



Agenda

Committee of the Whole Meeting

City of Kalamazoo

Monday, April 6, 2026

5:00 PM

City Commission Chambers – 241 West South Street

- A. CALL TO ORDER/ROLL CALL**
- B. COMMUNICATIONS**
- C. PUBLIC COMMENTS**
- D. SPECIAL AGENDA ITEMS**
- E. COMMITTEE OF THE WHOLE**
- F. WORK SESSION**
 - 1. Presentation on Flooding Causes and Solutions
- G. COMMISSIONER COMMENTS**
- H. ADJOURNMENT**

ADDITIONAL INFORMATION

Get news, information, and alerts from the City of Kalamazoo. Sign up at www.kalamazoocity.org/connect, follow @KalamazooCity on Twitter, and search for The City of Kalamazoo on Facebook.

Questions regarding agenda items may be answered prior to the meeting by contacting the City Manager's Office at 269.337.8047. Persons who wish to contact members of the City Commission prior to the meeting to provide input about items on the meeting agenda may do so via email to CityCommission@kalamazoocity.org.

Agendas for the Committee of the Whole meetings of the Kalamazoo City Commission are available on the Internet at: www.kalamazoocity.org. You may also use the QR Code below to access agendas and agenda packets.



QR Code to Access the Agenda & Agenda Packet

Use the camera on your phone or mobile device to scan the QR Code and then follow the instructions that appear on your screen.

The link will take you to <https://kalamazoomi.portal.civicclerk.com/> where you can view the meeting agendas and agenda packets.

The Kalamazoo City Commission's Committee of the Whole meetings are held on the first and third Mondays at 5:00 p.m. and are shown live on the Public Media Network (channel 190 for Charter customers, channel 99 for U-Verse customers). The Kalamazoo City Commission Business meetings are held immediately after the Committee of the Whole meetings at 7:00 p.m. Both meetings are also streamed live on the City's [Facebook page](#) and [YouTube Channel](#).

THE CITY OF



Kalamazoo Flooding Causes & Solutions For Residents

Kalamazoo City Commission Committee of the Whole April 6, 2026

Agenda

Background

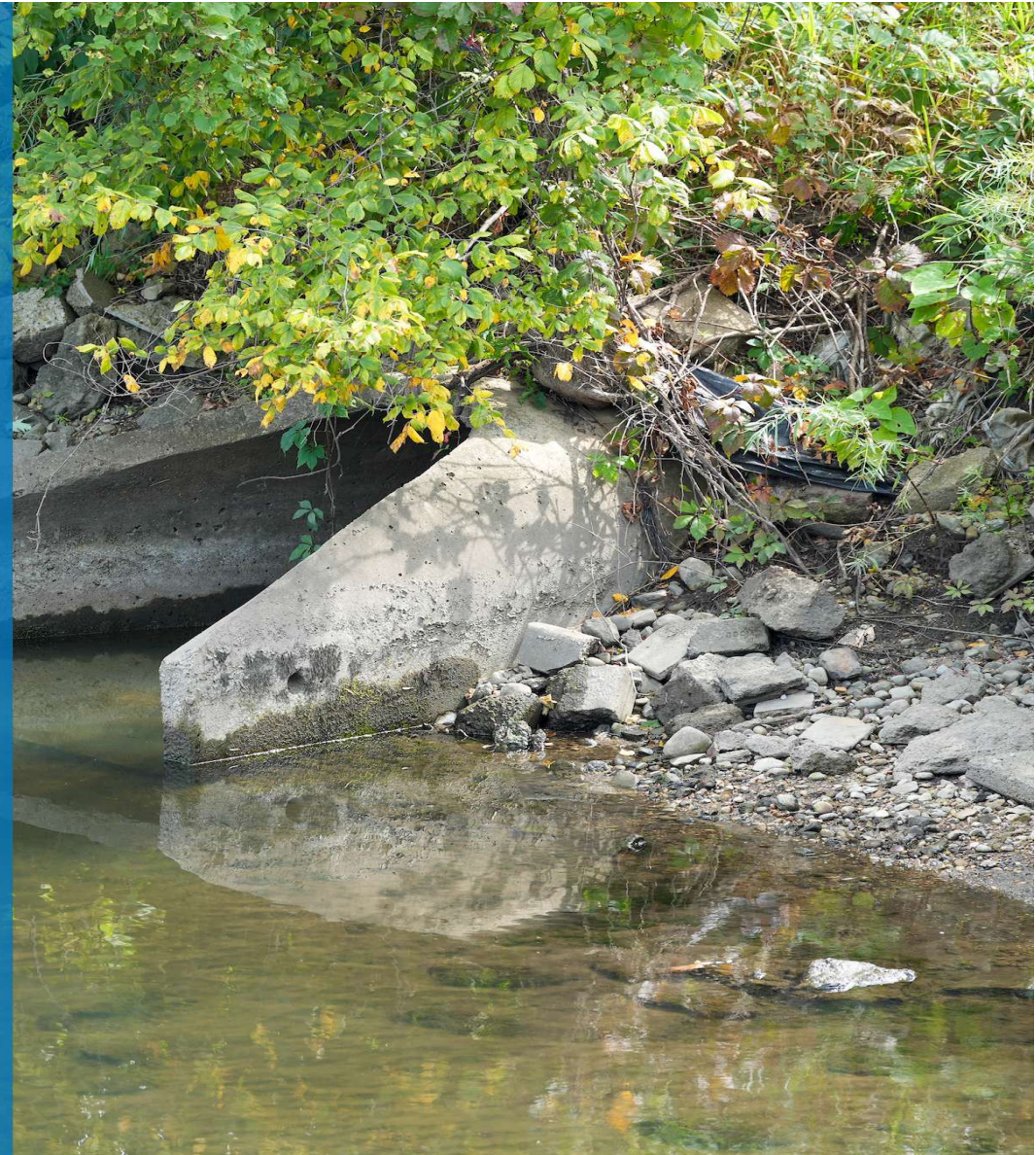
Urban Non-Riverine Flooding

Riverine Flooding

Backwater Flooding

Groundwater – Basement Flooding

Flood Mitigation & Planning



Background

Flood solutions are different for each type of flood event

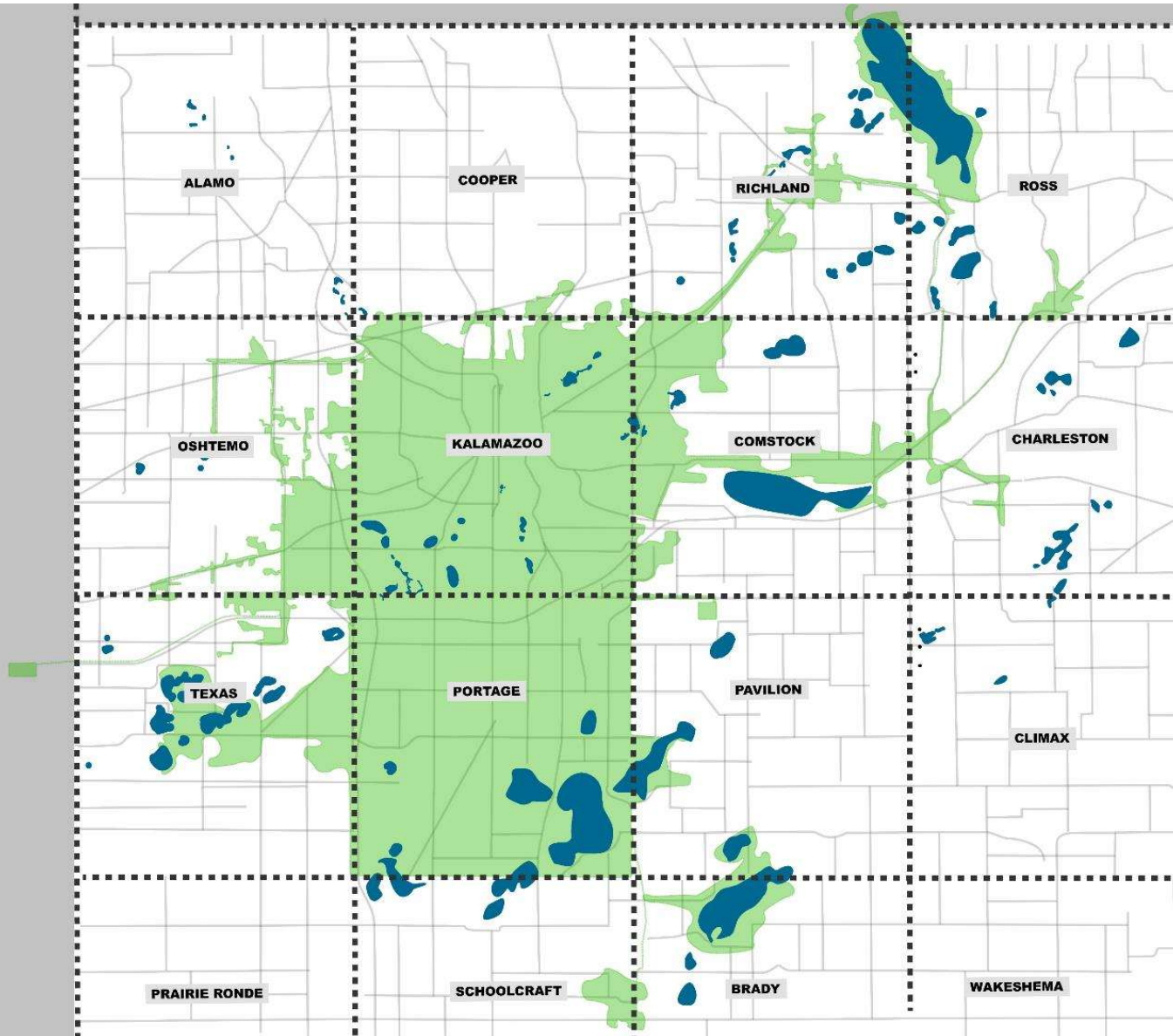
Impacts to residents can be devastating regardless of what caused the flood

