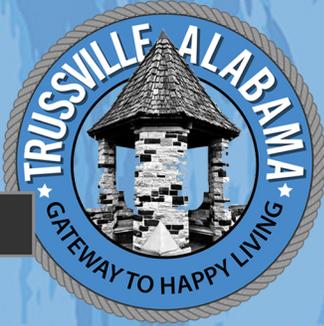
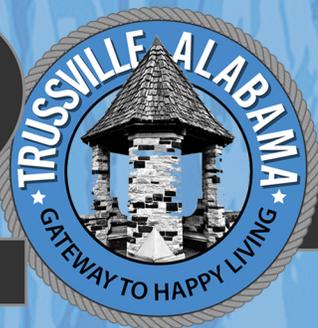
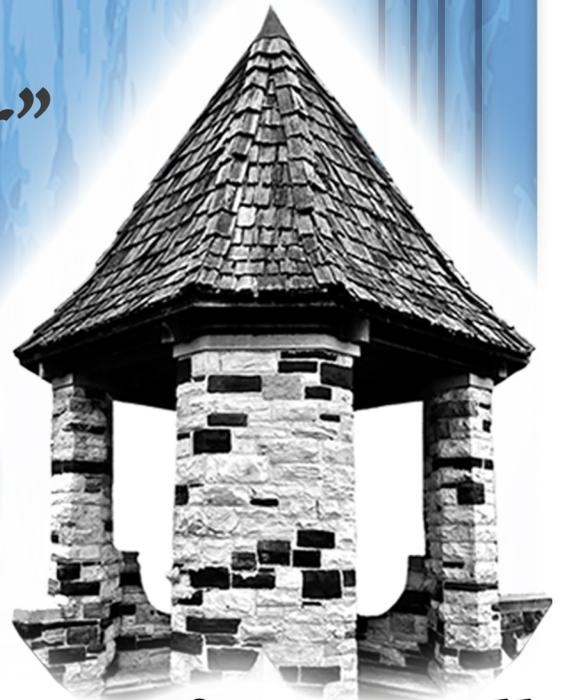


*Trussville*

24



*“Planning our  
Future Together”*



**City of Trussville**

# City of Trussville



Mayor: Buddy Choat  
City Clerk: Lynn B. Porter

Councilmembers:  
Brian Plant  
Perry Cook  
Jef Freeman  
Zack Steele  
Alan Taylor

Dear Trussville Residents,

Trussville is a great place to live and do business. We appreciate the strong sense of community that Trussville enjoys, as well as the high quality of services from the City government and other service providers. The wonderful community we have built together has taken place over a long period of time, and has involved civic groups, neighborhoods, businesses, and the faith community. Our commitment is to ensure that Trussville's future is even greater than its past and its present. As a result, we believe to build on what we have now involves strong citizen participation and commitment that results in a vision for the Trussville of the future. The outcome of many months of meetings by hundreds of citizens is the attached document known as Trussville 2040.

The pace of technologic change has quickened significantly over the past decade, and it is likely to increase at an even greater rate in the future. The threats to our community happening from events far beyond our city limits and within our community are real. The men and women who labored for months considering our future have warned us that the threats to our community are real, and we must be prepared for them. In addition to contingency planning, we realize that the city of 35,000 residents in 2040 will need increased public safety services, expanded utilities, and leisure time facilities and programs.

In order for Trussville to be successful, there has to be trust between the City government and its citizens. To build trust, the City has to be transparent in all that it does. Not everyone will agree with all the conclusions or recommendations contained in Trussville 2040, but we wanted everyone to have input if they desired to have it. Now finalized, I feel sure that it will be used as a guide for our future budgets and will establish the City's priorities for many years. Trussville 2040 will not be a static plan that goes on the shelf. We expect there to be regular reviews of the conclusions and recommendations with modifications as time passes.

It is a great honor for me to be your Mayor at this exciting time. Thanks to all who have given their time to deliberate over the issues that are so important to our future. We can be the community that we imagine.

Sincerely,  
  
Buddy Choat, Mayor

# Trussville 2040

## Introduction

The Mayor and City Council of the City of Trussville, Alabama initiated Trussville 2040 to create a citizen-driven long-range strategic plan, with the purpose of guiding the future growth and prosperity of the City and setting forth goals, policies, and programs for encouraging and influencing positive change during future years. The future will bring growth, development, and change to Trussville. Progress will be made when that future is well-defined, well-planned, and well-developed. Trussville's challenge as it advances toward 2040 will be to combine fiscal responsibility, quality City services, and the ability to plan effectively for future growth.

An underlying assumption in Trussville 2040 is that the community will continue to grow as it has over the past several decades. By 2040, we estimate that Trussville could be a city of 35,000 residents. A city of 35,000 will require more capacity in every phase of community life from housing, schools, and infrastructure such as roads and utilities. Because Trussville is part of the Birmingham metropolitan area, its relationships with other public agencies that impact Trussville are crucial. In addition, it will be important for Trussville to partner with numerous private sector organizations, such as utilities, that can assist Trussville's quality of life and prosperity.

In the development of Trussville 2040, we challenged the members of the committees to decide what kind of community we want Trussville to be over the next two decades. In order to envision the Trussville of 2040, we established goals based on community consensus that will allow the City, other organizations, and its citizens to pull in the same direction. The nearly 200 Trussville residents directly involved in this process have had the opportunity to understand Trussville's strengths and opportunities, as well as to realize the hurdles that we must overcome if we are to be the community we want to be in 2040.

Strategic planning results in a broader plan that guides the development in a community. The International Economic Development Council describes strategic planning as follows:

Strategic planning is a process in which a community can look at its current situation and compare that situation to where it would like to be in a certain matter of time....

Strategic planning is one of the most important tools that ... organizations can use for effective development. It is a means to establish and maintain effective programs based on economic opportunities, constraints, and needs of a community. It involves the setting of long-range goals and objectives, and allows for guidance in structuring tactical operations that focus on desirable and feasible initiatives.

In order to implement strategic planning, the City established seven committees consisting of citizen volunteers, elected officials, and City staff. These committees spent much time and effort toward creating comprehensive reports that address the subjects of each committee's focus area. The reports outline strategies and goals to guide the decisions of the City aimed at making Trussville a better community through citizen involvement. The aim is to have the strategic plan become a consensus building document designed to allow the entire municipality to come together for a common good – to make it a better place to live.

It should be stressed that the key element in this type of strategic planning process is that it is a document developed through consensus building based on citizen participation. The citizenry develops the plan working in conjunction with their elected officials and the City's professional staff. It is not a plan that results in an answer or process to solve every problem, but rather it establishes a vision with short-term, intermediate-term, and long-term goals that will result in the community having a specific direction to pursue. The goals should interlock, which means that the short-term goals should link with the intermediate-term goals, and the intermediate-term with the long-range goals.

As the City faces decisions and choices in the future, it will have a foundation on which to make decisions in line with the plan developed by consensus. In effect, the process will be institutionalized so that it can be used as a vehicle for future decision-making. Municipalities that have successfully used this process have found that their organizations are strategically aligned for the long-term as long as leaders continue to rely on the direction forged by the citizen-developed plan. By strategic alignment, we mean, in brief, that everyone within the City is "on the same page."

The process resulted in healthy discussion through both direct observations of problem areas, review of information provided by professional staff, and information developed by the citizens themselves. Committee meetings were considered "brainstorming" sessions where all viewpoints were given serious consideration. Once a consensus was reached on a particular issue, then a recommendation was developed to achieve and measure future results. The process sometimes leads to disagreement, but this is an accepted part of this type of planning process. The main issue to keep in mind is the development of a plan to make the community successful.

## **Organization of Trussville 2040**

### ***The Executive Committee***

An Executive Committee, appointed by the Mayor, was comprised of the following: Mayor, facilitator, and chairs of the various subject-matter committees. The Executive Committee identified key issues to be examined, received and reviewed the reports of the Subject Area Committees, emphasized commonalties, reconciled differences among them, and combined them into a final strategic plan. The Executive Committee met approximately every six weeks to share progress reports and to gather feedback from each of the subject area chairs.

### ***Trussville 2040 Organizational Chart***

#### **STEERING COMMITTEE**

Mayor Buddy Choat, Chair

Mike Ennis, Facilitator

Patti Neill and Peter Reich, Education Committee leaders

Deanna Carroll, Jobs, Growth, and Development Committee leader

Sid McNeal, Intergovernmental Relations Committee leader

J. T. Murphy, Traffic and Transportation Infrastructure Committee leader

Murray Shaw, Public Safety Committee leader

Vic Modic, Technology and Utilities Committee leader

Tandi Smith, Family and Community Committee leader

### ***The Subject Area Committees***

Community involvement was coordinated through the work of Subject Area Committees. Committees included City Council members, City of Trussville Department Heads, community leaders, and varying numbers of citizens. Other City staff members were assigned as necessary to provide support services. The Mayor selected a leader and, in some cases, a vice leader. The leader conducted the meetings and ensured that all members were notified of the meeting time and location. The leader maintained records of the discussions, and he/she filed a final report with the Executive Committee after it was approved by the committee at the conclusion of the committee's work.

The work of the committees was a major part of this project. Within their assigned subject areas, the committee members were expected to identify key issues to be examined, and recommend policies, programs, and projects that can be adopted and put into effect by the City Council. Each committee was given a specific charge and, in addition, each was asked to address some initial questions. Upon completion of committee discussions, each committee was charged with creating a final document outlining its mission statement and committee recommendations that were presented to the Executive Committee.

## **Project Schedule**

Following pre-project planning and publicity, the City invited all citizens interested in serving to volunteer to serve on the various committees during the months of December 2018 through August 2019. The kick-off meeting for Trussville 2040 was held on November 15, 2018. The committees held their organizational meetings during the month of April 2019. From that point, the committees scheduled their own meetings and worked with City staff assigned to the committees and with people it needed to consult to inform their conclusions. When the committees completed their work, they submitted their reports to the Executive Committee in July and August, 2019. The individual reports were reviewed by the Executive Committee, edited and examined for consistency, and presented in final form here.

## **Plan Completion**

At the completion of the citizen participation-based strategic planning process, the Executive Committee was responsible for a final document that was drafted and submitted to the elected officials for formal adoption. After adoption, the document should serve as a guide for future governmental decisions. Included in the document is a vision statement for the City, as well as goals for the City generally and for each subject area committee. This process served as a vehicle to engage the citizens of the community in the decision-making process, which will in turn encourage trust between the citizenry and its government. The consensus-building document should not remain static, but it should be reviewed periodically as the community grows and changes. The City should consider undertaking the same process within ten years, and it should hold an annual review of progress toward the goals. Preferably, it should advertise to the community the status of the goals so the citizenry can stay informed of the Municipality's progress.

## **Vision Statement**

A thriving small-town city, maintained through controlled growth, while offering amenities that attract the best.

**Trussville shall be a smart city with a knowledge-based and self-sustaining economy, with environmentally-compatible and high-tech production of goods and services, and an environment for all citizens to have opportunities to earn their livelihoods, live in safe and attractive housing, have competitive education opportunities, and for businesses to invest and create jobs.**

## **Mission Statement**

To create a community where individuals live, learn, grow, work, and play in order to have a higher quality of life.

