

Figure 3.1.1

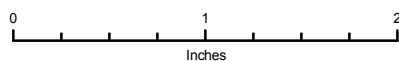
BUTTERFIELD CREEK SUBWATERSHED OVERVIEW

Little Calumet River DWP

- Local Problems**
- Bank Erosion
 - ▲ Maintenance
 - ◆ Pavement Flooding
 - ◇ Storm Sewer Flow Restriction
- Regional Problems**
- Bank Erosion
 - ▲ Maintenance
 - Overbank Flooding
 - ◆ Pavement Flooding
 - ★ Problem Area Identified Through Modeling
 - * Candidate Structures for Floodproofing/Acquisition
 - Project Alternative Location
- River/Stream
- ▭ Municipal Boundary
- ▭ County Boundary
- ▨ DWP 100-year Inundation Area
- FEMA Floodplain**
- Zone A; Zone AH; Zone AO
 - Zone AE



1 inch = 4,000 feet



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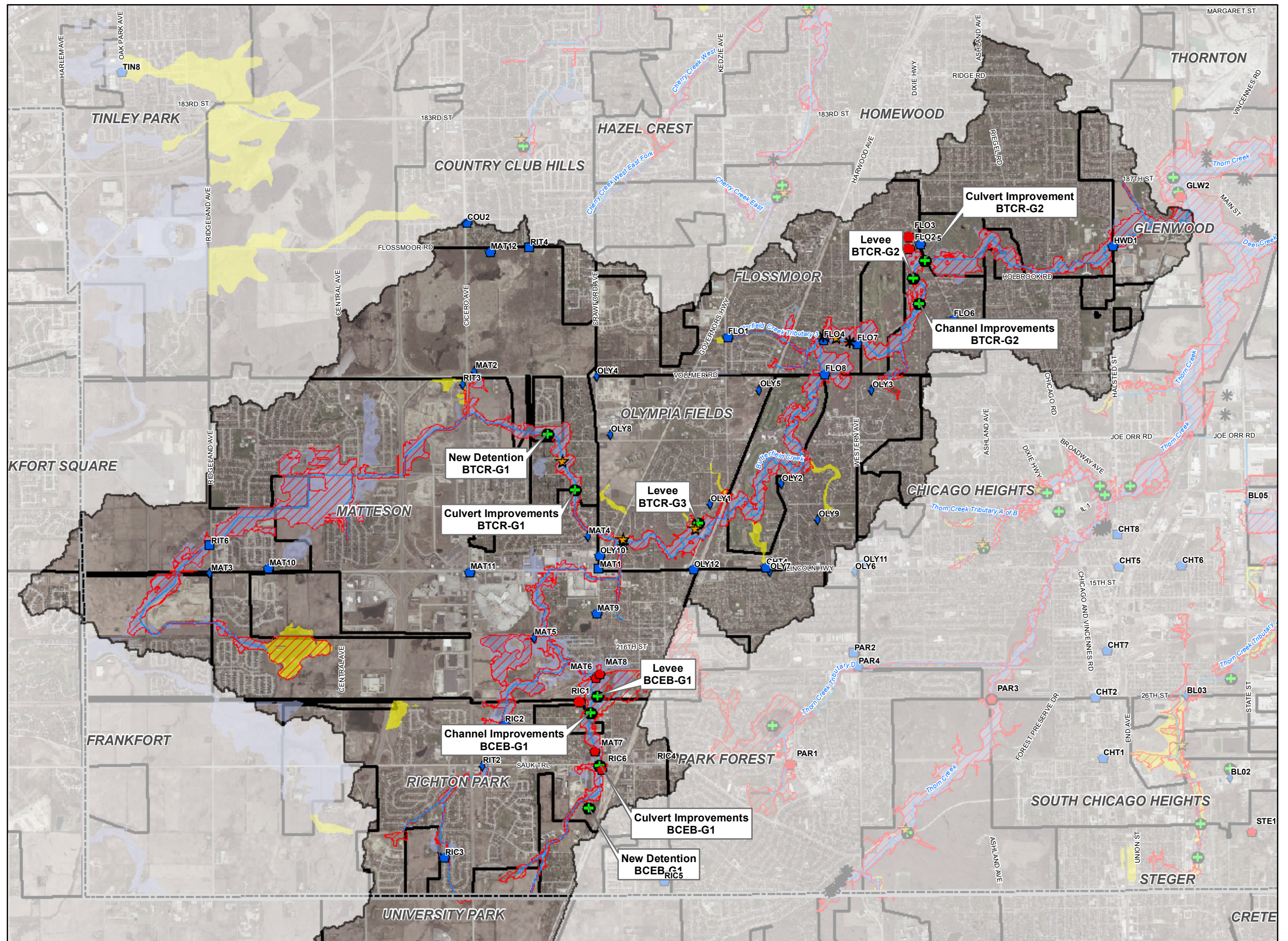


