

City of Social Circle, Georgia
Natural Gas Distribution System
Master Plan
Capital Improvement Report

April 26, 2021

Executive Summary

The purpose of this report is to provide priorities and cost estimates for capital improvements such as potential upgrades, reinforcements, and replacements as well as organizational improvements such as software solutions to assist in the organization of day-to-day operations and management of system assets. This report includes funding options that can help in the successful completion of the improvement programs identified.

Shown in Figure 1 is the design day pressure map of the Social Circle system. The area highlighted pink is the Laurel Ln area that will be the beneficiary of many of the projects in this report. Here, pressures fall well below 20 psig.

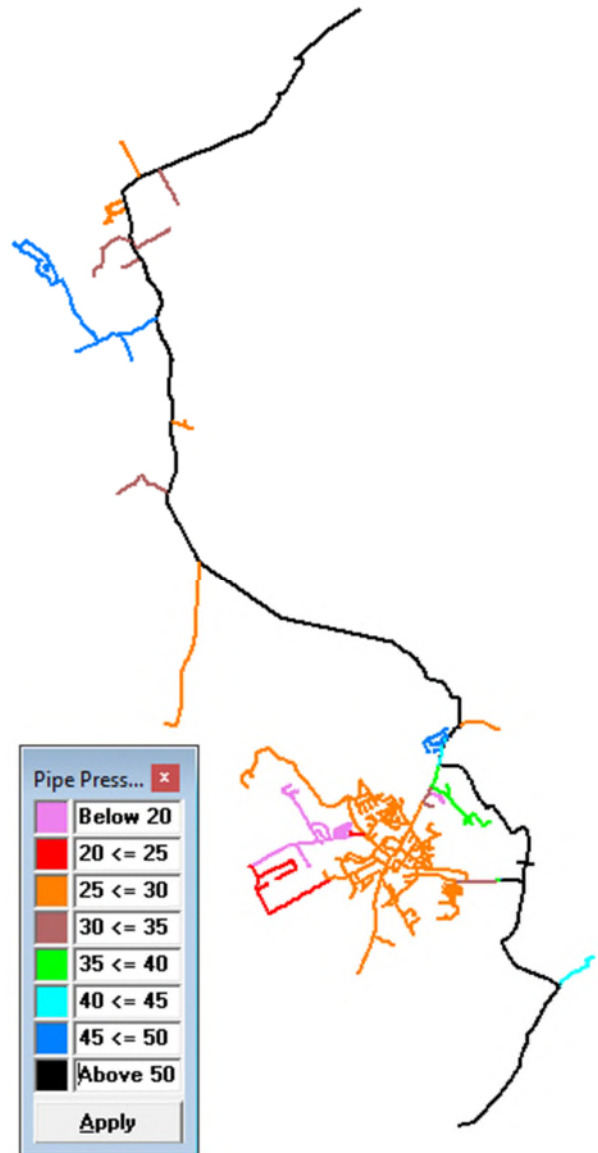


Figure 1: Design Day Pressure Map

Priority I: Ronthor Drive, \$243,100

This project consists of approximately 2,200-feet of 6-inch plastic main from a proposed new regulator station at the intersection of Industrial Boulevard and Malcolm Drive to Ronthor Drive. From there, 350-feet of 4-inch plastic would be installed from Ronthor Drive to tie-in to Goodyear’s service line.

This system upgrade is beneficial for two reasons. The first and primary reason to go forward with this project is to ensure that sufficient gas delivery pressure is available at the Goodyear manufacturing facility during a peak loading day for the system. According to the network model of the Social Circle system, pressure was completely lost at the facility on a design (peak) day simulation. The completion of this project would ensure continued operation as pressure drastically improved to 35 psig.

