and is important to consider when making decisions of the future.




COMMON RESIDENTIAL ARCHITECTURE

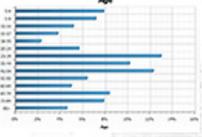
FIG\_APPENDIX\_236\_2

### SITE RESEARCH ANALYSIS SITE RESEARCH ANALYSIS

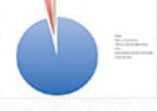
BUTLER DEMOGRAPHICS

#### Butler City

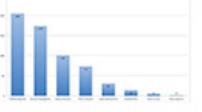
Population	
Total Population 2010	4219
Total Population 2000	4209
Change in Population 2000-2010	10
Males	1973
Females	2246
Population Density	1029
Land Area Sq. Miles	4



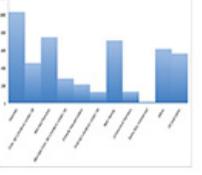
Age



Race



Housing



Household

<b>Butler Demographics</b>	
Note: Butler has an opportunity for growth and is in need of jobs to help stimulate that growth.	
<b>Population</b>	
Total Population 2010	4219
Total Population 2000	4209
Change in Population 2000-2010	10
Males	1973
Females	2246
Population Density	1029
Land Area Sq. Miles	4
<b>Race</b>	
White	3915
Black or African American	732
American Indian and Alaska Native	22
Asian	9
Native Hawaiian and Other Pacific Islander	1
Some Other Race	28
<b>Housing</b>	
Total Housing Units	2047
Occupied Housing Units	1739
Owner Occupied	1007
Renter Occupied	732
Vacant Housing Units	308
Vacant for Rent	155
Vacant for Sale	86
Vacant for Seasonal	12
<b>Household</b>	
Total House Holds	1739
Families	1031
Fam. w/children under 18	654
Married Fam.	744
Married Fam. w/children under 18	279
Female house holder	124
FMH children under 18	208
Non Family	129
unmarried partner	14
Same Sex unmarried	614
65 and older	541
Average household size	2.3
Average Fam. Size	2.97
<b>Employment</b>	
Unemployment Rate	4.7%
Below Poverty Level	17.2
Median Income	\$34,936
Median Income	\$25,531
Poverty Rate	19.4%
Families in Poverty Rate	15.4%
Commuters	3.1%
Travel Time Commuters	25 min

FIG\_APPENDIX\_236\_3

### SITE RESEARCH ANALYSIS

#### COMMITTING STRATEGIES

*Note: This shows various commuting strategies for frequent commuters. It explores a wide variety of solutions for various commuting distances.*

**Train Station**  
Building a train depot would create a commuter hub for those that have to travel 40 miles or more to work each day. Many other countries already use railroads as a resource for rural commuters. The Faralis system is a great example of train commuters. The system allows for travelers to pay for a year long pass to travel by train or metro as frequently as they choose. Perfect for frequent commuters.



**Van Pooling**  
Van pooling is another great way for commuters to get from their homes in Butler to work. This service can work both in the small town of Butler and bigger cities. Van pooling helps commuters who are traveling to the same place. The driver can pick you up from a public transportation hub such as train stations, metro station and bus stops and drop you off at work.



**DMV**  
Dual Mode Vehicles are vans or buses that travel both by railways and roads. This allows for stop and pickup that aren't on a train's routine route or where the tracks might not go. A DMV can pick up passengers from a bus stop and take them to nearby cities. Dual mode vehicles would be a great addition to America's mass transit infrastructure. It would make rail transit feasible in those areas that don't have the population density to support a lot of stations, and make mass transit a more available option for suburbs. Riders could simply hop on at a bus stop in their neighborhood, then ride the rails to their destination.



**Community Owned Vehicles**  
Fuel efficient or electric cars could be used as a means of transportation for day commuters. Community owned vehicles would allow for groups to travel together to work at little cost to them. The cars would be owned by the city and would be used by those people who travel daily to near by cities.



**Biking Trails**  
Local biking trails would be convenient for commuters who have to travel short distances, 1-10 miles, to get to work.




FIG\_APPENDIX\_237\_1

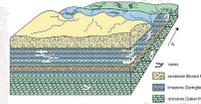
### SITE RESEARCH ANALYSIS

#### PRE-WHITE SETTLERS

*Before the town of Butler was created, there were events that led to its natural resources and history. These events can give a narration of how Butler can continue to grow as a city and enrich its alluring history.*

#### Forming of the Prairie Landscape

**Pennsylvanian Period (320 to 286 million ago)**  
Coal and the Pennsylvanian Period go hand in hand. The Absaroka Sea covered most of the state of Missouri. This sea left evidence in a series of rocks. Most of these rocks are shales, sandstones and clays, although thin limestone and coal are also common.



**Most prairie soil was deposited during the last glacial advance that began about 110,000 years ago.** The glaciers expanding southward scraped the soil, picking up material and leveling the terrain. As the glaciers retreated about 10,000 years ago, it deposited this material in the form of till.



**Native ungulates such as bison, elk, and white-tailed deer, roamed the expansive, diverse, plentiful grassland.** For 10,000-20,000 years native people used fire annually as a tool to assist in hunting, transportation and safety.



#### Pre-White Settlers

The Missouri or Missouri (in their own language, Niiachi, also spelled Niiachi) are a Native American tribe that originated in the Great Lakes region of United States before European contact. Historically, the tribe lived near the mouth of the Grand River at its confluence with the Missouri River; the mouth of the Missouri at its confluence with the Mississippi River, and in Saline County, Missouri.



The Osage Nation is a Native American Siouan-language tribe in the United States that originated in the Ohio River valley in present-day Kentucky. The Osage migrated west of the Mississippi River to their historic lands in present-day Missouri. The first historical mention of the Osage appears to be on Marquette's map of 1673, which locates them apparently on the Osage River.




FIG\_APPENDIX\_237\_2

### PRECEDENT STUDIES

#### BIKE AND GREENWAY TRAILS

*Trails have to be important to the community because these trails are alternatives to fossil fuels and roads.*

#### Bicycle Paths and Greenway Trails

Springfield, a mid-sized city, incorporates trails for bicyclists within the heart of the city, and on the country outskirts ranging from two to thirty-five miles long. Cyclists have proven that by leaving their cars behind and riding their bicycles, that it is not only a faster way to commute, but it provides exercise as well. Towns can get grants for bicycle paths from various Federal Departments. The Department of Health grants for providing exercise for the citizens. The Department of Transportation offers grants for the implementation of alternative source of energy usage. And the Department of Education also gives grants due to the knowledge of going on the right side of the road. Trails and greenways are ideal for nature walks and events to take place in the wilderness. Speed limits on bike trails are usually 20 mph, and ethics are used to warn slower trail walkers that they will be passed.




**Reasons for Alternative Commuting**

- Conserve Resources
- Non-Polluting
- Inexpensive
- Relieves Traffic Congestion
- Work Out While Commuting
- Experience Nature
- Improve Health, Energy and Productivity
- 42,000 People Die from Automobile Accidents While About a Thousand Die on Bicycles
- Come to Work Refreshed and Energized

**Trails in Small Towns**

- Small towns have usually small residential streets with low speed limits deeming dedicated bike paths unnecessary.
- Paving bike lanes is very expensive.
- Implementing a bicycle trail or a greenway doesn't mean that it will be used.
- A programmer would need to be hired.
- On average, a 1 mile paved bicycle trail costs \$225,000. This cost is without the land it is being built on, bridges, lights or benches.
- Trails bring communities together if a good programmer arranges events such as Christmas Walk, or have the possibility for events, programs, and activities.
- Trails and Greenways are one of the top reasons people move to certain areas.
- Small towns need trails to promote community and events for biking, walking, etc.




FIG\_APPENDIX\_237\_3

### PRECEDENT STUDIES

#### NEIGHBORHOOD PARKS

Neighborhood parks provide relief from the built environment for residents. They may offer a range of facilities and passive or active recreation in response to demographic and cultural characteristics of surrounding neighborhoods, with opportunities for interaction with nature. Neighborhood parks are largely accessible by foot, bicycle, or public transit within at least a quarter-mile radius from residences, providing easy access especially for children and senior adults.

**Trails**  
These trails found in the neighborhood connects different parks in the community. It provide a safe alternative from riding your bike on the streets. It also promotes active living with community. It is a quiet and relaxing place to walk and get away from the crowd and pollution of the city.

**Garden Parks**  
From formal to natural in design, each of the garden parks provides a peaceful and educational experience for the plant lover in all of us. The garden also provide an habitat for wild life such as bird. Therefore it create a place for bird watching. In parks like these one goes there to relax. Some of these relaxing features are beautiful colors for the flowers, the aromas of them. It's a perfect vacation away from the city life.

**Pavilion & Seating**  
Based on the size of the parks shelters and seatings is a good feature to have especially on days that rainy or really hot. There can be larger shelter that can be used for fair, festival artifacts and yard sales.

**Playgrounds**  
It is a great entertainment area for the younger children to have fun

**Skating Park**  
It is a great entertainment area for the older children to have fun

**FIG\_APPENDIX\_238\_1**

### PRECEDENT STUDIES

#### SMART GROWTH

**MIX LAND USERS**  
Mix land use are a crucial part to any successful community. Combining residential, commercial, open space and institutional pieces of land together will better the growth of the community. Reusing old structures; such as the old Wal-Mart building, the hold high school or any buildings downtown that aren't being used is a great way to be sustainable and grow as a community.

**TAKE ADVANTAGE OF COMPACT BUILDING DESIGN**  
As of right now, the city of Butler is slowly moving outward towards the interstate behind the old Wal-Mart. A method for achieving a smart growth community is to combine housing and go up, instead of out. Also, creating smaller subdivisions within the city with similar housing types is a great way to achieve smart growth.

**CREATE A RANGE OF HOUSING OPPORTUNITIES**  
A critical part of implementing smart growth is ensuring that a range of housing options is available for varying income levels and demographic groups. There is a wide range of housing in the city of Butler; however, there is a separation between them. More focus needs to be put into the less fortunate housing communities, which will inevitably pull a wider variety of people into the city.

**CREATE WALKABLE COMMUNITIES**  
The size of Butler presents a great opportunity to create a walkable community. By bringing in new things like corner drug stores or small grocery stores are a great way to encourage people to walk amongst the community instead of driving, which promotes a healthy way of living.

**FOSTER DISTINCTIVE, ATTRACTIVE COMMUNITIES WITH A STRONG SENSE OF PLACE**  
The Butler community needs to bring back traditions, festivals and community gatherings that give their city a sense of place and identity; since these things are implemented and revitalized the community will inevitably grow stronger as a whole from there. The arts are an essential way of establishing a sense of place in a community.

**PRESERVE OPEN SPACE, FARMLAND, NATURAL BEAUTY AND CRITICAL ENVIRONMENT AREAS**  
A healthy population of trees offers substantial environmental benefits, including cleaner air and water, quieter streets, cheaper energy bills, cooler temperatures, and wildlife habitat. Butler already has a large amount of green space outside the city, the next step is to bring that green infrastructure to the inner city.

**STRENGTHEN AND DIRECT DEVELOPMENT TOWARD EXISTING COMMUNITIES**  
The goal of smart growth is to use resources that existing neighborhoods offer and to maintain the value of the public and private investment already made in those areas. The Butler community is tight on money and promoting a use of existing sites in neighborhoods is a great way to save money and create a new community at the same time.

**PROVIDE A VARIETY OF TRANSPORTATION OPTIONS**  
As the city starts to move outward towards the interstate walking is no longer an option; therefore, a variety of transportation options is vital to maintaining a sustainable community. Public transportation is a necessity with a great focus towards the seniors of the Butler community

**MAKE DEVELOPMENT PREDICTABLE, FAIR AND COST EFFECTIVE**  
Prospects for smarter development are greatly enhanced when public leaders can clearly articulate a strong vision about how and where growth should occur. Educating the Butler city officials and the community about smart growth and the impact it will have will greatly affect the outcome of the design process.

**ENCOURAGE COMMUNITY AND STAKEHOLDER COLLABORATION IN DEVELOPMENT DECISIONS.**  
It is important that the community has just as much say in the design process as the designer. Allow the members of the community to get down on paper design ideas they have as well. Involving a wide range of stakeholders will also have a great influence on the final outcome of the design.

**FIG\_APPENDIX\_238\_2**

### PRECEDENT STUDIES

#### REVITALIZED CITY SQUARES

Research shows that a healthy and vibrant downtown boosts the economic health and quality of life in a community. Specifically, it creates jobs, incubates small businesses, reduces sprawl, protects property values, and increases the community's options for goods and services. A healthy downtown is a symbol of community pride and history."

**CLINTON, MISSOURI**

Similar to Butler in size, Clinton, Missouri has a rich history on which the city bases its pride and its decisions. And similar to Butler once more, Clinton's historic downtown center was subjected to a loss of industry, partially because of massive retail chains and stores that lined the cities edges adjacent to main vehicular paths. Because there was so much "new growth" on the edges, the appeal of a rich historic center began to fade. With retailers like Walmart placing their roots, 20% of downtown shops were left bare. In order to turn hard times around, a series of plans were put into action. With funding in place, Clinton then began giving their old businesses a facelift by implementing a business infill concept and a media landscape analysis plan to attract citizens and visitors alike to the downtown community. The key to the success of the renovation was that, not only did the city try to bring new business into the square, but they also linked the business in the square to other areas of the town. Using the Wayfinding Plan, they led vehicular traffic from the highway and other areas into downtown to further this link. With additions such as a community center, a convention center, a new library, Clinton was able to respect their historic roots while initiating innovation and contemporary ideas to create a progressive sustainable community.

**FIG\_APPENDIX\_238\_3**

### PRECEDENT STUDIES

#### REVITALIZED CITY SQUARES

*Note: Studying the downtown squares of other towns that have begun efforts to revitalize helps us to determine programs and strategies that may be beneficial in the redevelopment of Butler's own downtown square and city as a whole.*

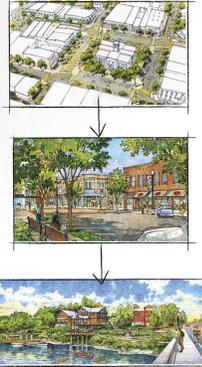
##### NEOSHO, MISSOURI

Also similar to Butler, is the city of Neosho, Missouri. It is located on the southwestern corner of Missouri and has a population of about 12,000 residents which is significantly higher than that of Butler; however, other characteristics make them increasingly comparable. Most noteworthy is the fact that both city's downtown squares are built around historic tradition—but more specifically, they are laid out with commercial property lining the perimeter of the square and a county courthouse in the center. The history was obviously present in Neosho's town center, but a lack of funds left it unmanaged and lifeless.



With the help of the Missouri DREAM initiative and funding from public and private partnerships, Neosho was able to allocate the funds to finally give their community's downtown the facelift that it needed. Areas of focus included: "destination and tourism development, financing for downtown improvements, addressing land use conflicts, historic preservation, and downtown beautification." As a result of these efforts, a series of projects were completed that led to Neosho's growth as a city and an All-American City Award. These projects consisted of a streetscape renovation, restoration of the historic Swiss Floral Clock, and the relocation of City Hall to the town square to name a few. To ensure continual revitalization, Neosho further developed their hopes for a sustainable community by implementing a Community Improvement District, an Arts Council, and a group specifically geared towards downtown organization.

##### WINCHESTER, TENNESSEE



Another city, not located in Missouri (which made it unavailable to DREAM initiative help unlike the above examples), similar in size to Butler is Winchester, Tennessee. Like other downtown areas that have failed in the past years, Winchester has been subjected to a lack of growth and an increase in empty buildings. Their problems were more concerned with extreme lack of funding. After years of deterioration, small business owners and government officials became desperate for change and began to initiate action towards finding a solution. Winchester's small government was able to raise enough awareness to provide the state of Tennessee enough proof to instigate a grant program for downtown development in its small towns. After much competition, Winchester was awarded the grant and was then able to tackle some of the problems facing their community. One of their most urgent successes was to create a Winchester downtown Program Corporation that oversee and organized the changes to the Downtown area. Once this system was in place, growth immediately began to follow. A city master plan was developed using a series of developmental strategies and Winchester hopes that within the next couple of years it will be evident that their community is at its peak once again.

FIG\_APPENDIX\_239\_1

### PRECEDENT STUDIES

#### PLACE MAKING

*The city of Butler should study how communities have used place making principles to develop and strengthen the identity of the community.*

##### OVERVIEW

Place making the process of adding value and meaning to the public realm through community-based revitalization projects rooted in local values, history, culture and the natural environment. The community needs to set itself apart as a unique destination in its regional setting. For example the community needs to create an identity for itself. It needs to have and become something unique to attract outsiders to their town. Place making does not mean that the town should demolish their old buildings and build new ones in hope of their town becoming the new tourist place. It means that the community should pay attention to what their city has and why it became a city in the first place. Place making directs the community in the techniques of regeneration and revitalization.