*Trussville is dedicated to become a city:*

- 1. With a competitive and diverse economy and smart infrastructure and with a friendly legal, business and investment environment;**
- 2. That works with other local and state governments to promote economic development and high quality of life;**
- 3. With excellent educational and skill training opportunities;**
- 4. That has state-of-the-art transportation, recreational, and utilities infrastructure; and**
- 5. That is environmentally conscious and provides a healthy and safe living environment for all of its citizens.**

## **Education Committee**

The Education Committee was charged with recommending strategies to support the idea of Trussville City Schools becoming the premiere destination for public education in the State of Alabama. Trussville City Schools was founded in 2005, and currently ranks among the top five school districts in Alabama in academics, ACT scores, athletics, facilities, graduation rates, and school safety. It is our desire to provide and maintain high quality K through 12 programs to ensure our graduates are college or career ready. If our schools are a premiere destination for education, then our city will likely become a premiere destination for families to live, learn, grow, and experience a high quality of life.

### **Vision**

The Education Committee ascribes to the 2040 Vision that Trussville will be a thriving small-town city, maintained through controlled growth, while offering amenities that attract the best. It is the vision of Trussville City Schools for educators, staff, parents and the community to work together to help students move forward on a positive path toward college and career readiness.

### **Mission**

The 2040 committee has a mission to create a community where individuals live, learn, grow, work and play in order to have a higher quality of life. The mission of Trussville City Schools is to educate all students using high standards in a safe, nurturing environment, fostering academic and career competencies that prepare them to be productive citizens.

### **TRUSSVILLE CITY SCHOOLS MOTTO AND ACROSTIC**

Learning today, Leading tomorrow

TCS = **T**eaching **C**itizenship and **S**cholarship

## Recommendations

To achieve the 2040 Vision and fulfill the mission of our schools, the committee formulated recommendations in the following specific areas for the 2040 Plan:

- I. Success factors in the School/City Partnership
- II. Innovative educational models to include an Education Corridor for skills training, career readiness, embedded job skills, and strong citizenship
- III. Career Technical Education in the Education Corridor

In this long-range plan, additional recommendations important to maintaining excellence in Trussville City Schools were formulated by an education subcommittee as follows:

- IV. Mental health, and
- V. Student population growth

### **I. Success Factors in the School/City/Business Partnerships:**

Through the financial support of the Trussville City Government, the Trussville City School facilities are state of the art and the athletic and academic programs are among the best in the state. It will be important to maintain and expand these facilities as families move into Trussville and student growth occurs. The benefits of city support can be seen in school safety with SROs in every school, land donations from the city for school use, funding for strong rotation cycles for technology, transportation and facilities, higher teacher salaries, substantial reserve balances, and strong athletic, fine arts, and band programs. Mere reliance on state and federal funding would not yield these benefits.

We are ready for the next step in recruiting business and industry to Trussville with guaranteed workforce from the education system. This commitment and partnership between the City, local businesses, and the Schools is a significant investment in Trussville's public educational system and is central to the City's growth and status in the state of Alabama. It is therefore recommended that:

- A. The Trussville City Government continues its strong support to Trussville City Schools.
- B. Current facility planning includes the use of city land for a new Board of Education building that will reflect our academic status in the state. A new building rather than a repurposed building will be paid for with school system capital reserves.

- C. In the event that an economic downturn significantly impacts the budget of Trussville City Schools, the Trussville City Government would help identify and support supplemental revenues to be used for school funding.
- D. Strong relationships between the city government, local businesses, and the school system continue to be a priority to ensure the success of the City, the school system and the mission herein.

School/business partnerships will be formalized as new businesses and industries move into Trussville.

## **II. Innovative Educational Model: The Education Corridor**

An education corridor would make Trussville City Schools the premier destination for secondary education and job skills training. This corridor concept includes the possibility of an early college program that yields college credits for students while in high school, a career/technical center for high school academy expansion, a training center for unique and specific workforce training, and a business incubator all in one general location or corridor. In our 2040 Education survey, 63% of the respondents were in favor of an Education Corridor in Trussville.

Our high school is currently nearing capacity and a high school expansion must be part of the 2040 growth plan to prevent overcrowding at the high school. One way to redistribute high school students and prevent overcrowding is to create the education corridor. It is therefore recommended that:

- a. The city and the school system work together to identify contiguous land in Trussville for the use of an education corridor.
- b. Consideration of acquiring and using land on Husky Parkway leading to the high school would be a logical first step.
- c. Partnerships with existing community colleges and state post-secondary institutions should be strengthened as matriculation occurs in an “early college” concept.
- d. On-line courses should be limited to reduce screen-time and to strengthen face-to-face communication and soft skills.
- e. Soft-skills and character traits would be addressed in all areas of the education corridor including the training center, early colleges, and incubators.

- f. The city would include the school system in business and industry recruitment and negotiation to guarantee an educated workforce specifically to meet the needs of the new business or industry.
- g. Businesses and industries would partner with the school system as needed to create apprentice courses for credit that would lead to certification, licensure, badges, or credentials for post-secondary employment.
- h. The corridor would also be reciprocal to local business partners in training their existing employees in an after school or weekend setting in writing skills, computer training, leadership, presentation skills and other professional development needs.

### **III. Career/Technical Education (CTE) in the Education Corridor**

There are currently seven academies at the high school based on the 16 career clusters under the federal Career/Technical Education (CTE) program. Some of the academies located at the high school should remain there, such as the culinary academy. Other academies are in repurposed rooms and need to be relocated to a space commensurate with their function, such as the electrical academy.

As the community population in Trussville grows and the need for a new fire station becomes apparent, an additional fire station could be located on the corridor to serve as a training classroom for our high school Fire Science classes. Emergency and Fire Management classes are portions of the Law, Public Safety, Corrections and Security Academy. If a police station extension would be feasible, a police station on the corridor would complement this new academy as well.

As the economy becomes increasingly diverse and technologically driven, there is a corresponding need to recruit and encourage students to pursue careers in technical fields. The most significant tasks that need to be accomplished are to educate the community and students with respect to opportunities that exist in the U.S. job market and to the importance of placing as much value on technical careers as we do on professional and service careers. It is therefore recommended that:

- A. The career/technical center becomes the capstone of the education corridor. Existing Advisory Councils would be expanded to include all areas included in the corridor.
- B. Cooperation with local business and industry in the form of a business/education workforce council would determine if and when new career/technical skills should be developed to meet the needs of local or incoming businesses.

- C. The business/education workforce council representatives would review each career/technical area of study including those that are already in place to determine what courses need to be adjusted over time to meet the changing needs of the field.
- D. Scholarship and technical advancement credentials and information would be available to all parents and students.
- E. The location of a career/technical center in a building along the corridor would create space for more student capacity at the high school.

#### **IV. Mental Health in our Schools**

As we look toward the year 2040, the direct correlation between mental health and school safety must be realized. Mental Health counselors, social workers, SROs, and psychologists will become more prevalent in the school setting to encourage stability and facilitate the establishment of positive and nurturing relationships. It is therefore recommended that:

- A. Social Emotional Learning (SEL) Programs will be integrated and expanded in the curriculum.
- B. Existing programs will be continued in the areas of character development, anti-bullying, and suicide prevention.
- C. More school counselors will be certified in mental health.
- D. Social workers will be available to connect families with community services.
- E. Improve and expand afterschool programs and extra-curricular activities that provide students safe, challenging, and enriching environments.
- F. SROs will continue to establish healthy relationships with students to build trust and curtail behavior problems.

**Elementary:** There will most likely be a need for a new elementary school to prevent Paine Elementary from becoming too large again. The Paine population should be held to approximately 1200 students. This is because of traffic, parking, program scheduling, and the student capacity for common areas such as lunchroom and library.

Existing elementary schools do not have enough common area space, specifically lunchroom, gym and playground space, to expand the classroom footprint. For example, building too many classrooms without adequate lunchroom space means students have to eat lunch too early or too late because of an inadequate lunchroom capacity.

**Secondary:** The current middle school space should be sufficient. However, the footprint of the “C” wing at the high school should be brought to fruition. The education corridor will redistribute a segment of the high school population as academies develop in the new career center, but the “C” wing should also be constructed for core courses of study. It is recommended that:

- A. State-leveraged bond issues should be considered for new capital projects in the education strategic plan.
- B. School debt retirement schedules should be monitored to forecast when encumbered funds might become available for new construction in long-range planning.
- C. A “Stockton Elementary” and/or a “Carrington Elementary” should be considered to relieve future overcrowding at Paine.
- D. An HTHS addition known as the “C” wing footprint should be considered to relieve overcrowding at the high school in addition to the consideration of an education corridor.

## **Conclusion**

The Trussville community is committed to its high performing public school system. The Trussville City Council, the Trussville School Board, local PTAs, the Chamber of Commerce, and our educators all desire and work hard to maintain excellence in our schools and add value to our city. There will be no shortage of opinions among community members, but all will agree that relevant, high quality, innovative education is essential for this city and its young people.

Strong public schools are a necessary ingredient for the quality of life wanted in this City. Quality education relates directly to a city's economic viability. Desirable new industries and businesses are attracted to those communities whose citizens invest in education.

Maintaining excellence in our educational system will take deliberate commitment and resources from the entire community. Working together means winning together, and as we keep moving onward and upward with this sense of purpose, there is no doubt that Trussville will become a premier destination for education, entertainment, work, worship, and quality of life in 2040.

# **Traffic and Transportation Infrastructure Committee**

The committee was charged with recommending ways in which the municipality can expand the transportation options available to its citizens and businesses; augment transportation so that it keeps pace with the demands of future growth; and create an overall transportation system that serves as a unifying framework for the built environment. Specifically, the committee was asked to do the following:

1. Identify deficiencies in the current transportation infrastructure utilizing previously prepared plans and input from the citizens of Trussville through various public outreach initiatives.
2. Recommend improvements to the transportation infrastructure to be made over the next 20 years as either short-term, intermediate-term, or long-term to address existing deficiencies.
3. Consider how the transportation system can be modified or expanded to incorporate facilities other than those serving the automobile, such as sidewalks, bikeways, and greenways?

## **Vision**

The Committee envisions Trussville in 2040 as a city in which its citizens and visitors are utilizing various methods of transportation to move from one location to another; not limited to gasoline-powered automobiles, many citizens could have electric engine vehicles and ride bicycles or walk to their destinations via a network of bicycle and pedestrian pathways and greenways.

## **Recommendations**

The Committee was organized to consider various transportation networks, such as streets and highways, bikeways, greenways, and sidewalks. The subcommittees reviewed several existing City of Trussville studies, such as the Downtown Master Plan (2013), the Major Street Plan (2005), and the Trussville Comprehensive Plan (2006) to develop recommendations for action by the City Council. In addition, the subcommittees relied on the expertise of its members as well as citizen input to develop the specific recommendations listed below.

### **General Policy Considerations**

Trussville policymakers should coordinate with contiguous governments on improvements, especially ones connecting to the external transportation system, and to take advantage of financial assistance from the State and federal governments.

