



Metropolitan Water Reclamation District of Greater Chicago

Addison Creek Reservoir

Mick Cosme, PE, CFM
Senior Civil Engineer
Stormwater Management

March 14, 2023





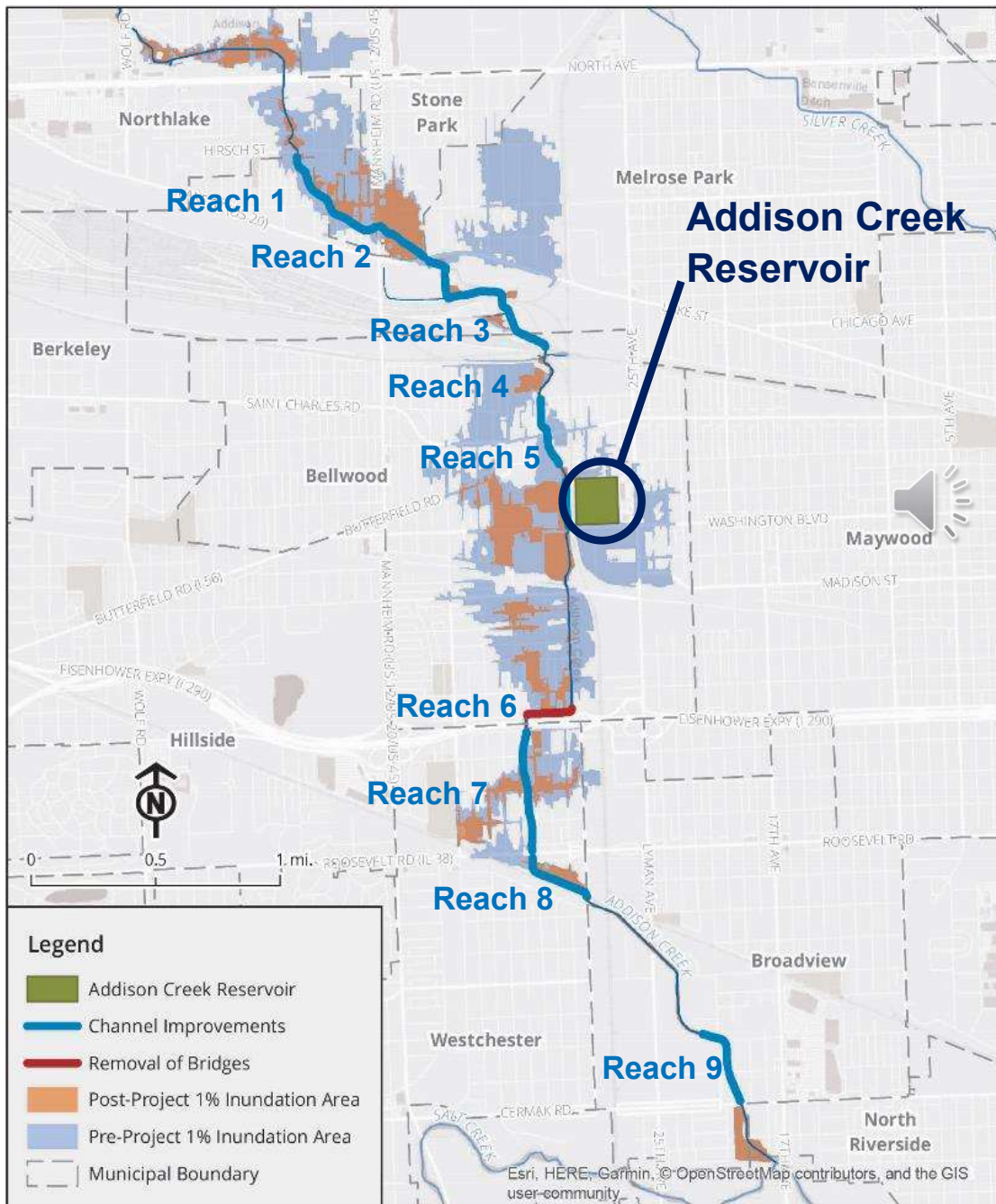
Overview of Presentation

- **Overview of Project**
- **Need for the Project**
- **Design History of Project**
- **Stakeholder Involved**
- **Preconstruction Site Cleanup and Demolition**
- **Preconstruction Utility Relocation**
- **Construction of Addison Creek Reservoir**
- **Update on Addison Creek Channel Improvements**
- **Milestones to Completion of Project**





Addison Creek Reservoir & Channel Improvements



- Protects **2,200 Properties**
 - Northlake
 - Stone Park
 - Melrose Park
 - Bellwood
 - Westchester
 - Broadview
- **1,700 Properties** Removed from the Floodplain
- **\$116 Million** in Flood Benefits
- Reservoir Stores **195 MG**
- **3 Miles** of Channel Improvements



April 2013 Flood

Broadview – Cermak Road



Historic Crests for Addison Creek at USGS Gauge in Bellwood, Illinois

- (1) 13.57 ft on 07/24/2010
- (2) 13.16 ft on 04/18/2013
- (3) 12.84 ft on 08/14/1987
- (4) 12.32 ft on 06/15/2015
- (5) 11.51 ft on 08/22/2014
- (6) 11.18 ft on 05/17/2020
- (7) 11.13 ft on 05/09/1990
- (8) 10.94 ft on 10/14/2017
- (9) 10.33 ft on 09/13/2008
- (10) 10.07 ft on 10/02/2006
- (11) 9.86 ft on 08/16/1997
- (12) 9.19 ft on 05/27/2019
- (13) 8.97 ft on 10/13/2001
- (14) 8.83 ft on 05/15/2020



Flood Categories (in feet)

Major Flood Stage:	12
Moderate Flood Stage:	11
Flood Stage:	9
Action Stage:	8
Low Stage (in feet):	1





Detailed Watershed Plan

Final Report

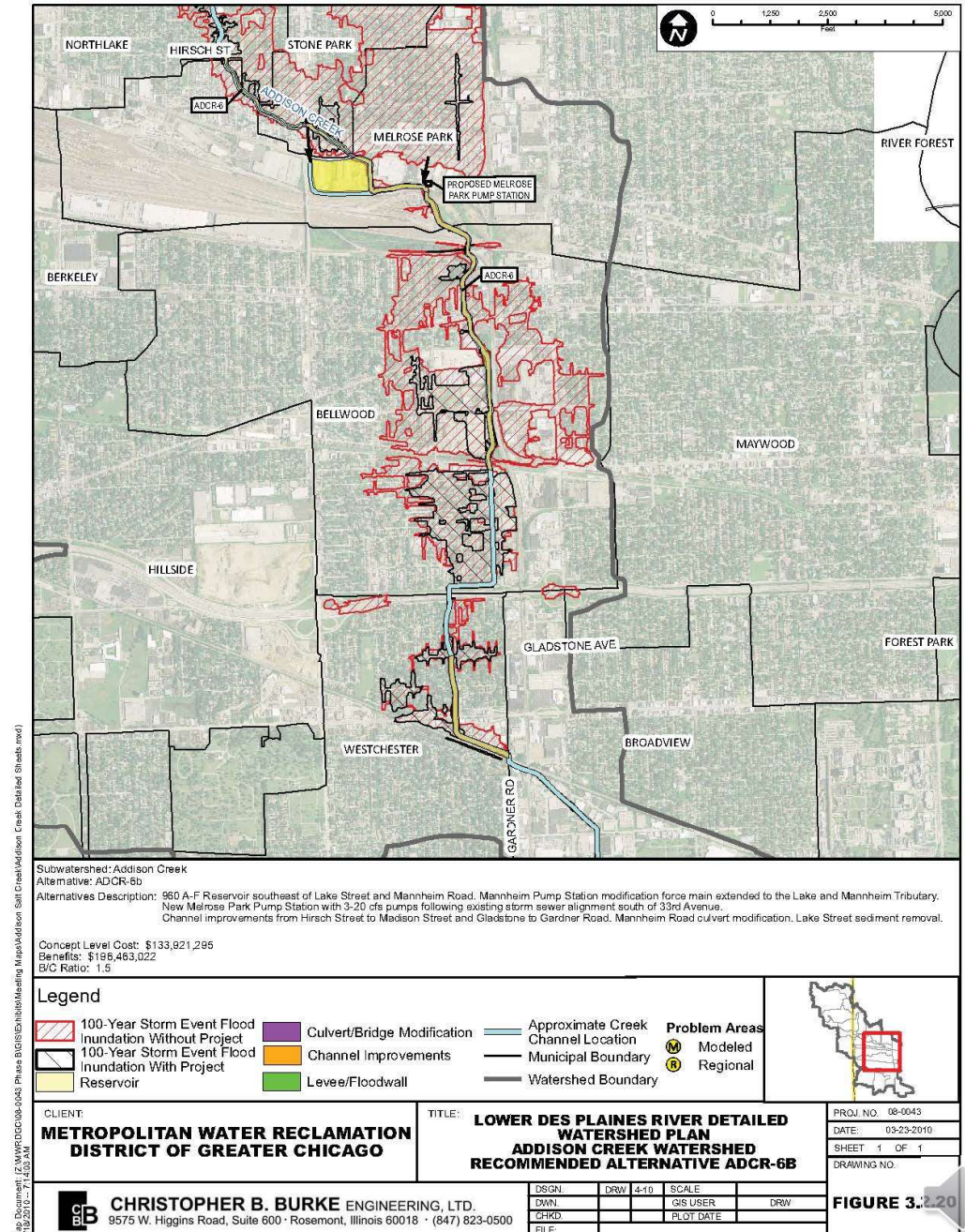
Detailed Watershed Plan for the Lower Des Plaines River Watershed: Volume 1

