



I-94 MODERNIZATION PROJECT

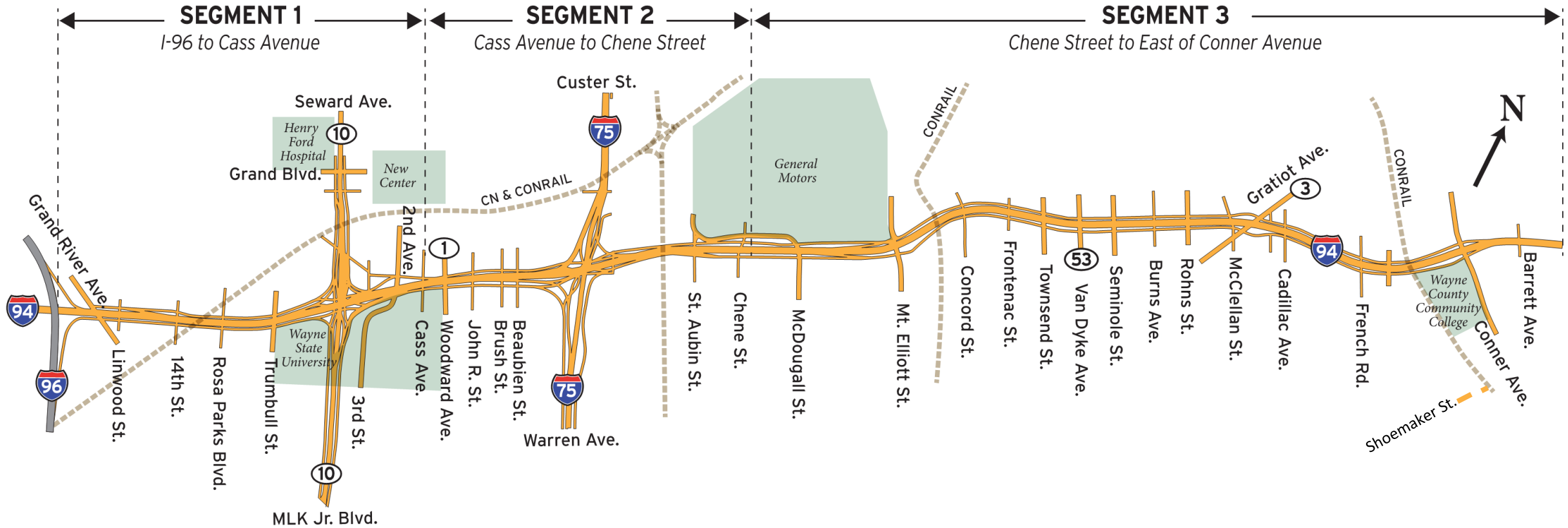
Current Draft Summary of Proposed Drainage Alternatives*