The Committee realizes that citizens do not want to be solely dependent on transportation by automobile so attention must be paid to the construction of sidewalks, bikeways, and greenways over the next 20 years. Before money is appropriated to build these facilities, master plans should be completed with citizen input so that priorities can be established.

The Committee's recommendations for major improvements should be consistently reviewed by the City Council (and adjusted if need be) during the annual budget process.

The City Council should invest sufficient funds in the maintenance of the infrastructure that exists and that will be built over the next 20 years.

# **Active Transportation**

## **Introduction**

The Transportation Committee, with strategic partnerships, has devoted much of its focus to the development of the Active Transportation infrastructure and the future of this segment of the overall transportation network. The way cities are growing is changing and subsequently the way we interact with our cities is evolving. Suburbs, as we knew them, traditionally focused solely on vehicular convenience. Many of the decisions that were made over the last several decades were centered around this idea. With this evolution in the way we want our cities to function, there is an ever-increasing need for the development of the Active Transportation Network. The transportation network, as a whole, is a system that should be discussed as the compilation of all modes of transportation in which we move through and interact with our city.

## **Definition**

For the purpose of the Trussville 2040 Active Transportation Plan, the definition of Active Transportation should encompass all modes of transportation that one would not classify as vehicular or motorized. Active Transportation should represent the following modes of transportation: Pedestrian (walking and running), Non-motorized personal transport (skates, skateboards), Bicycles, Scooters, Trikes, Electrified personal transport (Electric bikes, scooters, skateboards, etc.), wheelchairs, electric scooters.

## **Vision**

The vision of the Transportation Committee is for the City of Trussville to continue to develop with a more sustainable city planning mentality. By 2040, the City of Trussville will be a place that people want to live because of many of its assets, but especially its emphasis on outdoor recreation, parks, the preservation of natural open spaces, and smart development all linked by a critical, well-functioning Active Transportation network that is planned and designed to work with, not against, the vehicular transportation network.

## **Purpose**

Putting a deliberate focus on the Active Transportation network will benefit the City of Trussville and its current and future residents in many ways. The city has and will continue to have problems combatting increased vehicular traffic along many of its heavily trafficked thoroughfares. As an Active Transportation network is planned and developed in sync with the planning and development of the Vehicular Transportation network, the following benefits can be seen: a reduction in vehicular traffic on the main arteries with Trussville, Interconnectivity between existing neighborhoods and businesses, promotion of health and fitness, marketability of Trussville on a broad, far-reaching scale, the addition of Education opportunities related to City history, culture and environment.

## **Inventory: Case Studies**

The City of Trussville's Active Transportation infrastructure is an area of Trussville planning that has been neglected and therefore it is critical to recognize success stories within our city and learn from case studies outside of our city. The greenway along the Cahaba River is an incredibly successful addition to Trussville's Active Transportation network and is recognized as a major asset the city has to offer. The Active Transportation committee has developed a list of successful Active Transportation networks throughout the US to use as case studies. Each of these case studies has something that the committee feels the City of Trussville can learn from and plan toward. The list of case studies is as follows:

- Indianapolis Cultural Trail – Indianapolis, Indiana– A world class urban bike and pedestrian path in Downtown Indianapolis, Indiana. The trail seamlessly connects neighborhoods, cultural districts and entertainment amenities.
- Bikeville – Greenville, SC – The City of Greenville's bicycle friendly community initiative. The goal is to increase ridership, encourage bicycle use, expand bicycling facilities and provide useful educational resources to cyclists and motorist to share the road.
- Peachtree City, GA – A master-planned city near the world's busiest airport, ATL. Developers created over 100 miles of paved cart paths that would connect residents and visitors to shopping, dining, resort-styled hotel and conference centers, golf and other recreation.
- Bentonville, Arkansas – Bentonville is taking a proactive approach to Active Transportation development because of the numerous benefits trails provide to the community. The health and fitness benefits are obvious, but trails can support a clean environment, promote economic development and provide alternatives for transportation.

## **Inventory: Existing Plans**

There is an abundance of planning being done in the realm of Active Transportation in Birmingham and the surrounding areas. Understanding these plans and utilizing their regional impact will benefit the City of Trussville greatly. Planning our network to tie in seamlessly to the greater network is critical. A few of the plans that the Transportation Committee has recognized as being a vital part of understanding regional active transportation planning are as follows:

- Red Rock Ridge and Valley Trail System and specifically the Cahaba River Corridor – The masterplan for a network of trails, parks, bike lanes and sidewalks in Jefferson County, AL fueled by the work of the Freshwater Land Trust.
- B-Active Plan – The Active Transportation Plan for the Greater Birmingham region. The purpose of the plan is to establish a clear vision for building and expanding a multimodal transportation network in Jefferson and Shelby Counties, with a specific focus on creating

a cohesive system of bicycle and pedestrian infrastructure. This plan was developed by the Regional Planning Commission.

### **Inventory: Existing Demographics**

Trussville's population and demographics are changing, and it is important to plan for that change in the way the future of Trussville wants to use and engage with the city's transportation network. Trussville's population has grown an estimated 54% from 2000-2011, which has brought challenges in providing adequate infrastructure and maintaining a smart, planned development pattern. The average age of Trussville is trending downward, due in large part to the success of the Trussville School System. The median age is currently 39 and trending younger and younger.

The enormous growth in population and the downward trend of median age in Trussville leads to an increased need to provide pedestrian and community focused amenities, such as multi-use paths that accommodate a wide range of active transportation types, ages, genders and races.

As the age demographic continues to trend downward, it is increasingly important to offer a mix of entertainment options. The Downtown redevelopment will help to fill this gap in the market and will demand an active transportation network that will carry people from the growing residential zones through the downtown core and beyond.

### **Inventory: Existing Conditions**

The Active Transportation sub-committee, with the resources of the Regional Planning Commission, has mapped the existing sidewalks, trails, multi-use paths and greenways. To capitalize on active transportation network, a map of the existing infrastructure will be provided.

### **Analysis: Committee Workshop**

The Active Transportation sub-committee held a workshop to identify initial strengths, weaknesses, opportunities and threats to the City's current pedestrian network. Committee members participated in a group charette which identified the following items: Current and future park, playground and greenspace opportunities, Current and future pedestrian destinations, Current and future growing residential zones.

The committee found that the potential for the City to provide greenways, walking trails, bike paths, shared use paths, etc. as an amenity for its residents is enormous. There are opportunities

to connect existing trails to each other and provide connections to adjacent neighborhoods. The priority would be to connect the existing greenway and adjacent residential zones to downtown and beyond along Pinchgut Creek.

Other opportunities include both vehicular and pedestrian connections between Roper Road and Camp Coleman Road and extending the Trussville Springs greenway through this area. A largescale future park was identified as an opportunity for a regionally significant nature park including bike trails, camping, hiking, RV park, etc.

### **Analysis: Level of Comfort Study**

The Regional Planning Commission has provided an analysis of the active transportation network within Trussville that rates and documents the level of comfort of active transportation infrastructure to help determine the opportunities to improve the level of comfort within the City of Trussville. This information will help guide planning decisions for improving the level of comfort of necessary connections.

### **Analysis: WikiMap**

The Regional Planning Commission has provided the framework to gather data relative to the community's wishes, constraints and opportunities. This WikiMap data will be provided as part of the final document and will be critical in determining destinations that current residents want to travel, using various active transportation modes and also allows for them to provide comment on locations that are hindering their ability to make that trip.

### **Recommendations**

Based on the inventory and analysis gathered during the first phase of this document, the Active Transportation sub-committee has developed a list of recommendations that all contribute to the overall vision for Trussville by 2040:

#### **Active Transportation Plan**

1. Develop a comprehensive Active Transportation Plan for Trussville.
2. Maintain the Active Transportation Plan periodically based on changing needs and trends.
3. Implement sections or portions of the Active Transportation Plan based on prioritization.

## **Active Transportation Network**

1. Greenway extension from Civitan Park, connecting to Downtown and along Pinchgut Creek.
2. Greenway extension from Civitan Park north along the Cahaba River toward Stockton.
3. Multi-use path connection between Roper Road and Camp Coleman Road.
4. Multi-use path connection along the Deerfoot corridor to an identified, large-scale, regionally significant nature park including bike trails, camping, RV park, etc.
5. Multi-use path connection across Highway 11 to the future Greenway extension.
6. Development of a park and trailhead at property adjacent to Winn Dixie.
7. Planned trailhead locations that provide access to a major network throughout Trussville, designed to give access to all residents of Trussville and help shape future development.

## **Vehicular Circulation Plan**

### **Introduction**

The Vehicular Circulation Sub-committee was charged with examining the current transportation system and assessing its effectiveness, considering the present land uses and transportation network, and to develop a vehicular circulation plan that will mitigate current and future roadway deficiencies, increase mobility, support the Comprehensive Plan, create a safe and efficient roadway system for future growth, and create an overall system that serves as a framework for all modes of travel.

### **Vision**

The Committee envisions that by 2040 Trussville will be a City in which people and goods will move easily about the area using all modes of travel which include passenger vehicles, bicycles, busses and a well-defined pedestrian system. The Committee also envisions the overall transportation system will be developed to enhance access to the regional roadway system, support the orderly growth of the community over the next 20 years, provide protection to established residential areas, provide both local and regional accessibility to the commercial areas within the city and compliment the downtown redevelopment.

To ensure the vehicular transportation plan meets the needs of the City of Trussville it was determined the transportation plan should meet the following criteria:

- Meet the long-range transportation needs of the city;
- Encourage and accommodate traffic on the interstate, arterials and collectors while discouraging traffic on local and neighborhood streets;

- Provide access among all developed areas of Trussville;
- Improve overall accessibility to employment, education, public facilities, the Central Business district and other major activity centers;
- Provide for an orderly improvement and expansion of the roadway system at minimum cost as the need for improvement arises; and
- Minimize disruptions of existing and planned developments and established community patterns.

## **Background**

Trussville has approximately 23,000 inhabitants and is located east of Birmingham, Alabama. Over the past several decades, Trussville has experienced significant growth in both population and employment, resulting in subsequent traffic growth on the City’s roadway network and increasing traffic congestion throughout the area. Trussville is located adjacent to three major regional roadways: U. S. Highway 11, Interstate Highway 59 and Interstate Highway 459. U. S. Highway 11 cross-section varies from two lanes, five lanes and four lanes divided roadways. Interstate 59 and Interstate Highway 459 are four lane interstate highways.

## **Existing Transportation System**

### **Roadway Classifications and Descriptions**

All transportation networks have some form of classification to categorize the hierarchy of movement in the system. The roadway network developed for the Trussville study area was based on the functional classification system prepared by the Alabama Department of Transportation. The components of this network are freeways, arterials, collectors and local streets. The distribution of mileage in these classifications for Trussville is as follows (approximately):

<b><u>Classification</u></b>	<b><u>Mileage</u></b>
Interstate	7 miles
Arterials	15 miles
Collector Roads	30 miles
Local Streets	90 miles
TOTAL	142 miles

Each type roadway provides separate and distinct traffic service functions and is best suited for accommodating particular demands. Their designs also vary in accordance with the characteristics of traffic to be served by the roadway. The following is a brief description of each roadway type.