Prepared for
**Metropolitan Water Reclamation
District of Greater Chicago**

February 28, 2011

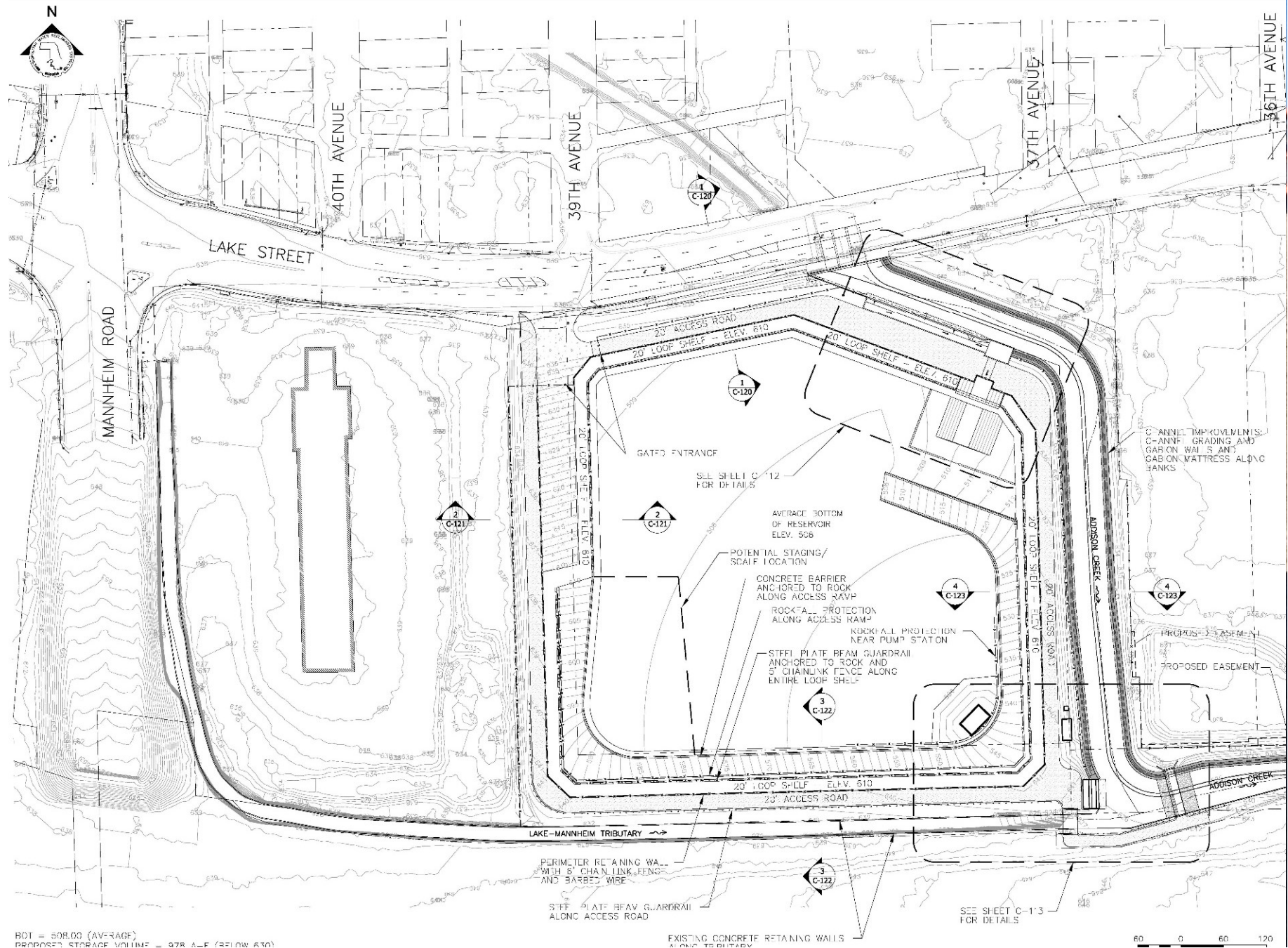


Christopher B. Burke Engineering, Ltd.



