



SARNIA-LAMBTON

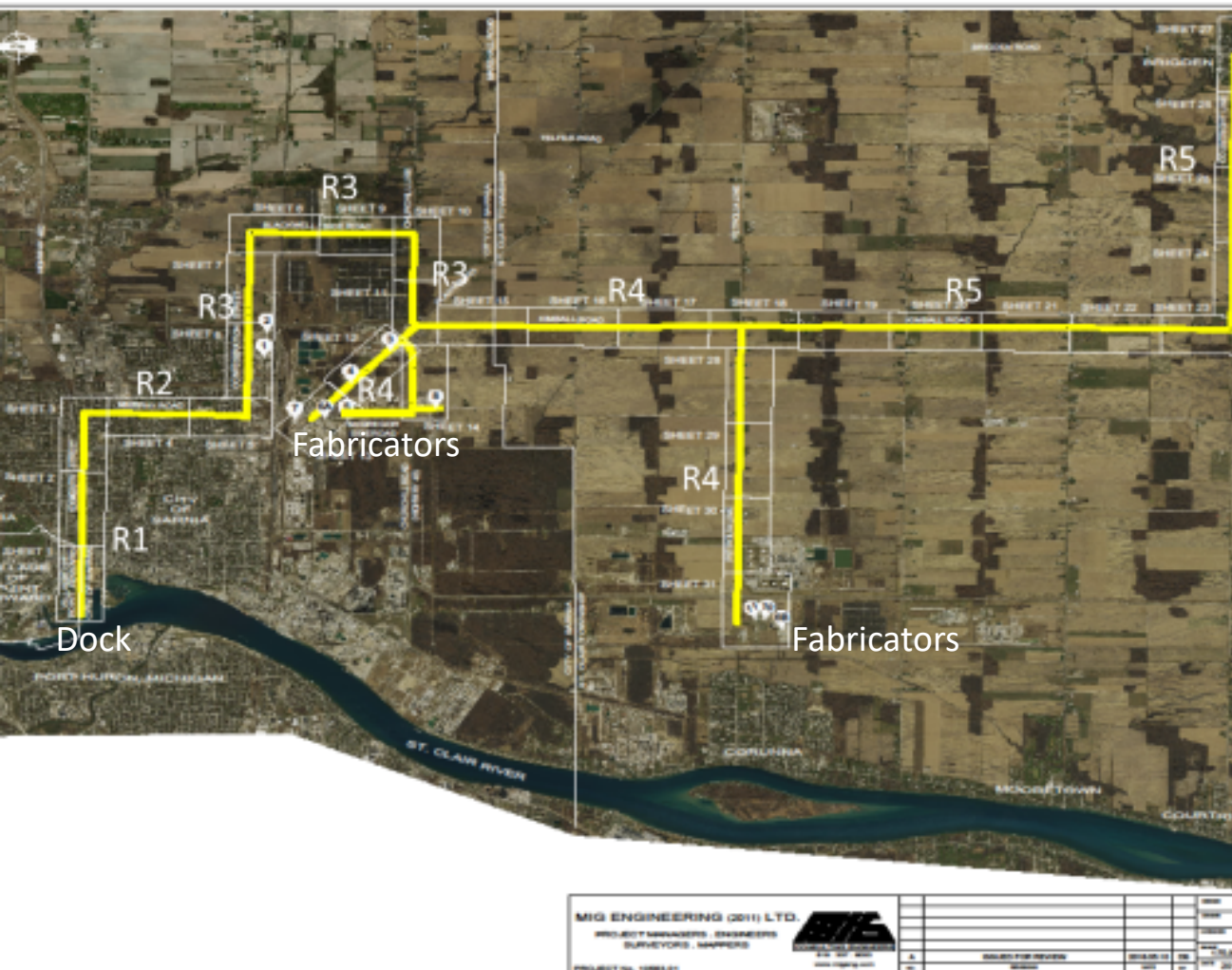
OVERSIZED LOAD CORRIDOR



The Challenge

- Moving large loads & vessels through the city was time consuming and expensive
- Movement required multiple traffic disruptions and encountered major conflicts with utilities
- Space at the existing dock was restrictive for loading/unloading
- Loading/unloading from Barges was difficult and a safety concern
- The cost related to transportation limited local fabricators competitiveness for export





