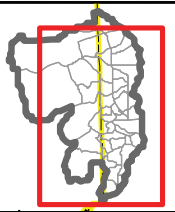


Legend

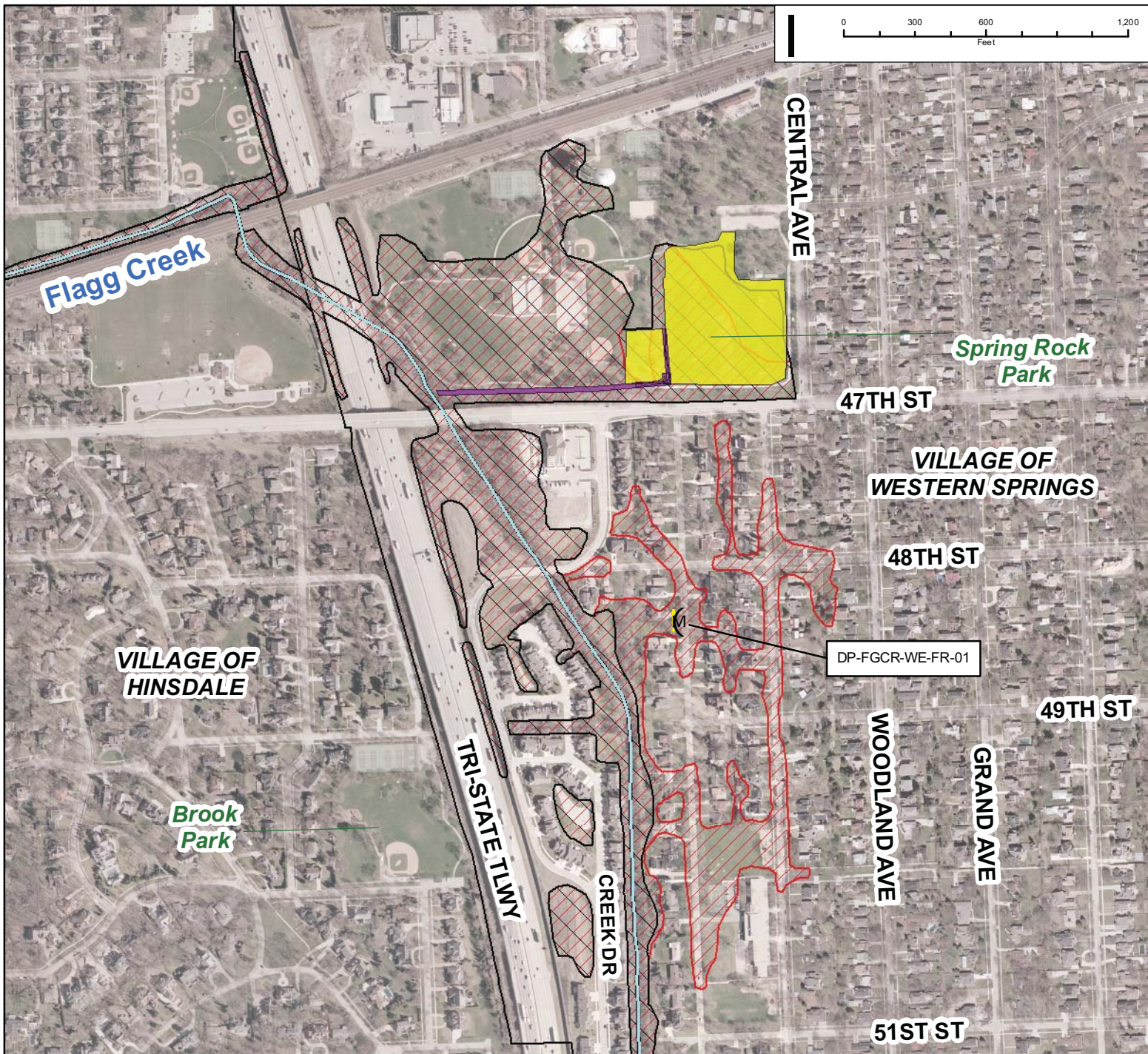
	100-Year Storm Event Flood Inundation Without Project		Reservoir		Approximate Creek Channel Location	Problem Areas	
	100-Year Storm Event Flood Inundation With Project		Levee/Floodwall		Municipal Boundary		
			Culvert/Bridge Modification		Watershed Boundary		
			Channel Improvements				