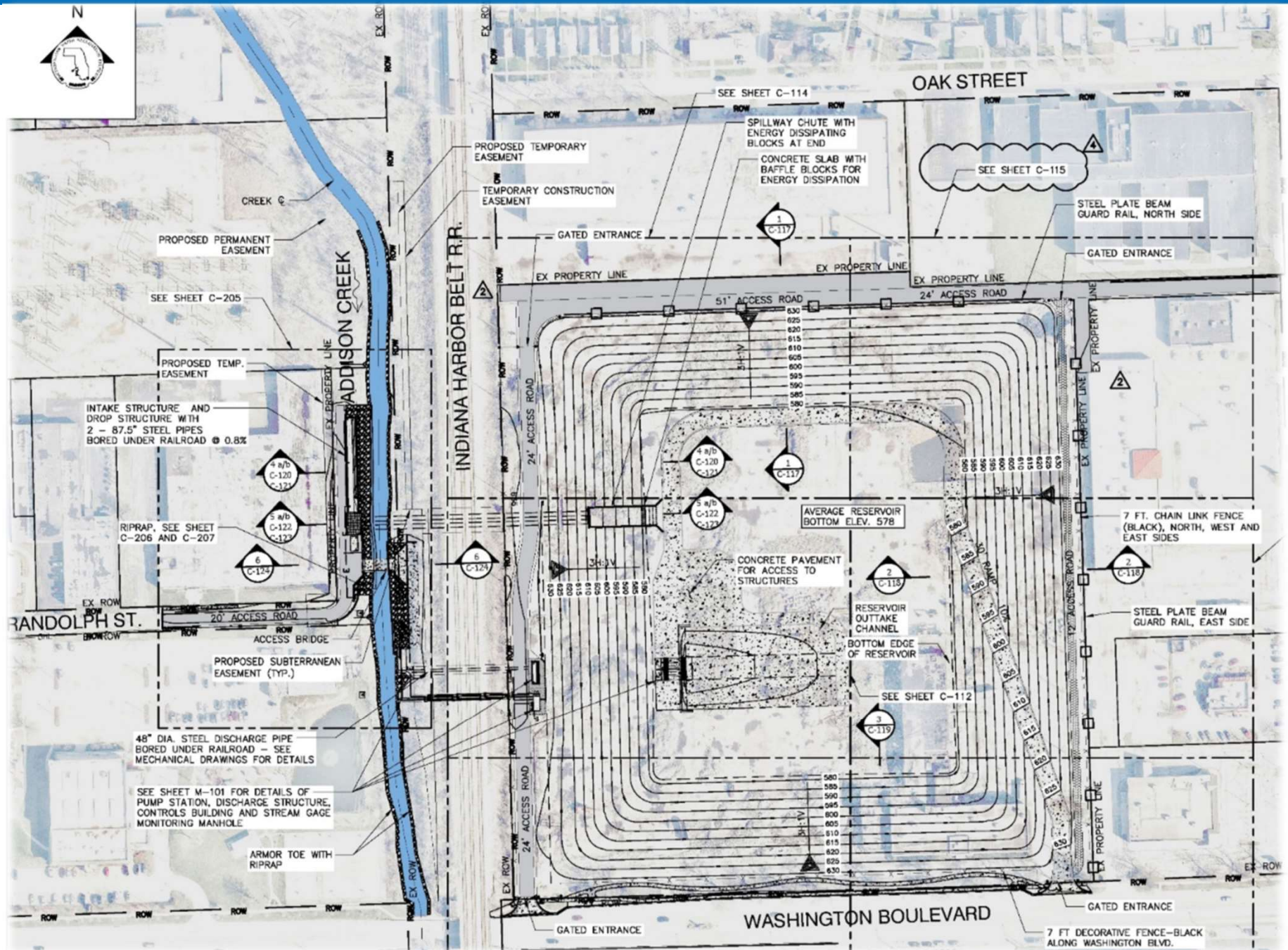


Preliminary Design - Melrose Park Site





Final Design - Bellwood Site





Stakeholders and Challenges



Cuna



Nubani Brothers, LLC



Nicor Gas

AT&T



EFN Bellwood Properties, LLC

MEMORIAL PARK DISTRICT

WHERE FUN IS SERIOUS BUSINESS



ILLINOIS HISTORIC
Preservation
AGENCY

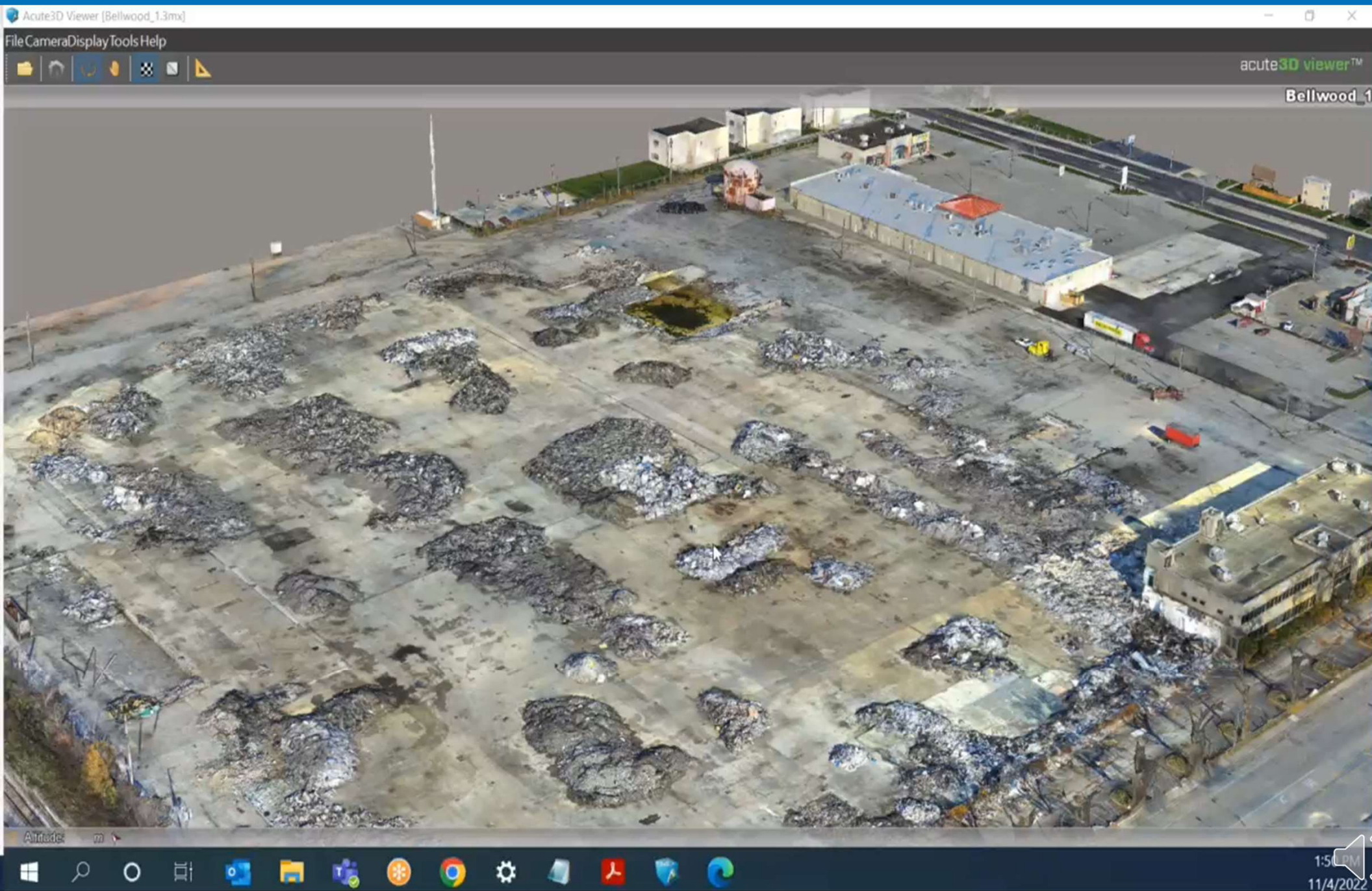


**US Army Corps
of Engineers®**
Chicago District





Removal of Piles of Debris





Removal of the Debris Pile

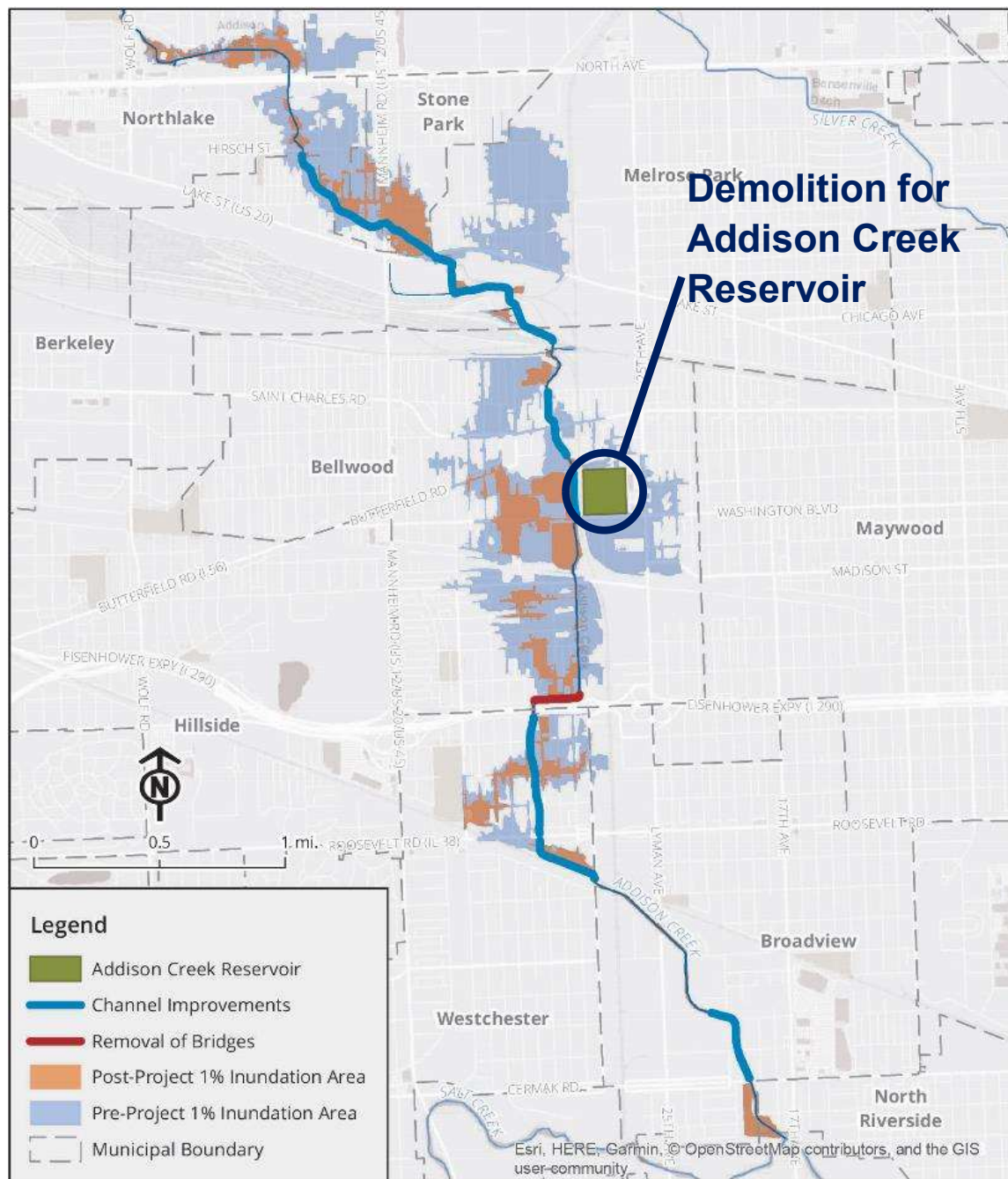


- **JOC Contractor:**
Meccor Industries Ltd
- **Awarded:**
June 2017
- **Completed:**
August 2017
- **Cost:**
\$1.06 million





Demolition for Addison Creek Reservoir

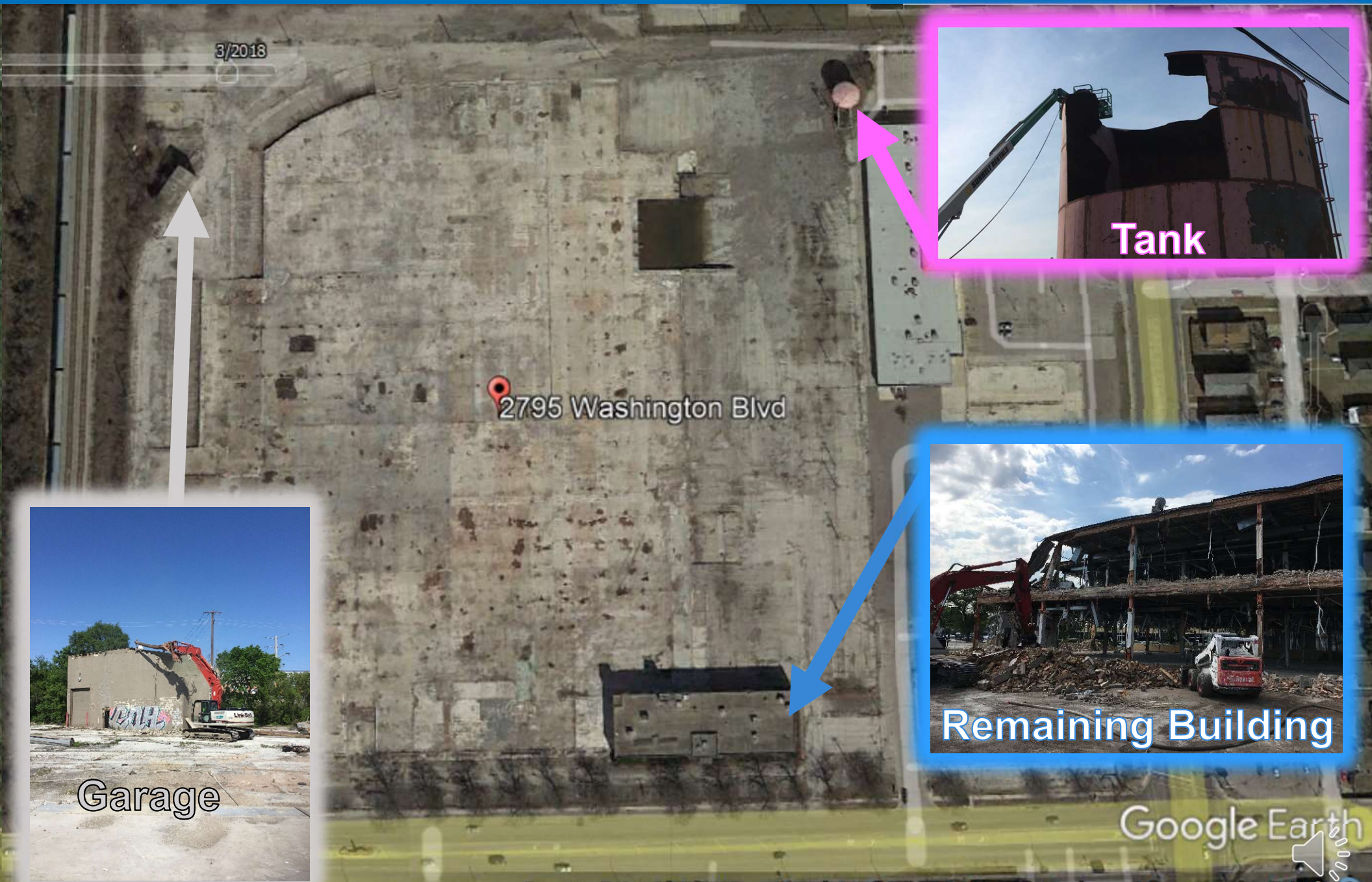


- **Contract:**
11-186-AF
- **Contractor:**
KLF Enterprises
- **Awarded:**
March 2018
- **Completed:**
May 2018 to July 2018
- **Cost w/ CORs:**
App. \$274K





Demolition Contract



3/2018

2795 Washington Blvd

Tank

Remaining Building

Garage

Google Earth



Relocations of Utilities

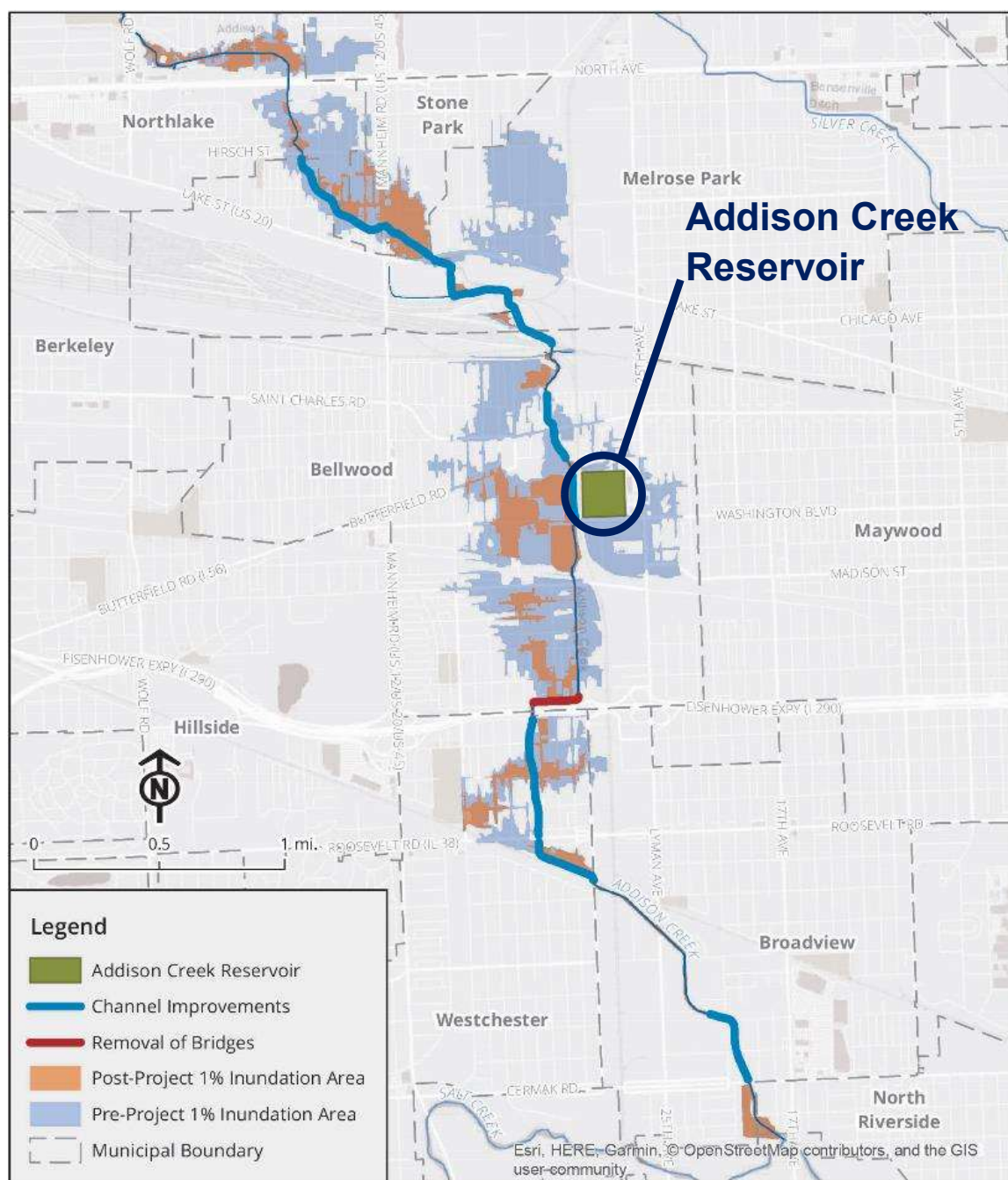


VINAKOM
Summer 2018





Addison Creek Reservoir



- **Contract:**
11-186-3F
- **Contractor:**
IHC Construction
- **Award Date:**
January 2019
- **Completion Date:**
Est. Summer 2023
- **Award Value:**
\$63,280,000
- **Current Value w/ CORs:**
\$81,304,221.95
- **Reservoir Capacity:**
600 ac-ft or 195MG