March 2022

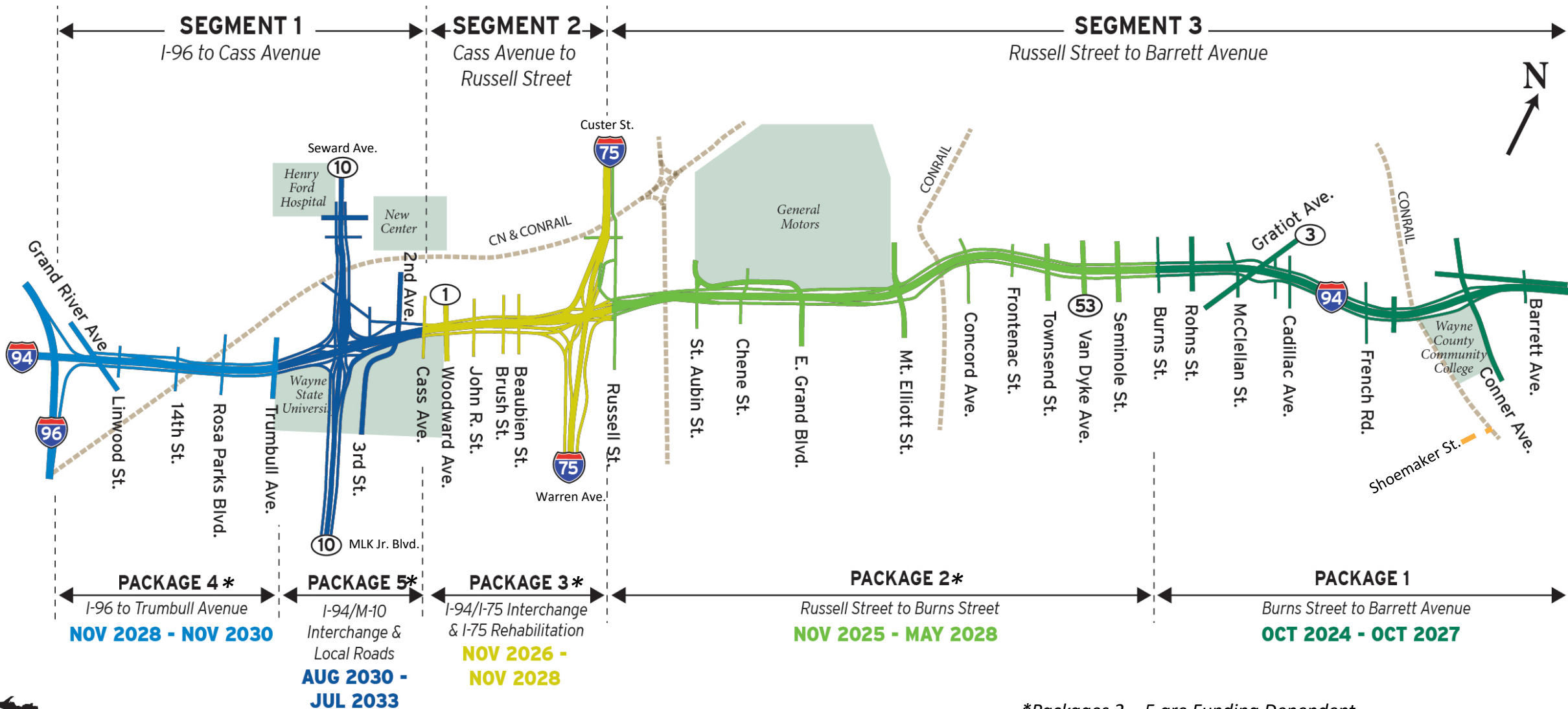


*Subject to change pending on-going discussions and approvals

PROJECT OVERVIEW



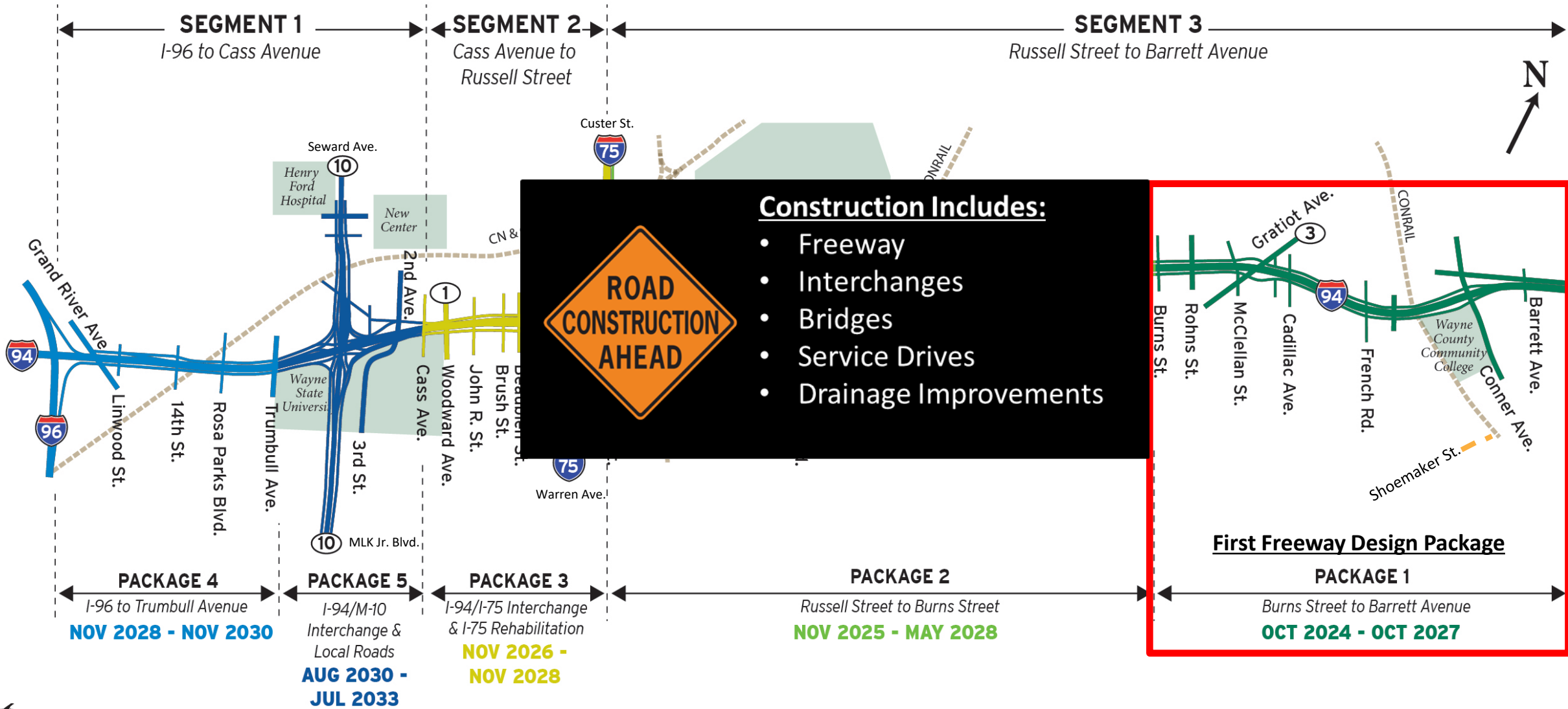
I-94 PROJECT CONSTRUCTION SCHEDULE



*Packages 2 – 5 are Funding Dependent