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FLAGG CREEK WATERSHED PROPOSED ALTERNATIVE OVERALL

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












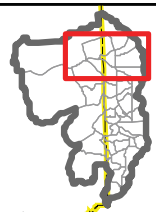
Subwatershed: Flagg Creek
 Alternative: FGCR-1

Alternatives Description: - Add and optimize storage in Spring Rock Park by lowering soccer fields appx. 8 ft. to 633
 - Lower high spots to 641 in area to west of soccer fields to allow water to flow freely
 - Add gravity outlet with flap gate
 - Tie in to existing swale
 - Appx. 32 A-F additional storage

Concept Level Cost: \$6,229,554
 Benefits: \$290,306
 B/C Ratio: 0.05

Legend

-  100-Year Storm Event Flood Inundation Without Project
-  100-Year Storm Event Flood Inundation With Project
-  Reservoir
-  Levee/Floodwall
-  Culvert/Bridge Modification
-  Channel Improvements
-  Approximate Creek Channel Location
-  Municipal Boundary
-  Watershed Boundary
-  **Problem Areas**
-  Modeled
-  Regional



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TITLE:
**LOWER DES PLAINES RIVER DETAILED WATERSHED PLAN
 FLAGG CREEK WATERSHED
 RECOMMENDED ALTERNATIVE FGCR-1**

PROJ. NO.
 DATE: 09-08-2010
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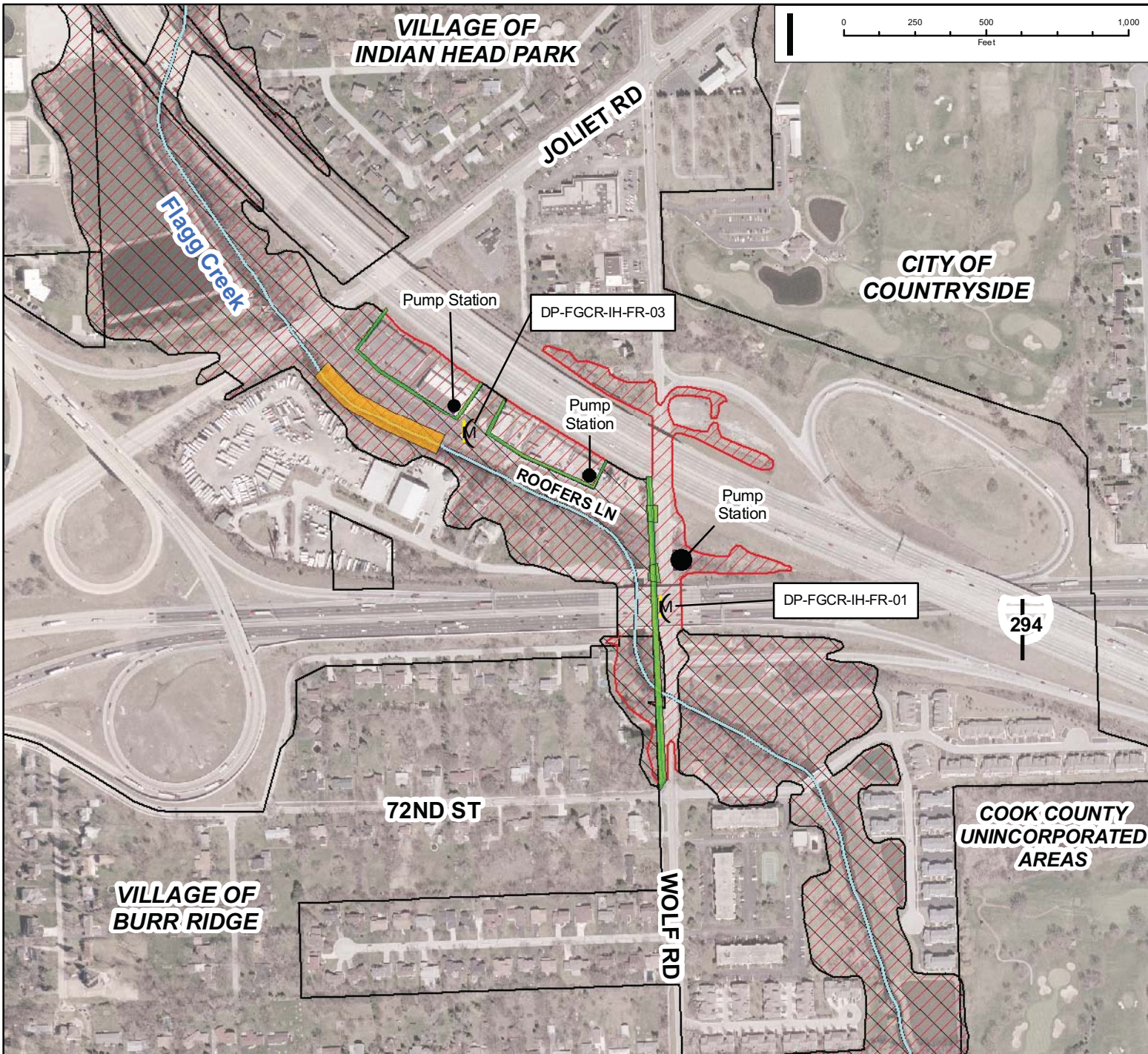
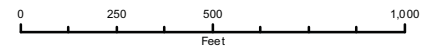
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DWN.		GIS USER	
CHKD.		PLOT DATE	
FILE:			

