

An aerial photograph of a park area. A river flows through the center, with several baseball fields on either side. There are various buildings, including a large one with a red roof, and parking lots. The surrounding area is residential and commercial.

Hancock County Flood Risk Reduction Program

Hydraulic Improvements (Phase 1) Project Public Presentation

January 24, 2018

An aerial photograph of a sports complex. The image shows several baseball fields with brown dirt bases and green grass. A winding river or stream flows through the center of the complex. To the left, a multi-lane highway curves through the area. The surrounding area includes residential neighborhoods with houses and streets, as well as industrial or commercial buildings with large roofs. The word "INTRODUCTIONS" is overlaid in large, white, bold, sans-serif capital letters across the middle of the image.

INTRODUCTIONS

Agenda



Project Overview

- Floodplain Benching & Soil Disposal
- In-River Structure Removal
- Soil Stockpiling & Staging
- Utility Coordination
- Site Restoration

Opinion of Probable Cost

Anticipated Benefits

Project Schedule

Project Stations

Project Overview

Floodplain
Bench Widening

Remove Inline
Riffles/Dams

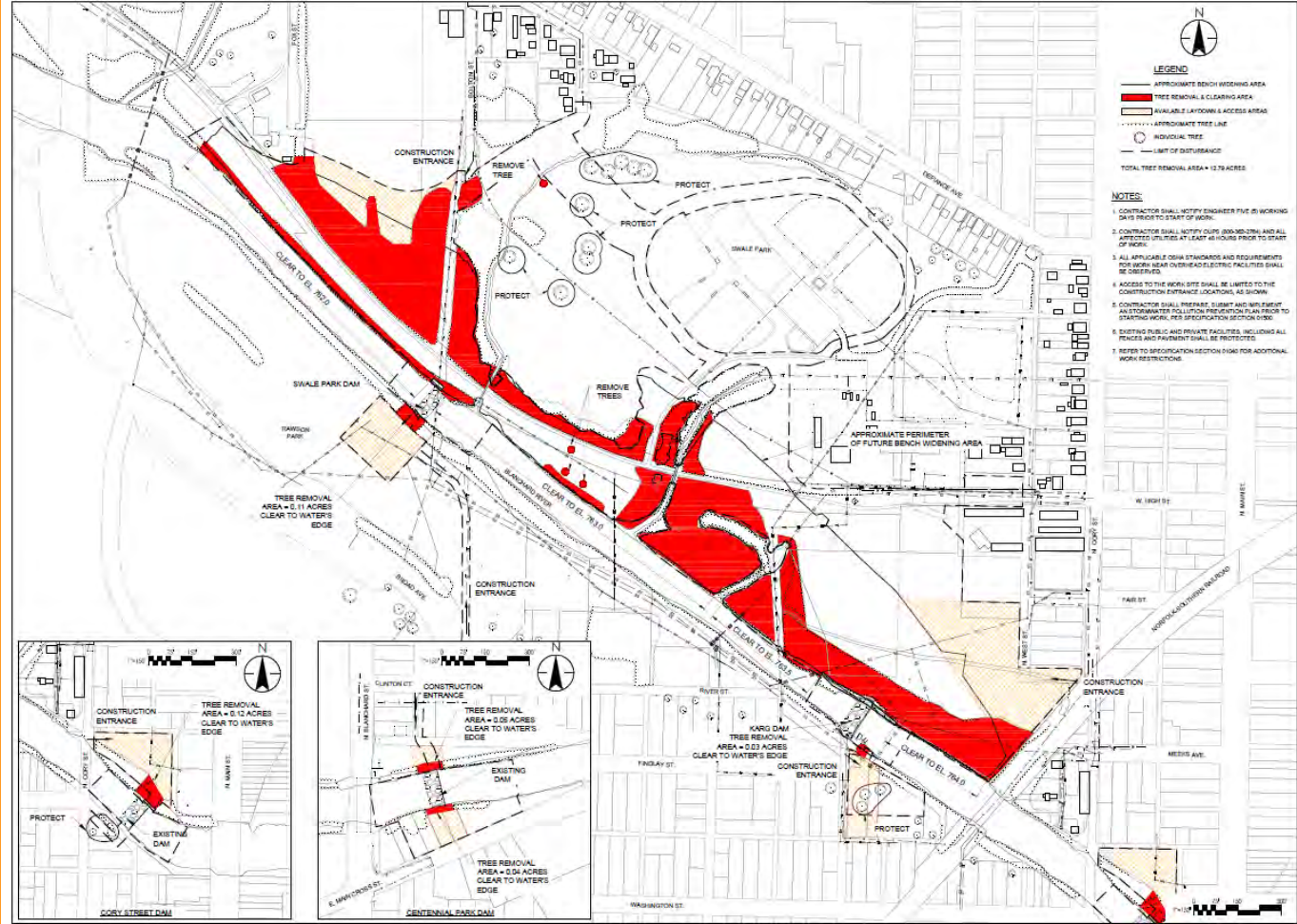
Norfolk-Southern
RR Bridge
Modifications in
Phase 2

Hydraulic Improvements (Phase 1)