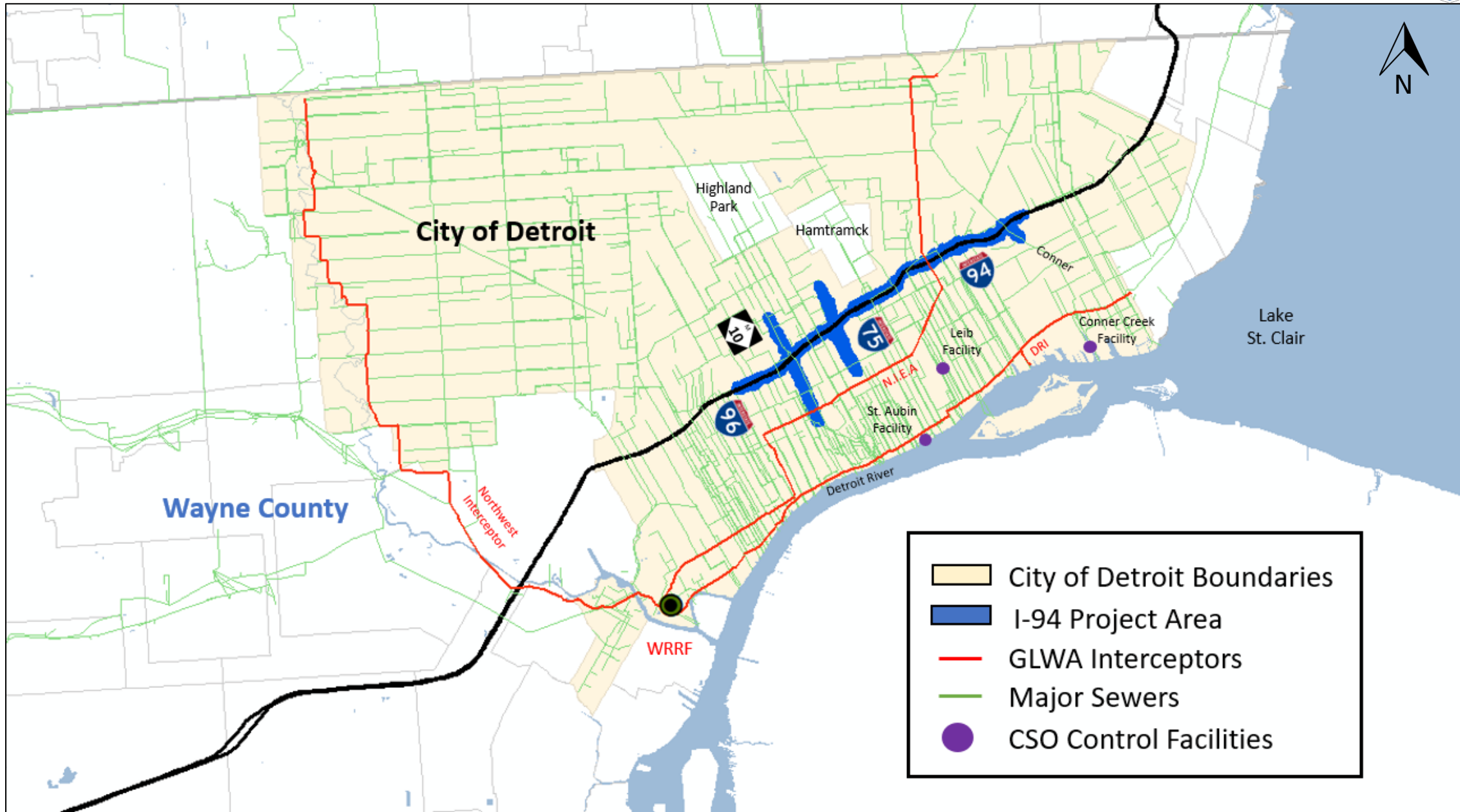
1. Dates indicated represent construction duration.
2. Dates and package limits are subject to change.

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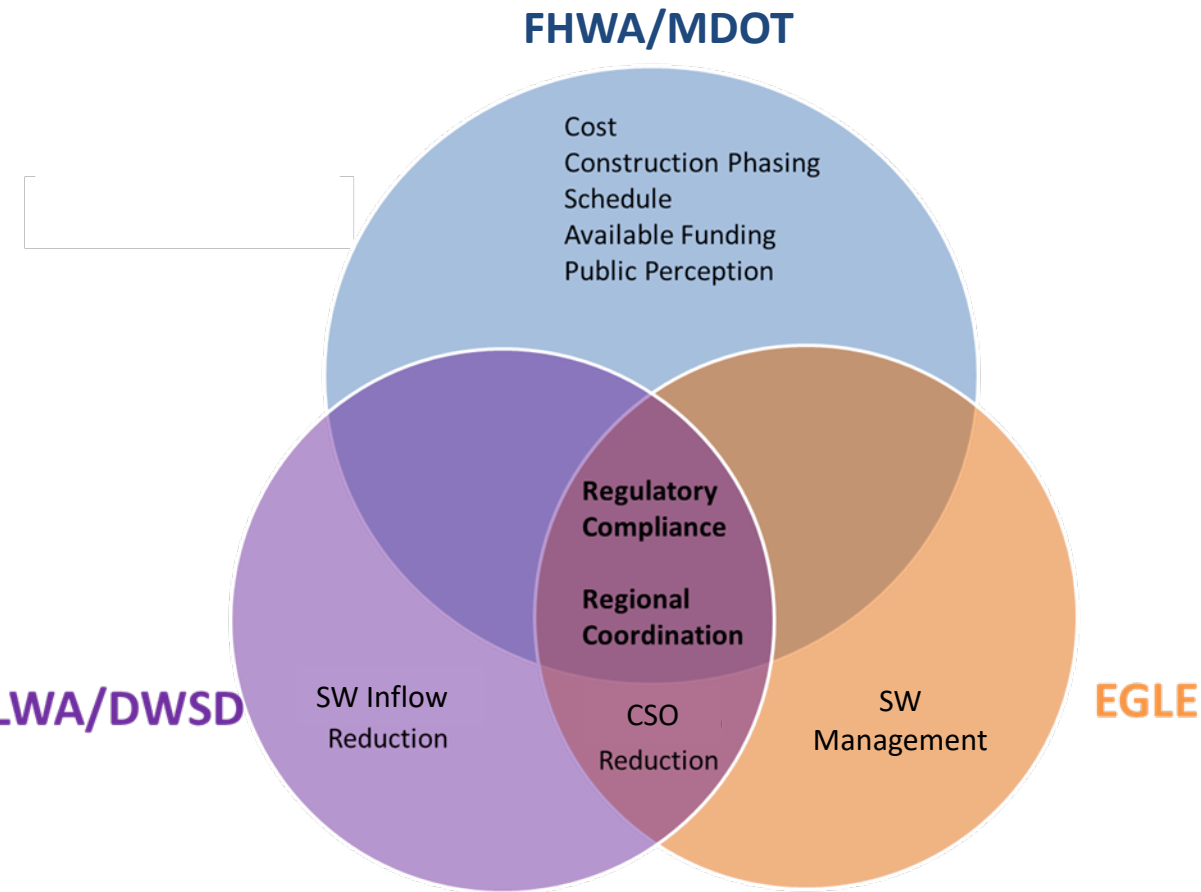
Project Overview – Wastewater Collection System



