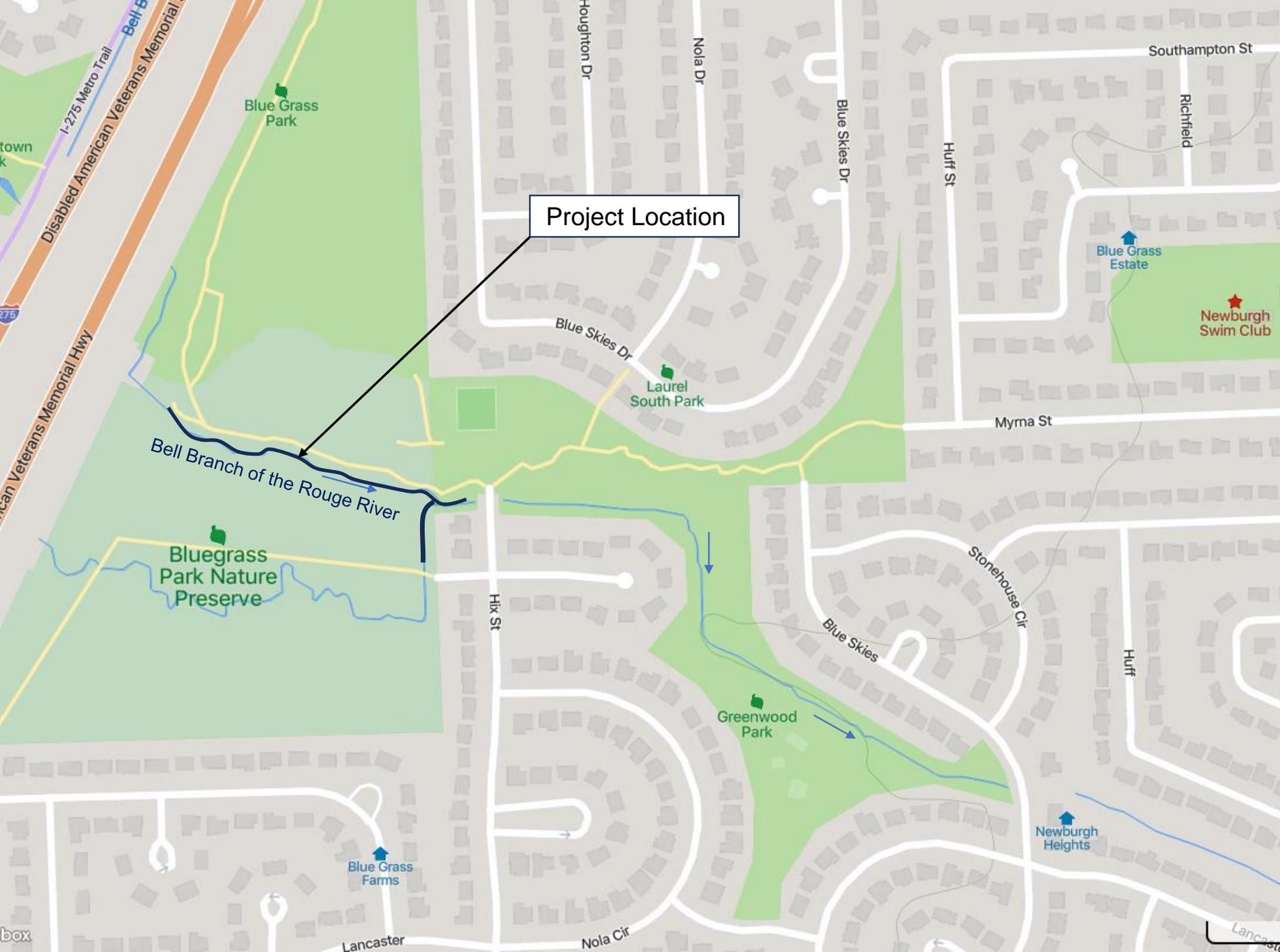


**BELL BRANCH RESTORATION  
AT BLUEGRASS PARK**

**PUBLIC MEETING  
MARCH 18, 2024**

***ECT***

**on behalf of Ashley Capital**



Project Location

Bell Branch of the Rouge River

Bluegrass Park Nature Preserve

Blue Grass Park

Laurel South Park

Greenwood Park

Blue Grass Estate

Newburgh Swim Club

Blue Grass Farms

Newburgh Heights

Nola Cir

Lancaster

Lancaster

box

# Existing Stream Conditions

- Excessive and continuous bank erosion:
  - 8 dump trucks of sediment per year
  - 15 lb phosphorus
  - Public safety concerns
- Deeply downcut (eroded streambed); disconnected from the landscape
- Altered watershed conditions
- Invasive shrubs; lack of native herbaceous plants
- Existing wetland on the north bank is being drained
- Over-wide: the 5'-6' deep, 20'-40' wide channel should be 8'-10' wide and <1' deep
- Poorly rated fish and aquatic organism communities

