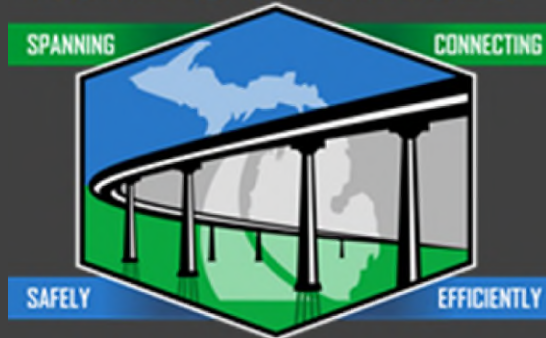


# IBT/ABC – UTC November Webinar Michigan Bridge & US DOT Strategic Plan



**BUREAU of BRIDGES**



**and STRUCTURES**

Richard Liptak, PE  
Chief Bridge Construction Engineer





- MDOT's efforts to make work zones safer on Bridge Projects
- MDOT's Transformation from Plans to Building Information Modeling – BIM
- MDOT's challenges with Workforce

# Work Zone Safety

Modern PPE - Safety Gear



Fall Protection – Temp Rails or Lanyard's

Equipment can be replaced – **People** can not



# Public driving through Work Zones

## Capitol Briefings

By MDOT OoC, OGA, and IPS staff • Oct 20, 2023

Smart Brevity® count: 1.5 mins...386 words

### Governor signs freeway barrier requirements into law



On Oct. 19, Gov. Whitmer signed a bill into law that requires crashworthy barriers when completely closing a freeway to traffic. If a freeway is partially closed at night, [SB 43](#) requires similar barrier to be used between workers and traffic. The law does not apply to emergency closures.