The Butler community should consider emphasizing the assets of the community and build off of the vibrant and active downtown. By revitalizing the buildings around the square the community can rejuvenate the image of Butler and strengthen the identity of the town.

##### ASHEVILLE, NORTH CAROLINA

Asheville's cheer arts district is a great example of place making. Back in the early 1980s a couple of artist started buying old buildings downtown as cheap studio space. Because of this more and more artists came to the river's district and bought more and more warehouses and buildings for their art studios. This was great for the city and for the artist. The city did not have to worry about what to do with all the old industry warehouse's and the artist saved money by purchasing these buildings and re-using them. This brought life back to a part of the city which had been "dead" and renewed the heart of downtown Asheville.



##### NAPPANEE, INDIANA

Nappanee is similar to Butler in that it at one time had a High School that was vacant. What the city of Nappanee did was find willing partners in the city that they commissioned to develop the projects. The developer built 22 senior housing units in and around the old school. Because the school was close to downtown the seniors were able to access downtown and its local shops. The seniors could also use the gym, game room, and computers in the schools. This strong local support allowed the partners to raise \$2.4 million to refurbish the high school. In so doing an important structure and historic site was saved and repropoed to create a new sense of place and identity in town.




FIG\_APPENDIX\_239\_2

### PRECEDENT STUDIES

#### ACTIVE LIVING

Active living aims to blend daily routines with healthy activities. This in turn creates a more healthy community. Active living can be enhanced through programs and infrastructure.

##### DOUGLAS COUNTY, MINNESOTA



The county created more pedestrian friendly streets by adding signage and crosswalks.



Cycle-to-work grants inspire businesses to aid employees in biking to work.



Bike lanes and corrals make the streets more bike friendly. Landscaping as well as ramps and pedestrian amenities further develop a positive pedestrian experience. The street is also updated to be fully wheelchair accessible.



##### COLUMBIA, MO



Programs and events encourage finding alternative means of transportation. Annually a week long event is held aimed at this purpose.



The Walking School Bus Initiative - Adult volunteers pick up children at designated "walk stops" much like a traditional school bus.



Programs encourage students to eat healthy. Snacks await them as they arrive at school.



##### IMPLEMENTATION

- Mix residential and shopping to promote walking to the store.
- Provide safe routes for children to walk or bike to school.
- Maintain neighborhood parks for children to have a place to gather.
- Designate bike and pedestrian routes.
- Develop initiatives that inspire people to be more active.
- Enhance facilities for exercising.

##### BENEFITS

- Small increases in physical activity can make major improvements to health.
- The Surgeon General recommends at least thirty minutes of physical activity five or more days a week.
- Physical activity can be added into daily routines without needing to find more time.
- Lack of physical activity is an attributing factor to heart disease, diabetes, high blood pressure, and cancer.
- Promotes community interaction.

FIG\_APPENDIX\_239\_3

### PRECEDENT STUDIES

#### TRIPLE BOTTOM LINE

The triple bottom line is a business term that was developed to assess the overall financial impact a company has on a community. The triple bottom line consists of: people, profit, and planet. Businesses should follow this and balance out the measure of corporate profit, how socially and environmentally responsible they are through their operations. The triple bottom line measures the financial, social, and environmental performance of the business over a set time period. If companies don't measure their social and environmental impact they aren't a socially and environmentally responsible company. So to be a sustainable company the company needs to look at people (their social progress), profit (their economic growth), and planet (their environmental stewardship) and strive to find the balance between them.

The Triple Bottom Line concept has been adopted by the sustainability movement. It is used as a tool to measure a project or community's the amount of responsibility in their decision making process. We recommend Butler also adopt this tool to assess the future decisions of projects and the community.

#### RECRUITMENT AND RETENTION STRATEGIES

University of Nebraska-Lincoln researchers did a study that looked at the recruitment and retention strategies that worked in the Lincoln area. Retention strategies for this area were to make people feel accepted and like they belonged, to have an open-minded attitude toward residents new to the area, as well as their ideas, to have a clear and positive community vision, to have individual job and career enhancement, opportunities to take a leadership role, and opportunities to participate in the community.

To recruit new community members it is important to have a community website because according to the study 70 percent of rural community newcomers learned about the community through its website. It is also important to treat people as if they are already part of the community. Housing and job opportunities are also important in the recruitment process, just like in the retention process.

FIG\_APPENDIX\_240\_1

### PRECEDENT STUDIES

#### Community Center

"A Community is organized around a center for its own political and social welfare and expression; to peer into its own mind and life, to discover its own social needs and there to meet them, whether they concern the political field, the field of health, of recreation, of education, or of industry; such community organization is necessary if democratic society is to succeed and endure."

##### Community Center Valley of Hérault / N+B Architects

Located at the entrance of the town of Gignac, France, the purpose of the project consisted in creating a simple building that the village will be located around. The main circulation of the community center's campus is dedicated to pedestrians. Also, the main buildings are directed to the North-South in order to offer natural ventilation into the buildings. Yet, the main buildings also protect the central garden from cool North winds. Zinc, stone and concrete of the site will be the essential materials of this construction relating to the traditional materials used in this region.

##### Yountville Community Centre by Siegel & Strain Architects

For years, the residents of Yountville, California, a rural town in Napa County, relied on a small 1920s-era community hall and a number of rental spaces to host community events. The hall was in need of renovation and it was ill-equipped to support art classes. The new community center houses a branch library, multipurpose rooms, teen center, and meeting and program spaces. It opens onto a new town square framed by the existing community hall and the post office. The community center was targeted to achieve green building concepts while using walkways and bike paths to connect the center to surrounding neighborhoods.

##### Community Centre by MARP and Dévényi és Társa

Sánd is a town of 3500 inhabitants located in Hungary. The town government was looking for a new "Integrated Community and Cultural Institution". Directly adjoining the existing school buildings renovated in the framework of the present investment, the new structure is furnished with rooms for educational activities (e.g. study circle facilities, computer lab, music room, cafeteria and corresponding service units), functions serving the wider town community (e.g. library) and multi-use rooms (gym and events hall).

FIG\_APPENDIX\_240\_2

### PRECEDENT STUDIES

#### NORTHAMPTON COUNTY VIRGINIA

Northampton County, Virginia is a rural county that has a sustainable economic development effort and is often cited as a model for small-town and rural sustainable development. It is rich in nature and culture. It has a diverse habitat with numerous species of birds, fish and other wildlife. It is one of the poorest counties in Virginia.

In 1991 the county was approached with a match-free grant proposal for a sustainable development project. The project was to develop policies to protect coastal habitats in addition to promoting economic development. They accepted the offer and the local government formed a partnership with federal and state governments. Based on the Special Area Management Plan they developed a strategy.

Their strategy:

- To develop heritage tourism while protecting culture and nature
- To develop seafood and equiculture industries and protect water quality
- To develop new industries, an eco-industrial park yet protect sense of place, quality of life, and groundwater
- To develop an agriculture industry and protect productive land and sensitive habitats
- To develop arts, crafts, and industries for local products as well as preserve diversity in the communities
- To develop research and education facilities and protect natural and cultural systems

The county has already begun to implement three projects, and some initial success has been shown. An example of the progress is how the Special Area Management Plan developed bird-watching tourism while protecting the habitat. In 1993 a festival was created by the Virginia Coastal Program. The festival is an annual Eastern Shore Birding Festival. Each year the festival is put on by efforts of many federal, state, and local agencies as well as private citizens. It celebrates the migration of different species of birds and usually brings in several hundred thousand dollars.

Part of Cape Charles Sustainable Technologies Industrial Park

Another example is an eco-industrial park called The Port of Cape Charles Sustainable Technologies Industrial Park. The project is funded by federal, state, private, and county investments. The park is beginning to attract businesses that are committed to the environment, the community, and profitability. The park is planning on incorporating local enterprises and new industry while creating a more sustainable product and production practices. It hopes to be able to demonstrate advanced facilities in resource efficiency and pollution prevention. The first tenant is a manufacturer of photovoltaic energy equipment.

FIG\_APPENDIX\_240\_3

## RESEARCH STUDIES

### BEAUTY IN THE DETAILS

Beauty in the details is not always obvious. Through the eyes of a resident it is hard to see, but through this same viewer details can show a different side of Butler, whether it's history or modern beauty.

Butler has a historic presence and beauty in its details. However these details are hard to see unless you stop to actually look for them. From the details of the historic Courthouse all the way to how the light catches in the glass around the square, Butler has a unique beauty and is something that only can be seen in the details.



Bank Clock : The Clock encompasses the historic charm of Butler



This Facades cornice and stone work are what make it beautiful.



This corner "crown" caps the end of one side of the square.



The facade of the square is enveloped in the distracting lights.



The statue above, stands for all to see.



The soldier statue adds historic presence.



The light poles at each corner, embody the phrase "Electric City".

FIG\_APPENDIX\_241\_1

## PRECEDENT STUDIES

### COMMUNITY GATEWAYS AND IDENTITY

Community Gateways allow for visitors and the community alike to understand the physical and visual boundaries of Butler. Through physical and visual identity, Butler can start to have a sense of identity and approach.

#### LARGER SCALE ENTRIES

The Olive Street Exit was replanned, and in doing so identifies this sub-community of St. Louis through the use of visuals such as pedestrian spaces, greenery, and refined masonry on the overpass itself. The approach to the Butler Community through Highway 71 and 52 could be re-visited to provide visitors a sense of where they are and the community they are entering into.




#### STREETScape AND COMMUNITY IDENTIFIERS

East 29th Avenue town center revitalized city square in Denver CO, consisting of mixed use buildings from office, residential, restaurants and apartments. Through a re-designed open space and architectural elements such as updated facades, pedestrian buffer zone to separate vehicular traffic as well as vegetation, allow the transformation of the old space into a entry between downtown Denver and its surrounding suburb communities. In result this transformation has allowed a separate identity to be formed. As, 29th Avenue, Town Center is it's own distinct place.




#### SHOWS AND IDENTIFIERS

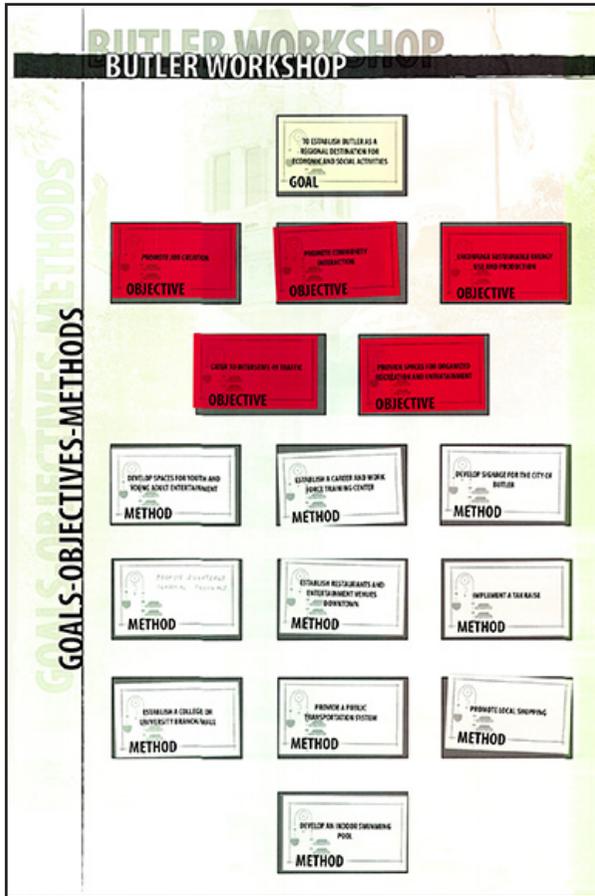
Short North : Arts District has a historic presence about the neighborhood as the arches were designed in 1888 and was re-vitalized in 2000 Columbus, Ohio set out to make a statement by constructing a series of arches throughout downtown not only to light the streets but to dazzle the visitors. Today, there are 17 high-tech arches spanning High Street, which are the architectural signature of the Short North.

"The arches now provide a mile-long rainbow that has become the hallmark of the district"

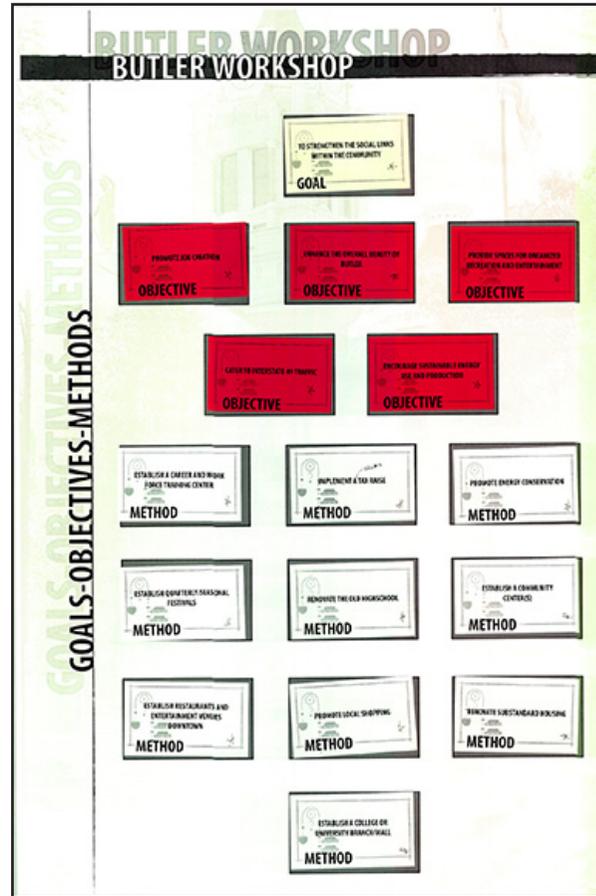



FIG\_APPENDIX\_241\_2

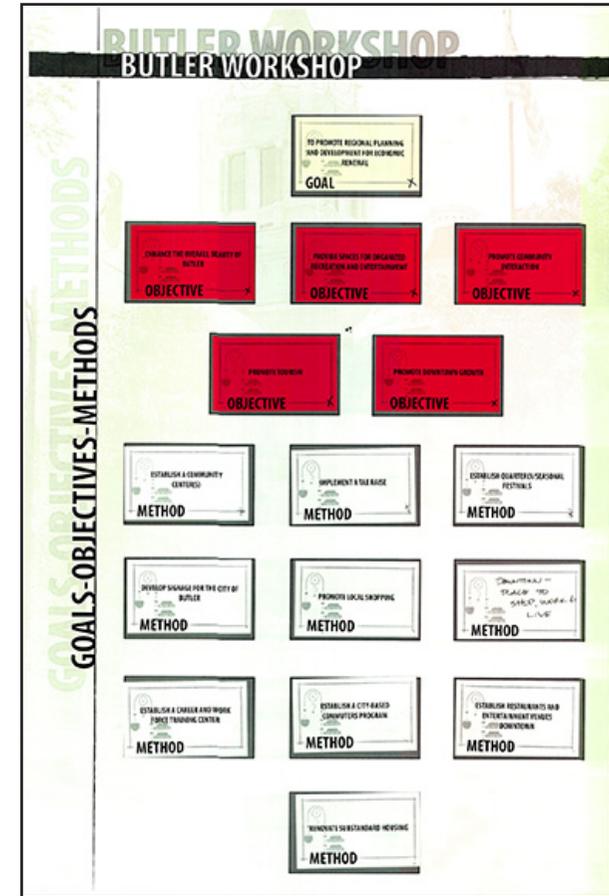
NOTE: These boards were the goal, objective and method results from each community team during the visioning workshop.



