KU KANSAS GEOLOGICAL SURVEY
The University of Kansas

July 30, 2008

Ryan Glessner, E.I.T.
BG Consultants, Inc.
2508 West 15th Avenue
Emporia, KS 66801

Re: Williamsburg, KS Water System Improvements

Dear Mr. Glessner,

The Kansas Geological Survey (KGS) has received your letter dated July 3, 2008, requesting us to review the above referenced project. The project consists of replacing sections of water mains that are aging cast iron mains with new PVC waterlines, and upgrading the water tower's exterior and interior coatings along with several safety improvements to the tower. The improvements will be situated within the City right of way and any replacement/rehabilitation will be in the same location.

A review of regional geologic information and project information provided by you indicates that there are no unduly adverse geologic conditions that should affect this project.

Refurbishing the City's water tower could potentially have environmental considerations associated with historical maintenance activities of the City's existing tank. Refurbishing and painting the exterior of old, large painted structures can displace lead paint, if present, sometimes leading to elevated lead levels in the surface soil around the structure. Lead concentrations in the surface soil should be considered.

This letter is an assessment based on the regional geologic conditions available at the KGS and cannot be used in substitute of a detailed site characterization. Other geologic conditions, not discussed herein, or for which the KGS has no knowledge, may affect the viability of the project. It is the responsibility of the applicant to provide any necessary characterization, geotechnical or environmental testing, or design by a licensed professional geologist or engineer to complete the project.

Sincerely,

David P. Young,
Hydrologist

cc: Rex Buchanan, KGS Deputy Director, Outreach and Public Service

BG CONSULTANTS, INC. / Engineers-Architects-Surveyors

2508 West 15th Avenue • Emporia, Kansas 66801 • (620) 343-7842 • Fax: (620) 343-7844 • www.bgcons.com

July 03, 2008

Kansas Geological Survey
University of Kansas
1930 Constant Ave.
Lawrence, KS 66047-3726

RE: Environmental Review – Williamsburg, KS – Water System Improvements

Dear Sirs:

The City will be applying for a Rural Development Loan of approximately $236,000 and a Rural Development Grant of approximately $101,000 from the United States Department of Agriculture along with a $338,000 Department of Commerce Block Grant to upgrade the City's water system. The improvements will be situated within City right of way. The proposed improvements will primarily consist of distribution line replacement. The existing water tower will also be refurbished.

The improvements will be in the City of Williamsburg located in Sections 18 & 19, Township 18S, Range 18E, Franklin County, Kansas.

I am attaching the Explanation of Alternatives and an aerial map of the proposed improvements. The existing lines are shown and any replacement/rehabilitation would be in the same location.

Please submit you response to BG Consultants, Inc., 2508 West 15th Avenue, Emporia, KS 66801.

Please contact me at (620) 343-7842 with any questions you might have.

Sincerely,

Ryan Glessner, E.I.T.

Enc.

SECTION 1

INTRODUCTION

1.1 REPORT OBJECTIVE

This study has been prepared for the purpose of planning improvements to the water system currently serving the City of Williamsburg, Kansas. This study provides an analysis of the various components of the system, including supply, quality, storage, and distribution. An evaluation of the condition and capabilities of the distribution system under all potential flow conditions is included. This study will provide a program of capital improvements and upgrades considered necessary.

1.2 EXECUTIVE SUMMARY

1.2.1 OVERVIEW:

The study was conducted at the request of the City. The City is concerned about the reliability and service of their existing water distribution system. All of the existing mains within the City are less than 6" in diameter. Approximately one quarter of the City water mains are cast iron and were installed with the original system in 1957. These cast iron main are prone to breaking and should be replaced.

The existing tower does not meet current codes and certain safety improvements are required. The protective coatings of the tower have deteriorated and need upgrades.

1.2.2 ALTERNATIVES:

Several possible alternatives were examined and were discussed with the City. A summary of the alternatives are listed below

- NO ACTION – This is determined not to be an option due to the reliability of the public distribution system. Continuing to patch and repair the existing lines will produce large repair costs and delay the necessary project. The existing tower does not meet current code and is in need of protective upgrades. Neglecting these improvements will allow for unsafe working conditions and further deterioration.