2- 87.5" Dia. Steel Intake Pipes

Intake Structure

Bridge

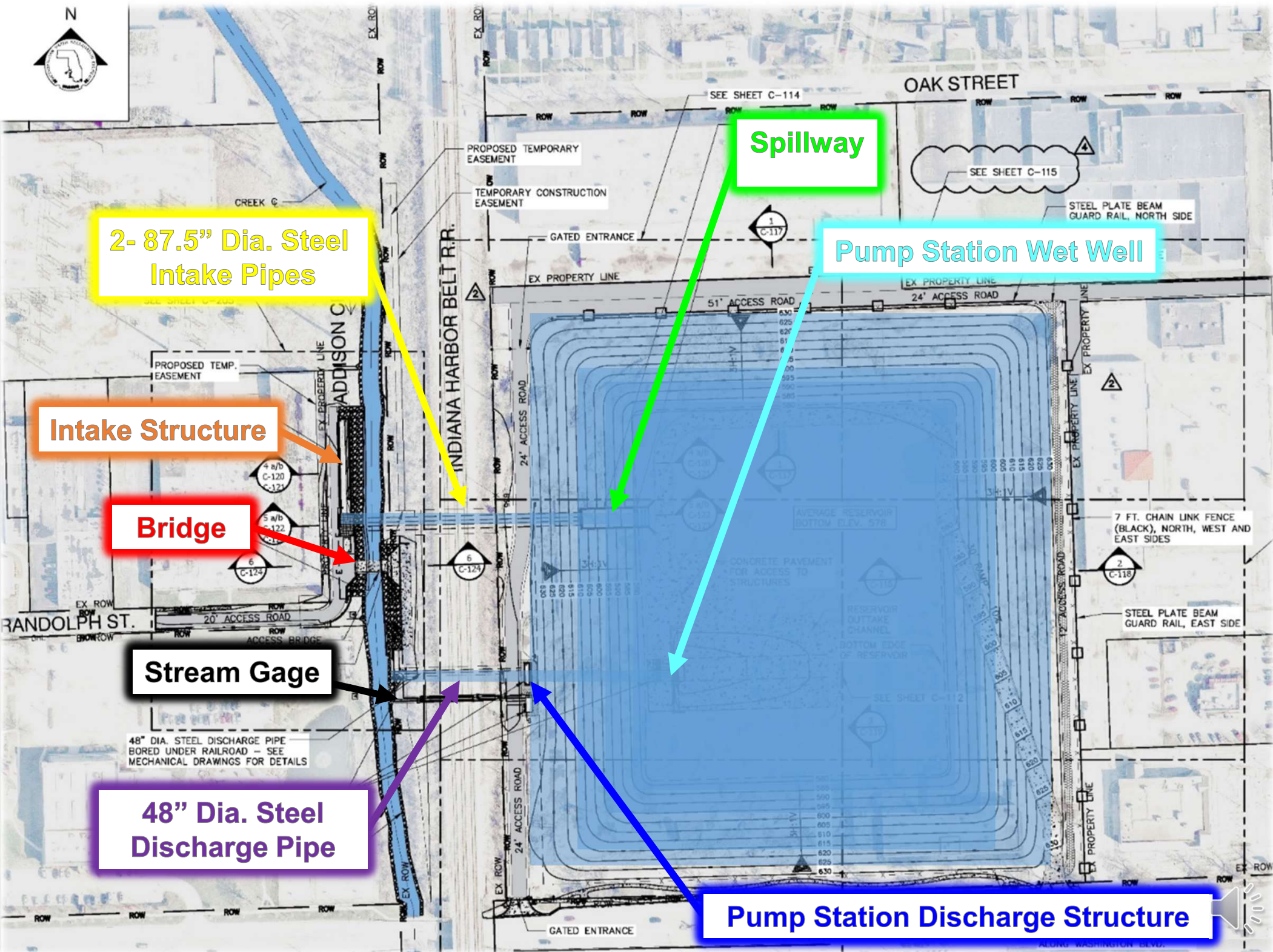
Stream Gage

48" Dia. Steel Discharge Pipe

Spillway

Pump Station Wet Well

Pump Station Discharge Structure





Major Construction Components

- **Soil-Bentonite Wall**
- **Tunneling**
- **Stream Channel Improvements**
- **Construction of Control Structure, Intake/Drop Structure, Spillway, and Pump Station**
- **Contaminated Soil**
- **Mass Excavation**





Soil Bentonite Wall



Video Credit: Dewind



0:01 / 2:40





Soil Bentonite Wall



- Orange dot = Rock Cores Already Completed
- Blue dot = New Rock Core Locations
- Green dot = Roller Bit Locations

Location	Distance (ft)	Workdays	Average Production (ft/day)
East Wall	920	6	153.33
South Wall	838	5	167.60
West Wall	917	8	114.63
North Wall	830	7	118.57
Total Length	3505 ft	26	134.81