An additional benefit is a general reinforcement of the Laurel Lane area system. As seen in the model section of this report and Figure 1 above, the Laurel Lane area of Social Circle was the weakest of the system with pressures falling to 12 psig according to the design day model. Depending on the quality of pressure gages in this area, tolerances can range anywhere from one to ten percent, meaning that pressure could easily become low enough to render service regulators ineffective. Upon the completion of this project, pressure should be supported at approximately 25 psig. The table below communicates a breakdown of the costs associated with this project. Figure 2 on the next page illustrates the location of proposed piping.

Priority I: Ronthor Drive, \$243,100			
Project Components	FY0	FY1	2-Year Total
Engineering Design	\$28,600		\$28,600
Other Construction Costs		\$27,000	\$27,000
Construction		\$107,500	\$107,500
Material		\$80,000	\$80,000
TOTAL	\$28,600	\$214,500	\$243,100

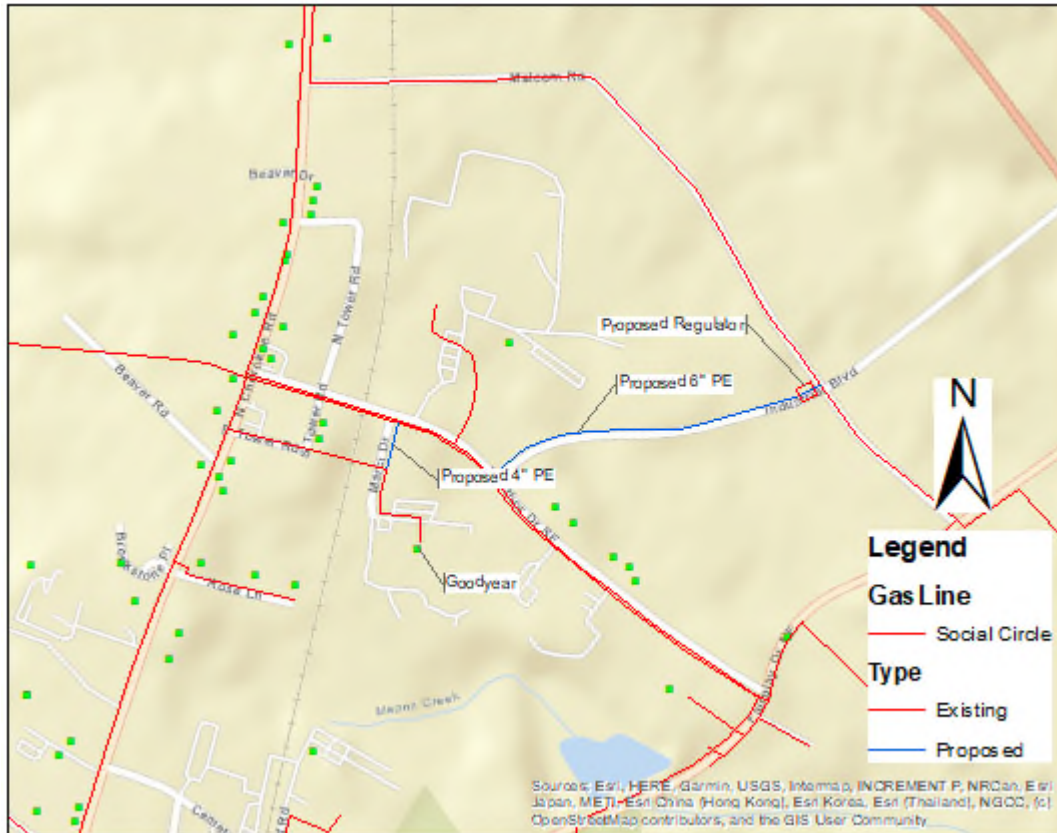


Figure 2: Ronthor Drive Improvement Area

Priority II: Alcova Drive, \$99,800

This project involves the replacement of approximately 1,200-feet of 2-inch steel gas main on Alcova Drive and West Hightower Trail and again provides the benefit of additional pressure around Laurel Lane. This area proves to be a bottleneck in gas flow that can be relieved by 4-inch plastic main. The addition of 5 psi brings the average pressure here to approximately 30 psig. The table below communicates a breakdown of the costs associated with this project. Figure 3 shows the location of the proposed project.

