

Construction Challenges In Northern Climates



ENGINEERING
HEMISPHERE

Presented By:

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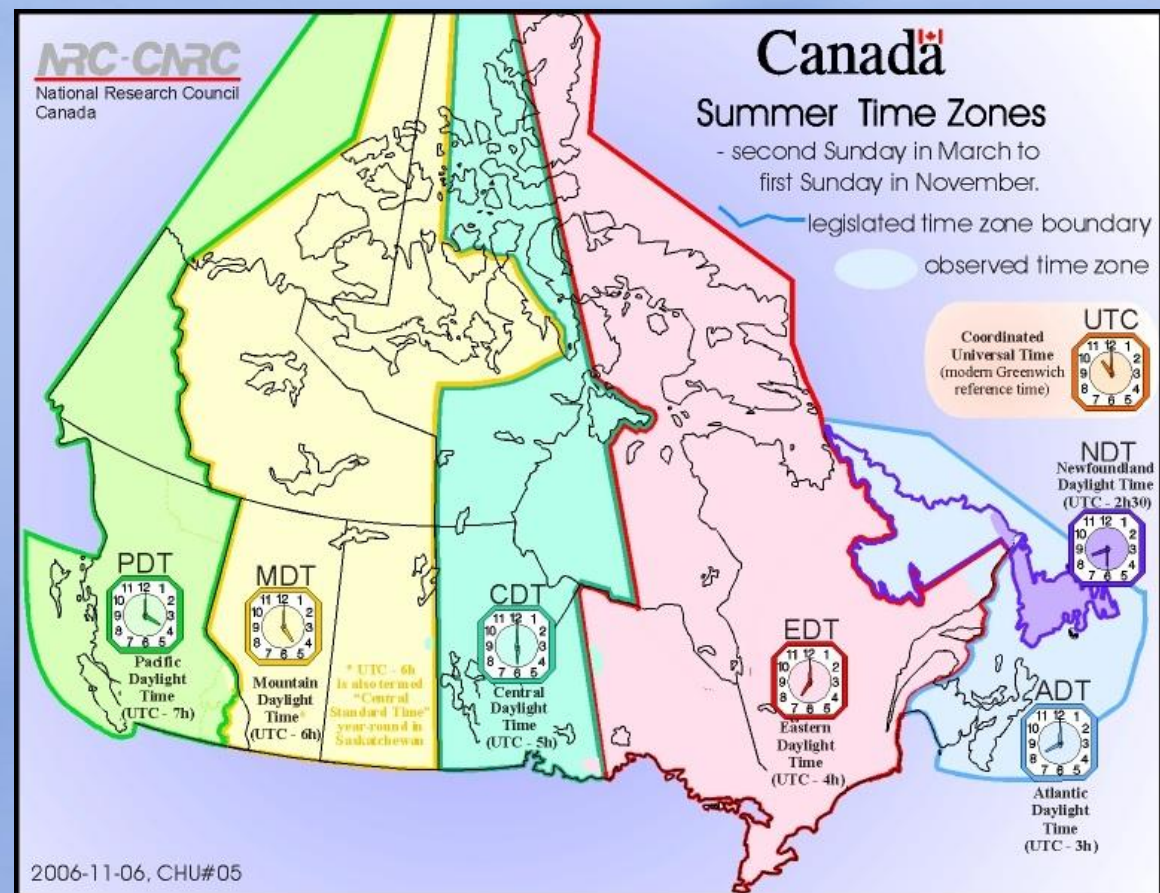
Design Challenges

- Local and Regional availability of knowledgeable design expertise in Arctic projects



Design Challenges

- Challenges of communication between design and owner groups
 - Differing Time zones



Design Challenges

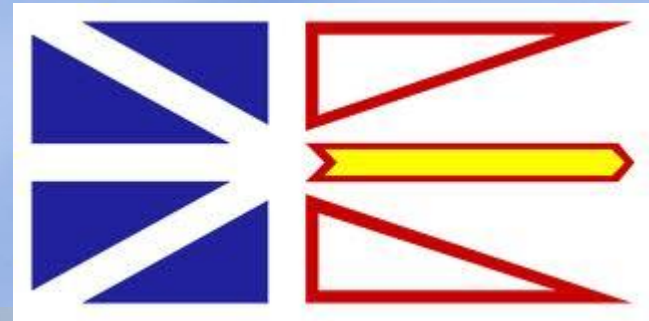
- Challenges of communication between design and owner groups
 - Satellite uplinks
 - Lack of or extremely slow internet





Design Challenges

- Local and Regional availability of knowledgeable construction expertise (Tendering Process)
 - Many workers are not from area.
 - Lack of local skilled trades





Design Challenges

- Challenges of a timely Procurement and Shipping of Materials
 - Barges
 - Air freight



<http://www.ntcl.com/marine-operations/barges/>



Construction Challenges

- Challenges changing weather conditions during construction
 - [Blizzards](#)
 - Fall and Spring Ice Fog
 - Cold temperatures





Construction Challenges

- Challenges of constructing within a fragile environment
 - i.e. tire tracks from the 1950's are still visible in many remote locations





Construction Challenges

- Challenges of a lack of available equipment and supplies during construction
 - No local supply houses





Construction Challenges

- Challenges of site lighting
- Transportation issues for construction and owner's personnel (i.e. weathered-in)
 - [Blizzards](#)
 - Fall and Spring Ice Fog
 - Cold temperatures





Construction Challenges

- Challenges of timely communication between design and owner groups during construction
 - i.e. time zones; internet outages; lack of cell phone coverage; etc



Construction Challenges

- Lack of available 'turnover' personnel
 - i.e. Fire Alarm VI often personnel from Edmonton, Montreal/Ottawa, or Winnipeg;
 - Many workers are not local



Questions?