FIG\_APPENDIX\_242\_1



FIG\_APPENDIX\_242\_2



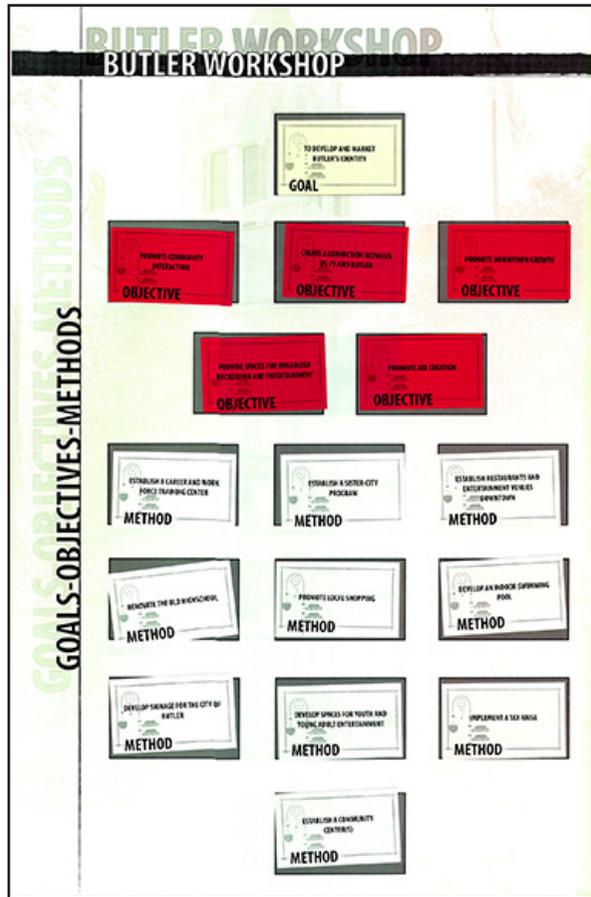
FIG\_APPENDIX\_242\_3



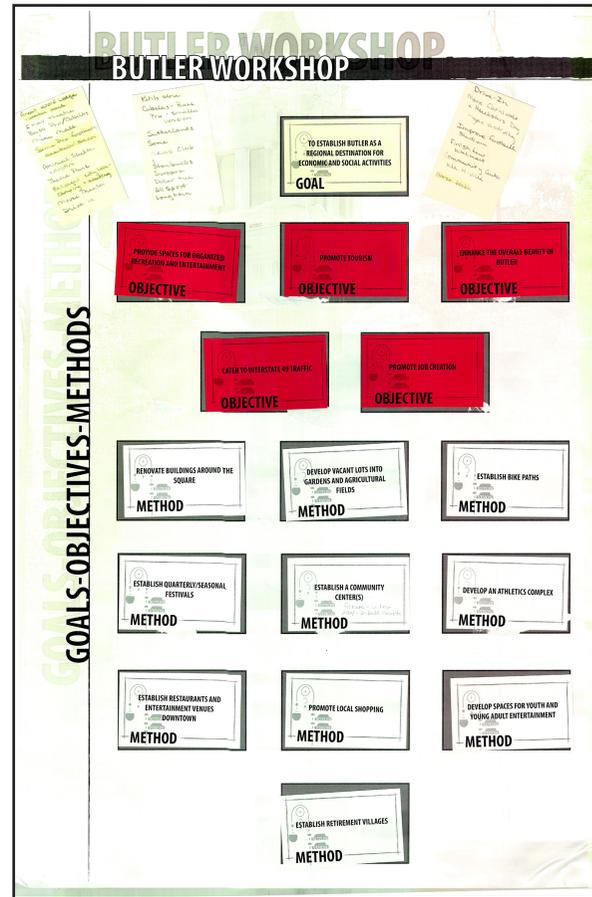
# BUTLER 2040

## workshop 1

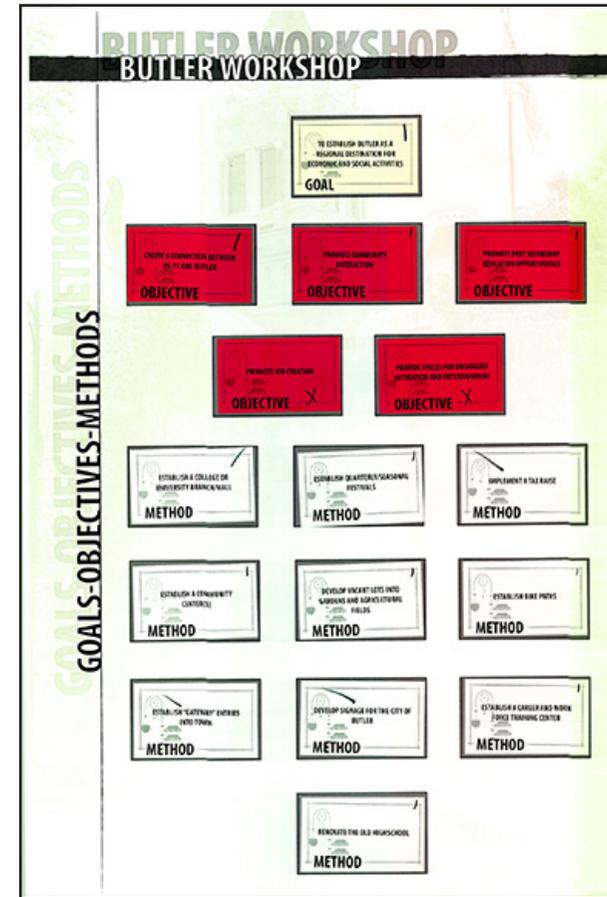
NOTE: These boards were the goal, objective and method results from each community team during the visioning workshop.



FIG\_APPENDIX\_244\_1

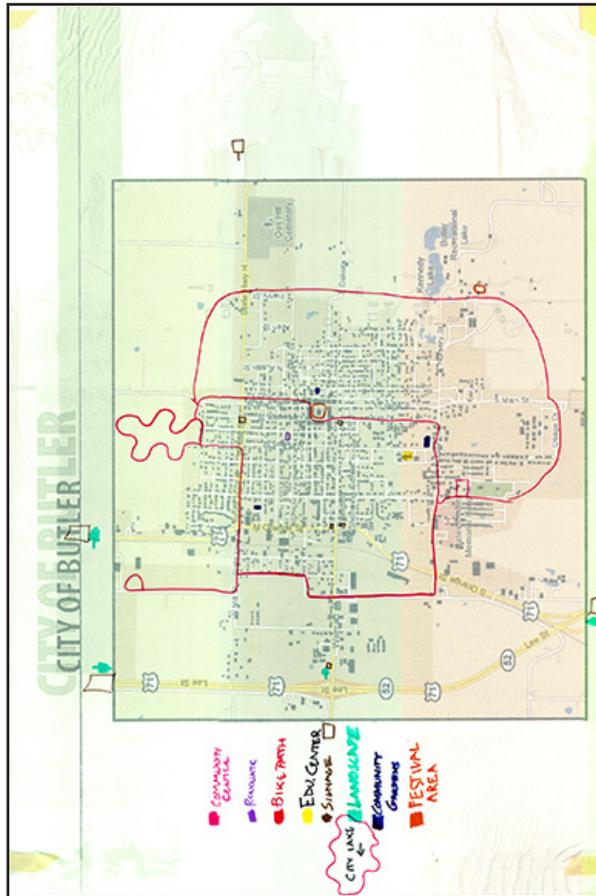


FIG\_APPENDIX\_244\_2

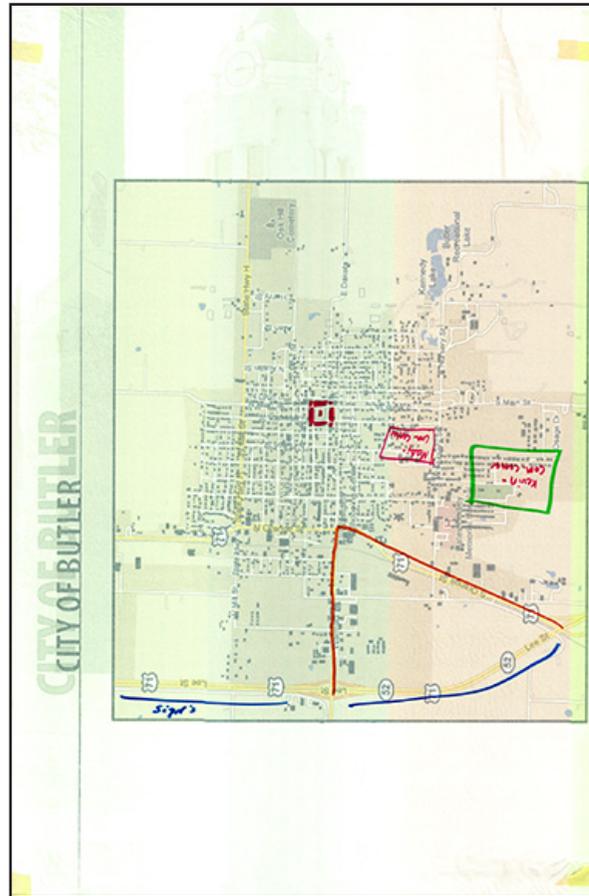


FIG\_APPENDIX\_244\_3

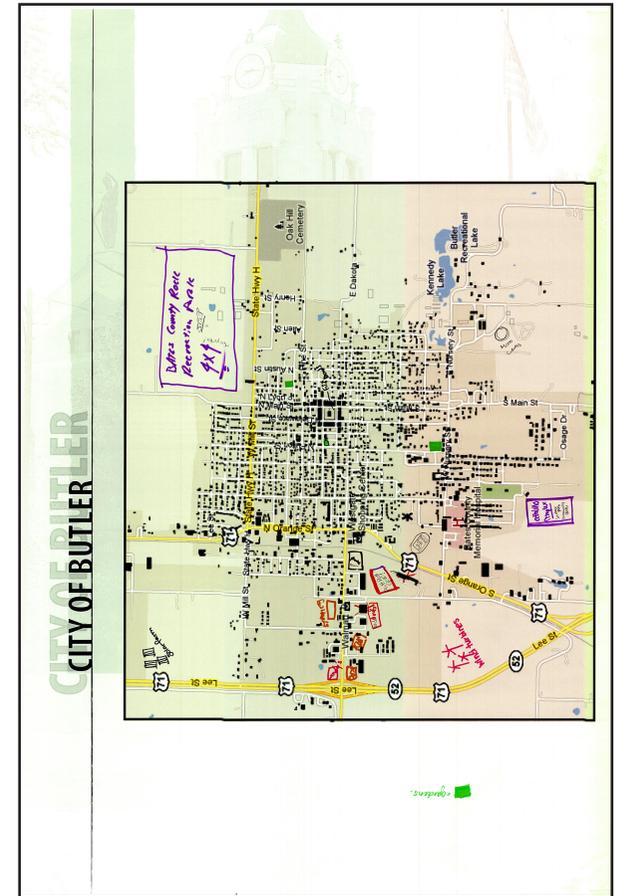
NOTE: These boards were suggested vision plans prepared by the community members during the visioning workshop.



FIG\_APPENDIX\_245\_1



FIG\_APPENDIX\_245\_2



FIG\_APPENDIX\_245\_3

# BUTLER 2040

## workshop 1

NOTE: These boards were the goal, objective and method results from each community team during the visioning workshop.

**BUTLER WORKSHOP**

**GOALS-OBJECTIVES-METHODS**

**GOAL**  
TO BECOME A MODEL FOR SUSTAINABLE GROWTH

**OBJECTIVE**  
INCREASE BUTLER'S POPULATION

**OBJECTIVE**  
PROVIDE SPACES FOR ORGANIZED RECREATION AND ENTERTAINMENT

**OBJECTIVE**  
CATER TO INTERESTS IN TRAFFIC

**OBJECTIVE**  
PROMOTE JOB CREATION

**OBJECTIVE**  
ENHANCE THE OVERALL BEAUTY OF BUTLER

**METHOD**  
DEVELOP A TECH CENTER

**METHOD**  
ESTABLISH RETIREMENT VILLAGES

**METHOD**  
ESTABLISH A COMMUNITY CENTER(S)

**METHOD**  
ESTABLISH RESTAURANTS AND ENTERTAINMENT VENUES DOWNTOWN

**METHOD**  
DEVELOP AN INDOOR SWIMMING POOL

**METHOD**  
ESTABLISH DOWNTOWN RESIDENCES

**METHOD**  
DEVELOP SPACES FOR YOUTH AND YOUNG ADULT ENTERTAINMENT

**METHOD**  
IMPLEMENT A TAX RAISE

**METHOD**  
PROMOTE LOCAL SHOPPING

**METHOD**  
ESTABLISH QUARTERLY/SEASONAL FESTIVALS

FIG\_APPENDIX\_246\_1

**BUTLER WORKSHOP**

**GOALS-OBJECTIVES-METHODS**

**GOAL**  
TO PROMOTE REGIONAL PLANNING AND DEVELOPMENT FOR ECONOMIC RENEWAL

**OBJECTIVE**  
PROMOTE TOURISM

**OBJECTIVE**  
PROMOTE POST-SECONDARY EDUCATION OPPORTUNITIES

**OBJECTIVE**  
PROMOTE JOB CREATION

**OBJECTIVE**  
CATER TO INTERESTS IN TRAFFIC

**OBJECTIVE**  
PROVIDE SPACES FOR ORGANIZED RECREATION AND ENTERTAINMENT

**METHOD**  
ESTABLISH A COLLEGE OR UNIVERSITY BRANCH/MALL

**METHOD**  
TRIM/REMOVE SUBSTANDARD HOUSING

**METHOD**  
DEVELOP SPACES FOR YOUTH AND YOUNG ADULT ENTERTAINMENT

**METHOD**  
PROMOTE LOCAL SHOPPING

**METHOD**  
IMPLEMENT A TAX RAISE

**METHOD**  
PROVIDE A PUBLIC TRANSPORTATION SYSTEM

**METHOD**  
RENOVATE BUILDINGS AROUND THE SQUARE

**METHOD**  
DEVELOP AN ATHLETICS COMPLEX

**METHOD**  
ESTABLISH RESTAURANTS AND ENTERTAINMENT VENUES DOWNTOWN

**METHOD**  
ESTABLISH A CAREER AND WORK FORCE TRAINING CENTER

FIG\_APPENDIX\_246\_2

**BUTLER WORKSHOP**

**GOALS-OBJECTIVES-METHODS**

**GOAL**  
TO ESTABLISH BUTLER AS A REGIONAL DESTINATION FOR ECONOMIC AND SOCIAL ACTIVITIES

**OBJECTIVE**  
PROMOTE DOWNTOWN GROWTH

**OBJECTIVE**  
CATER TO INTERESTS IN TRAFFIC

**OBJECTIVE**  
PROVIDE SPACES FOR ORGANIZED RECREATION AND ENTERTAINMENT

**OBJECTIVE**  
PROMOTE JOB CREATION

**OBJECTIVE**  
PROMOTE TOURISM

**METHOD**  
ESTABLISH A COMMUNITY CENTER(S)

**METHOD**  
PROMOTE LOCAL SHOPPING

**METHOD**  
ESTABLISH RESTAURANTS AND ENTERTAINMENT VENUES DOWNTOWN

**METHOD**  
PROMOTE ENERGY CONSERVATION

**METHOD**  
DEVELOP SPACES FOR YOUTH AND YOUNG ADULT ENTERTAINMENT

**METHOD**  
ESTABLISH QUARTERLY/SEASONAL FESTIVALS

**METHOD**  
DEVELOP AN ATHLETICS COMPLEX

**METHOD**  
ESTABLISH RETIREMENT VILLAGES

**METHOD**  
ESTABLISH DOWNTOWN RESIDENCES

**METHOD**  
RENOVATE BUILDINGS AROUND THE SQUARE

FIG\_APPENDIX\_246\_3

NOTE: These boards were the goal, objective and method results from each community team during the visioning workshop.

