

**Sioux Falls, South Dakota**

**Brandon Road Pump Station Dual Force Main Project**

*Technical Memorandum No. 5  
Future Brandon Road Pump Station Outfall Sewer Tie-In*

*Task No. 350*

**HDR Project No. 135-235980**

DRAFT

Prepared for:



**CITY OF SIOUX FALLS  
PUBLIC WORKS**  
Providing a Better Quality of Life for You!

**Sioux Falls Department of Public Works  
& Water Reclamation**

By:



**HDR Engineering, Inc.**

**October, 2014**



## **1.0 INTRODUCTION**

The existing 66-inch City of Sioux Falls Outfall Sewer is scheduled to be replaced with a new 72-inch sewer in the future. The purpose of this TM is to describe the recommended method for connecting the new Outfall Sewer to the Brandon Road Pump Station (BRPS). This TM also provides the recommended method for connecting the new Outfall Sewer to the future pump station, which will eventually replace the BRPS.

## **2.0 CONNECTION TO BRANDON ROAD PUMP STATION**

It is recommended that a concrete junction box be constructed on top of the existing Outfall Sewer pipe directly upstream of the BRPS.

A temporary sanitary sewer extension is required to convey flow from the new 72" diameter outfall sanitary sewer line and the existing 12" diameter sanitary sewer, coming into the PS from the south, to the existing BRPS. Two concrete junction boxes are required for this to occur.

Junction Box No. 1 will be constructed at the east end of the new 72" outfall sewer and around the existing 12" sanitary sewer pipe. There will be a stub-out for future pump station connection on the east side of this box.

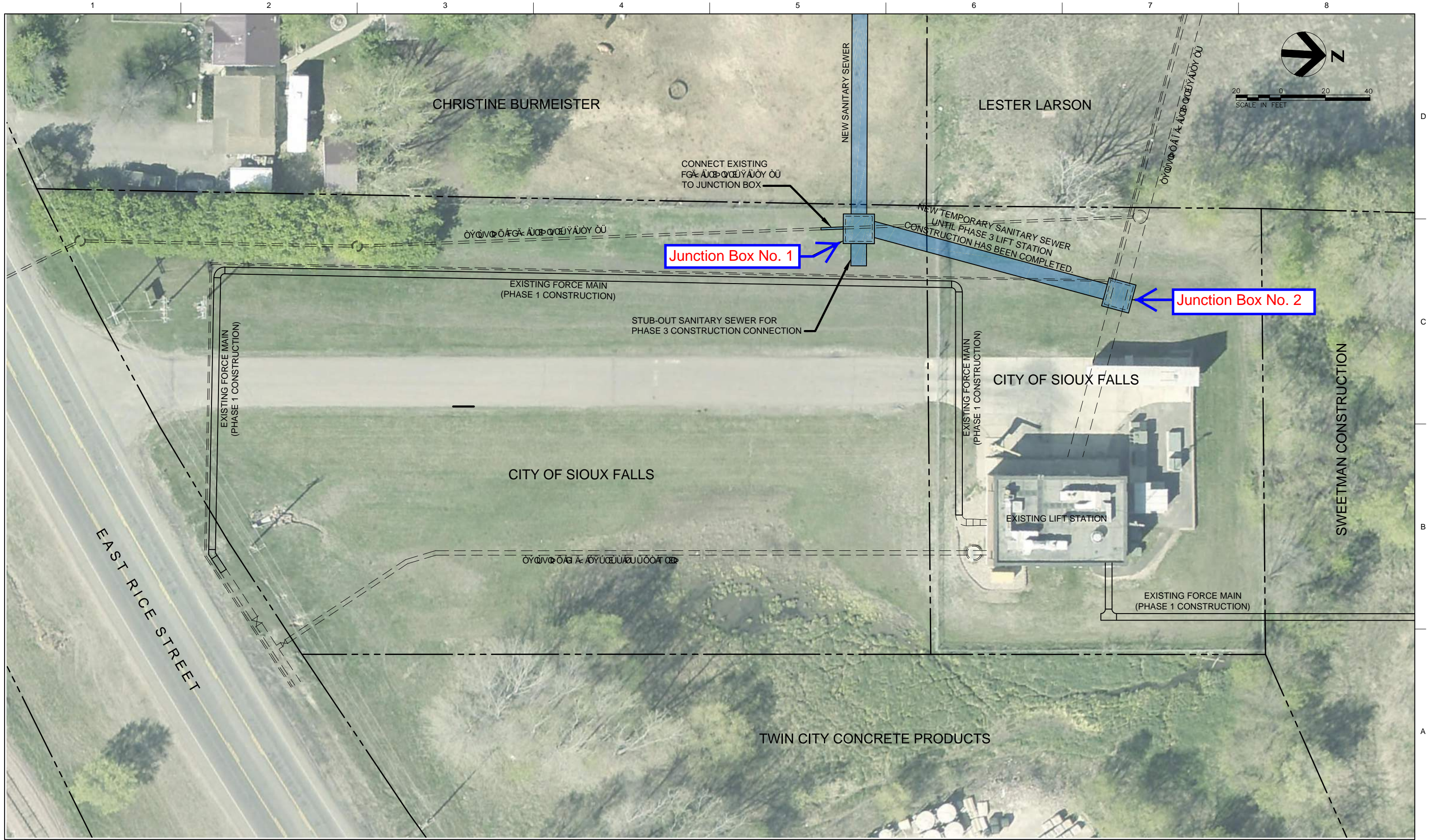
Junction Box No. 2 will be constructed on top of the existing 66" sewer pipe. A 72" pipe will be routed between the two junction boxes. When the new Outfall Sewer is complete, an opening will be cut in the existing 66" sewer inside Junction Box 2 to allow flow to travel down the new 72" Outfall Sewer, into Junction Box No. 1, through the connecting pipe to Junction Box No. 2, and into the existing 66" pipe to the BRPS. The upstream 66" pipe connection to Junction Box No. 2 will be permanently blocked off to prevent flow from entering the abandoned 66" sewer.

An opening will be made in the 12" pipe inside Junction Box No. 1 to allow flow from this pipe to enter the box. The 12" pipe penetration through the north wall of Junction Box No. 1 will then be sealed. Figure 5-1 shows the conceptual layout of temporary sanitary sewer extension and the junction boxes tie-ins.

## **3.0 CONNECTION TO FUTURE PUMP STATION**

When the future pump station is constructed, a 72" pipe will be installed between the new pump station wetwell and the Junction Box No. 1 72" stub-out to allow flow from the 72" sewer to enter the new pump station. The Junction Box No. 1 north wall penetration (for the pipe connecting the two junction boxes) will be blocked off permanently. After the 72" outfall sewer connection is complete, the second junction box that ties to the existing 66" outfall sewer and the existing 66" outfall line west of the junction box are to be abandoned in-place. Figure 5-1 shows the conceptual layout of the PS and the tie-ins.





ISSUE	DATE	DESCRIPTION

PROJECT MANAGER	
CIVIL	
STRUCTURAL	
ARCHITECTURAL	
PROCESS	
MECHANICAL	
ELECTRICAL	
INSTRUMENTATION	
PROJECT NUMBER	

Figure 5-1

**WATER RECLAMATION COLLECTION SYSTEM PLANNING**  
**CITY OF SIOUX FALLS, SOUTH DAKOTA 2014**

**PHASE 2 GRAVITY SEWER CONSTRUCTION**



FILENAME: AS NOTED  
 SCALE: AS NOTED