

ENVIRONMENTAL ASSESSMENT DOCUMENT

A. Project Identification:

Project Name: Grand Island Sanitary Sewer System Improvements

Applicant: City of Grand Island

CWSRF Project No.: C317984

City: Grand Island **County:** Hall **State:** NE

Total Project Amount: \$40,000,000

Potential CWSRF Loan: \$4,800,000

B. Community Description:

Location: The city of Grand Island is located in central Nebraska approximately three miles north of Interstate 80 and the Platte River. The project area is within the Right of Way of Sweetwood Drive, Greenwood Drive, and the utility easements of Westwood Road Subdivision located in the northwest corner of Greenwood Drive and North Road of Grand Island.

Population: The 2012 census population of the City was 49,500 and is projected to be 55,000 by 2022.

Current Wastewater Treatment Systems: Grand Island's wastewater collection system consists of about 226 miles of sanitary sewer mains ranging in diameter from eight inches to 42 inches. The topography of the area is quite flat and the system includes 18 lift stations. Wastewater flows to the treatment facility averages about 9.8 million gallons per day. The wastewater treatment system includes pretreatment, primary clarifiers, four aeration basins with anoxic zones, final clarifiers, and ultraviolet disinfection. Waste sludge is dewatered, composted and used as daily cover at the City's landfill. The treatment system is performing well and meeting the discharge permit limits. Five industries in the area contribute significant waste loads to the system. The largest wastewater contributor, JBS Swift, has significantly reduced their wastewater load with a new pretreatment system which increases the City's treatment capacity available for other users. Since 2010, the City has undertaken several collection system improvement projects and has also completed a major headworks improvement project at the existing wastewater treatment plant.

C. Project Description:

Purpose: The project (See Figure 1) to be funded with the proposed loan will provide sanitary sewer collection system to the only residential subdivision in Grand Island which does not have a centralized collection system. One in three homes within Westwood Park Subdivision has failing septic tanks and or leach fields. These homes are not in compliance with State or local laws that protect public health and the environment. The project will also repair and or replace the Lift Station 20 forcemain, which has had multiple breaks.

Type: The projects that the City proposes to undertake are listed below:

1. The proposed project consists of construction of 3500 lineal feet of 8-inch polyvinyl chloride (PVC) sanitary sewer, precast concrete manholes, asphalt removal, concrete pavement, earth excavation six to sixteen feet in depth, groundwater dewatering, and ancillary items. The project will provide sanitary service to 32 homes located in the Westwood Park Subdivision. It is estimated that the proposed project will result in contributing an additional 16,000 gallons per day to Grand Island's Wastewater Treatment Plant.
2. Replacing and or repairing Lift Station No. 20's force main. The forcemain has experienced multiple breaks in the past several years.

Design Factors: It is estimated that the proposed project will result in contributing an additional 16,000 gallons per day to Grand Island's Wastewater Treatment Plant.

Receiving Stream: The Grand Island wastewater treatment facility discharges to Wood River via the Grand Island Utilities Ditch, Segment MP2-10100 in the Middle Platte River Basin which is protected for Class A warm water aquatic life, Class A agricultural uses and aesthetics.

D. Alternatives Considered:

Types: The only alternative that was evaluated was to provide a centralized collection system to the residential subdivision that is currently being served by substandard septic tanks and associated leach fields. The City will evaluate the option of either replacing and or lining the Lift Station 20 forcemain in order to select the most cost-effective option.

Reasons for Selection of Proposed Alternative: Only viable alternative/alternatives available.

E. Environmental Impact Summary:

Primary:

Construction: The construction will take place primarily in streets, alleys and existing right-of-way. There may also be some impact to sidewalks, driveways, homeowners' yards, and other private property. Temporary impacts caused by the construction may include noise, dust, and a limited potential for soil erosion, fuel, and oils spills. A high water table will necessitate dewatering and there is a potential to encounter existing groundwater contamination. No impacts to historical or archaeological sites are anticipated. Potential impacts to wetlands are not expected. The Nebraska Department of Health & Human Services has indicated that construction of the projects will have to comply with Section 005.5 of Title 179 NAC 22 to address any potential encroachments to the City's public water system.