# The Original Project Engineers

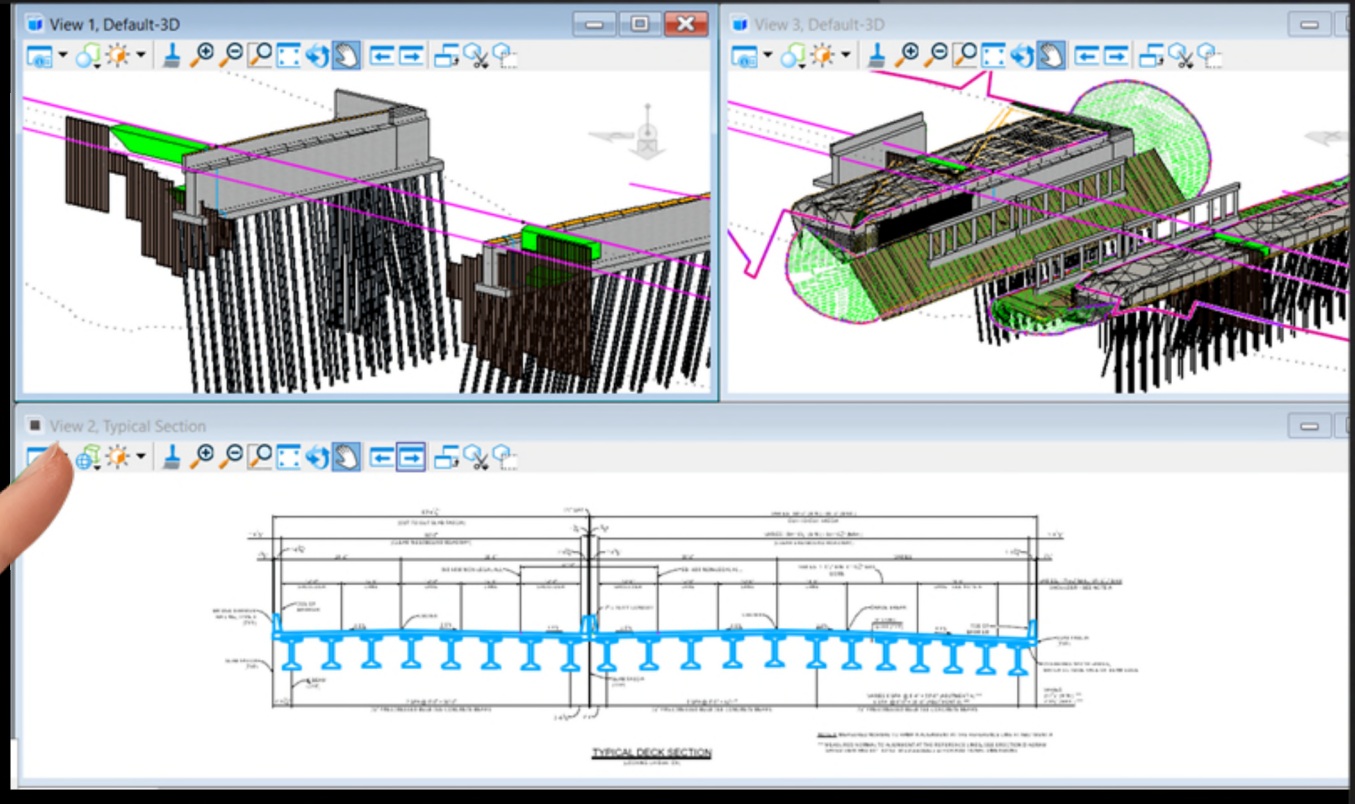
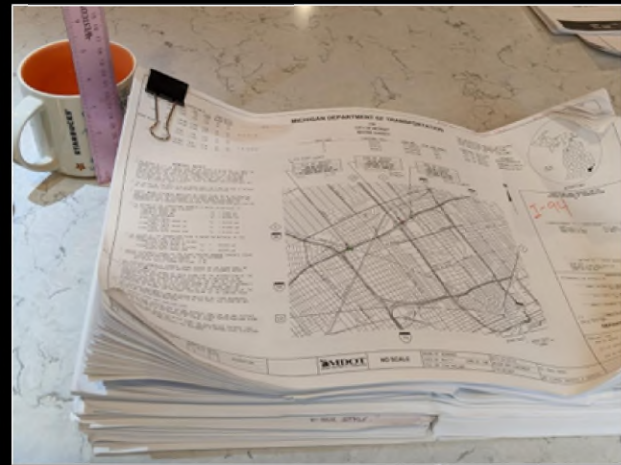