Priority II: Alcova Drive, \$99,800			
Project Components	FY0	FY1	2-Year Total
Engineering Design	\$15,800		\$15,800
Other Construction Costs		\$18,000	\$18,000
Construction		\$58,000	\$58,000
Material		\$8,000	\$8,000
TOTAL	\$15,800	\$84,000	\$99,800

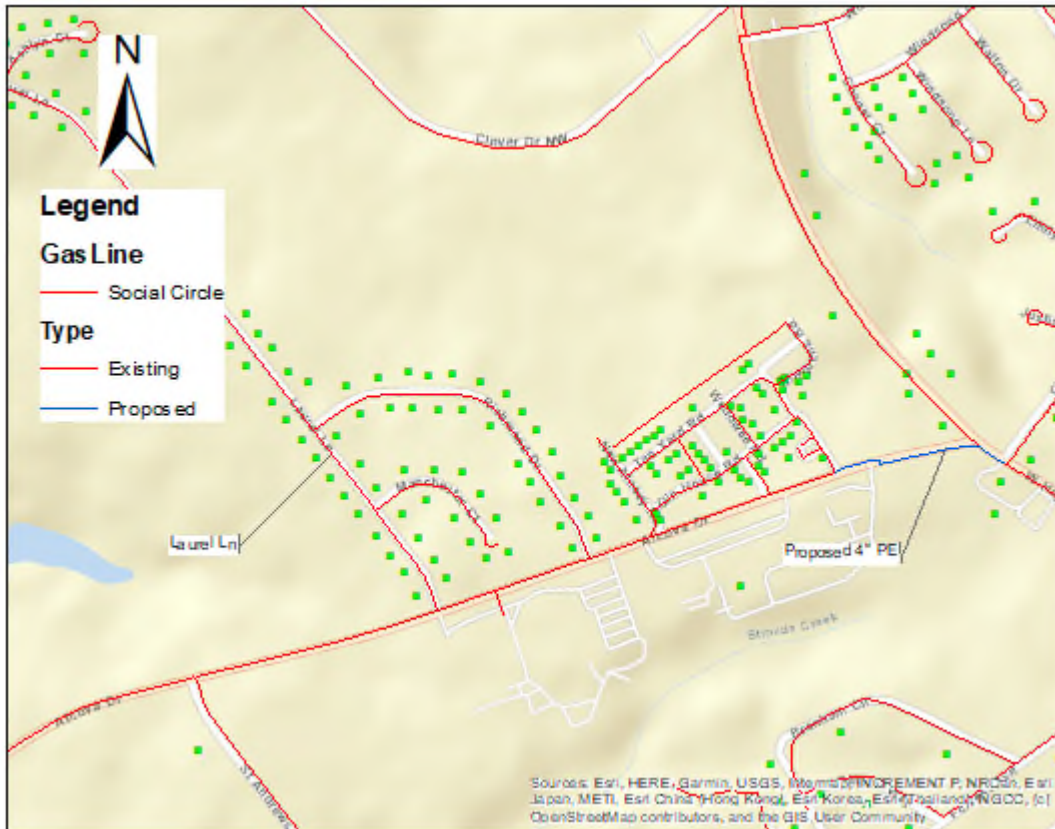


Figure 3: Alcova Drive Improvement Area

Priority III: East Hightower Trail, \$77,200

The East Hightower project provides a modest pressure increase again to the Laurel Lane area while also providing additional support to the pressures on South Cherokee Road. By helping to reduce velocity in the existing 3-inch pipe, an additional 3 psig were supplied to both areas bringing Laurel Lane pressures to 33 psig from 30 psig, and South Cherokee Road pressures to 37 psig from 34 psig. These benefits require the installation of approximately 1,000-feet of 4-inch plastic main parallel to the existing 3-inch steel main along East Hightower Trail beginning at the outlet of the regulator station and tying in passed the western IsoNova service tee. The table below communicates a breakdown of the costs associated with this project. Figure 4 shows the location of the proposed project.

