Portage Lake Lift Bridge
2014-2016 Rehabilitation
What are we doing?

MDOT will rehabilitate and upgrade the Portage Lake Lift Bridge between Houghton and Hancock.

**Duration:** December 2014-April 2016  
**Cost:** $8.39 million  
**Contractor:** Zenith Tech Inc.
Project details

• Lift cable replacement
• Balance chain rehabilitation
• Electrical and mechanical upgrades
• System improvements
• Spot painting
• Deck repairs
• New warning and barrier gates
Replace lift cables
Repair balance chains
Replacing Lift Cables

• Mid-January to Late March
Replacing Lift Cables

- Disconnection (10 hours)
  - January 17
  - Pin Counterweight
  - Jack Lift Span approx 2’
  - Place temporary ramp for emergency vehicles to pass during this time
  - Disconnect all old cables
  - Lower lift span to bridge seats for winter
Replacing Lift Cables

• Replace all 84 2-3/8” cables - one at a time
  – 20-minute closures throughout winter (night work)
Reconnecting New Cables to Lift Span (11.5-hour closure) March 21

- Jack the liftspan approx. 3’
- Position emergency ramp
- Connect new cables
- Lower the liftspan a distance to relieve pressure on counterweight hangers
- Unpin counterweight and lower lift span with bridge machinery.
Balance Chain Replacement

- During Winter
- Shift traffic to inside lanes
- Set up rigging/equipment
- Close bridge 2 hours to lower/raise chains
- 8 chains – 2 closures per chain.
Balance Chain Replacement

- 8 chains – 2 closures per chain.
Portage Lake Lift Bridge

- Bridge house repairs

Repair floor damage
Portage Lake Lift Bridge

- Upper machinery room - upgrades

Drive equipment upgrade
Additional items

• New underbridge LED lighting (Navy, M-26 Ramp, Lakeshore Drive)
• New LED street level luminaires
• Additional cameras for operational need and security on north side
• Replacing warning gates and adding barrier gates
• New motor drives and rebuilding lift motors
Traffic impacts

Bridge closures:
• **One 10-hour closure** (with ramp for emergency vehicles)
  WHEN? Jan. 17, 2015, nighttime (9 PM-7 AM) with an alternate date of Jan. 24 in case of weather delay.
  WHY? Disconnect lift cables from lift span
• **Eight 2-hour closures**
  WHEN? January 2015, nighttime (2 AM-4 AM)
  WHY? Remove balance chains
• **168 intermittent 15-20 –minute closures**
  WHEN? January-March 2015 , nighttime (7 PM-6 AM)
  WHY? Lift cable removal and reinstallation
• **One 11.5-hour closure** (with ramp for emergency vehicles)
  WHEN? March 21, 2015, nighttime (9 PM-8:30 AM) with an alternate date of March 28 in case of weather delay.
  WHY? Connect lift span to new cables
• **Eight 2-hour closures**
  WHEN? March 2015, nighttime (2 AM-4 AM)
  WHY? Install balance chains
Waiting rooms during all-night closures

- Magnuson Hotel – Houghton
- Lakeview Manor – Hancock
- Warm spot for motorists to sit and wait for bridge to reopen
- Available in case of no other options
Traffic impacts

• Single-lane closures, one side or other: 
  Dec. 15, 2014 - April 15, 2015

• Closures of one lane in each direction: 
  April 15 - June 15, 2015 
  Sept. 15 - Dec. 15, 2015

• Single-lane closures limited to nighttime (6 PM - 6 AM): 
  June 15 - Sept. 15, 2015

• Closure of one side and running two-way traffic on other side. 
  Sept. 15 - Dec. 15, 2015

• Maintain pedestrian traffic except during full bridge closures

• Maintain snowmobile traffic except during all-night closures
Traffic routing on US-41 during lift bridge work
Traffic routing continued
Traffic routing continued
Traffic routing continued
Traffic routing continued
Bridge lifts for marine traffic

April 15-June 15, 2015
Sept. 15- Dec. 15, 2015

• Restricted to on-the-hour openings for pleasure craft
• No openings during the 8 AM, Noon and 5 PM hours
Why is this being done?

The Portage Lake Lift Bridge has a proven record of reliability.

This preventive maintenance project will ensure the bridge remains in excellent operating condition.
More information

• Ishpeming Transportation Service Center: 906-485-4270
• Major project webpage: michigan.gov/mdotprojects, look for US-41 Portage Lake Lift Bridge
• www.michigan.gov/drive
• www.twitter.com/MDOT_UP
• www.facebook.com/MichiganDOT
• During all-night closures, tune to 1610 AM
• Check for info on the many digital message boards
• Sign up for e-mail alerts from MDOT via GovDelivery
Get up-to-date

Scan this code with your mobile device for a direct link to the project website.