Soil Bentonite Wall





Soil Bentonite Wall

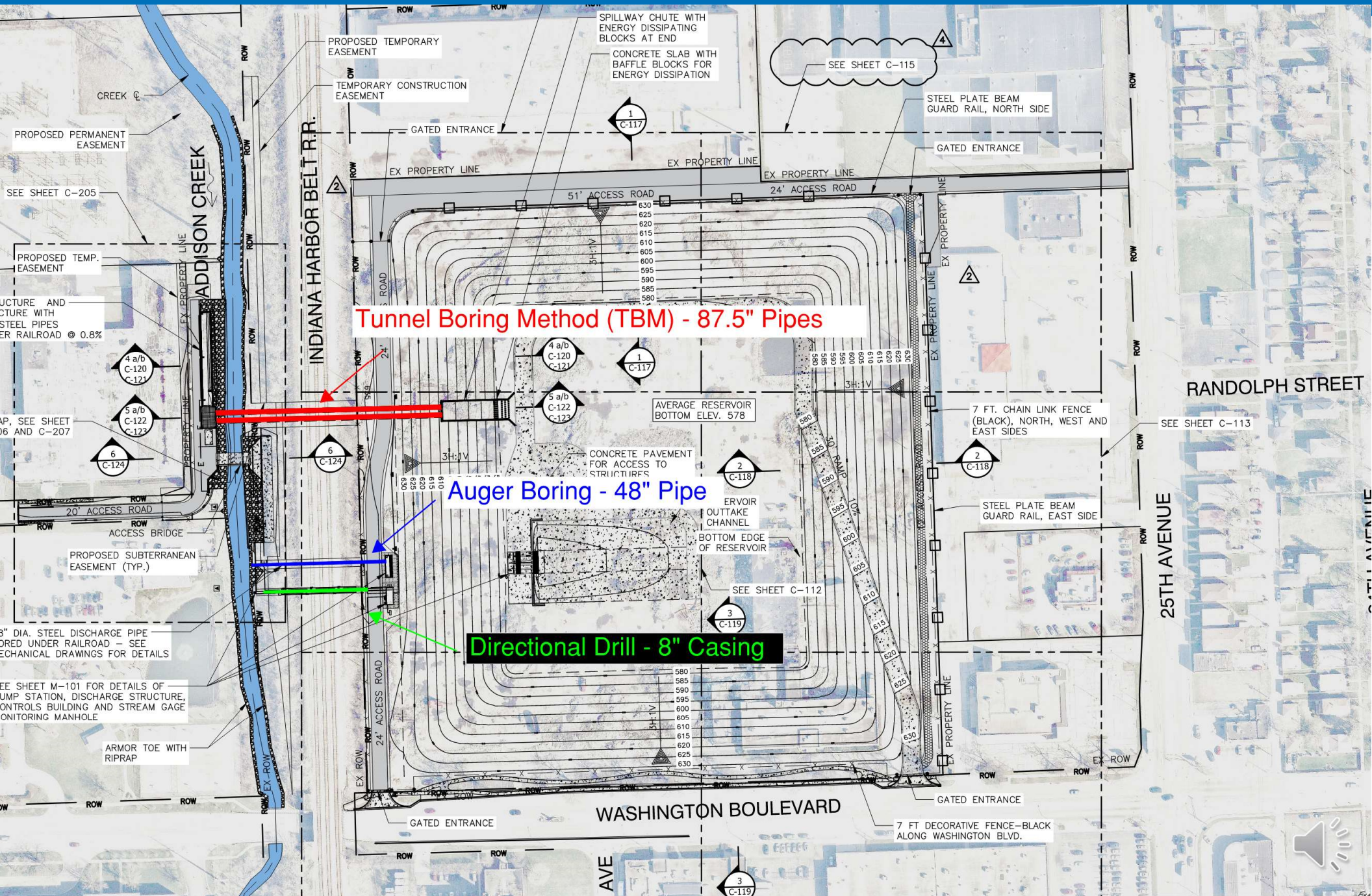


Video Credit: Dan Wendt





Tunneling





Installation of 87.5-inch Diameter Pipes



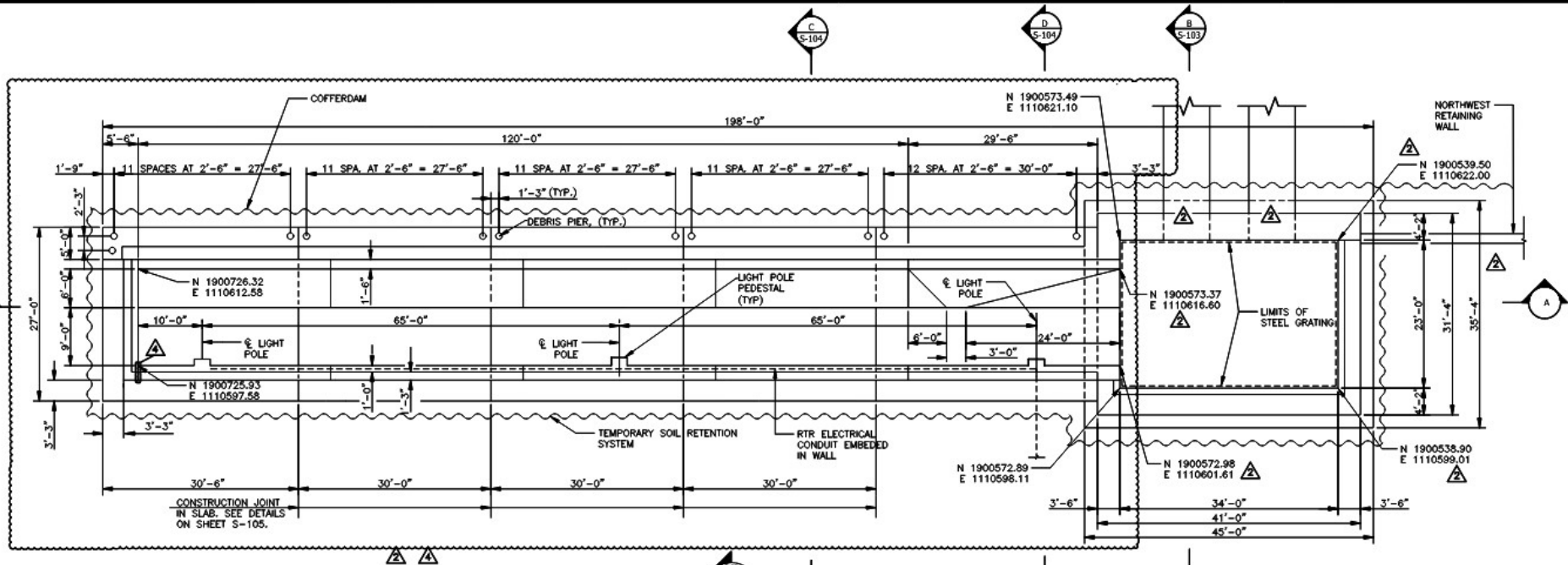
Addison Creek Reservoir, January 2021

Video Credit: Dan Wendt

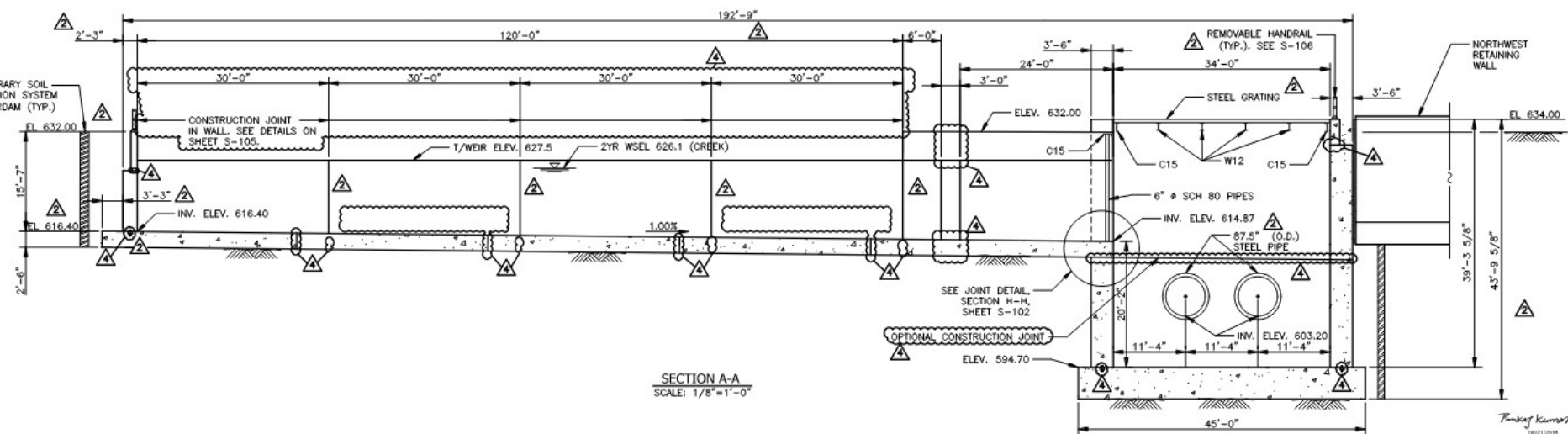
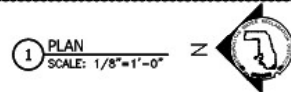




Intake/Drop Structure



1 PLAN
SCALE: 1/8"=1'-0"



SECTION A-A
SCALE: 1/8"=1'-0"

Rev.	Description	Appr.	Date
1	ADDITION NO. 1	PK	01/10/18
2	ADDITION NO. 2	PK	02/28/18
3	ADDITION NO. 3	PK	03/28/18
4	ADDITION NO. 4	PK	11/19/18

METROPOLITAN WATER RECLAMATION DISTRICT
OF GREATER CHICAGO

INFRASTRUCTURE
ENGINEERING | INCORPORATED



Designed by: SPK
Drawn by: RRD
Reviewed by: PK
Date: 09/21/2018
Scale: AS SHOWN

CONTRACT 11-186-3F
ADDISON CREEK RESERVOIR

INTAKE AND DROP STRUCTURE
PLAN AND ELEVATION

Pankaj Kumar
06/01/2018
09/05/2018, 11/03/2018



Sheet Number: S-1



Drop Structure



Photo Credit: IHC Construction





Drop Structure

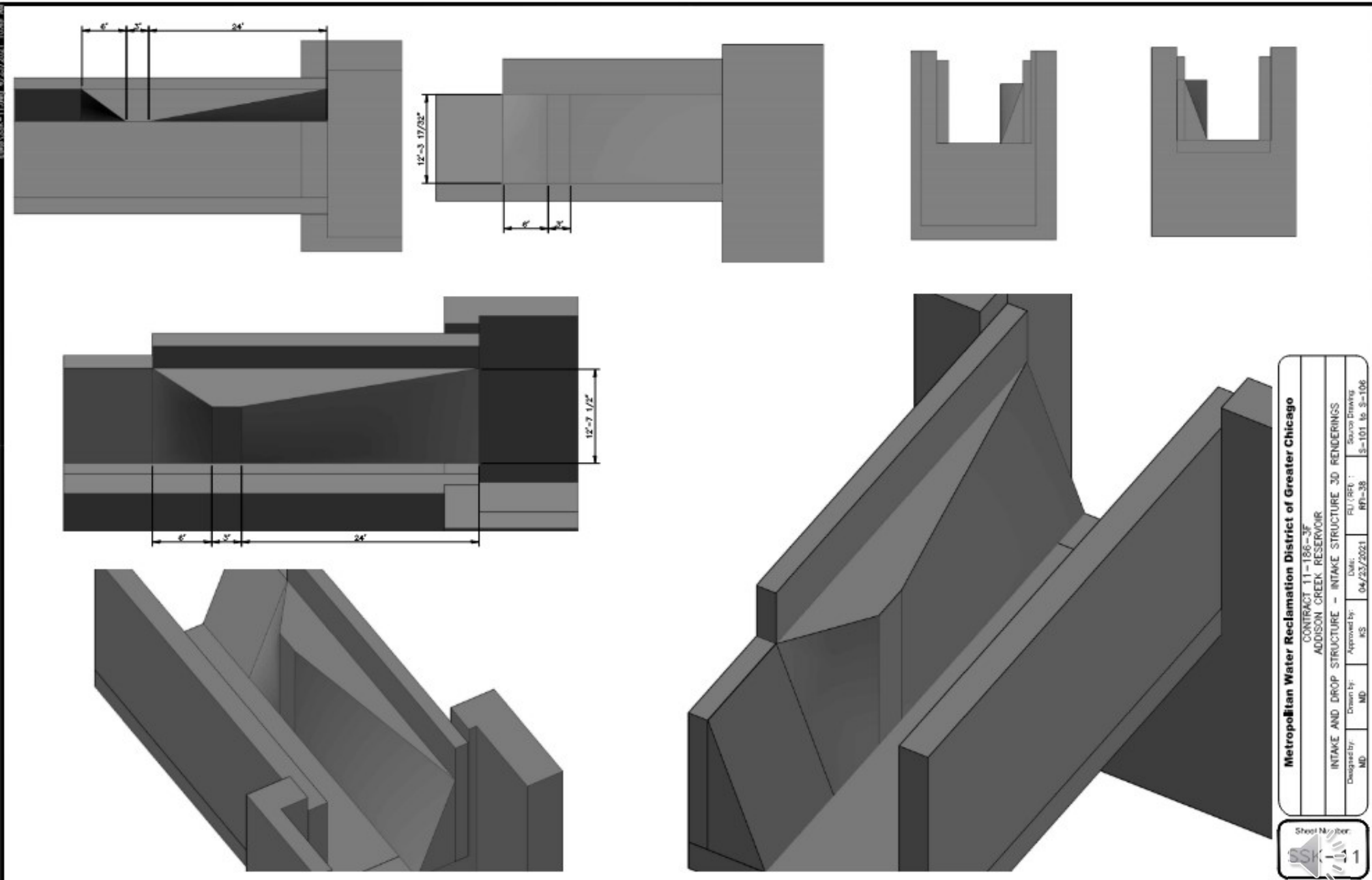


Photo Credit: Dan Wendt





Intake Structure



Metropolitan Water Reclamation District of Greater Chicago

CONTRACT 11-186-3F
ADDISON CREEK RESERVOIR

INTAKE AND DROP STRUCTURE - INTAKE STRUCTURE 3D RENDERINGS

Designed by: MD
Drawn by: MD
Approved by: KCS
Date: 04/23/2021
Revision: 1
Sheet Number: S-101 to S-106





