# Corporation of the County of Wellington

## Roads Committee

## Minutes

September 12, 2023
County Administration Centre
Keith Room

| | |
|---|---|
| Present: | Warden Andy Lennox<br>Councillor Gregg Davidson (Chair)<br>Councillor Campbell Cork<br>Councillor Michael Dehn<br>Councillor Dave Turton |
| Also Present: | Councillor Diane Ballantyne<br>Councillor Matthew Bulmer<br>Councillor Jeff Duncan<br>Councillor Steve O'Neill |
| Staff: | Jennifer Adams, County Clerk<br>Brittany Boomer, Infrastructure Technical Analyst<br>Philippe Campbell, Engineering Technologist<br>Pasquale Costanzo, Technical Services Supervisor<br>Ken DeHart, County Treasurer<br>Joe de Koning, Manager of Roads<br>Don Kudo, County Engineer<br>Erin Runciman, Roads Administration Clerk<br>Eric Williams, Purchasing and Risk Analyst<br>Scott Wilson, CAO<br>Kelly-Ann Wingate, Purchasing and Risk Analyst |

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**1. Call to Order**

At 10:00 am, the Chair called the meeting to order.

**2. Declaration of Pecuniary Interest**

There were no declarations of pecuniary interest.

**3. Delegation:**

1/8/23

**Moved by:** Councillor Turton
**Seconded by:** Councillor Dehn

That the video presentation by Daniela De Francesca, Lake Road Community Committee regarding Lake Road Speed Change Concerns be received for information.

**Carried**

**4. Roads Financial Statements as of August 31, 2023**

2/8/23

**Moved by:** Warden Lennox
**Seconded by:** Councillor Dehn

That the Roads and Engineering Financial Statements as of August 31, 2023 be approved.

**Carried**

**5. Tender Award - Elora Gorge Bridge Rehabilitation**

3/8/23

**Moved by:** Councillor Dehn
**Seconded by:** Councillor Cork

That County of Wellington Project No. CW2023-009 tender for the rehabilitation of the Elora Gorge bridge located on Wellington Road 7 in the Township of Centre Wellington as specified be awarded to HugoMB Contracting Inc. of Milton, Ont, Ontario at the total tendered amount of $443,165.50 exclusive of HST @ 13%; and

That the funding for this project be approved as set out in the Financial Summary; and

That staff be authorized to issue the Purchase Order for the contract; and

That the Warden and Clerk be authorized to sign the construction agreements.

**Carried**

**6. Tender Award - Pick-up Trucks**

4/8/23

**Moved by:** Councillor Turton
**Seconded by:** Councillor Cork

That County of Wellington Project No. CW2023-060 a tender for six (6) ½ ton pickup trucks and four (4) ¾ ton pickup trucks for the Roads Department as specified be awarded to, Finch Auto Group of London, Ontario at their tendered amount of $610,449.00, exclusive of HST @ 13%; and

That the 2024 Capital Budget be updated accordingly; and

That Purchasing and Risk Management staff be authorized to issue the necessary purchase orders.

**Carried**

**7. Tender Award - CW2023-012 Roundabout WR7 and 1st Line, Elora**

5/8/23

**Moved by:** Councillor Turton
**Seconded by:** Warden Lennox

That County of Wellington Project No. CW2023-012 a tender for a roundabout on Wellington Road 7 and the First Line in Elora as specified be awarded to Steed and Evans Limited of St. Jacobs, Ontario at the total tendered amount of $1,728,400.00 exclusive of HST @ 13%; and

That the funding for this project be approved as set out in the Financial Summary; and

That staff be authorized to issue the Purchase Order for the contract; and

That the Warden and Clerk be authorized to sign the construction agreements.

**Carried**

**8. Correspondence from the Township of Puslinch - Kerr Crescent Storm Water Management Facility**

6/8/23

**Moved by:** Councillor Dehn
**Seconded by:** Councillor Cork

That the correspondence from the Township of Puslinch - Kerr Crescent Storm Water Management Facility be received for information.

**Carried**

**9. Correspondence from the Township of Puslinch - Lake Road Reconstruction and Project Details and Speed Limit Changes**

7/8/23

**Moved by:** Councillor Cork
**Seconded by:** Councillor Turton

That the correspondence from the Township of Puslinch - Lake Road Reconstruction and Project Details and Speed Limit Changes be received for information.

**Carried**

**10. Lake Road (Wellington Road 32) - Speed Limit Adjustment**

8/8/23

**Moved by:** Warden Lennox
**Seconded by:** Councillor Dehn

That the County of Wellington take appropriate action, as outlined in the staff report, to revise the consolidated speed limit bylaw and signage on Lake Road (Wellington Road 32).

**Carried**

**11. Automated Speed Enforcement - Request for Information**

9/8/23

**Moved by:** Councillor Cork
**Seconded by:** Councillor Dehn

That the report Automated Speed Enforcement – Request for Information be received for information; and

That staff issue a Request for Proposal (RFP) for automated speed enforcement.

**Carried**

**12. Updated Warrant for Speed Radar Signs**

10/8/23

**Moved by:** Warden Lennox
**Seconded by:** Councillor Turton

That the report entitled Updated Warrant for Speed Radar Signs be received for information; and

That the warrant criteria for Speed Radar Signs be adopted to determine suitable sign locations.

**Carried**

**13. Intersection Improvements - Capital Budget and Future Work**

11/8/23

**Moved by:** Councillor Turton
**Seconded by:** Councillor Dehn

That the Intersection Improvements – Capital Budget and Future Work report be received for information.

**Carried**

**14. Adjournment**

At 11:26 am, the Chair adjourned the meeting until October 10, 2023 or at the call of the Chair.

_____

Gregg Davidson
Chair
Roads Committee

# COUNTY OF WELLINGTON

# COMMITTEE REPORT

**To:** Chair and Members of the Roads Committee
**From:** Jackie Osti, Manager Purchasing and Risk Management Services
**Date:** Tuesday, September 12, 2023
**Subject:** **Tender Award – Elora Gorge Bridge Rehabilitation**

## Background:

Staff recently issued Project No. CW2023-009 a tender for the rehabilitation of the Elora Gorge Bridge located on Wellington Road 7 approximately 1.5 kilometres south of Wellington Road 18 in the Township of Centre Wellington.

The work includes concrete patch repairs on the barrier walls and substructure, local sidewalk replacement and aluminum railing repairs, in addition to temporary traffic control and access.

On Thursday August 31st, four (4) submissions were received from prequalified bridge and culvert contractors as follows, with pricing shown exclusive of HST @ 13%.

| COMPANY NAME | TOTAL AMOUNT |
|---|---|
| HugoMB Contracting Inc., Milton | $443,165.50 |
| Lancoa Contracting Inc., Caledon | $543,787.15 |
| Sierra Bridge Inc., Woodstock | $599,400.00 |
| Marbridge Construction Ltd., Mississauga | $686,150.00 |

The tender submissions were in order and staff are recommending awarding the contract HugoMB Contracting Inc. of Milton, Ontario at the total tendered amount of $443,165.50 exclusive of HST @13%.

The funding for this project is provided in detail in the attached Financial Summary.

Additional professional fees are estimated at $35,800.

## Recommendation:

That County of Wellington Project No. CW2023-009 tender for the rehabilitation of the Elora Gorge bridge located on Wellington Road 7 in the Township of Centre Wellington as specified be awarded to HugoMB Contracting Inc. of Milton, Ont, Ontario at the total tendered amount of $443,165.50 exclusive of HST @ 13%; and

That the funding for this project be approved as set out in the attached Financial Summary; and

That staff be authorized to issue the Purchase Order for the contract; and

That the Warden and Clerk be authorized to sign the construction agreements.

Respectfully submitted,

Jackie Osti
Manager, Purchasing and Risk Management Services

**FINANCIAL SUMMARY**

# COUNTY OF WELLINGTON
## CAPITAL PROJECT EXPENDITURE AND FINANCING SCHEDULE

Bid name: Elora Gorge Bridge Rehabilitation
Bid number: CW2023-009

Project name: WR7, Elora Gorge Xing B007059/2023 Various Bridge Patches
Project number : 21190351/21130351