Priority III: East Hightower Trail, \$77,200			
Project Components	FY0	FY1	2-Year Total
Engineering Design	\$15,200		\$15,200
Other Construction Costs		\$18,000	\$18,000
Construction		\$36,000	\$36,000
Material		\$8,000	\$8,000
TOTAL	\$15,200	\$62,000	\$77,200

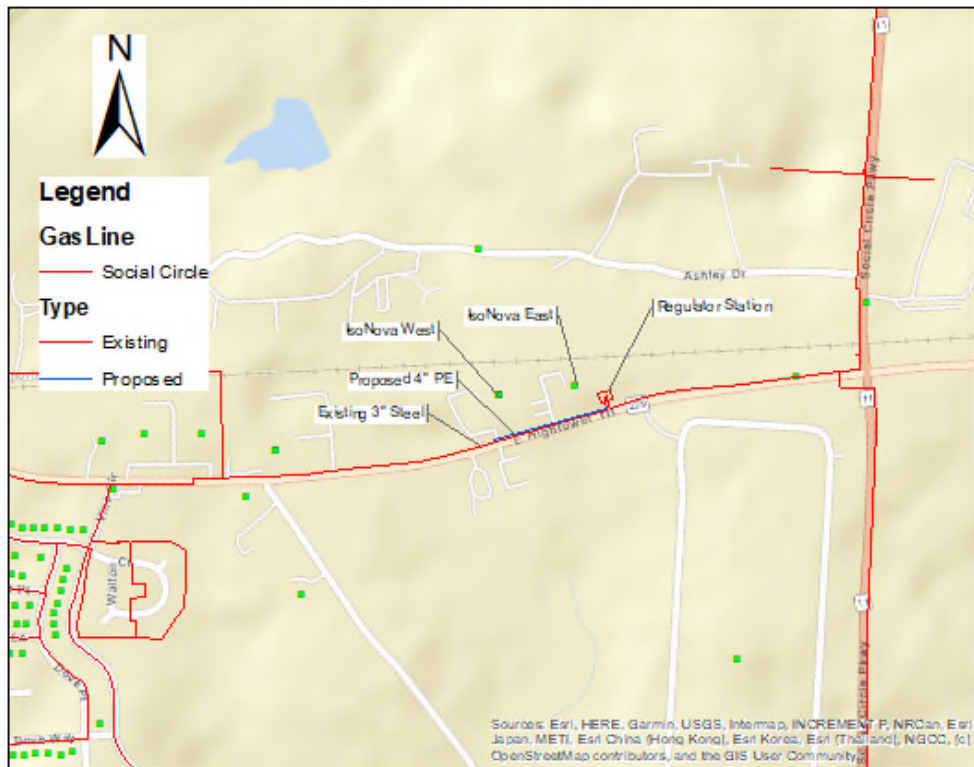


Figure 4: East Hightower Trail Improvement Area

Priority IV: Thurman Baccus Road, \$598,400

This extension of approximately 4000-feet of 4-inch steel main along Social Circle Parkway would better prepare the system to accommodate new, high value customers at the southern end of the network. While not critical to the effective function of the gas system, this expansion could be the deciding factor in a potential consumer’s decision to locate in Social Circle. The table below communicates a breakdown of the costs associated with this project. Figure 5 shows the location of the proposed project.