**BUTLER WORKSHOP**

**GOALS-OBJECTIVES-METHODS**

**GOAL**

TO ESTABLISH BUTLER AS A REGIONAL DESTINATION FOR ECONOMIC AND SOCIAL ACTIVITIES

**OBJECTIVE**

PRESERVE BUTLER'S ARCHITECTURAL HISTORY

PROMOTE COMMUNITY INTERACTION

ENHANCE THE OVERALL BEAUTY OF BUTLER

**OBJECTIVE**

PROVIDE SPACES FOR ORGANIZED RECREATION AND ENTERTAINMENT

PROMOTE JOB CREATION

**METHOD**

DEVELOP AN ATHLETICS COMPLEX

DEVELOP VACANT LOTS INTO GARDENS AND AGRICULTURAL FIELDS

DEVELOP SPACES FOR YOUTH AND YOUNG ADULT ENTERTAINMENT

**METHOD**

ESTABLISH RESTAURANTS AND ENTERTAINMENT VENUES DOWNTOWN

ESTABLISH QUARTERLY/SEASONAL FESTIVALS

ESTABLISH A COMMUNITY RETIREMENT ORGANIZATION

**METHOD**

PROMOTE LOCAL SHOPPING

ESTABLISH STREETSCAPE GUIDELINES

PROMOTE ENERGY CONSERVATION

**METHOD**

ESTABLISH "GATEWAY" ENTRIES INTO TOWN

FIG\_APPENDIX\_247\_1

**BUTLER WORKSHOP**

**GOALS-OBJECTIVES-METHODS**

**GOAL**

TO ESTABLISH BUTLER AS A REGIONAL DESTINATION FOR ECONOMIC AND SOCIAL ACTIVITIES

**OBJECTIVE**

PROVIDE SPACES FOR ORGANIZED RECREATION AND ENTERTAINMENT

PROMOTE TOURISM

ENHANCE THE OVERALL BEAUTY OF BUTLER

**OBJECTIVE**

PROMOTE DOWNTOWN GROWTH

PROMOTE POST SECONDARY EDUCATION OPPORTUNITIES

**METHOD**

ESTABLISH QUARTERLY/SEASONAL FESTIVALS

ESTABLISH RESTAURANTS AND ENTERTAINMENT VENUES DOWNTOWN

ESTABLISH A COMMUNITY (CENTERS)

**METHOD**

DEVELOP SPACES FOR YOUTH AND YOUNG ADULT ENTERTAINMENT

ESTABLISH A COLLEGE OR UNIVERSITY BRANCH/SCHOOL

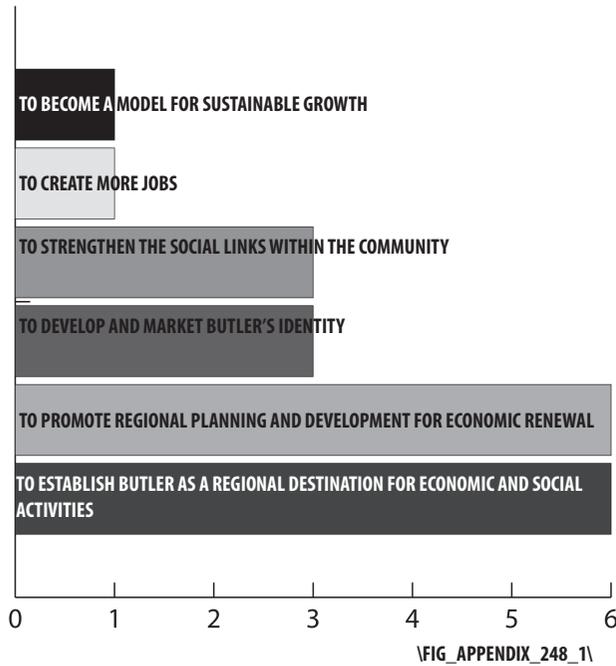
FIG\_APPENDIX\_247\_2

# BUTLER 2040

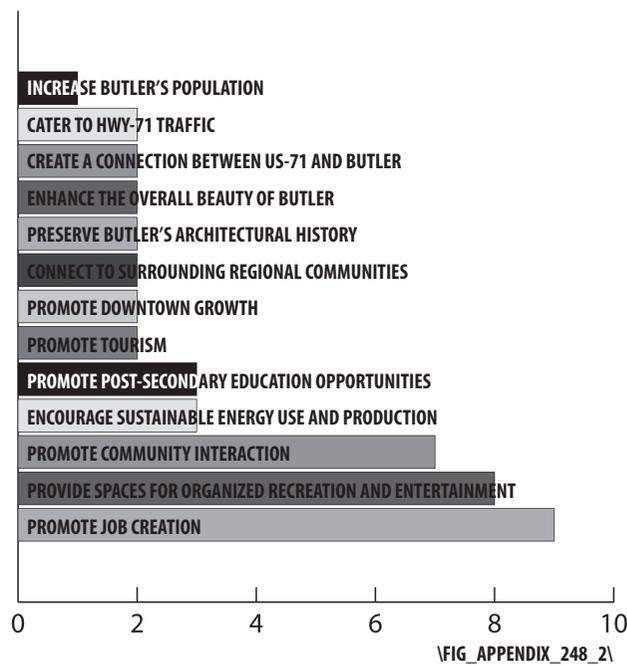
## workshop 1 recap

NOTE: These are the summaries of of the considered goals, objectives and methods that resulted from Workshop 1.

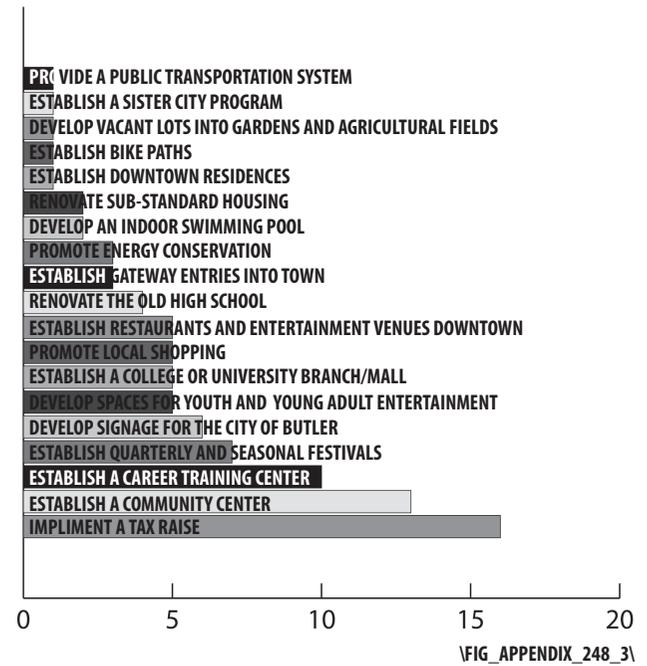
### CONSIDERED GOALS



### CONSIDERED OBJECTIVES

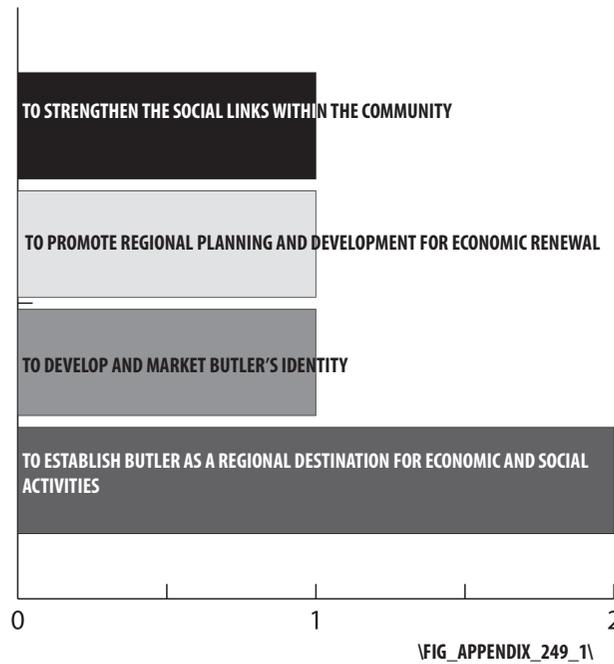


### CONSIDERED METHODS

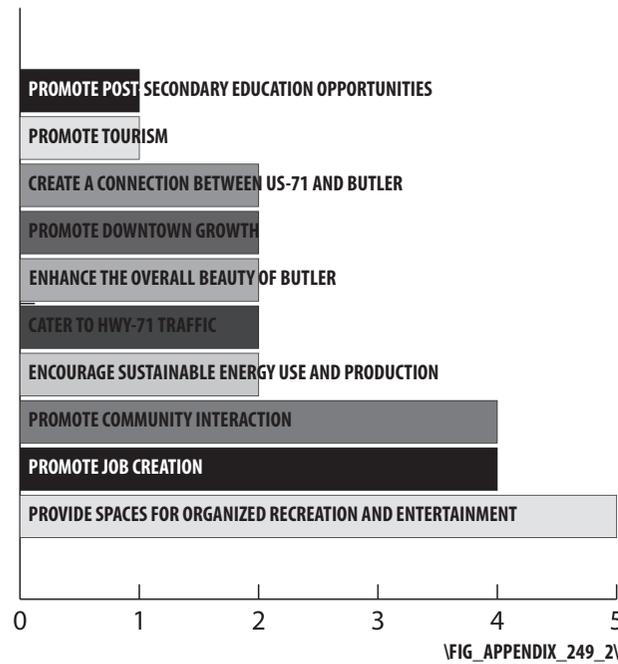


NOTE: These are the summaries of of the selected goals, objectives and methods that resulted from Workshop 1. This data specifically formed the basis of further research and design responses.

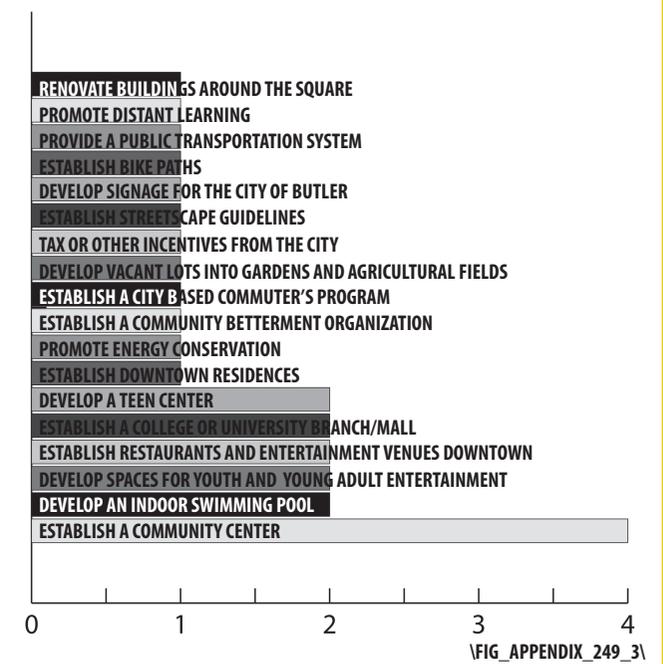
### SELECTED GOALS



### SELECTED OBJECTIVES



### SELECTED METHODS



### COLLABORATIVE DESIGN

#### IDENTITY

Reinvent Butler as the "new electric city"

- Signage and beautification
- Streetscaping, landscaping, and design guidelines
- Green technology
- Charging stations, wind turbines, and the initiation of the already planned solar farm

#### SOCIALIZATION

Two community centers

- One near high school aimed at recreation, rehabilitation and sports
- One near square centered on meetings, gatherings and other events
- Density through variety of housing methods, public green spaces and community gardens

#### HEART OF CITY

- Public transportation route and hub that caters to square
- Clear path and views from Fort Scott to the square
- Bring a farmer's market, festivals, and events to square
- Systematically improving the facades, streets, landscaping, and surrounding area

#### ACTIVE LIVING

- Placing the housing within easy reach of public green spaces
- Walkable communities
- Mixing land use: commercial, residential, etc.

NOTE: The purpose of a collaboration board such as this is to allow one to visualize every piece of the puzzle finally coming together. After viewing each portion separately, a holistic design that implements identity, socialization, and sustainable practices can begin to shape what Butler could be twenty-three years from now.

FIG. APPENDIX\_250\_1

### FORT SCOTT CORRIDOR

#### GREEN COMMERCIAL CORRIDOR

#### SITE PLAN

#### GATEWAY PEDESTRIAN BRIDGE

#### TRANSIT HUB

#### KEY

- Gateway Features
- Transportation Hub
- Entertainment
- Gateway Green Space

#### KEY FEATURES:

- Open Gateway footbridges that connect and paths throughout the city
- Entertainment venues with outdoor and indoor options
- Transportation Hub that connects all rail and transport systems
- Green spaces that offer concrete plazas as well as open green space
- Wind energy generation

#### SITE SECTION

**PROS:** Initiates an active community; provides a visual link between the two ends of town; promotes environmental concern; placement of elements are central to city; transportation hub utilizes train tracks

**CONS:** Lack of increase in commercial space along corridor may lose potential Highway 71 drivers

FIG. APPENDIX\_250\_2

### FORT SCOTT CORRIDOR

#### GREEN CORRIDOR

#### SITE PLAN

#### CENTRAL MEDIAN GREEN PATH SYSTEM

#### PRECEDENT: KNOX COUNTY TRANSIT STATION

- Implements a successful connection of multiple transit systems while including retail and entertainment opportunities

#### PRECEDENT: BETTER PLACE

- Allows for a future in electric transportation in which transit relies on batteries rather than diesel fuel

#### PRECEDENT: HENDERSON PAVILLION

- Opens the opportunity for outdoor entertainment such as music, theatre, and open gathering space

#### KEY

- Gateway Features
- Transportation Hub
- Entertainment
- Gateway Green Space

#### KEY FEATURES:

- Open Gateway Park that connects across Fort Scott
- Central Median Green Path System
- Transportation Hub that connects all rail and transport systems
- Pavilion style outdoor entertainment venue
- Softscape landscaping and signage techniques

#### SITE SECTION

**PROS:** Initiates an active community; provides a visual link between the two ends of town; promotes environmental concern; placement of elements are central to city; transportation hub utilizes train tracks

**CONS:** Lack of increase in commercial space along corridor may lose potential Highway 71 drivers; entertainment venue cannot be used at all times

FIG. APPENDIX\_250\_3

### FORT SCOTT CORRIDOR

#### COMMERCIAL CORRIDOR

**BUILT ENTERTAINMENT:**  
-Allows for multiple differing entertainment opportunities as well as numerous sheltered options

**COMMERCIAL CORRIDOR**

**GATEWAY PARK**  
Using concrete and paved park systems such as this could provide more of a visual stand-out to those passing by Butler on Highway 71

**KEY**

- Gateway Features
- Transportation Hub
- Entertainment
- Gateway Green Space

**KEY FEATURES:**

- Commercial strips of restaurants, retail and entertainment
- Gateway entry to include paved parks and concrete plazas
- Simple landscaping with relevant side-walks
- Downtown Square Transport Hub
- Built entertainment facility
- Gateway entry to include paved parks and concrete plazas
- Gateway entry to include a welcome center on opposing side of HWY 71

**SITE SECTION**

**PROS:** Provides more venues for entertainment and retail and, as a result, may draw more attention from Highway 71 drivers; more inexpensive due to lack of landscaping; entertainment venue can be utilized at all times

**CONS:** Doesn't really initiate an active community; doesn't provide a visual link between the two ends of town; doesn't promote environmental concern; placement of elements are not central to city—transportation hub doesn't utilize train

FIG\_APPENDIX\_251\_1

### FORT SCOTT CORRIDOR

#### TRANSPORTATION

**ELECTRIC TROLLEY**

**ADVANTAGES:**

- Nearly Silent
- Run on Paved Streets
- More environmentally friendly
- Not bound to a specific fuel source
- Favored when electricity is abundant and cheap
- Can be equipped with battery
- Not affected by increasing diesel costs
- Track provides visual link to destinations
- Promotes an aesthetic classic American image
- Promote's Butler's Electric City Image

**DISADVANTAGES:**

- Fixed to route
- Wires aren't an aesthetic addition
- Derailment
- Somewhat expensive to initiate
- Fixed to route

**LITHIUM ION BATTERY POWERED TROLLEY (450 per kWh its total cell cost would be an initial \$7200, Fuel costs about 2 cents per mile using electricity and 10 cents per mile using gas)**

**ADVANTAGES:**

- Run on paved streets
- More environmentally friendly
- Not bound to a specific fuel source
- Favored when electricity is abundant and cheap
- Not affected by rising fuel costs
- Promotes Butler's Electric City image
- More operational system needed
- Inexpensive

**DISADVANTAGES:**

- Slightly Noisy
- Does not provide a visual link to destinations

**STREETCAR ON TRACKS**

**ADVANTAGES:**

- Track provides visual link to destinations
- Promotes an aesthetic classic American image

**DISADVANTAGES:**

- Fixed to Track and Route
- Most expensive option
- Derailment
- Cannot run on paved street alone
- Not environmentally concerned
- Noisy
- Subject to rising fuel costs
- Doesn't promote Butler's Electric City image

**DIESEL/HYBRID DIESEL BUS**

**ADVANTAGES:**

- Run on paved streets
- Promotes an aesthetic classic American image
- Routes are versatile
- No operational system
- Fairly inexpensive initially
- Biodiesel and other advances are being continuously researched

**DISADVANTAGES:**

- Subject to rising fuel costs
- Subject to becoming obsolete as far as fuel is concerned
- Does not provide a visual link to destinations
- Not environmentally concerned
- Noisy
- Doesn't promote Butler's Electric City image

**INCREASING DIESEL COSTS OVER A 36 YEAR SPAN...**

**POSSIBLE TROLLEY TRANSPORTATION ROUTE ABOVE IN RED**

**NOTE:** In addition to adding another option of transportation to the city of Butler, public transportation has a number of advantages. It creates a visual link to different key points of interest in town and it provides a safe, economic, and reliable method of travel. Not to mention, if an electric system was implemented, Butler is one step closer to becoming "the NEW Electric City."