- ❖ *Interstates* are divided highways with full control of access and grade separation at all intersections. The controlled access character of freeways results in high-lane capacities, enabling these roadways to carry up to three times as much traffic per lane as arterials. Freeways move traffic at relatively high speeds.
- ❖ *Arterials* are important components of the total transportation system. They serve as feeders to the interstate system as well as major travelways between land use concentrations within the study area. Arterials are typically roadways with relatively high traffic volumes and traffic signals at major intersections. The primary function of arterials is moving traffic. Arterials provide a means for local travel and land access.
- ❖ *Collectors* provide both land service and traffic movement functions. Collectors serve as feeders between arterials as well as provide access to the local streets. Collectors are typically lower volume roadways that accommodate short distance trips.
- ❖ *Local Streets* sole function is to provide access to the land uses that are immediately adjacent to the roadways. These streets are not included in the computer network for this project.

### **Regional Access Routes**

The Trussville area is served by two interstate highways (I-59 and I-459) and a U. S. Highway (U. S. Highway 11). These highways offer both north south and east-west regional access as well as access throughout the Trussville area.

***Interstate Highway 59*** traverses the City of Trussville from northeast to southwest. It is a four-lane controlled access interstate highway that bisects the study area. I-59 has two interchanges located within the study area: Chalkville Mountain Road and Deerfoot Parkway. There is also a route interchange between I-59 and I-459 located within the study area.

***Interstate Highway 459*** extends along the western boundary of the City of Trussville in a north-south direction. I-459 is a controlled access interstate highway with a cross-section that ranges from four lanes to six lanes throughout the study area. The I-459 interchanges in the Trussville area are located at U.S. Highway 11 and at Derby Parkway. The Derby Parkway interchange is not within the Trussville city limits but it does provide some access to the City of Trussville.

***U.S Highway 11*** varies as a principal arterial roadway that is two to five lanes throughout the study area. It is the major transportation spine through the City of Trussville and provides access to many of the commercial and residential areas in the City.

With the exception of the regional access routes, all other roadways in the Trussville network are either collector roadways or local roadways.

### **Planned Roadway Improvement Projects**

The Birmingham area MPO's Long Range Transportation Plan (2045 draft) was reviewed to determine any transportation projects that were currently planned for the Trussville area. The projects in the Trussville area included in this Long-Range Transportation Plan include:

- I-59 from 1<sup>st</sup> Avenue North to I-459 – widen from 4 to 6 lanes in 2034;
- I-59 from I-459 to Chalkville Road widen from 4 to 6 lanes in 2024;
- I-59 from I-459 to Chalkville Road widen from 6 to 8 lanes in 2035;
- U.S. Highway 11 from Chalkville Road to Cahaba River widen from 4 to 5 lanes in 2019; and
- Birmingham Area Northern Beltline from I-59 to Pinson construct as 4 lanes in 2040.

### **Existing Traffic Volumes**

Traffic volume, as indicated by traffic counts at various locations on the roadway network, reflect current travel patterns and how well the network is serving the travel demand. Traffic counts have previously been collected by various agencies in recent years. The following is a summary of the maximum daily traffic volumes that occur on some of the major roadways in the study area:

Interstate 59	64,120 vehicle per day
Interstate 459	63,270 vehicle per day
U.S. Highway 11	36,520 vehicle per day
Chalkville Road (Projects area)	12,690 vehicles per day
Chalkville Mountain Road (north of I-59)	39,460 vehicle per day
Deerfoot Parkway	18,920 vehicle per day

### **Roadway Capacity**

Roadway networks are evaluated by comparing the traffic volumes along each facility to the facility's capacity. Roadway capacity is defined as the ability of the facility to accommodate traffic. Service flow volume is the level of traffic flow (vehicles per day) that can be accommodated at various levels of service. The current level of service scale, as developed by the Transportation Research Board in the *Highway Capacity Manual* ranges from a level of service "A" to a level of service "F". Abbreviated definitions of each level of service are as follows:

Level of Service A	Free traffic flow (0% –35% of capacity)
Level of Service B	Stable traffic flow (35% –50% of capacity)
Level of Service C	Stable traffic flow (50% –62% of capacity)
Level of Service D	High-density stable traffic flow (62% –75% of capacity)
Level of Service E	Capacity level traffic flow (75% –100% of capacity)
Level of Service F	Forced or breakdown traffic flow (>100% of capacity)

As a general rule, the desired operation of a roadway should be no lower than level of service “C” planning purposes. Level of service "D" may be acceptable under certain circumstances for peak hour conditions. A level of service "E" or "F" is considered unacceptable.

The methodology used to evaluate roadway segment capacity in this project was a tabular analysis relating roadway classification, number of lanes, levels of service, and daily service volumes. The estimated 24-hour capacities of the facilities included in the area network are shown in Table 1. Also reflected in Table 1 are roadways that are currently near or over capacity and include:

- I-459 from Alabama Highway 75 to Chalkville Road;
- U.S. Highway 11 from I-459 to Deerfoot Parkway;
- Chalkville Road from Queenstown Road to U.S. Highway 11; and
- Chalkville Road from Trussville /Clay Road to top of Chalkville Mountain Road (near Walmart).

**TABLE 1**  
**TRUSSVILLE, ALABAMA**  
**ROADWAY SEGMENTS OVER OR NEAR CAPACITY**

Roadway	Classification	Cross Section and Capacity		2017 V/C and LOS		
		Basic Cross-Section	Daily Capacity	2019 Volumes	V/C Ratio	LOS
I-59 from Alabama Hwy 75 to I-459	Interstate	4 lane with median	68,000	45,380	0.67	E
I-59 from I-459 to Chalkville Road	Interstate	4 lane with median	68,000	64,120	0.94	F
I-59 from Chalkville Road to Deerfoot Pkwy	Interstate	4 lane with median	68,000	42,450	0.62	D
I-59 from Deerfoot Parkway to Argo Exit	Interstate	4 lane with median	68,000	34,770	0.51	C
I-459 from Derby Parkway to US Highway 11	Interstate	6 lane with median	102,000	63,270	0.62	D
I-459 from US Highway 11 to I-59	Interstate	6 lane with median	102,000	55,620	0.55	C
US Highway 11 from I-459 to Edwards Lake Pkwy	Arterial	5 lanes	33,900	36,520	1.08	F
US Highway 11 South of Tutwiler Drive	Arterial	5 lanes	33,900	34,030	1.00	F
US Highway 11 South of Chalkville Road	Arterial	5 lanes	33,900	27,020	0.80	E
US Highway 11 from Parkway Drive to Deerfoot Pkwy	Arterial	2 lanes	17,800	16,800	0.94	E
US Highway 11 from Deerfoot Pkwy to Carrington Drive	Arterial	2 lanes	17,800	8,890	0.50	B
Deerfoot Pkwy from US Highway 11 to Happy Hollow Road	Collector	3 lanes	20,800	14,260	0.69	D
Deerfoot Pkwy from Happy Hollow Road to I-59	Collector	4 lane with median	28,500	18,920	0.66	B
Deerfoot Pkwy from I-59 to Husky Pkwy	Collector	4 lane with median	28,500	12,440	0.44	A
Chalkville Road from Queenstown Road to US Highway 11	Collector	2 lanes	17,800	18,840	1.06	F
Chalkville Road from US Highway 11 to Trussville/Clay Road	Arterial	2 lanes	17,800	12,690	0.71	D
Chalkville Road from Trussville/Clay Road to I-59	Arterial	2 lanes	17,800	16,650	0.94	E
Chalkville Road from I-59 to top of hill	Arterial	4 lane with median	33,900	39,460	1.16	F

X.XX OR F INDICATES SEGMENT OVER CAPACITY  
X.XX OR E INDICATES SEGMENT NEAR CAPACITY

## **Transportation Plan Development**

The Vehicular Transportation Plan for Trussville was developed in an effort to provide a guide for local officials to utilize to address existing traffic congestion, mitigate anticipated future year capacity deficiencies, improve mobility, increase safety and promote economic vitality.

Various types of roadway improvements have been included in Trussville's Vehicular Transportation Plan. The improvements include adding travel lanes to existing roadways and constructing new roadways. The Vehicular Transportation Plan is described below and illustrated in the attached Figure. Projects are designated by either a number or letter and match the accompanying graphic. Existing roads to be improved are designated in a solid color and new roadways or extensions of existing roads are illustrated with a dashed colored line.

### **Trussville Area Transportation Plan**

1. Chalkville Road from I-59 interchange to Green Drive – reconstruct from three lanes to five-lanes
2. Chalkville Road from Green Drive to Poplar Street – reconstruct from two-lanes to three-lanes
3. Longmeadow Drive from its current end west to Trussville Crossings Parkway – three lanes
4. Arrowhead Lane from its current end to Deerfoot Parkway – align at Husky Parkway – two-lanes
5. Missy Lane Extension from its current end to Bethune Parkway – two-lane connector from Carrington
6. Bethune Parkway extension from current end to Windsong area (Coach Drive) – two-lane
7. Camp Coleman Road extension from “S” curve to Roper Road – two-lane
8. Still Oaks Drive extension to Roper Road – two-lane
9. U.S. Highway 11 from I-459 interchange to Tutwiler Drive – widen to six lanes with median
10. U.S. Highway 11 from Parkway Drive to north of Deerfoot Parkway – widen to five lanes
11. Wimberly drive extension to Linden Street – two-lane connector to Tutwiler community
12. Valley Avenue Extension from Linden Street to Roosevelt Boulevard – two-lane connector
13. Tutwiler Drive extension from current end to Roosevelt Boulevard – two-lane connector
14. Pinnacle Connector from Roosevelt Boulevard to Edwards Parkway – two-lane connector
15. I-59 from I-459 to Deerfoot Parkway – widen to 6-lanes
16. Birmingham Northern Beltline – planned expressway from I-59 north thru Clay community
17. Edwards Lake Road from Edwards Lake Parkway to Medical Park Drive – widen to five lanes
18. Mary Taylor Road from U.S. Highway 11 to railroad – widen to three lanes
19. U.S. Highway 11 at Deerfoot Parkway – overpass over U.S. Highway 11 and railroad

20. Deerfoot Parkway from U.S. Highway 11 to Happy Hallow Road – 4 lanes w/median
21. Deerfoot Parkway from Husky Parkway to Trussville Clay Road – widen to 4 lanes with median

Although a majority of the projects listed are on roadways that are not governed or maintained by the City of Trussville these roadways provide direct access to the regional roadway network and are identified for coordination by the City of Trussville with the City of Birmingham, the Alabama Department of Transportation or Jefferson County.

### **Downtown Area**

The downtown area should be a vibrant community center easily accessible to citizens for business and social needs. To assist in this effort the City of Trussville has adopted a downtown redevelopment plan and currently has the southwest quadrant of the downtown area under construction. To foster the redevelopment of this quadrant and the three remaining quadrants the following road improvements are recommended.