FIGURE 3.11.9

**VILLAGE OF
INDIAN HEAD PARK**



Subwatershed: Flagg Creek

Alternative: FGCR-2

- Alternatives Description:
- Floodwall to 638.4 (3ft freeboard)
 - Floodwall to 638.6 (3ft freeboard)
 - Channel Improvements (not needed if FGCR-1 & 59DT-1 are selected)
 - 1840 gpm pump at east building
 - 1840 gpm pump at west building

- Wolf Floodwall. 1ft freeboard= 634.8 to 635.7
- Pump Station for 0.2 square mile drainage area (Q100=85cfs)
- Raise Roofers Lane Entrance appx 2 ft.
- Raise 71st Pl. appx. 2.5 ft.

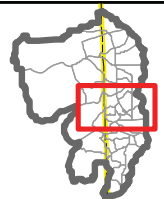
Concept Level Cost: \$10,563,338

Benefits: \$183,916

B/C Ratio: 0.02

Legend

- | | | | | | | | |
|--|---|--|-----------------------------|--|------------------------------------|----------------------|------------------|
| | 100-Year Storm Event Flood Inundation Without Project | | Reservoir | | Approximate Creek Channel Location | Problem Areas | |
| | 100-Year Storm Event Flood Inundation With Project | | Levee/Floodwall | | Municipal Boundary | | |
| | 100-Year Storm Event Flood Inundation With Project | | Culvert/Bridge Modification | | Watershed Boundary | | Modeled Regional |
| | Channel Improvements | | | | | | Regional |