# THE BELL BRANCH OF THE ROUGE RIVER IS NOT MEETING STATE DESIGNATED USES DUE TO POOR BIOTA

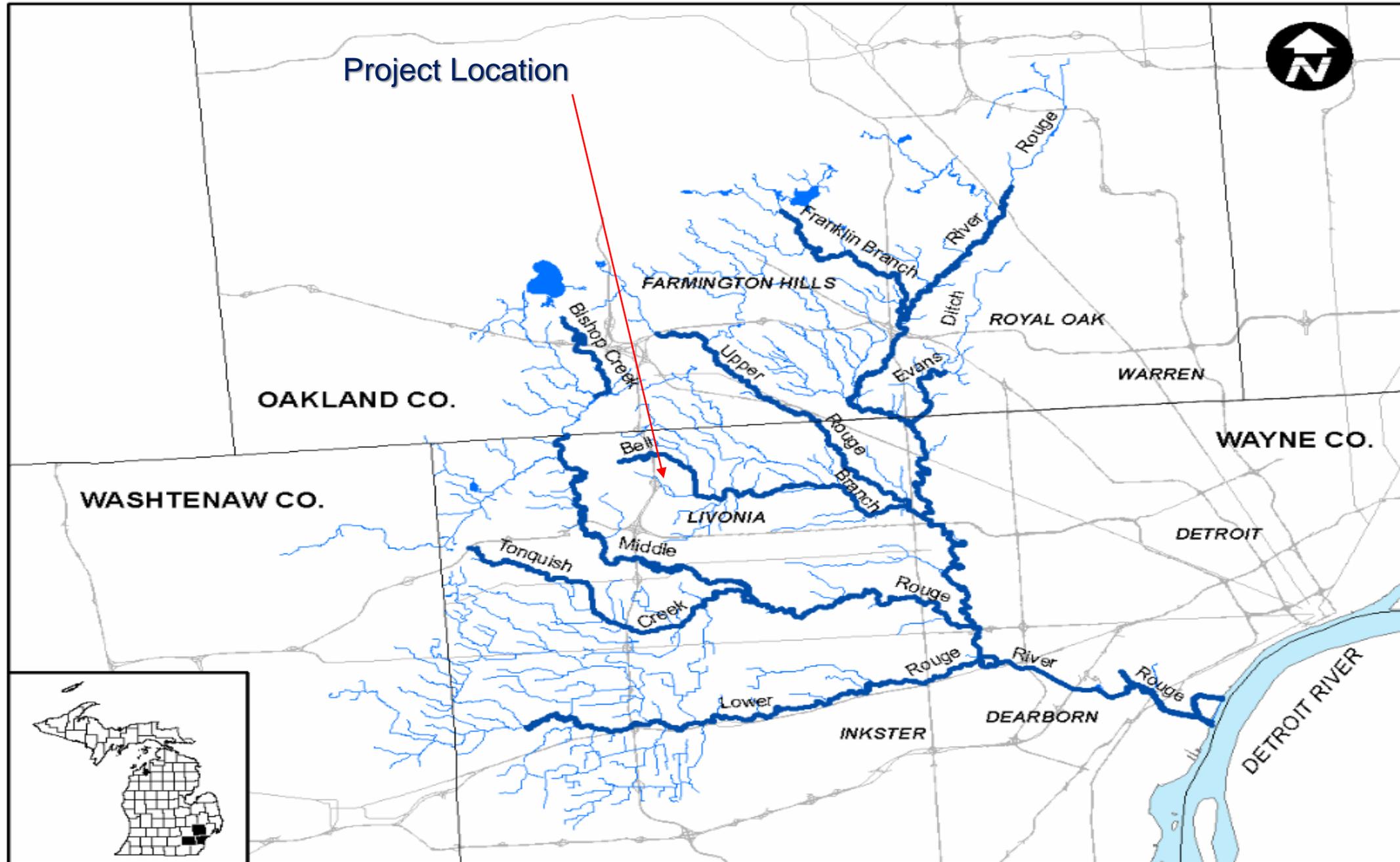


Figure 1. Rouge River Watershed 303(d) listed biota TMDL reaches (in bold).

<https://www.michigan.gov/egle/-/media/Project/Websites/egle/Documents/Programs/WRD/GLWARM/TMDL-Other/river-rouge-biota.pdf?rev=f3b04ffce9b0433f928ed4e492e734bb&hash=688EE806E4B337CEEF162D42C06A38EC>