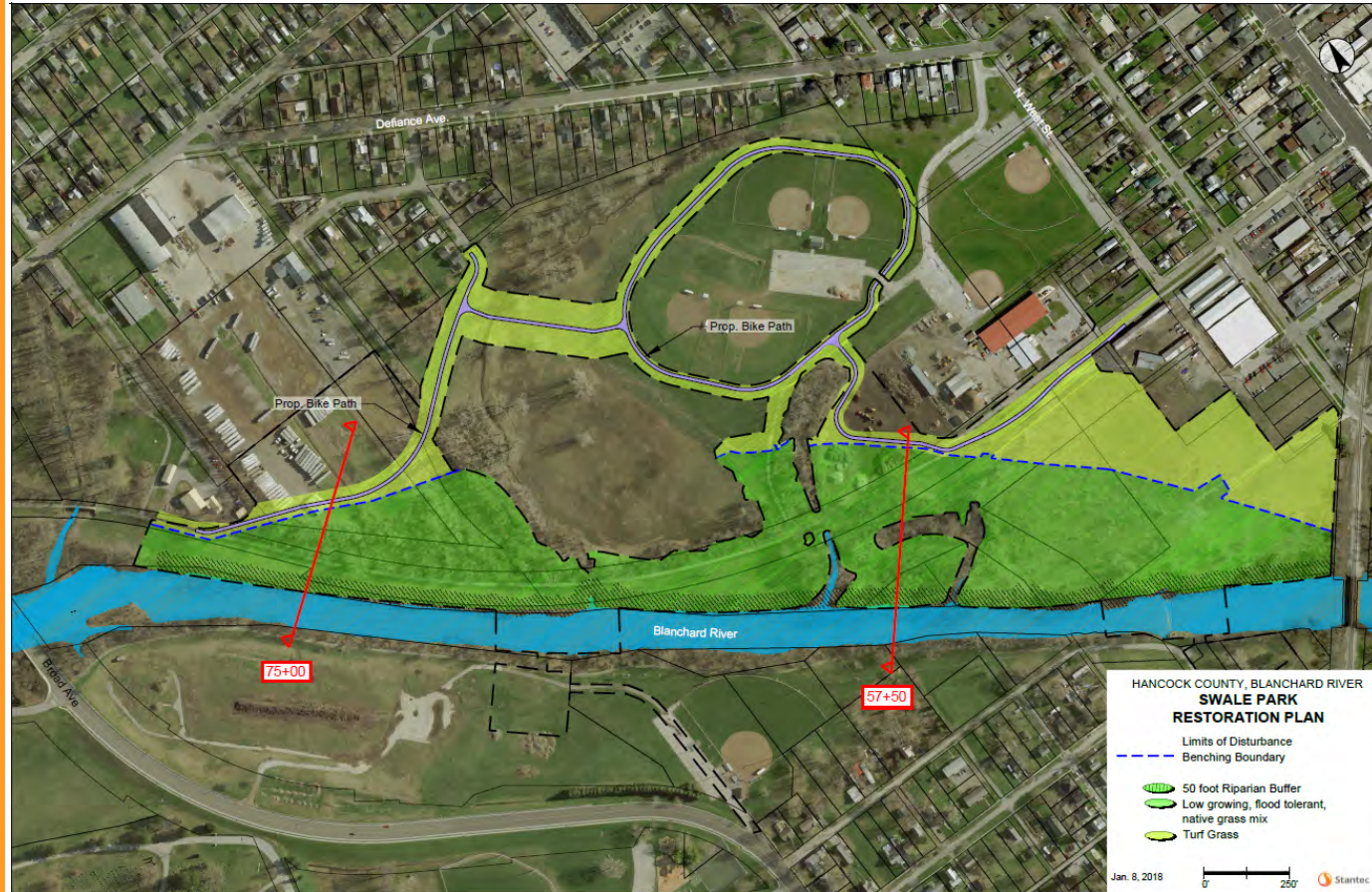
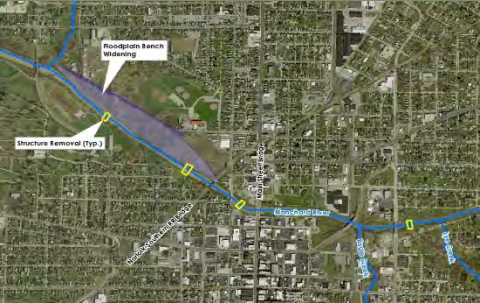
Project Overview

Tree Clearing



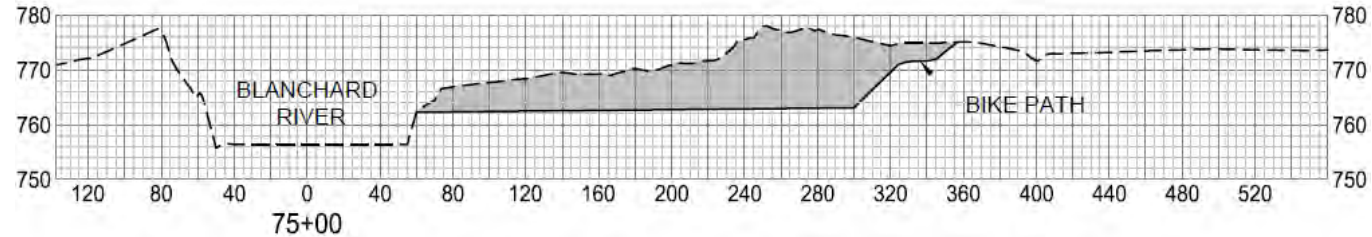
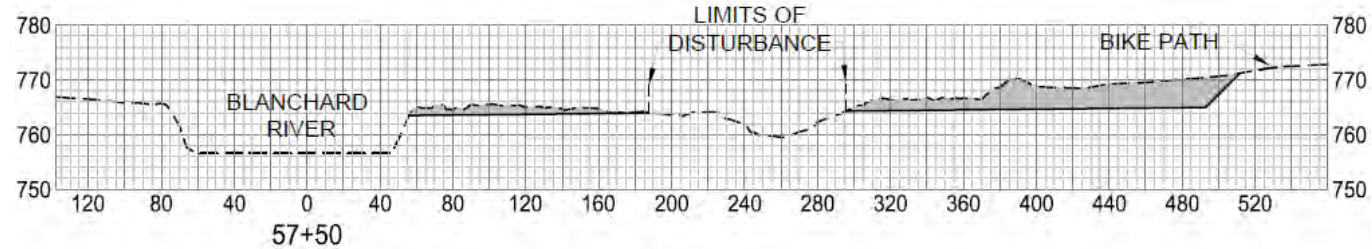
Project Overview

Floodplain Benching



Project Overview

Floodplain Benching Cross Sections





Project Overview

Existing Inline Structure Removals

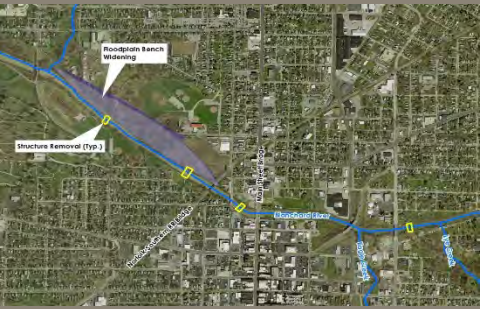


Figure 1 – Blanchard River – Existing Inline Structure - (Cory Street Dam)



Figure 2 – Blanchard River – Existing Inline Structure - (Centennial Park Dam)