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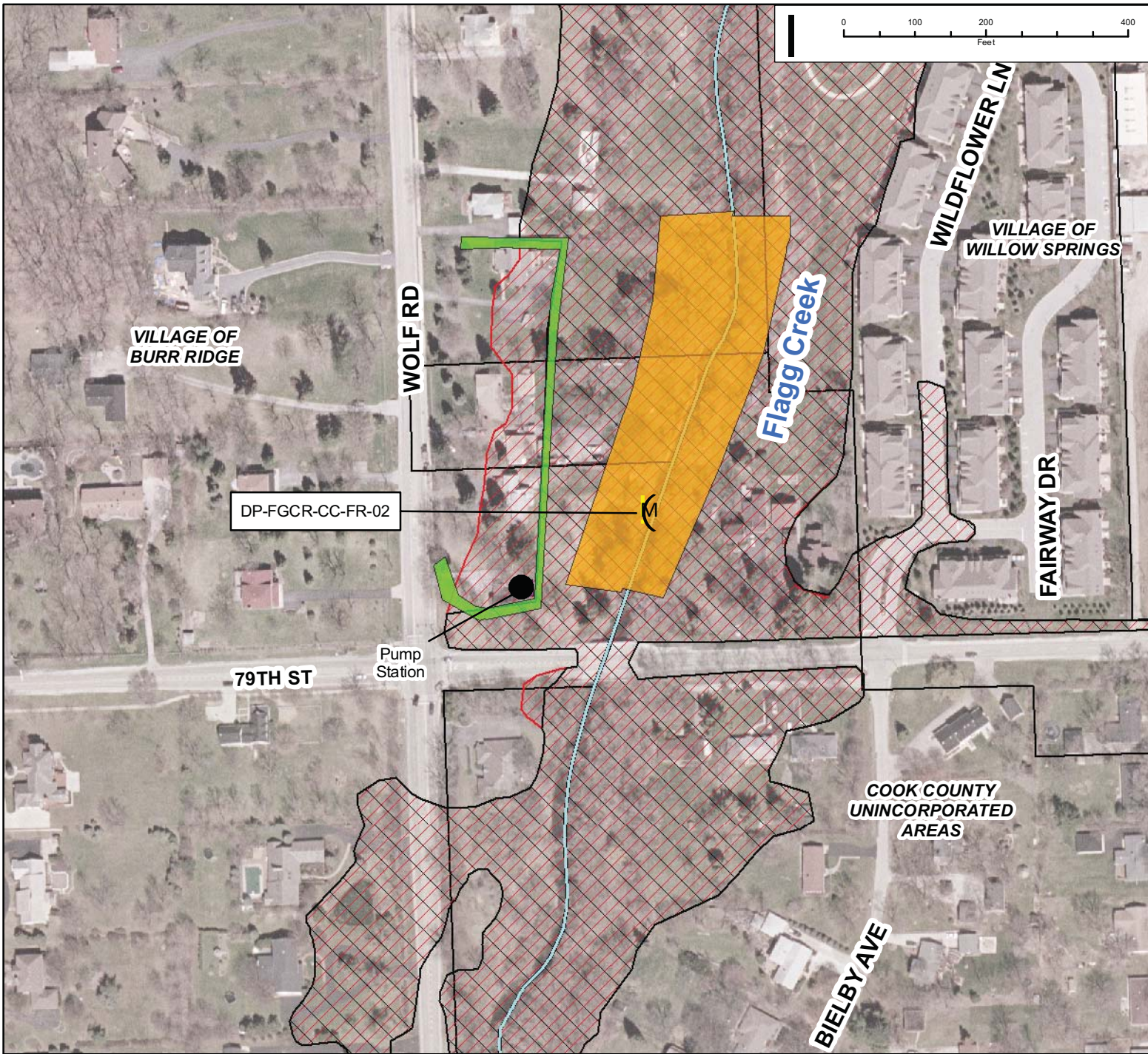
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FIGURE 3.11.10

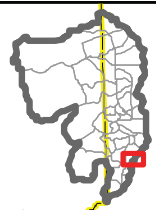


Subwatershed: Flag Creek
 Alternative: FGCR-3
 Alternatives Description: - Floodwall and pump station on west side of the channel
 - Channel improvements including approximately 6 M-F mitigation storage