Drainage Collaboration



- Collaboration between MDOT, DWSD, GLWA started in **February 2019** as part of the project progress meetings
- Drainage Committee was formed in **December 2020** and included:
 - MDOT/ORC (technical / legal)
 - GLWA (technical / legal)
 - DWSD (technical / legal)
 - EGLE
 - FHWA
- **Drainage committee mission:** *Reach a final agreement on a **GLWA/DWSD** cost-effective and resilient drainage solution for the complete I-94 corridor while advancing environmental benefits working in partnership with MDOT, FHWA, DWSD, GLWA, and EGLE.*



Collaborative Drainage Alternatives Development



February 2019 - March 2021

MDOT, GLWA, & DWSD, negotiates a collaborative drainage alternative for the I-94 Modernization Project.



March 2021

I-94 Drainage Committee agrees on proposed conceptual drainage alternative which would reconnect I-94 to the combined system with alternative compliance.



March – June 2021

I-94 Drainage Committee drafted an interim agreement for the proposed collaborative drainage solution.



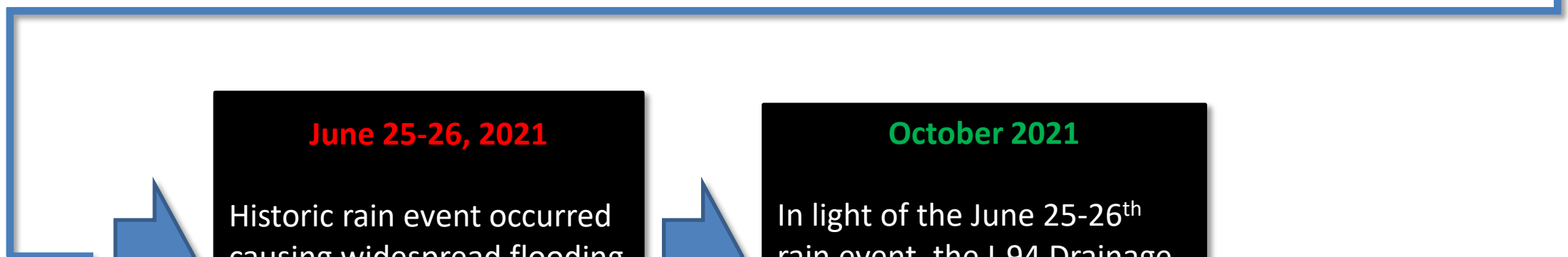
June 25-26, 2021

Historic rain event occurred causing widespread flooding in the area and highlighted the need for reducing flows to the combined system.



October 2021

In light of the June 25-26th rain event, the I-94 Drainage Committee coalesced around new revised collaborative alternative.