Project Overview

Existing Inline Structure Removals

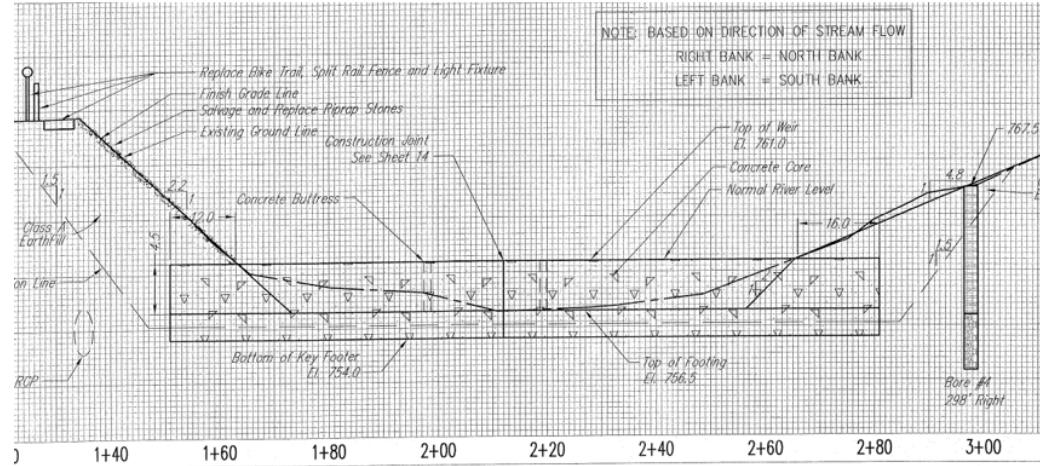


Figure 3 – Blanchard River – Existing Inline Structure - (Section Detail)

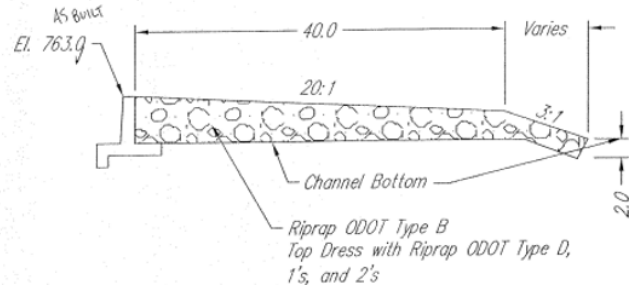


Figure 4 – Blanchard River – Existing Inline Structure - (profile View)

Project Overview

Constructed Riffles

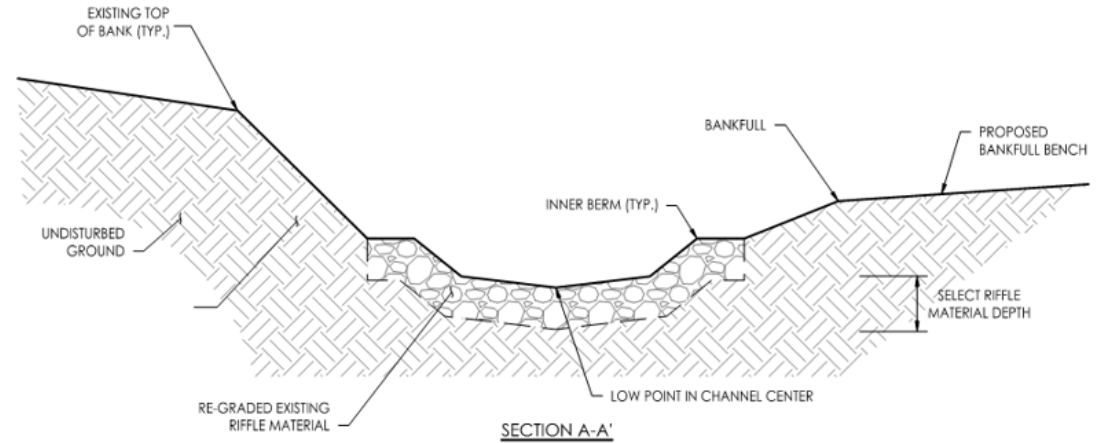


Figure 5 – Example Constructed Riffle – (Section Detail)

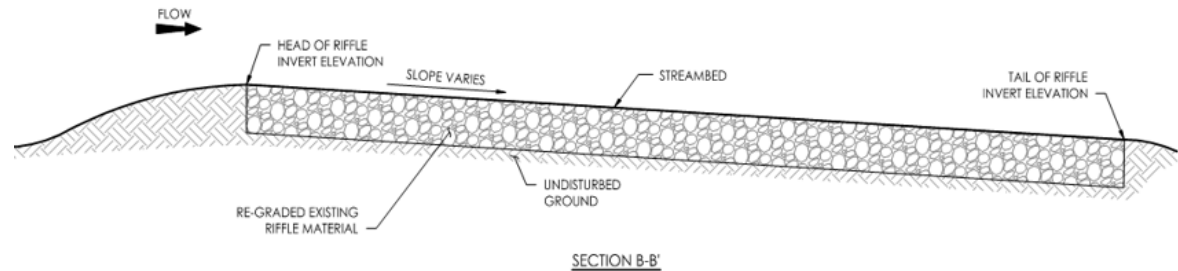


Figure 6 – Example Constructed Riffle – (Profile View)

Proposed Riffle Structures

Project
Overview

Example
Project



Figure 7 – Kalamazoo River – Example Before Dam Removal (Pre-Construction)