Figure 3.1.5

**BUTTERFIELD CREEK
ALTERNATIVE
BTCR-G1**
Little Calumet River DWP

Alternative Description:
Replace 206th Street culvert and construct
new 65 ac-ft detention facility

Conceptual Level Cost:
\$8,494,000
Benefit: \$1,495,000
B/C Ratio: 0.18

- * Candidate Structures for Floodproofing/Acquisition
- Regional Problems**
 - Bank Erosion
 - ▲ Maintenance
 - Overbank Flooding
 - ◆ Pavement Flooding
- Local Problems**
 - Bank Erosion
 - ▲ Maintenance
 - ◆ Pavement Flooding
 - ◆ Storm Sewer Flow Restriction
- River/Stream
- ▭ Municipalities
- ▭ County Boundary
- ▭ Project Alternative Location
- 100-year Inundation Area With Project
- 100-year Inundation Area Without Project

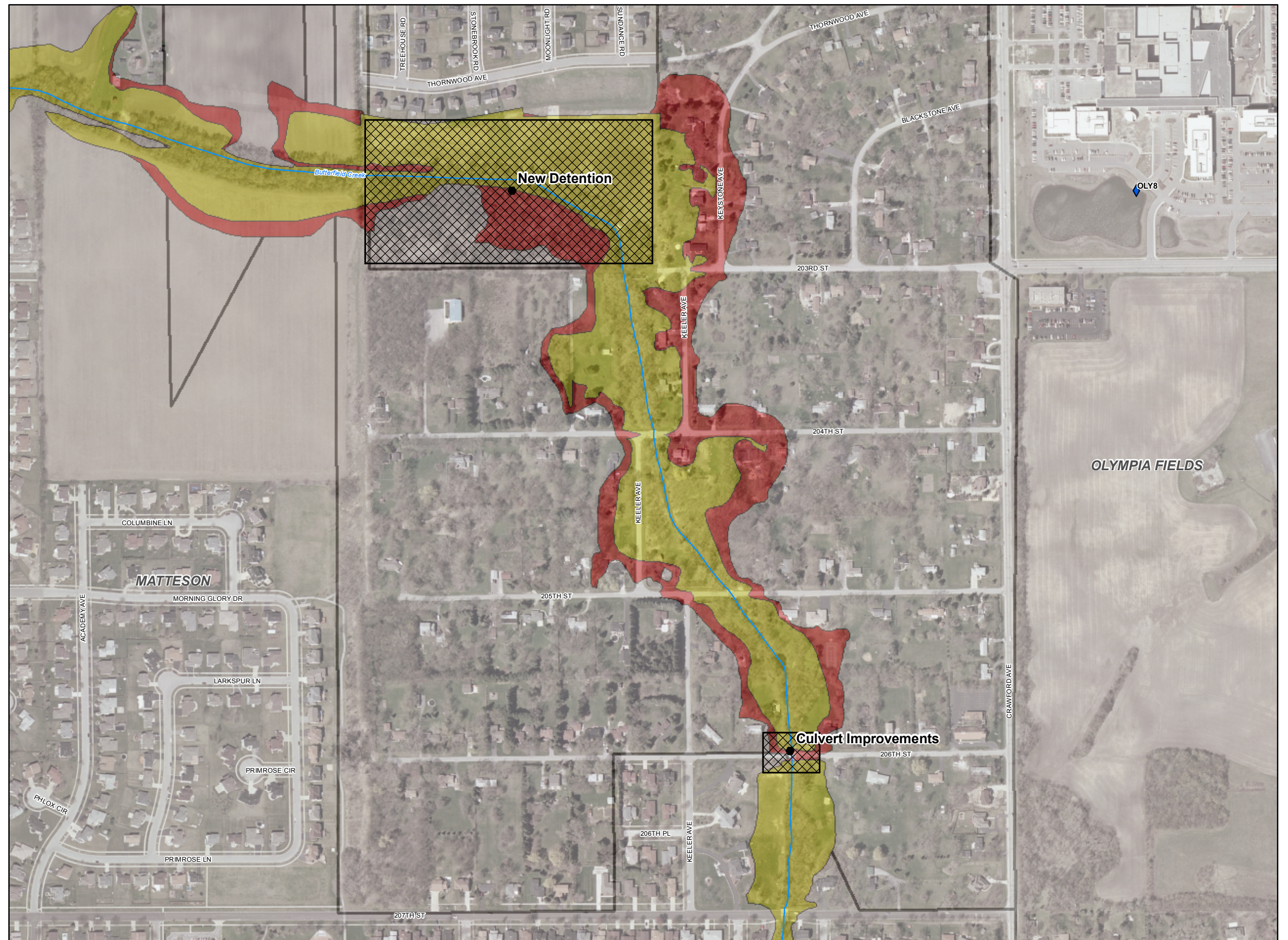
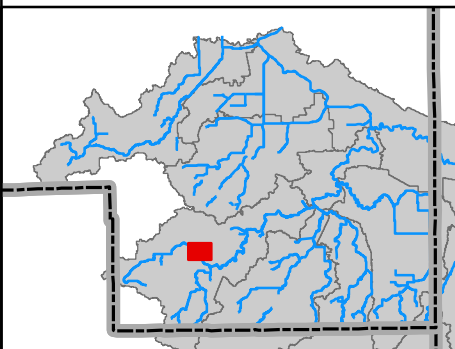
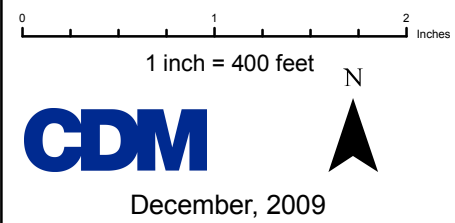