Alternative Compliance to City Stormwater Ordinance

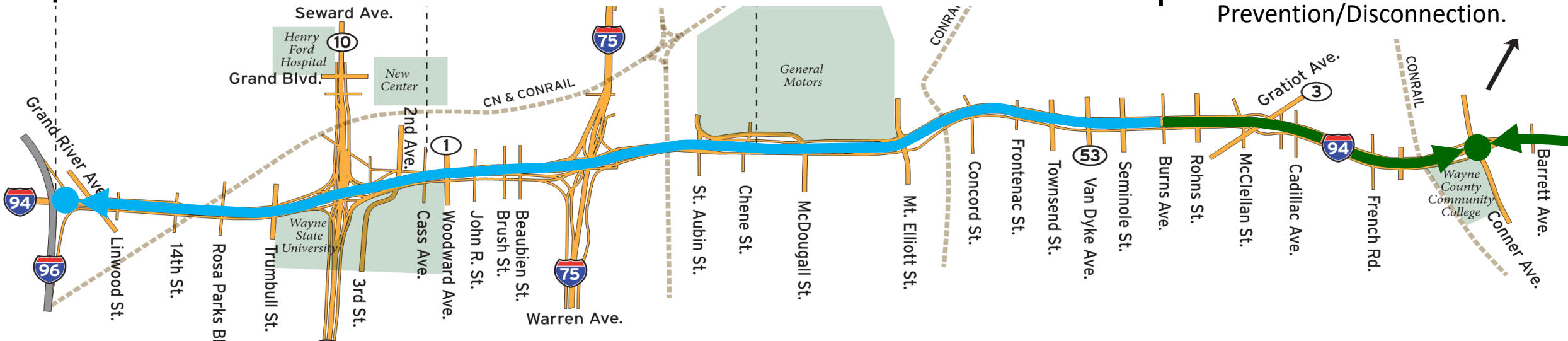


I-96 to Burns Avenue

- **I-94 Drainage Tunnel** connecting to MDOT's I-96 storm sewer via a dewatering pump station.
 - **Service Drives** disconnected from the GLWA/DWSD combined system and **connected to the new drainage tunnel.**
 - MDOT will evaluate **potentially upsizing the tunnel to provide additional capacity** that GLWA/DWSD could utilize for future stormwater separation projections.
 - **Reduce I-94 and Service Drive flows and volumes by 100%** (complete disconnection from the combined sewer system)

Burns to Barrett Avenue

- **I-94 Storm Sewer** continues to connect to Conner Creek Combined Sewer via a pump station.
- **Reduce existing I-94 peak flows by 10%** to the Conner Sewer
- **Alternative Compliance** which includes funding for CSO facilities and mitigation for Backflow Prevention/Disconnection.



Package 1 (Burns to Barrett) Drainage Alternative



Service drive flows will be directed to I-94 proposed drainage system.

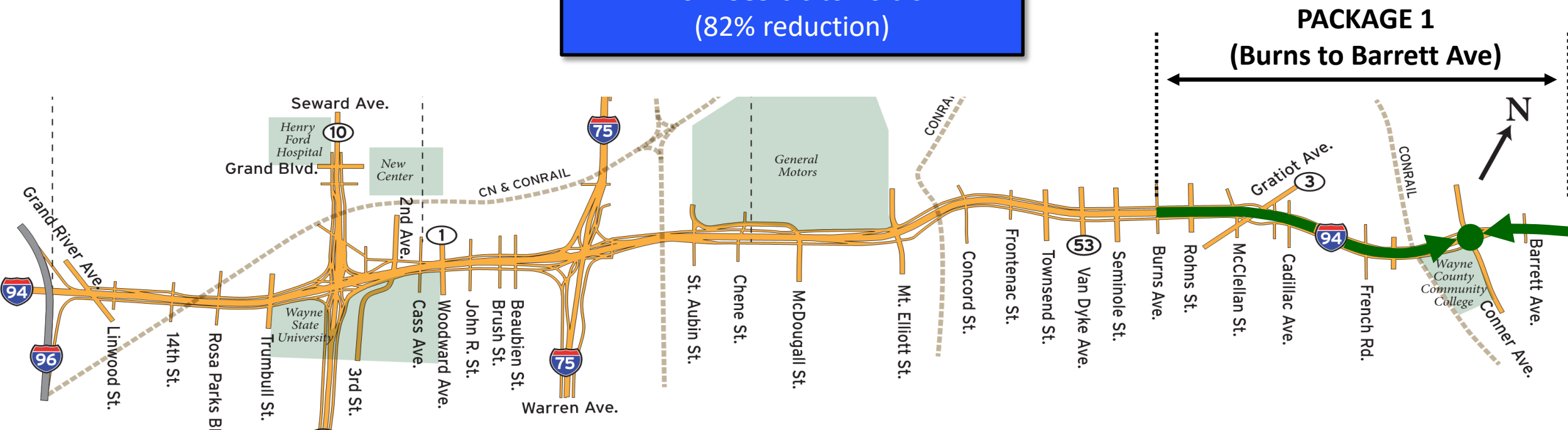
Drainage system will discharge to Conner combined sewer at a 10% reduced peak rate (78 cfs to 70 cfs)

Elimination of 3 connections to the combined system (Seneca & Cadillac PS's, & Norcross), all service drive flows, and reduction of peak discharge to Conner Sewer.

Total peak flow to the combined system for Package 1 is reduced from 389 cfs to 70 cfs (82% reduction)