# EXISTING CONDITIONS

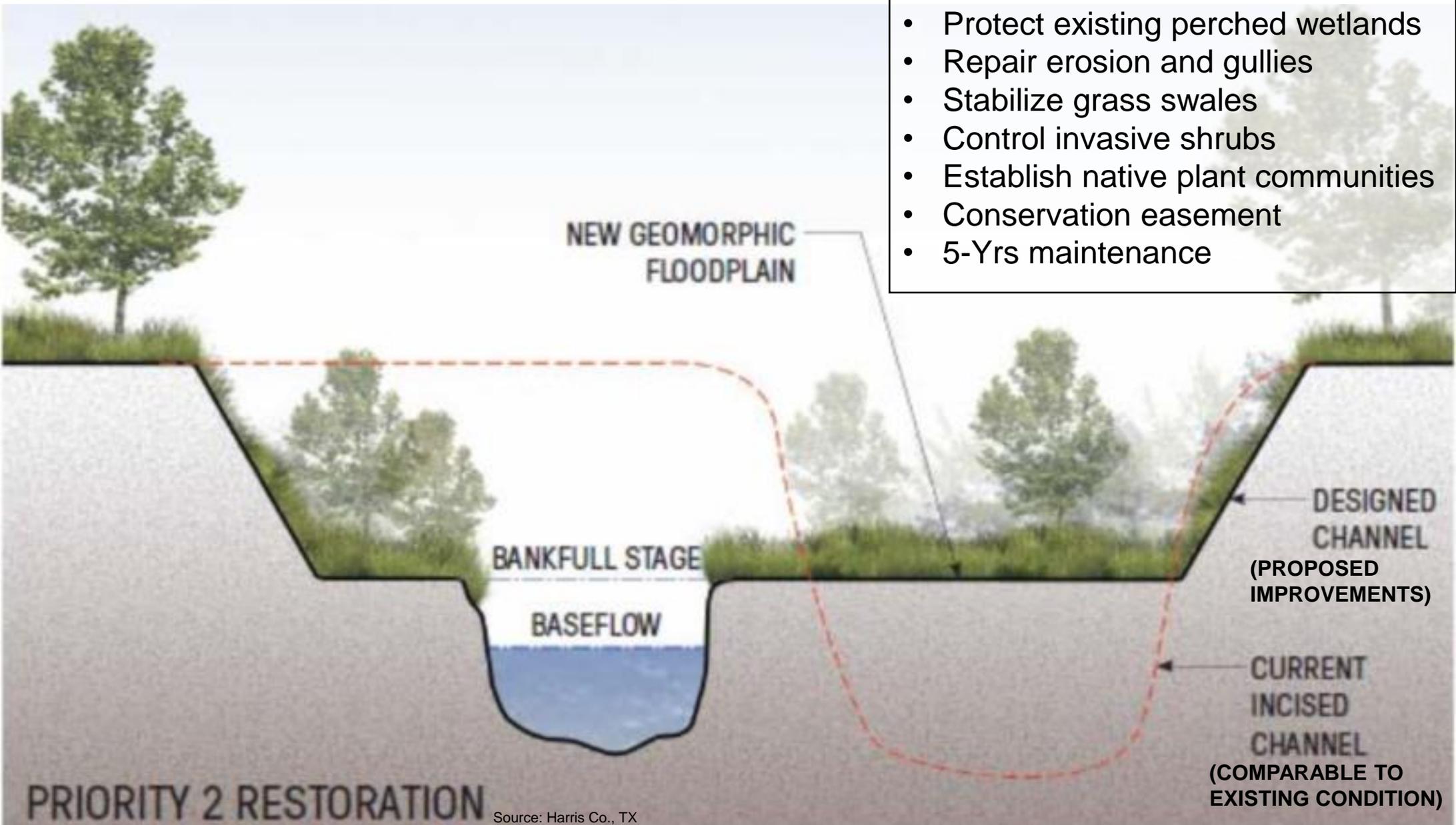


# EXISTING PERCHED WETLAND AREAS – UPPER NORTH BANK



# STREAM RESTORATION APPROACH

- Re-meander the straightened creek
- Partially raise the bed to the west
- Excavate low banks on each side
- Replicate natural riffles/pools
- Construct in-stream habitat
- Off-channel habitats
- Protect existing perched wetlands
- Repair erosion and gullies
- Stabilize grass swales
- Control invasive shrubs
- Establish native plant communities
- Conservation easement
- 5-Yrs maintenance



**BELL BRANCH RESTORATION AT BLUEGRASS PARK**

ECT PROJECT No.:	220320
DESIGNED BY:	RM
DRAWN BY:	NK
CHECKED BY:	CH
APPROVED BY:	
STATUS:	FINAL DESIGN
REVISIONS:	