Concept Level Cost: \$3,689,102
 Benefits: \$222,718
 B/C Ratio: 0.06

Legend

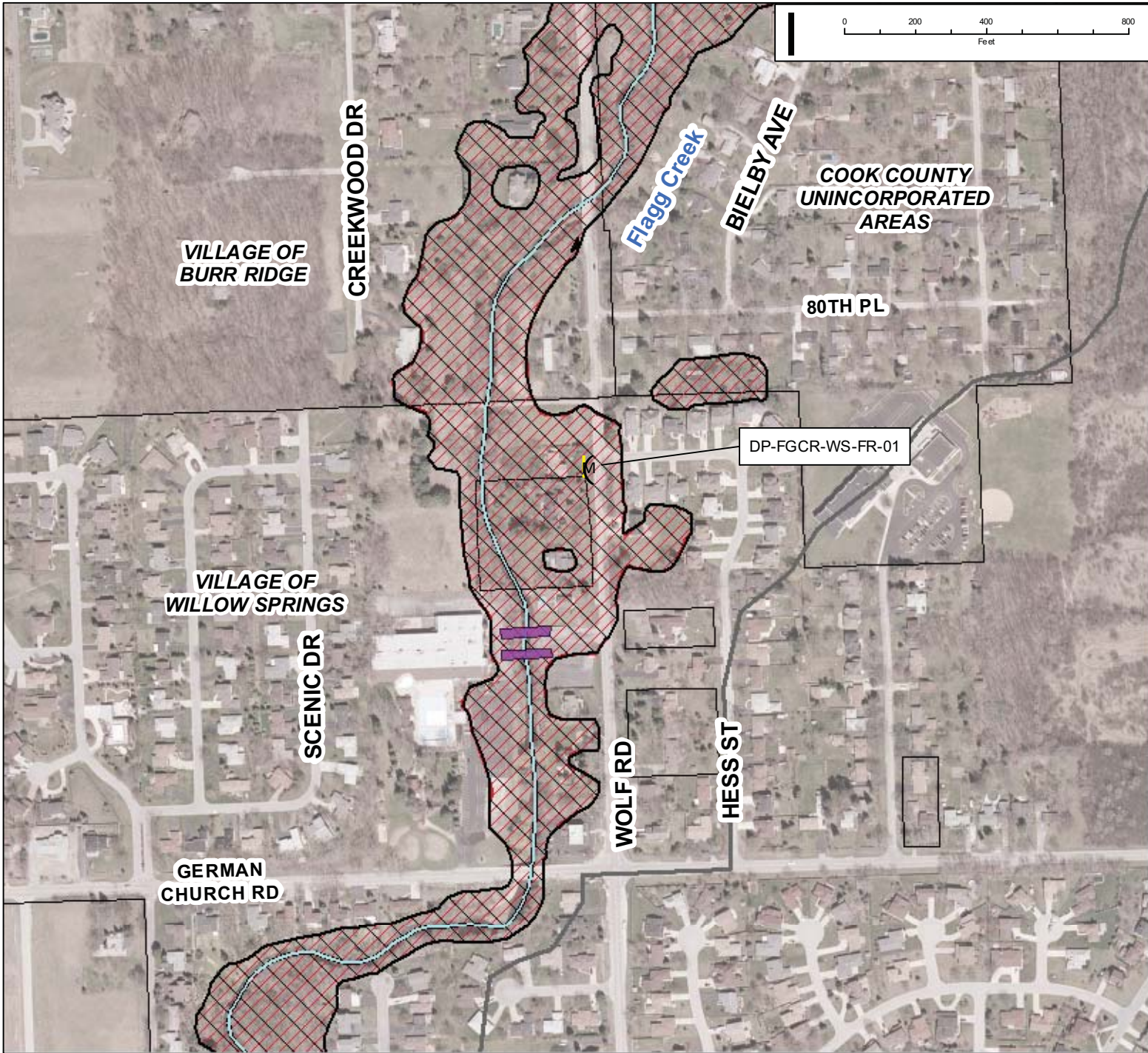
- | | | | | | | |
|--|---|--|----------------------|--|------------------------------------|--|
| | 100-Year Storm Event Flood Inundation Without Project | | Reservoir | | Approximate Creek Channel Location | Problem Areas
Modeled Regional |
| | 100-Year Storm Event Flood Inundation With Project | | Levee/Floodwall | | Municipal Boundary | |
| | Culvert/Bridge Modification | | Channel Improvements | | Watershed Boundary | |



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 FLAG CREEK WATERSHED
 RECOMMENDED ALTERNATIVE FGCR-3**











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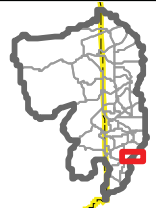