## PROJECT COSTS

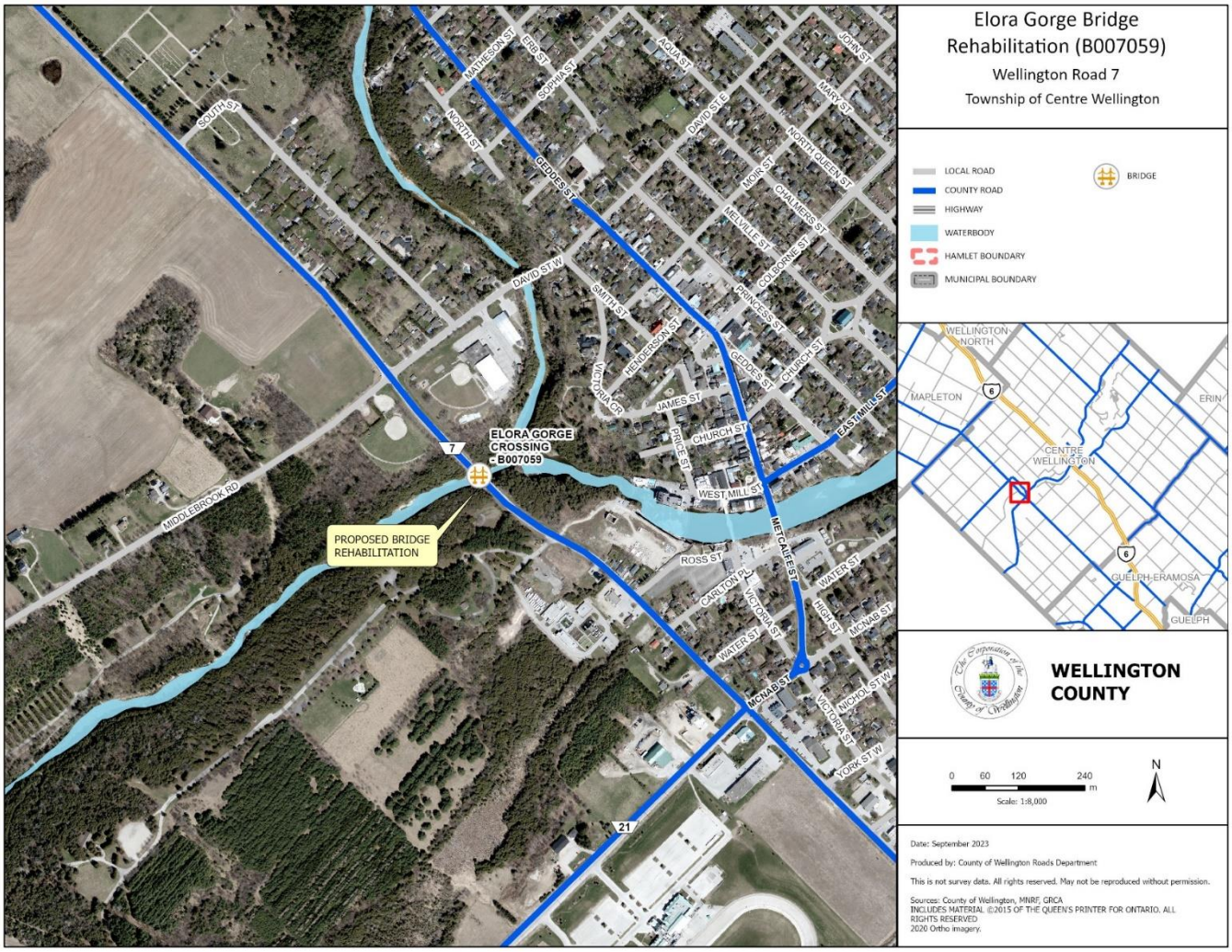
| | Total |
|---|---|
| **Bid:** | |
| Tendered Cost* | $450,000 |
| Actuals to date* | |
| Professional fees | 36,100 |
| Contracted Construction | 8,700 |
| Contingency | 5,200 |
| Bid to Award | $500,000 |

* includes net cost to County of HST

## PROJECT BUDGET APPROVALS AND FINANCING

| | Gross cost | Current Fund | Roads Capital Reserve |
|---|---|---|---|
| 2019-21 Capital Budget - 21190351 | $ 175,000 | $ 175,000 | |
| 2023 Capital Budget - 21130351 | $ 250,000 | | $ 250,000 |
| | $ 425,000 | $ 175,000 | $ 250,000 |
| Additional Funding Requirement | $ 75,000 | | $ 75,000 |
| | $ 500,000 | $ 175,000 | $ 325,000 |

# MAP


Elora Gorge Bridge
Rehabilitation (B007059)
Wellington Road 7
Township of Centre Wellington
LOCAL ROAD
COUNTY ROAD
HIGHWAY
WATERBODY
HAMLET BOUNDARY
MUNICIPAL BOUNDARY
BRIDGE
ELORA GORGE CROSSING - B007059
PROPOSED BRIDGE REHABILITATION
WELLINGTON COUNTY
0 60 120 240 m
Scale: 1:8,000
N
Date: September 2023
Produced by: County of Wellington Roads Department
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# COUNTY OF WELLINGTON

# COMMITTEE REPORT

**To:** Chair and Members of the Roads Committee
**From:** Jackie Osti – Manager of Purchasing and Risk Management Services
**Date:** Tuesday, September 12, 2023
**Subject:** **Tender Award – Pick-up Trucks**

## Background:

Purchasing and Risk Management Services recently issued tender CW2023-060 for six (6) ½ ton pickup trucks and four (4) ¾ ton pickup trucks and, supplied and delivered to the County of Wellington, Roads Department, Central Garage, 7468 Wellington Road 51, Guelph Ont., in accordance with the tender documents and specifications.

The order of these new units will take place in 2023 and will be paid for from the 2024 capital budget.

The half ton trucks were budgeted as electric vehicles, however the current offerings in the market do not meet range and capability requirements for the Roads fleet.

On Thursday August 31, 2023, four (4) submissions were received with prices shown exclusive of HST @ 13% –

| COMPANY NAME | ½ TON PICKUP YEAR/MAKE/MODEL | UNIT PRICE |
|---|---|---|
| Finch Auto Group, London | '24 GMC Sierra 1500 Pro | $ 58,900.50 |
| Barry Cullen Chevrolet Cadillac Ltd., Guelph | '24 Chevrolet Silverado WT | $ 59,378.05 |
| Bayview Chrysler Doge Jeep Ram Ltd., Sarnia | '24 Ram 1500 Tradesman | $ 65,627.00 |
| East Court Ford Lincoln, Toronto | '24 Ford F150 XLT | $ 74,931.00 |
| | ¾ TON PICKUP YEAR/MAKE/MODEL | |
| Finch Auto Group, London | '24 Chevrolet Silverado 2500HD WT | $ 64,261.50 |
| Barry Cullen Chevrolet Cadillac Ltd., Guelph | '24 Chevrolet Silverado 2500HD WT | $ 66,042.00 |
| Bayview Chrysler Doge Jeep Ram Ltd., Sarnia | '24 Ram 1500 Big Horn | $ 75,348.00 |
| East Court Ford Lincoln, Toronto | '24 Ford F250 Extended Cab XL | $ 71,560.00 |

Staff are recommending awarding the tender to the lowest bidder meeting the specifications, Finch Auto Group of London, Ontario for the supply for four (4) ¾ ton Pickup trucks and six (6) ½ ton pickup trucks of $610,449.00 exclusive of H.S.T. @13%.

The price quoted will be updated accordingly in the 2024 capital budget.

## Recommendation:

That County of Wellington Project No. CW2023-060 a tender for six (6) ½ ton pickup trucks and four (4) ¾ ton pickup trucks for the Roads Department as specified be awarded to, Finch Auto Group of London, Ontario at their tendered amount of $610,449.00, exclusive of HST @ 13%; and

That the 2024 Capital Budget be updated accordingly; and

That Purchasing and Risk Management staff be authorized to issue the necessary purchase orders.

Respectfully submitted,

Jackie Osti

Jackie Osti,
Manager Purchasing and Risk Management Services

**FINANCIAL SUMMARY**

# COUNTY OF WELLINGTON
## CAPITAL PROJECT EXPENDITURE AND FINANCING SCHEDULE

Bid name: Roads Pickup Trucks
Bid number: CW2023-060

Project name: Roads Equipment 2024
Project number : 21140501

## PROJECT COSTS

| | Total |
|---|---|
| **Bid:** | |
| 6 1/2 Ton Pickups* | $360,000 |
| 4 3/4 Ton Pickups* | $262,000 |
| Vehicle outfitting | 48,000 |
| Bid to Award | $670,000 |

* includes net cost to County of HST

## PROJECT BUDGET APPROVALS AND FINANCING

| | Gross cost | Roads Equipment Reserve |
|---|---|---|
| 2024 Capital Budget | $ 690,000 | $ 690,000 |
| | $ 690,000 | $ 690,000 |
| 2024 Budget Adjustment | $ (20,000) | $ (20,000) |
| | $ 670,000 | $ 670,000 |

# COUNTY OF WELLINGTON

# COMMITTEE REPORT

**To:** Chair and Members of the Roads Committee
**From:** Jackie Osti, Manager Purchasing and Risk Management Services
**Date:** Tuesday, September 12, 2023
**Subject:** **Tender Award – Roundabout – Wellington Road 7 and 1st Line**

## Background:

Staff recently issued Project No. CW2023-012 a tender for the construction of a roundabout located on Wellington Road 7 and First Line in Elora.

The work consists of soil excavation, storm sewers granular base and asphalt, curbs and gutters, concrete sidewalk, pavement markings, street lighting and landscaping.