Residents can experience all types of flood events through the evolution of a significant storm event



Urban Non-Riverine Flooding

Storm Water system



Land Use Impacts Storm Water

- The same amount of rain on different land use types creates different amounts of storm water
- Forests help to put more water back into the ground
- Urban areas, like cities, create more storm water
- Storm sewers need to be larger to handle more storm water
- Rain that does not soak in becomes storm water
- **34 Inches of Precipitation Each Year**

How much Runoff

Runoff volume is determined by precipitation, land use type and time

Length of time that rainfall occurs

2" of rain in one day

2" of rain in one hour



Storm Water Maintenance

Stormwater Utility Business Plan drafted in October 2025

Act 51 funding used to support utility operations, maintenance, regulatory requirements and CIP

Planning for long term sustainable funding strategies should continue



Storm Water Maintenance

Annual river cleanup events, Kalamazoo River, Portage Creek, Axtell Creek, Arcadia Creek, Davis Creek

New catch basin cleaning & inspection program beginning in Spring 2026

City Commission approved equipment purchase(s) and staffing

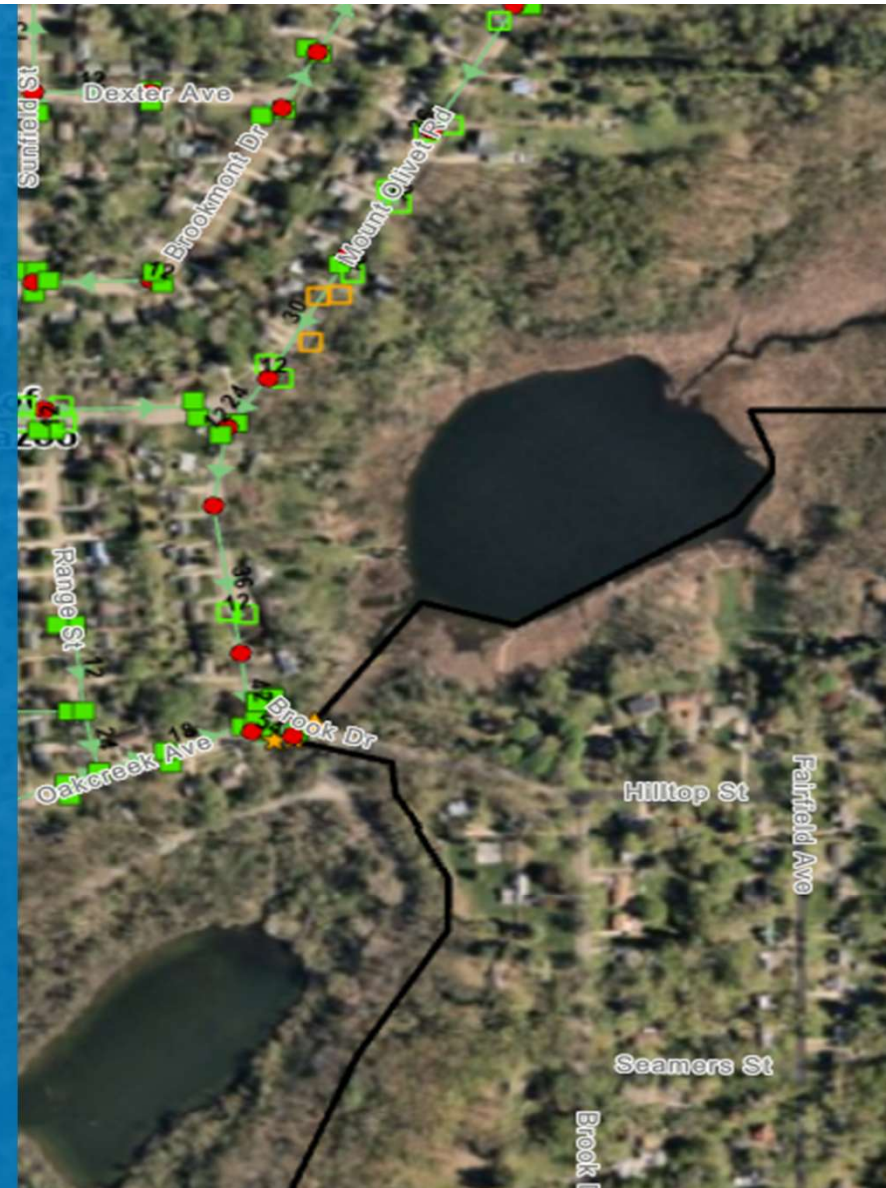


New Storm Water Maintenance Strategy

Burke Acres catch basin cleaning 2026

Northside 2027

All areas of the City planned to be
completed by 2029-2030





New Storm Water Maintenance Strategy

MS4 Permit

**11,584 structures cleaned and inspected (3-
years)**

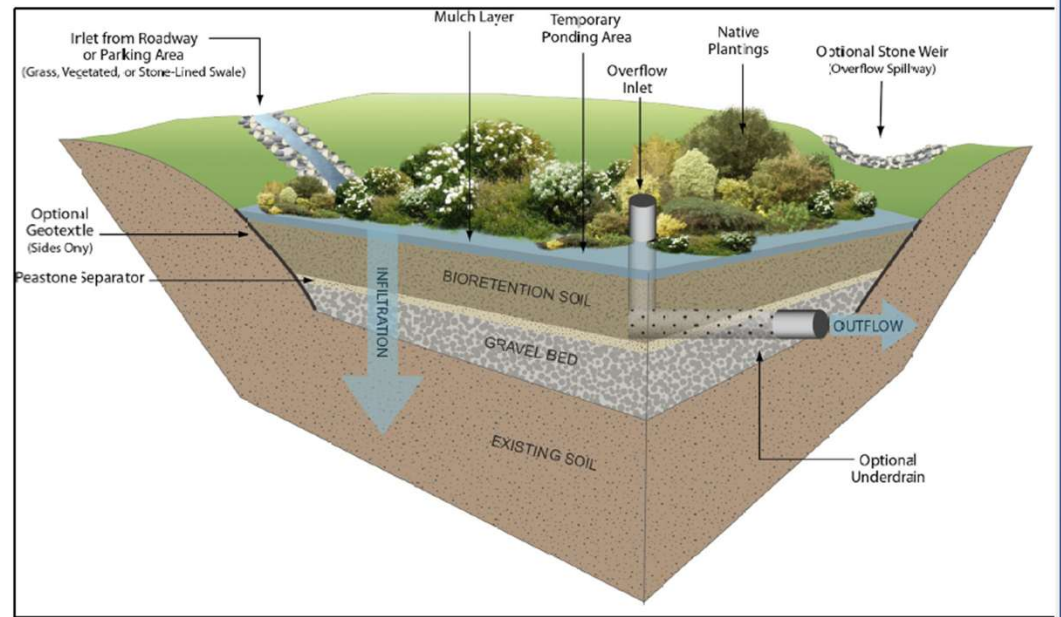
**Wet weather sampling at 66 outfalls within
Axtell Creek, Arcadia Creek and Davis
Creek**

