The Civil and Environmental Engineering Department is pleased to invite the University community to attend the spring 2018 senior design team presentations. This semester students have undertaken a wide range of interesting projects to fulfill the Department’s design project requirement. Refreshments will be served.

### Dow 641

**8:00 AM - 10:00 AM**

**Proposed Utility Tunnel Beneath the Straits of Mackinac, MI**

*Advisors:* Michael T. Drewyor, PE & PS & Jim Morrison, PE, ILF Consultants

Establish entry and exit points – Upper Peninsula Precision Inc.
Pat Weaver (PM), Karrah Schneiderwent, Aaron Crapsey (TCMG) and Gavin Bodnar

Tunnel Profile Design – Horizon Engineering
Chad Brown (TCMG, PM), Taylor Garbe, Alex Kuehn and Isaac MacMillan

Determine optimum tunnel cross section – Tunnel X
Mike Frahm (PM), Jeremy Dziwiet, Mike Prast and Jesse Fredericks

Determine optimal portal/shaft configuration – MADE Consultants
Aaron Kostrzewa (PM), Danny Bast, Emma Beachy and Matt Wray (TCMG)

**10:00 AM - 12:00 PM**

**Lake State Railroad Gaylord Development Plan**

*Advisor:* Dave Nelson

LSRC New Transload Facility Site Development: Roads and Parking
Melissa Creutz (PM), Allen Van Den Boom, Pierce Treend, Brian Nance

LSRC Vanderbilt Extension
Group Members: Ian Stampfly (PM), Robin Jackson, Jesse Steeves

LSRC New Transload Facility Site Development: Rail Development
Haylee Lakenen (PM), Matt Burfeind, James McGhee, Austin Strahl

LSRC New Transload Facility Site Development: Warehouse and Facilities
Jake Hebert (PM), Tyler Gildersleeve, Nevin Radosevich, Mikayla Young

### Dow 642

**8:00 AM - 10:00 AM**

**Challenge Manufacturing Environmental Audit, Walker, MI**

*Advisor:* Dr. Alex Mayer

WWE Michigan Tech: Liquid Waste Streams
Noah Bednar (PM), Sara Beine, Janna Brown, Kelsey Cole

Fresh Coast Consulting: Storm Water
Alex Bergquist (PM), Kristin Lowery, Ryan Pietila, Victoria Swanson

Husky Waste Solutions: Solid Waste Streams A
Addison Bailey (PM), Mina Kukuk, Shaye Maetzold

Efficiency Consultants: Solid Waste Streams B
Caryn Murray (PM), Marcy Patrick, Shelby Scherdt

**10:00 AM - 12:00 PM**

**Design of the Copperwood Mine Surface Processing Facilities**

*Client:* Highland Copper Company

*Advisor:* Stan Vitton, PhD, PE

Haul Road Design
Connor Fitzpatrick, Annie White

Concentrator Plant Foundation Design
KC Borseth, Mac Carter, Yaqi Yang

Rock Storage Silo Foundation Design
Isaac Pantii, Chris McCue, Kayla Wielgus

Geotechnical & Structural Access Decline Design
Sarah Cuda, Brock Hoffman, Brittany Klingerman, Abbey Nieskes

Tailings Basin Drainage System Design
Hunter Brisson, Mike Rosati, Kaitlyn Sabourin, Hannah Stevens