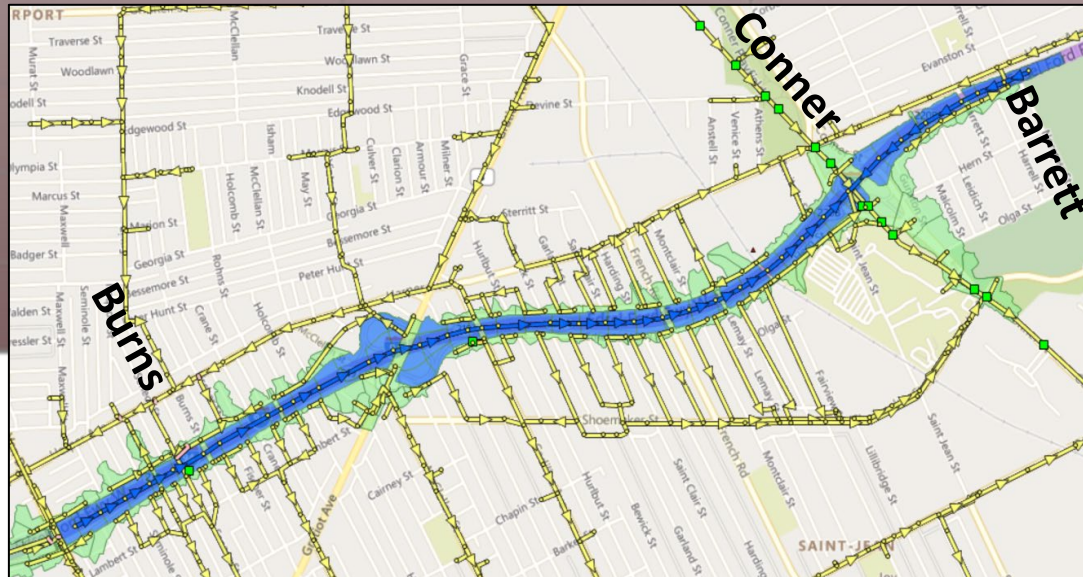
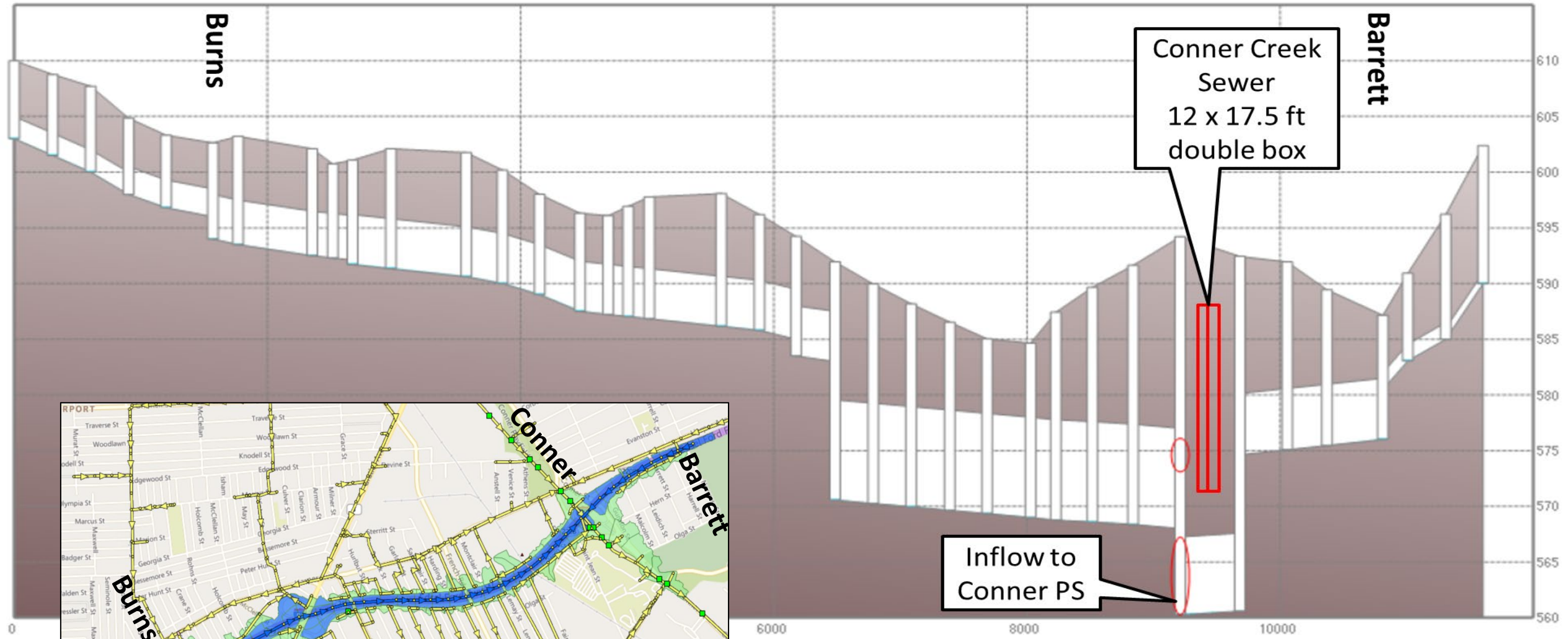
MDOT will provide funding as mitigation for disconnection or installation of backflow preventors.

MDOT will provide funding for CSO Facilities



PACKAGE 1
(Burns to Barrett Ave)

Package 1 (Burns to Barrett) Drainage Alternative



I-94 Backflow Preventors/Disconnection from Combined System



- Four (4) existing connections to the combined system in Package 1:
 - Norcross
 - Conner Pump Station
 - Cadillac Pump Station
 - Seneca Pump Station
- Proposed alternative will **disconnect I-94 from the combined system** at Norcross, Cadillac, and Seneca
- Under existing conditions, the **Norcross connection backflows onto I-94** during heavy wet weather events
- Disconnection will prevent backflow onto I-94 but will result in impacts to adjacent community as water no longer can use I-94 as a relief
- The proposed alternative includes **funding for mitigation** to address impacts caused by disconnection to the combined system. Funding will be used for installation of larger diameter sewers for flow attenuation and storage.