Priority IV: Thurman Baccus Road, \$598,400			
Project Components	FY0	FY1	2-Year Total
Engineering Design	\$60,400		\$60,400
Other Construction Costs		\$42,000	\$42,000
Construction		\$312,000	\$312,000
Material		\$184,000	\$184,000
TOTAL	\$60,400	\$538,000	\$598,400

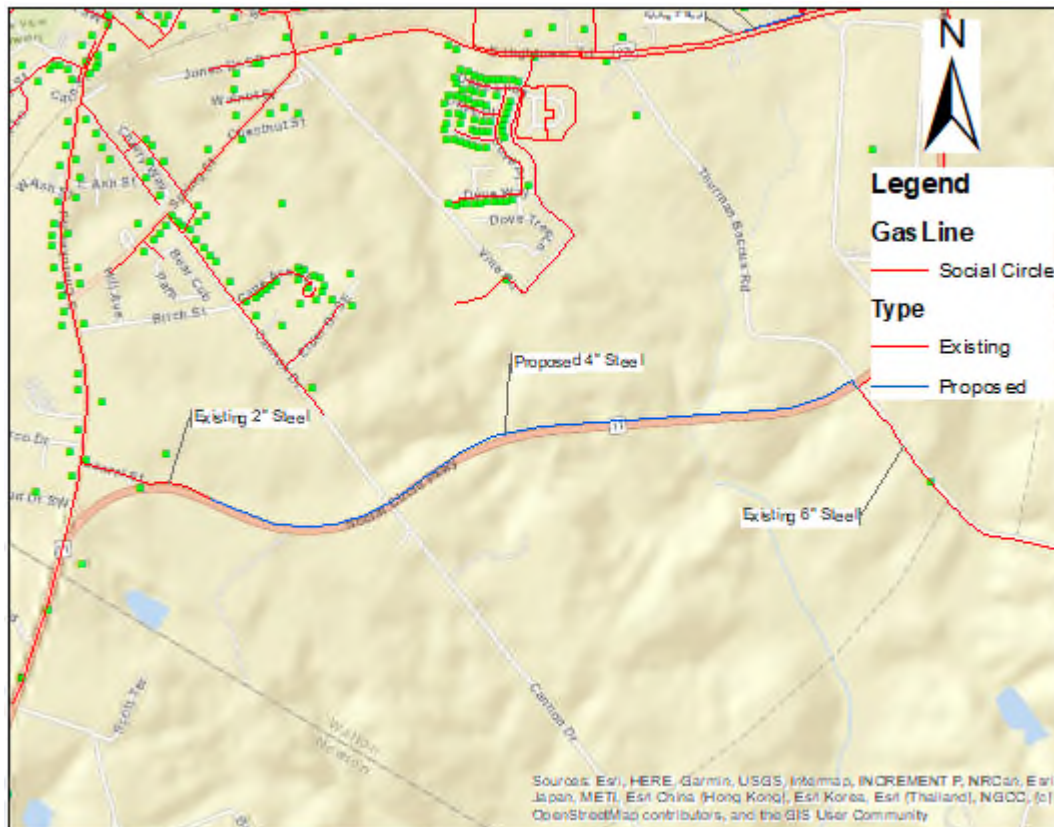


Figure 5: Thurman Baccus Road Improvement Area

Priority V: GIS Enhancement, \$68,500

As part of the system assessment made in Tasks 1 & 2, SGE would like to recommend the integration of a comprehensive GIS software package that houses all operations and asset data in order to organize workflows, documentation, and equipment pertaining to the gas network. With a GIS package would come an enhanced ability to produce critical reports in case of audit, a platform to house clear and concise geospatial data, and a simple method of analyzing risks and viewing problem areas within the natural gas network. In addition to a software purchase, implementation support can be included in a project package to assist in the smooth transition from current analog processes to the digital processes provided by the program.

Depending on the technological and operational capabilities of Social Circle, integration of this software can be as involved or hands off as desired with costs varying depending on the level of assistance requested. The costs are broken down below with the minimum cost being that of the initial software purchases plus the cost of yearly subscription.