Figure 3.1.6

**BUTTERFIELD CREEK
ALTERNATIVE
BTCR-G2**
Little Calumet River DWP

Alternative Description:
Construct a 700 LF levee along Greenwood Drive

Conceptual Level Cost:
\$9,556,000
Benefit: \$13,000
B/C Ratio: <0.01

* Candidate Structures for Floodproofing/Acquisition

Regional Problems

- Bank Erosion
- ▲ Maintenance
- Overbank Flooding
- ◆ Pavement Flooding

Local Problems

- Bank Erosion
- ▲ Maintenance
- ◆ Pavement Flooding
- ◆ Storm Sewer Flow Restriction

— River/Stream

▭ Municipalities

▭ County Boundary

▭ Project Alternative Location

■ 100-year Inundation Area With Project

■ 100-year Inundation Area Without Project

0 1 2 Inches

1 inch = 250 feet



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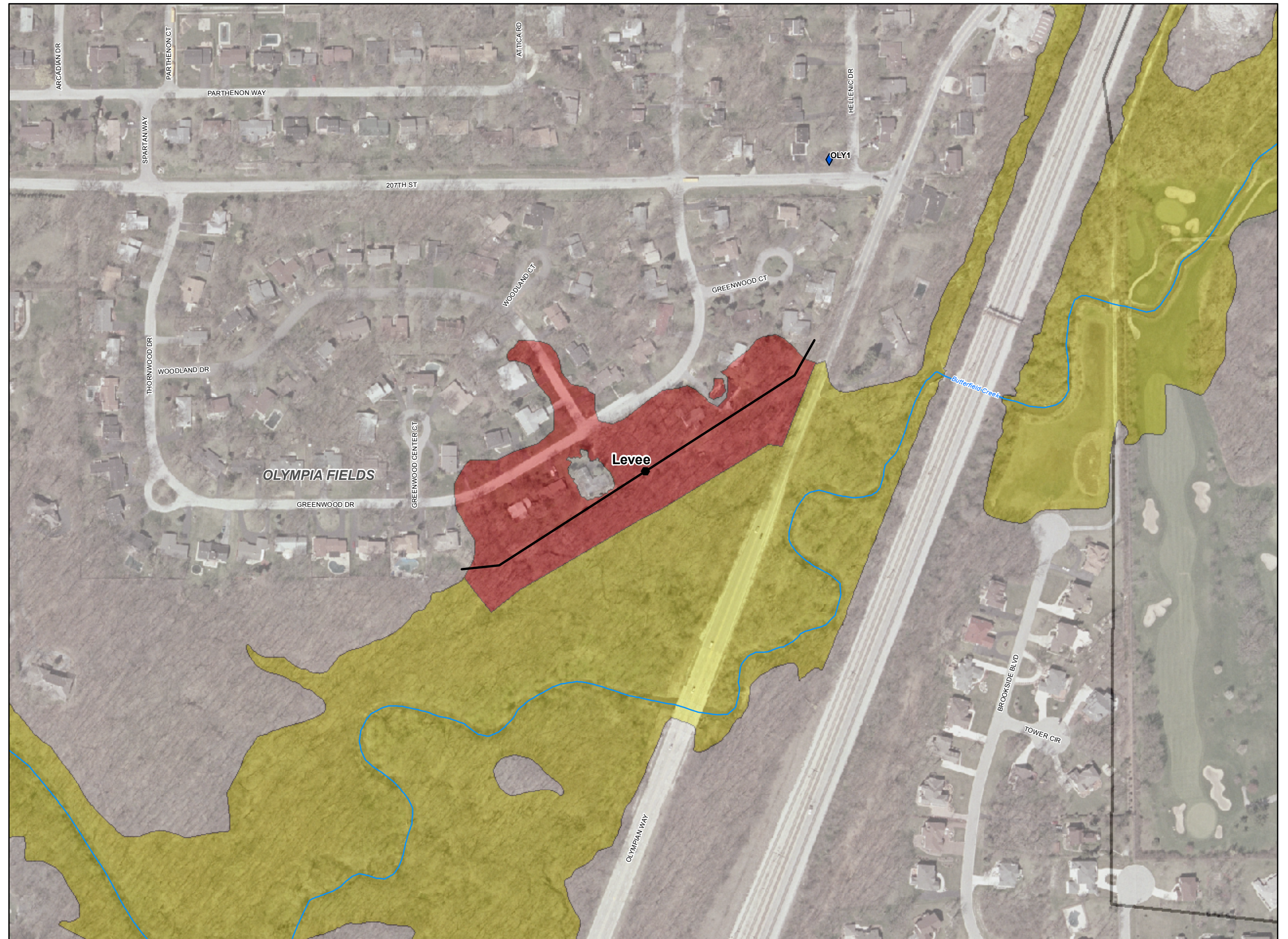
