



# State Revolving Fund Loan Programs

## Drinking Water, Wastewater, Nonpoint Source

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### ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT

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#### CITY OF RICHMOND

#### Phase III Eastside Interceptor Replacement Project

#### STATE REVOLVING FUND PROJECT WW 13 04 89 04

**DATE: September 28, 2012**

**TARGET PROJECT APPROVAL DATE: October 29, 2012**

#### I. INTRODUCTION

The above entity has applied to the Waste Water State Revolving Fund (WWSRF) Loan Program for a loan to finance all or part of the waste water project described in the accompanying Environmental Assessment (EA). As part of facilities planning requirements, an environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA, which can also be viewed at <http://www.in.gov/ifa/srf/>.

#### II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The WWSRF has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

#### III. COMMENTS

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the deadline date above. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

**Sarah Hudson**  
**Senior Environmental Manager**  
**State Revolving Fund**  
**100 N. Senate Ave. IGCN 1275**  
**Indianapolis, IN 46204**  
**317-232-8663; [sahudson@ifa.in.gov](mailto:sahudson@ifa.in.gov)**

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**ENVIRONMENTAL  
ASSESSMENT**

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**I. PROJECT IDENTIFICATION**

Project Name: Phase III Eastside Interceptor Replacement Project

Authorized Representative: Mr. Richard Bodiker, Board President  
Richmond Sanitary District  
2380 Liberty Avenue  
Richmond, IN 47374

**II. PROJECT LOCATION**

The project area is located in Richmond, Indiana, in the Wayne Civil Township of Wayne County. Specifically, the project is located in Township 14 N, Range 1 W, Section 32 and Township 13 N, Range 1 W, Section 5 of the Richmond USGS quadrangle. See Figure ES-1.

**III. PROJECT NEED AND PURPOSE**

Richmond operates a combined storm and wastewater collection system within the sanitary district boundaries. The main interceptor portion of the combined sewer collection system (i.e., Eastside Interceptor) consists of approximately 16,000 feet of 24-inch to 36-inch reinforced concrete pipe constructed in the 1930s on the east slope of the Whitewater River valley. This interceptor generally parallels the East Fork of the Whitewater River through the City of Richmond. Along this Eastside Interceptor are several combined sewer overflows (CSO) points including CSOs 002, 004, 005 and 006. Due to the age of the system, excessive surcharging, CSOs and sanitary sewer overflows, it has been determined that the interceptor currently does not have sufficient capacity to transport current and future wet weather flows.

Richmond's National Pollutant Discharge Elimination System (NPDES) permit required the development of a Long Term Control Plan (LTCP). The development of the LTCP included the development and utilization of a sewer model to aid in sizing CSO mitigation alternatives, such as the size of the Eastside Interceptor.

The improvements to the Eastside Interceptor were broken into three phases. Phase I consisted of replacing the existing 36-inch interceptor with a new 54-inch interceptor extending from the wastewater treatment plant (WWTP) to just west of South I Street. This phase was completed in 2010. Phase II included the replacement of the existing 36-inch interceptor with a 54-inch sewer from the end of Phase I east to Liberty Avenue turning north along 5<sup>th</sup> Street, then back west to the existing Eastside Interceptor west of South E Street near CSO 005. This phase started construction in 2011 and is still under construction in 2012. Phase III Eastside Interceptor Replacement Project will consist of replacing the existing 24-inch with a 48-inch sewer that will extend northwest at the Phase II terminus near South E Street and parallel the East Fork of the Whitewater River from CSO 004 to approximately North G Street, where it will shift to 8<sup>th</sup> Street until the north connection of the interceptor with the Chester Boulevard Siphon. In addition, a new replacement relief structure CSO 004 will be constructed west of the intersection at North C Street and North 3<sup>rd</sup> Street. Without the replacement of the CSO 004 relief structure, there is a risk that low lying manholes along the proposed Phase III interceptor may overflow during heavy rainfall events. The total overflow volume and activation frequency of CSO 004, after complete implementation of all the CSO LTCP improvements, is anticipated to be significantly less than the current CSO 006 (between four and six overflows in a typical year).