1. Southwest Quadrant Loop Road - Beech Street extension to Cedar Lane with connections to Fresh Value Market center
2. Northwest Quadrant Loop Road – connector from U.S. Highway 11 to Chalkville Road – two-lanes
3. Northeast Quadrant Loop Road – connector from Chalkville Road to U.S. Highway 11 – two-lanes
4. Railroad Avenue Extension- connector from current end of Railroad Avenue behind the Municipal complex to Parkway Drive.

### **Coordination**

As previously mentioned, a majority of the streets identified as needing improvement or new construction are not maintained by the City of Trussville; however, these roadways provide valuable access for Trussville to and from the regional roadway network. As such the City of Trussville should work closely with the City of Birmingham, the Alabama Department of Transportation and Jefferson County to coordinate their transportation plans that will result in the most cost-effective service for the area residents and businesses. As such the City of Trussville should:

1. Ensure transportation issues are given sufficient emphasis in the transportation planning activities of the local governments through the Metropolitan Planning Organization;
2. Work with Jefferson County to ensure maintenance of County roads in the city limits are given proper attention;

3. Coordinate with the Alabama Department of Transportation to ensure the regional roadway system provide sufficient capacity in a timely manner to avoid use of local streets for regional destinations; and
4. Provide method for public viewing of information concerning traffic and transportation issues that impact them on a daily basis.

## **Community Outreach Plan**

### **Scope**

The committee and sub-committee chair(s) in conjunction with our community volunteer team and third-party resources through the Jefferson County Regional Planning Commission met on several occasions in April, May and June 2019 to establish a framework for data collection, analysis and reporting. Our team determined that soliciting direct community feedback was of critical importance to the integrity of our final reporting. It was determined, however, to only solicit feedback on the “active transportation” portion of our overall committee scope. This determination was made due to the technical knowledge required to understand and recommend vehicular routing strategies and because of that, a belief that any resulting feedback from citizens in this area would be of limited use.

### **Execution:**

Development of a succinct, cloud-based survey and interactive WikiMap™ to collect both objective and subjective data points from a sampling of Trussville residents. In conjunction with city staff and web developers a Trussville 2040 Active Transportation landing page was created as a single point of interaction. The web address for this landing page was subsequently distributed through various outlets; including social media and email. Printed post cards containing explanatory data and the landing page web address were also distributed to physical locations including city hall, the Trussville Public Library and the Trussville Civic Center.

### **Result:**

As of the date of this summary, some 350 separate interactions, to include survey responses and WikiMap™ notations have been recorded. This represents approximately 1.5% of the population. Data will be organized, analyzed and summarized for final reporting purposes.

## **Family and Community Committee**

The Family and Community committee was charged with reviewing current leisure, recreational, and arts programming, and assessing the needs of Trussville over the next two decades; evaluating programs and facilities that will enhance the sense of community that will be needed during the study period; and evaluating programs of the City, non-profits, and faith organizations that meet the needs of family, especially ones with children; and considering the special needs of older citizens and children at-risk.

### **Vision**

The committee envisions Trussville in 2040 as a vibrant place to live with numerous opportunities for families to work, play, learn, and recreate with adequate facilities and programs offered by the City, non-profits, and faith organizations; families will be safe in their homes and in public spaces with the City; all residents will have available adequate health and wellness facilities and programs to help them lead a healthy lifestyle; the community will embrace the arts and encourage involvement in the various forms of artistic endeavors.

### **Recommendations**

In order to achieve the Trussville 2040 vision, the committee identified a number of projects that will be new to Trussville or expansions of existing facilities and programs. The city will have to prioritize funds, and program future budgets to make these goals a reality. The recommendations are arranged by the following subareas: recreation, the arts, transportation, health and wellness, and family safety. Several of these projects were considered by other committees in that they serve a dual role. For example, a project, such as a bikeway, is recreation to us, but it is considered by the Traffic and Transportation Infrastructure committee as part of the future traffic network.

### **Recreation**

#### **Mountain Biking/Nature Trails**

If it can be developed, convert the City-owned property on Deerfoot into a nature/walking/biking trail. Utilizing the many grants available for trail building would make this a fairly inexpensive undertaking if the City allows use of the property. We envision a potential botanical garden, bird watching trails, walking trails, mountain biking trails, and educational trails to identify plants and trees.

### **Mega Indoor Multi-purpose Facility**

Create a large (70,000 to 90,000 square feet) indoor multi-purpose facility that would attract events to Trussville which would have a large economic impact on the community. This facility would be a multi-purpose facility that could host events such as volleyball, tennis, pickleball, basketball, and archery tournaments. While this is an expensive project, it has the potential to bring revenue to the City and other businesses.

### **Special Needs Multi-purpose field**

An outdoor facility that supports children and adults with special needs is recommended. This would be a place for track and field events as well as to play soccer, football, baseball/softball, frisbee, disk golf and more. Hosting the Special Olympics should also be considered.

### **Indoor 25-yard Pool and Therapy Pool, Outdoor Lazy River, and Splash Park**

This is a project of the Parks and Recreation Department to include an indoor 25-yard pool and therapy pool, outdoor lazy river, and a splash park to be located behind the Civic Center. This would provide the city with a place to have a swim team and host swim meets. It would also ease overcrowding at the current Trussville Pool.

## **Arts**

### **Cultural Arts Center (CAC)**

By 2040, we envision a Performing Arts Theater with seating for 300 to 500. The CAC would be able to house the Arts Council for the Trussville Area (ACTA), and create a new ACTA youth program with classrooms for acting workshops and camps, classrooms for music lessons including piano, violin, and other instruments, as well as lessons for pottery, quilting, painting, and other crafts. The City could make classrooms available for rent for other fine arts activities. In order to support and encourage local artists, the lobby area could be used for displaying the work of local artists. This would allow the Historical Museum to utilize all of the ACTA building which would allow it to open their doors more frequently.

## **Community Involvement**

### **1. Communications**

Create a City-wide communication app that would alert residents of emergency situations, traffic issues, and other threatening situations. Have a website so that people can follow calls by the fire and police departments that gives very generic information like medical call, fire call, or police call. Have message boards up in the Entertainment district and other areas around town that will advertise upcoming events. Flashing light BEFORE you get to Watterson Parkway on US 11 and S. Chalkville Road alerting drivers that a train is on the tracks and you need to turn here.

### **2. Volunteerism**

Encourage volunteerism by creating a place on the City's website where people can go to view volunteer opportunities and where groups and organizations can post their needs for volunteers.

## **Jobs, Growth, and Development Committee**

The Jobs, Growth, and Development Committee was charged with recommending ways to improve and grow the local economy through the attraction of new businesses and the enhancement of existing businesses. Some typical questions that this committee was asked to address are as follows: How can the City maintain and attract desirable industries and businesses in the rapidly changing national and global economies? What programs can be developed to assist small and start-up businesses? How can we conserve and enhance the valuable aspects of the current built and natural environments while at the same time accommodate future growth?

### **Vision**

The committee envisions Trussville as a vibrant community with excellent well-paying jobs in a diversified economy and an attractive built environment that places Trussville among the cities in the Southeast with the highest quality of life.

### **Recommendations**

To achieve the committee's vision, the committee considered five areas that combined will allow Trussville to prosper and grow into one of the South's premier cities: housing, quality of life, transportation, industrial development, and commercial development.

#### **Industrial Development**

1. A vibrant industrial development program is important to Trussville. The recruitment of industry represents the opportunity to attract jobs and investment that will be important in creating and supporting the City's economic base. This effort should continue but should be focused on developing areas of high-technical, clean industry including fiber optics, with value-added manufacturing.
2. The current industrial properties should be evaluated for the goal of determining how best to use the property in a targeted manner. Additional property owned by Trussville should also be evaluated as well as other parcels that could be acquired and developed.
3. It is a fact that Trussville has limited land that could be developed for industry. However, adjacent St. Clair County has large tracts the City should consider discussing a joint marketing and development effort with Springville in St. Clair County. This effort could target sites for large locations and allow Trussville to utilize its property for small developments.
4. A skilled workforce is one of the main issues, if not the number one issue, facing industry today. An effort should be made to work closely with business and industry, Trussville City Schools, and area technical colleges to create a workforce development program to provide a skilled workforce.

5. Key infrastructure is essential to developing a great city. Fiber optic availability is also important for today's business and industry. Planning for the effort is essential and should be a priority for Trussville, especially in our industrial park.
6. Trussville should have a viable business retention and expansion program for existing companies. This effort ensures companies already located with Trussville to understand what help may be available for them to expand and grow their companies.
7. Trussville should consider hiring a full-time person to run its economic development effort. This would provide the City with a full-time professional to enable the community to move forward with an aggressive pro-active economic development program.
8. The passage of Amendment 772 by the State Legislature has resulted in cities having greater Constitutional activity in economic development. Trussville should analyze how it is currently organized and determine if it should consider additional or alternative methods of organization.
9. Consider the possibility of converting the existing Trussville Industrial Development Board to Industrial Development Authority. This would provide for more flexibility including working with office buildings and complexes, possibility of joint ventures and limit liability.

## **Commercial Development**

1. Economic development should be conducted in an aggressive, pro-active manner- not reactive. It is important to maintain close partnerships with agencies responsible for marketing and recruiting business to our region and state, but it is essential that Trussville has an effort that focuses closely on ensuring the success of our community.
2. Trussville should move forward with concept plan for key municipally-owned properties to have an aggressive, pro-active effort to get the type of development that its citizens want and expect.
3. The community should have an entrepreneurial program such as an incubator or accelerator to help aggressively promote start-ups. This program could be one of the tools available to the economic developer.
4. There should be a continued aggressive effort to redevelop Trussville's downtown. The effort should also be given to consider development of all entrances to the City. This effort could also be coordinated by the new economic developer.
5. As new retail stores occur, care should be given to promote revitalization and redevelopment of existing retail/commercial areas.

## **Housing**

1. Neighborhood stabilization is absolutely essential to having a successful community. The City should evaluate all its neighborhoods to ensure critical infrastructure and maintenance of such infrastructure is provided.
2. The City of Trussville owns substantial acreage in key locations with the community. Care should be taken in development of this property to ensure the successful development of planned living opportunities where possible.
3. A viable downtown is essential to our community's health. Urban living concepts should be considered where appropriate to ensure our urban area remains vibrant as neighborhoods.

## **Quality of Life**

1. Trussville City Schools are important to the success of our community. Recognizing the importance is a priority, therefore, continued support of our Schools is essential to maintain a vibrant Trussville.
2. Our community recognizes that a successful local economy allows the municipality to provide the resources needed to maintain the level of public programs, facilities and services our citizens expect. The maintenance and expansion of our tax base is therefore essential.
3. Recreation is a priority in Trussville. Continued support of such amenities is essential for current as well as future population.
4. Our citizens expect to live in a quality community committed to having the best possible environmentally-sound and aesthetically-pleasing development. The City should ensure that our development codes, zoning ordinance and our planning effort reflects these goals- both current and future land use should be evaluated.
5. Our downtown should continue with its redevelopment effort. The goal should be to continue to attract quality commercial and retail opportunities, as well as housing.
6. Cultural activities are a key effort in creating a high quality of life. Support for these programs is important.
7. Emphasis should be placed on the concept of being a "smart city." Planning should commence immediately in this area.