Environmental: The project will provide a centralized collection system to the only subdivision in the City that is currently served by substandard septic tanks and associated leach fields. This will result in protecting the area groundwater from contamination and has the potential to improve the quality of groundwater in the area.

Financial: These improvements to the Grand Island collection system are eligible for funding through the Clean Water State Revolving Fund (CWSRF) and are included in the FY2016 Intended Use Plan. A 1.50% , 20-year loan for \$4,800,000 would have an annual debt serve of \$278,690. In addition to the principal and interest payments, an administrative fee of 1.00% of the principal balance would be assessed each year. Wastewater treatment revenues, including sewer tap fees and sewer use charges, will be dedicated to repay the loan. Grand Island's sewer rates have been adjusted annually and residential customers currently pay a service charge of \$8.24/month plus \$3.01/100 cubic feet (based on winter quarter water use), which equates to a monthly charge of \$28.35 for a residential customer who uses 5000 gallons per month in the winter quarter. Revenues generated by the sewer utility are expected to fund system operation and maintenance, and debt service on the existing and proposed loans. The users of the sewer extension to the Westwood Park Subdivision are expected to pay their share of project costs over time.

Secondary:

Population Impacts: The sewer improvements and extensions will facilitate development and population growth in the project area.

Land Use and Trends: The project will foster development and a change of land use in the area. The project is within the right of way of Sweetwood Drive, Driftwood Drive, Greenwood Drive, and the utility easements of Westwood Road Subdivision located in the northwest corner of Greenwood Drive and North Road. The project will consist of also replacing and or repairing the forcemain for existing lift station 20.

Environmental: The sewer system improvements will have little direct impact on agricultural land. Farmland conversion is not a concern and will also not impact the floodplain.

Environmental Justice: The project has been planned to ensure that no segment of the community's population is impacted disproportionately from related effects.

Mitigation Measures Necessary to Eliminate Adverse Environmental Effect: The project includes appropriate design features and proper construction practices to minimize erosion, inflow and infiltration, impacts to the floodplain, and other potential adverse impacts. Storm water and dewatering permits will be required. Construction of the projects will comply with Nebraska Department of Health & Human Services Title 179 regulations.

Irreversible and Irretrievable Commitment of Resources: The resources committed to the project include the pipe, other construction materials, and the energy used during construction.

F. Measures Taken to Insure Environmental Soundness:

Public Involvement: Multiple public hearings have taken place with the City and residents of Westwood Park Subdivision in an effort to create a sewer assessment district and provide sanitary sewer service to Westwood Park. However, due to property owner protests and or higher than estimated contractor bids, the final creation of a sanitary sewer district has failed to happen. The City has decided to move forward with the project based on the Westwood Park Subdivision Agreement dated August 25, 1979, filed with the Hall County Clerk under instrument 79-002913. A public hearing on the Westwood Subdivision and the Lift Station 20 forcemain replacement project was held on July 28, 2015, to comply with State Revolving Fund requirements. Three citizens from the Westwood Subdivision spoke in a neutral position and requested more information as the project progressed.

Public Opposition or Opinions:

Coordination and Documentation with Other Agencies and Special Interest Groups:

Planning Document: Preliminary Engineering Report Westwood Park Subdivision dated May 28, 2015.

Prepared by: City of Grand Island.

Supplemental Planning Material: City of Grand Island Nebraska – 6 Year Wastewater Infrastructure Improvement Plan.