Proposed Riffle Structures

Project
Overview

Example
Project

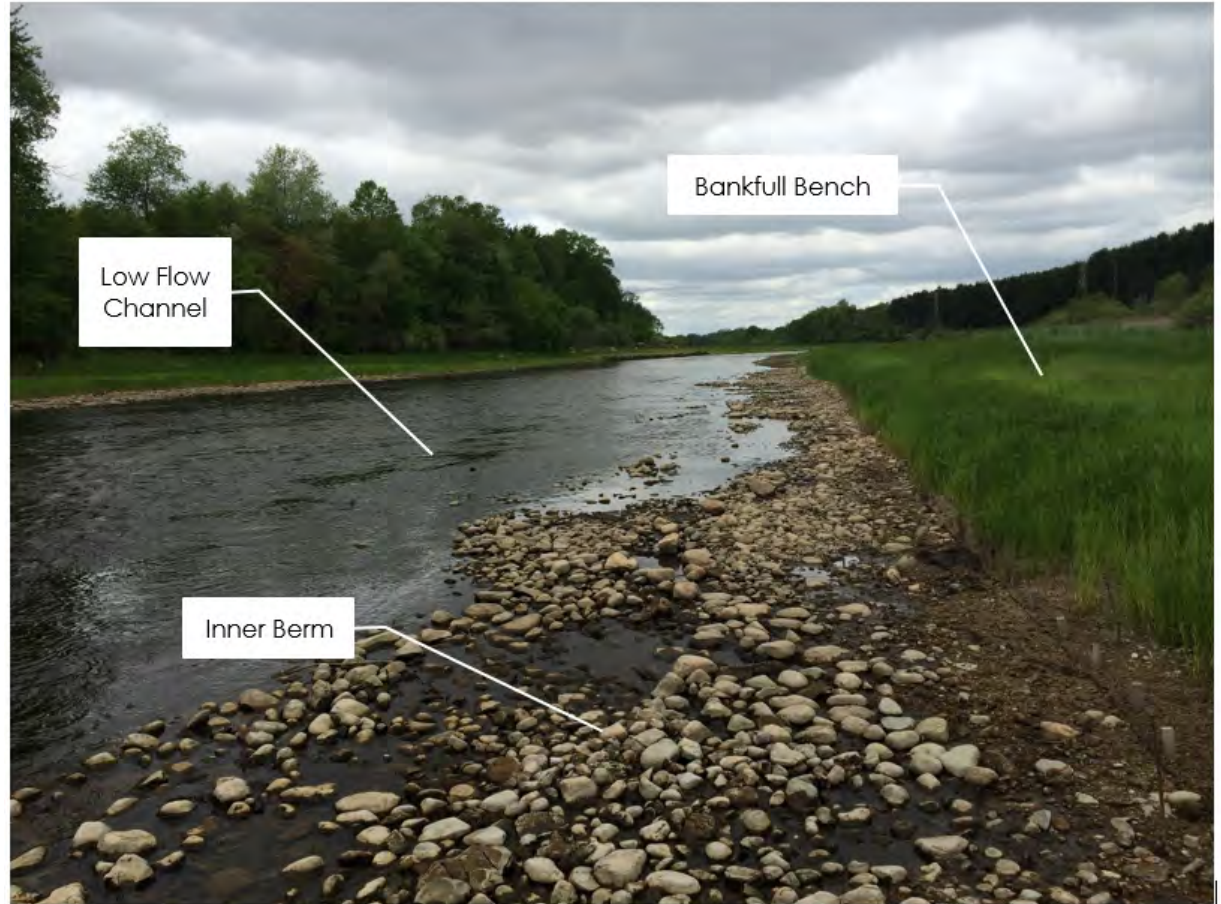


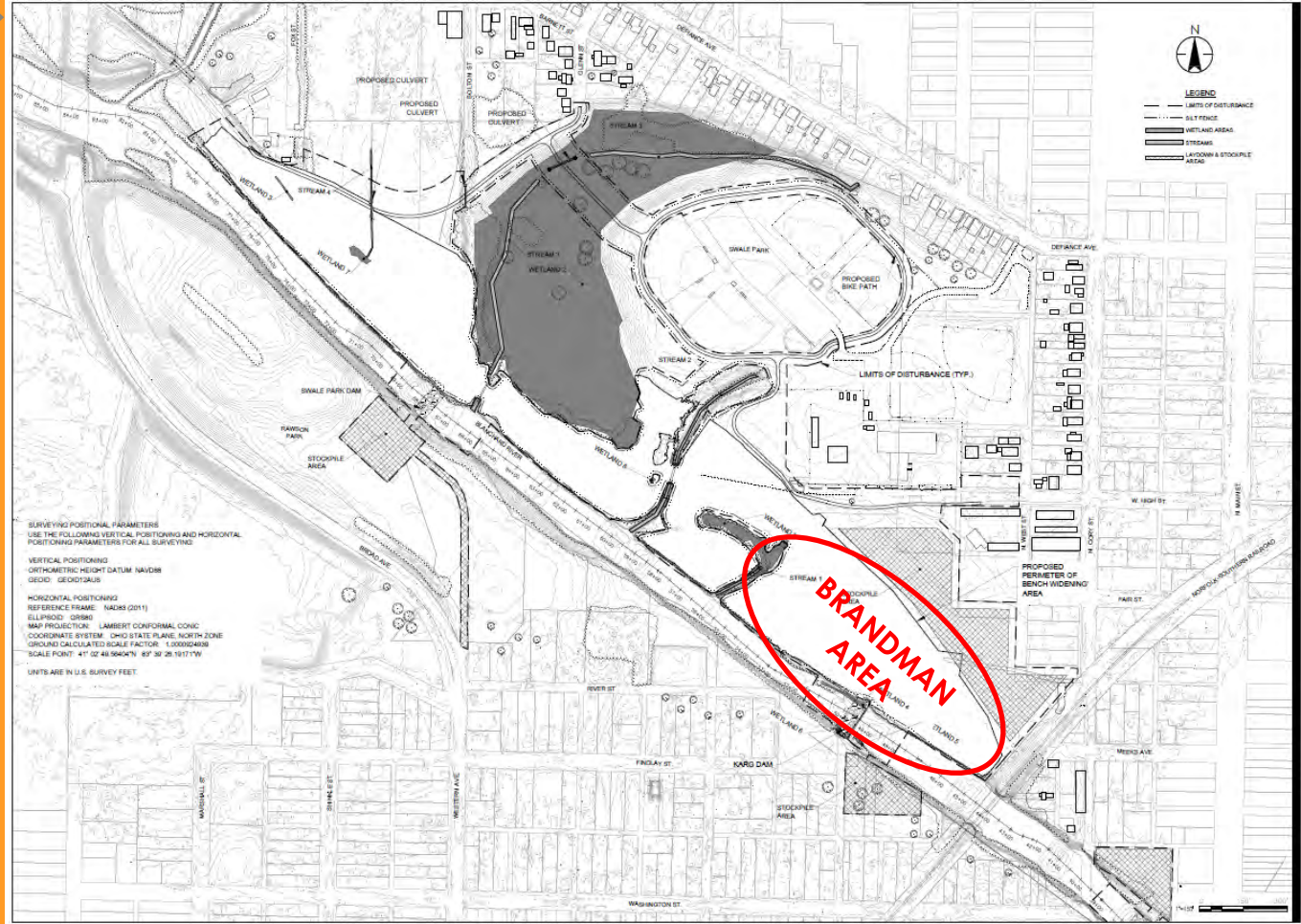
Figure 8 – Kalamazoo River – Constructed Riffle (Post-Construction)