#### IV. PROJECT DESCRIPTION

The proposed project includes:

- A. installing approximately 1,364 feet of 48-inch reinforced concrete pipe (RCP) sanitary sewer using open cut construction;
- B. installing approximately 6,785 feet of 48-inch RCP using trenchless technology;
- C. installing approximately five 84-inch diameter manholes;
- D. installing approximately two 96-inch diameter manholes;
- E. installing approximately five 102-inch diameter manholes;
- F. installing approximately four 20-foot diameter trenchless construction shafts;
- G. installing approximately four 35-foot diameter trenchless construction shafts;
- H. reinstating connections to existing sewers; and
- I. constructing a new CSO 004 regulator structure.

#### V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

##### A. Selected Plan Estimated Cost Summary

CONSTRUCTION COMPONENTS	COSTS
1. 48-inch RCP Sanitary Sewer	\$11,592,330
2. 48-inch Diameter Manholes	\$66,400
3. 96-inch Diameter Manholes	\$41,000
4. 120-inch Diameter Manholes	\$530,000
5. 4-foot Diameter Vertical Shaft	\$50,000
6. 20-foot Diameter Shaft (Trenchless Construction)	\$1,600,000
7. 35-foot Diameter Shaft (Trenchless Construction)	\$2,000,000
8. CSO 004 Regulator Structure	\$225,000
9. Erosion Control	\$50,000
10. Mobilization, Demobilization	\$820,300
11. Contractor Construction Engineering	\$328,100
12. Traffic Control	\$85,000
13. Street Restoration	\$25,900
14. Bypass Pumping	\$100,000
15. Tree Removal	\$40,000
<b>Construction Sub-Total</b>	<b>\$17,554,030</b>
Contingency	\$1,755,030
<b>Construction Total</b>	<b>\$19,309,430</b>

## NON-CONSTRUCTION COSTS

1. Financial Services	\$75,000
2. Legal Services	\$75,000
3. Engineering Planning	\$30,000
4. Engineering Design	\$443,691
5. Other Engineering Services	\$251,220
6. Easement Acquisition Services	\$300,000
<b>Non-Construction Total</b>	<b>\$1,174,911</b>
<b>Total Project Costs</b>	<b>\$20,484,341</b>

- B.** Richmond will borrow approximately \$20,484,341 from the State Revolving Fund Program through a 20-year loan at an interest rate to be determined at the time of loan closing. Monthly user rates and charges may need to be analyzed to determine if adjustments are required for loan repayment.

## VI. DESCRIPTION OF EVALUATED ALTERNATIVES

Several design alternatives for the undersized and deteriorated Eastside Interceptor were evaluated in 2008 for the District's CSO LTCP. These alternatives included: constructing a 42-inch parallel interceptor; constructing a shallower interceptor sewer; and replacing the existing 36-inch Eastside Interceptor with a larger interceptor. Based on the hydraulic model and an analysis at 100 percent build-out conditions in the June 2010 CSO LTCP Update, the selected alternative was the replacement of the existing 36-inch interceptor sewer with a larger interceptor. On this basis, three alignment alternatives were evaluated including the No Action alternative.

- A. No-Action:** The no-action alternative was rejected since significant amounts of untreated CSOs will continue to discharge to the East Fork of the Whitewater River during and following wet weather events. Also, the undersized and dilapidated Phase III portion of the Eastside Interceptor would continue to deteriorate, resulting in increased infiltration and inflow that would further limit the hydraulic capacity of the interceptor.

- B. Rivers Edge Alignment Alternative** (see Figures 4-2, 4-3 and 4-4)

This alignment generally follows the river edge, while maintaining an adequate separation distance from the existing Eastside Interceptor. The central portion of this alternative shifts away from the river and extends down 1<sup>st</sup> Street. This alignment avoids the Starr Gennett Jazz Heritage Area by shifting the route to the east of the facility and utilizing trenchless technology. The alignment extends to a shallow shaft in 1<sup>st</sup> Street, where the alignment then follows 1<sup>st</sup> Street north to the Manufactured Gas Plant (MPG) site. Within the MPG site, trenchless construction transitions to open cut excavation, and the interceptor then continues north, crosses Johnson Street, and then follows the east edge of the new walking trail within Riverside Park. Very steep grades near the Riverside Park shelter will require additional fill to provide adequate cover over the new interceptor. Finally, adjacent to CSO 004, a new relief structure will be constructed near the base of the hill. The construction method then returns to trenchless construction where the new interceptor connects to CSO 004 basin. This alternative was rejected since it had a slightly higher cost than the selected alternative, but also due to its alignment passing through the MGP site, which has unknown sub-surface conditions and potential contamination issues.