Intake Structure



Photo Credit: IHC Construction





Intake Structure



Photo Credit: IHC Construction





Bridge, Intake Structure, and Drop Structure



Video Credit: Dan Wendt





Spillway



Photo Credit: Dan Wendt



Pump Station



Photo Credit: Dan Wendt





Pump Station

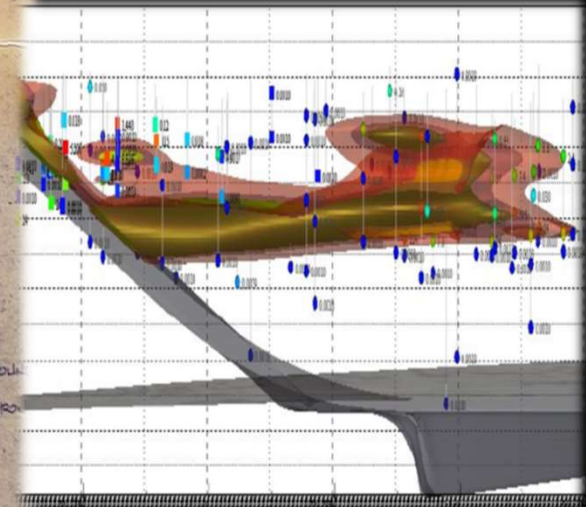
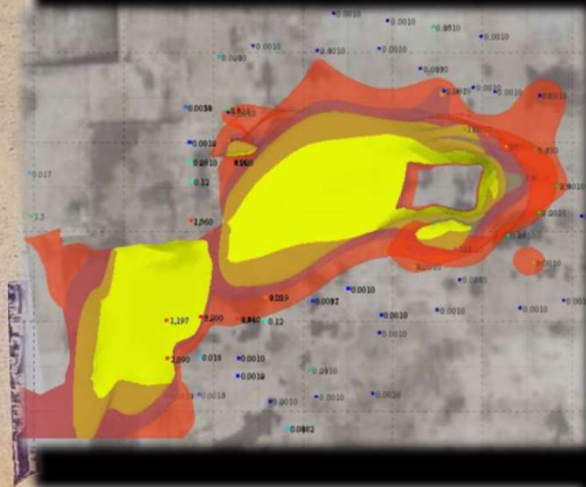
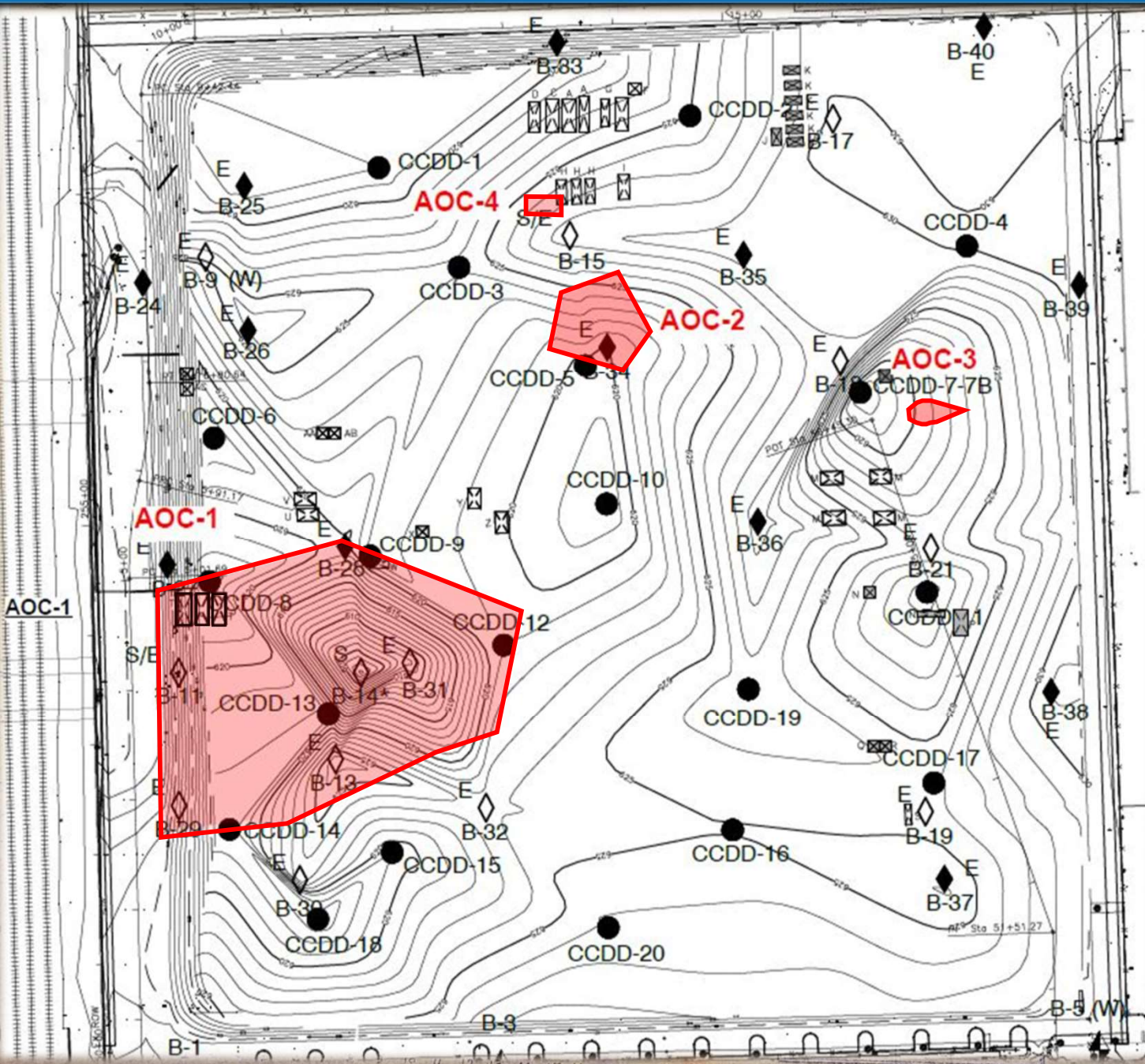