Project Overview

Wetland Area Avoidance

Brandman Area

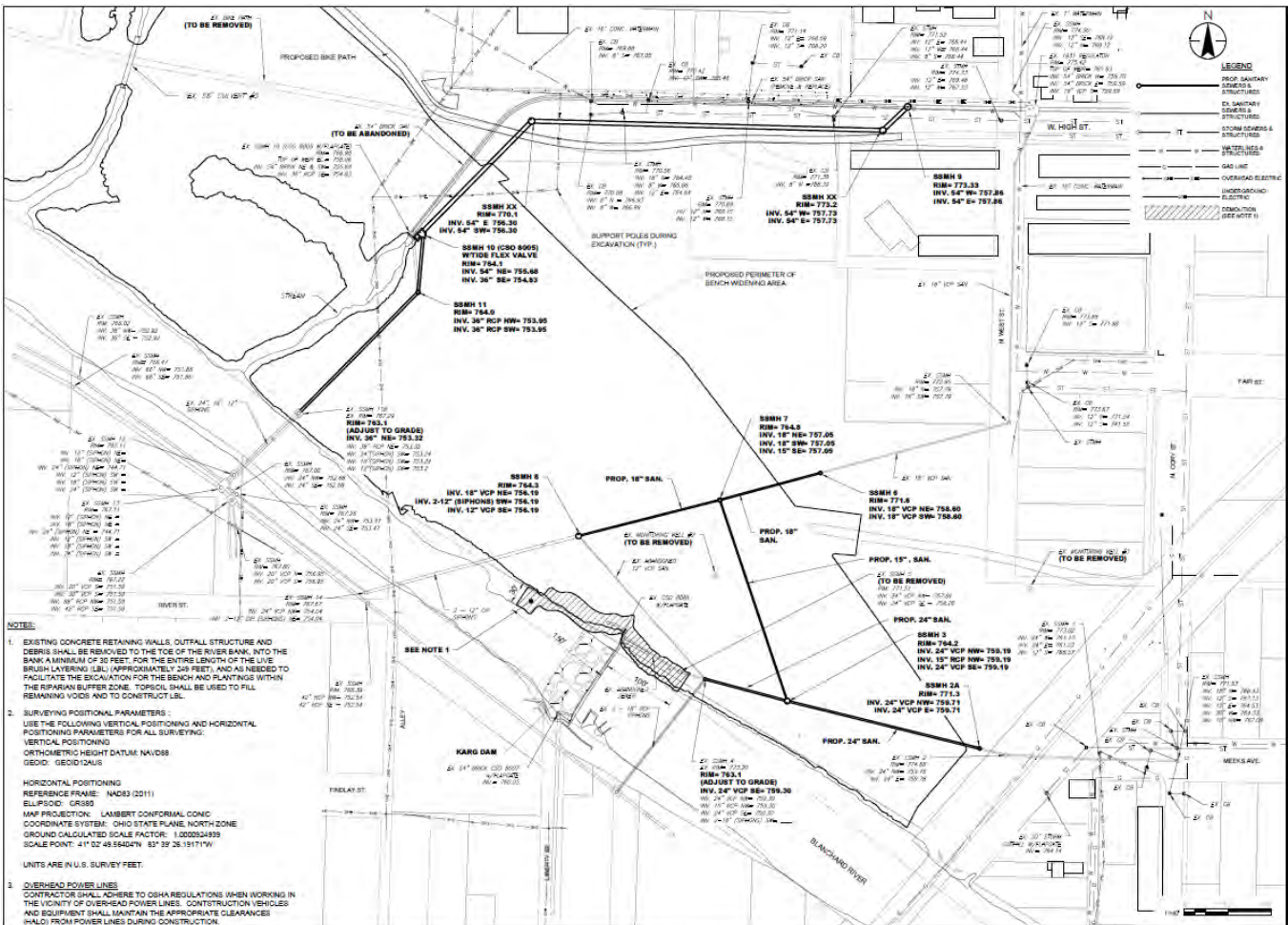
Soil Stockpiling & Staging



Utility Coordination

Project Overview

AEP Overhead Electric City Combined Sewers















Opinion of Probable Costs

Hydraulic Improvements (Phase 1) Only

Project Costs

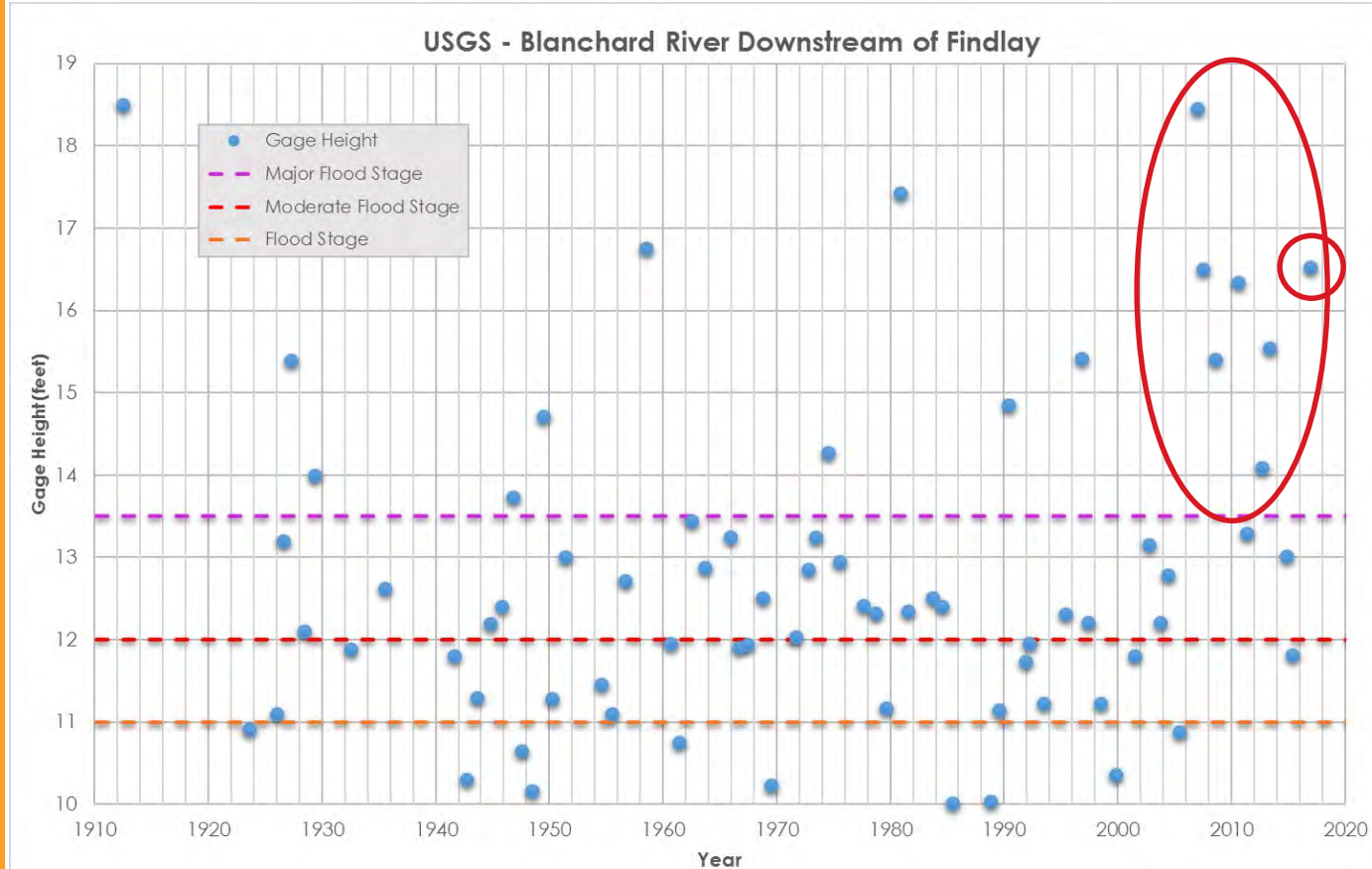
Hydraulic Improvements - Phase I - Opinion of Probable Costs	
Description	Amount
Construction Costs	
In-Stream Improvements:	\$1,401,000
Floodplain Bench Widening Improvements:	\$7,179,000
Utility and Bike Path Improvements:	\$1,222,000
Utility Coordination:	\$750,000
CONSTRUCTION SUBTOTAL	\$10,552,000
Contingency (15%)	\$1,583,000
CONSTRUCTION TOTAL	\$12,135,000
Other Costs	
Tree Removal (Including Debris Removal)	\$105,000
Stream Wetland and T&E Mitigation	\$75,000
Construction Administration (5%)	\$607,000
OTHER SUBTOTAL	\$787,000
TOTAL PROJECT COSTS	\$12,922,000

