

To: Warden and Members of County Council

From: Director of Public Works

Contract Award – 2023 Road Resurfacing and Culvert Replacements

RECOMMENDATIONS

1. That Oxford County Council award a contract to the low bidder, GIP Paving Inc. (formerly Coco Paving Inc.), in the amount of \$4,969,647 (excluding HST), for the 2023 Road Resurfacing and Culvert Replacements;
2. And further, that Oxford County Council authorize the Chief Administrative Officer and Director of Public Works to sign all documents related thereto.

REPORT HIGHLIGHTS

- The purpose of this report is to obtain County Council approval to award 2023 road resurfacing improvements and culvert replacements on various County Roads to GIP Paving Inc., in accordance with the County's Purchasing Policy.
- The recommended rehabilitation strategies will help maintain and improve the County's overall road network condition, extend road service life and restore service levels. This work ensures that the County-owned road assets are in a good state of repair in alignment with the County's 2022 *Asset Management Plan* and the 2019 *Transportation Master Plan*.
- Using cold-in-place (CIP) recycling technology, the 10.4 km of planned road resurfacing is anticipated to avoid greenhouse gas emissions by at least 50% (up to 645 tonnes CO₂e) compared to conventional mill and pave technology.
- The proposed rural storm sewer/culvert replacements are required in order to maintain proper drainage function and safety within the road network, as well as to help prevent future unanticipated failures.
- This project is anticipated to begin in May 2023 and is targeted for completion in October 2023.

Implementation Points

Upon County Council approval, a contract will be executed with the low bidder, GIP Paving Inc., prior to proceeding with the work.

Culvert replacements on Oxford Road 2 (Highway 401 to Oxford Road 22) and Oxford Road 59 (Municipal No. 385201 to Municipal No. 385229 – West of Burgessville) will require a road closure and some lane restrictions during the work. Planned detour routes will be implemented and access for local residents, businesses and emergency services will be accommodated as required with some restrictions at times. Waste collection services will be interrupted due to the planned road closures and the contractor will manage and transfer any resident curbside garbage and recycling set-outs to a designated temporary collection depot area where the County's waste management contract can then collect the interim "depot" materials.

Additionally, culvert replacements will be completed on Oxford Road 119 (Thamesford to Ingersoll), and it is anticipated that these culverts will be completed under lane restriction conditions, allowing access for local residents, businesses, waste collection services, emergency services and other motorists during the work. Oxford Road 46 (East of Municipal No. 384483) has one culvert scheduled to be replaced under this contract and will also be completed under lane restriction staged half-and-half conditions.

Cold-in-place road recycling and asphalt resurfacing work on Oxford Road 2 (Oxford Road 22 to west limit of Princeton) and Oxford Road 20 (Oxford Road 26 to east limit of Brownsville) will be completed under lane restriction conditions with the use of a pace vehicle to help control the flow and speed of one-way traffic permitted through the mobile work zone, allowing maintained access for local residents, businesses, waste collection services, emergency services and other motorists during this work.

Regulatory authorities, bus services, waste collection services, and emergency services will receive advanced notice of the lane restrictions, road closures and detour routes from Oxford County staff through *Municipal511* notifications.

Financial Impact

Cold-in-place road recycling and asphalt resurfacing work on Oxford Road 2 (Oxford Road 22 to west limit of Princeton) is being cost shared (50/50) with the neighbouring municipality – County of Brant – with the approximate amount of cost recovery from the County of Brant being \$901,629 (excluding HST).

The proposed work also includes sidewalk improvements in the Village of Brownsville, which have been planned in consultation with Township of South-West Oxford staff, and budgeted as part of the Township's 2023 Capital Budget.

The recommended award amount includes a contingency of \$200,000, which will be divided amongst both 930099 (Rehab & Resurfacing) and 930199 (Rural Storm Sewer) Capital accounts to assist with unknowns and additional work if required. A portion of this contingency will be available for the fluctuation of the Asphalt Cement (AC) price index, which can increase the cost of asphalt price within the contract.

A summary of the financial impact of this contract on the approved Capital budgets is presented in Table 1.

Table 1: Funding Summary for 2023 Road Resurfacing and Culvert Replacements

2023 Capital Budget Account / Description	Available 2023 Budget	2023 Expenditures (excluding HST)
930099 – Rehab & Resurfacing (Approved Budget: \$4,800,000) (Less other projects: \$1,225,000)	\$3,575,000	\$3,161,575
930199 – Rural Storm Sewer (Approved Budget: \$3,110,000) (Less other projects: \$1,000,000)	2,110,000	1,601,383
960400 – Township Distribution Replacement (Approved Budget: \$50,000)	50,000	6,689
Contingency		200,000
Sub-Total	\$5,735,000	4,969,647
Estimated Contract Administration; Inspection & Materials Testing		135,000
Non-Refundable HST (1.76%)		87,466
Total Estimated Construction Expenditures		\$5,192,113

Communications

The communication strategy for this project will be similar to other County construction projects. The Contractor's project manager and the County's project manager will form an open channel of communication and include other members of the project team as needed. Communications will commence upon approval of this report and will continue for the duration of the project.