- TOWER REPLACEMENT – The existing tower is functionally sufficient and the structure of the tower appears to be in satisfactory condition. Therefore, we do not recommend a total water tower replacement, as this would be extremely costly and encumber the City with a large debt payment.

- PHASED WATERLINE REPLACEMENT – The City has been selectively replacing old water mains. They have made substantial progress in replacing these mains, but have exhausted their financial resources in the process. A

larger project would be a more cost effective way of replacing the remainder of old lines.

- PARTIAL WATERLINE REPLACEMENT & TOWER REHABILITATION – All cast iron water mains are proposed to be replaced with new PVC water lines. It is recommended that approximately 4,780 linear feet of waterline be replaced. It is also recommended the tower's foundation be repaired, the exterior and interior protective coatings be upgraded, and several safety improvements be installed. This will provide the City with a reliable water system for current and future City residents. The opinion of probable cost for the proposed project is $675,000. A detailed cost description is located at the end of Section 6.

1.2.3 RECOMMENDATIONS:

It is recommended that the City of Williamsburg replace sections of water mains that are aging cast iron mains with new PVC waterlines. It is recommended that approximately 4,780 linear feet of waterline be replaced. It is also recommended the tower's exterior and interior protective coatings be upgraded along with several safety improvements. This will provide the City with a reliable water system for current and future City residents. The opinion of probable cost for the proposed project is $675,000. A detailed cost description is located at the end of Section 6.

1.2.4 FUNDING:

There are several different funding options available to the City of Williamsburg. The following is a brief description with the deadlines associated with each funding option.

- Community Block Development Grant (CDBG) – This grant program is a competitive program with a maximum possible grant of $400,000. The City must attend a KIAC meeting before submitting for the grant. All grant applications must be submitted by the end of September and funds are typically awarded in January.

- State Revolving Loan Fund (KDHE-SRF) – This SRF loan is a 20 year loan with an interest rate and service fee of approximately 3%-4%. Projects are typically selected for funding in May of each year and are competitive with other Cities.

- Rural Development (RD) – The Rural Development loan is a 40 year loan with an interest rate that may vary from 4%-5% and is competitive with other Cities, Counties, etc. The grants are base on a percentage of the project and will not exceed 75%. The Rural Development funding is from a federal pool of money that is typically awarded in October of each year.
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- General Obligation Bond (GO Bond) - A General Obligation Bond is similar to a loan and is funded through the private sector. Competitive rates are ensured by bidding on the financing of the bond. These bonds require a minimum of 45 days to prepare the application and can be applied for throughout the year. State and local statues will provide guidance on the formation of such funds

1.2.5 USER RATES:

The increase in consumer water rates will be dependent upon which funding option is obtained. The current water rates for the City of Williamsburg are as follows:

- USER WITHIN CITY LIMITS: $11.00 minimum for the first 1,000 gallons of water used, and $5.50 per thousand gallons used thereafter.
- USER OUTSIDE CITY LIMITS: $12.00 minimum for the first 1,000 gallons of water used, and $6.50 per thousand gallons used thereafter.

Currently a 5,000 gallon per month user would have a monthly water bill of $33.00

The proposed funding options are as follows with the proposed monthly bill for a 5,000 gallon per month user listed below. A detailed explanation of each option can be found in Section 8.

- SRF Loan – With a $675,000, 20 year SRF Loan the proposed monthly water bill for a 5,000 gallon user would be $57.30.
- CDBG & SRF Loan – With a $337,500 CDBG grant and a 20 year SRF Loan the proposed monthly water bill for a 5,000 gallon user would be $45.15.
- USDA Rural Development (45% Grant) – With a 45% grant and a 40 year loan the proposed monthly water bill for a 5,000 gallon user would be $41.90.
- CDBG & USDA Rural Development (30% Grant) – With a $337,500 CDBG grant, a 30% USDA grant, and a 40 year loan the proposed monthly water bill for a 5,000 gallon user would be $38.65.
- CDBG & USDA Rural Development (45% Grant) – With a $337,500 CDBG grant, a 45% USDA grant, and a 40 year loan the proposed monthly water bill for a 5,000 gallon user would be $37.45.