Local Flooding

Seven Events Since 2000

July 2017 Event
~4% (25-year)
ACE

Historic Flood Events

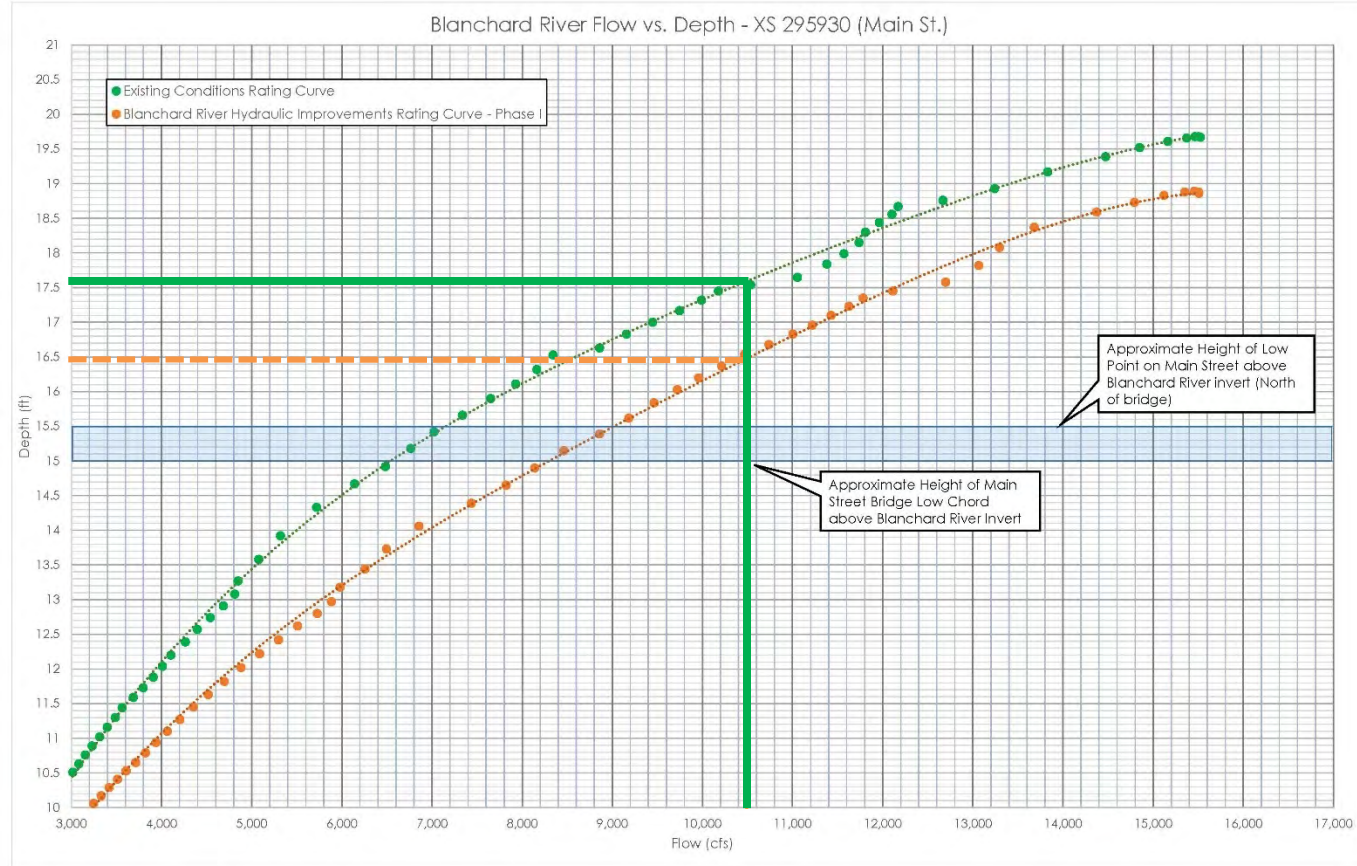


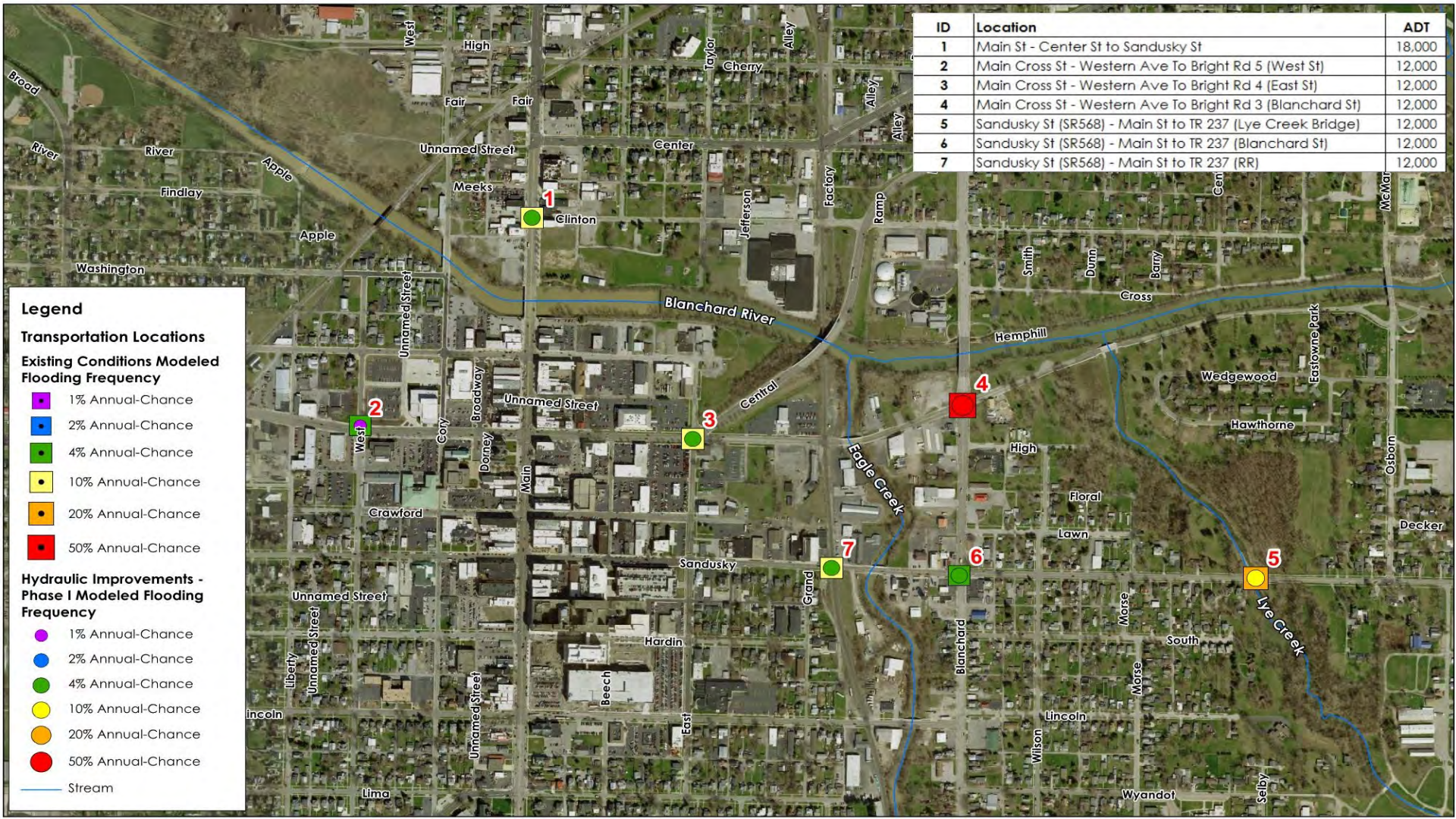
Anticipated Benefits

River Flow vs Depth at Main Street

New Blanchard River Rating Curve at Main Street

July 2017 Event
~ 10,500 CFS





ID	Location	ADT
1	Main St - Center St to Sandusky St	18,000
2	Main Cross St - Western Ave To Bright Rd 5 (West St)	12,000
3	Main Cross St - Western Ave To Bright Rd 4 (East St)	12,000