Communication with the public (affected property owners and business owners) will begin when the project approaches initiation stages in the form of typical construction notices delivered by mail and/or hand delivery, when required. Communication will continue throughout the duration of the project as required to keep the affected parties informed and updated on project progress. Additionally, further outreach and promotion of construction activities will include posts to the County website and social media campaigns as needed.

Communication and engagement with affected area municipalities took place during the planning stages of this project in which various aspects of this project were discussed, such as proposed detour routes for road closures, upcoming work plans and schedules and possible incorporation of work and infrastructure replacements.

Staff will continue to work with key internal stakeholders (County Management staff, Transportation staff, Waste Management staff and Water/Wastewater staff) and external stakeholders during the execution of this project as required to ensure the appropriate level of communication and outreach is maintained, and further ensuring all parties involved are updated on project status and outcomes as needed.

Oxford Road 20 resurfacing work has been included for a portion of the available Canadian Community-Building Funding. As part of the requirements for this type of funding, mandatory communication activities and promotion are required to help the public recognize the importance of infrastructure funding and its impact to their community; this includes the installation of project-appropriate information signs within the project sites, additional posts on the County website and social media campaigns.

Strategic Plan (2020-2022)

					
WORKS WELL TOGETHER	WELL CONNECTED	SHAPES THE FUTURE	INFORMS & ENGAGES	PERFORMS & DELIVERS	POSITIVE IMPACT
1.i. 1.ii.	2.i.	3.iii.	4.ii.	5.i. 5.ii.	

DISCUSSION

Background

Various County road segments have been selected for the 2023 resurfacing program based on the review of the 2015 *Road Needs Study* and 2020 *Road Needs Study, Asset Management Plan*, inspection/evaluation of the existing pavement distresses and conditions, as well as from the input and coordination from both Engineering Services and Transportation staff regarding operational issues and field observations.

A number of storm culvert replacements have also been included in 2023 as part of this project. Culverts needing replacement were identified by completing an inspection and condition assessment of the existing infrastructure along with input and recommendations from Transportation staff. Culverts identified along the selected road segments that were in a poor state of condition or determined to be beyond their useful service life were included for replacement.

A County map identifying the road resurfacing locations and culvert replacements has been included as shown in Attachment 1. A description and background of the included scope of work for this project is provided below.

Oxford Road 2 (Oxford Road 22 to west limit of Princeton)

The 2023 Road Resurfacing project involves the resurfacing of Oxford Road 2 (Oxford Road 22 to west limit of Princeton) totalling approximately 6.4 kilometers. Oxford Road 2 is considered a rural road cross-section and acts as an east/west transportation corridor within the County road network. Segments of this road asset are exhibiting signs of pavement deterioration, thus providing a lower level of service and carrying an increased maintenance cost. This section of Oxford Road 2 is a shared asset with the neighbouring municipality, the County of Brant.

To renew the pavement condition and extend the road lifecycle, a two-stage pavement recycling and resurfacing rehabilitation approach will be utilized. The existing pavement structure undergoes cold-in-place (CIP) recycling and then receives the placement of a new hot-mix asphalt (HMA) wearing surface. The recycling and resurfacing is a multi-step procedure with an interval between operations to afford time for the CIP mat to cure and undergo acceptance of quality assurance testing. This interval can vary depending on the type of added emulsions used during recycling, weather and contractor schedules (typically about two weeks or more). This is the preferred method of renewing the pavement condition rating for high-medium volume rural County road networks which offers a more sustainable and resilient pavement structure.

As part of the recycling and resurfacing strategy to renew the pavement condition and service level provided, other improvements are being incorporated into the scope of work, including new granular road side shoulders and new pavement markings.

Oxford Road 20 (Oxford Road 26 to east limit of Brownsville)

The 2023 Road Resurfacing project also includes the resurfacing of Oxford Road 20 (Oxford Road 26 to east limit of Brownsville) totalling approximately 4.0 kilometers. This section of Oxford Road 20 is made up of a rural road cross-section including an urban section within the Village of Brownsville. This section of road acts as an east/west transportation corridor within the County road network. Segments of this road asset are exhibiting signs of pavement deterioration, thus providing a lower level of service and carrying an increased maintenance cost.