Photo Credit: Dan Wendt





Source Contamination





Contaminated Soils



Photo Credit: Dan Wendt





Mass Excavation - Dewatering

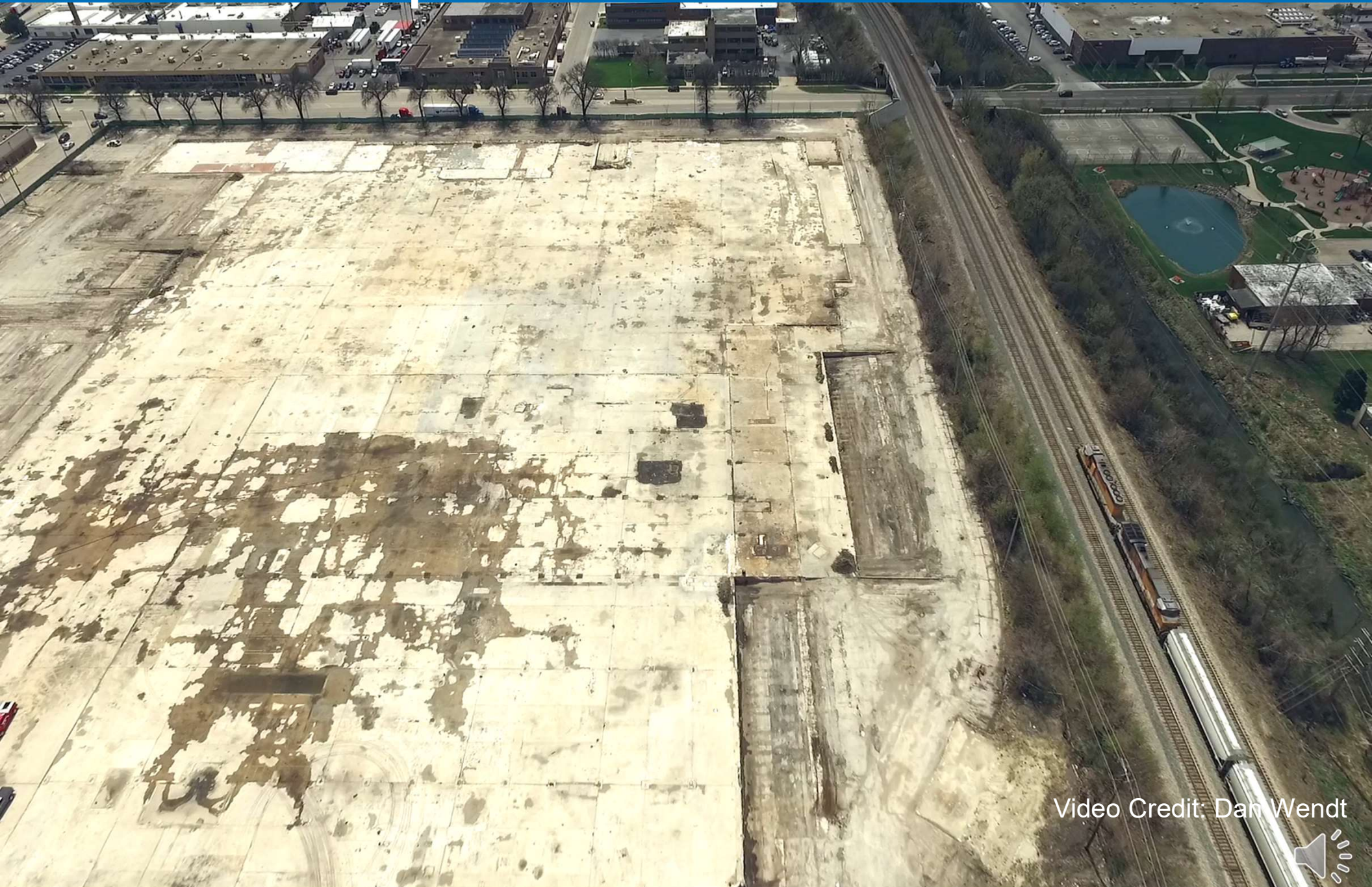


Photo Credit: IHC Construction



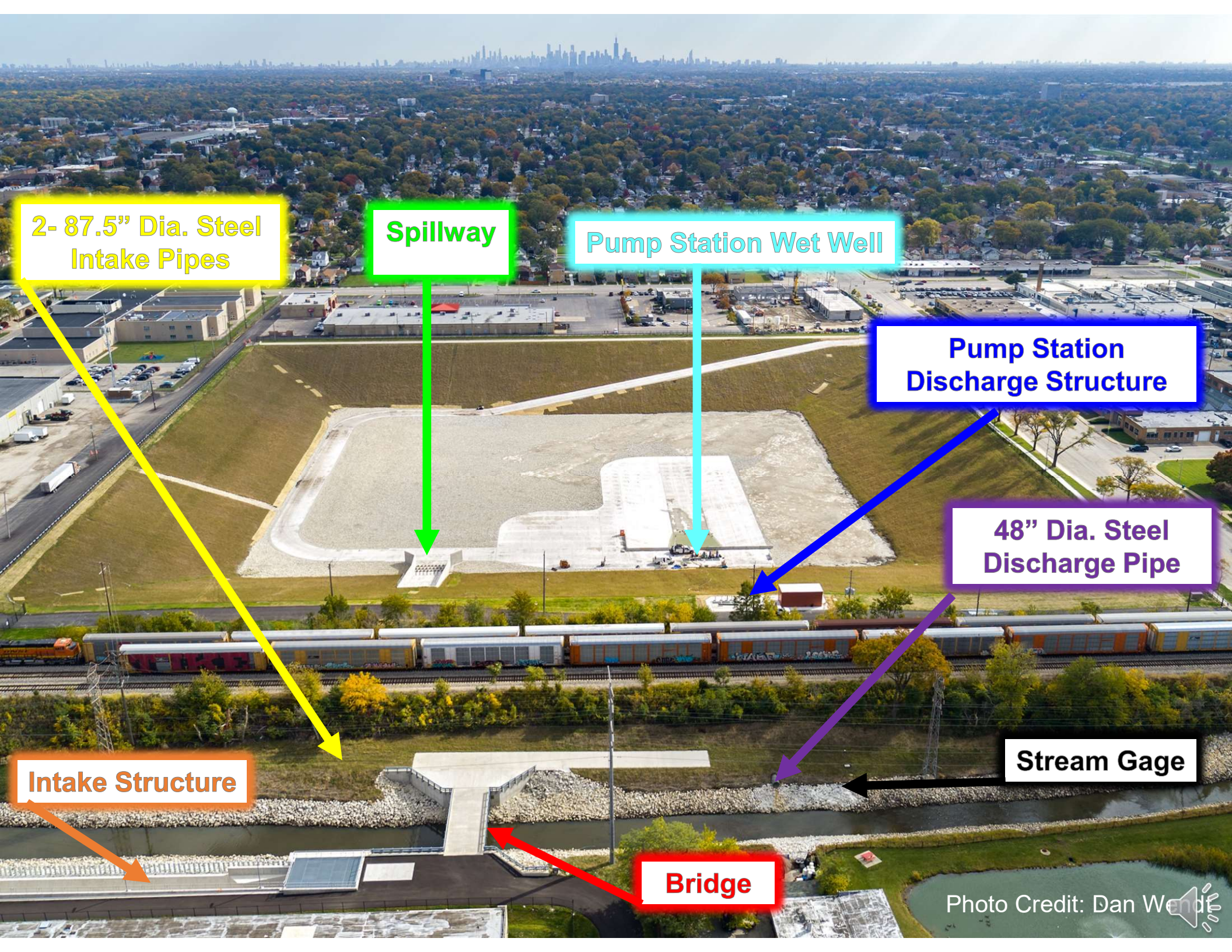


Timelapse Video of Construction April 2019 to October 2022



Video Credit: Dan Wendt





2- 87.5" Dia. Steel Intake Pipes

Spillway

Pump Station Wet Well

Pump Station Discharge Structure

48" Dia. Steel Discharge Pipe

Intake Structure

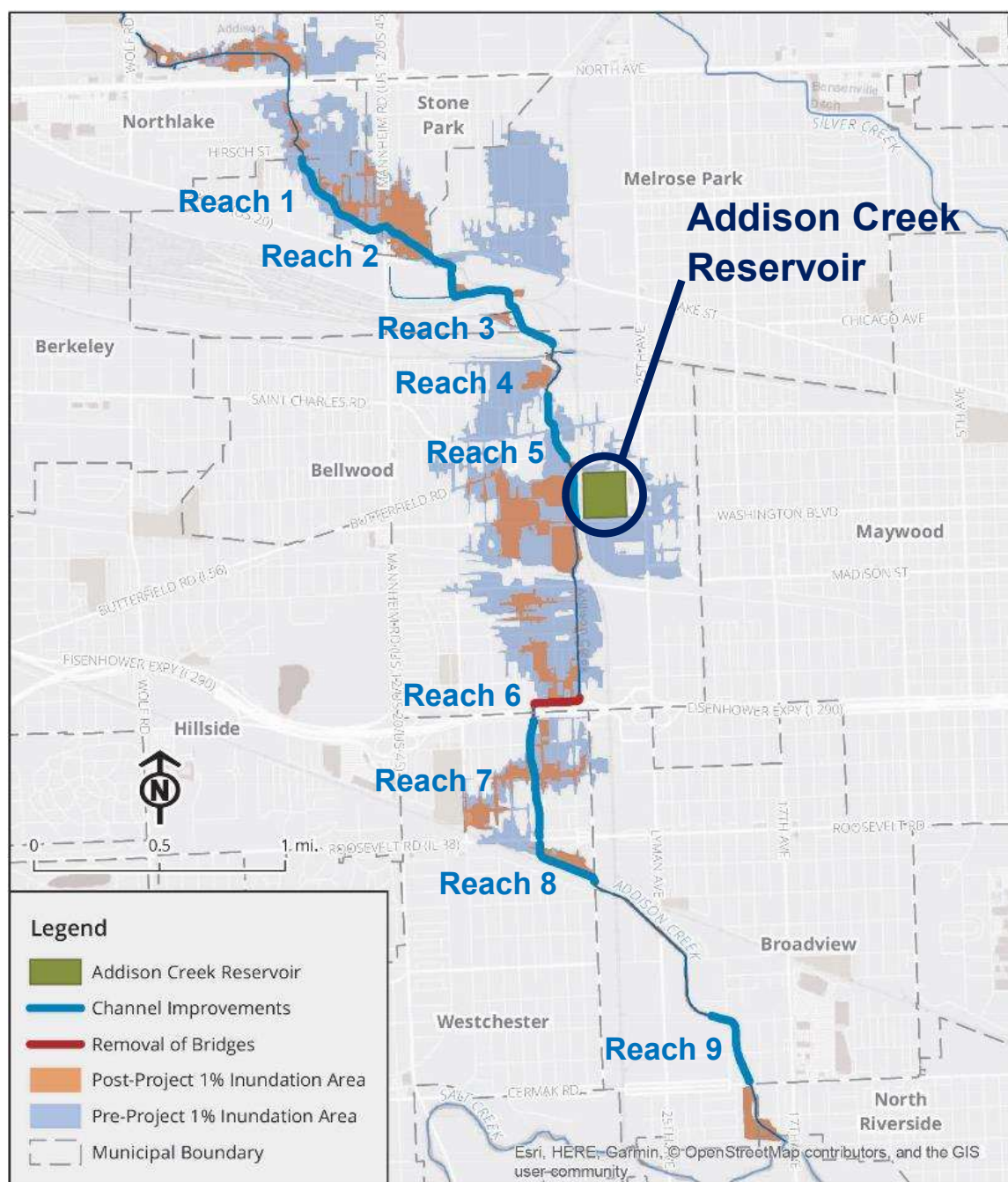
Stream Gage

Bridge

Photo Credit: Dan Wendt



Demolition for Addison Creek Channel Improvements



- **Contract:**
11-187-AF
- **Contractor:**
McDonagh Demolition, Inc.
- **Awarded:**
July 2021
- **Completed:**
January 2022
- **Cost:**
\$747,601
- **Demo**
16 Residential Homes &
13 Mobile Home Trailers