## **Intergovernmental Relations Committee**

In Trussville, we know that our best opportunities for growth and success are tied to our working to try to improve the prospects of those around us as well. The City of Trussville values its neighbors. And we know our own success depends on how we interact with other units of government at all levels, both regionally and at the State level. This is especially true with economic development, where success could require cross border cooperation, since our City may not possess all the needed resources sufficient to secure major projects and opportunities.

The Committee on Intergovernmental Relations was asked to identify the units of government with whom Trussville currently interacts, and to examine the status of these relationships.

Expected areas of involvement include:

Identify the units of Trussville government that routinely interact with those outside our City.

Ensure the City has individuals assigned as primary contacts to these other governments. And, ensure that these representatives keep other officials of our City informed of issues and opportunities that arise.

Actively seek opportunities for cooperative service agreements that produce efficiency and economy, and also desirably reduce duplication of services between Trussville and other units of government.

Work to align Trussville's economic development goals with others, by seeking to identify shared targets for development based on mutual strengths, capabilities and objectives.

### **Vision / Action**

By 2040, with Trussville growing to be a city of possibly 35,000+ residents, our City desires to work cooperatively with an ever expanding group of external entities to seek and secure mutual opportunities and projects, for the provision of mutually beneficial services in association with other municipalities, and regional and State governments, as well as private service providers, non-profits, etc. Trussville is committed to achieve economies of scale, efficiency in service delivery, opportunity attainment and problem solving through expanding cooperative arrangements.

Trussville is an active contributor to and participant in the Jefferson County-wide Discussions for Economic Development and Intergovernmental Cooperation, which recently resulted in his signing The Good Neighbor Pledge, along with 21 other of our county municipalities.

As Trussville casts its vision forward toward 2040, we will continue to seek out mutually beneficial ways to cooperate with our neighbors. Emphasis should be on the following:

- Economic Development: Trussville should focus our efforts in developing suitable land for recruitment of business and industry. Our community is limited in this sector. Therefore, we should evaluate partnering with nearby communities through their governments where practical to develop land for these purposes.
  - Development of new parks for recruitment of industries should also lead to the development of an area marketing effort. This would allow Trussville to expand its capabilities in partnership with other communities to stretch its valuable resources.
  - An effort should also be made to emphasize programs for entrepreneurs and support business development within the Trussville community. The City of Trussville should proceed with efforts to create an incubator/accelerator program either independently or in partnership with other area organizations with a proven track record in entrepreneurial development such as the Innovation Depot.
  
- Workforce Development: The development of a qualified workforce is essential to the future success of Trussville. Emphasis should be placed on partnership with our local school system as well as area businesses, community colleges, universities, and other local governments to develop an aggressive workforce development plan. This plan should deal with job training, as well as such efforts as school-to-work programs with apprenticeship opportunities to ensure a pipeline of qualified employees.

The above two items require major emphasis to create a successful Trussville. However, we should not neglect other important areas for future collaboration such as:

- Public Safety
- Transportation
- Responsible land development
- Environmental cooperation
- Regional cooperation in provision of other services

Intergovernmental relations are a key area for the future success of the City of Trussville. This fact is evident throughout the other subject area committee reports. Many of the goals identified in these reports will require cooperation with other governments and organizations to be successfully implemented. New areas for cooperative emphasis will emerge and community leaders will need to be able to recognize opportunities to work with other entities.

## **Public Safety Committee**

The Public Safety Committee was tasked with reviewing and examining the state of the City of Trussville's current Public Safety resources, and creating a plan with recommendations for necessary improvements to accommodate the City's projected growing population and economy over the next 20 years. This is a task the committee has taken very seriously, as Public Safety is the cornerstone to ensuring the City of Trussville remains one of the most desired communities to live in across the State of Alabama by providing safety and security to its citizens throughout the community - in their homes, schools, and businesses. Enhancing our Public Safety resources will be a major benefit to the citizens of the City of Trussville, ensuring the best possible safety, protection and emergency response for their homes, families and businesses.

### **Department Mission Statements**

The Trussville Police Department is dedicated to working with the community to make the City of Trussville a safe and desirable place to live, work, and visit. We diligently strive to protect lives and property, improve public safety, and deter crime with excellence and integrity.

It is the mission of Trussville Department of Fire and Rescue to facilitate a safe community for residents and visitors of our great city by preserving life and property, and protecting the environment through a combination of Prevention, Community Education, Fire Suppression, Emergency Medical Services, and Specialized Services. Trussville Fire and Rescue strives to utilize the experience, education, and training of each member to the fullest by employing the best equipment, technology, and tactics available.

### **Vision**

It is the committee's and each Department's vision that the City of Trussville be able to offer its citizens **premier** Public Safety service by enhancing the resources available to all public safety departments over the next 20 years to allow the City to live up to its mission to offer the highest quality of life to its citizens.

### **Focus Areas and Recommendations**

#### ***1. Personnel***

Currently, the Fire Department has 51 employees overall, having added six new positions in 2017, three new positions in 2018, and two part time positions in 2019. The Police Department has 68 sworn officers with 10 administrative positions, with 8 new hires in the past fiscal year and plans to add 2-3 more positions this fiscal year.

The additional hires made over the past 2-3 years under the current City administration have allowed both departments to become more competitive in comparison to many of the top 10 safest cities in the State of Alabama. However, with the expectation of an increased population

from approximately 24,000 to greater than 35,000 over the next 20 years, it will be necessary for both departments to continue to add positions incrementally to accommodate this growth and the mission.

### Recommendations

The committee recommends that both departments add personnel strategically rather than simply in a number of employees in comparison to population. The following are some areas where the Committee believes staff will be required:

- In the Police Department, additional officers are needed to help patrol the increased traffic that is naturally growing with the downtown redevelopment and growth along Highway 11.
- The Police Department should continue to develop specialized units-such as Directive Enforcement Unit to meet the challenges of changes within our city.
- School Resource Officers are examples of non-patrol positions within the Police Department. Currently, the number of SROs is sufficient and allows the Trussville City Schools (TCS) to be recognized as one of the safest school systems in the State of Alabama. As the Trussville City Schools system continues to grow to accommodate the growing population, additional SROs should be added to continue to lead the way in school safety.
- In the Fire Department, the addition of a 4<sup>th</sup> Fire Station, as identified in the following section as one of the most important recommendations of the plan, would require the hiring of 12-15 employees to staff the new fire station effectively. This staff expansion should be a focus of the first five years of this 20-year plan.
- Both the Police and the Fire Department work to be competitive and lead the way in salary and benefits to their employees, which will pay off in attracting the best of the best candidates for their departments.

## 2. Facilities

The committee had the opportunity to tour some of the key Public Safety facilities in the City of Trussville, and it would be an understatement to report that some facilities – especially those in and around City Hall – are a poor representation of the excellence for which the City of Trussville strives. The majority of the current facilities are too small to accommodate the staff and mission of the departments. Considering the previous recommendation to continue to grow Public Safety staff, the current facilities will fail to accommodate the staff growth without changes.

Both Departments have been forced to separate staff simply due to the space limitations. Fire Administration has seven employees (in six offices) in the Fire Administration complex on Cherokee Drive, while other staff positions are at Station 1 at City Hall. The Police Administration is in the complex directly connected to City Hall with the Jail, while the Patrol

Unit is in a separate location with the Training facility between City Hall and the Trussville Utilities building.

Beyond the need for space that will be required to accommodate the growth of staff, the Police Department needs more room for police dispatchers and more room for evidence storage. Evidence storage is becoming more important as evidence compounds over time, and in particular, hazardous materials must have proper space and ventilation to avoid damaging effects to the staff who work in the facility. The City may need to consider expansion of the jail and training facilities for both departments.

The Fire Department needs to enhance the current facilities/stations by adding cleaning units in the stations to ensure equipment can be properly cleaned and maintained for long-term use. It's also important to note that the City's current ISO rating is a "3" based on current facilities and resources – applicable standards recommend a Fire station be located within 5 miles of all residents in the City limits, and the current stations do not comply with that requirement.

### Recommendations

The first and most important recommendation of the plan is to proceed to build Fire Station 4. The preferred site is located near Norris Farm Road and the land is currently owned by Trussville Gas and Water. This addition could improve the City's ISO rating to the highest possible score ("1"), which could have a positive impact for the City by lowering insurance rates for both private and commercial insurance coverages.

The ISO performs this review roughly every five years, so the goal would be to build this additional Fire Station within the next several years. The cost to build this station varies depending on the purpose.

Another recommendation for facilities during the study period is to make a commitment to develop a formal plan to create a Public Safety Complex that could house Fire & Rescue, Police, and the Court resources under one roof. This complex is preferred to be centrally located, either around the current City Hall, possibly being combined with a new City Hall facility as well, or another central area on Highway 11/ Main Street or Chalkville Mountain Road within the boundaries of the City's historical district.

A combined Public Safety complex would solve many of the issues identified in the facilities overview above:

- Reflect the vision of the City of Trussville and its commitment to offer premier Public Safety services to ensure its citizens feel safe and secure
- Allow the departments to bring the staff under one roof, enhance continuity and increase work efficiency, resulting in better service to the public.
- Allow the departments to recruit the most qualified candidates by offering first-class facilities and resources

- Accommodate the additional room needed for today's limited areas:
  - Court staff
  - Evidence / Property room
  - Jail
  - Police Dispatch
- Create an effective and combined Training facility for both Police and Fire Departments
- Allow the Public Safety Departments to offer more Community-oriented training and education

### 3. Technology Resources

The Committee evaluated the City's current Public Safety technology resources – vehicles, equipment, and other technology – in effort to make the proper recommendations for growth and enhancement. Our recommendations include:

#### Recommendations

- The Fire Department has a proposed 10-year budget plan for all apparatus, vehicle, and major equipment replacement. The plan allows annual payments to be made out of the Fire Department's operating budget and will ensure that all major equipment in the Fire Department stays in compliance with current standards. The plan should include the following considerations:
  - Purchase of a new fire pumper every 2 years
  - Adding a new medical transport unit every 5 years
  - Replace one staff/support vehicle every year starting in 2020.
  - Making regular payments to replace an aerial unit every 10 years
  - Replacing 6-8 sets of turnout gear, per year
  - Replace five SCBAs every year starting in 2023; 15 are currently on order and will be paid for over the next three years.
  - Replacing 1 defibrillator each year starting in 2025; eight of the nine current units are new (2017) and under a service contract through 2025.
- Police vehicles – plan to purchase new vehicles every year with in-vehicle technology. This will ensure enough vehicles to accommodate the department's staff growth
- Radio System – New portable and mobile radios will need to be purchased to keep up with the evolving communications technology. The end result will be more effective communications interoperability between Police and Fire & Rescue.

- License Plate Readers – The committee would recommend the City continue to invest in LPR technology for high traffic areas of the City based on the current success.