1920's

STATIC

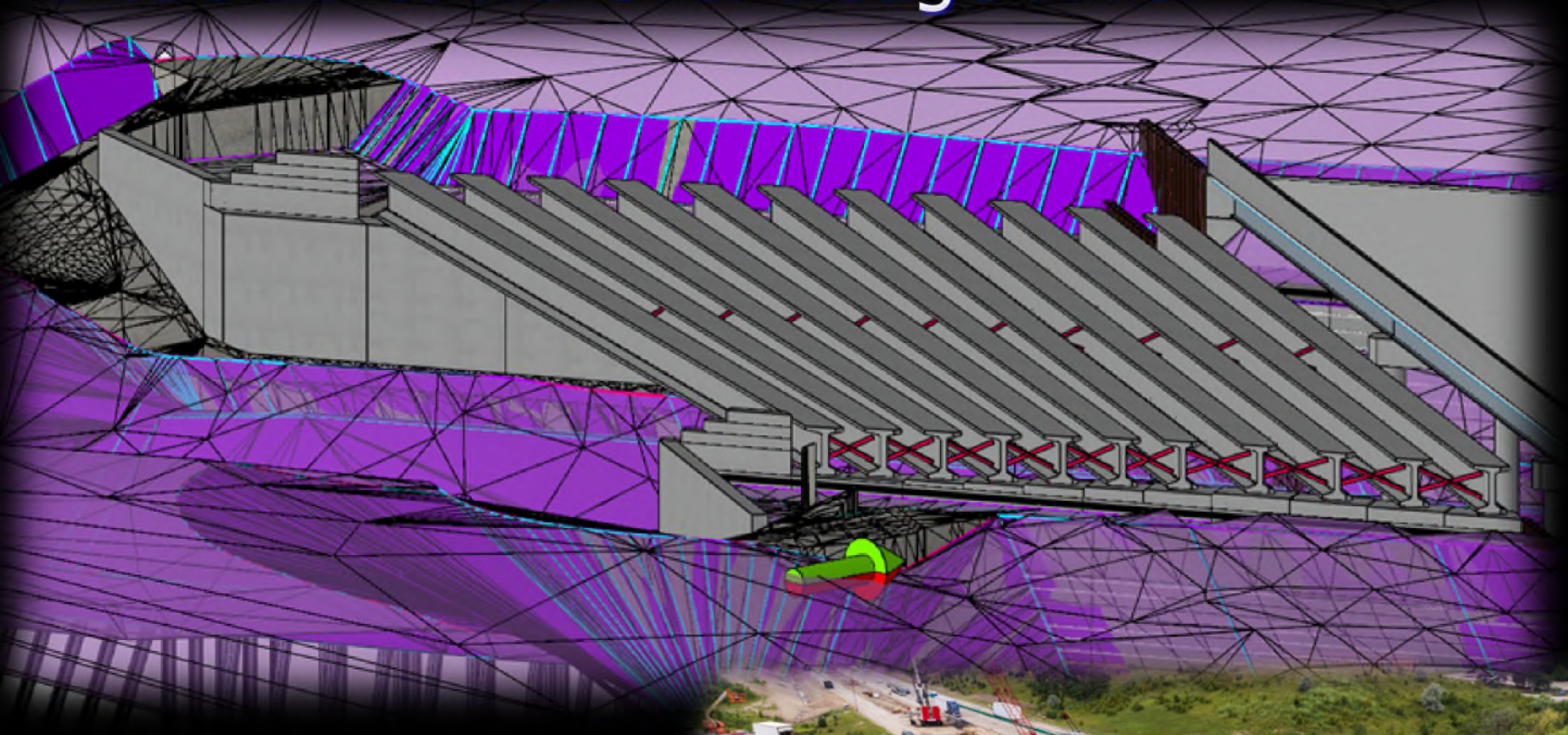
# BIM (Building Information Modeling) Bridge Model Delivery Pilot

DYNAMIC



- Design info in model
- Dynamic Views
- Saved Views
- Annotations
- Supplemental Documents

# I-696 EB & WB over Rouge River



# Recruitment, Retention and Knowledge Transfer



- Youth Development & Mentoring Program
- TRAC and STEM Programs
- Internship Program
- Diversity Recruitment Program