Relocation Warning Siren and Billboard



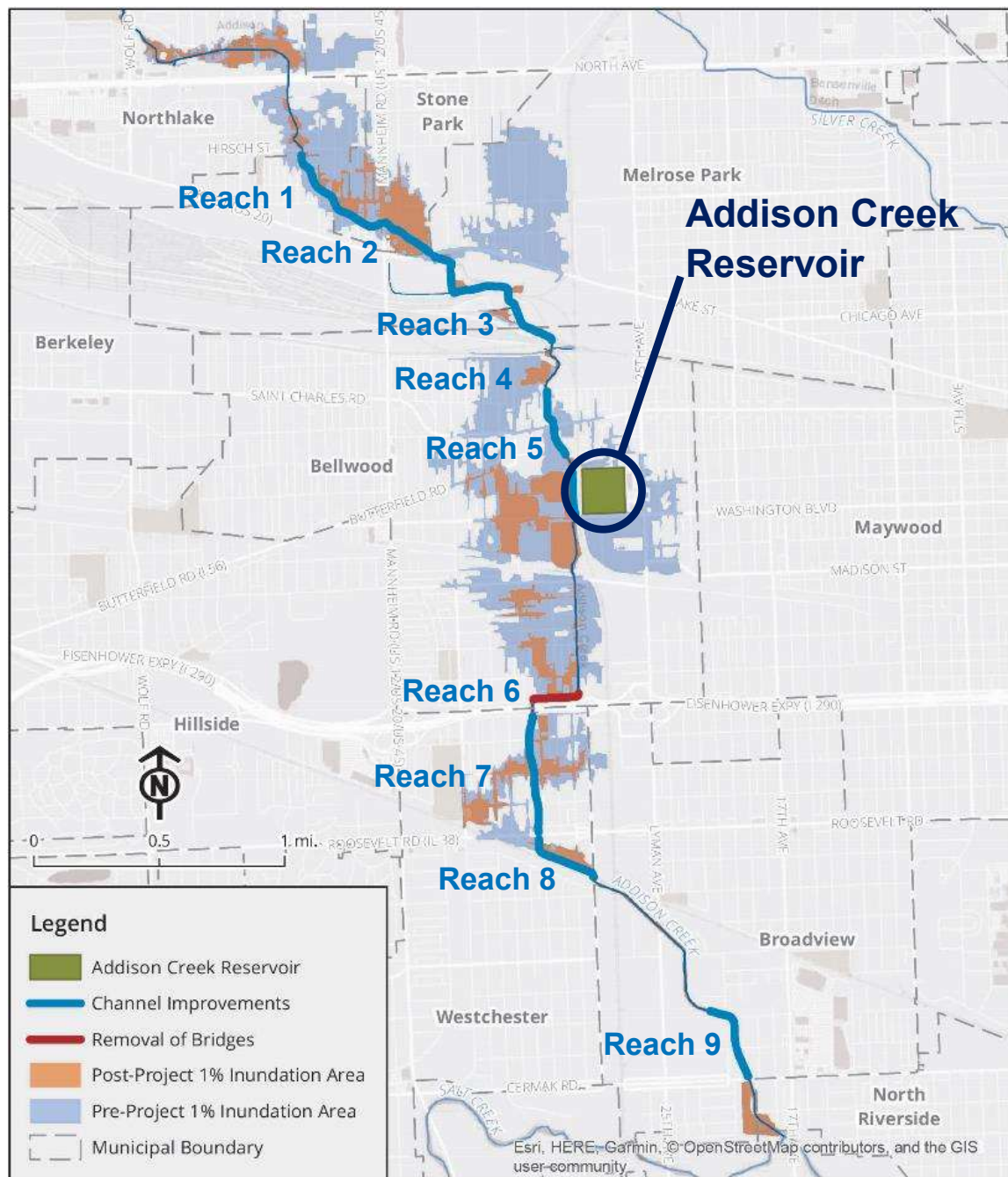
Photo Credit: Mick Cosme



Photo Credit: Google



Addison Creek Channel Improvements

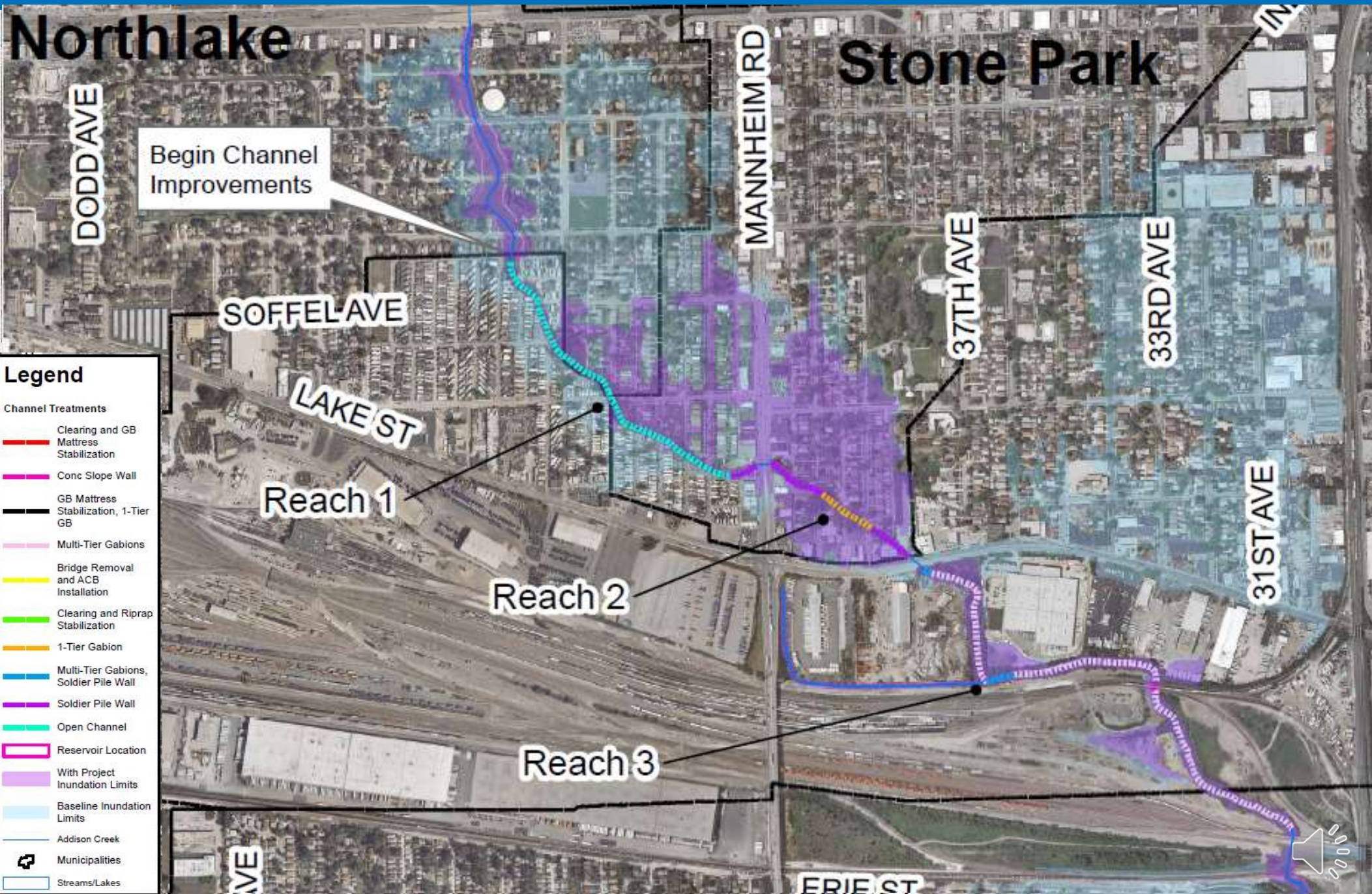


- **Contractor:**
TBD- Currently Out for Bids
- **Est Award Date:**
Summer 2023
- **Est. Completion Date:**
Summer 2026
- **Est. Value:**
Between \$57,133,000 and \$69,161,000
- **Channel Improvements:**
App. 3 miles





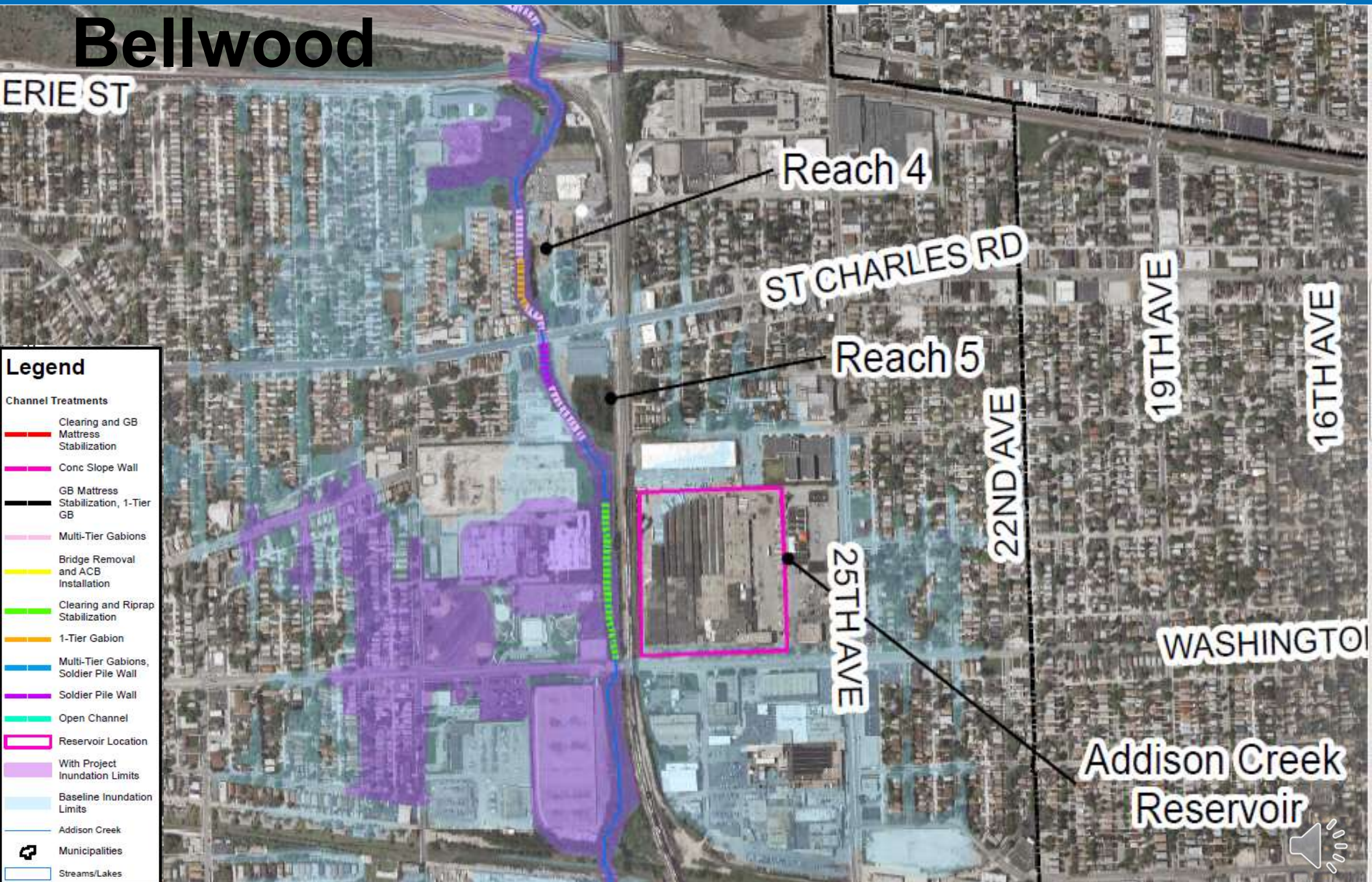
Addison Creek Channel Improvements





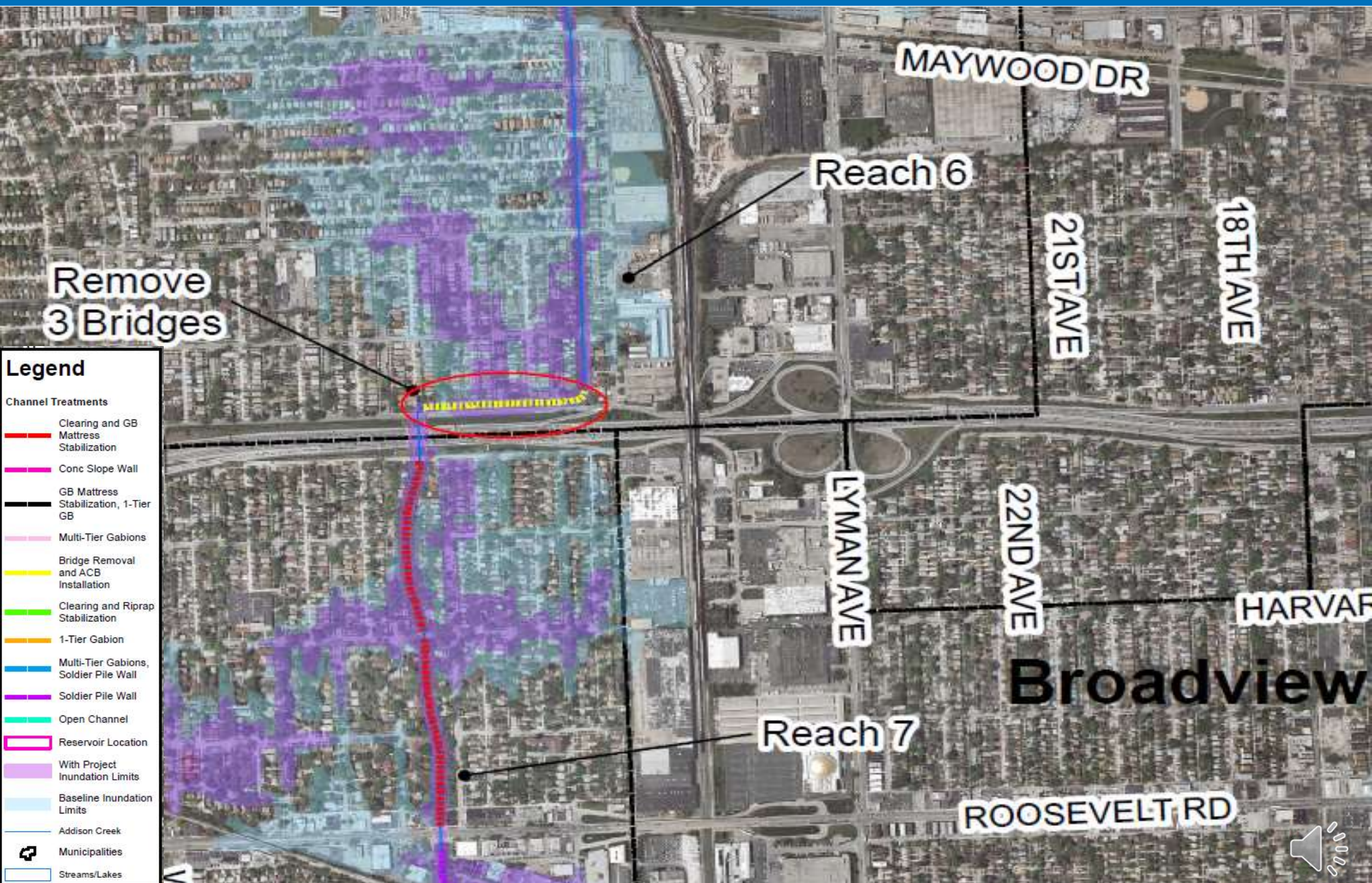
Addison Creek Channel Improvements

Bellwood





Addison Creek Channel Improvements





Addison Creek Channel Improvements





Milestones to Completion

Complete Reservoir Control Building - Spring 2023

Place Reservoir Online - Summer 2023

Construct Reach 1, 2, Upstream 3, 7, & 9 - Summer 2024

Construct Reach Downstream 3, 4, 5, 6, & 8 - Summer 2025

Following with FEMA Map Revisions