END OF SECTION

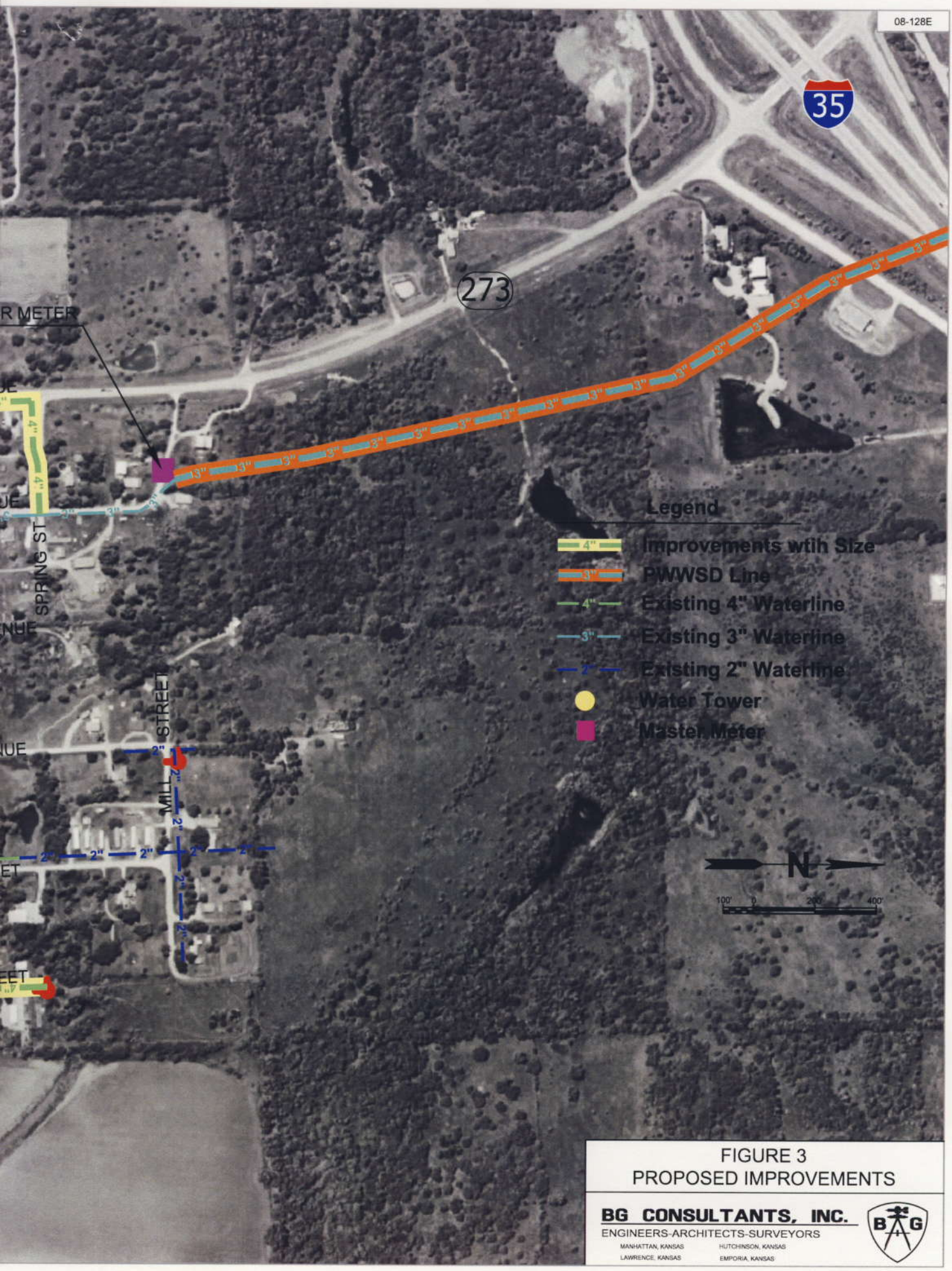
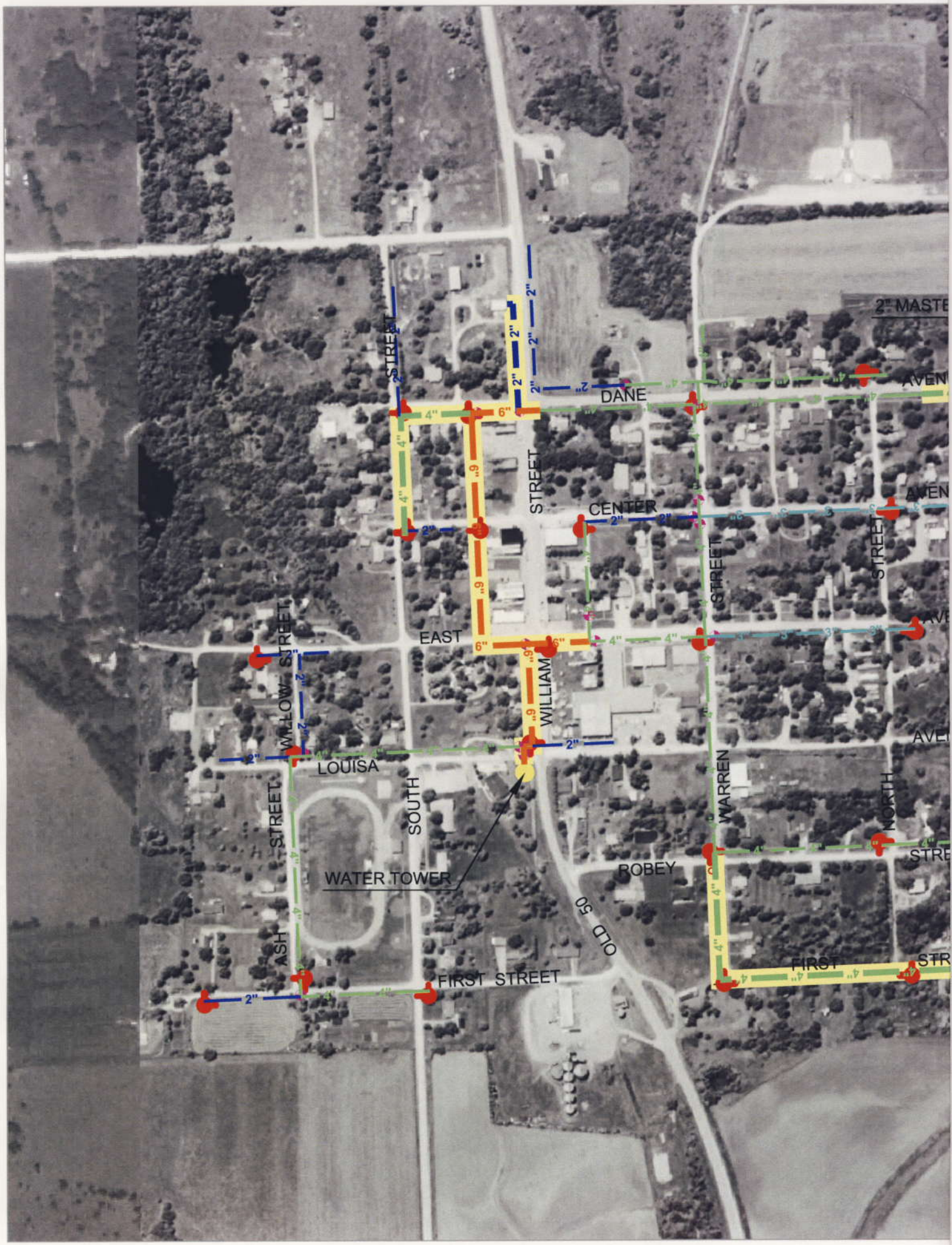


FIGURE 3
PROPOSED IMPROVEMENTS

BG CONSULTANTS, INC.
ENGINEERS-ARCHITECTS-SURVEYORS
MANHATTAN, KANSAS HUTCHINSON, KANSAS
LAWRENCE, KANSAS EMPORIA, KANSAS


2" MASTE
DANE
CENTER
EAST
WILLIAM
LOUISA
SOUTH
WARREN
NORTH
ROBEY
WATER TOWER
OLD 50
FIRST STREET
ASH
WILLOW STREET
STREET
AVEN
2"
4"
6"