Subwatershed: Flag Creek
 Alternative: FGCR-4
 Alternatives Description: - Remove/replace pedestrian and vehicle entrance bridges over Flag Creek
 - Replace auto entrance

Concept Level Cost: \$668,351
 Benefits: \$489,707
 B/C Ratio: 0.7

Legend

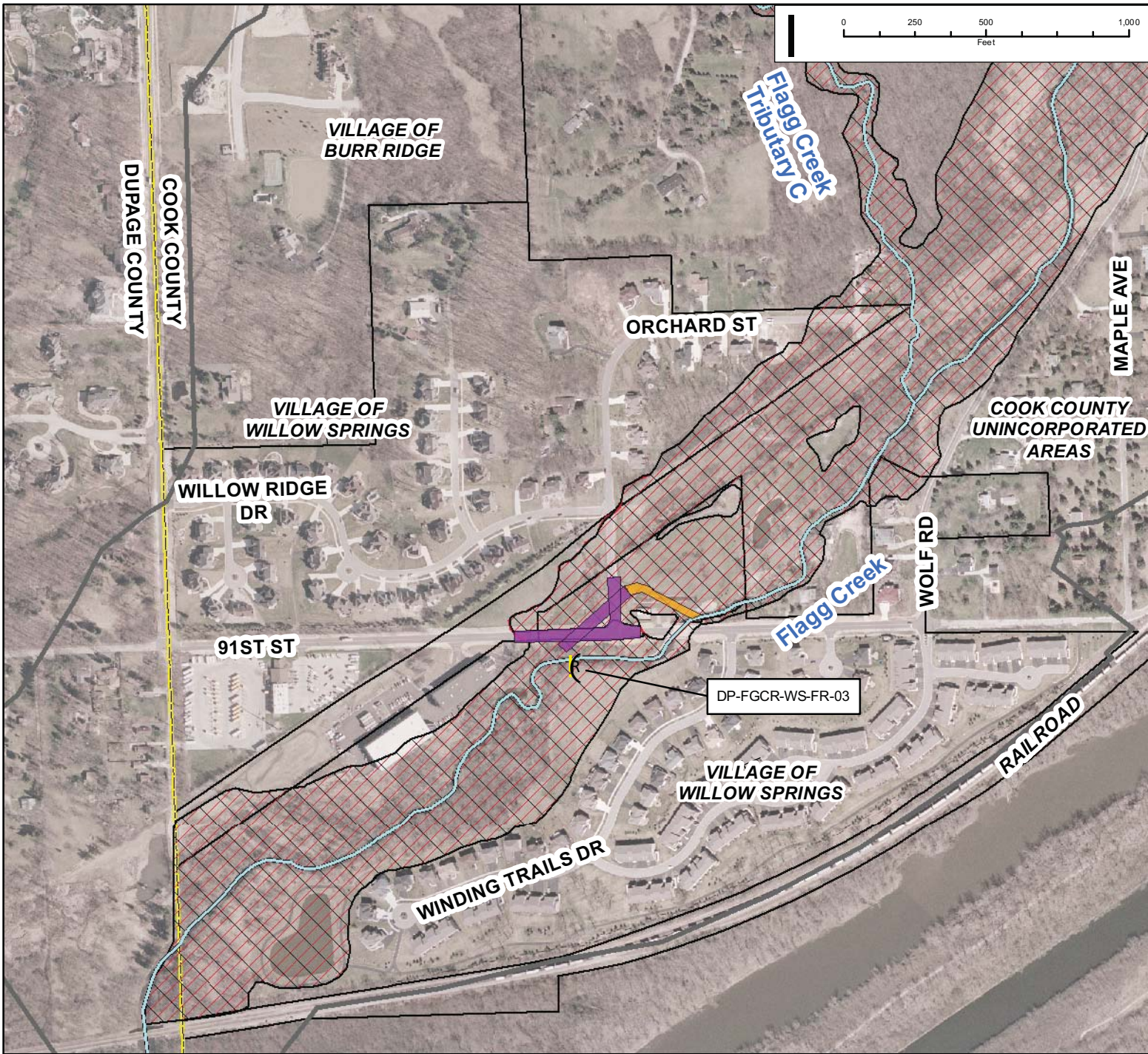
- | | | | |
|--|---|--|--|
|  100-Year Storm Event Flood Inundation Without Project |  Reservoir |  Approximate Creek Channel Location | Problem Areas
 Modeled Regional |
|  100-Year Storm Event Flood Inundation With Project |  Levee/Floodwall |  Municipal Boundary | |
| |  Culvert/Bridge Modification |  Watershed Boundary | |
| |  Channel Improvements | | |