Solutions for Residents

- *New* storm water maintenance strategy
- Adopt-a-drain program
- Rain barrels and rain gardens
- Nature based solutions & green infrastructure
- Catch basin off lining
- Tree planting
- Permeable pavement
- Rehabilitation and replacement of aging infrastructure
- Targeted capital improvements to address urban non-riverine flooding hot spots
- Funding provided in MST and LST Capital Improvement Plans



URBAN STORMWATER INLET AREAS



RAIN GARDEN AREAS



Ticket No: 2022072101036 Rev:000

User Reference: Not Supplied

Excavator Details

Caller Id: 2089668
Contact: James Baker
Company: KALAMAZOO CITY

Phone: 269-337-8601
Mobile: 269-370-8715
Email: bakerj@kalamazoo-city.org

Dig Site and Ticket Details




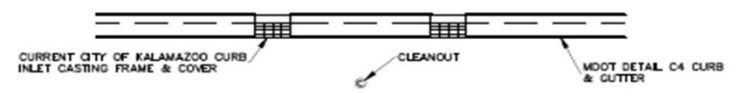
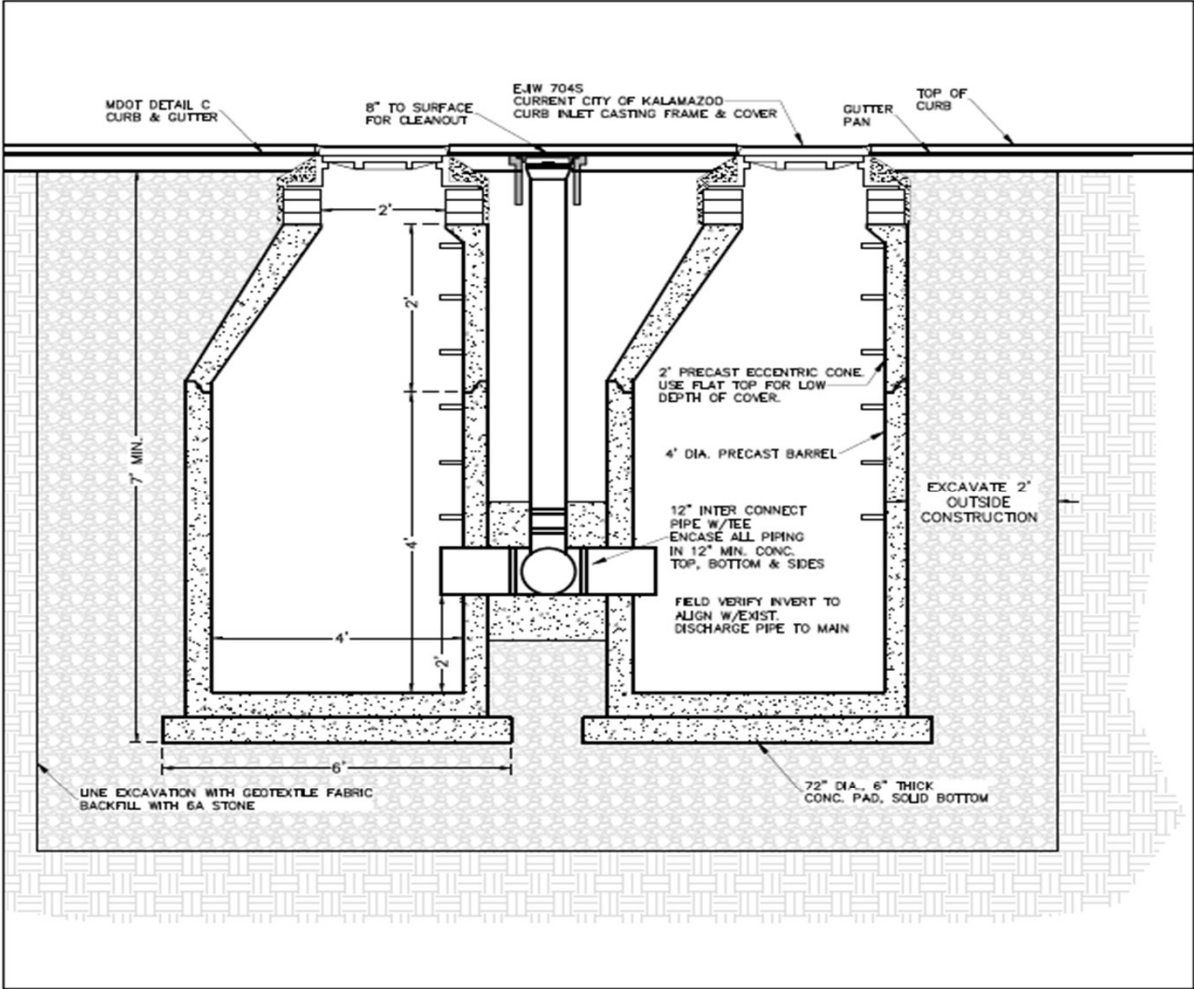
[Open Map](#)

REMOVE EXISTING STRUCTURE, REPLACE WITH COK MODIFIED DOUBLE INLET,
CONNECT NEW PIPE TO EXT 12" CLAY

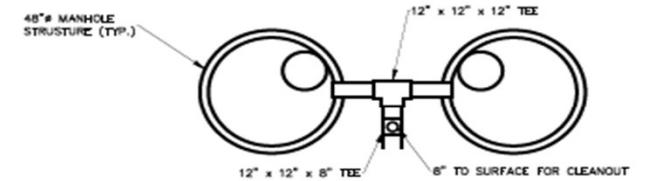
Ticket Status	Original		
Previous Ticket No.	Not Supplied		
Ticket Type	Normal - 21 day		
Ticket Date	07/21/2022 09:42		
Work to Begin Date	08/01/2022 09:35		
Work Legal Start Date	08/01/2022 09:35		
Work Expiration Date	08/22/2022 23:59		
Address	1715 N Church St Kalamazoo		
Nearest Cross Street	HOPKINS		
Lot Number/Subdivision	CORNER LOT WITH HOPKINS		
Type of Work	Storm Drain		
Activity	Catch Basin		
Excavation Method	Mechanical Excavation		
Excavation Depth	>48in		
Working for	KALAMAZOO CITY DPS		
Onsite Company	KALAMAZOO CITY DPS		
Onsite Contact Name	CHRIS SMITH		
Onsite Contact Phone	2699980273		
Private Locate	No	Area Pre-marked	Yes-Paint
Pet on Property	No	Work in Water	No

STANDARD DETAIL - ST-3-A - KALAMAZOO DOUBLE STORM INLET, MODIFIED

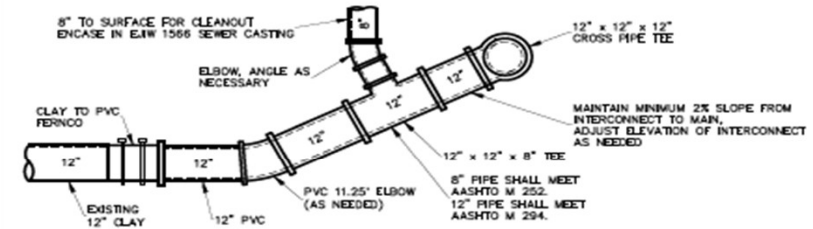
 DEPARTMENT OF PUBLIC SERVICES - Engineering STANDARD DETAILS - SHEET 6 CITY OF KALAMAZOO		SCALE GENERAL 3/4" = 1'-0" STRUCTURAL 3/8" = 1'-0" ELEC. 3/16" = 1'-0"
DESIGNED BY / DATE CHECKED BY / DATE		



PLAN VIEW



PIPE PLAN VIEW



CROSS PIPE CONNECTION TO 12" CLAY PIPE

ENCASE ALL PIPING IN 12" MIN. CONC. TOP, BOTTOM & SIDES
 ANGLES SHOWN ARE EXAGGERATED.
 ACTUAL ANGLES WILL NOT EXCEED 11.25°



A blue-tinted photograph of a river scene. In the background, a large truss bridge structure is visible, partially submerged in the water. To the left, there are some buildings and utility poles. In the foreground, a stone wall or dam structure runs across the width of the frame. The water is calm, reflecting the sky and the bridge. The overall tone is a deep, uniform blue.