Federal: US Army Corps of Engineers
USDA Natural Resources Conservation Service

State: Nebraska Department of Environmental Quality
Nebraska Natural Resources Commission
Nebraska State Historical Society

Local: Grand Island City Council

Consulting Engineers: NA

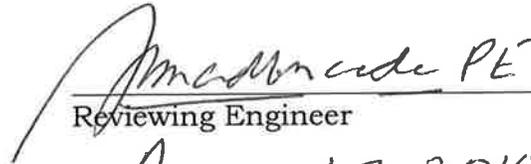
Public Groups: Westwood Park Subdivision

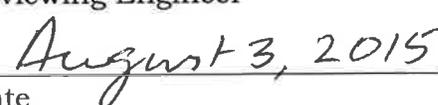
Other: Central Platte Natural Resources District

G. Positive Environmental Effects to be Realized from the Proposed Project:

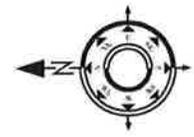
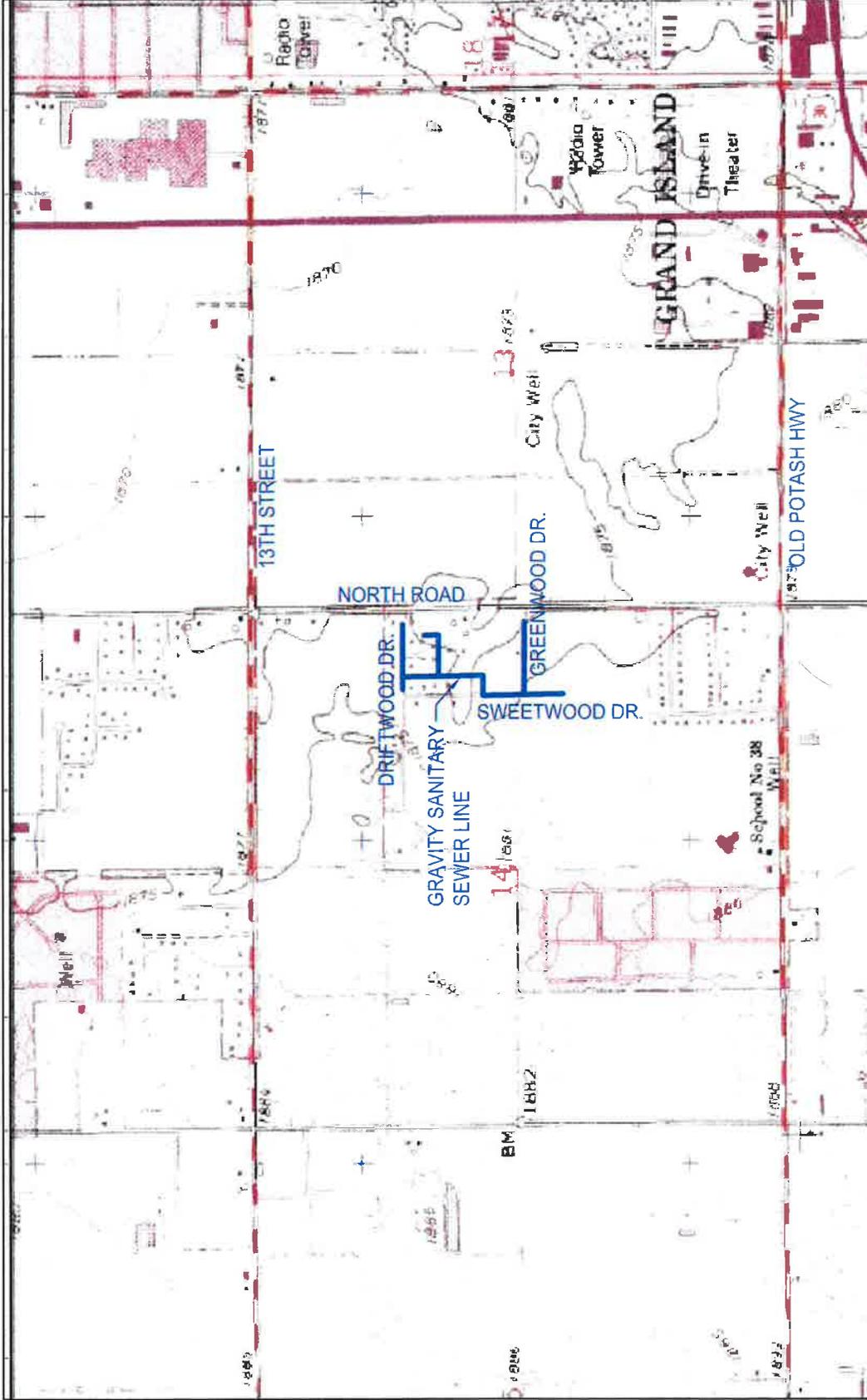
The project will provide a centralized collection system to the only subdivision in the City that is currently being served by substandard septic tanks and associated leach fields. The project will result in protecting area groundwater from contamination and has the potential of improving the quality of area groundwater. The project will also result in ensuring reliable service from Lift Station 20.