**C. 2<sup>nd</sup> Street Alignment – Alternate A** (see Figures 4-2, 4-3 and 4-4)

This alignment extends northwest from the Phase II terminus within the existing interceptor alignment to a point approximately 250 feet north of South D Street where the alignment turns northeast from the existing interceptor alignment, parallel and within the right of way of South 2<sup>nd</sup> Street to just south of US 40. At this location, a shaft is needed to collect US 40 flows and for trenchless construction access. The interceptor continues north within the 2<sup>nd</sup> Street right of way to north of North A Street where another shaft will collect flows from Johnson Street and provide trenchless construction access. The interceptor will continue north to a shaft at the CSO 004 area where a replacement relief structure will be constructed. Businesses at the southwest corner of Main Street and 1<sup>st</sup> Street will also be connected to this new sewer in order to allow the existing interceptor to be abandoned. Sewer connections between Johnson Street and Main Street along 2<sup>nd</sup> Street will also be rerouted to the new interceptor. Upstream of CSO 004, this route extends northeast using trenchless construction via a shaft at North D Street to pass under Richmond Avenue to another shaft northeast of the Cardinal Greenway intersection of Bridge Avenue. From this shaft, the new interceptor will continue northeast to the intersection of North 8<sup>th</sup> Street and North G Street, where a shaft is needed for turning and to collect flow from the North G Street sewer. The new interceptor alignment then continues to the north within the 8<sup>th</sup> Street right of way to a shaft near the property line between 900 and 902 North 8<sup>th</sup> Street. From this shaft, the interceptor will be installed using trenchless techniques west toward the existing siphon structure to a final shaft at the connection with the existing interceptor. This portion of the interceptor, approximately 140 feet in length, may require hand mining to avoid damage at the connection to the existing sewers. **Based on cost, this is the selected alternative.**

**D. 2<sup>nd</sup> Street Alignment – Alternate B** (see Figures 4-2, 4-3 and 4-4)

This alignment is similar to the 2<sup>nd</sup> Street Alternate A. This route extends northwest from the Phase II terminus within the existing alignment to a point approximately 250 feet north of D Street where the alignment turns northeast from the current alignment and follows 2<sup>nd</sup> Street within the right of way to just south of US 40 where a shaft is necessary. Further north at Johnson Street, a second shaft is necessary where the interceptor will turn northwest. Due to grade conflicts with the existing interceptor, uncertainty regarding the rock profile within the area, and a relatively short run, this portion of the sewer may be required to be constructed using hand mining techniques. Upon completion of this short run, the interceptor will turn north to follow the existing pedestrian trail, and will be constructed using open cut methods. As with the River's Edge alignment along 1<sup>st</sup> Street, this option will require additional fill behind the Riverside Park Shelter and a replacement relief structure near CSO 004. Trenchless methods will be used from this point north to continue constructing the new Eastside Interceptor. The Johnson Street sewer will be diverted to the new interceptor north of the MGP facility. This option will require businesses on the southwest corner of Main Street and 1<sup>st</sup> Street to be reconnected to the interceptor on 2<sup>nd</sup> Street. Again, similarly to 2<sup>nd</sup> Street Alternate A, upstream of CSO 004, this alignment extends northeast beneath the Cardinal Greenway across Bridge Avenue and northeast to the intersection of North 8<sup>th</sup> Street and North G Street, where a shaft is needed for turning and collecting flow from the North G Street sewer. The alignment then continues to the north within the 8<sup>th</sup> Street right of way to the alley north of I Street. In order to abandon the existing Eastside interceptor, the flow from the Chester Boulevard Relief Interceptor must be rerouted around existing homes, likely using open construction. This alternative was rejected since it had the highest cost of all three alternatives.

## VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

### A. Direct Impacts of Construction and Operation

#### **Disturbed / Undisturbed Land:**

The project will be constructed on previously disturbed land both next to and under existing streets or within the zone of influence of the construction of the existing interceptor. The original interceptor was constructed in the 1930s. The project route is shown on Figures 4-2, 4-3, and 4-4, including the location of the existing interceptor.

The route of the selected alternative (“2<sup>nd</sup> Street Alignment – Alternate A”) extends northwest from the Phase II terminus within the existing interceptor alignment to the point approximately 250 feet north of South D Street where the alignment turns northeast from the existing interceptor alignment, parallel and within the right of way of South 2<sup>nd</sup> Street to just south of US 40. At this location, a shaft is needed to collect US 40 flows and for trenchless construction access. The interceptor continues north within the 2<sup>nd</sup> Street right of way to north of North A Street where another shaft will collect flows from Johnson Street and provide trenchless construction access. The interceptor will continue north to a shaft at the CSO 004 area where a replacement relief structure will be constructed. Businesses at the southwest corner of Main Street and 1<sup>st</sup> Street will also be connected to this new sewer in order to allow the existing interceptor to be abandoned. Sewer connections between Johnson Street and Main Street along 2<sup>nd</sup> Street will also be rerouted to the new interceptor. All new connections in these areas will be in previously-disturbed areas.

Upstream of CSO 004, the route extends northeast using trenchless construction via a shaft at North D Street to pass under Richmond Avenue to another shaft northeast of the Cardinal Greenway intersection of Bridge Avenue. From this shaft, the new interceptor will continue northeast to the intersection of North 8<sup>th</sup> Street and North G Street, where a shaft is needed for turning and to collect flow from the North G Street sewer. The new interceptor alignment then continues to the north within the 8<sup>th</sup> Street right of way to a shaft near the property line between 900 and 902 North 8<sup>th</sup> Street. From this shaft, the interceptor will be installed using trenchless techniques west toward the existing siphon structure to a final shaft at the connection with the existing interceptor. This portion of interceptor, approximately 140 feet in length, may require hand mining to avoid damage at the connection to the existing sewers.

The new replacement relief structure CSO 004 will be constructed northwest of the intersection of North C Street and North 3<sup>rd</sup> Street. The new structure will connect the new interceptor to the existing CSO 004 outfall. The area along the proposed outfall line and new CSO 004 replacement relief structure was disturbed when the existing interceptor and existing CSO 004 structure were installed.

#### **Structural Resources:**

Starting from the southern terminus of the interceptor, the Wayne County Interim Report Maps identify the following structures located in the project areas:

#### Old Richmond Historic District:

177 536 42043	No impact is anticipated to these properties. The interceptor will be within the right-of-way of the street
177 536 42097	

177 536 42098	and will be constructed using trenchless construction methods.
177 536 42099	
177 536 42100	
177 536 42101	
177 536 42102	
177 536 42103	
177 536 42104	Excavation for the construction shaft is anticipated to affect the existing concrete pavement near the road. This concrete will be replaced in-kind.
177 536 42105	No impact is anticipated to these properties. The interceptor will be within the right-of-way of the street and will be constructed using trenchless construction methods.
177 536 42106	
177 536 42107	
177 536 42108	
177 536 42109	
177 536 42110	
177 536 42111	
177 536 42112	
177 536 42027	
177 536 42014	
177 536 42113	
177 536 42114	
177 536 42115	
177 536 42116	
177 536 42117	
177 536 42118	
177 536 42001	

Starr Piano/Gennett Record Company Historic District:

Within the Starr Piano/Gennett Record Company Historic District, the only structure that was near to the project area, Machine Shop (177 536 53010) was demolished in August 2001.

Richmond Scattered Sites – SW Quad (Enlargement A):

177 536 55524	No impact is anticipated to this property. The interceptor will be within the right-of-way of the street and will be constructed using trenchless construction methods.
177 536 55389	No impact is anticipated to these properties. The interceptor will be within easements and will be constructed using trenchless construction methods.
177 536 55390	

Richmond Scattered Sites – NW Quad (Enlargement):

177 536 55250	No impact is anticipated to this property. The interceptor will be within easements and will be constructed using trenchless construction methods. Connection sewers and shafts will be within easements and/or right-of-way and not on historically significant properties.
177 536 55186	No impact is anticipated to this property. The interceptor will be within the right-of-way of the street and will be constructed using trenchless construction methods.
177 536 55179	No impact is anticipated to this property. The interceptor work will be contained to easements on neighboring property 902 N. 8th Street. See additional explanation below.