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TITLE:
**LOWER DES PLAINES RIVER DETAILED WATERSHED PLAN
 FLAG CREEK WATERSHED
 RECOMMENDED ALTERNATIVE FGCR-4**

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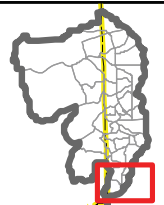


Subwatershed: Flag Creek
 Alternative: FGCR-5
 Alternatives Description: - Raise roadway west of structure to 602.1 for 0.5ft freeboard above the 100-year flood inundation
 - 2 - 10x8 Box Culverts under 91st Street and Orchard Street

Concept Level Cost: \$2,455,384
 Benefits: \$26,676
 B/C Ratio: 0.01

Legend

- 100-Year Storm Event Flood Inundation Without Project
- Reservoir
- Approximate Creek Channel Location
- 100-Year Storm Event Flood Inundation With Project
- Levee/Floodwall
- Municipal Boundary
- Culvert/Bridge Modification
- Channel Improvements
- Watershed Boundary
- Problem Areas
- Modeled Regional



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TITLE:
**LOWER DES PLAINES RIVER DETAILED WATERSHED PLAN
 FLAG CREEK WATERSHED
 RECOMMENDED ALTERNATIVE FGCR-5**

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FIGURE 3.11.13

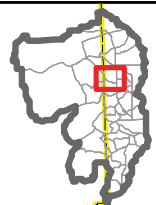


Subwatershed: Flagg Creek
 Alternative: 59DT-1
 Alternatives Description: - Earthen Berm to 659.6: 3ft freeboard (WSEL=656.6)
 - Tie in to existing drainage to street
 - Emergency spillway to existing swale
 - 2 AC of Flood Easement required in Legge Park