Riverine Flooding

Flow Exceeds Creek & River Channel Capacity

- Flow conveyance within a watershed
- Watersheds are drainage areas
- Natural, improved, constructed
- Mother natures version of a storm sewer system



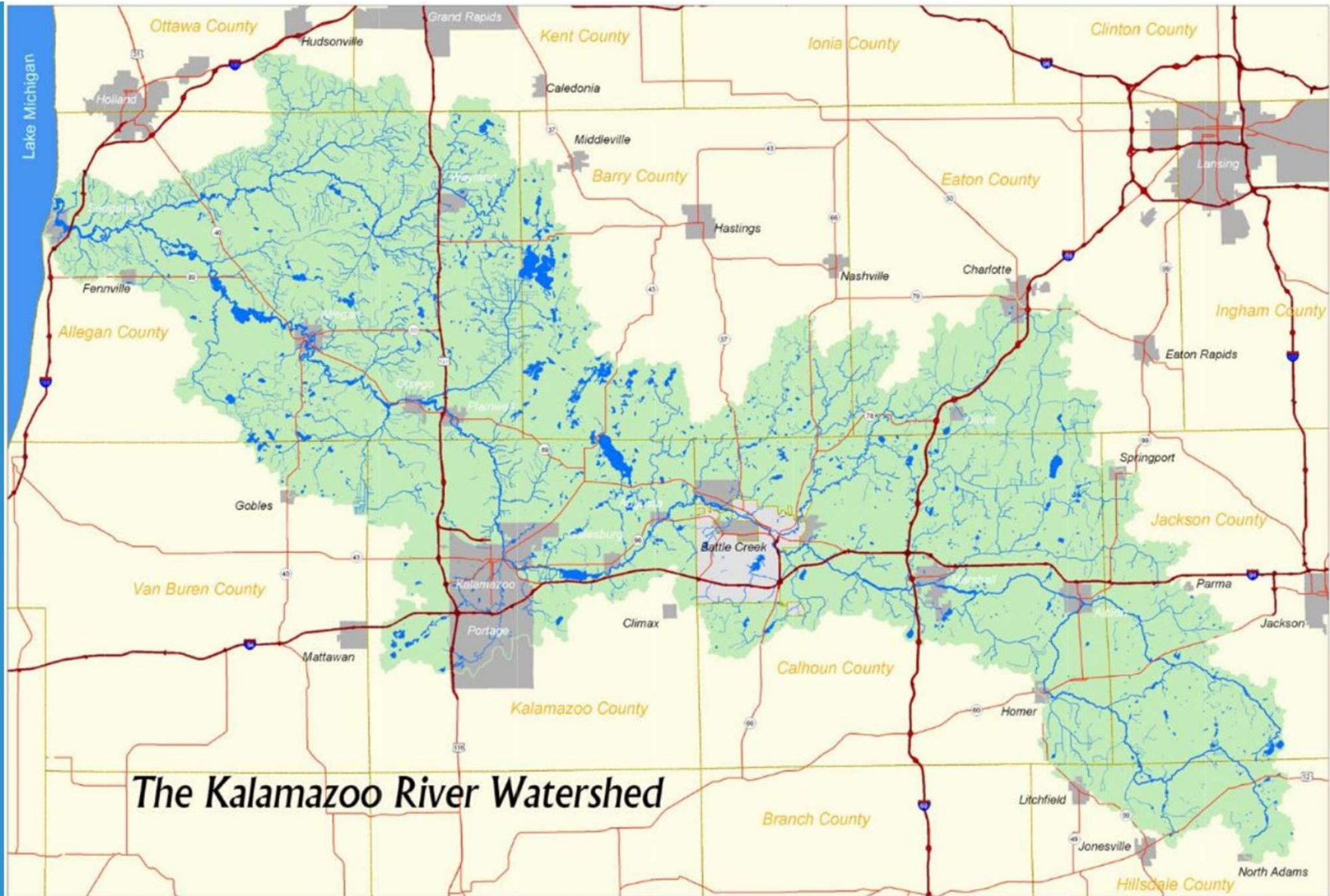
Channel Capacity

Shape of channel, width and depth

Slope of channel

Channel material, rock, sand, trees

Channel obstruction, bridges,
bends, debris



Channel Capacity

Many creeks begin upstream of Kalamazoo

The Kalamazoo River begins in Hillsdale County

The Kalamazoo River has 1010 square miles of watershed above Kalamazoo

During Kalamazoo River flood events, the Kalamazoo River exceeded channel capacity upstream of the City of Kalamazoo





Floodplain

When rivers exceed channel capacity flow extends into the floodplain

Reoccurring flooding has been occurring in Kalamazoo since the 1850s

Kalamazoo floodplain, once celery farms, was developed into urban land use areas in the 1900s to 1950s

Flooding of urban land use areas can be very damaging, dangerous and impactful to a City