On Friday September 8, 2023, ten (10) submissions were received from contractors as follows, with pricing shown exclusive of HST @ 13%.

| COMPANY NAME | TOTAL AMOUNT |
|---|---|
| Steed and Evans Limited, St. Jacobs | $1,728,400.00 |
| Capital Paving Inc., Guelph | $1,771,000.00 |
| Cox Construction Limited, Guelph | $1,809,339.69 |
| J.G. Goetz Construction Limited, Guelph | $1,824,357.55 |
| Navacon Construction Inc., Brantford | $1,846,582.00 |
| E.C. King Contracting, Own Sound | $1,961,753.90 |
| E. & E. Seegmiller Limited, Kitchener | $2,007,127.00 |
| Vista Contracting Ltd, Cambridge | $2,044,100.69 |
| Amico Infrastructure(oxford) Inc., Oldcastle | $2,155,883.00 |
| Wyndale Paving Co. Ltd, Brampton | $2,623,883.78 |

The tender submissions were in order and staff are recommending awarding the contract to Steed and Evans Limited of St. Jacobs, Ontario at the total tendered amount of $1,728,400.00 exclusive of HST @13%.

An additional $85,400.00 in professional fees is anticipated for this project.

The funding for this project is provided in detail in the attached Financial Summary.

## Recommendation:

That County of Wellington Project No. CW2023-012 a tender for a roundabout on Wellington Road 7 and the First Line in Elora as specified be awarded to Steed and Evans Limited of St. Jacobs, Ontario at the total tendered amount of $1,728,400.00 exclusive of HST @ 13%; and

That the funding for this project be approved as set out in the attached Financial Summary; and

That staff be authorized to issue the Purchase Order for the contract; and

That the Warden and Clerk be authorized to sign the construction agreements.

Respectfully submitted,

Jackie Osti
Manager, Purchasing and Risk Management Services

## FINANCIAL SUMMARY

### COUNTY OF WELLINGTON
**CAPITAL PROJECT EXPENDITURE AND FINANCING SCHEDULE**

Bid name: Roundabout, WR7 and First Line
Bid number: CW2023-012

Project name: WR7 @ 1st Line Roundabout
Project number : 21190461

**PROJECT COSTS**

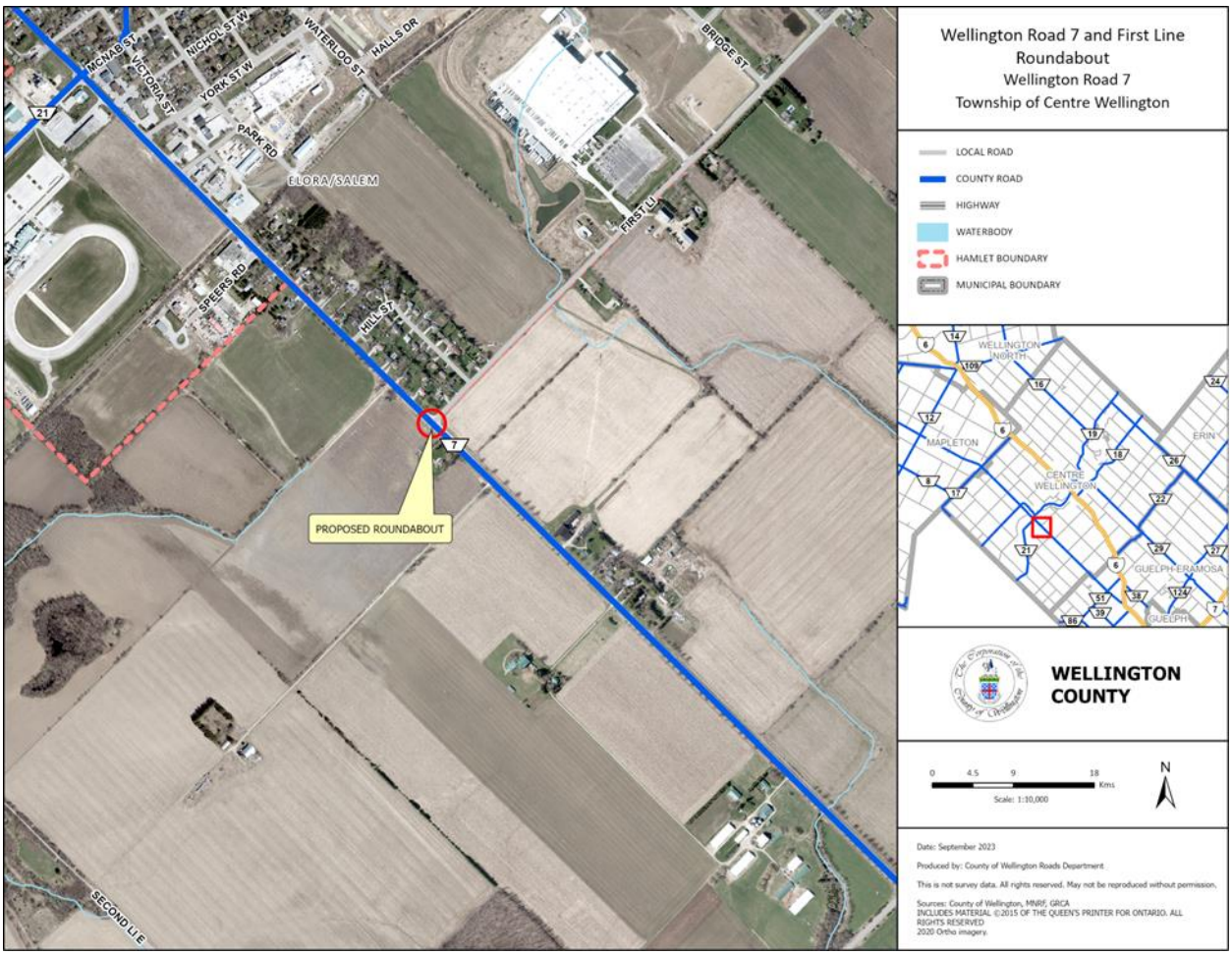
| | Total |
|---|---|
| **Bid:** | |
| Tendered Cost* | $1,759,000 |
| Professional Fees* | $51,000 |
| Previously Incurred Costs | |
| Professional Fees* | $85,400 |
| Contingency | $179,600 |
| Bid to Award | $2,075,000 |

* includes net cost to County of HST

**PROJECT BUDGET APPROVALS AND FINANCING**

| | Gross cost | Current Fund | Roads Capital Reserve | Roads Development Charges | Municipal Recoveries |
|---|---|---|---|---|---|
| 2019 Capital Budget | $ 150,000 | $ 50,000 | | $ 100,000 | |
| 2023 Capital Budget | $ 1,725,000 | | $ 645,000 | $ 860,000 | $ 220,000 |
| | $ 1,875,000 | $ 50,000 | $ 645,000 | $ 960,000 | $ 220,000 |
| Funding Adjustments | $ 200,000 | | $ 176,000 | | $ 24,000 |
| | $ 2,075,000 | $ 50,000 | $ 821,000 | $ 960,000 | $ 244,000 |

# MAP


Wellington Road 7 and First Line
Roundabout
Wellington Road 7
Township of Centre Wellington
LOCAL ROAD
COUNTY ROAD
HIGHWAY
WATERBODY
HAMLET BOUNDARY
MUNICIPAL BOUNDARY
PROPOSED ROUNDABOUT
ELORA/SALEM
MCNAB ST
VICTORIA ST
NICHOL ST W
YORK ST W
PARK RD
WATERLOO ST
HALLS DR
BRIDGE ST
FIRST LI
SPEERS RD
HILL ST
SECOND LI E
WELLINGTON NORTH
MAPLETON
CENTRE WELLINGTON
ERIN
GUELPH-ERAMOSA
GUELPH
WELLINGTON COUNTY
0 4.5 9 18 Kms
Scale: 1:10,000
N
Date: September 2023
Produced by: County of Wellington Roads Department
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Township of Puslinch
7404 Wellington Road 34
Puslinch, ON N0B 2J0
www.puslinch.ca

August 17, 2023

County of Wellington Road Committee
Attention: Councillor Gregg Davidson, Chair
74 Woolwich Street
Guelph ON N1H 3T9

Dear Councillor Davidson,

At the December 7, 2022, Regular Meeting of Council, staff were directed to approach the County of Wellington ("County") to request a cost sharing agreement for the maintenance of the Kerr Crescent Storm Water Management (SWM) Facility:

> Resolution No. 2022-394:
> That Council direct staff to approach the County of Wellington requesting that a cost sharing agreement for the maintenance of the Kerr Crescent storm water management facility be established between the County and the Township; and That Council direct staff to forward this correspondence to the County Roads Committee for review and response. CARRIED

**Kerr Cresent Storm Water Management Pond**

The Kerr Crescent SWM facility was constructed as part of an industrial/commercial development initiated in the 1970s and 1980s. With 21 industrial/commercial parcels, the Kerr Industrial Park is fully occupied. Approximately 1.03 acres is retained by the Township to house the SWM assets. There are no residential properties serviced by the Kerr SWM Pond.

While minor maintenance work has been anticipated and planned by the Township, recent inspections have identified that immediate repair is required due to pond silt contamination which has tripled the cost estimates associated with the project. The project has been included in the Township's capital budget and forecast at an estimated cost of $600,000. At Council's direction, the project is on hold while alternate funding opportunities are researched.

TOWNSHIP OF
PUSLINCH
EST. 1850

**Benefits of Kerr Industrial Park & Cost Sharing Request**

The Township presents the following information as a formal request that the County consider a cost-share agreement for the ongoing maintenance of this important asset:

1. Unlike SWM facilities that service residential developments, there are likely to be increased water quality and contamination issues attributable to industrial/commercial activities in the Kerr Industrial Park. This results in increased maintenance costs (i.e., removing contaminated silt).