Priority V: GIS Enhancement, \$68,500	
Project Components	Total
Data Collection and Mapping	\$15,000
Software Purchase	\$22,500
Set Up and Configuration	\$15,000
Training	\$6,000
Software Subscription (per year)	\$10,000
TOTAL	\$68,500

Funding Options

PHMSA Technical Assistance Grant (GIS Enhancement)

The Pipeline & Hazardous Materials Safety Administration (PHMSA) Technical Assistance Grant (TAG) provides funding designed to improve damage prevention, develop new technologies, or otherwise improve pipeline safety to communities for both technical assistance and analyses of local pipeline safety issues. Eligible communities are those such as cities, towns, villages, counties, parishes, townships, and similar governmental subdivisions, or consortiums of such subdivisions, and groups of individuals (not including for-profit entities).

Qualifying TAG activities can range from public awareness activities to technology solutions, such as the conversion of paper maps into electronic format. Additional activities include, but are not limited to:

- Improvement of local pipeline emergency response capabilities
- Improvement of safe digging programs
- Development of pipeline safety information resources
- Implementation of local land use practices that enhance pipeline safety
- Community and pipeline awareness campaigns
- Enhancements in public participation in official proceedings pertaining to pipelines

PHMSA first awarded TAGs for qualifying activities in 2009. By law, the amount of any grant may not exceed \$100,000 for a single grant recipient, and the funds authorized for these grants may not be derived from user fees collected (under 49 U.S.C. 60301). The TAG program ceiling varies year to year. The number of TAG awards will depend on the quality and number of applications received and the dollar amounts requested.

MGAG Financing (Capital Improvements, Customer Recruitment)

Social Circle's membership in MGAG presents multiple opportunities for the city to capitalize on options to fund the growth of the gas system, recruit current residences to convert to natural gas, and entice new developers to install gas appliances. Listed below are the initiatives provided by MGAG to member municipalities.

- On Bill Financing (OBF)
- Multi-family OBF
- Natural Gas Connection (NGC)
- Poultry Growers
- Small Project Financing
- Emerging Technology

Each of these programs have the potential to impact at least one of the recommendations in this report. For the capital improvements listed in this chapter, Small Project Financing can be applied for on a case by case basis. The Gas Authority Board would review each application and consider providing loans to fund projects at a market interest rate. The Thurman Baccus Road project would fit the description of a qualifying project as they are to be billed “special system growth projects”.

On Bill Financing and Multi-family OBF are similar in the fact that city loans could be provided to potential customers for the purchase of natural gas appliances. Up to \$6,000 can be financed for up to 5 years at no interest with only a \$3 monthly fee. The city would then be reimbursed via a credit on their Gas Authority invoice. The difference in OBF and Multi-family OBF is the target customers. Simple OBF would apply to single family residences to purchase their own equipment. Multi-family OBF would apply to builders or developers building multi-family units and are installing gas appliances. These programs can assist with the recommendations from the Service Area Analysis to convert existing structures into natural gas users, residential developers and “out of town” industrial and manufacturing operations to fill in parcels that are currently empty.

Natural Gas Connection (NGC) is a residential recruitment program in the early phases of development with initial sites in Northwest Georgia and Alabama. This program presents the opportunity to residents of participating member cities to order appliances and schedule delivery and installation as well as apply for financing and appliance rebates through the NGC website. This service also includes a regional appliance showroom and local customer service and marketing. This program is still evolving, and additional services are anticipated as more phases are rolled out.

Poultry Growers is a simple program where participating members offer a two-year fixed price natural gas rate to poultry growers on the gas system. Prices are hedged by MGAG and participating members meet once per year to make joint rate decisions.

Finally, Emerging Technology is another recruitment program funded by member dollars. This initiative targets commercial customers by incentivizing the use of innovative, emerging natural gas technologies. Currently, the program would provide rebates on large gas cooling equipment installed for commercial, government, and institutional buildings. This program could be utilized in recruiting to areas zoned as General Commercial in the current zoning plan, especially the area proposed to be served by the Thurman Baccus project.