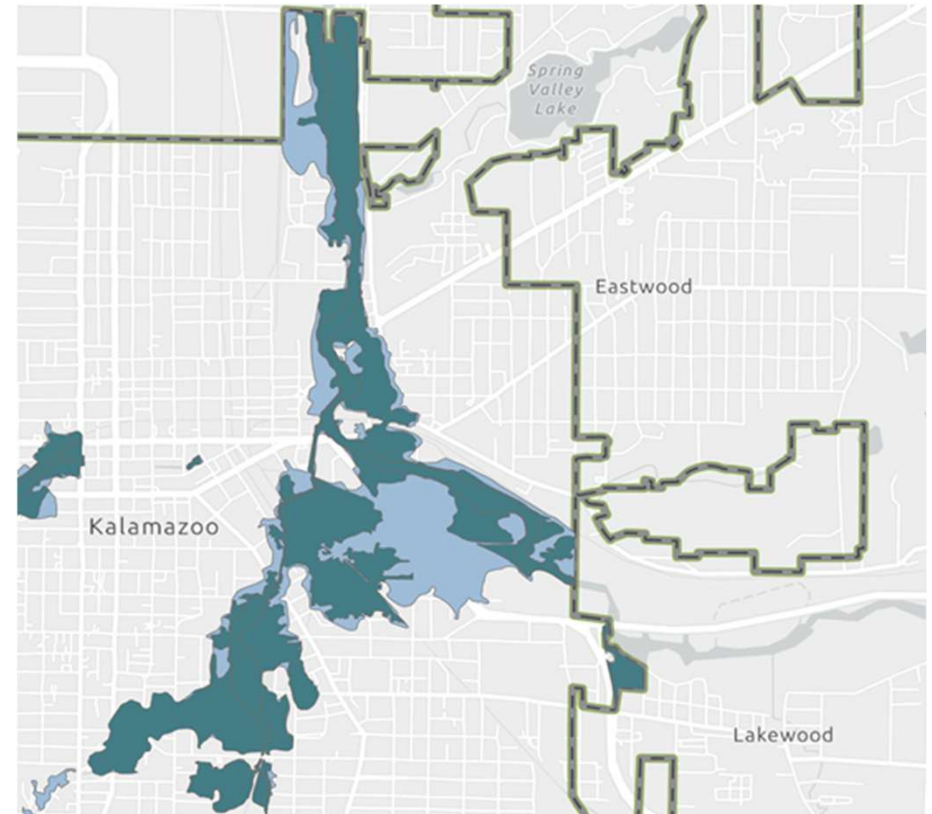


Floodplain

Water seeks its own level

During flooding water can flow back up storm sewers to flood streets

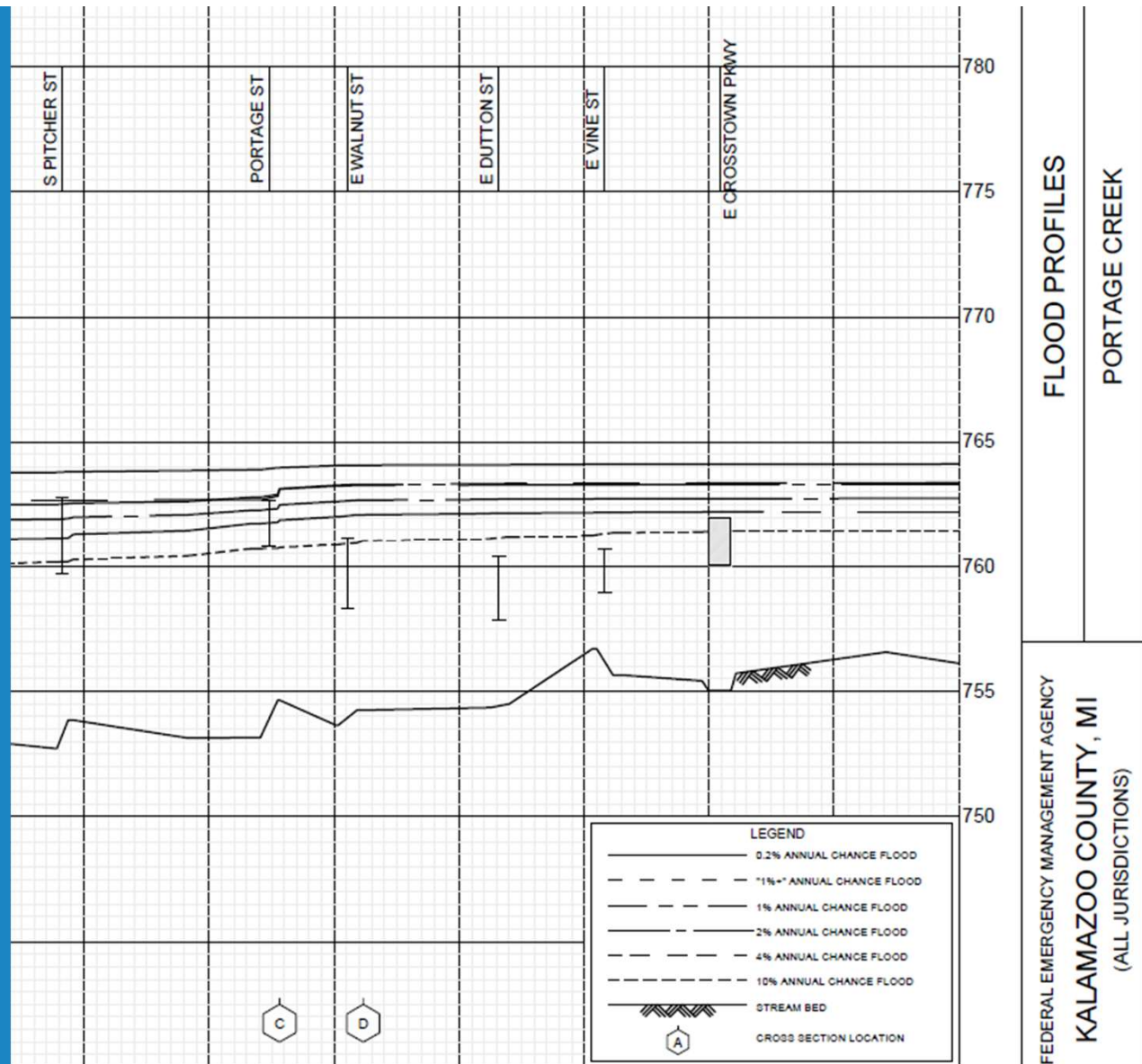
During a flood event, streets within the floodplain are at a lower elevation than the high water of the river



Floodplain

Streets lower than the water surface elevation during flood events

- Gull Street
- East Michigan Ave
- Mills St
- King Hwy
- Pitcher St
- Portage St
- Walnut St
- Dutton St
- Jasper St
- Vine St
- Crosstown Pkwy
- Burdick St
- Rose St
- Park St



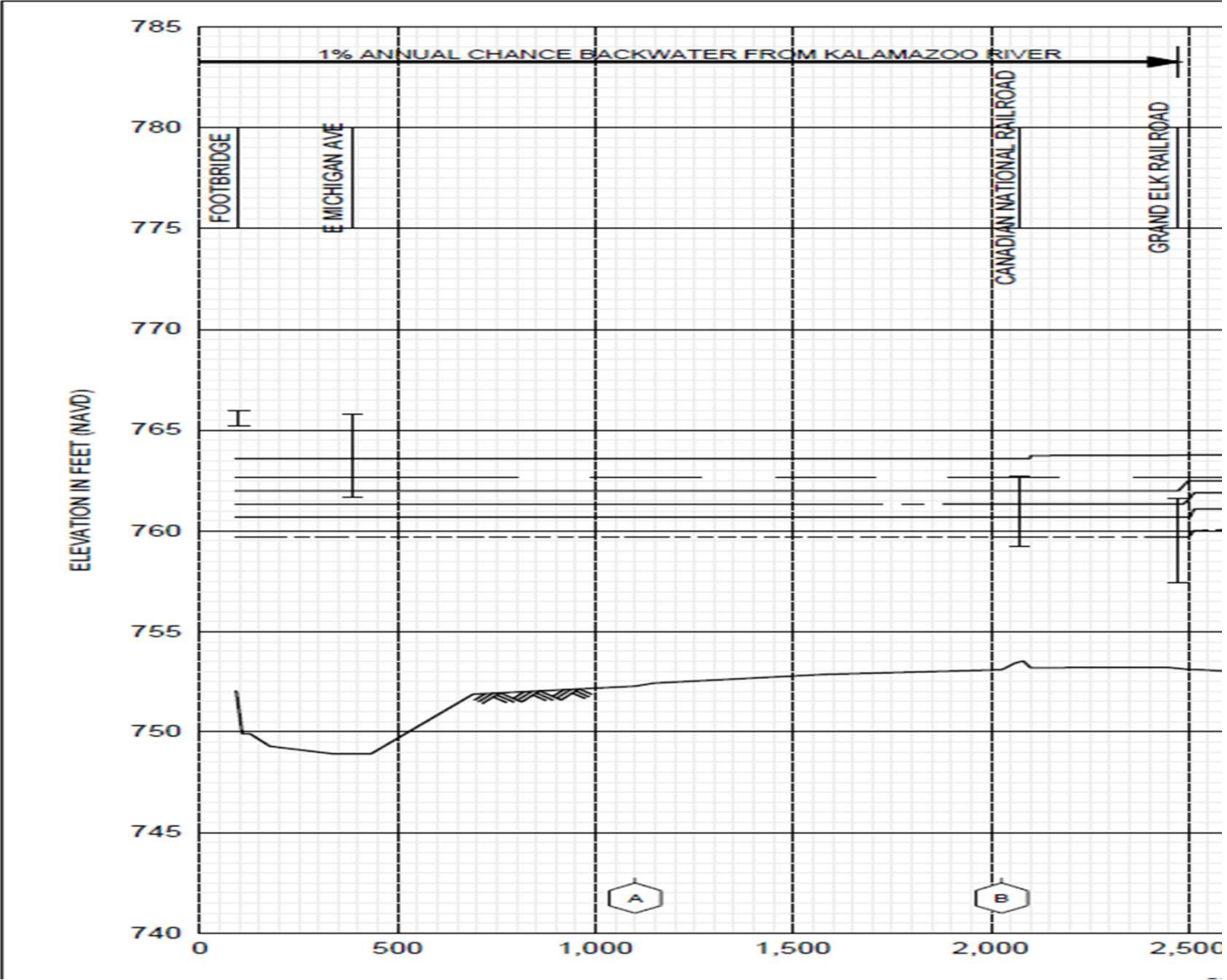
A blue-tinted photograph showing a flooded area. In the background, there is a large, complex metal truss structure, possibly a bridge or a large industrial building, partially submerged in water. In the foreground, there is a low stone wall or barrier. The water is calm, reflecting the sky and the structures. The overall scene suggests a significant flooding event.