2. The estimated maintenance cost of the Kerr Crescent SWM facility is $600,000.

3. The total 2023 property taxes levied to the 21 properties benefiting from the SWM facility is $969,855.
   Of this, the Township only receives $134,692, or 14% of the total. The County receives a significantly higher proportion of taxes levied of $483,109 or 50% of the total taxes levied.

   Of the total property taxes not redistributed to the province for education purposes, 22% is retained by the Township and 78% by the County.

4. The County has retained this significantly higher proportion of property taxes levied on an annual basis since the SWM facility's construction from 1988 to present.

5. Using the 2023 property taxes levied as a basis, it will take the Township 4.5 years to levy taxes sufficient to maintain the SWM facility for the benefitting properties. This means that all Township ratepayers are contributing, in some way, to the maintenance of the Kerr Crescent SWM facility maintenance.

6. The Kerr Industrial Park is one of the largest industrial park areas in the County. In fact, the Township's industrial land inventory represents a significant percentage of the overall County inventory.

   The ongoing maintenance of this SWM facility asset is an important aspect of retaining a strong industrial base and keeping the Kerr Industrial Park attractive to investors.

7404 Wellington Road 34, Puslinch, ON N0B 2J0
Tel: (519) 763-1226 Fax: (519) 763-5846 admin@puslinch.ca

TOWNSHIP OF
PUSLINCH
est. 1850

The Township respectfully requests that the County Roads Committee consider this request to cost-share the ongoing maintenance of the Kerr Crescent SWM facility and recommend that Council support a sharing agreement at a rate of 50%, with the current project estimates amounting to approximately $300,000.

For further discussion and information, please do not hesitate to contact the undersigned.

Regards,

CHoytfox

Courtenay Hoytfox
Municipal Clerk
Township of Puslinch

7404 Wellington Road 34, Puslinch, ON N0B 2J0
Tel: (519) 763-1226 Fax: (519) 763-5846 admin@puslinch.ca

TOWNSHIP OF
PUSLINCH
EST. 1850

Jennifer Adams
County Clerk
74 Woolwich St,
Guelph, ON N1H 3T9
VIA EMAIL:
jennifera@wellington.ca

Township of Puslinch
7404 Wellington Road 34
Puslinch, ON N0B 2J0
www.puslinch.ca

April 25, 2023

RE: 10.1 County of Wellington Response to Township Council Resolution regarding Lake Road Reconstruction and Project Details and Speed Limit Changes

Please be advised that Township of Puslinch Council, at its meeting held on April 12, 2023 considered the aforementioned topic and subsequent to discussion, the following was resolved:

**Resolution No. 2023-123:** Moved by Councillor Sepulis and
Seconded by Councillor Goyda

That Council receives the correspondence item 10.1 regarding the County of Wellington Response to Township Council Resolution regarding Lake Road Reconstruction and Project Details and Speed Limit Changes; and

That Council direct staff to resubmit the Council resolution from the March 1, 2023 meeting to the County Roads Committee for consideration at the September 2023 Committee meeting; and

That Council direct staff to request clarification from the Police Service Board regarding how speed changes and enforcement will take place.

**CARRIED**

As per the above resolution, please accept a copy of this correspondence for your information and consideration.

Sincerely,
Courtenay Hoytfox
Municipal Clerk

COUNTY OF WELLINGTON

OFFICE OF THE COUNTY ENGINEER
ADMINISTRATION CENTRE
T 519.837.2601 x 2280
F 519.837.8138
E donk@wellington.ca

74 WOOLWICH STREET
GUELPH, ONTARIO
N1H 3T9

DON KUDO, P.Eng.
COUNTY ENGINEER

Township of Puslinch
7404 Wellington Road 34
Puslinch ON N0B 2J0

March 22, 2023

To Mayor James Seeley and Township Council

I have received a copy of the correspondence from the Township of Puslinch Council meeting of March 1, 2023 with respect to the County of Wellington - Roads Committee Report - Lake Road Reconstruction (Wellington Road 32, Puslinch) - Project Details and Speed Limit Changes. The following Council resolutions were directed to me for a response:

> That Council receives the correspondence item 10.2 County of Wellington - Roads Committee Report - Lake Road Reconstruction (Wellington Road 32, Puslinch, - Project Details and Speed Limit Changes for information; and
>
> That Council direct staff to request that the County be requested to report to Council prior to approving the speed by-law and comment on the proposal for the addition of a threeway-stop at Travelled Road and Sandy Shore Blvd. and comment on the proposal for a graduated speed option from Townline Road to the residential area; and
>
> That the County consider implementing a pilot program prior to adopting the speed by-law.

In addition to the Council resolutions, questions were forwarded to me from Puslinch staff by email on February 28, 2023:

> 10.2 Lake Road Reconstruction
>
> - It is noted there will be post construction monitoring regarding the new concrete material, Cematrix. Will there also be post construction monitoring regarding the reptile and amphibian mortality rate? Is there baseline data (perhaps from community experts) to use? Or has the County collected its own data?

- When the project is under construction, what is the plan to ensure trucks are discouraged from using Ellis Road? This was an issue in the past and hopefully we can mitigate issues from happening again.

The Lake Road Reconstruction (Wellington Road 32, Puslinch) - Project Details and Speed Limit Changes report was approved by the Roads Committee and County Council in February, 2023. The report refers to the County's Road Master Action Plan (Road MAP), and the Lake Road assessment and recommendations along with providing project details, public open house comments, project schedule and posted speed limit bylaw changes.

In response to the above noted Council resolutions, the following are my comments:

Proposal for a three way-stop at Travelled Road and Sandy Shore Blvd

All way stop control is not warranted at these locations. The County implements stop control based Ontario Traffic Manual warrants.

Proposal for a graduated speed option from Townline Road to the residential area

A graduated speed option was not recommended in the Road MAP Speed Corridor Review study. The County has adopted the Transportation Association of Canada guidelines to establish posted speed limits throughout the County.

Implementing a pilot program prior to adopting the speed by-law

The implementation of a pilot program was not recommended in the Road MAP Speed Corridor Review study. A bylaw change is required for enforcement of the posted speed limit.

From the questions forwarded from Puslinch staff, the following are my responses:

Will there also be post construction monitoring regarding the reptile and amphibian mortality rate? Is there baseline data (perhaps from community experts) to use? Or has the County collected its own data?

The County's ecological consultant completed a turtle habitat assessment for the project. The assessment provided data and observations on habitat and wildlife in the project area. The report recommends post construction monitoring and the County will have the consultant provide a follow up report.

What is the plan to ensure trucks are discouraged from using Ellis Road?

For the upcoming construction project, information and detour signs will be posted for traffic control purposes. Traffic including truck traffic will be maintained on Lake Road for the majority of the project duration with only one planned short term full road closure. The full road closure is planned for duration of one month and is expected to have a reduced impact on detoured traffic.

Sincerely,

Don Kudo, P. Eng.
County Engineer

Cc: Gregg Davidson - Wellington County Roads Committee Chair

Andy Lennox – Wellington County Warden

Scott Wilson – Wellington County CAO

Joe de Koning – Wellington County Manager of Roads

# COUNTY OF WELLINGTON

# COMMITTEE REPORT

**To:** Chair and Members of the Roads Committee
**From:** Don Kudo, P. Eng., County Engineer
**Date:** Tuesday, September 12, 2023
**Subject:** **Lake Road (Wellington Road 32) Speed Limit Change**

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## Background:

As previously outlined in the February, 2023 Lake Road Reconstruction (Wellington Road 32, Puslinch) – Project Details and Speed Limit Changes Committee Report (attached), the Road Master Action Plan (RMAP) assessed the Lake Road segment during Speed Management Corridor review process. The study memo (attached) recommended design changes and to adjust the current Lake Road posted speed limit to align driver behaviour with the design of the road.

Staff has recommended the following changes to the posted speed limit:

- For the westerly portion, increase the posted speed limit from 50 km/h to 70 km/h
- For the easterly portion that fronts the residential properties, speed limit to remain at 50 km/h.

**Proposed Speed Limit Bylaw Changes**

Based on the above, in order to implement the posted speed limit changes, revisions to the current Consolidated Speed Limit Bylaw (Bylaw 5536-17) are required as noted below:

The proposed bylaw "Schedule C" be revised for the 50 km/h limit for Wellington Road 32 (Lake Road) as follows:

- From: "from a point 610 metres west of the intersection with Concession 2 (Township of Puslinch)"
- To: "a point 250 metres north from the intersection with Concession 2 (Township of Puslinch)"

The proposed bylaw "Schedule A" be revised to add a 70km/h limit for Wellington Road 32 (Lake Road) as follows:

- From: "from a point 610 metres west of the intersection with Concession 2 (Township of Puslinch)"
- To**:** "the intersection of Wellington Road 33 (Townline Road)"

With the completion of the road reconstruction project, it is recommended to implement the posted speed limit bylaw change and signage.

## Recommendation:

That the County of Wellington take appropriate action, as outlined in the staff report, to revise the consolidated speed limit bylaw and signage on Lake Road (Wellington Road 32).