Corridor (I-96 to Burns) Drainage Alternative

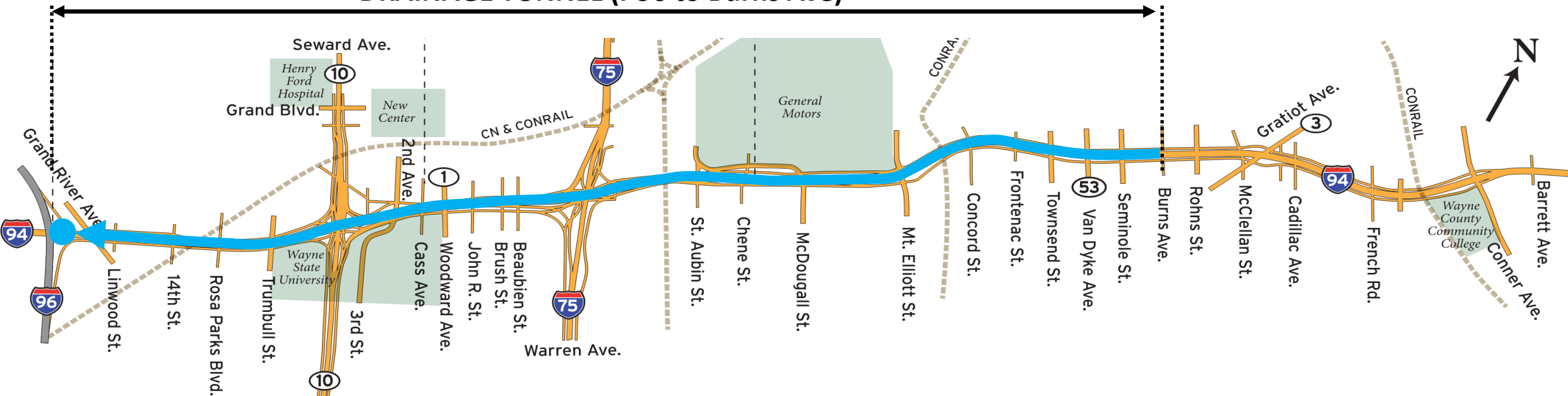


Mainline and service drive flows will be removed from the combined system and will go to MDOT proposed Tunnel System.

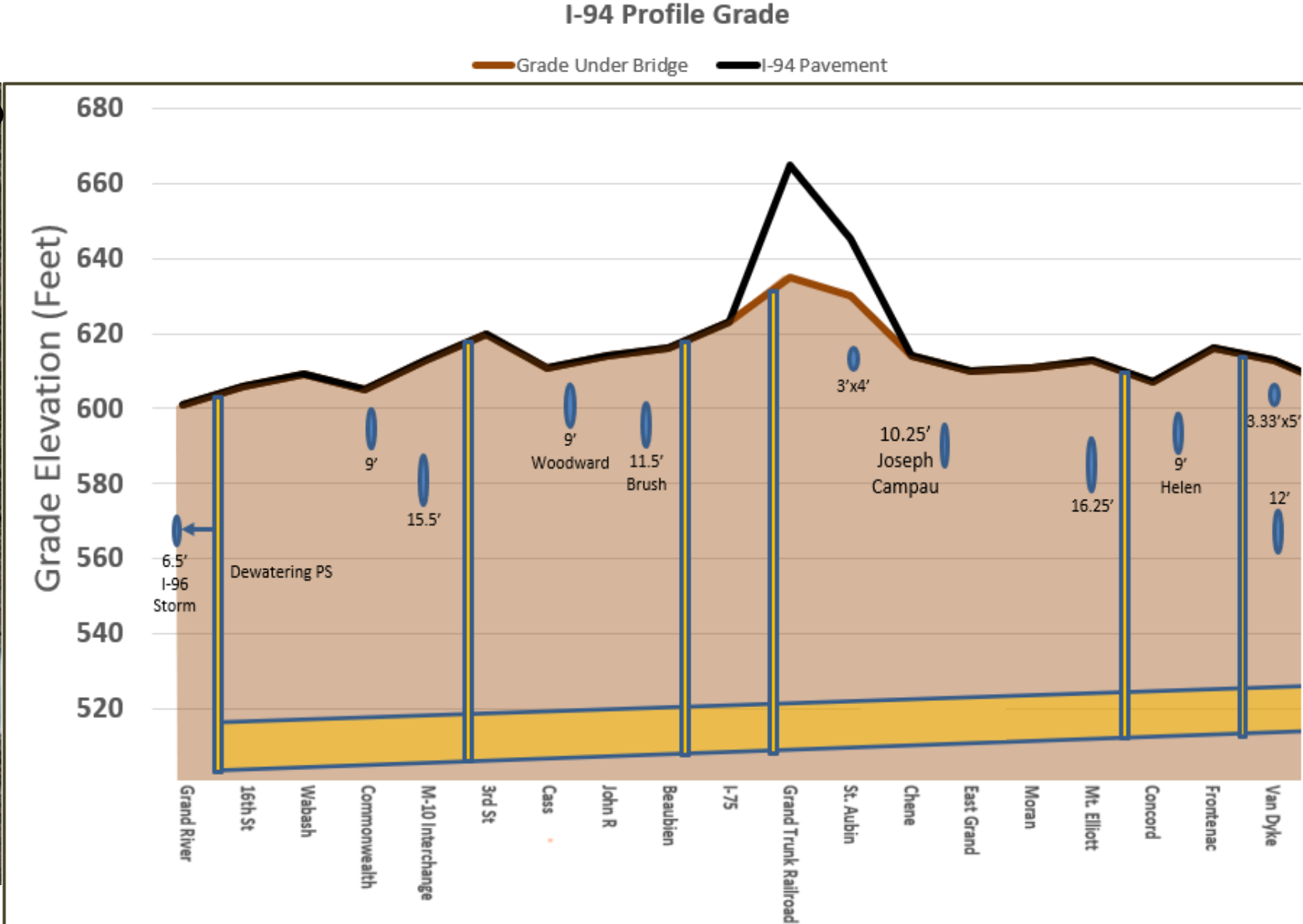
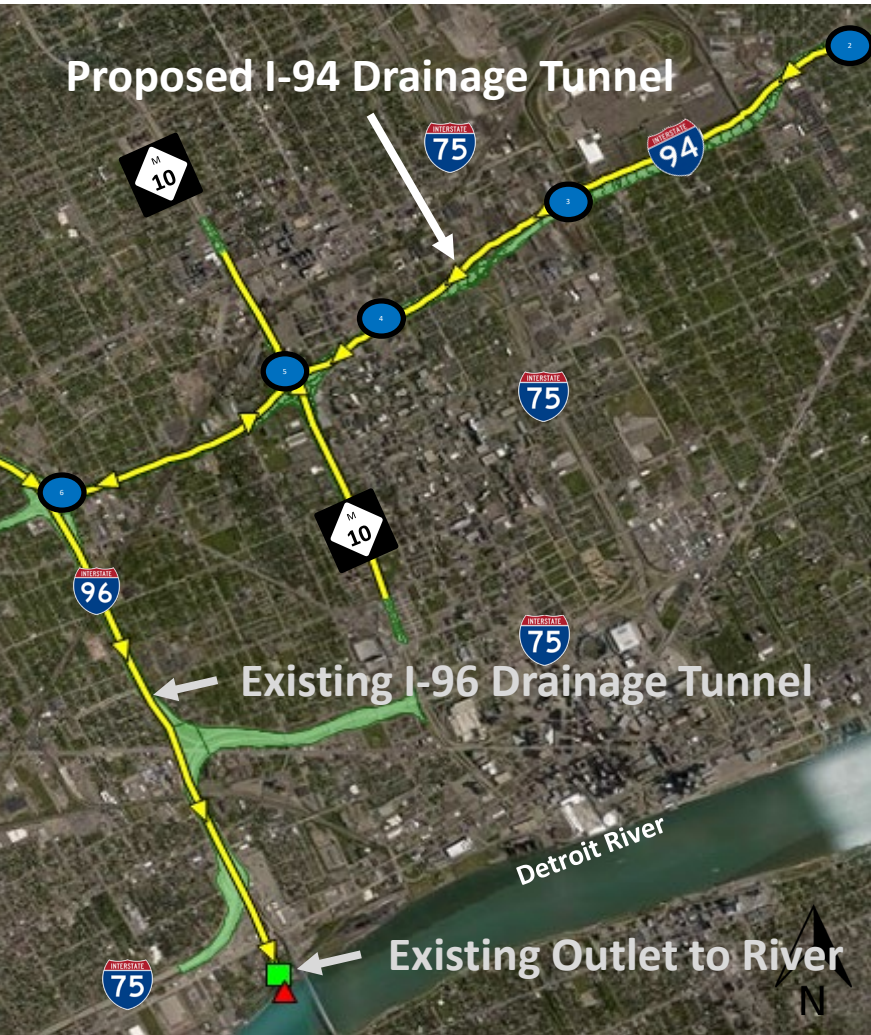
Tunnel to potentially be oversized to accommodate future stormwater flows from the City of Detroit to provide additional flooding relief (oversize amount is being evaluated).