Backwater Flooding





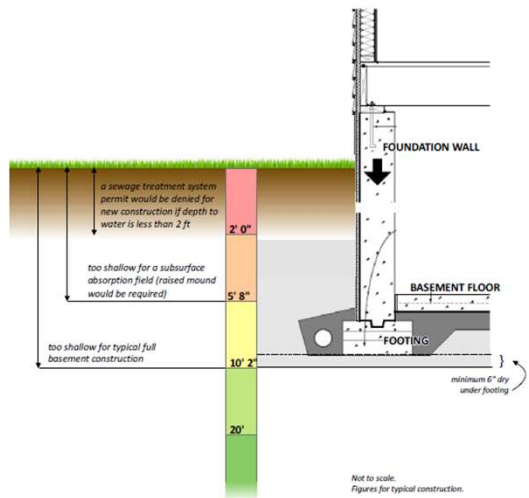




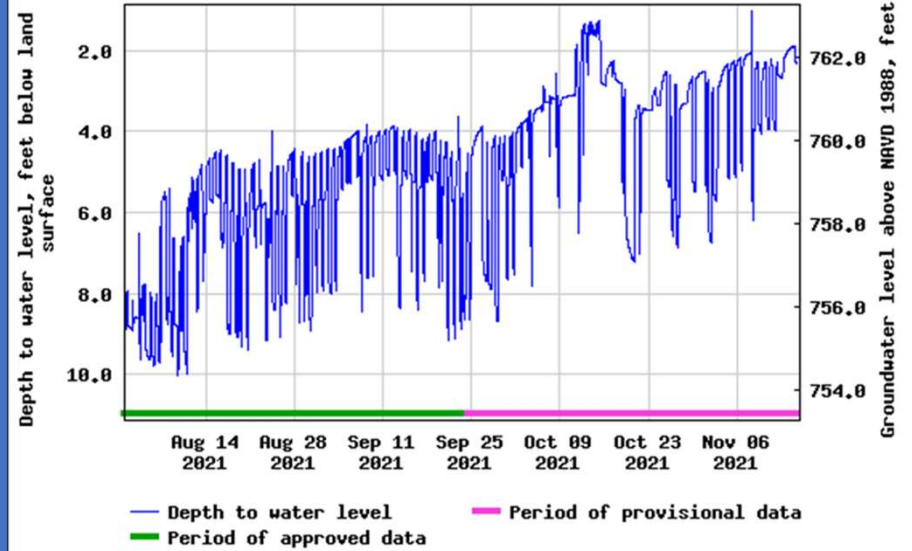
The image features a blue-tinted photograph of a flooded area. In the background, there is a wooden structure, possibly a bridge or a large roof frame, partially submerged in water. The sky is overcast. In the foreground, there is a cross-section diagram of groundwater flow, showing water levels and flow paths through a porous medium. The text "Groundwater – Basement Flooding" is overlaid in white, bold font in the center of the image.

Groundwater – Basement Flooding

Depth Requirements for Standard Building Practices

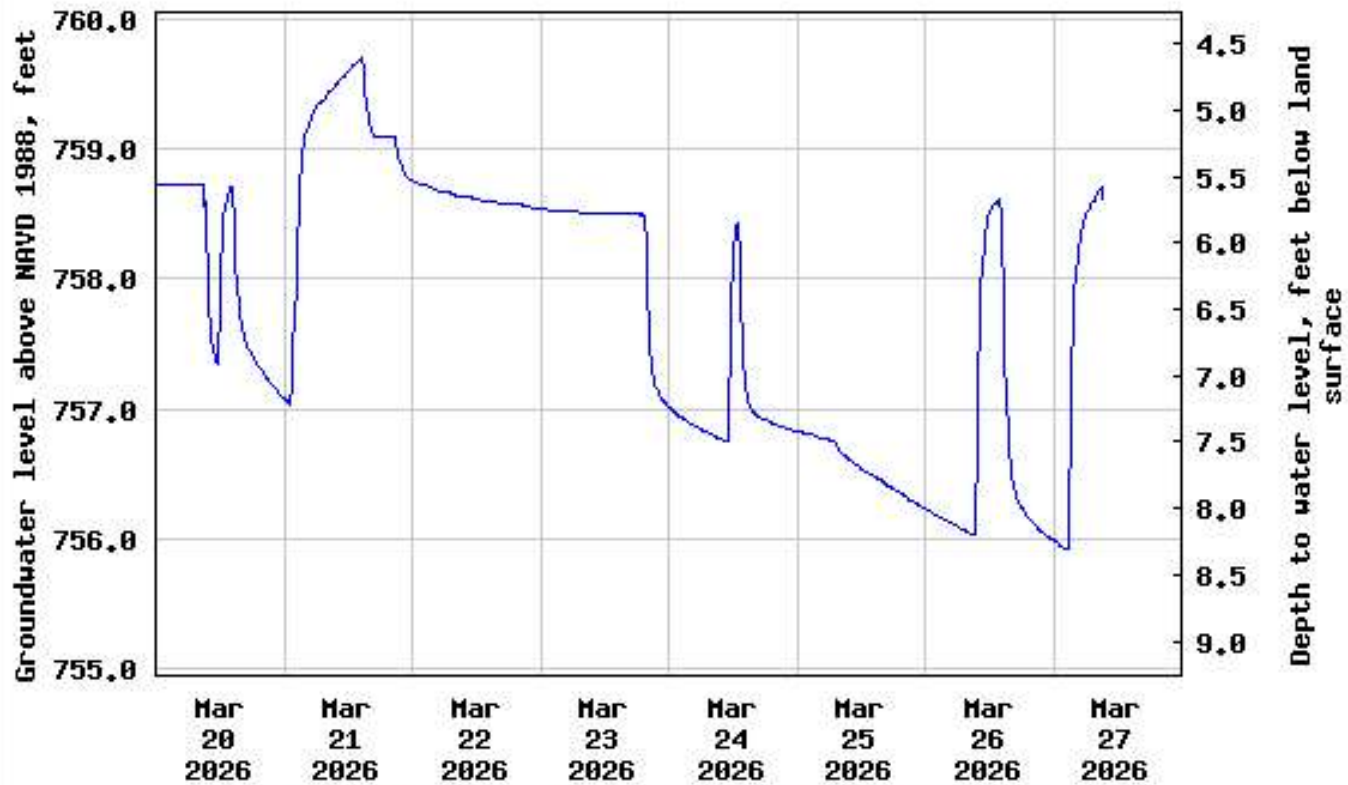


USGS 421641085350601 02S 11W 22CDBB 01 KALAMAZOO CO (STOCKBRIDGE)