Cameras would be available to all Public Safety departments to assist in response and aid. These cameras would also be available to assist with traffic evaluation and monitoring, assisting in the development of plans by the Traffic and Transportation committee.

- The committee recommends the City add an AFIS fingerprint system. This system would allow the evidence technicians to enter prints recovered at a crime scene and search the database to develop a suspect list that may lead to more efficient convictions and case resolutions.
- In line with the need for more space for evidence storage as outlined in the facilities recommendations, the committee also recommends the City explore options for professional evidence processing equipment, such as:
  - Drying cabinet
  - Fuming Hood
  - Computerized labeling/inventory system
  - Alternative light sources

Due to the increasing expectation of physical evidence in all prosecutions, it's vitally important the City has the ability to properly store and manage evidence.

#### 4. *Disaster Preparedness*

- A formal, citywide Emergency Preparedness Plan (EPP) should be developed to educate citizens on how to respond/react in emergency situations.
  - The EPP should be made available on the City's website and shared through the City's social media accounts
  - Should include a map identifying all Public Safety locations throughout the City.
  - The EPP should include coordination with local churches, TCS schools, and the Civic Center to be available for shelter or as evacuation sites.
  - Encourage local businesses to develop an emergency plan in coordination with the City's formal EPP.
- Community-wide education for Public Safety should be a priority for both departments.
- An emergency alerting application (phone app) should be offered to alert citizens during an emergency. The committee recommends making the rollout of this application a priority through the EMA app named Everbridge.
- The Committee recommends that the City consider plans to build additional storm shelters to accommodate large crowds at facilities and sporting events.
- The City should also consider that large community developments include one or more storm shelters based on the number of planned residents, built at the expense of the developer.

- The City should mandate that all future community developments locked in by the railroad develop alternative exits for emergency situations.
- As the City's population continues to grow towards the anticipated 35,000 mark over this 20-year period, the committee recommends the City pursue bringing a hospital or free-standing Emergency Department within City limits to better serve emergency medical needs of its residents.

## 5. Strategic Funding

- Considering that the recommendations made by the committee throughout this Public Safety plan will require a significant amount of funding to execute, the City's tax revenues are not likely to support it alone. Alternative funding should be considered, such as state and federal grants. Private grant programs are another option.
- The City should consider employing a grant writer to do the following:
  - Stay educated on available grant programs and help identify grants where the City has the best chance to receive funding
  - Write and submit formal applications on the City's behalf to obtain available grant funding
  - Manage and respond to the reporting requirements for awarded grants

## **Technology and Utilities Committee**

The Technology and Utilities committee was charged with reviewing the adequacy and future capacity of the various utilities to ensure that Trussville's residents and businesses will be properly served over the next two decades. In addition, the committee was asked to pay particular attention to the impact that emerging technologies are having and will have on the community.

### **Vision**

The vision of the Technology and Utilities committee is that Trussville's utilities will supply sufficient service so that all residents and businesses can rest assured that they will be adequately served at a reasonable cost; and that the committee will foresee and adjust to the impact of emerging technologies on the quality of life of Trussville residents.

### **Water and Gas Issues**

Our water is clean, plentiful and inexpensive today – but will it remain that way?

How much of a threat is the Birmingham Landfill Expansion over/near our aquifer?

Are earthquakes a threat to our water supply?

Can our water resources accommodate our city's growth?

Do we have a security plan for terrorism?

How will we fund future water infrastructure improvements?

### **Pertinent Facts**

Trussville Utilities (TU) has approximately 12,000 water utility customers, and approximately 23,000 gas customers. Most of these customers are residential.

TU serves gas customers in Trussville, but also Birmingham, Center Point, Pinson, and Clay. In the late 1940's and early 1950's, many cities went into the gas business. Since then many municipal systems have been acquired by private enterprises. Trussville has done a great job reinvesting in our water and gas infrastructure, an approach known as "invest as we go."

If you live in Trussville, your water bill is often less than your cellphone bill.

All of Trussville's water comes out of wells/aquifers.

Our groundwater is incredibly clean due to the limestone aquifer.

However, we don't know how much we have – it is difficult to measure.

There exists a Trussville Groundwater Recharge report dated 2012 from a geological Alabama study. The wells are relatively close together.

### **Issues to Consider**

#### Issue 1: Birmingham Landfill Expansion – How much of a threat is it to our water supply?

##### Risk Assessment: Medium Probability, But Low Impact

Our water aquifer runs along the Cahaba syncline. The expansion of the Birmingham landfill adjoins the rear of the property of Magnolia Elementary. This was a controversial issue, opposed by our City leadership. The Cahaba River Society (CRS) is involved. Randy Haddock found a map, showing the landfill overlapped the Banglore Formation (our aquifer). Mike Strength, GM of Trussville Utilities, wrote a letter opposing the landfill expansion to the Alabama Department of Environmental Management (ADEM). Despite the protests, ADEM approved the expansion and held that the Banglor formation was not that large or critical to our water supply. The issue is still a concern due to imprecision of geological maps. However, ADEM holds that the flow of any landfill leakage will follow Pinchgut Creek, i.e., it will drain downstream from our well matrix. They felt that if there is leakage, since it is over an iron-rich vein, it will color the water and we'll know quickly. Mike Strength would like to see the threat eliminated, but does believe that ADEM's position is not unreasonable.

#### Issue 2: Earthquake Risk

##### Risk Assessment: Very Remote Probability, But Very High Impact

Seismic activity is probably the biggest threat to our water supply. Trussville is on the New Madrid fault. Although earthquakes here are infrequent and severe earthquakes very rare, they have occurred. We do utilize only ductile iron pipe, as opposed to polyvinyl chloride (PVC) pipe that has only a 20-year life, and can be brittle. When PVC fails, it can be catastrophic.

A well is approximately 300 feet deep. There is a possibility that a severe earthquake could shear a well casing. We could stand the loss of a well, but if we lost a matrix of wells we would have to implement TU's alternative plan. We do have agreements with surrounding communities to share water resources, but they come with a cost. The largest "cost" would be one of quality, not quantity. Our current water supply is incredibly clean; cleaner than the surrounding communities. For example, the maximum turbidity allowed is 5.0 ppm. Our turbidity level is 0.25 on average, or 20 times cleaner. Additionally, we use a lot less chlorine than if we used surface water, which is what our surrounding communities use. Disinfection chemicals are sometimes carcinogenic. If we receive water from Birmingham or Springville, we will be at the end of the water line.

### Issue 3: Ground Water Recharge

#### Risk Assessment: Moderate Probability, Moderate Impact (To Water Availability)

We need increasing focus on our groundwater recharge. In the winter, we use approximately 3,000,000 gallons per day. But in the summer, our peak usage can spike to 7,000,000 gallons/day. We can handle a peak of approximately 12,000,000/day, but probably for one day only. If we ever go above that 12 million gallons/day line, we will probably have to put in more wells.

The recharge risk comes from development, specifically, as we pave over ground for roads, parking lots, buildings, etc., the rain water that falls on those structures does not seep down into the ground, but runs through our wastewater system, and thus not available for ground water recharge. This is because in Alabama, it is illegal to drop reused water on the ground. Wastewater can be cleaned if treated, but there is a risk of failure. (Note – most of the water flow in the Cahaba is treated wastewater). We need more natural areas. If there is less lawn area, there is more pavement. This is how unplanned growth could threaten our water supply. We must plan for the peak usage days. When drought conditions hit, and they are projected to hit more often, more lawns are watered. We are somewhat limited as to how much of this we can control, but it is an area for TU and the City to study.

According to TU, we've done experiments with putting temporary restrictions on water use in drought conditions by requiring alternate-day watering only. However, the results show that it has, at best, no effect. People just water twice as long when it is their day to water. Most of the time it results in increasing water use. In fact, the most water we've ever delivered in a day was during alternate-day restrictions. So that does not appear to be the solution.

Ideally we would have three (3) systems: one for drinking/bathing, one for reuse, e.g., irrigation, and one for fire-fighting (residential pipes are not sufficient to fight a fire unless they are adequately sized). But it will be very expensive, probably cost prohibitive, to rebuild the whole system.

The risk is real as we grow our city, i.e., develop undeveloped areas, without a plan. It is probable that we will run out of developable land before we run the aquifer dry. Unfortunately, as previously stated, we are not sure exactly how large our aquifer is, nor what the effect of climate change will be. So we are advocating an incentive program be initiated to encourage developers to design in infrastructure features whereby runoff water is diverted into swales adjacent to developed areas, thus allowing a slow absorption of rainwater back into the soil and therefore the aquifer. We should also encourage residential developers to minimize lawn areas and maximize natural areas, with trees, shrubs, etc. instead.

#### Issue 4: Miscellaneous Other Risks, i.e., Water Quality, Terrorist Attack, Affordability

##### Risk Assessment: Minimal Probability, but Potential Impact is very high.

Our water is clean, plentiful, and a bargain. But there's always more we can do to ensure our system stays that way.

Right now we monitor water quality at the filter plant, and at a few selected areas in the pipe delivery system. But the real test is the quality of water at our homes. Our goal should be to monitor water quality throughout the system. That will require additional expenditures.

The cost of water is projected to increase faster than the rate of inflation. The biggest expense in replacing old, or broken pipe, or running new pipe to new developments, is in the earth-moving, and associated labor cost to maintain the system, not just the cost of the pipe. As we grow, the cost of infrastructure will increase.

Cyber-security is a concern that Trussville Water and Gas takes very seriously. Although the safeguards that are in place understandably cannot be publicized in this public document, the Board and General Manager are aware of potential cyber threats and stay abreast of new threats and defenses that are available to them. Part of that defense is in building redundancy into the system. Again, as the threat level increases, the cost of defense will increase.

We are all aware of the water quality disaster at Flint, Michigan a few years back. The residents there are still feeling the effects of that event, and there are still areas where bottled water is required. An enlightening quote from the General Manager of our utility when he spoke to our group was, "Financial crises almost always precede a water crisis." That begs the question, how will we be able to afford to keep our water system up to best practice standards, while keeping our water bills affordable?

The answer: We have a very good water system because we have a great energy company. Trussville Water and Gas is truly an energy company. Eighty-five percent of the revenue from our utility comes from natural gas sales, and only 15% from the sale of water. We run water as a break-even enterprise, while running gas as a profit center. Our water rates are less than the surrounding area, e.g., Birmingham. Profits from our gas company fund our water company. Culturally, we, in the Southeast, value energy over water, i.e., we will pay more for gas than water, as opposed to the Southwest, where water is valued more than energy.

The gas industry is far more regulated than the water industry. TU undergoes an annual inspection, and have built the reputation of having an exceedingly clean report. The biggest risk to the cost of our water system is if our natural gas business were to suffer a significant decrease in demand. Even with gas prices going down, due to increased domestic production, we do not anticipate a serious reduction in demand in the near term.

## **Electrical Power Delivery**

### **Load Growth & Power Quality**

Alabama Power prides itself on providing safe, clean, affordable, and reliable electricity for its customers. Every year, new electrical infrastructure is constructed and existing infrastructure is improved to meet the needs of residential, commercial, and industrial customers. New technologies are constantly being evaluated and implemented on the grid to improve the quality of electrical service. By maintaining and improving the distribution and transmission systems, Alabama Power, along with the surrounding communities, can take action to facilitate growth.