H. Reasons for Concluding there will be No Significant Impacts: Review of the Preliminary Engineering Report, agency comment letters, and supporting documents indicate that the proposed project will result in positive environmental effects and benefits with no significant negative impacts. Little or no farmland is being taken out of production by construction, but the project will promote development and thus indirectly result in land use changes. No adverse impacts to critical habitats, or floodplains are anticipated. Timing of construction will be addressed in the project specifications to minimize impacts to endangered species. Potential impacts to wetlands are not expected. No known historical or archaeological sites will be impacted. The projects will meet Nebraska Department of Health & Human Services Title 179 regulations. Dewatering as a result of construction is expected and there is a potential to discover contaminants during the construction of the project. The project was planned to ensure that no segment of the community's population is impacted disproportionately from related effects.



Reviewing Engineer


Date



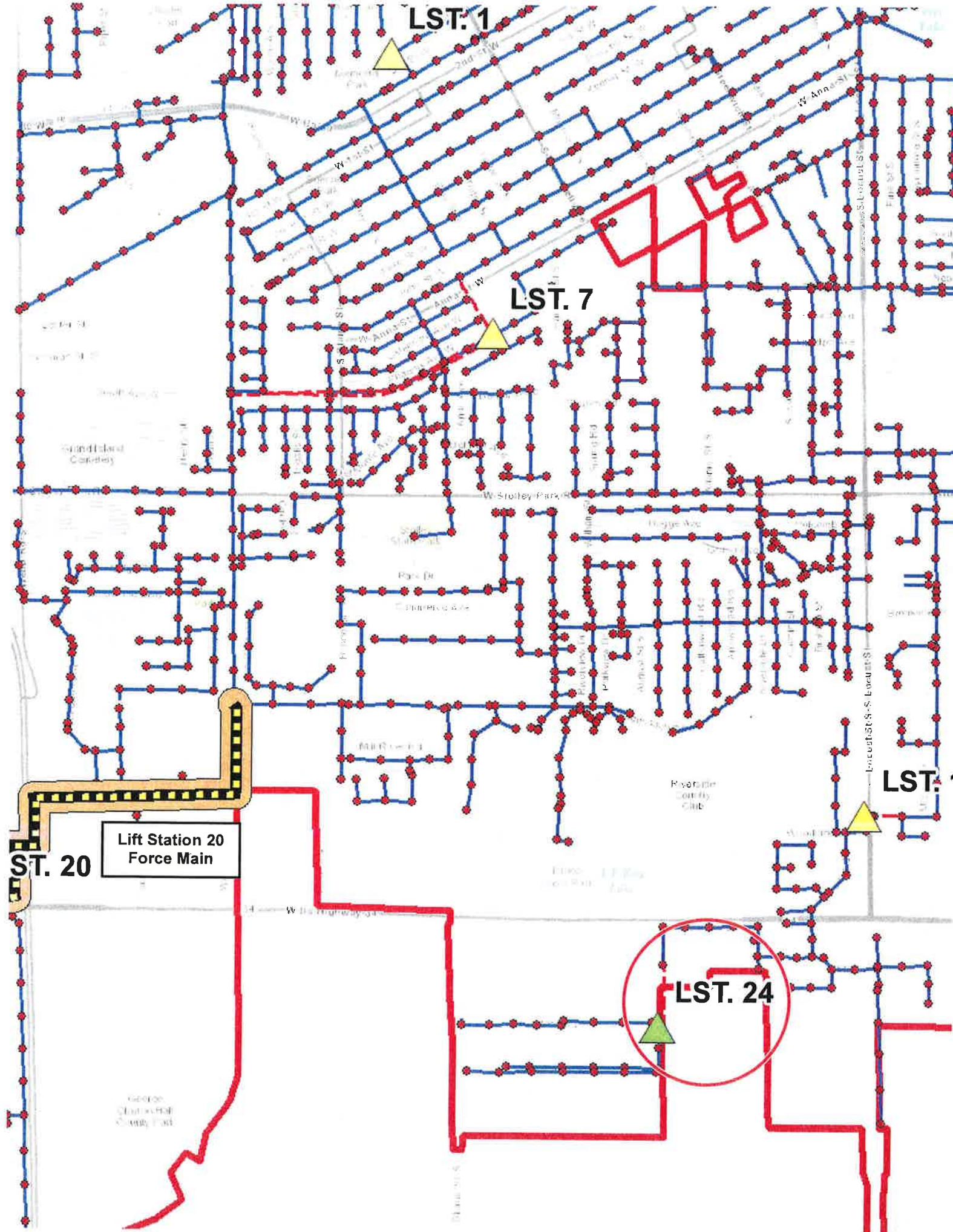
Westwood Park Sub.
Sanitary Sewer

REVISIONS

NO.	BY	DATE	DESCRIPTION

Contact: Tara Bevard
Phone: (308) 385-5444 Ex 265
Email: tbeward@grand-island.com