Concept Level Cost: \$969,361
 Benefits: \$126,823
 B/C Ratio: 0.1

Legend

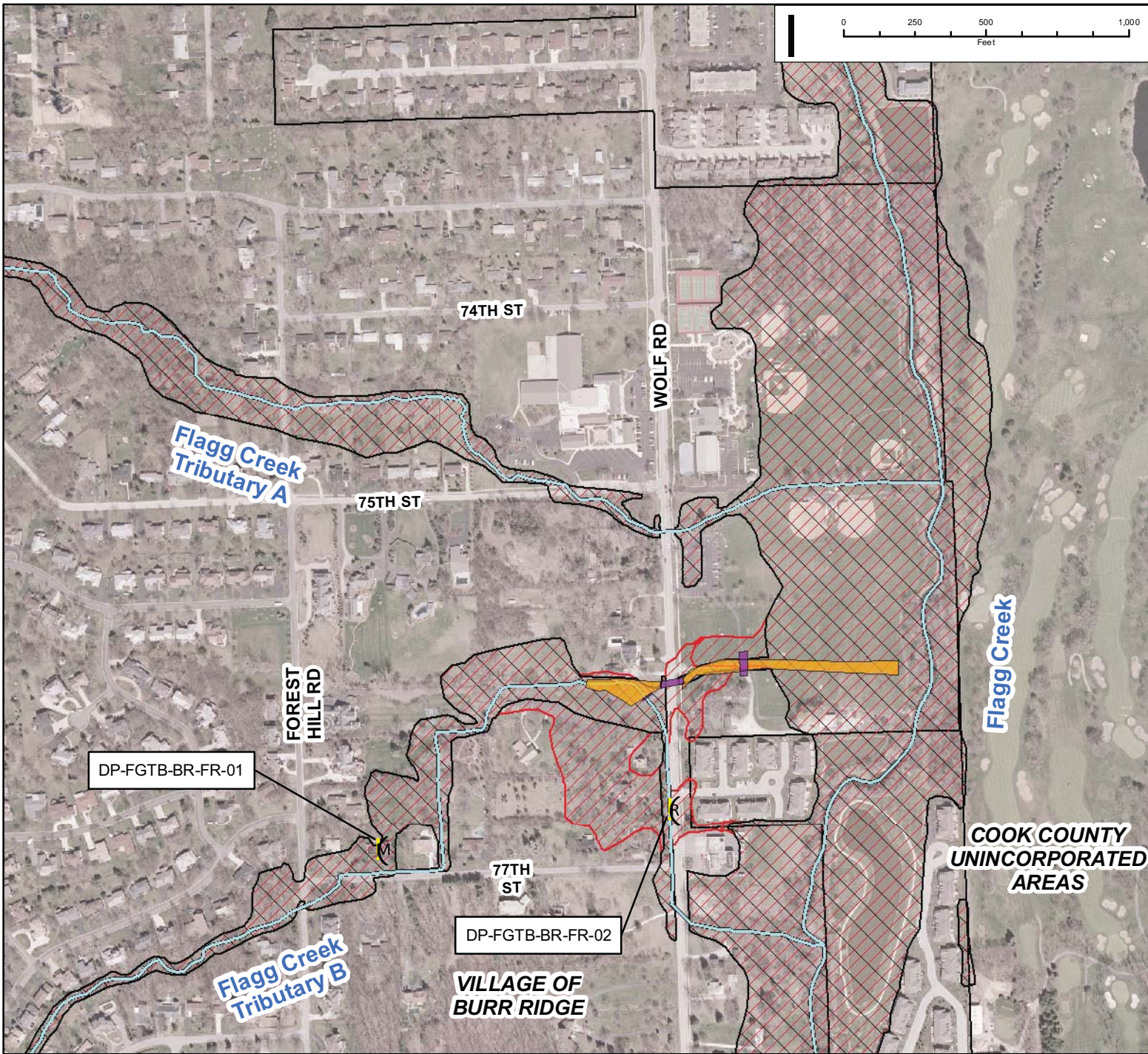
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|--|---|--|-----------------------------|--|------------------------------------|----------------------|--|
| | 100-Year Storm Event Flood Inundation Without Project | | Reservoir | | Approximate Creek Channel Location | Problem Areas | |
| | 100-Year Storm Event Flood Inundation With Project | | Levee/Floodwall | | Municipal Boundary | | |
| | | | Culvert/Bridge Modification | | Watershed Boundary | | |
| | | | Channel Improvements | | | | |



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TITLE:
LOWER DES PLAINES RIVER DETAILED WATERSHED PLAN FLAGG CREEK WATERSHED RECOMMENDED ALTERNATIVE 59DT-1

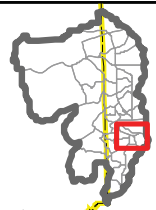
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Subwatershed: Flag Creek
 Alternative: FGTB-1
 Alternatives Description: - New outfall channel for Flagg Trib B 3ft excavated, 15ft BW, 27ft TW
 - Channel improvements and mitigation storage
 - Inline concrete weir
 - Two 4ft diameter culverts
 - New park district maintenance & pedestrian bridge
 Concept Level Cost: \$815,713
 Benefits: \$1,831,974
 B/C Ratio: 2.2

Legend

- | | | | | | | |
|--|---|--|-----------------------------|--|------------------------------------|---|
| | 100-Year Storm Event Flood Inundation Without Project | | Reservoir | | Approximate Creek Channel Location | Problem Areas
Modeled
Regional |
| | 100-Year Storm Event Flood Inundation With Project | | Levee/Floodwall | | Municipal Boundary | |
| | | | Culvert/Bridge Modification | | Watershed Boundary | |
| | | | Channel Improvements | | | |



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FIGURE 3.11.15