Respectfully submitted,

Don Kudo, P. Eng.
County Engineer

Attachments: Map – Lake Road (WR 32) Speed Limit Change
Committee Report - Lake Road Reconstruction (Wellington Road 32, Puslinch) – Project Details and Speed Limit Changes
Memo - Wellington Road MAP - Speed Management Reviews - August 10, 2021 Lake Rd

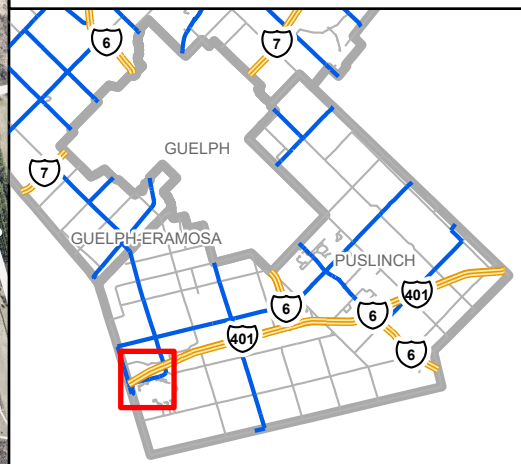
# Lake Road (Wellington Road 32) Speed Limit Change

## Township of Puslinch


**COUNTY ROAD**

- 30 KM/HR
- 40 KM/HR
- 50 KM/HR
- 60 KM/HR
- 70 KM/HR
- 80 KM/HR

- LOCAL ROAD
- HIGHWAY
- WATERBODY
- HAMLET BOUNDARY
- MUNICIPAL BOUNDARY




**WELLINGTON COUNTY**

0 0.25 0.5 Kms

Scale: 1:14,000

N

Date: July 2023

Produced by: County of Wellington Roads Department



Sources: County of Wellington, MNRF, GRCA

2020 Ortho imagery.

COUNTY OF WELLINGTON

# COMMITTEE REPORT

**To:** Chair and Members of the Roads Committee
**From:** Don Kudo, P. Eng., County Engineer
**Date:** Tuesday, February 14, 2023
**Subject:** **Lake Road Reconstruction (Wellington Road 32, Puslinch) – Project Details and Speed Limit Changes**

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## Background:

Lake Road (Wellington Road 32) has been a focus of speeding and safety concerns within the local Puslinch community for a number of years. The County's Road Master Action Plan (RMAP) included a review of Lake Road as one of the 27 County road segments assessed in the RMAP's Speed Management Corridor review process. For Lake Road, the study recommended changes to the posted speed limits on this road segment along with recommending a number of road improvements as speed management measures.

**Project Details**

With the reconstruction of Lake Road scheduled to be completed this construction season, the County has the opportunity to make roadway safety improvements that were recommended in the RMAP and other design changes as follows:

- Improving the current residential area by enhancing the concrete curb and gutter cross section with a narrower road lane width of 3.25 metres
- Eliminating the right turn slip-a-round lane with a reconfigured all way stop tee intersection at the intersection of WR 32 and Concession 2
- Providing a 3.0 metre-wide paved shoulder along the north side of the residential area curbed section to the Puslinch Tract Conservation area north of the intersection of WR 32 and Concession 2
- Installing two pedestrian crossovers (PXO) along this section of road with one located in the residential area and the other located adjacent to the Puslinch Tract Conservation area

Other proposed roadway improvements based on consultant studies and recommendations include:

- Installing eco-passages and exclusion fencing to help reduce reptile and amphibian mortality rates at the wetland sections, resulting in safer and greater movement for wildlife. Road mortality has a direct impact on population size and restricts species movement, which reduces opportunities for feeding and reproduction.
- Introducing an innovative product, Cematrix, that is a lightweight cellular concrete to be used as sub base road material with the intent to extend the life cycle of the road structure. The use of the Cematrix product will be a first for a County road and will be used along the two wetland sections of Lake Road where prominent rutting and pavement fatigue have previously been experienced. The improved road base may allow for the removal of the year round reduced load restriction on Lake Road. Staff will undertake post construction monitoring to determine if a change to the reduced load restriction bylaw for Lake Road is warranted.

**Road Master Action Plan**

The Road Master Action plan was approved in January, 2022. As part of the RMAP, Speed Management Guidelines were developed for the County. These guidelines provide context for managing speed on County roads including some factors with respect to establishing appropriate posted speed limits as follows:

- uniformity of vehicle speeds increases safety and reduces the risks for vehicle collision
- collision potential is lowest when the difference in operating speed between vehicles in the traffic stream is the smallest
- effectiveness and credibility of the posted speed limit is enhanced by setting speed limits that are safe and reasonable for the roadway environment
- posted speed limits that are set too low result in a significant number of "reasonable" drivers operating illegally, place unnecessary burdens on law enforcement personnel, and lead to a lack of credibility of the posted speed limit

The RMAP Speed Management Guidelines are consistent with the Transportation Association of Canada (TAC) "Canadian Guidelines for Establishing Posted Speed Limits". The TAC guidelines were adopted by the County in 2012 for setting or adjusting posted speed limits and the RMAP reconfirmed the use of these guidelines. The guidelines consider factors such as road classification, road geometry, conflict points, and pedestrian/cyclist use to establish appropriate posted speed limits.

As previously noted, 27 County road segments including Lake Road, were studied as part of the RMAP Speed Management Corridor review. The corridor review study recommended to adjust the current Lake Road posted speed limit by implementing appropriate speed limit changes to align driver behaviour with the design of the road. The following are the RMAP recommendations for the posted speed limits along this section of Lake Road as detailed in the attached Wellington RMAP – Speed Management Review memo:

- For the westerly portion, increase the posted speed limit from **50 km/h to 70 km/h**
- For the easterly portion that fronts the residential properties, increase the posted speed limit from **50 km/h to 60km/h.**

The RMAP Speed Management Corridor review for Lake Road recommended to change the current 50 km/h posted limit in the easterly residential area to 60 km/h, however, staff is not recommending this change. This would be consistent with the Roads Committee RMAP report of September 14, 2021 where staff did not recommend changing the posted speed limits when the corridor review results were +/- 10km/h of the existing posted speed limit. For the Lake Road Reconstruction project, staff have taken the extra measure of proposing to extend the 50km/h posted speed limit to across the frontage of the Puslinch Tract Conservation area, extending the 3.0 metre-wide paved shoulder and proposing to install an additional PXO at this location.

**Proposed Speed Limit Bylaw Changes**

Based on the above, in order to implement the posted speed limit changes, revisions to the current Consolidated Speed Limit Bylaw (Bylaw 5536-17) would be required to coincide with the completion of the road reconstruction project.

The proposed bylaw "Schedule C" would be revised for the 50 km/h limit for Wellington Road 32 (Lake Road) as follows:

- **From:** “from a point 610 metres west of the intersection with Concession 2 (Township of Puslinch)”
- **To:** “a point 150 metres north from the intersection with Concession 2 (Township of Puslinch)”

The proposed bylaw “Schedule A” would be revised to add a 70km/h limit for Wellington Road 32 (Lake Road) as follows:

- **From:** “from a point 610 metres west of the intersection with Concession 2 (Township of Puslinch)”
- **To:** “the intersection of Wellington Road 33 (Townline Road)”

**Public Open House**

Staff held a public open house on November 24th, 2022 as part of the consultation and communication process for the speed management plan and road reconstruction project. Proposed changes to the roadway and the posted speed limits were presented. The open house was well attended with approximately 60 attendees. Comments from the public were supportive of the improvements to the east end of the project where the 50km/h speed limit is proposed to remain and be extended but most comments were not in favour to increase the speed limit to 70km/h proposed west of the residential area. Attached to the report are the comment sheets received. Comments were also received directly on the Open House presentation map. Images of the map and comments provided are also attached.

**Project Schedule**

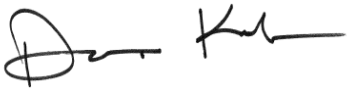
The Lake Road reconstruction project is proposed to be tendered in March, 2023 with award of the construction tender in April, 2023. The project construction is planned to commence in May, 2023 with the estimated completion of the work in September, 2023. Traffic will be maintained during construction with a full road closure needed for approximately one month this summer to complete a portion of the project work. Changes to the Consolidated Speed Limit Bylaw would be proposed to the Roads Committee for approval to coincide with the completion of the project.

## Recommendation:

That the Lake Road Reconstruction (Wellington Road 32, Puslinch) – Project Details and Speed Limit Changes report be received for information;

And that staff be directed to take appropriate action, as outlined in the staff report, to revise the Consolidated Speed Limit Bylaw and signage on Wellington Road 32 to coincide with the completion of the Lake Road Reconstruction project.

Respectfully submitted,



Don Kudo, P. Eng.
County Engineer

Attachments: Memo - Wellington RMAP – Speed Management Reviews - August 10, 2021 Lake Rd
WR32 Open House Comments
WR32 Open House Notes Maps (1 to 4)

## 3.13 Wellington Road 32 (Lake Road) from Wellington Road 33 (Townline Road) to Concession 2

### 3.13.1 Corridor Context

- Rural cross-section, with paved/gravel shoulders, no streetlights or sidewalks
- Rural land uses, with limited properties taking access to or fronting the corridor, except for approximately a dozen properties on the north side of the corridor closer to the east limits of the corridor
- There is an MTO Park and Ride towards the west end of the corridor.