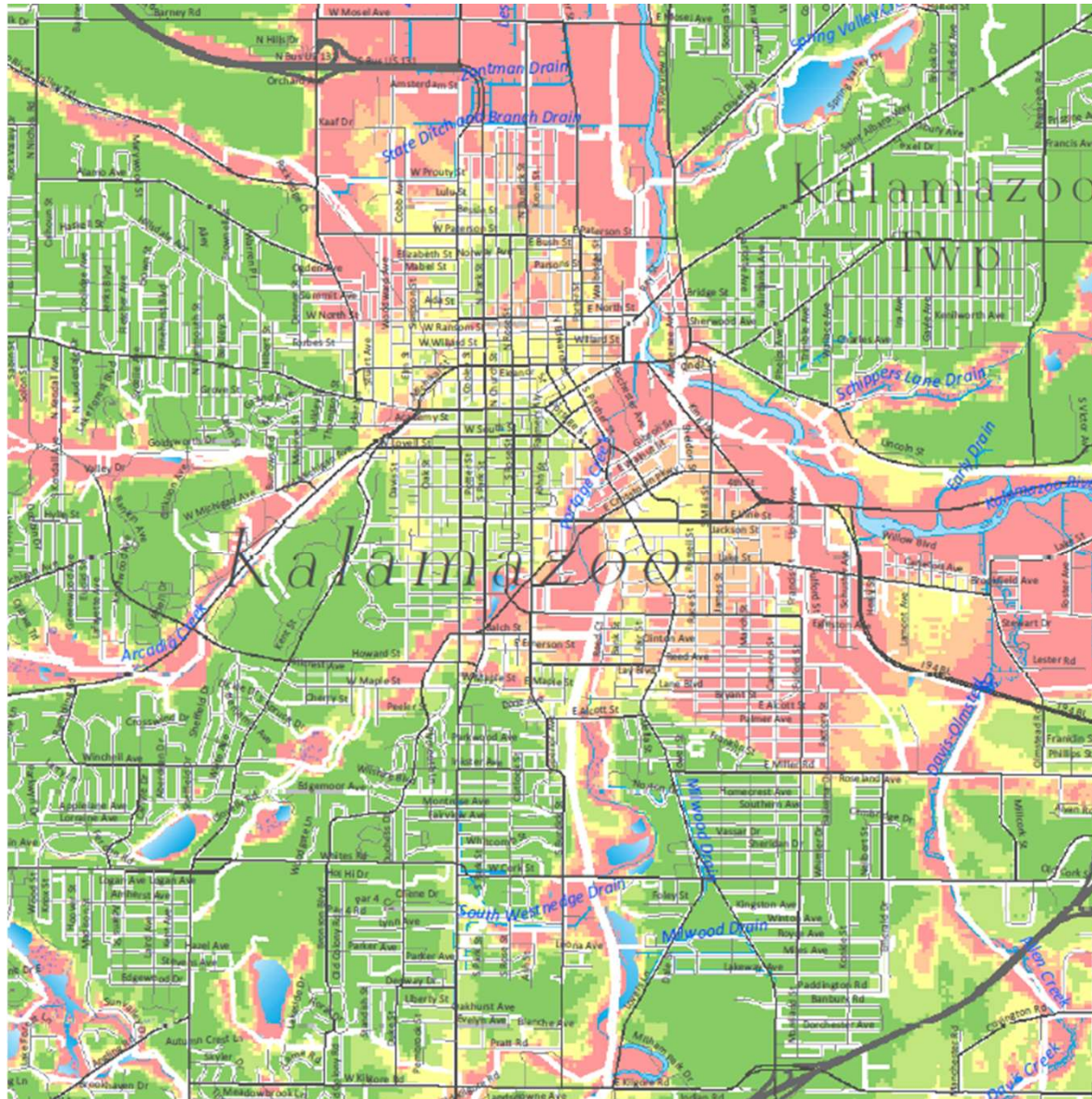


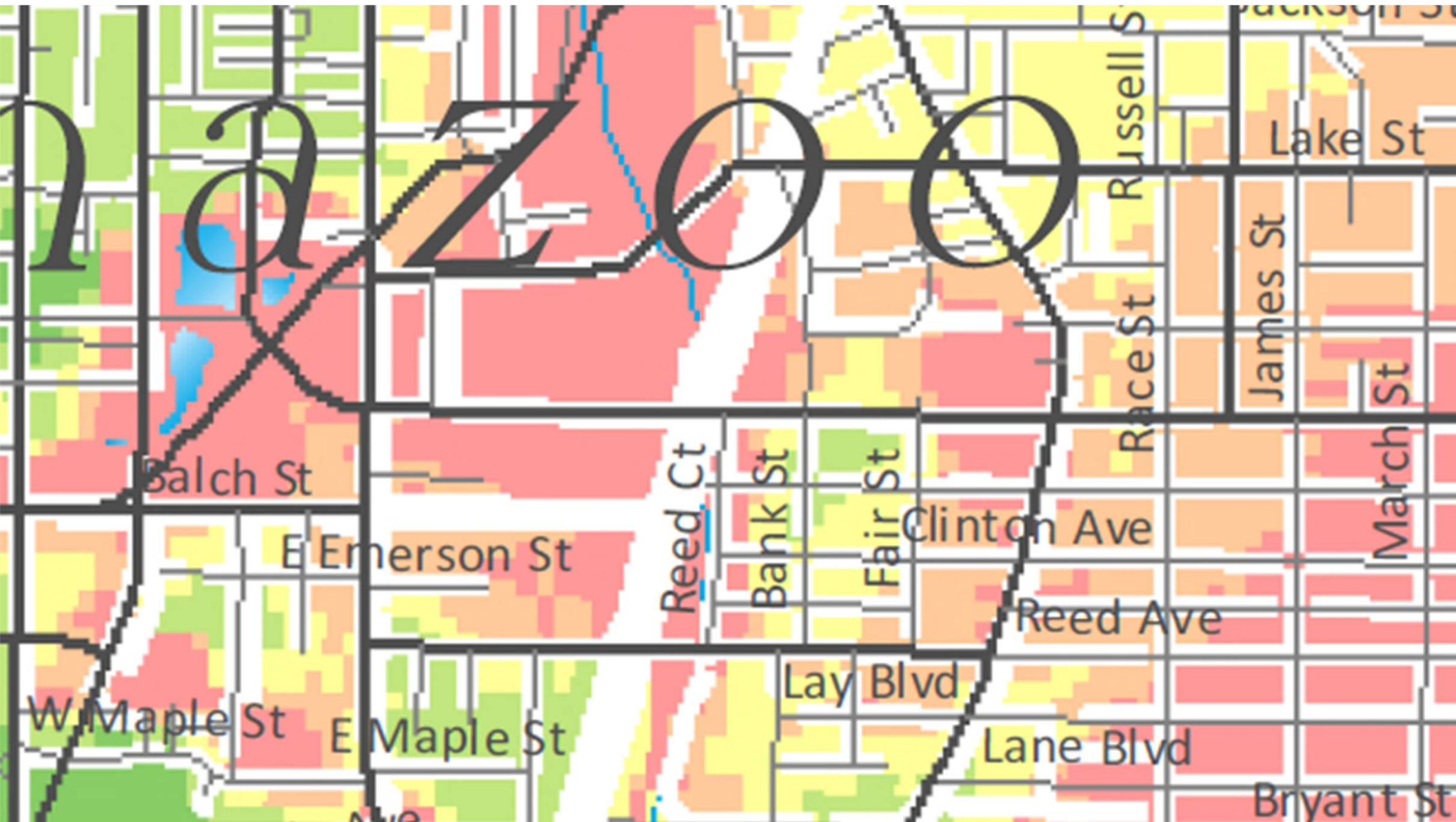


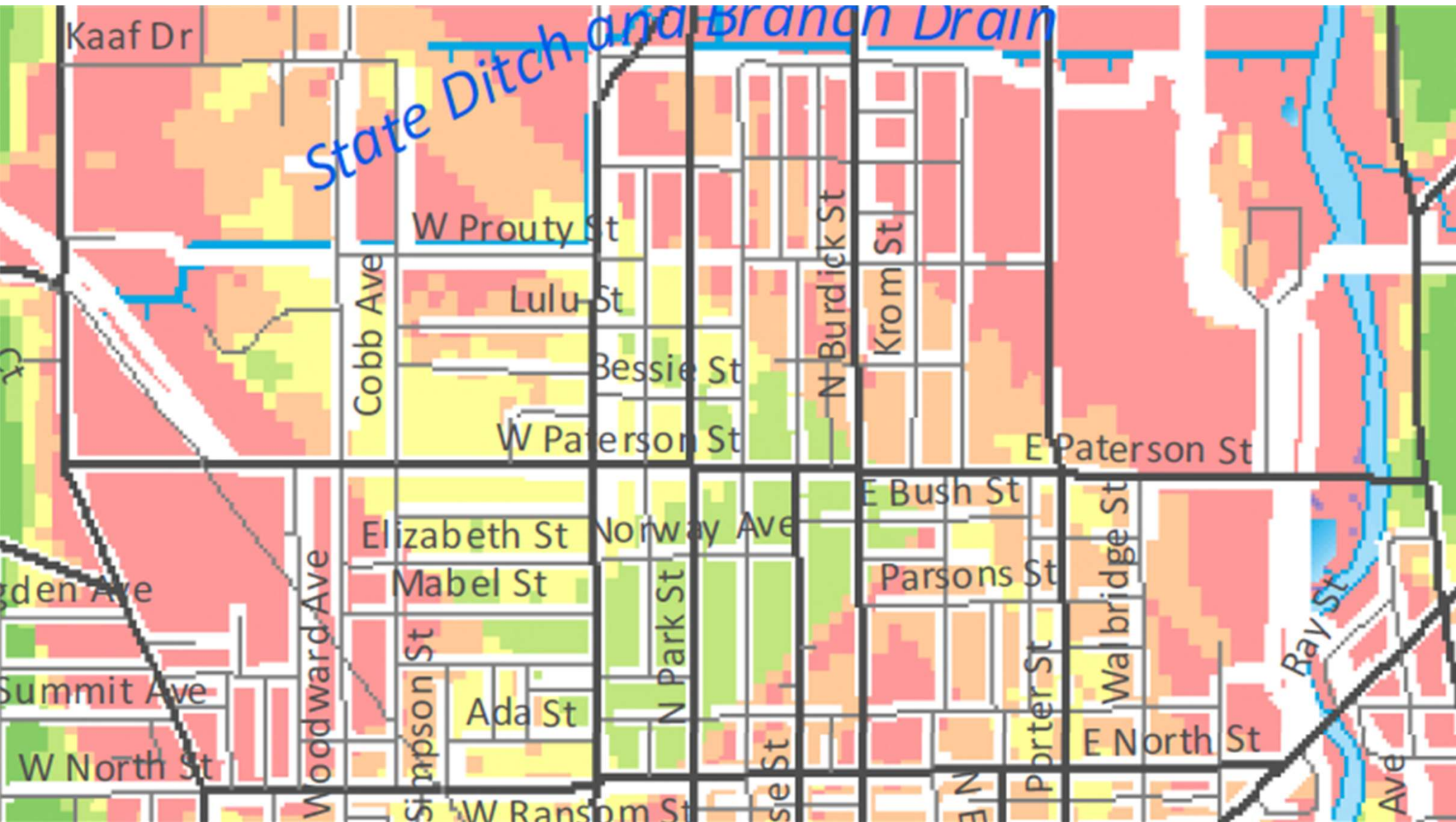
USGS 421641085350601 02S 11W 22CDBB 01 KALAMAZOO CO STOCKBRIDGE



----- Provisional Data Subject to Revision -----







Solutions for Residents

- Sump pump discharge approvals via direct connections
- Sanitary sewer backwater valves
- Collaboration with County Drain Commissioner on the State Ditch & Branch Drain
- Remedies may vary by foundation construction type





Flood Mitigation & Planning

Flood Mitigation & Planning

USACE plans to widen, straighten, deepen the Kalamazoo River and Portage Creek through Kalamazoo completed in 1967 to 1970

PCB contamination discovered

Flood mitigation project determined to be unfeasible in 1972 due to PCB contamination

EPA cleanup of Kalamazoo River PCB contamination completed fall 2024

KALAMAZOO RIVER, MICHIGAN
KALAMAZOO AND VICINITY
FLOOD CONTROL PROJECT
PROJECT PLAN, (PORTAGE CREEK)
STA. 75+40 TO 90+60

Scale of Feet
100 0 100 200 300

U. S. Army Engineer District, Detroit

Submitted: *[Signature]* Chief, Design Branch
Recommended: *[Signature]* Chief, Engineering Division
Approved: *[Signature]* Col., C.E., District Engineer

Drawn by E.J. File No. To Accompany D.M. No. 1
Checked by J.J.M. 51-12-148 Dated: Jan. 1970

PLATE 23

Flood Mitigation & Planning

2018 joint project with NWS, USGS, USACE to install additional gage stations, perform bathymetric survey, create a 2D HECRAS model and to study flood inundation impacts within floodplains

2019-2023 Flood mitigation alternatives analyzed, BCA performed, funding assistance requests submitted

2023 Kalamazoo County Hazard Mitigation Plan

2024 Water Resources Development Act