As with the section of Oxford Road 2 resurfacing, to renew the pavement condition and extend the road lifecycle, a two-stage pavement recycling and resurfacing rehabilitation approach will be utilized, with the existing pavement structure undergoing cold-in-place recycling (CIP) and then receiving the placement of a new hot-mix asphalt (HMA) wearing surface.

As part of the recycling and resurfacing strategy to renew the pavement condition and service level provided, other improvements are being incorporated into the scope of work, including new granular road side shoulders, new pavement markings, improvements and repairs to the existing concrete sidewalk in Brownsville, installation of new sidewalk ramps and curb and gutter drop downs to better accommodate pedestrian access and safety.

Cold-In-Place Recycling Resurfacing Technology Method

The CIP method is expected to reduce new materials production and transport as well as existing unrecycled materials disposal, resulting in avoidance of greenhouse gas (GHG) emissions of at least 50% when compared with a mill and pave (conventional method).

Considering the multiple, project specific, varying factors of influence (region, distance to the site, the efficiency of equipment, etc.), it is estimated that up to 645 tCO₂e of GHG emissions can be avoided by utilizing the CIP method (based on 2007 MTO Study assumptions) for the 10.4 km of road resurfacing works versus the conventional mill and pave method.

Storm Infrastructure, Culvert Replacements (Oxford Road 2, 119, 59 and 46)

As part of this contract, a combined total of 38 storm culvert replacements were included along various County road segments including Oxford Road 2, 119, 59 and 46. Oxford Road 2 has a total of 22 proposed culvert replacements to be completed, while Oxford Road 119 has a total of 13 proposed culvert replacements. Oxford Road 59 has two culverts scheduled for replacement and Oxford Road 46 includes a single culvert to be replaced as part of this contract.

As mentioned previously, culvert replacements were identified and selected after evaluation of the current culvert conditions were considered. Most culvert locations proposed for replacement in 2023 are along road segments that have been selected for future road resurfacing plans.

Replacement of underground infrastructure in the years leading up to and ahead of planned road resurfacing programs is the preferred method for culvert replacements and has proven to be beneficial to overall project outcomes. Furthermore, this method ensures any possible settlement concerns are addressed and corrected in the year(s) prior to road resurfacing work taking place.

Lastly, this process reduces the overall construction duration at each location and eases the impact to road users each year, as the length of disruption is shortened and spread out over multiple years of capital work.

Comments

A prequalification process was completed prior to the tendering stage of this project in December 2022. Staff reviewed the prequalification submissions and recommended that eight Contractors be pre-qualified and invited to submit bids for this project. The evaluation of submissions was based on a number of factors including Contractors' previous project experience with similar projects of scope and size, overall management team background and experience managing projects of this scale.

After the prequalification process was completed and the Contractors that were eligible to move forward were selected, the project was tendered through a competitive bidding process, which opened on February 16, 2023. The tendering process closed on March 9, 2023 at 2 p.m. and six bids were received, with bid amounts outlined in Table 2 below, including contingency and provisional items.

Table 2: Summary of Bid Submissions

General Contractor	Bid Amount (excluding HST)
1. GIP Paving Inc.	\$4,969,647
2. Permanent Paving Ltd.	\$5,191,740
3. J-AAR Excavation Ltd.	\$5,950,824
4. Capital Paving Inc.	\$6,292,940
4. Dufferin Construction Company	\$6,434,252
5. Brantco Construction	\$7,440,431

As this project has the possible risks that would be associated with any construction project of this scope and size, the successful Contractor was also required to secure construction bonds and certificates of insurance to mitigate risks related to the exposure of financial loss.

Staff reviewed the bid submissions and have confirmed that the low bid received from GIP Paving Inc. (formerly Coco Paving Inc.), in the amount of \$4,969,647 (excluding HST), represents good value for the work.

Should the contract not be awarded and the work does not proceed, the condition of the County's affected assets will continue to deteriorate.

Conclusions

Review of the competitive bid submissions confirm that it is appropriate to award the 2023 Road Resurfacing and Culvert Replacements project to the low bidder, GIP Paving Inc. of Petersburg, Ontario.

SIGNATURES

Report Author:

Original signed by:

Alex Brown, C. Tech
Senior Coordinator of Construction

Departmental Approval:

Original signed by:

David Simpson, P.Eng., PMP
Director of Public Works

Approved for submission:

Original signed by:

Benjamin R. Addley
Chief Administrative Officer

ATTACHMENT

Attachment 1: 2023 Road Resurfacing and Culvert Replacement Map