FIG\_APPENDIX\_251\_2

### SUSTAINABLE COMMUNITIES

#### DESIGN MECHANISMS

**SUSTAINABLE COMMUNITIES:**  
Sustainable communities are planned, built, or modified to promote sustainable living, a lifestyle that seeks to reduce a society's use of the Earth's natural resources. This may include sustainability aspects relating to development, water, transportation, energy, and waste and materials.

**CREATING A COMMUNITY:**  
There are many aspects that go into creating a sustainable community. Not only are the typical conventions of "sustainable" employed, but also many conceptual concepts. These include compact building designs, ranges of housing choices, walkable neighborhoods, mixed land uses, preservation of open space, and place making.

**WHAT HAPPENS:**  
Implementing strategies and design mechanisms to grow the city of Butler in an intelligent way while also creating sustainable communities will aid Butler to become a self supportive community. Applying these mechanisms to not only current areas will add to the uniqueness, community, and prosperity of the Butler community.

**THE GOAL IS TO CREATE STRONG COMMUNITIES.**  
Communities based in walking, communal gatherings, public gardens, alternative transportation methods. These communities make use of multi-use space and sustainable practices.

**RISING COSTS:**  
Above is the graph of the rising cost of gasoline in the United States. The price of gas will only continue to rise. The benefit to having walkable neighborhoods will only be greater as the cost of transportation rises. The interest in alternative means of transport will also rise.

**STATION PARK GREEN (SAN MATEO, CA)**  
Mix of retail, businesses, residential and entertainment.  
Redefine an underutilized brownfield site into a walk able, mixed-use, transit-oriented development.  
Bicycle parking and connections to the transit station, as well as car-sharing vehicles, will offer residents and workers options beyond using personal automobiles.  
Use of solar orientation, rooftop gardens, and low-impact storm water management features.

**JORDAN DOWNS (WATTS, CALIFORNIA)**  
Up to 1,100 homes for families with a range of income and types.  
8 acres of public open space and markets.  
The master plan is organized around a new central park, connecting the north and south sections of the Jordan Downs community.  
Parks are spread around the entire area allowing all to have easy access to green spaces  
The new community is reconnected with surrounding neighborhoods through permeable streets and blocks.

**TWINBROOK STATION (ROCKVILLE, MD)**  
Connects and anchors retail, office and residential areas to the Twinbrook Metro station.  
Reduces the area's vehicle miles traveled by making public transportation more accessible and attractive.  
Makes green building an integral part of Twinbrook Station  
New buildings will feature energy and water efficient design strategies.  
Creates waste management and recycling programs throughout the development.

**PROS:** Sustainable communities create a more active and social society. They reduce the demand and necessity of cars as means of transportation. The communities make public transportation a more viable option. By reducing the physical size of the community, municipalities can save money on maintenance of sewage, water, electricity, and other infrastructure.

**CONS:** Creating sustainable communities can have a large up front cost. Many technologies may not provide as great a benefit as would be desired. Positive aspects could take many years or even decades to see the benefits.

FIG\_APPENDIX\_251\_3

### SUSTAINABLE COMMUNITIES

**RETROFITTING**

**Pros:** Fosters a greater sense of community by raising density of the area from .75 to approximately 12.4 units per acre and promotes walkability in the area. The area is a more socially conducive pedestrian based community. This encourages businesses to open in the area that takes advantage of multiple modes of transportation. Thus, a sense of place and identity will be fostered, which creates more open public space, and upgrades and enhances these areas of town. The scheme can be phased in over time.

**Cons:** Could displace residents. Requires a greater commitment by the community and the neighborhoods directly effected would require modification to city zoning codes.

FIG\_APPENDIX\_252\_1

### SUSTAINABLE COMMUNITIES

**LOW TECHNOLOGY**

**Pros:** Improvements in water retention, transportation, energy, waste, and materials. Provides a natural community space to walk and interact.

**Cons:** Sustainable materials may be expensive, does not engage commercial retail into the community.

FIG\_APPENDIX\_252\_2

### SUSTAINABLE COMMUNITIES

**HIGH TECHNOLOGY**

**Pros:** Promotes sustainable living using a number of methods including water retention, materials, energy saving. Provides a multitude of different housing options, and creates a lot of green space.

**Cons:** These sustainable strategies will be expensive (solar panels and wind turbines). Butler may not have the population that will make this design function.

FIG\_APPENDIX\_252\_3

### DOWNTOWN REVITALIZATION

#### DOWNTOWN REVITALIZATION

FARMERS MARKET ON FORT SCOTT

**VIEW OF CITY HALL**



**VIEW FROM LOFT APARTMENT**



**VIEW OF THEATRE STYLE SPACE**



**VIEW FROM FORT SCOTT**



**VIEW OF FARMERS MARKET**



The Downtown Revitalization program for this scheme contains similarities from other schemes. The parking was condensed to have one street of one way vehicular circulation. There will be an open green space along Fort Scott that would be transformed to a Farmers Market, at which farmers would meet once a week to sell their goods. The Farmers Market would have similar circulation to the Kansas City Farmers Market, creating a linear pattern for consumers to take while shopping. Within the program of the Green Space/ Farmers Market, the vehicular circulation should be apart from pedestrian traffic, and a clear view of the City Hall will be seen driving from Fort Scott Street.

Loft apartments will be created above the stores. There is plenty of room for loft apartments above the shops, and implementing living spaces will give owners a chance to live above their store, or to rent it out to pay taxes, living expenses, etc.



**PROS-** Added green space, more seating around square, added linkage between Fort Scott and the Square, added community interaction, farmers market bring community together

**CONS-** Farmers market structure is single purpose, loss of parking, one way circulation, possibility of wasted space, too much vegetation could lose sense of space.

FIG\_APPENDIX\_253\_1

### DOWNTOWN REVITALIZATION

#### DOWNTOWN REVITALIZATION

FARMERS LANE

**VIEW TOWARDS FORT SCOTT**



**VIEW DOWN THE ROAD DURING FARMERS MARKET**



**VIEW DOWN THE SIDEWALK**



**VIEW FROM STREET TO CITY HALL**



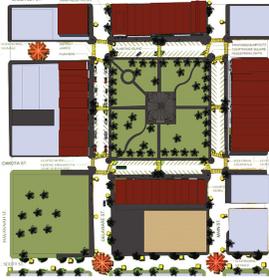
**PRECEDENTS**

Precedent studies were derived from successful farmers market idea's and downtown square lofts. A precedent study was taken from the square of Denton, Texas for implementation of the green space and parking assembly.



The Farmers Lane Scheme use the existing streets as parking for the farmers who bring their goods to sell to the community. The roads will be closed once a week for this event. The reasoning behind this is to bring people from around the area, and have them shop locally, buy local products, and interact with others.

Aside from the Farmers Lane, similar to other schemes, lofts would be created on the second or third stories above shops within the square. Benches would be placed along the sidewalks for additional seating, and more lighting would be implemented to electrify the square and reassert the meaning of Butler as the "Electric City". The square will also include improved crosswalks.



**PROS-** Increased community interaction, additional living space above shops, safer roads with crosswalks, added green space creating a visible entrance to the Square from Fort Scott, promote local farming.

**CONS-** Loss of main parking within square, road closed once a week, vegetation could lose sense of place within the square, and the buildings would have to be removed to create green space.

FIG\_APPENDIX\_253\_2

### DOWNTOWN REVITALIZATION

#### DOWNTOWN REVITALIZATION

URBAN GREENSPACE

**VIEW TO GREEN SPACE FROM FT. SCOTT**



**VIEW FROM INSIDE LOFT**



**VIEW DOWN SIDEWALK**



**VIEW TO GREEN SPACE FROM SQUARE**



**PRECEDENTS:**

Below are some pictures of urban green spaces that have been incorporated into cities approximately the same size of Butler and have turned out to be successful.



Through this scheme, an "Urban Greenspace" is implemented in order to create a greater physical and visual connection to the square from Ft. Scott St. and also become a pivot point from the newly proposed pocket neighborhood to the square.

Disconnect between Ft. Scott and the square is resolved in this design by physical and visual connections of a new park and green space that will be used as a multi purpose space for the farmer's market and recreational use on a daily basis by the community. The location of the new park creates a pivot point at the southwest corner of the square that connects the team's proposal for a pocket neighborhood to the northwest and the square. The layout of the farmer's market on the square allows for flexibility depending on the size of the market that day. The majority of the lofts on the upper floors of the downtown square are in good shape for future lofted apartments.



**PROS-** Balance of green space and hard scape, creates barrier from Ft. Scott, multi-use space, PIVOT POINT, overall beautification, visual connections, expansion for Farmer's Market

**CONS-** Ghost-like when unoccupied, too large, connection of old jail parking and new park isn't as strong, could create competition to Farmer's Market on square

FIG\_APPENDIX\_253\_3

### DOWNTOWN REVITALIZATION

The buildings surrounding the downtown square create great opportunities to renovate the interior spaces and incorporate housing into the downtown square. Lower floors are approximately 70 percent occupied by commercial space with the majority of the upper floors unoccupied. Below are guidelines to spatial organization with the lower floors being commercial spaces and the upper floors as loft spaces. The loft spaces above could create a great opportunity to promote housing for returning college students, housing for the owners of the businesses below or housing for anyone looking to be closer to the downtown lifestyle.

VIEW TO GREEN SPACE FROM FT. SCOTT

#### COMMONALITIES

##### FACADE GUIDELINE EXAMPLES

- Proper rhythm throughout the storefronts
- Masonry is the preferred facade material for downtown
- Do repairs and cleaning on brick
- Buildings should be interesting to pedestrians and motorists at night, as well as day. Incorporate lighting.
- Maintain original size and shape of storefront opening
- Establish a recessed entry on each storefront
- Solid doors should be avoided
- Create transparency between the exterior in interior
- Tinted or reflective glass should be avoided
- Upper windows to be uniformly spaced
- Storefronts are to be permanently open or operable so they appear to be open on the upper levels
- Put fences around exposed dumpsters to preserve the beauty of downtown and the rear of the buildings
- Fresh paint, use the base color for majority of the surface. Base colors should be muted earth tones or pastels

One way to create a connection from the square to Ft. Scott is to incorporate the lighting used downtown along the physical connection and roadways down Ft. Scott and around the new green space. A way for people to relax, and even add aesthetic beauty, is to implement sitting benches around the square so shoppers could have a place to rest and enjoy nature.

VIEW TO GREEN SPACE FROM FT. SCOTT

FIG\_APPENDIX\_254\_1

### NORTH COMMUNITY CENTER

#### RENOVATE HIGH SCHOOL FOR HOUSING

##### COMMUNITY CENTER PRECEDENT

The Virginia Avenue Park expansion is a community center complex. It has multiple spaces that help unite diverse cultures in a dense neighborhood. It has pedestrian path that connect the existing park with the new pavilion. There is a new children's water area and playground and a teen center that was placed inside a converted warehouse. In another building on the campus there is a gym, dance, and fitness studio. It also houses employment information and referral services, administrative offices and a police sub-station.

##### SHARED COMMON SPACE

This pocket neighborhood has several small houses or cottages that surround a common space which holds the neighborhood together and gives it vitality. The common space could be a garden courtyard, a play space, a reclaimed alley, or a community room. The space is defined between the public and private realms. The residents manage and care for the space. Each of the houses has a personal yard with a fence around it. The garages are off to the side which forces the residents to walk through the common space which increases the sense of community.

##### DESIGN

- The old high school was renovated for senior living
- The police station was removed and replaced with a community garden
- There is a single cluster pocket neighborhood that features a common building for the sub community
- It features communal parking as well as bike storage
- Green pathway that connects to the new green space off the square
- South of the pocket neighborhood there is a community center
- Visual connection with the square and Ft. Scott street

**Zone One**  
This is the lot for the proposed community center.

**Zone Two**  
This is the space for the pocket neighborhoods.

**Zone Three**  
This is the lot of the old high school, which is either torn down and replaced with green space or renovated.

**PROS:** Pocket Neighborhood gives sense of community, community center with multiple uses for downtown area, provides multiple housing options, promotes street beautification.

**CONS:** Removes two businesses, closes off two access streets, does not allow for as much green space.

FIG\_APPENDIX\_254\_2

### NORTH COMMUNITY CENTER

#### POCKET NEIGHBORHOOD WITH GARDEN

##### COMMUNITY CENTER PRECEDENT

The Williamsburg Community Center in Brooklyn was designed to serve the community for everyday uses and special events. It houses a gym, dance studio, classrooms, art studios, darkroom, computer room, movie projection screen, stage, recording studio, and other multipurpose spaces. The facility has a kitchen that offers lunches to senior citizens all year and for children during summer. Large operable doors were used with moveable partitions give the space flexibility. The center was part of the program to renovate 24 of the residential buildings in the area.

##### POCKET NEIGHBORHOOD WITH GARDEN

A common building and gardens pocket neighborhood has clusters of houses and separate common areas. One common area is a community garden with a tool shed for the gardening supplies, which would be shared among everyone. Other common spaces would be a pavilion for grilling, and a multipurpose room that would have a kitchenette and storage. This common space could be used for events like neighborhood meetings, exercise groups, movie nights, etc.

##### DESIGN

- Tear down old high school and replaced it with a park and community garden space for the pocket neighborhood.
- Features a double cluster pocket neighborhood that crosses over Harvannah
- The pocket neighborhood allows access from the park to the community center through a common green space
- A community center that features fields for youth activities and meeting spaces
- A kitchen that serves dinner to a wide age group throughout the year
- Streetscape beautification that allows visual connection to square and Ft. Scott street

**Zone One**  
This is the lot for the proposed community center.

**Zone Two**  
This is the space for the pocket neighborhoods.

**Zone Three**  
This is the lot of the old high school, which is either torn down and replaced with green space or renovated.

**PROS:** Allows open green space for the community, Community garden promotes self sustaining practices, Pocket Neighborhood gives sense of community, Community center with multiple uses for downtown area.

**CONS:** Removes two businesses, Tears down old high school, Closes off two access streets.

FIG\_APPENDIX\_254\_3

### NORTH COMMUNITY CENTER

**COMMUNITY CENTER PRECEDENT**  
Coal Harbour Community Centre in Vancouver, British Columbia was part of the planning process to bring people back to the downtown square. Coal Harbour is one of the few community centers developed and tailored for specific neighborhood needs. This 85,000 sq. ft. community center serves the more leisure-oriented users. It has a cappuccino par and a dance studio. It also has things the other community centers don't have, like a gym and a large multipurpose space that can be rented out for events such as weddings.

**DOUBLE CLUSTER VILLAGE**  
This type of pocket park has different layers of privacy. This helps balance the feeling of privacy and community, so no one feels suffocated or cut off from their neighbors. A passage would be created from the public street to the common space as a gateway. The porches will have coverings and be surrounded with plants, which allows the front porch to be a private or public space. Inside the house the active living spaces are near the front, and the more private personal spaces are at the back of the house or upstairs.

**DESIGN**

- Tore down old high school and replaced it with a park and playground
- South of the new park is a double clustered pocket neighborhood
- The pocket neighborhood includes a corner grocery store and a cafe coffee shop
- A community center is south of the pocket neighborhood
- The community center has youth services, a multipurpose room, a banquet room with kitchen, closets for various organizations, and a studio room.
- There is also a green space with a playground on the site

**Zone One**  
This is the lot for the proposed community center.

**Zone Two**  
This is the space for the pocket neighborhoods.

**Zone Three**  
This is the lot of the old high school, which is either torn down and replaced with green space or renovated.

**PROS:** Allows open green space for the community, gives the community a new park, pocket neighborhood gives sense of community community center with multiple uses for downtown area, provides multiple housing options.

**CONS:** Removes two businesses, tears down old high school, closes off two access streets, others may feel they can not go to the corner store and cafe since they are in the pocket neighborhood.

FIG\_APPENDIX\_255\_1I

### SOUTH COMMUNITY CENTER

**RECREATIONAL DESIGN**

This design take a more traditional approach. This Recreational Center would focus community health and wellness. There would be basketball courts, racquetball courts, weight room, indoor and outdoor track, and indoor pool. Also incorporates classrooms that could be rented out to teach healthy living practices. There is also a recreation field adjacent to the complex. This can be used for festival, football games, soccer games and many other recreational activities.

**PROS:** Community health and wellness center, place for community to come and work out, lower cost, classrooms

**CONS:** Little community interaction- no pocket parks or community gardens

**ENTRANCE TO COMMUNITY CENTER**

**OUTDOOR TRACK AND RECREATION FIELD**

**INDOOR POOL**

**PROS:** Recreation Center, Park, Teaches Sustainable Practices, Community Involvement

**CONS:** Limited connection to high school and hospital. Will not work without community support

FIG\_APPENDIX\_255\_2I

### SOUTH COMMUNITY CENTER

**HIGH PERFORMANCE COMPLEX**

**PRECEDENTS**

The Goldring Center for High Performance Sports Complex is a new state of the art facility for its community.