4	Main Cross St - Western Ave To Bright Rd 3 (Blanchard St)	12,000
5	Sandusky St (SR568) - Main St to TR 237 (Lye Creek Bridge)	12,000
6	Sandusky St (SR568) - Main St to TR 237 (Blanchard St)	12,000
7	Sandusky St (SR568) - Main St to TR 237 (RR)	12,000

Legend

Transportation Locations

Existing Conditions Modeled Flooding Frequency

- 1% Annual-Chance
- 2% Annual-Chance
- 4% Annual-Chance
- 10% Annual-Chance
- 20% Annual-Chance
- 50% Annual-Chance

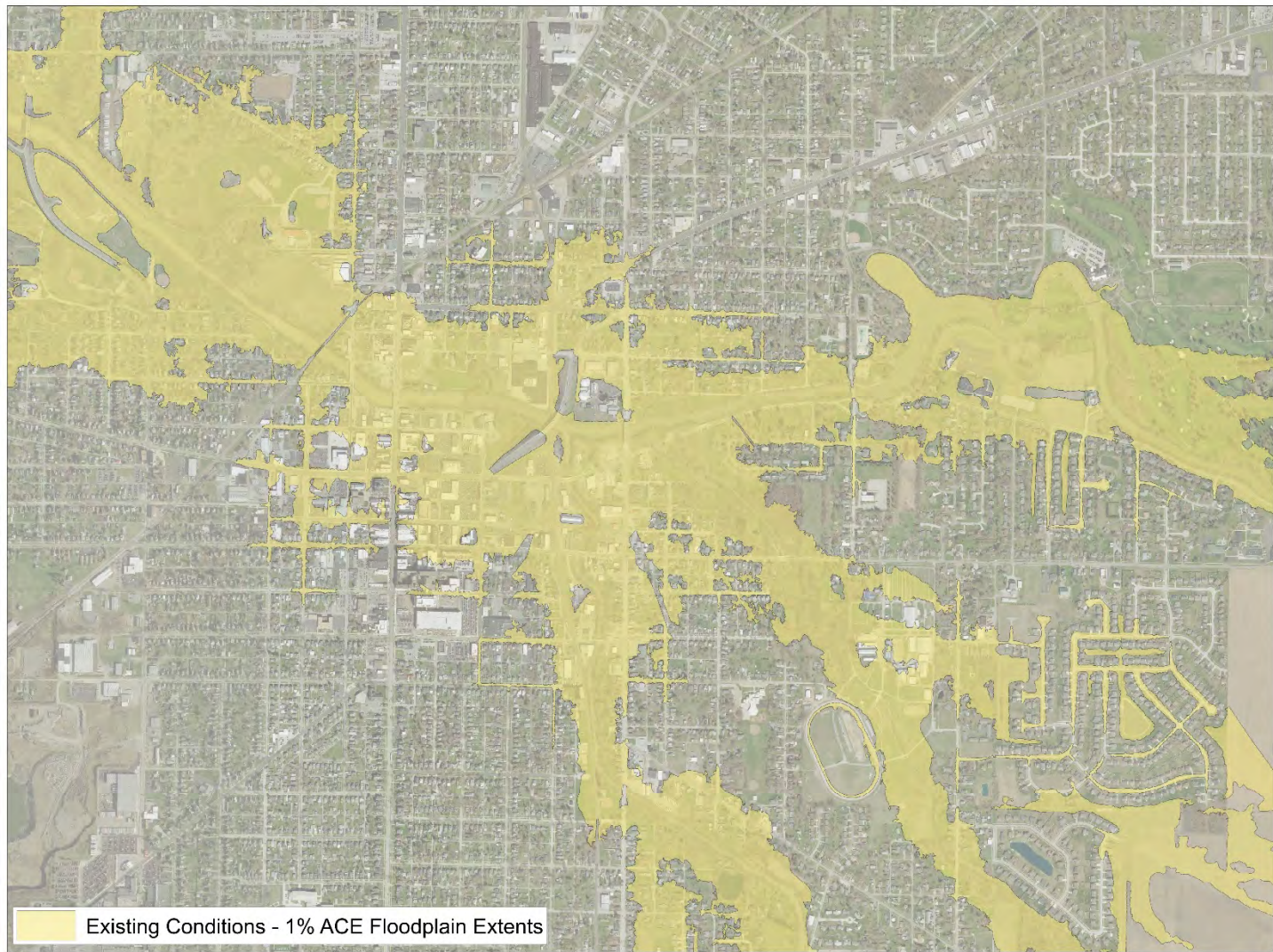
Hydraulic Improvements - Phase I Modeled Flooding Frequency