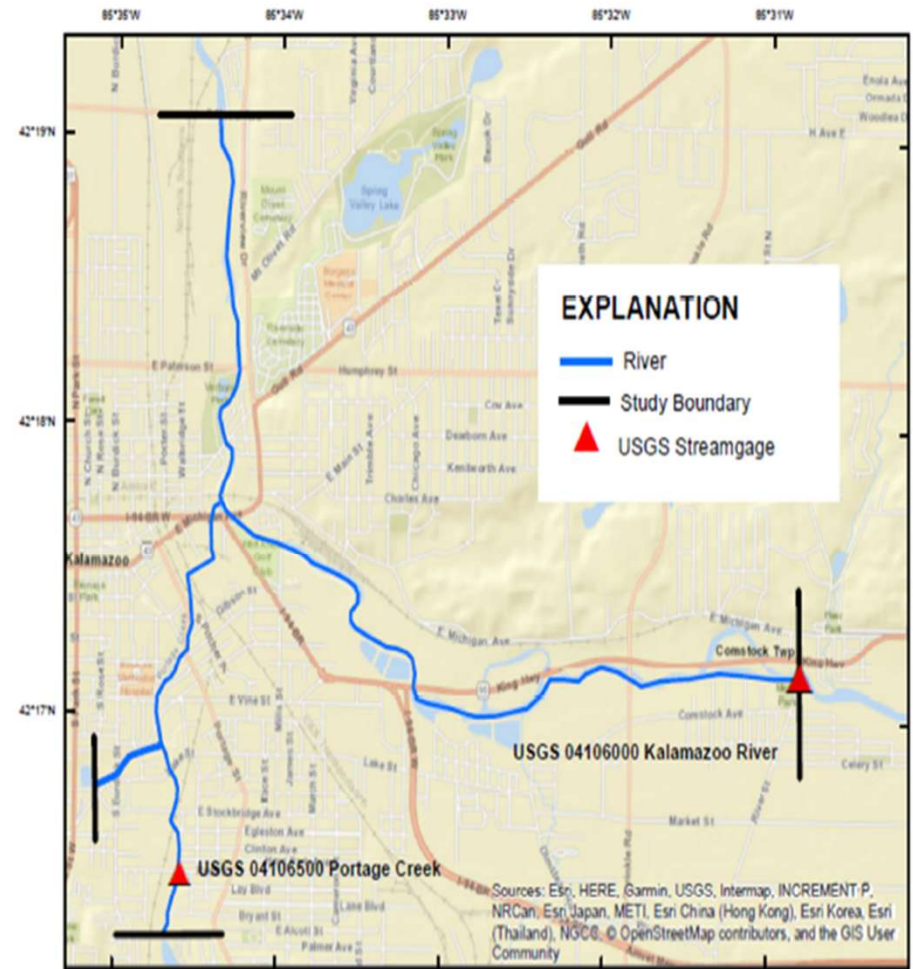


Figure 2. Study area of the Kalamazoo River from River Avenue to E Mosel Avenue and Portage Creek from E Alcott Street to the confluence of Kalamazoo River, Kalamazoo, Michigan

Flood Mitigation & Planning

Kalamazoo

The 2024 WRDA authorizes a new Army Corps study in the Kalamazoo River Watershed to examine urban flooding in the City of Kalamazoo to set the stage for projects that Kalamazoo has been working to plan. Residents, businesses, and emergency services commonly impacted by flooding events could be supported by initiatives such as a by-pass and closure project along the Portage Creek and a stormwater relief project in the Northside Neighborhood of Kalamazoo. These projects have the potential to benefit the entire city of Kalamazoo.



Flood Mitigation & Planning

Planning and Project Focus since 2018 (recent)

Development and installation of the Portage Creek USGS gaging stations 04106500, 04106400, 04106320
Cleaning and dredging of Crosstown Pond No.1
Cleaning and dredging of Axtell Creek outlet culvert to Portage Creek
Sanitary sewer lining projects completed and planned
Storm sewer lining and rehabilitation projects completed and planned
City of Kalamazoo, National Weather Service, USGS, USACE Joint Flood Inundation Mapping Project
US Fish and Wildlife, Natural Resources Trust – Stormwater and wetland improvement project 433 Reed Ave
Project alternative identified, submitted for FEMA hazard mitigation action through Kal-County
Project submitted to USACE for evaluation and technical assistance
USACE currently providing technical assistance
2024 WRDA approved and moving forward with a \$3 million study phase (50% local match)
April 2026 WRDA letter of intent submittal

Discussion