The OLC Corridor

- A 27km designated route on existing roadways connecting fabricators to the Port of Sarnia.
- The corridor is designed to accommodate loads up to 9M wide x 9M high x 45.7M long (30ft x 30ft x 150 ft)

OLC Funding

Total Project estimated cost - \$17M

- Utility Upgrades - \$6M
- Roads and Infrastructure - \$2M
- Dock Facility - \$9M
- \$6M in funding allocated from:
 - City of Sarnia - \$4,715,000
 - County of Lambton - \$1,200,000
 - St Clair Township - \$75,000
 - SLIA - \$10,000
- Additional Funding
 - National Trade Corridor Fund (Federal) \$6M
 - Southwestern Ontario Development Fund (Provincial)\$1.5M
 - CESTAR College \$4M

OLC Permit/Approvals Requirements

- Department of Fisheries and Oceans (DFO)
- Transport Canada-Navigational Waters (NPP)
- St Clair Regional Conservation Authority (SCRA)
- Ministry of Environment, Conservation and Parks (MECP)
- Support from five regional Indigenous groups

What Does the OLC Bring to the Area

- It is estimated the construction of the Oversized Load Corridor could result in additional potential annual sales of \$9.5 million for Sarnia-Lambton fabricators.



OLC SCOPE - ROADWAYS

- Intersection improvements to allow for better turning radius for transporters
- Resurfaced 5 km of existing roadway



OLC SCOPE

- UTILITIES

- Completed the relocation of 220 overhead utilities conflicts to below grade or elevated for the clear passage of oversized loads

Primary Contractors:

- Bluewater Power Inc.
- Hydro One



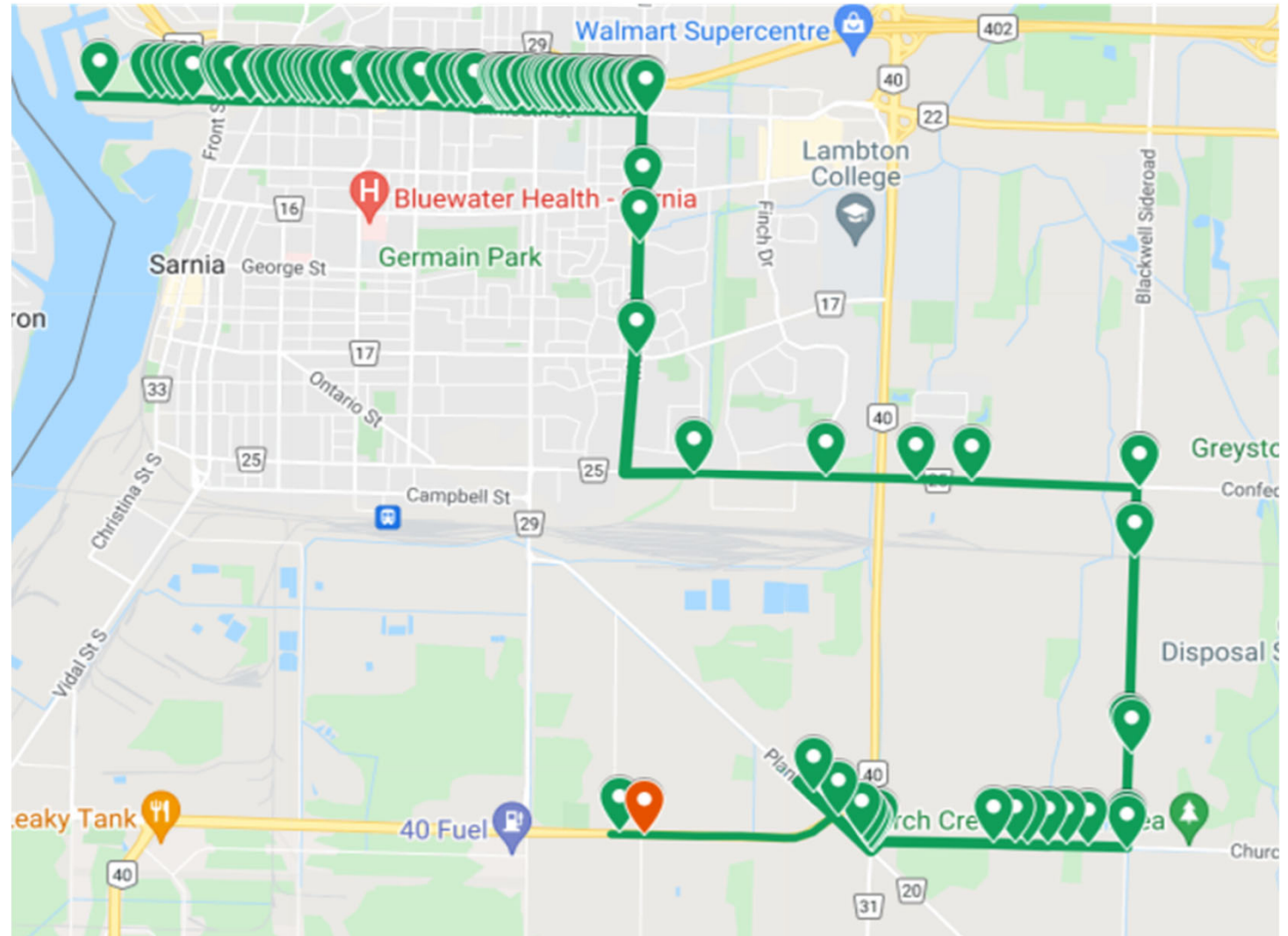
OLC SCOPE - Utilities



23 rotating bases Installed on traffic signal poles

Contractor comment- *“Swinging traffic signals at turn onto Murphy worked well. All traffic had to be stopped at this intersection to make clearance for the load, but with the swinging lights the impact to traffic was reduced to about 15 minutes”*