- 1% Annual-Chance
- 2% Annual-Chance
- 4% Annual-Chance
- 10% Annual-Chance
- 20% Annual-Chance
- 50% Annual-Chance
- Stream

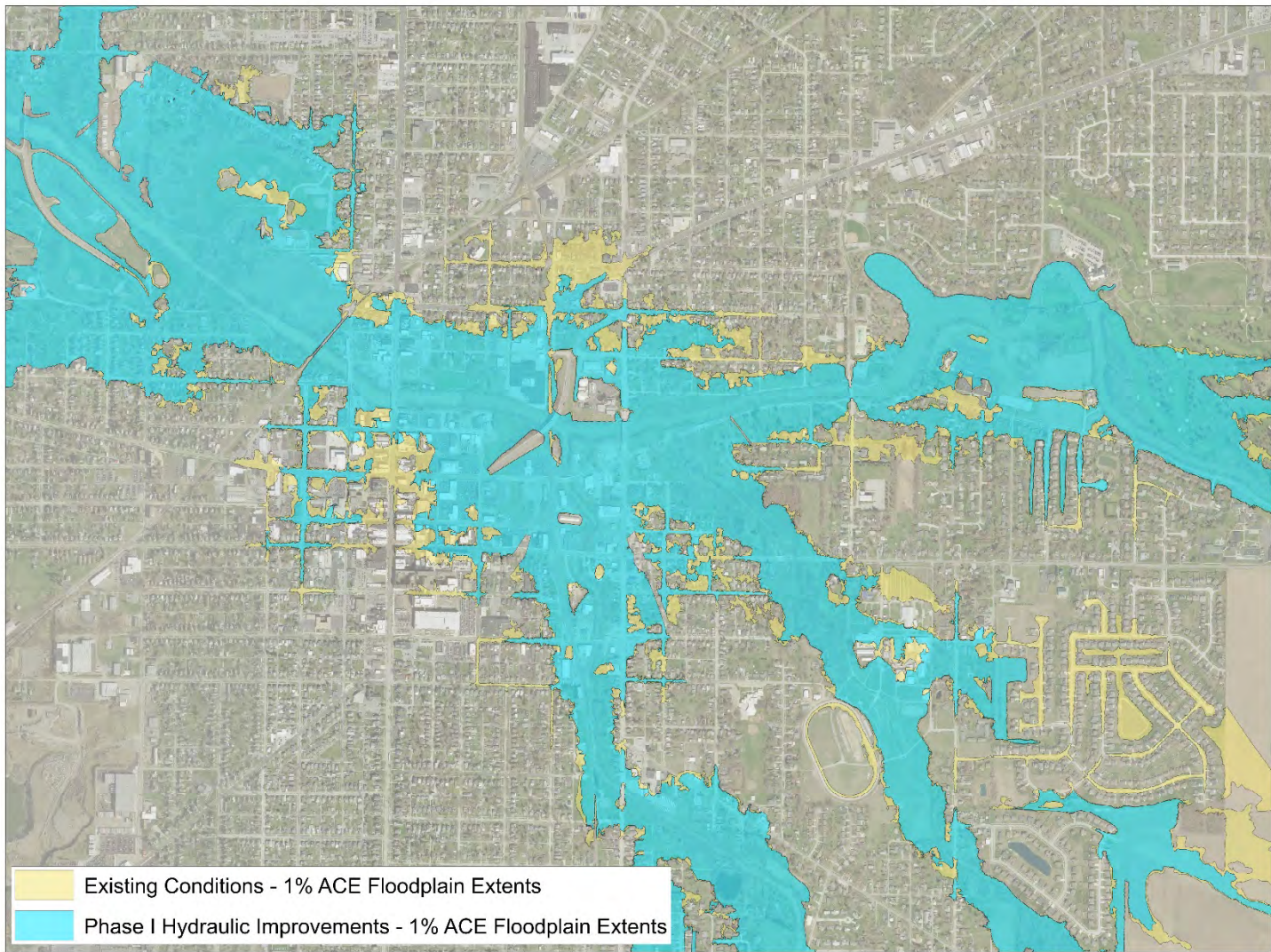
Anticipated Benefits

- Increased Wetland Function
- Improved Water Quality
- Fish Passage & Aquatic Habitat
- Enhanced Recreational Opportunities
- Reduced Transportation Impacts
- **1% ACE Floodplain Reduction** ~ LOMR To Be Filed Following Construction

1% ACE Floodplain



1% ACE Floodplain



Anticipated Schedule

Critical Path of Project is through Permitting

Permitting

- OEPA 401 WQC / USACE 404 Permits
 - Submitted week of Dec. 18, 2017 ~ Completeness Review Underway
 - Public Comment & Agency Coordination Periods
 - 401 Public Hearing
- Floodplain Permit (City)
- OEPA Permit to Install (Sewer Replacements)
- OEPA Rule 27-13 Application (Brandman Site)

** Targeting permits to be issued Summer 2018 **

Anticipated Schedule

*Critical Path
of Project is
through
Permitting*

Design & Construction

- Tree Clearing Project
 - Bid Award: Jan. 16th / NTP: Feb. 1st
 - S.C.: Mar. 31st / F.C.: May 15th
- Final Design
 - 60% Design submitted Dec. 8, 2017
 - 95% Design due May 1st
 - Final IFB Package (estimate July 2018)
- Construction
 - Bidding & Award: Aug. 2018 / NTP: Sep. 2018 (**)
 - S.C.: Aug. 2019 / F.C.: Oct. 2019 (**)

** Targeting permits to be issued Summer 2018 **

Questions & Comments

Project Stations in Hallway

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