- Designed to form an identity to the area.
- Units the community with a campus orientation.
- State of the art complex and teachers.
- Green roof minimizes heat island effect and storm water run off.
- Skylights and terraces admit diffuse daylight into core of building.
- PVs generate electricity.
- Solar thermal panels provide hot water needs.
- High performance building envelope.
- Vegetated aluminum grille shades in summer; thermal gains maximized in winter.
- Harvested rainwater for irrigation and flushing toilets/urinals.
- Dual flush toilets, pint flush urinals, ultra low flow faucets and showers.
- Natural ventilation shaft, mechanical assist.
- Demand control ventilation with CO2 sensors for low occupancy rooms.
- Occupancy / daylight sensors; energy efficient lamps/ballasts.
- Heat recovery system for exhaust air and showers.
- Waterside and air side free cooling in HVAC systems.
- Variable flow pumping systems with variable frequency drives.

**SITE PLAN OF SOUTH WEST BUTLER**

**BUTLER COMMUNITY CENTER SOUTH**  
Community Center- Indoor swimming pool, basketball court, cafeteria, college classrooms for technical colleges, connected to track and football stadium, fitness center and medical clinic.

- Community Center
- Pocket Parks
- Round-about
- Sustainable Gardens
- Pedestrian Bridge
- Stadium
- Senior Home
- Hospital
- High School

**PERSPECTIVE OF FOOTBALL FIELD**

**PERSPECTIVE OF PEDESTRIAN BRIDGE OVER ORANGE ST.**

**TO ESTABLISH A CAMPUS FOR THE COMMUNITY TO CONNECT THE HIGH SCHOOL, NURSING HOME, HOSPITAL AND NEW COMMUNITY CENTER.**

**PROS:** Unite the community, improve athletics and recreation, establish an identity, provide activities year around facility for the community, safer part of town with walkways sides bike paths and roundabouts

**CONS:** Cost, could have the potential to take main concentration away from community instead of uniting it.

FIG\_APPENDIX\_255\_3I

### SOUTH COMMUNITY CENTER

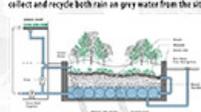
ENVIRONMENTAL DESIGN



**SOUTH COMMUNITY CENTER KEY AREA**

- Recreational Center
- Community Gardens
- Pocket Park

Water retention ponds on the site. These will be used to collect and recycle both rain and grey water from the site.



This design concept focuses more on sustain all life's. The community center will provide various service that help teach people in the community to live more sustainably. It include classrooms, recreation facilities, a pocket park, and several community gardens. These gardens will provide food for the local food kitchen as well as teach the community how to grow their own food.



Entrance to Community Center



Pocket Park



Pocket Park



Indoor Pool

**COMMUNITY CENTER PROGRAM:**

- Basketball Court
- Classroom
- Cafe
- Weight room
- Recreation Center
- Indoor Pool with swimming lanes.

**PROS:** Recreation Center, Park, Teaches Sustainable Practices, Community Involvement

**CONS:** Limited connection to High school and Hospital. Will not work without community support

FIG\_APPENDIX\_256\_1

### SUSTAINABLE COMMUNITIES

DESIGN MECHANISMS

**SUSTAINABLE COMMUNITIES:** Sustainable communities are planned, built, or modified to promote sustainable living, a lifestyle that seeks to reduce a society's use of the Earth's natural resources. This may include sustainability aspects relating to development, water, transportation, energy, and waste and materials.

**CREATING A COMMUNITY:** There are many aspects that go into creating a sustainable community. Not only are the typical conventions of "sustainable" employed, but also many conceptual concepts. These include compact building designs, ranges of housing choices, walkable neighborhoods, mixed land uses, preservation of open space, and place making.

**WHAT HAPPENS:** Implementing strategies and design mechanisms to grow the city of Butler in an intelligent way while also creating sustainable communities will aid Butler to become a self-sustaining community. Applying these mechanisms to not only new construction, but also in retrofitting current areas will add to the uniqueness, community, and prosperity of the Butler community.

The goal is to create strong communities. Communities based in walking, communal gatherings, public gardens, alternative transportation methods. These communities make use of multi-use space and sustainable practices.

**DESIGN MECHANISMS**

**STATION PARK GREEN (SAN MATEO, CA)**  
Mix of retail, businesses, residential and entertainment.  
Redefold an underutilized brownfield site into a walkable, mixed-use, transit-oriented development.

**JORDAN DOWNS (WATTS, CALIFORNIA)**  
Up to 1,100 homes for families with a range of income and types.  
8 acres of public open space and markets.  
The master plan is organized around a new central park, connecting the north and south sections of the Jordan Downs community.  
Parks are spread around the entire area allowing all to have easy access to green spaces.  
The new community is reconnected with surrounding neighborhoods through permeable streets and blocks.

**TWINBROOK STATION (ROCKVILLE, MD)**  
Connects and anchors retail, office and residential areas to the Twinbrook Metro station.  
Reduces the area's vehicle miles traveled by making public transportation more accessible and attractive.  
Makes green building an integral part of Twinbrook Station  
New buildings will feature energy and water-efficient design strategies.  
Creates waste management and recycling programs throughout the development.

**PROS:** Sustainable communities create a more active and social society. They reduce the demand and necessity of cars as means of transportation. The communities make public transportation a more viable option. By reducing the physical size of the community, municipalities can save money on maintenance of sewage, water, electricity, and other infrastructure.

**CONS:** Creating sustainable communities can have a large up front cost. Many technologies may not provide as great a benefit as would be desired. Positive aspects could take many years or even decades to see the benefits.

FIG\_APPENDIX\_256\_2

### SUSTAINABLE COMMUNITIES

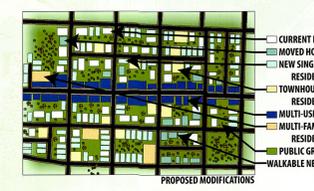
RETROFITTING

**RETROFITTING**



**CURRENT NEIGHBORHOOD**

- HIGHWAY H
- POLICE STATION
- OLD SCHOOL
- PINE STREET



**PROPOSED MODIFICATIONS**

- CURRENT HOUSING
- MOVED HOUSING
- NEW SINGLE FAMILY RESIDENCES
- TOWNHOUSE STYLE RESIDENCES
- MULTI-USE COMMERCIAL
- MULTI-FAMILY RESIDENCES
- PUBLIC GREEN SPACES
- WALKABLE NEIGHBORHOODS



**SECTION THROUGH PROPOSED MAIN STREET**

**COMPACT BUILDING DESIGN MIXED LAND USE VARIETY OF TRANSPORTATION WALKABLE MAIN STREET**



**PERSPECTIVE OF PROPOSED MAIN STREET**

**EXAMPLE MULTI-FAMILY DWELLING PROMPTING SOCIAL INTERACTION**

**PROS:** Fosters a greater sense of community by raising density of the area from .75 to approximately 12.4 units per acre and promotes walkability in the area. The area is a more socially conducive pedestrian based community. This encourages businesses to open in the area that takes advantage of multiple modes of transportation. Thus, a sense of place and identity will be fostered, which creates more open public space, and upgrades and enhances these areas of town. The scheme can be phased in over time.

**CONS:** Could displace residents. Requires a greater commitment by the community and the neighborhoods directly effected would require modification to city zoning codes.

FIG\_APPENDIX\_256\_3

### SOUTH COMMUNITY CENTER

RECREATIONAL DESIGN



**Plan**

This design take a more traditional approach. This Recreational Center would focus community health and wellness. There would be basketball courts, racquetball courts, weight room, indoor and outdoor track, and indoor pool. Also incorporates classrooms that could be rented out to teach healthy living practices. There is also a recreation field adjacent to the complex. This can be used for festival, football game, soccer games and many other recreational activities.

**PROS:**  
Community health and wellness center, place for community to come and work out, lower cost, classroom

**CONS:**  
Little community interaction- no pocket parks or community gardens



**Entrance to Community Center**



**Outdoor track and recreation field**



**Indoor Pool**



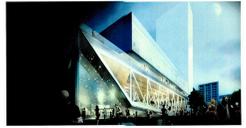
**PROS:**  
Recreation Center, Park, Teaches Sustainable Practices, Community Involvement

**CONS:**  
Limited connection to high school and hospital  
Will not work without community support

FIG\_APPENDIX\_257\_1\

### SOUTH COMMUNITY CENTER

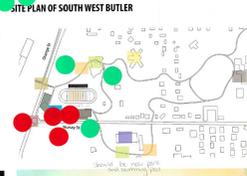
HIGH PERFORMANCE COMPLEX



**PRECEDENTS**

The Goldring Center for High Performance Sports Complex is a new state of the art facility for its community.

- Designed to form an identity to the area.
- Unites the community with a campus orientation.
- State of the art complex and teachers
- Green roof minimizes heat island effect and storm water run off.
- Skylights and terraces admit diffuse daylight into core of building.
- PVs generate electricity.
- Solar thermal panels provide hot water needs.
- High performance building envelope.
- Vegetated aluminum grille shades in summer; thermal gains maximized in winter.
- Harvested rainwater for irrigation and flushing toilets/urinals.
- Dual flush toilets, pint flush urinals, ultra low flow faucets and showers.
- Natural ventilation shaft, mechanical assist.
- Demand control ventilation with CO2 sensors for low occupancy rooms.
- Occupancy / daylight sensors; energy efficient lamps/ ballasts.
- Heat recovers system for exhaust air and showers.
- Waterside and inside free cooling in HVAC systems.
- Variable flow pumping systems with variable frequency drives.



**SITE PLAN OF SOUTH WEST BUTLER**

- Community Center
- Pocket Parks
- Round-about
- Sustainable Gardens
- Pedestrian Bridge
- Stadium
- Senior Home
- Hospital
- High School



**PERSPECTIVE OF FOOTBALL FIELD**



**PERSPECTIVE OF PEDESTRIAN BRIDGE OVER OREGON ST**

**TO ESTABLISH A CAMPUS FOR THE COMMUNITY TO CONNECT THE HIGH SCHOOL, NURSING HOME, HOSPITAL AND NEW COMMUNITY CENTER.**

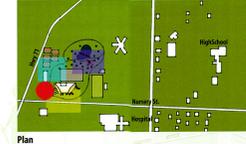
**PROS:** Unite the community, improve athletics and recreation, establish an identity, provide activities year around facility for the community, safer part of town with walkways sides bike paths and round-abouts

**CONS:** Cost, could have the potential to take main concentration away from community instead of uniting it.

FIG\_APPENDIX\_257\_2\

### SOUTH COMMUNITY CENTER

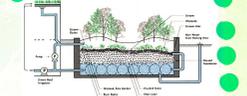
ENVIRONMENTAL DESIGN



**KEY AREA**

- Recreational Center
- Community Gardens
- Pocket Park

Water retention ponds on the site. These will be used to collect and recycle both rain and grey water from the site.



This Design concept focuses more on sustain ab lit y. The community center will provide various service that help teach people in the community to live more sustain-ably. It include classrooms, recreation, facilities, a pocket park, and several community gardens. These gardens will provide food for the local food kitchen as well as teach the community how to grow their own food.



**Entrance to Community Center**



**Pocket Park**



**Pocket Park**



**Indoor Pool**

**COMMUNITY CENTER PROGRAM:**

- Basketball Court
- Classroom
- Cafe
- Weight room
- Racquetball Court
- Indoor Pool with swimming lanes.

**PROS:**  
Recreation Center, Park, Teaches Sustainable Practices, Community Involvement

**CONS:**  
Limited connection to High school and Hospital  
Will not work without community support

FIG\_APPENDIX\_257\_3\



### NORTH COMMUNITY CENTER

#### RENOVATE HIGH SCHOOL FOR HOUSING

**COMMUNITY CENTER PRECEDENT**  
The Virginia Avenue Park expansion is a community center complex. It has multiple spaces that help unite diverse cultures in a dense neighborhood. It has pedestrian path that connect the existing park with the new pavilion. There is a new children's water area and playground and a teen center that was placed inside a converted warehouse. In another building on the campus there is a gym, dance, and fitness studio. It also houses employment information and referral services, administrative offices and a police sub-station.

**SHARED COMMON SPACE**  
This pocket neighborhood has several small houses or cottages that surround a common space which holds the neighborhood together and gives it vitality. The common space could be a garden courtyard, a play space, a reclaimed alley, or a community room. The space is defined between the public and private realms. The residents manage and care for the space. Each of the houses has a personal yard with a fence around it. The garages are off to the side which forces the residents to walk through the common space which increases the sense of community.

**DESIGN**

- Old high school was renovated for senior living
- The police station was removed and replaced with a community garden
- There is a single cluster pocket neighborhood that features a common building for the sub community
- It features communal parking as well as bike storage
- Green pathway that connects to the new green space off the square
- South of the pocket neighborhood there is a community center
- Visual connection with the square and Ft. Scott street

**Zone One**  
This is the lot for the proposed community center.

**Zone Two**  
This is the space for the pocket neighborhoods.

**Zone Three**  
This is the lot of the old high school, which is either torn down and replaced with green space or renovated.

**PROS:** Pocket Neighborhood gives sense of community, community center with multiple uses for downtown area, provides multiple housing options, promotes street beautification.

**CONS:** Removes two businesses, closes off two access streets, does not allow for as much green space.

FIG\_APPENDIX\_259\_1

### DOWNTOWN REVITALIZATION

#### URBAN GREENSPACE

**PRECEDENTS:**  
Below are some pictures of urban green spaces that have been incorporated into cities approximately the same size of Butler and have turned out to be successful.

Through this scheme, an "Urban Greenspace" is implemented in order to create a greater physical and visual connection to the square from Ft. Scott St and also become a pivot point from the newly proposed pocket neighborhood to the square.

Disconnect between Ft. Scott and the square is resolved in this design by physical and visual connections of a new park and green space that will be used as a multi-purpose space for the farmer's market and recreational use on a daily basis by the community. The location of the new park creates a pivot point at the southwest corner of the square that connects the team's proposal for a pocket neighborhood to the northwest and the square. The layout of the farmer's market on the square allows for flexibility depending on the size of the market that day. The majority of the lofts on the upper floors of the downtown square are in good shape for future lofted apartments.

**VIEW TO GREEN SPACE FROM FT. SCOTT**

**VIEW FROM INSIDE LOFT**

**VIEW DOWN SIDEWALK**

**VIEW TO GREEN SPACE FROM SQUARE**

**PROS:**  
Balance of green space and hard scape, creates barrier from Ft. Scott, multi-use space, PIVOT POINT, overall beautification, visual connections, expansion for Farmer's Market

**CONS:**  
Ghost-like when unoccupied, too large, connection of old jail parking and new park isn't as strong, could create competition to Farmer's Market on square

FIG\_APPENDIX\_259\_2

### NORTH COMMUNITY CENTER

#### POCKET NEIGHBORHOOD WITH GARDEN

**COMMUNITY CENTER PRECEDENT**  
The Williamsburg Community Center in Brooklyn was designed to serve the community for everyday uses and special events. It houses a gym, dance studio, classrooms, art studios, darkroom, computer room, movie projection screen, stage, recording studio, and other multipurpose spaces. The facility has a kitchen that offers lunches to senior citizens all year and for children during summer. Large operable doors were used with moveable partitions give the space flexibility. The center was part of the program to renovate 24 of the residential buildings in the area.

**POCKET NEIGHBORHOOD WITH GARDEN**  
A common building and gardens pocket neighborhood has clusters of houses and separate common areas. One common area is a community garden with a tool shed for the gardening supplies, which would be shared among everyone. Other common spaces would be a pavilion for grilling, and a multipurpose room that would have a kitchenette and storage. This common space could be used for events like neighborhood meetings, exercise groups, movie nights, etc.

**DESIGN**

- Tore down old high school and replaced it with a park and community garden space for the neighborhood.
- Features a double cluster pocket neighborhood that crosses over Havannah
- The pocket neighborhood allows access from the park to the community center through a common green space
- Community center that features fields for youth activities and meeting spaces
- Kitchen that serves dinner to a wide age group throughout the year
- Streetscape beautification that allows visual connection to square and Ft. Scott street

**Zone One**  
This is the lot for the proposed community center.

**Zone Two**  
This is the space for the pocket neighborhoods.

**Zone Three**  
This is the lot of the old high school, which is either torn down and replaced with green space or renovated.

**PROS:** Allows open green space for the community, Community garden promotes self sustaining practices, Pocket Neighborhood gives sense of community, Community center with multiple uses for downtown area.

