Abstract

The challenges facing Liuzhou’s underground infrastructure system today are unlike any it has ever faced before. Frequent underground gas pipeline leaks and explosions are impacting the safety and quality of citizens’ lives. To develop a safe, efficient and economical underground infrastructure system, Liuzhou City will have to do three things: (1) create a unified administrative department for underground pipeline administration, (2) conduct a citywide underground pipeline survey by stages and create an information platform to share the underground pipeline data, and (3) develop a public-private partnership to construct a utility tunnel. The poster outlines these critical steps in Liuzhou’s underground infrastructure system reform and renewal.

Causes

- The deficient institution setting of underground pipeline administrative system.
- The shortage of advanced construction theories and scientific underground pipeline laying techniques.
- The underground laying technique is defective and maintenance is difficult to implement.

Recommendations

Step 1: Reorganize the institution setting of Liuzhou underground pipeline administration, found a unified administrative department.

Step 2: Conduct a city underground pipeline survey by stages and create an information platform to share the underground pipeline data.

Issues

- The underground pipelines laying with few coordination and are short of unitary management guidance.
- The underground data that are needed in planning and approval are deficient, and supervision is weak.
- The underground pipe network data is incomplete and short of information sharing.

Background

- According to the statistics of Liuzhou Safety Bureau official report, there are 366 hidden safety problems of underground gas & oil pipelines until the middle of 2015, and most of them are due to the misconduct of other underground pipes.

Challenges

- Frequent road excavations caused by underground pipeline maintenance
- Challenges with acceleration of city urbanization
- An unsafe underground pipeline system

(Source: Liuzhou Safety Bureau official safety report, June, 2015)