TO-01



LST: 1

LST: 7

LST: 1

LST: 24

Lift Station 20
Force Main

ST. 20

George
Chapin
County Park

Riverside
Country
Club

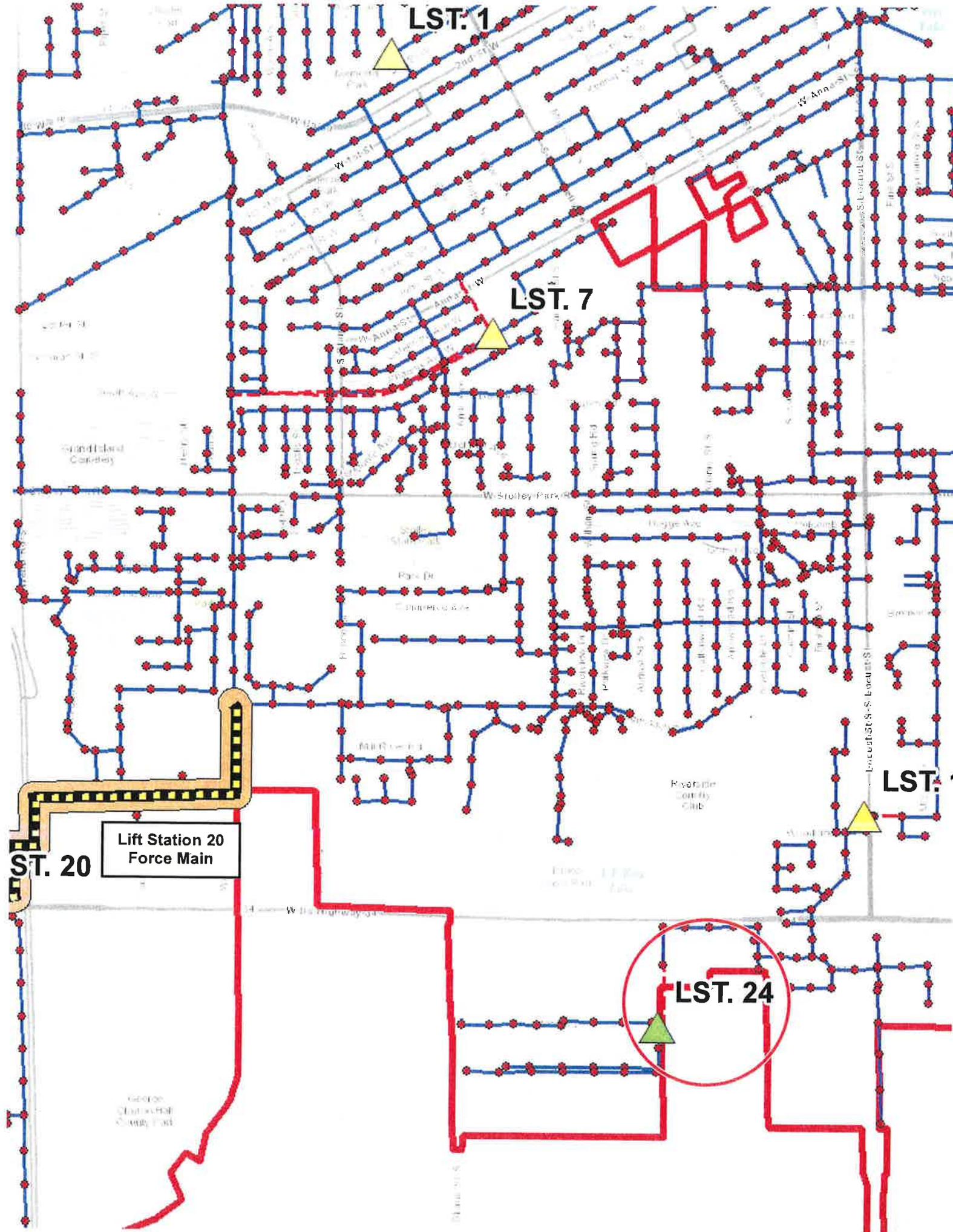
Grand Island
Cemetery

W. Stolley Park

Pipe Dr

W. Highway

W. Anna St



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GRAND ISLAND, NEBRASKA

DEPARTMENT OF ENVIRONMENTAL
QUALITY
Office of Public Affairs
P.O. Box 98922
Lincoln, NE 68509-8922

DEPARTMENT OF HEALTH AND HUMAN
SERVICES – DIVISION OF PUBLIC HEALTH
Steve McNulty
P.O. Box 95026
Lincoln, NE 68509-5026

DEPARTMENT OF NATURAL RESOURCES
Mitch Paine
P.O. Box 94676
Lincoln, NE 68509-4676

NEBRASKA GAME & PARKS COMMISSION
Craig Wacker/Carey Grell
P.O. Box 30370
Lincoln, NE 68503-0370

DIRECTOR, NEBRASKA STATE
HISTORICAL SOCIETY
P.O. Box 82554
Lincoln, NE 68508-2554

STATE OFFICE OF POLICY RESEARCH
Policy Advisor
Rm 1319, State Capitol
P.O. Box 94601
Lincoln, NE 68509-4601

DEPARTMENT OF ECONOMIC DEVELOPMENT
Heather Voorman
P.O. Box 94666
Lincoln, NE 68509

DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
Eliza Hines
9325 South Alda Road
Wood River, NE 68883