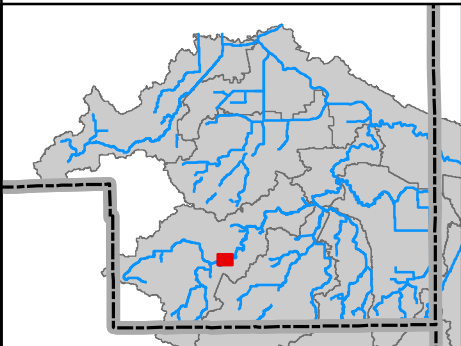


Figure 3.1.7

**BUTTERFIELD CREEK
ALTERNATIVE
BTCR-G3**
Little Calumet River DWP

Alternative Description:
Channel improvements near Laurel Avenue and construct a floodwall on west bank from Cambridge Avenue to Dixie Avenue

Conceptual Level Cost:
\$29,876,000
Benefit: \$1,109,000
B/C Ratio: 0.04

- * Candidate Structures for Floodproofing/Acquisition
- Regional Problems**
 - Bank Erosion
 - ▲ Maintenance
 - Overbank Flooding
 - ◆ Pavement Flooding
- Local Problems**
 - Bank Erosion
 - ▲ Maintenance
 - ◆ Pavement Flooding
 - ◆ Storm Sewer Flow Restriction
- River/Stream
- ▭ Municipalities
- ▭ County Boundary
- ▭ Project Alternative Location
- 100-year Inundation Area With Project
- 100-year Inundation Area Without Project