### 3.13.2 Public Feedback

Through the Social Pinpoint exercise, we received the following feedback from the public:

- *"Lake Road is frequently used by fully loaded transport trucks as an alternative to 401. They do not adhere to the 50 speed limit."*
- *"Not many who drive thru this area adhere to the speed limits. When I'm going slightly over the limit, people are often right on my bumper."*
- *"Speed is an issue and law enforcement have continuously attempted to conduct traffic initiatives. shoulders are too narrow and steep.*
- *"A 3 way stop sign would really help with traffic issues at where this road intersects with Lake Road allowing for safe exit from Old Marina to Lake Road. It will also greatly help slow down speeders who constantly go well over the 50km speed limit if they actually are forced to come to a complete stop here."*

### 3.13.3 Traffic Data

The following traffic data was collected and used as part of the speed management analysis:

**Wellington Road 32 between Seifert Driver and Butler Avenue**

- Data Collection Dates: 2019-07-02
- Collected By: Wellington County
- 6,907 vehicles per day.
- Posted Speed Limit = 50 km/h
- Average Speed = 62 km/h
- 85$^{th}$ Percentile = 70 km/h
- 95$^{th}$ Percentile = 77 km/h.

**Wellington Road 32 at Wellington Road 33**

- Data Collection Dates: 2020-11-02 to 2020-11-04
- Collected By: OPP
- 11,849 vehicles recorded over two days (average 5,925 vehicles per day)
- Posted Speed Limit = 50 km/h
- Average Speed = 63 km/h
- 85th Percentile = 72 km/h
- 95th Percentile = 80 km/h
- Six collisions in the last 10 years, two collisions in the last three years.

### 3.13.4 Problem Statements

- Average and 85th Percentile speeds are measured to be much higher than the posted speed limit of 50 km/h
- No amenities for pedestrians.

### 3.13.5 Posted Speed Limit Review

The TAC Canadian Guidelines for Establishing Posted Speed Limits was used to conduct a speed management review on each corridor segment. The following were the results.

**Wellington Road 32 from Wellington Road 33 to Concession 2**

- Consider as a Major Rural Arterial Road with one lane per direction
  - Horizontal Geometry = Medium Risk
  - Vertical Geometry = Lower Risk
  - Average Lane Width = Medium Risk
  - Roadside Hazards = Medium Risk
  - Pedestrian Exposure = Higher Risk
  - Cyclist Exposure = Higher Risk
  - Pavement Surface = Lower Risk
  - One signalized intersections
  - Four side-street STOP controlled intersections
  - 24 driveway accesses
  - On-Street Parking = Lower Risk.

**Current Posted Speed Limit = 50 km/h**
**TAC Recommended Posted Speed Limit = 70 km/h**

- If considered as a Major Urban Arterial Road with 1 lane per direction.

**TAC Recommended Posted Speed Limit = 60 km/h**

### 3.13.6 Potential Mitigation

Described options and their specific relevance or context in this segment:

- **Regulatory Modifications** – Implementing segment-appropriate speed limit changes align the driver behaviour with the design of the road. Consistent design results in less variation in driver behaviour which makes the expectations of all users more homogenous. Less variation in behaviour makes for greater predictability and makes the environment safer for all users. Viable option.
- **Geometric Modifications** – Controlling the speed of vehicles can be achieved by aligning the design of the road with the desired posted speed. This can be an expensive undertaking over long corridors with varied environments. Viable but expensive option, and should be targeted along some portions of the road rather than the entire corridor.
- **Education / Enforcement** – Consistent enforcement/police presence over this length of roadway a cost and resource issue. Over long sections of road, intense enforcement is typically not viable, infrequent enforcement not effective.
- **Do Nothing** – Two segments, notable speeding issues. Doing nothing is not an option.

### 3.13.7 Recommendations

The posted speed limit recommendations take into account the TAC recommended posted speed limit but do consider other factors such as changes to the surrounding land uses and changes to the road cross-section. As a result, the actual posted speed limit recommendation may not fully align with the TAC recommended speed limit. The following recommendations with regard to the posted speed limits for this corridor:

- For the more-westerly portion, increase the posted speed limit from **50 km/h to 70 km/h**
- For the easterly portion that is fronting the single-family properties, increase the posted speed limit from **50 km/h to 60 km/h**.

**Figure 26** and **Figure 27** shows the existing and recommended posted speed limits on Wellington Road 32 between Wellington Road 33 and Concession 2, respectively.

Regardless of whether the recommendations related to the posted speed limit are endorsed, the speed management action plan along the corridor should also include the following improvements:

- In the short-term, consider the need for a **pedestrian crossover (PXO)** on Wellington Road 32 near McClintock Drive/Butler Avenue
- In the long-term, reconstruct the easterly portion of the corridor to an **urban cross-section**, which would include curbs and gutter, a multi-use pathway on the south side of the corridor as well as street lighting.

Figure 26: Existing Posted Speed Limits, Wellington Road 32 (Lake Road), Barber's Beach, Little Lake




Figure 27: Recommended Posted Speed Limits, Wellington Road 32 (Lake Road), Barber's Beach, Little Lake

COUNTY OF WELLINGTON

# Committee Report

**To:** Chair and Members of the Roads Committee
**From:** Don Kudo, P. Eng., County Engineer
**Date:** Tuesday, September 12, 2023
**Subject:** **Automated Speed Enforcement – Request for Information**

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## Background:

At the June, 2023 Roads Committee meeting, staff were directed to prepare a Request for Information (RFI) for Automated Speed Enforcement (ASE). A RFI was issued on July 24, 2023.

The RFI noted that the County was seeking information from prospective vendors to gather information about the marketplace to assist in the determination of future purchasing options or requirements. The RFI provided detail on the County's ASE background, strategic objectives, and business needs. The submission requirements requested respondents to summarize aspects of their ASE programmes. Respondents were requested to provide high level basic estimated costing for associated components of an ASE programme, and estimated revenues to be generated including but not limited to:

- Camera Operation Cost
- Processing Cost
- Fixed Site Cost
- Mobile Site Cost
- Cost associated with the implementation and administration of the programme (communication, signage, planning, research)
- Expected Revenue

Respondents were also requested to provide commentary on other aspects of ASE programmes with respect to Administrative Penalty System (APS), Administrative Monetary Penalties (AMPs), Joint Processing Centre (JPC) and Provincial Offences Officers, Provincial Offences Act (POA) and other applicable aspects that impact an ASE programme.

The qualifications of the vendors team were requested based on their experience, and performance on projects of a similar size completed by the firm, within the last three years. Vendors were to demonstrate proven experience and success in providing these services for public sector projects with a public education component and provide added education and promotion strategies.

On August 23, 2023, the County received three submissions in response to the RFI that are attached to this report. The respondents to the RFI were as follows:

- Global Traffic Group Ltd.
- Redflex Traffic Systems (Canada) Limited
- Traffipax LLC

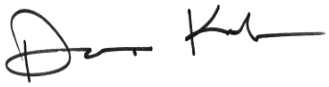
The submissions from the vendors varied in their level of detail. In addition to providing vendor information, one of the purposes of the RFI was to assist the County in determining future purchasing options or requirements. Based on the submissions provided, Redflex is currently operating in 16 Ontario municipalities with 10 other additional municipal commitments and was procured in these municipalities based on a competitive process through the City of Toronto. The County could proceed with ASE implementation with Redflex through the established consortium agreement. Global Traffic Group has an agreement with the Township of Essa for a pilot project for ASE and integration with AMPS that is a precedent for Ontario. Global Traffic Group has operated ASE in other locations in Alberta. Trafficpax Ontario's experience has been with red light camera implementation and speed enforcement cameras being utilized for speed studies by various Regions throughout Ontario. Trafficpax has operated traffic enforcement systems in Edmonton and in Quebec.

Two of the vendors have delegated to the Roads Committee earlier this year with Redlex providing a presentation in March, 2023 and Global Traffic Group providing a presentation in June, 2023. Since this RFI was not an evaluation process, this report and vendor submissions are provided to the Committee for information.

## Recommendation:

That the report Automated Speed Enforcement – Request for Information be received for information.

Respectfully submitted,



Don Kudo, P. Eng.
County Engineer

Attachments: Global Traffic Group Ltd. - Wellington County Request For Information Project Number CW2023-059 Automated Speed Enforcement Programme

Redflex Traffic Systems (Canada) Limited - Response to Request for Information for Automated Speed Enforcement Programme For the County of Wellington

Traffipax LLC - Wellington County, Ontario RFI - Automated Speed Enforcement Program

# Wellington County

## REQUEST FOR INFORMATION

## PROJECT NUMBER
## CW2023-059

## AUTOMATED SPEED ENFORCEMENT PROGRAMME

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**CONCLUSION** ..... **9**

August 16, 2023

Wellington County
74 Woolwich Street
Guelph, Ontario N1H 3T9

Thank you for the opportunity to highlight Global Traffic Group Ltd.'s innovative technology. We believe our Automated Speed Enforcement (ASE) technology can assist Wellington County in helping achieve its traffic safety goals.