144 of the
220
Utilities
crossings
completed



OLC DOCK

Objective

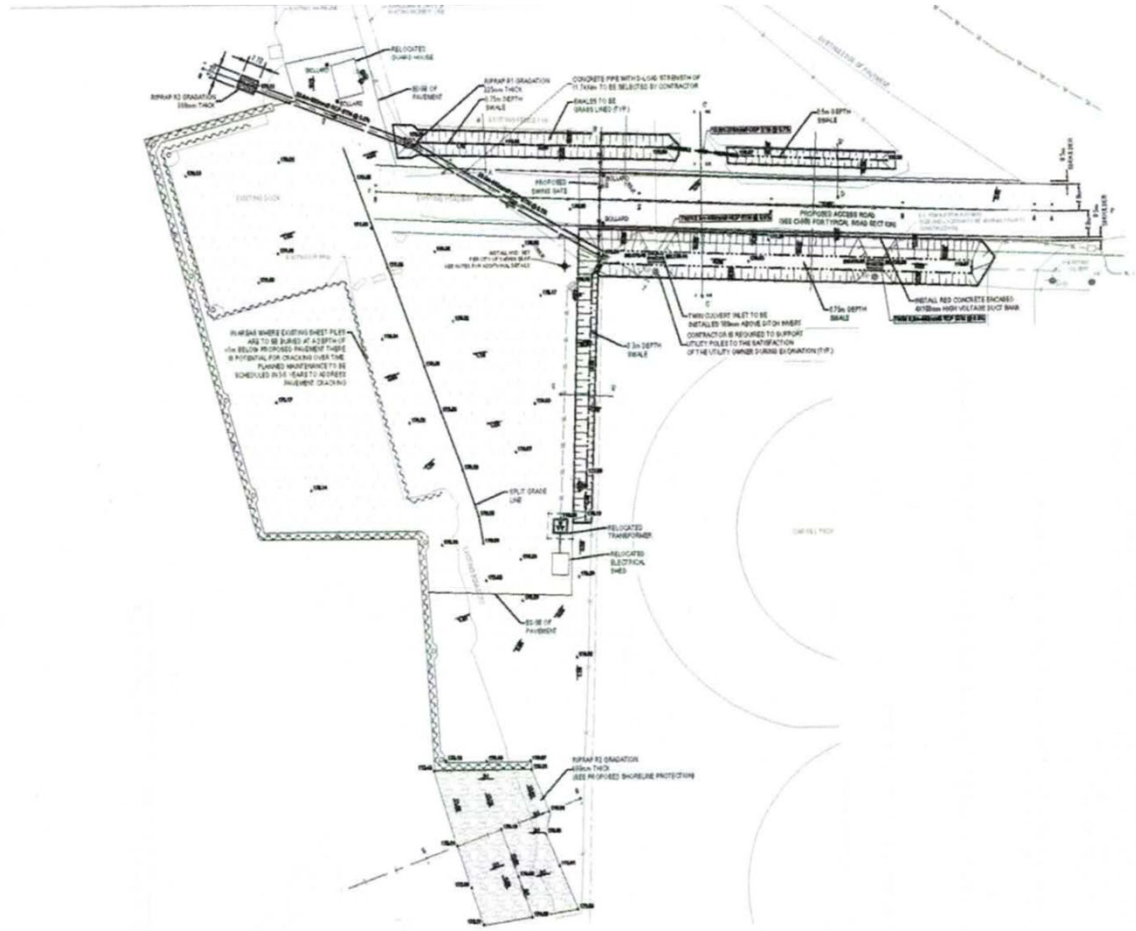
- A new dock facility providing direct and cost-effective access to the waterways of the Great Lakes and St Lawrence Seaway system providing fabricators and constructors cost competitive transport to National and International markets.

Design Criteria

- Capacity for ships up to 35,000 DWT
- Roll-on/Roll-off for barges
- 50KPa surcharge design load
- Enhanced laydown area

CESTAR DOCK

Primary Contractors:
Design/Permitting:
GHD, Waterloo
Construction:
Bronte Construction,
Burlington