2<sup>nd</sup> Avenue over I-94

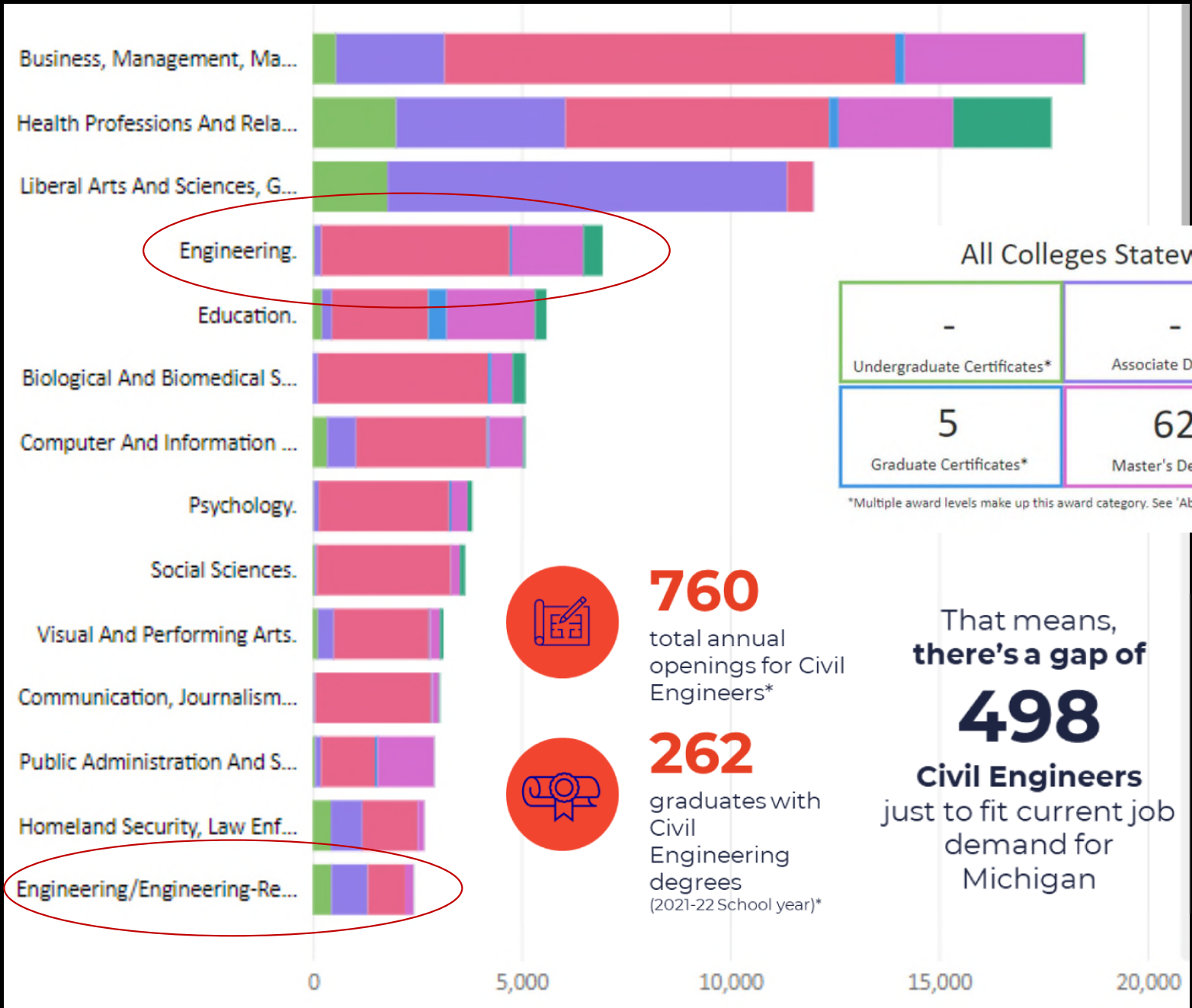


Amtrak line over Mechanic Street



# Challenging Projects

# Graduates of Higher Education in Michigan



All Colleges Statewide 2021-2022

-	-	262
Undergraduate Certificates*	Associate Degrees	Bachelor's Degrees
5	62	32
Graduate Certificates*	Master's Degrees	Doctoral Degrees*

\*Multiple award levels make up this award category. See 'About This Report' or the data file for more details

**760**  
total annual openings for Civil Engineers\*

**262**  
graduates with Civil Engineering degrees (2021-22 School year)\*

That means,  
**there's a gap of**  
**498**  
**Civil Engineers**  
just to fit current job demand for Michigan

WHO wants to work all night?



WHO wants to work on a floating crane?

Started Bridge Construction  
in January in the middle of  
the Manistee River



WHO wants to work in a basket hours at a time???



WHO wants to run a jackhammer in the Winter??

# Gordie Howe International Bridge (GHIB)



# Progress with Lots of People



# Conclusions

- MDOT's has made progress at making work zones safer
- MDOT's is moving forward with BIM
- MDOT's efforts on the Workforce are a continual Effort



Someone had a bad DAY!!!