### **Advanced Grid Automation / Fiber to Distribution**

Alabama Power has been installing automated devices on its power distribution system for many years. These devices automatically isolate trouble on the distribution system and allow system operators and programs to remotely reconfigure the grid to restore power to as many customers as possible during an outage. These devices have evolved to become more capable and more prevalent, sectionalizing the grid into smaller customer count blocks. By pairing automated device technology with high speed fiber optic communications, more automated devices are able to be installed on the distribution system than previously possible. This results in further reducing the number of customers impacted by an outage event, pin pointed outage location accuracy and quicker outage restoration times.

### **Distributed Generation**

Unlike conventional power stations that are centralized and require electric energy to be transmitted over long distances, Distributed Energy Resources (DER) systems are decentralized and modular, located close to the load they serve, albeit having capacities of only 10 megawatts or less. DER systems typically use renewable energy sources. Micro-grids are localized, small-cell grids that can disconnect from the centralized grid and operate autonomously, strengthen grid resilience and help mitigate grid disturbances.

### **Goals for Electric Power Delivery**

5 year Goal: Complete first phase of Fiber to Distribution

10 year Goal: Deploy micro-grid for critical customers

15 year Goal: Fiber connecting municipal and educational buildings

## **Smart Cities**

### **Smart Lighting**

Smart Lighting is a lighting technology designed for energy efficiency. Light-Emitting Diodes (LED) is the longest-lasting, most energy efficient lighting solution available today. The primary appeal of LED street lighting is energy efficiency compared to conventional street lighting fixture technologies such as high pressure sodium (HPS) and metal halide (MH). The projected lifetime of LED street lights is usually 10 to 15 years, two to four times the life of currently prevalent HPS. Smart lighting controls provide automatic dimming based on time of day and sun exposure that ultimately reduces energy consumption per fixture.

### **Network Lighting Controls**

Placing a network of lighting controls on street and area lighting can drive energy efficiency, sustainability and reduce operating and maintenance costs. These sensors can be programmed to dim at scheduled times to reduce energy usage, as well as flash during times of emergency. The nodes will detect a light outage and automatically notify maintenance reducing outage time. Additionally, the network lighting control system creates a wireless connectivity gateway that other Internet of Things (IoT) devices can use as communication backhaul.

### **Advanced Security Cameras**

Visible surveillance equipment can deter criminal activity and provide safety and security for people, vehicles and property. Popular technology includes fixed lens cameras, Pan-Tilt-Zoom (PTZ) cameras, and License Plate Recognition (LPR) cameras. Surveillance equipment must be accompanied by a Video Management Software (VMS) that records and stores the video footage and provides an interface to both view live footage and access recorded footage. The VMS enables cameras from multiple cities to be networked and viewed simultaneously ultimately increasing situational awareness for law enforcement.

### **Smart Parking**

Smart parking is a strategy that uses technology to achieve faster, easier, and denser parking of vehicles. Sensor or camera systems are used to detect space availability and this information is communicated to drivers to decrease idling and circling that ultimately reduces traffic and pollution. Additionally, the system can track space occupancy times to optimize parking enforcement that ultimately increase revenue from targeted ticketing.

## **Goals for Smart Cities**

5 Year Goal: Asset deployment including LED fixtures, network lighting controls, security cameras and internet access points

10 Year Goal: Software integration enabling assets to function together, software stacking enabling one asset to serve multiple use cases

15 Year Goal: Become the premier city for smart city technology testing

20 Year Goal: Become a leading smart city in Alabama

## **Connectivity**

### **Fiber Optics**

Optical fiber is a superior technology that carries a communications signal from an operator's equipment all the way to a home, business, or other enterprise. Fiber is a low-latency internet solution that is optimized for voice and video delivering speeds up to 1 Gbps (1,000 Mbps). Fiber internet connectivity offers significant reliability advantages and bandwidth over copper internet connectivity. As a physical asset, there are minimal security concerns since signal interference will only occur when the fiber strands are physically cut. Fiber not only provides internet solutions, but backhaul solutions for IoT devices, data centers and anchor institutions. Fiber-backed internet will provide the speeds and security needed for a technology-based economy and enable tele-medicine, tele-education, and remote working.

5G. 5G networks are the next generation of mobile internet connectivity, offering faster speeds and more reliable connections on smartphones and other devices. The networks will help power a huge rise in IoT technology, providing the infrastructure needed to carry huge amounts of data, allowing for a smarter and more connected world. The 5G network requires high density small cell deployments made possible through pole attachments that are backhauled via fiber. This technology is most effective in dense urban areas.

### **Sustainability**

Electric Vehicle Infrastructure will be an important addition to our community over the coming decades. Plug-in electric vehicles (PEVs) are a cleaner alternative to internal combustion engines that provide savings on fuel and maintenance, reduces environmental impact, and contributes to our nation's energy independence. PEVs require charging infrastructure at homes, businesses, and public areas and include both standard Level 2 and DC fast charging. Adopting PEV charging infrastructure provides residents with expanded consumer choice to purchase all-

electric and hybrid vehicles and an economic development opportunity that brings travelers to a city while their vehicle charges. Cities can lead by example by drafting green vehicle procurement policies that will result in fleet electrification.

### **Energy Efficiency Measures**

From replacement of aging electrical and mechanical equipment to the installation of new systems designed to capture waste energy, the implementation of energy efficiency measures will improve the overall performance and reliability of the City's building systems while reducing overall energy usage. Technologies to be considered include indoor LED lighting retrofits, energy efficient chiller and boiler replacements, variable volume water systems, waste heat recovery, water conservation, building automation controls and commissioning and re-commissioning activities.

### **Goals for Connectivity**

5 Year Goal: Conduct in-depth analysis of fiber resources in area, deploy fiber connecting municipal and educational buildings, and draft 5G - ready policies

10 Year Goal: 5G deployment

15 Year Goal: 1 Gbps fiber-backed internet access to every home

20 Year Goal: Autonomous vehicle capability enabled by 5G

### **Smart Homes**

The home of the future is designed to give homeowners more control over their homes and energy use by incorporating energy-efficient appliances, connected devices, innovative security systems, and more home automation. Homes can be extremely energy efficient by way of programmable thermostats, advanced air sealing and insulation, and high-efficiency heat pumps, water heaters, and smart appliances. Homes can be outfitted with cutting-edge technologies, capable of handling a multitude of responsibilities to help simplify routine tasks. Features can be managed through smartphones, tablets and via Alexa voice-activation for ultimate convenience.

### **Economic Development - Technology**

#### **Data Centers**

Data centers housing data processing computers are a quintessential part of the 21st century technology-based economy. The presence of a data center provides construction jobs, revenue to the state and local government and an influx of new industries. In Alabama, Google, Blue Cross and Blue Shield, and AT&T invested millions of dollars in building data centers that resulted in the arrival of additional industries and businesses. Data centers require reliable electric power, water for cooling, and fiber redundancy. In addition to site-specific criteria, proximity to

knowledge economy clusters and a hi-tech workforce, as is present in Birmingham, are keys to data center recruitment.

### **Science Parks**

As industry in Alabama continues to transition to a digital economy, there needs to be additional investments in infrastructure that supports technology and research. Science parks are property-based developments, often affiliated with a university or research body, that support the progress of research to viable commercial product. These developments provide space for high growth technology companies providing high-wage jobs that will attract highly skilled workers.

### **Goals for Economic Development- Technology**

5 Year Goal: Hire full-time economic developer, identify data center and tech park sites and develop infrastructure, develop education-workforce pipeline strategy

10 Year Goal: Work with local and state economic development allies to proactively recruit companies in target sectors, establish public private partnerships

15 Year Goal: Increase percentage of workforce in NAICS 54 to 5.0% (At the end of 2018, the numbers were at 3.3% or 355 jobs with an average annual wage of \$80,350)

20 Year Goal: Increase percentage of workforce in NAICS 51 to 5.0% (At the end of 2018, the numbers were at 0.4% or 40 jobs with an average annual wage of \$62,872)

NOTE: I would like to give a special thank you to my Co-Chair, Halie Oliff, along with Brandi Vines of Alabama Power, a subsidiary of The Southern Companies, and Melanie Dimler, an inspiring teacher at HTHS, and finally to the entire Women's Engineering Club of HTHS for their enormous contribution to this report and the success of the Trussville 2040 Utilities and Technologies Committee!

-Vic Modic, Chair

## **Key Goals for 2040**

(Not in priority order)

1. Maintain strong financial support of the Trussville City Schools (TCS) in order for TCS to prepare our students for the challenges they face in a continually changing world of technology and of unrest.
2. Create an education corridor with educational and training opportunities for citizens of all age groups, and construct new school buildings when appropriate to address the anticipated increased school population.
3. Develop programs that recognize the important link between school safety and mental health of school children, and continue existing programs in character development, anti-bullying, and suicide prevention.
4. Hire a full-time economic developer, identify data center and technology park sites, develop infrastructure of the parks, explore the creation of a business incubator/accelerator, develop a marketing program with local partners, and create an education-workforce pipeline strategy.
5. Work with local and state economic development allies to proactively recruit companies in target sectors, and establish public-private partnerships to create jobs and tax revenue.
6. With the passage of Amendment 772 by the State Legislature Alabama cities have greater Constitutional control in economic development, and, therefore, Trussville should analyze how it is currently organized and determine if it should consider additional or alternative methods of organization.
7. Continue to address the need for adequate facilities, equipment, and personnel for Police, Fire, and other City departments to provide high quality services as the City continues to grow over the next 20 years.
8. Build a new municipal complex that includes a modern city hall to address the increased service demands of citizens based on the expected growth of the City.
9. Update and create as necessary the various plans of the City, including Trussville 2040, the land use plan and zoning ordinance, the major street plan, a sidewalk master plan, the downtown master plan, and the capital improvements program.
10. Continue on a regular basis to evaluate and address traffic patterns and circulation to minimize congestion and delays on the City's major corridors.
11. Enhance the quality of life by developing a network of sidewalks, bikeways, and greenways that encourages alternative transportation and recreational means for citizens of all ages.

12. Ensure that the City maintains adequate and high quality sources of drinking water while examining alternative sources and distribution channels for non-potable uses.
13. Provide a venue that will allow both performing arts and competitive sporting events to provide facilities for citizens, to encourage visitors to Trussville, to create economic impact, and to support local merchants.
14. Become a leading smart city in Alabama with asset deployment including LED fixtures, network lighting controls, security cameras, and internet access points with software integration enabling assets to function together.
15. Create a formal, city-wide Emergency Preparedness Plan (EPP) to educate citizens on how to respond/react in emergency situations, and to identify locations for the construction of emergency storm shelters.
16. Develop a plan to accommodate alternate methods of transportation, including public transportation and electric vehicles.
17. Evaluate regularly all neighborhoods to ensure the construction of critical infrastructure and maintenance of such infrastructure.