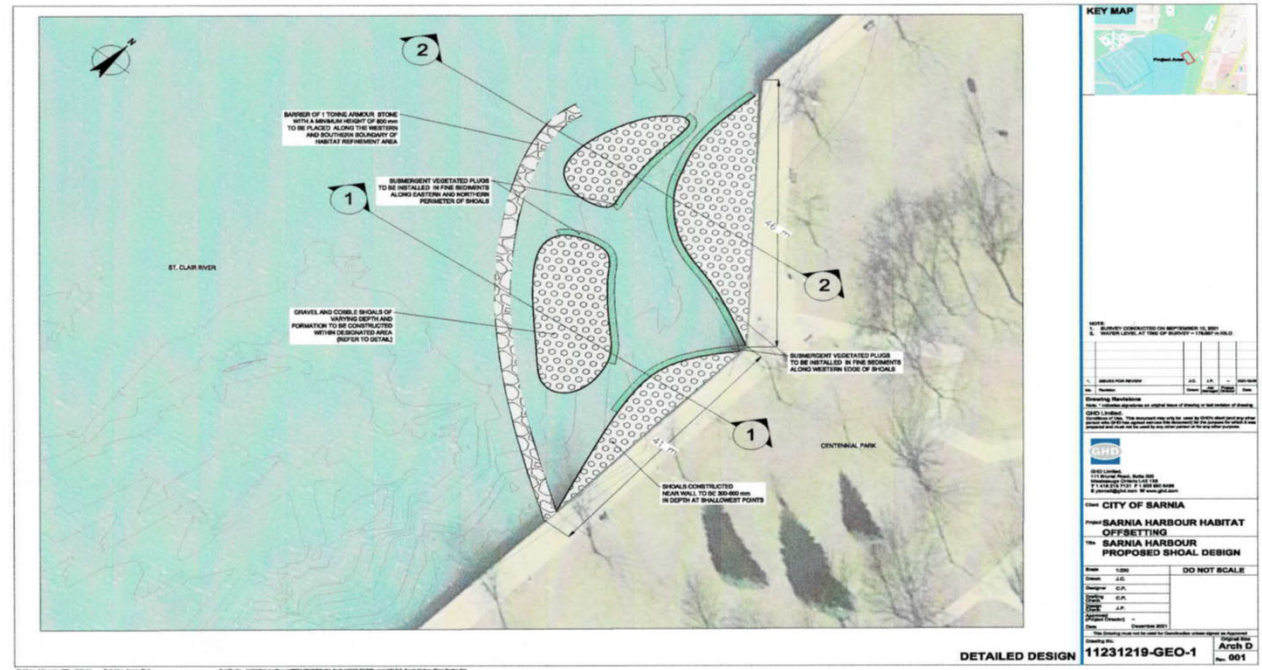






OFFSETTING FISH HABITAT

- 1400 sq m of area developed as a Fish Habitat
- Required as a condition of the DFO Permit
- Designed to support identified species at risk or endangered
 - Channel Darter
 - Northern Madtom
 - Spotted Sucker



Primary Contractor: Kehoe Marine
Lansdowne On. (Kingston)







POSITIVE COMMUNITY IMPACT

- Eliminates temporary power outages related to transport of oversized loads along the OLC route
- Eliminates safety risk of crews working on temporarily raising/lowering of utility and power lines





POSITIVE COMMUNITY IMPACT

- Reduced travel time for large loads
- Reduced traffic disruption along the route



POSITIVE COMMUNITY IMPACT

- Supports continued employment during downturns in the valley by giving local fabricators an improved competitive advantage

Load 7.6M (25') W x
9.4M (31') H x
21.3M 70'L
completed on
September 25/22

Note rotated traffic
signal at right side of
photo.



December 22/21
move:
8M (16'8) wide x
7M (22'11) high x
67.6M (221'11)
long



November 2/23
move:

181,436kg

36.5m long

Completed
move through
the city in
under 90
minutes



Lessons Learned

Estimate/Budget/Schedule

- The original high level cost estimate of \$12M was developed in 2016 to support grant funding applications.
- The original estimate of \$12M had a +/- 20% accuracy. The public published numbers did not include the +/- 20% range.
- Municipal approval process does not allow for staged funding of projects to develop the scope and engineering required to improve the estimate accuracy and minimize contingency
- Ensure the level of accuracy of the cost estimate is clearly communicated. For projects of this scale, it would be too costly to complete detailed engineering to refine the cost estimate before funding sources are secured, so it is important that the high-level cost estimate range is communicated.
- For long term projects, an inflationary increase must be added each year to the cost estimate; the inflationary increase for construction projects is typically higher than the increase in the Consumer Price Index.
- The impact of changes to design standards or practices must be considered when using estimates developed in previous years. The cost and time required to do this can be significant and so must be budgeted for or ensure the risk is communicated

Lessons Learned

- The baseline schedule had allowed 18 months to obtain the required permits. The actual time was close to 36 months
- The DFO permit requires indigenous consultation and some of the local indigenous communities have recently increased their involvement in the process.
- This process took additional time as we worked with our local indigenous communities and their consultants directly to ensure the environmental impacts were mitigated. Face to face meetings throughout the process is recommended.
- The contract award should have been put “ON HOLD” until all approvals were in place.
- A schedule contingency allowance should be included when working underground in/around areas that have been reclaimed or previously developed. This contingency would be utilized if obstructions or restrictions are encountered during the construction phase.
- When working around waterways a schedule allowance must include/identify restricted work windows defined by permitting groups. (No in-water works between March 1st and July 15th)
- A contingency allowance should be included for scope additions related to conditions for permit approvals (offsetting Fish Habitat, additional lighting, pre and post construction studies)