The proposed interceptor route includes a construction shaft on the east side of North 8<sup>th</sup> Street in front of house number 802 North I Street directly across from the property line between houses numbered 900 and 902 North 8<sup>th</sup> Street. The interceptor then continues west and slightly north to the Chester Blvd siphon connection. The proposed route does not cross the historical property at 900 North 8<sup>th</sup> Street; it is completely on public right-of-way and new easements at 902 North 8<sup>th</sup> Street. The anticipated construction method is trenchless technology, but approximately 140 feet in length, may require hand mining to avoid damage at the connection to the existing sewer.

Construction and operation of the project will not alter, demolish or remove historic properties. If any visual or audible impacts to historic properties occur, they will be temporary and will not alter the characteristics that qualify such properties for inclusion in or eligibility for the National Register of Historic Places. The SRF's finding pursuant to Section 106 of the National Historic Preservation Act is: "no historic properties affected."

**Wetlands:** Wetlands will not be impacted by this project.

**Surface Waters:** The project will not impact surface waters. The design of the new CSO 004 connection structure is almost completely underground; therefore there will be no impact the East Fork of the Whitewater River.

The project will not adversely affect waters of high quality listed in 327 IAC 2-1-2(3), exceptional use streams listed in 327 IAC 2-1-11(b), Natural, Scenic and Recreational Rivers and Streams listed in 312 IAC 7-(2), Salmonid Streams listed in (327 IAC 2-1.5-5(a)(3), or waters on the Outstanding Rivers list (Natural Resources Commission Non-rule Policy Document).

**Floodplain:** The only part of the project that may occur in the floodplain is the new connection at CSO 004. The city's consulting engineer is in discussion with the Indiana Department of Natural Resources (IDNR) Division of Water Technical Services Section as to whether a floodplain construction permit is required. If IDNR determines a permit is necessary, one will be obtained.

**Groundwater:** Due to the depth requirements of this project, dewatering may be necessary. If dewatering is required to complete construction, dewatering flows will be discharged to a settling

basin prior to being discharged to surface water. The amount of dewatering is anticipated to be minimal. Therefore, dewatering is not expected to cause long-term detriment to the groundwater table. The project will not impact a sole source aquifer.

**Plants and Animals:** Tree removal will be likely in two main areas. First, tree removal is necessary along the route from the Phase II terminus connection to the South 2<sup>nd</sup> Street right of way. Although this area was previously-disturbed by the original construction of the existing interceptor, trees and shrubs have re-grown and the construction method of this portion of the route will likely be open-cut.

Tree removal is also expected at the new CSO 004 connection. The land along the outfall line and the new connection structure were cleared a few years ago but vegetation has returned. The area presently consists of an access road and scrub/shrub vegetation, which will need to be removed.

Tree removal is not expected at any other project areas. The project will be implemented to minimize impact to non-endangered species and their habitat. If necessary, mitigation measures required by the Indiana DNR and the US FWS will be implemented.

**Prime Farmland:** The project will not cause conversion of prime farmland.

**Air Quality:** The only expected short-term impact to air quality would result from construction activities. Reasonable and proper construction techniques and clean-up practices will be implemented. No direct long-term impacts are expected.

**Open Space and Recreational Opportunities:** The project will neither create nor destroy any open space and recreation opportunities. Potential short-term impacts to recreational areas along the East Fork of the Whitewater River include restricted access to areas near construction shafts and places where open cut construction methods are anticipated. Long-term impacts are not expected.

**Lake Michigan Coastal Program:** The proposed project will not affect the Lake Michigan Coastal Zone.

**National Natural Landmarks:** Construction and operation of the proposed project will not impact National Natural Landmarks.