Global Traffic Group Ltd. (Global) is a Canadian-owned and operated company passionate about traffic safety and technology. We achieve our mission successfully by developing innovative systems and custom-built software.

We have been operating for over twenty (20) years as an industry leader and have collectively provided services to twenty-three (23) communities across Canada. In addition, we are partnering with Essa Township in Ontario, which pioneers deploying ASE in combination with an Administrative Monetary Penalty System (AMPS). Their processing centre is powered by Global's exclusive ASE/AMPS software. The Township is located in Simcoe County, which is similar to Wellington County and its lower-tier municipalities.

We guarantee that we have the finest ASE systems operating in Canada. With the longest range, we can capture more license plates than other systems, as witnessed in independent testing. We are willing to engage in direct comparisons with any competing technology to showcase our systems' effectiveness and illustrate the economic advantages of how we can outshine all other equipment on the market.

Although this request for information deals only with ASE, some of Global's software and technology may be considered "value-added" options for the future. For example, we can support the County with its own processing centre utilizing Global's custom ASE processing software. We can also enhance speed and parking enforcement and improve traffic safety with intersection safety devices, portable stop signs/red lights, pedestrian crosswalks, and distracted driving enforcement technology. We have previously worked with a provincial government and municipalities to develop pilot projects for such programs. Global also helps police services in various ways, such as tracking blacklisted vehicles and with Amber Alerts. This broad-based enforcement approach truly supports overall traffic management initiatives.

If you have any questions or comments, please contact me at (780) 914-9720.

Sincerely,

David Steer

David Steer, CEO

## ASE PROGRAM SUMMARY

**Wellington ASE Program Scope**
Global can provide a full turnkey processing centre to operate an ASE program enforcing speed limits in Wellington County. The process will include an initial evaluation in conjunction with the County and the OPP, to determine in which Community Safety Zones and School Safety Zones ASE can effect change. Global and Wellington County will decide upon the number of zones, operating hours, and commencement date. Global will follow the County and OPP's directions and comply with the provincial guidelines.

Global will support the County in creating a processing centre, including hardware, a call centre, and proprietary software that can process speeding offences through the POA court system and an AMPS.

We will provide the required legal, IT, administrative, and traffic safety support to help Wellington establish IT platforms, bylaws, privacy impact assessment, agreements with the Ministry of Transportation Ontario and the Ministry of Attorney General, signage, and camera installation.

If Wellington elects to develop an ASE/AMPS system, we will work with the County, deploying our experience and subject matter experts who helped pioneer Ontario's first ASE/AMPS in Essa Township, located in Simcoe County.

**Technology & Equipment**
At Global, we have our own research and development team, including machine learning engineers, programmers, and developers who develop custom processing centres for our communities. We believe that this sets us apart.

Global's mobile speed enforcement units use proven technology to provide high-quality service. They bring together the best possible Lidar, digital camera, and computer technology, making these systems very effective from traffic safety and weather perspectives. Global's mobile speed enforcement units can recognize vehicles in violation of the speed limit and record the violations using a combination of detector(s) and camera units. The systems operate successfully in all weather and light conditions typical to the climate: temperature extremes (-40 to +40), rain, snow, freezing rain, hail, fog, darkness, shadows, bright sunlight, and capturing images in low light environments.

Global's mobile speed enforcement units produce colour photographs of a vehicle and licence plate. One is a wide-angle view that shows the entire vehicle and its immediate surroundings. The second is a zoomed-in view from the back that clearly shows a legible licence plate. These images are sharp, colour-balanced, and exposed correctly for colour, brightness, and contrast.

All systems can simultaneously monitor up to four lanes of traffic. These systems can detect and record near-simultaneous violations and multiple speed calculations per vehicle and differentiate between individual vehicles within specific road lanes. These systems are currently operating very successfully in Canada, helping make communities safer.

For this program, we will deploy Global's G3C system. This ultra-portable system can be operated out of various types of roadside boxes or mounted on an existing post or pole well above head height, reducing the threat of vandalism. Media reports about frequent acts of vandalism to ground mounted photo speed enforcement units in Ontario harm ASE's reputation. The G3C can have

multiple acquisition units and be fully automated.

Locations for ASE sites are data-driven and supported by Global's Three-in-One G3TA Traffic Analyzer, which offers traffic counts, vehicle speeds, and stop data simultaneously and in real time. It gives detailed insight into driver behaviour – The detailed data collected, when, where, how many, how fast, stopping behaviour at schools, playgrounds, and intersections, gives detailed insight into driver behaviour.

The system's data generates Risk Analysis Reports in easy-to-read formats, which can be customized for internal and public display. The reports showcase the number of vehicles driving at speeds that have resulted in a traffic violation ticket. They will support data-driven enforcement by ASE and the OPP. These reports are compared yearly to measure program success (see attachment for sample "heat" map). If the County has speed data, Global can create “Heat Maps” showing at which hours and days of the week specific safety zones have speeding issues. This allows efficient, targeted enforcement deployment.

**MAINTENANCE**
Global offers a comprehensive package for the ASE program, encompassing equipment provision, backup systems, and technical support. All necessary equipment is supplied by Global for program operation. Should any main units become unserviceable, we guarantee the installation of same-standard backup systems within the same day. Furthermore, Global takes responsibility for replacement unit installation during long-term maintenance and repairs.

Our G3C units receive monthly software upgrades, supplemented by 24/7 in-house technical support accessible to Provincial Offences Officers. From technology to ticket issuance, Global supports everything related to camera and system maintenance, repairs, upgrades, and backup systems.

Our laser systems undergo thorough pre-and post-session testing, surpassing manufacturer certification requirements. With an unwavering commitment to operational excellence, Global employs in-house Lidar professionals to prevent downtime and ensure equipment is always in optimal working condition.

**Partnering with the OPP**
Global will partner with the OPP: we have a proven track record of working with the police of jurisdiction and the community administration in meeting and exceeding ASE requirements. In Essa Township, we are partnering with the OPP, which identified high collision rate sites and will provide monthly collision data. Sites are selected for deploying ASE in collaboration with the local jurisdiction police. We have a two-decades-long successful partnership with the RCMP in Alberta. This partnership includes utilizing our technology to help track blacklisted vehicles and assisting the RCMP with Amber Alerts. We know and highly value the importance of this relationship, underscored by our operations managers being retired police officers.

**AMPS and Court System – Dual Function Processing Centre**
Global has developed proprietary processing software that can process violations through both a court system and AMPS.
***Please see Joint Processing Commentary for a detailed description.***

## REVENUE

**Global offers two pricing models:**
The number of units and staffing required for the program to run successfully will determine both pricing models. This will be determined through the RFP process. It's been our experience to work with the communities to determine this data through traffic counting in each community safety zone to ensure the most effective program.

**Full turnkey solution:**
The full turnkey model is based on revenue sharing of fines. There will be no upfront cost to Wellington County. Global's proposal will include the costs of all components and applicable taxes, and other associated costs with providing ASE services. When responding to an RFP, Global's detailed proposal of fees related to providing ASE and estimated revenue projections reflect the number of mobile speed enforcement units deployed. Global will require the County to install the supplied signage and provide administrative support for agreements and communication with the MTO and MAG.

**A-la-carte pricing model:**
The a-la-carte model allows municipalities to run their program and choose the features they want to operate in-house and which ones they want to contract. There are no initial fees at contract signing. There is a monthly cost based on the level of service and a per-ticket processing fee. This is typically determined through traffic data analysis and the RFP process.

Examples of revenue generated from speeding fines in three Ontario municipalities:

| Municipality | Tickets | Revenue $ million | Months |
|---|---|---|---|
| Brampton | 10,119 | $1.024 million | 3 |
| Toronto | 560,000 | $34 million | 26 |
| Mississauga | 23,163 | $1.83 million | 10 |

## COMMENTARY

**AMPS**
Advantages of an Administrative Monetary Penalty System AMPS, aka Administrative Penalty System (APS) in comparison to the Provincial Offences Act (POA) court system include:

**Decongesting Court Systems**
An AMPS helps decongest any court system where cases are backlogged due to the hiatus regarding court hearings during the COVID-19 pandemic.

Conversely, introducing an ASE program without an AMPS will increase the number of processed speeding offences, increasing the volume of cases that go through the court system to early resolution and trial. Guelph's ASE program, which started in August 2023, is expected to clog an already congested court system further.

**Community Advantage**
An AMPS presents a more streamlined approach compared to traditional court systems, resulting in increased automation, swifter processes and resolutions, and reduced operational expenses.

The revenue generated by an AMPS remains within the local community. While numerous municipalities that lack provincial offences courts usually divide the revenue, subtracting court processing fees from the fine amounts, municipalities hosting such courts maintain the entire sum.

**Enhanced Deterrence**
The efficacy of ASE diminishes when fines are not paid on time or are ignored. AMPS effectively addresses this issue by decreasing the number of outstanding speeding tickets and accelerating payments from vehicle owners who choose not to dispute or default on payments.