**PROPOSED CONDITIONS - OVERALL**



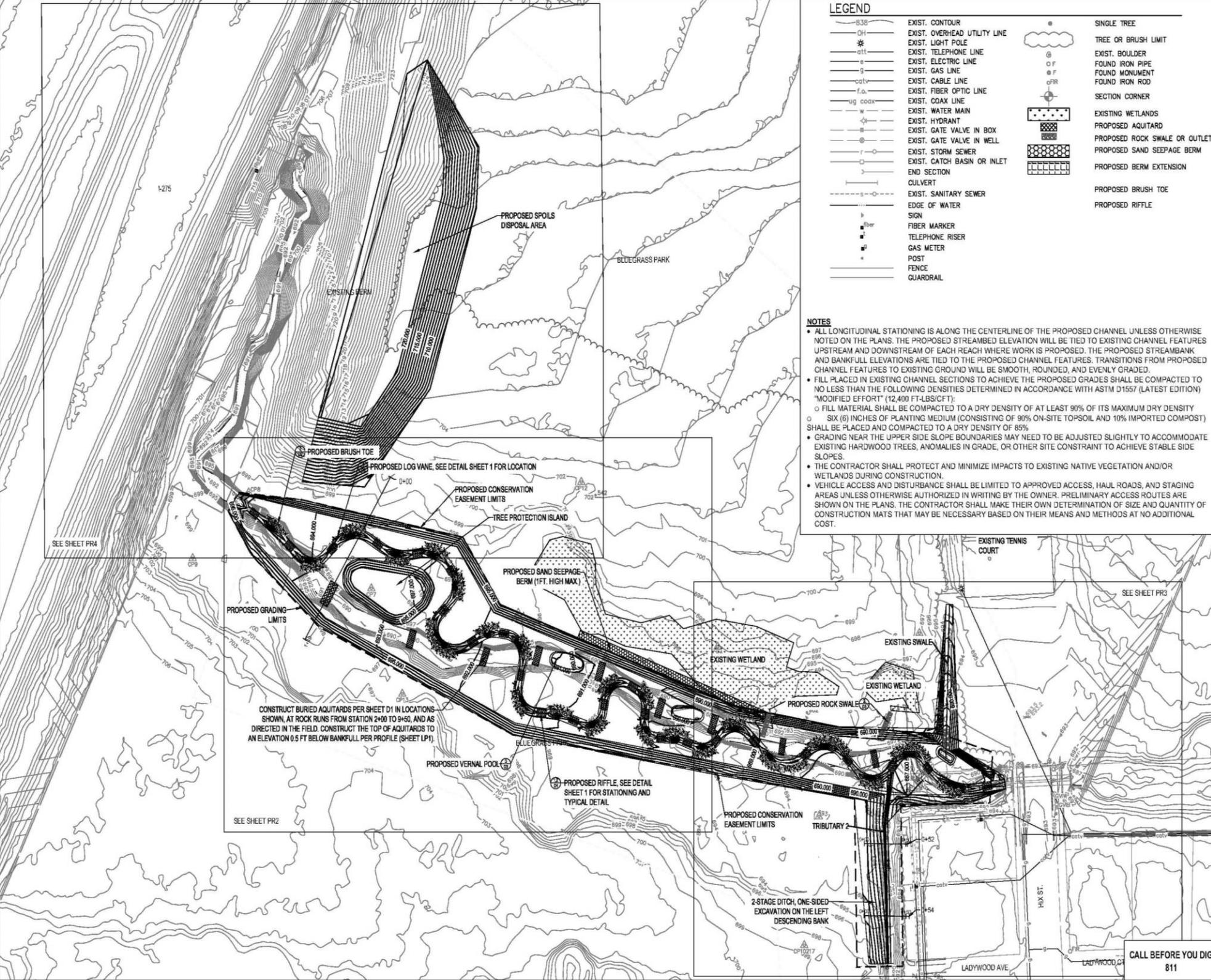
**PR1**

**LEGEND**

— 8.38 —	EXIST. CONTOUR	○	SINGLE TREE
— OH —	EXIST. OVERHEAD UTILITY LINE	☁	TREE OR BRUSH LIMIT
— att —	EXIST. TELEPHONE LINE	○ F	EXIST. BOULDER
— e —	EXIST. ELECTRIC LINE	○ FR	FOUND IRON PIPE
— g —	EXIST. GAS LINE	○ FR	FOUND MONUMENT
— catv —	EXIST. CABLE LINE	○ FR	FOUND IRON ROD
— f.o. —	EXIST. FIBER OPTIC LINE	+	SECTION CORNER
— ug coax —	EXIST. COAX LINE	+	EXISTING WETLANDS
— w —	EXIST. WATER MAIN	+	PROPOSED AQUATARD
— h —	EXIST. HYDRANT	+	PROPOSED ROCK SWALE OR OUTLET
— g —	EXIST. GATE VALVE IN BOX	+	PROPOSED SAND SEEPAGE BERM
— g —	EXIST. GATE VALVE IN WELL	+	PROPOSED BERM EXTENSION
— r —	EXIST. STORM SEWER	+	PROPOSED BRUSH TOE
— r —	EXIST. CATCH BASIN OR INLET	+	PROPOSED RIFFLE
—	END SECTION		
—	CULVERT		
—	EXIST. SANITARY SEWER		
—	EDGE OF WATER		
—	SIGN		
—	FIBER MARKER		
—	TELEPHONE RISER		
—	GAS METER		
—	POST		
—	FENCE		
—	GUARDRAIL		