NATIONAL PARK SERVICE
Nick Chevance
Environmental Coordinator
Midwest Regional Office
601 Riverfront Drive
Omaha, NE 68102-4226

USDA RURAL DEVELOPMENT
Ken Shaw
Room 308, Federal Building
100 Centennial Mall North
Lincoln, NE 68508

ENVIRONMENTAL PROTECTION AGENCY
Chris Simmons/Kelly Beard-Tittone
11201 Renner Blvd
Mail Code: WWPDWIMB
Lenexa, KS 66219

STATE CONSERVATIONIST
Natural Resources Conservation Service
Federal Building, Room 345
100 Centennial Mall North
Lincoln, NE 68508

DEPARTMENT OF THE ARMY
John Moeschen
State Program Manager
US Army corps of Engineers
Nebraska State Office, Suite 1
8901 South 154th Street
Omaha, NE 68138-3621

APPLICANT:
City of Grand Island _____
Tara Bevard, Project Manager
100 East First Street
PO Box 1968 _____
Grand Island, NE 68801 _____

In house Design Engineer
Keith Kurz, PE
100 East First Street
PO Box 1968 _____
Grand Island, NE 68801

LOCAL NEWSPAPER:
Grand Island Independent
422 W 1st Street
Grand Island, NE 68801
(Public Information Only not for Public Notice)

NATURAL RESOURCES DISTRICT:
Lyndon Vogt, Manager
Central Platte NRD
215 Kaufman Avenue
Grand Island, NE