Tunnel will convey, store and discharge flow to existing MDOT I-96 stormwater drainage system.

DRAINAGE TUNNEL (I-96 to Burns Ave)



Proposed Tunnel System for Corridor



Summary of Proposed Drainage Alternative



▪ GLWA/DWSD Benefits:

- I-94 Package 1 **reduces peak flow to 90%** to the Conner Sewer
- I-94 Package 1 **reduces total peak flow by 82%** to the combined system
- MDOT funding will be provided to GLWA to advance the construction of **wet weather CSO facilities**
- MDOT will provide **funding for mitigation of disconnection / installation of backflow preventors**
- Drainage **tunnel removes over 7 miles of freeway** and approximately **14 miles of service drives** from the combined system
- Proposed drainage tunnel **may be oversized to provide additional capacity** to accommodate some of Detroit stormwater to provide additional flooding relief

Summary of Proposed Drainage Alternative



■ MDOT Benefits:

- Removes over five (5) miles of I-94 and two (2) miles of M-10 from the GLWA/DWSD Combined Sewer System reducing drainage charges
- Accommodates the Package 1 final design and construction schedule
- Proposed drainage tunnel expands MDOTs storm sewer network that is independent from the combined sewer system

Summary of Proposed Drainage Alternative



- **MDOT/GLWA/DWSD/EGLE :**

- EGLE has expressed their support for the proposed drainage alternative
- This collaborative drainage alternative demonstrates a strong multiagency collaboration effort that will result in regional benefits to not only Detroit residents but others that are reliant on the GLWA/DWSD system

Why is an agreement needed?



- Federal funding requires a framework, justification, and steps to maintain eligibility
- Defines a collaborative agreed-on scope of work and cost not-to-exceed for Burns to Barrett Alternative Compliance
- Documents commitments and responsibilities of GLWA, DWSD and MDOT from planning through construction and maintenance for Burns to Barrett Alternative Compliance
- Demonstrates a partnership between GLWA, DWSD, MDOT, EGLE and FHWA to improve drainage for the I-94 project corridor

Schedule and Timeline of Package 1