## **B. Indirect Impacts**

The Richmond Sanitary District, through the authority of the City Council, will ensure that future development, as well as future collection system or treatment works projects connecting to SRF-funded facilities, will not adversely impact archaeological/historical/structural resources, wetlands, wooded areas, or other sensitive environmental resources. The City will require new development and treatment works projects to be constructed within the guidelines of the U.S. Fish and Wildlife Service, IDNR, IDEM, and other environmental review authorities.

## **C. Comments by Environmental Review Authorities**

In a letter dated June 8, 2012, the Natural Resources Conservation Service has determined that the project will not affect prime/unique farmland.

This document is the first notice to the U.S. Fish and Wildlife Service, the Indiana Department of Natural Resources (IDNR) Division of Historic Preservation and Archaeology, and the IDNR Environmental Unit.

#### **VIII. MITIGATION MEASURES**

All construction impacts (noise, dust, and construction site erosion) will be temporary in nature. Provisions will be included in the construction specification to limit such problems. The work is expected to be completed during normal working hours. All construction equipment will be required to have mufflers to reduce noise pollution. Reasonable and proper construction techniques and clean-up practices will be required by the contractor. Erosion control measures including seeding, drainage inlet protection, and silt fencing will also be utilized.

#### **IX. PUBLIC PARTICIPATION**

A properly noticed public hearing was held on May 22, 2012 at 10:00 a.m. at the Sanitary District Office Board Room, 2380 Liberty Avenue to discuss the project's preliminary engineering report. No comments on this project were voiced at the public hearing, and no written comments were submitted in the five-day period following the public hearing.

EXISTING  
CHESTER BOULEVARD  
RELIEF INTERCEPTOR

SCALE: 1"=2000'

0 2000'



EXISTING  
WEST SIDE  
INTERCEPTOR

EXISTING  
CHESTER BOULEVARD  
INTERCEPTOR

EXISTING  
CHESTER BOULEVARD  
RELIEF INTERCEPTOR  
SIPHON CONNECTION

WHITEWATER RIVER

EAST FORK

PHASE III

EAST SIDE INTERCEPTOR  
SECTION ABANDONED

EXISTING  
EAST SIDE  
INTERCEPTOR

PHASE II

EXISTING  
WEST SIDE  
INTERCEPTOR

EXISTING  
WEST SIDE  
SIPHON  
CONNECTION

EXISTING  
ROUND BARN  
INTERCEPTOR

PHASE I

WWTP



**COMMONWEALTH**  
**ENGINEERS, INC.**

CITY OF RICHMOND, INDIANA  
EAST SIDE INTERCEPTOR REPLACEMENT PHASE III

PRELIMINARY ENGINEERING REPORT

EXISTING EAST SIDE INTERCEPTOR  
FIGURE ES-1



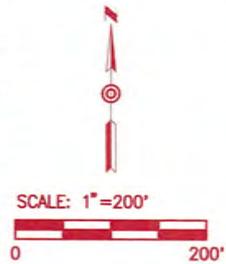
**LEGEND**

- 2ND STREET ALIGNMENT A
- 2ND STREET ALIGNMENT B
- RIVERS EDGE ALIGNMENT
- EXISTING EAST SIDE INTERCEPTOR
- Manhole - Open Cut
- Trenchless Construction Shaft

MAY 2012 (REVISED AUGUST 2012)



CITY OF RICHMOND, INDIANA  
 EAST SIDE INTERCEPTOR REPLACEMENT PHASE III  
 PRELIMINARY ENGINEERING REPORT  
 NORTH ALIGNMENT OPTIONS  
 FIGURE 4 - 2



LEGEND	
<span style="color: red;">—</span>	2ND STREET ALIGNMENT A
<span style="color: blue;">—</span>	2ND STREET ALIGNMENT B
<span style="color: green;">—</span>	RIVERS EDGE ALIGNMENT
<span style="color: yellow;">—</span>	EXISTING EAST SIDE INTERCEPTOR
○	Manhole - Open Cut
●	Trenchless Construction Shaft



STARR GENNETT JAZZ HERITAGE AREA

CONNECTION WITH PHASE II

**LEGEND**

- 2ND STREET ALIGNMENT A
- 2ND STREET ALIGNMENT B
- RIVERS EDGE ALIGNMENT
- EXISTING EAST SIDE INTERCEPTOR
- Manhole - Open Cut
- Trenchless Construction Shaft