**CONS:** Removes two businesses, Tears down old high school, Closes off two access streets.

FIG\_APPENDIX\_259\_3

### NORTH COMMUNITY CENTER

**COMMUNITY CENTER PRECEDENT**  
Coal Harbour Community Centre in Vancouver, British Columbia was part of the planning process to bring people back to the downtown square. Coal Harbour is one of the few community centers developed and tailored for specific neighborhood needs. This 85,000 sq. ft. community center serves the more leisure-oriented users. It has a cappuccino par and a dance studio. It also has things the other community centers don't have, like a gym and a large multipurpose space that can be rented out for events such as weddings.

**DOUBLE CLUSTER VILLAGE**  
This type of pocket park has different layers of privacy. This helps balance the feeling of privacy and community, so no one feels suffocated or cut off from their neighbors. A passage would be created from the public street to the common space as a gateway. The porches will have coverings and be surrounded with plants, which allows the front porches to be a private or public space. Inside the house the active living spaces are near the front, and the more private personal spaces are at the back of the house or upstairs.

**DESIGN**  
Tear down old high school and replaced it with a park, playground.  
 • South of the new park is a double clustered pocket neighborhood  
 • The pocket neighborhood includes a corner grocery store and a cafe coffee shop  
 • A community center is south of the pocket neighborhood  
 • The community center has youth services, a multipurpose room, a banquet room with kitchen closets for various organizations, and a studio room.  
 • There is also a green space with a playground on the site

**Zone One**  
This is the space for the proposed community center.

**Zone Two**  
This is the space for the pocket neighborhoods.

**Zone Three**  
This is the lot of the old high school, which is either torn down and replaced with green space or renovated.

**PROS:** Allows open green space for the community, gives the community a new park, pocket neighborhood gives sense of community  
**CONS:** Removes two businesses, tears down old high school, closes off two access streets, others may feel they can not go to the corner store and cafe since they are in the pocket neighborhood.

**DOUBLE CLUSTER WITH PARK**

FIG\_APPENDIX\_260\_11

### FORT SCOTT CORRIDOR

**IDENTITY**  
- Reinvent Butler as the new electric city!  
 - Signage and beautification  
 - Streetscaping, landscaping, and design guidelines  
 - Green technology  
 - Charging stations, wind turbines, and the initiation of the already planned solar farm

**SOCIALIZATION**  
- Two community centers  
 - One near high school aimed at recreation, rehabilitation and sports  
 - One near square centered on meetings, gatherings and other events  
 - Density through variety of housing methods, public green spaces and community gardens

**HEART OF CITY**  
- Public transport route and hub that caters to square  
 - Clear path and views from Fort Scott to the square  
 - Bring a farmer's market, festivals, and events  
 - Systematically improving the facades, streets, landscaping, and surrounding area

**ACTIVE LIVING**  
- Placing the housing within easy reach of public green spaces  
 - Walkable communities  
 - Mixing land use: commercial, residential, etc.

**COLLABORATIVE DESIGN**

**NOTE:** The purpose of a collaboration board such as this is to allow one to visualize every piece of the puzzle finally coming together. After viewing each portion separately, a holistic design that implements identity, socialization, and sustainable practices can begin to shape what Butler could be twenty thirty years from now.

FIG\_APPENDIX\_260\_21

### SUSTAINABLE COMMUNITIES

**OVERLOOKING PLAN**  
 - WATER RETENTION  
 - PRESERVE OPEN SPACE  
 - COMPACT BUILDING DESIGN  
 - NATURAL LIGHTING AND VEGETATION FOR SHADE  
 - LOW-E GLASS  
 - RANGE OF HOUSING CHOICES  
 - MIXED LAND USE  
 - FOSTER A SENSE OF PLACE  
 - CREATE WALKABLE NEIGHBORHOODS

**SECTION**

**PERSPECTIVE**

**LOW TECHNOLOGY**

**THE COTTAGE COMPANY: HARBOR SPRINGS, MI**

**Pros:** Improvements in water retention, transportation, energy, waste, and materials. Provides a natural community space to walk and interact.

**Cons:** Sustainable materials may be expensive, does not engage commercial retail into the community.

FIG\_APPENDIX\_260\_31

### FORT SCOTT CORRIDOR

#### COMMERCIAL CORRIDOR

**KEY:**

- Gateway Features
- Transportation Hub
- Entertainment
- Gateway Green Space

**KEY FEATURES:**

- Commercial strips of restaurants, retail and entertainment
- Simple landscaping with concrete plazas
- Gateway entry to include a welcome center on Downtown Square Transport Hub
- Built entertainment facility
- Gateway entry to include paved parks and concrete plazas
- Gateway entry to include a welcome center on opposite side of HWY 71

**BUILT ENTERTAINMENT:**  
- Allows for multiple facility entertainment and numerous sheltered options

**COMMERICAL CORRIDOR**

**GATEWAY PARK**  
Using concrete and paved park systems such as this could provide more of a visual stand-out to those passing by Butler on Highway 71

**SITE SECTION**

**PROS:** Provides more venues for entertainment and retail and, as a result, may draw more attention from Highway 71 drivers, more inexpensive due to lack of landscaping, entertainment venue can be utilized at all times

**CONS:** Doesn't really initiate an active community, doesn't provide a visual link between the two ends of town, doesn't promote environmental concerns, placement of elements are not central to city—transportation hub doesn't utilize train

FIG\_APPENDIX\_261\_1\

### SUSTAINABLE COMMUNITIES

#### HIGH TECHNOLOGY

**OVERLOOKING PLAN**

- RANGE OF HOUSING CHOICES
- COMPACT BUILDING DESIGN
- PRESERVE OPEN SPACE
- MIXED LAND USE
- ROOF/RAIN GARDEN
- WIND TURBINES
- SOLAR PANELS
- SUSTAINABLE MATERIALS
- STORM WATER MANAGEMENT
- GROUND SOURCE
- BICYCLE NETWORK AND STORAGE
- FOSTER A SENCE OF PLACE
- NATURAL LIGHTING AND VEGETATION FOR SHADE
- CREATE WALKABLE NEIGHHOODS

**SECTION**

**PERSPECTIVE**

**Boulder CONDOS: BOULDER, CO**

**SUSTAINABLE APARTMENTS INDEPENDENCE, OR**

**Pros:** Promotes sustainable living using a number of methods including water retention, materials, energy saving. Provides a multitude of different housing options, and creates a lot of green space.

**Cons:** These sustainable strategies will be expensive (solar panels and wind turbines). Butler may not have the population that will make this design function.

FIG\_APPENDIX\_261\_2\

### FORT SCOTT CORRIDOR

#### TRANSPORTATION

**ELECTRIC TROLLEY**

**ADVANTAGES:**

- Nearly Silent
- Run on Paved Streets
- More environmentally friendly
- Not bound to a specific fuel source
- Favored when electricity is abundant and cheap
- Can be equipped with battery
- Not affected by increasing diesel costs
- Track provides visual link to destinations
- Promotes an aesthetic classic American image
- Promote's Butler's Electric City Image

**DISADVANTAGES:**

- Fixed to Wire
- Wires aren't an aesthetic addition
- Derailment
- Somewhat expensive to initially initiate
- Fixed to route

**LITHIUM ION BATTERY POWERED TROLLEY (450 per kwh its total cell cost would be an initial \$7200, Fuel costs about 2 cents per mile using electricity and 10 cents per mile using gas)**

**ADVANTAGES:**

- Run on paved streets
- Route is versatile
- More environmentally friendly
- Not bound to a specific fuel source
- Favored when electricity is abundant and cheap
- Not affected by rising fuel costs
- Promotes Butler's Electric City image
- No operational system needed
- Inexpensive

**DISADVANTAGES:**

- Noisy
- Does not provide a visual link to destinations

**STREETCAR ON TRACKS**

**ADVANTAGES:**

- Track provides visual link to destinations
- Promotes an aesthetic classic American image

**DISADVANTAGES:**

- Fixed to Track and Route
- Most expensive option
- Derailment
- Cannot run on paved street alone
- Not environmentally concerned
- Noisy
- Subject to rising fuel costs
- Doesn't promote Butler's Electric City image

**DIESEL/HYBRID DIESEL BUS**

**ADVANTAGES:**

- Run on paved streets
- Promotes an aesthetic classic American image
- Routes are versatile
- No operational system
- Fairly inexpensive initially
- Biodiesel and other advances are being continuously researched

**DISADVANTAGES:**

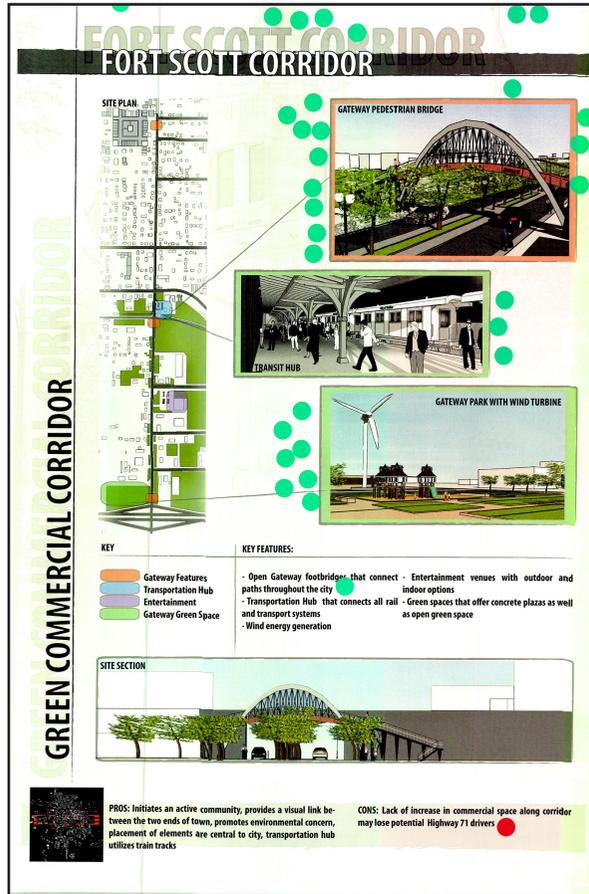
- Subject to rising fuel costs
- Subject to becoming obsolete as far as fuel is concerned
- Does not provide a visual link to destinations
- Not environmentally concerned
- Noisy
- Doesn't promote Butler's Electric City image

**INCREASING DIESEL COSTS OVER A 36 YEAR SPAN...**

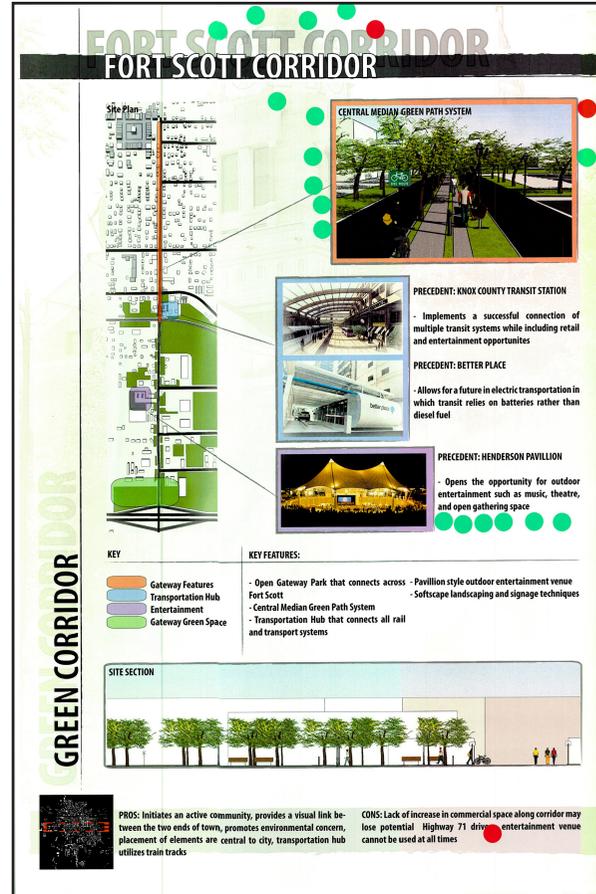
**POSSIBLE TROLLEY TRANSPORTATION ROUTE ABOVE IN RED**

**NOTE:** In addition to adding another option of transportation to the city of Butler, public transportation has a number of advantages. It creates a visual link to different key points of interest in town and it provides a safe, economic, and reliable method of travel. Not to mention, if an electric system was implemented, Butler is one step closer to becoming "the New Electric City."

FIG\_APPENDIX\_261\_3\



FIG\_APPENDIX\_262\_1



FIG\_APPENDIX\_262\_2



## SUSTAINABLE COMMUNITIES

### STREETS

Streets provide the means of movement around and within a community. Current streets are not friendly towards bicycles, pedestrians and other alternatives to motorized vehicles. Streets can be easily changed and reconfigured to help the city and the environment rather than just acting as thoroughfares for transportation.

**TYPES** - Streets range anywhere in size from small one way alleys to multi-lane highways and parkways. Each size can get its own treatment that allows the street to give the community aesthetic beauty and identity.

**SKINNY** - Smallest of the street types. Thinner streets promote slower speeds and leave more space for vegetation and pedestrians.

**GREEN** - A slightly wider street. It shares the same concepts as skinny streets.

**SHARED** - Public spaces that work with vehicles, pedestrians and bicyclists to inhabit the street.

**ECO-BOULEVARDS** - Larger streets that are divided by vegetation strips. Heavily vegetated and wide to accommodate multiple forms of transportation.

**PARKWAYS** - Highway sized streets working with greenways.

**PARTS** - Streets are made up of many different parts working together.

**SIDEWALK** - Sidewalks facilitate any and all pedestrian traffic.

**CURB** - Curbs define the edges of the street. They begin to separate vehicular traffic from pedestrian traffic. There are many different types of curbs that can be implemented.

**VEGETATION STRIPS** - Any amount of vegetation from trees to bioswales and rain gardens.

**PARKING** - Parking, either parallel or angled, can be incorporated into any street depending on the desired use.

**VEHICULAR LANES** - These lanes can vary widely in width. The thinner lanes promote slower speeds while wider lanes may be needed for larger streets.

**OVERHEAD COMPONENTS** - Trees, signs, awnings and lights are all important parts to consider when designing a street. Each piece can give the street a unique and special feel.

**OTHER AMENITIES** - Bike racks, benches, water closets and rest areas all need to be implemented at some scale on each new street.

Modified streets are more ecologically friendly and helps to manage the rainwater that falls on site. Each also fosters alternative modes of transportation by making those other modes more enjoyable and safer. The heat island effect is reduced by adding vegetation to the streets and sidewalks while also creating a more pleasing space. Greater social interaction can be fostered as people move from using cars to biking and walking from place to place and multiple smaller public spaces are created.

FIG APPENDIX 264\_1

## SUSTAINABLE COMMUNITIES

### PROPERTY

**LOTS** - In many urban low to moderate densities, many self-sustaining principles can be carried out on individual property parcels.

Turf lawns are one of the biggest problems associated with current housing districts. It offers no habitat to animals and does not help water to infiltrate into the soil. In many cases it is considered an impervious surface. There are many different options to the typical turf lawn.

Xeriscaping lawns utilize landscaping that takes minimal to no additional water beyond the typical area rainfall. They have deeper root systems to help water infiltrate and are also more aesthetically pleasing than the conventional turf.

Another option is that of a food production lawn. A typical lawn could produce enough vegetables to feed six people. These lawns are low impact and food remnants can be used to fertilize the plants.

A final alternative is a rain garden. These depressed areas aid water infiltration without retaining water. These lawn alternatives can be blended to make unique landscaping.

**BLOCKS** - Block design is a conglomeration of multiple lots. Large scale practices and facilities can be implemented on this scale.

**Midblock easement** - Down the middle of the block a community "back yard" is created for ecological use. Trails, ponds and vegetation can all be implemented.

**Green Alley** - The functions of parking and access are combined with more eco-friendly ideas.

**Frontage** - Combining the easement with a green alley, parking is put in the rear of the buildings with extensive green space left to face the street edge.

**PARKING** - Parking lots take up lots of space and are some of the most ecologically harmful spaces.

**Center** - A center greenspace is incorporated into the lot.

**Bands** - Bands of greenspace are periodically placed through the parking lot.

**Edges** - The lot is ringed by vegetation.

**Pixels** - Greenspace and water management is spread around the lot with a major vegetation space at one end.

**Parking Garden** - The most intensive layout. Cars are clustered around greenspaces with vegetation abounding.

Individuals have the most control over what happens on their own property. If changes are implemented on this scale, it will greatly enhance the individuality and identity of Butler. Implementation of these strategies can not only be ecologically beneficial but economically beneficial as well.