**NOTES**

- ALL LONGITUDINAL STATIONING IS ALONG THE CENTERLINE OF THE PROPOSED CHANNEL UNLESS OTHERWISE NOTED ON THE PLANS. THE PROPOSED STREAMBED ELEVATION WILL BE TIED TO EXISTING CHANNEL FEATURES UPSTREAM AND DOWNSTREAM OF EACH REACH WHERE WORK IS PROPOSED. THE PROPOSED STREAMBANK AND BANKFULL ELEVATIONS ARE TIED TO THE PROPOSED CHANNEL FEATURES. TRANSITIONS FROM PROPOSED CHANNEL FEATURES TO EXISTING GROUND WILL BE SMOOTH, ROUNDED, AND EVENLY GRADED.
- FILL PLACED IN EXISTING CHANNEL SECTIONS TO ACHIEVE THE PROPOSED GRADES SHALL BE COMPACTED TO NO LESS THAN THE FOLLOWING DENSITIES DETERMINED IN ACCORDANCE WITH ASTM D1557 (LATEST EDITION) "MODIFIED EFFORT" (12,400 FT-LBS/CFT):
  - FILL MATERIAL SHALL BE COMPACTED TO A DRY DENSITY OF AT LEAST 90% OF ITS MAXIMUM DRY DENSITY
  - SIX (6) INCHES OF PLANTING MEDIUM (CONSISTING OF 90% ON-SITE TOPSOIL AND 10% IMPORTED COMPOST) SHALL BE PLACED AND COMPACTED TO A DRY DENSITY OF 85%
- GRADING NEAR THE UPPER SIDE SLOPE BOUNDARIES MAY NEED TO BE ADJUSTED SLIGHTLY TO ACCOMMODATE EXISTING HARDWOOD TREES, ANOMALIES IN GRADE, OR OTHER SITE CONSTRAINT TO ACHIEVE STABLE SIDE SLOPES.
- THE CONTRACTOR SHALL PROTECT AND MINIMIZE IMPACTS TO EXISTING NATIVE VEGETATION AND/OR WETLANDS DURING CONSTRUCTION.
- VEHICLE ACCESS AND DISTURBANCE SHALL BE LIMITED TO APPROVED ACCESS, HAUL ROADS, AND STAGING AREAS UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE OWNER. PRELIMINARY ACCESS ROUTES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF SIZE AND QUANTITY OF CONSTRUCTION MATS THAT MAY BE NECESSARY BASED ON THEIR MEANS AND METHODS AT NO ADDITIONAL COST.



1-275

PROPOSED SPOILS DISPOSAL AREA

BLUEGRASS PARK

EXISTING BERM

PROPOSED BRUSH TOE

PROPOSED LOG VANE, SEE DETAIL SHEET 1 FOR LOCATION

PROPOSED CONSERVATION EASEMENT LIMITS

TREE PROTECTION ISLAND

PROPOSED SAND SEEPAGE BERM (1FT. HIGH MAX.)

EXISTING TENNIS COURT

PROPOSED GRADING LIMITS

EXISTING WETLAND

EXISTING SWALE

EXISTING WETLAND

CONSTRUCT BURIED AQUATARDS PER SHEET D1 IN LOCATIONS SHOWN, AT ROCK RUNS FROM STATION 2+00 TO 9+50, AND AS DIRECTED IN THE FIELD. CONSTRUCT THE TOP OF AQUATARDS TO AN ELEVATION 0.5 FT BELOW BANKFULL PER PROFILE (SHEET LP1).

PROPOSED ROCK SWALE

PROPOSED VERNAL POOL

PROPOSED RIFFLE, SEE DETAIL SHEET 1 FOR STATIONING AND TYPICAL DETAIL

PROPOSED CONSERVATION EASEMENT LIMITS

TRIBUTARY 2

2-STAGE DITCH, ONE-SIDED EXCAVATION ON THE LEFT DESCENDING BANK

SEE SHEET PR2

CALL BEFORE YOU DIG  
811

# Typical Restored Stream After One Growing Season



# Tree Cutting Activities: March 19-29, 2024

## 14 (mostly dead) trees



TAG#	DBH	COMMON NAME	SCORE
1553	9"	American Elm	dead
no tag	10 inch snag	NA	dead
706	10"	Box Elder	dead
700	7"	American Elm	dead
503	10"	Box Elder	dead
430	6"	Shagbark Hickory	live
347	NA	NA	NA
439	9"	American Elm	dead
385	12"	American Elm	dead
2559	14"	Black Cherry	live
2577	16"	Black Cherry	live
2663	15"	Box Elder	0.4
2680	17"	Linden	dead
1574	20"	Box Elder	live

# Preliminary Construction Schedule\*

Public Notice/EGLE Review	Dec. 2023 – Mar. 2024
Construction Bidding	March 2023
Site Clearing and Preparation	March/June 2024
In-Stream Construction Start	July 2023
Significant Completion	Sept. 2024
Riparian Plantings	Sept. – Oct. 2024

\*This is a required Contractor submittal once one has been selected.