0 1 2
Inches

1 inch = 400 feet



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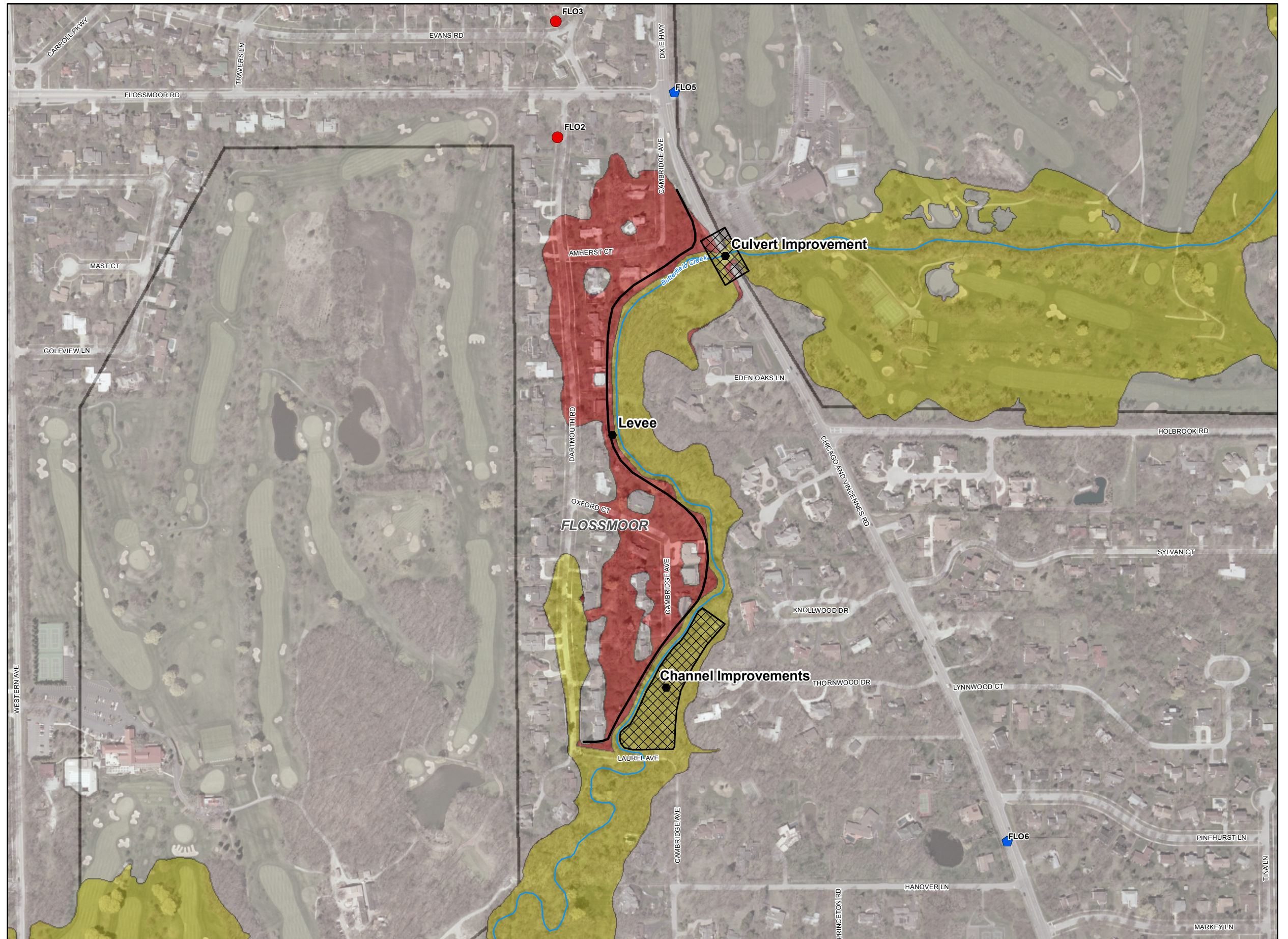
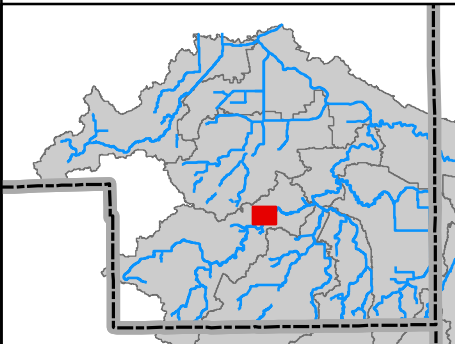


Figure 3.1.8

**BUTTERFIELD CREEK
ALTERNATIVE
BCEB-G1**
Little Calumet River DWP

Alternative Description:
Repalce Sauk Trail culvert, construct 130 ac-ft detention facility and a levee along Governor's Highway

Conceptual Level Cost:
\$28,079,000
Benefit: \$515,000
B/C Ratio: 0.02

* Candidate Structures for Floodproofing/Acquisition

Regional Problems

- Bank Erosion
- ▲ Maintenance
- Overbank Flooding
- ◆ Pavement Flooding

Local Problems

- Bank Erosion
- ▲ Maintenance
- ◆ Pavement Flooding
- ◆ Storm Sewer Flow Restriction

— River/Stream

▭ Municipalities

▭ County Boundary

▨ Project Alternative Location

■ 100-year Inundation Area With Project

■ 100-year Inundation Area Without Project

0 1 2
Inches

1 inch = 700 feet



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