FIG APPENDIX 264\_2

## SUSTAINABLE COMMUNITIES

### HOUSING / BUILDING

**GREEN BUILDING**  
Green building refers to a structure and using process that is environmentally responsible and resource-efficient throughout a building's life-cycle. Environmental practices can be optimized in construction, operation, maintenance, renovation and demolition. The common objective is that green buildings are designed to reduce the overall impact of the built environment on human health and the natural environment by efficiently using energy, water and other resources; protecting occupant health and reducing waste pollution and environmental degradation.

**INFILL DEVELOPMENT**  
Infill development involves building and developing in vacant areas in city centers or urban settings. This promotes the betterment of these city centers and leaves rural areas and open spaces undeveloped. Advocates state that infill development can reduce traffic congestion, save open space and create more livable communities. The building industry currently consumes over 50 percent of the world's natural resources and products over 40 percent of solid waste stream. By using infill development materials installed have less of an impact on the environment, there is less reliance on fossil fuels, energy and water resources are more efficiently consumed, healthier and ergonomic indoor environments are created, less waste is generated and more materials are recycled.

**WATER HARVESTING**  
For conventional roofs, rock swales can transition vertical storm water flow in tandem with facilities to aid in horizontal network distribution. Rock swales slow and convey storm water runoff, acting like a dry creek bed that receives and distributes runoff. For larger roof areas, wide rock swales and flow control devices like level spreaders will be needed. Also, by implementing a biodiverse treatment across the property, storm water can be filtered and treated to improve water quality.

**SUN ENERGY**  
The common features of passive solar architecture are orientation relative to the Sun, compact proportion, selective shading (overhangs) and thermal mass. When these features are tailored to the local climate and environment they can produce well-lit spaces that stay in a comfortable temperature range. Active solar equipment such as pumps, fans and switchable windows can complement passive design and improve system performance. The higher temperatures are a result of increased absorption of the solar light by urban materials such as asphalt and concrete, which have higher heat capacities than those in the natural environment. A program in Los Angeles has projected that urban temperatures could be reduced by approximately 3°C at an estimated cost of US\$1 billion, giving estimated total annual benefits of US \$530 million from reduced air-conditioning costs and healthcare savings.

Green building can improve the economy, utility, durability and comfort of Butler. By the use of green construction; energy, water and other resources will protect occupant health by reducing waste pollution and environmental degradation. Green building is recommended because materials that will be installed have less of an impact on the environment, there is less reliance on fossil fuels, energy and water resources are more efficiently consumed and less waste is generated.

FIG APPENDIX 264\_3

### SUSTAINABLE COMMUNITIES

#### SMART GROWTH AND HOUSING

**SMART GROWTH**  
Growth is "smart" when it gives our great communities, with more choices and personal freedom, good return on public investment, greater opportunity across the community, a thriving natural environment, and a legacy we can be proud to leave our children and grandchildren. When communities choose smart growth strategies, they can create new neighborhoods and maintain existing ones that are attractive, convenient, safe, and healthy. They can foster design that encourages social, civic, and physical activity. They can protect the environment while stimulating economic growth. A high density and compact city form is the most ideal development pattern for the future. High density essentially signifies a concentration of people and their activities. The wide cross-section of people and their activities also makes for a culturally rich area. High density cities will also promote a sense of social equity by providing opportunities for the economically underprivileged. Further, the only way to offer housing for all sections of the society is by pursuing high density planning strategies. In societal terms, compact cities and mixed uses are connected with diversity, social unity and cultural growth.

**TYPES OF HOUSING**  
Multi-family housing is a classification of housing where multiple separate housing units for residential inhabitants are contained within one building or several buildings within one complex. Another type of multi-family housing is townhouses. The name townhouse is used to describe units mimicking a detached home that are attached in a multi-unit complex. The distinction between dwellings called just "apartments" and those called "townhouses" is that townhouses usually consist of multiple floors and have their own outside door as opposed to having only one level and an interior hallway access.

A single-family means that the building is usually occupied by just one household or family, and consists of just one dwelling unit or suite. In some jurisdictions allowances are made for basement suites or granny garages without changing the description from "single family". There are also some disadvantages to owning a single-family detached home. All maintenance and repair costs are at the owner's expense. There is often a lack of amenities such as pools and playgrounds, unless built at private expense, or if a municipal playground is available. Some single-detached homes do have these features within the lot or nearby, given that their owners pay a homeowners fee as those in condos or townhomes. Landscaping and lawn upkeep costs are at the owner's expense.

Granny Garages are not considered an additional story to the home. These are usually occupied by additional members to the family of a single-family home.

Growth presents a tremendous opportunity for progress. Smart growth is a way to get the most out of new development and to maximize their investments. In communities that require residents to drive long distances between jobs and homes, smart growth put workplaces, homes, and services closer together. Smart growth is the key to improve daily life, the economy and the environment.

FIG APPENDIX 265\_1

### SUSTAINABLE COMMUNITIES

#### OPEN SPACE

**OPEN SPACES**  
Open spaces offer recreational, aesthetic, and ecological functions; however with planning they can deliver more comprehensive ecological services. To achieve this, open space should be comprehensively planned as a green network that maintains water body functioning and ecosystem connectivity through use of designed parks, greenways, and self-organizing conservation areas.

**CONSERVATION DEVELOPMENT**  
Conservation development, also known as Conservation design, is a controlled-growth land use development that adopts the principle for allowing limited sustainable development while protecting the area's natural environmental features in perpetuity, including preserving native vegetation, sensitive ecological habitat, and open space by using conservation development techniques. This type of development can still maintain the character of rural communities. Compact residential development conserves 30%-80% of a site's buildable land as permanent, undivided open space.

**TREATMENT PARKS**  
Treatment parks introduce storm water management as another ecological service delivered by urban parks. A treatment park can use design solutions to promote natural processes that control water. Treatment parks are designed to filter storm water from surrounding public streets, which is currently being piped and transferred elsewhere. Steps in developing a treatment park include creating recreation, water retention, natural water treatment and filtration.

**WATER HARVESTING**  
Water harvesting is the accumulating and storing of rainwater for reuse before it reaches the aquifer. It can be used to provide drinking water, water for livestock and water for irrigation. Rainwater collected from roofs of houses and local institutions can make an important contribution to the availability of drinking water. One inch of rainfall on a 1000 ft<sup>2</sup> yields about 623 gallons of water. When considering rainwater harvesting, keep in mind that petroleum-based roofing and treated wood products can leach toxins.

**GREENWAYS**  
Greenways connect open spaces to create an urban greenway that maintains nutrient, natural resource, and habitat flows through the city. A greenway is a long-narrow piece of land that is often used for recreation and pedestrian and bicycle user traffic and sometimes for streetcar or retail uses. The land may be newly developed, but usually it is redeveloped, having been formerly occupied by a railroad, highway, or other transportation route. Greenways provide alternative transportation systems free of traffic conflict and are ideal for casual transit and recreation. They also improve health by accommodating active living and physical activity.

Open Space can deliver vital ecological services not feasible at the scale of the lot, block or neighborhood. Well-planned urban open space can yield compounding economic, environmental and social returns. The use of conservation development can still maintain the character of rural communities but conserves 30%-80% of the space which will increase ecological functioning.

FIG APPENDIX 265\_2

### SUSTAINABLE COMMUNITIES

#### TECHNOLOGY

**TECHNOLOGY**  
Environmental technology is the application of one or more of environmental science, green chemistry, environmental monitoring, conservation of the natural environment and resources and curbing the negative impacts of human involvement. Sustainable development is the core of environmental technologies. Studies have shown over a 20 year life period, some green buildings have yielded \$53 to \$71 per square foot back on investment.

**WIND TURBINES**  
Wind power is the conversion of wind energy into a useful form of energy, such as using wind turbines to make electricity, windmills for mechanical power, wind pumps for water pumping or drainage, or sails to propel ships. Wind power, as an alternative to fossil fuels, is plentiful, renewable, widely distributed, clean, produces no greenhouse gas emissions during operation, and uses little land.

**GREEN ROOFS/WALLS**  
Green roofs can treat and retain 60-100% of the storm water they receive. Other benefits include improved air quality, heat island mitigation, and urban biodiversity. Green roofs have a high initial cost but can last 40+ years. Similar in application to green roofs, vegetated walls harvest water to reduce storm water runoff loads. A green wall, is an extension of the building envelope laminated with vegetation. These walls also regulate building temperature through additional thermal insulation, reducing heating and cooling loads.

**SURFACE MATERIALS**  
Porous asphalt allows water to drain through into a stone recharge bed that then allows the water to infiltrate into the earth below. Pervious concrete shares the same cost and life of the asphalt, but has more void space and increased rainwater perviousness. Interlocking paver systems mitigate heat in the same way as pervious concrete, but has a much higher initial cost. Recycled rubber has moderate heat mitigation properties with a medium initial cost. Gravel systems can be extremely effective at mitigating heat island. The most effective system is a grass concrete and turf paver system. Voids in the concrete allow for the vegetation to grow through and water to pass.

**SOLAR POWER**  
Solar power is the conversion of sunlight into electricity, either directly using photovoltaic cells or indirectly using concentrated solar power. Photovoltaic solar panels help to provide sustainable electricity for any use. An active solar collector system will cost approximately \$2,500 to \$3,500 installed and produce about 80 to 100 gallons of hot water per day. A passive system will cost about \$1,000 to \$2,000 installed but will have a lower capacity.

Environmental technology can conserve the natural environment and curb the negative impacts of human involvement. Even though some technologies can be expensive to install, the savings on energy and utility bills can be paid back within 20 years. The use of green roofs and walls are highly recommended for Butler. The installation of these technologies is high, yet not as extreme as PV cells or wind turbines.

FIG APPENDIX 265\_3

### SUSTAINABLE COMMUNITIES

#### ZONING, CODES AND OBSTACLES

None of the tools necessary to create more sustainable communities can be implemented, or at least not to their fullest extent, unless zoning is taken into account, codes are changed, covenants are made and obstacles are overcome.

Some obstacles are regulations pertaining to greywater recycling and rainwater recycling for household use, the requirements to have gutters and the specifications of turf for lawns.

Other issues have to do with the regulated height of buildings by city zoning. These codes often encourage low-density sprawling buildings. Zoning also needs to be changed to allow for multi-use sites.

Management of ecological facilities whether they be for storm water management, open space renewal, energy production or any other facility is paramount in utilizing it for any extended period of time.

To promote the use of these concepts, incentives such as tax breaks and expedited approval of construction documents should take place.

Requirements for a Sustainable Community

Bioswale, Alternative Driveway, Rain Collection, Stormwater Retention, Infiltration Strips

The first step is to make changes to zoning and regulations to make way for new improvements. Without these changes, many different pieces to the community will not be able to be implemented. Another early step is the application of all the new regulations to all new construction.

As the benefits are realized, retrofitting can begin. Starting with streets and civic buildings, the city can lead by example.

Existing neighborhoods can then be retrofitted to raise density. As building age and deteriorate, this opens the possibility to infill with new development that raises density and exhibits environmentally friendly methods without physically expanding Butler.

Each recommendation should be taken and implemented in its own unique way at the appropriate time.

**SHORT TERM**  
 IMPLEMENT ZONING AND REGULATIONS TO ALLOW FOR CHANGES  
 APPLY REGULATIONS TO ALL NEW CONSTRUCTION  
 ENCOURAGE ENVIRONMENTAL AND ECONOMIC SUSTAINABILITY

**MID TERM**  
 RETROFIT EXISTING BUILDINGS  
 RETROFIT EXISTING STREETS  
 RETROFIT EXISTING HOUSING BY USING GREEN MATERIALS AND TECHNOLOGY  
 RETROFIT EXISTING NEIGHBORHOODS TO RAISE DENSITY  
 IMPLEMENT OPEN SPACE TO ALLOW FOR GREENWAYS AND TREATMENT PARKS

**LONG TERM**  
 IMPLEMENT CONSERVATION AND INFILL DEVELOPMENT  
 BUILD NEW FULL SELF-SUSTAINING COMMUNITIES AS BUTLER EXPANDS

FIG APPENDIX 266\_1

### FORT SCOTT CORRIDOR

#### GATEWAY ENTRY PARK

In Butler, one major concern is that there are not enough visitors coming into the city from other areas. According to different precedents, one of the ways smaller cities were able to bring visitors into the community was reconsidering the city's initial entry.

The city of Butler can be a place that people would want to come again and it can be memorable. As for now Butler is known as the "Electric City," but it can be known for some much more such as a "Sustainable, Self-Supportive Active City." In order for Butler to be known as such a place there are a few steps and things to be considered. Because Butler is situated next to an interstate there is a lot of opportunity to display the qualities and amenities that are offered within the city.

Benefits of having a gateway in Butler:  
 - It adds an identifying feature that Butler be known for  
 - It would create a point of entry  
 - It would attract travelers from the highway  
 - It would help with the overall beautification of Butler.  
 - It would provide a space of socialization.  
 - It would help with economic growth by bringing more people into the community.  
 - It would promote the idea of an active lifestyle

Steps to follow in order to implement such an idea into the city of Butler:  
 - Along the highway going towards Butler there will be signage place the road that will announce that the city is close by.  
 - The location: a beneficial location would be on the North side of Fort Scott Street as you turn off of Highway 71.  
 - Lighting along the perimeter of the parks nearest the highway.  
 - Walkability: there would be concrete paved walkways.  
 - Seating areas, boundary walls and sidewalks will be clad in brick.  
 - Aesthetic features: water features, such as man-made ponds and water fountains.

Butler is a community that has had a lot of historical impact. By implementing features native to the community into the community gateway park in addition to others, it could further inform Butler's identity within the city and to surrounding areas. The recommendations made will hope to verify improve the amount of visitors within the community, the community's social outreach, its active living principles, and its overall economy.

ELEVATION OF WHAT THE ENTRANCE OF THE PARK COULD BE

**SHORT TERM**  
 BEGIN TRANSFORMATION OF LAND DEVELOPMENT ADJACENT TO THE HIGHWAY  
 BEGIN IMPLEMENTATION OF MATERIAL AND LANDSCAPING APPLICATIONS AND GUIDELINES

**MID TERM**  
 BEGIN IMPLEMENTATION OF MAN MADE WATER FEATURES  
 IMPLEMENT NON PERMANENT STRUCTURES INTO THE PARK

**LONG TERM**  
 COMPLETE CONSTRUCTION OF GATEWAY PARK

FIG APPENDIX 266\_2

### FORT SCOTT CORRIDOR

#### STREETSCAPING GUIDELINES

WHY IS THIS NECESSARY?

There are two primary ways to enter into the city of Butler; however, the main gateway entrance into town is the Fort Scott Street exit off of Highway 71. When a traveler initially exits off they are first introduced to Butler's commercial thoroughfare. They are invited by multiple places to visit and stop at – and, in the future, will be invited by even more commercial, retail, and entertainment venues.

At present, the entire span of Fort Scott is somewhat monotonous and has no continuity. There is nothing aside from the commercial attributes that would engage a traveler to stay on the road, there are no guidelines between businesses, and no obvious landscaping guidelines along its entire span. In addition to the lack of interrelated parts, there is also no obvious distinction between points of interest along the street, which results in lost interest from travelers and citizens alike. Finally, aside from the uninviting sidewalks along various portions of Fort Scott Street, there is no access other than automobile access. Even if a pedestrian had decided that they did not need a functioning sidewalk to walk along the side of the street, the risk of getting hit by a motor vehicle would immediately crush any desires they once had. Because of these factors, the commercial economy within the city is not reaching its full potential gain and not receiving the interest that it has the opportunity attain. Furthermore, the city is not utilizing simple forms of active living, which depletes factors of socialization and depresses any hopes of an active community.

RECOMMENDATIONS FOR THE COMMERCIAL CORRIDOR: (Hwy 71-Orange Street)

- The addition of wide sidewalks along the edge of the commercial zone of Fort Scott.
- The addition of a central median that reinforces lane distribution and adds a softscape to the once industrial looking Fort Scott Street
- Organized streetscaping guidelines that provide standardization of materials, lighting, and their placement
- The addition of crosswalks that provide safe walking paths across the street throughout the city
- The addition of crosswalks that add visual stimulation to points of interest
- Historical attributes that further enforce Butler's rich historic past
- Signage development at gateways and points of interest

View of Sunset and Ft. Scott Street  
 Edge Median Elevation  
 Center Median Elevation  
 Section through street

Guidelines for Commercial Corridor Streetscaping are based on a number of considerations. The visioning team first researched a number of precedents in order to gauge standards for an area similar to Butler. After having done so, the city of Butler was studied based on its current implementations. This includes, their current lights, sidewalks, streets, landscaping guidelines, signage opportunities, etc. A set of guidelines were created based on the projected success of the visioning teams recommendations.

FIG APPENDIX 266\_3