Upon launching its program, Mississauga observed nearly three-quarters of its $104 million in issued speeding fines remaining unpaid after a year. The extended duration for early resolution and court hearings hampers timely payments. This not only reduces deterrence but also strains municipal budgets. Both AMPS and the court system can retrieve unpaid fines by denying licence renewals. However, AMPS possesses an additional enforcement mechanism that the court system lacks: attaching unpaid penalties to property taxes.

**Flexibility for Smaller Municipalities**
AMPS staff can job share working for more than one municipality, so the labour costs aren't prohibitive for smaller municipalities.

**User-Friendly Hearings**
An AMPS' increased processing efficiency will result in faster hearing times than in a court system.

Vehicle owners can challenge their penalty notice in a 30-minute hearing online and can choose via an online calendar the time and date of their hearing, compared to a court telling them when their case will happen.

An AMPS hearing is less intimidating – it's with a municipal employee – rather than the court setting.

**Provincial Offences Officers**
Provincial Offences Officers can be dedicated to ASE or multi-purpose, which is the case in many small municipalities. They can be full or part-time – customizable to the size of the community – and under AMPS guidelines, they can work for different municipalities, allowing cost sharing. A provincial offences officer can work seamlessly in both an AMPS and POA court system – issuing Part 1 and Part 3 infractions and also penalties.

**Joint Processing Centre (JPC)**
A major advantage of a JPC is economy of scale in expertise, hardware, software, personnel, capital expenditure, and operational expenditure.

Global's proprietary processing software meets and exceeds all requirements of the government ministries for Ontario communities, and all data is stored in Canada. The processing software monitors all aspects of the ASE programs and is key to violation processing. This software includes a call centre tracking system that tracks every violation from the moment it goes in the mail, including ticket inquiries, payments, call history, and how many times a video of a violation has been watched and returned mail. All operational details can be immediately retrieved for audits. Its court tracking system includes a calendar that provides information regarding court briefs, trial dates, and payment history. Its AMPS solution hosts both AMPS screening and hearing sessions in a user-friendly platform that allows

contraveners to book their sessions. The processing centre generates statistical and financial reports for the community and other government authorities.

**Provincial Offences Act (POA)**
The POA permits ASE deployment under Ontario Regulation 355/22 “Administrative Penalties for Vehicle Owner Contraventions Detected Using Camera Systems.” It came into effect on July 1, 2022, establishing an AMPS regulatory framework for camera-based automated enforcement programs. It establishes an efficient, cost-effective, user-friendly mechanism for processing speeding offences.

## REFERENCES

**Project: Essa Township - Automated Speed Enforcement in Combination with an Administrative Monetary Penalty System Pilot Project**
In 2023, Global took the lead in implementing a groundbreaking pilot project for the integration of ASE and AMPS in Essa Township, a development that set a precedent in Ontario. Following a successful transition, Global's ASE technology is set to go live in November 2023. Throughout the process, Global offered comprehensive assistance to the Township, including the formulation of bylaws, conducting a privacy impact assessment, and establishing both AMPS and ASE programs in alignment with provincial regulations and guidelines. Global is delivering a complete enforcement solution to the municipality, ensuring seamless implementation. The operational setup will encompass two (2) G3C systems.

Central to this project is Global’s proprietary dual-purpose processing solution that processes violations for both the court system and AMPS, including ticket issuing, hearing dates and payment history. Its platform hosts both AMPS screening and hearing sessions. The processing software generates statistical and financial reports for the community and other government authorities.

**The reference contact is:**
Michael Mikael
Manager of Public Works/ Deputy CAO
Township of Essa
5786 Simcoe County Road 21
Utopia, ON L0M 1T0
Phone: 705-424-9917 ext. 135
Email: mmikael@essatownship.on.ca

**Project: Regional Municipality of Wood Buffalo - Automated Traffic Enforcement Program**
Global was the successful bidder for the Automated Traffic Enforcement program with the Regional Municipality of Wood Buffalo in 2019. Global's transition was completely successful and was operational in January 2020. Global provides the municipality with a full turnkey solution, which includes keeping it abreast of changes to provincial regulations and guidelines. Global provides forty (40) hours per week of speed enforcement. Global operates two (2) 4WD vehicles and two (2) G2r/G2lr systems. Global also provides the City with two (2) KRIA T-EXSPEED cameras that operate 24/7. With the introduction of Global's technology, the enforcement presence and traffic safety have significantly increased. We have had excellent support from the Municipality and look forward to introducing future safety initiatives. *Please see the appendix for the reference letter.*

The reference contact is:
Nicole Chouinard
Manager, RCMP Support & Victim Service
9909 Franklin Avenue
Fort McMurray, AB T9H 2K4
Phone: 780-742-7330
Email: Nicole.Chouinard@rmwb.ca

**Project: City of St. Albert - Automated Traffic Enforcement Program**
In 2014, Global emerged as the successful bidder for the Automated Traffic Enforcement initiative in partnership with the City of St. Albert. The transition orchestrated by Global proved to be highly effective, achieving full operational status by September of that same year. Through its comprehensive approach, Global offers the municipality an all-inclusive solution, ensuring alignment with evolving provincial regulations and guidelines. The execution involves the deployment of six (6) 4WD vehicles, one (1) G2lr unit, six (6) G2h units, and four (4) G2r units, which collectively contribute to one hundred and ninety (190) hours of weekly speed enforcement. Complementing this, the City maintains a 24/7 operational status of six (6) KRIA T-EXSPEED cameras. The introduction of Global's cutting-edge technology has profoundly elevated the visibility of enforcement efforts and augmented overall traffic safety within the community.

**The reference contact is:**
Aaron Giesbrecht
Manager of Policing Services
96 Bellerose Dr
St. Albert, AB T8N 7A4
Phone: 780-458-4303
Email: AGiesbrecht@stalbert.ca

## CONCLUSION
Global extends its gratitude to Wellington County for affording the chance to present this data for the implementation of its ASE program. Backed by a track record of successful inventive enforcement solutions, Global is committed to surpassing all anticipations in aiding the County's pursuit of traffic safety objectives. This involves a punctual and swift execution of the program. Global earnestly anticipates further advancement in traffic safety across Wellington County and contributing to the overall enhancement of road safety for everyone.

# CW2023-059 - Automated Speed Enforcement Programme

Opening Date: July 24, 2023 4:00 PM

Closing Date: August 23, 2023 2:00 PM

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### Vendor Details

| | |
|---|---|
| Company Name: | Global Traffic Group Ltd. |
| Does your company conduct business under any other name? If yes, please state: | Alberta |
| Address: | 23069 Citadel RPO<br>St. Albert, Alberta T8N 6Z9 |
| Contact: | Cindy Hirtle |
| Email: | reception@globaltrafficgroup.com |
| Phone: | 780-987-4949 |
| Fax: | 780-987-4949 |
| HST#: | 85903 3375 |

### Submission Details

| | |
|---|---|
| Created On: | Wednesday August 16, 2023 11:42:21 |
| Submitted On: | Wednesday August 16, 2023 11:57:15 |
| Submitted By: | Cindy Hirtle |
| Email: | reception@globaltrafficgroup.com |
| Transaction #: | 1c052b77-8973-48c7-bfb9-f2adbc203fe5 |
| Submitter's IP Address: | 209.89.8.88 |

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**Documents**

It is your responsibility to make sure the uploaded file(s) is/are not defective or corrupted and are able to be opened and viewed by the Owner. If the attached file(s) cannot be opened or viewed, your Bid Document may be rejected.

We having read, understood and accepted the Bid Documents for the above-named Project, including Addenda, and having visited the Place of the Work, hereby offer to perform the Work in accordance with the Bid Documents.

We declare that:

a) we agree to attain Substantial Performance of the Workafter receiving notice of contract award, and acknowledge that the construction duration may be considered by the Owner in evaluating this Bid and determining contract award. The date of contract award shall be the date the letter of award is sent to the Bidder.

b) we have arrived at this Bid without collusion with any competitor,

c) this Bid is open to acceptance by the Owner for a period of sixty (60) days
from the date of Bid closing, and

d) all Bid Form Supplements called for by the Bid Documents form an integral part of this Bid.

e) no member of the Owner's Council and no other officer or employee of the Owner is, will be, or has become interested, directly or indirectly, as a contracting party, partner, stock holder, surety or otherwise in, or in the performance of the Contract, or in the supply, work, or business to which it relates, or in any portion of the profits thereof, or any of the money to be derived therefrom.

f) We agree, to perform the Work in compliance with the Contract Documents.

- CW2023-059 Automated Speed Enforcement Programme Submission - Automated Speed Enforcement Programme PROJECT NUMBER CW2023-059 (1).pdf - Wednesday August 16, 2023 11:53:58

## Addenda, Terms and Conditions

1. We, having read, understood and accepted the Bid Documents for the Project, including the Addendum's listed below and having visited the Place of the Work, hereby offer to perform the Work in accordance with the Bid Documents.
2. I/We, the undersigned, declare that:
3. a) We agree to attain Substantial Performance of the Work as directed by the Owner after receiving notice of contract award, and acknowledge that the construction duration may be considered by the Owner in evaluating this Bid and determining contract award. The date of contract award shall be the date the letter of award is sent to the Bidder.
4. b) We have arrived at this Bid without collusion with any competitor.
5. c) This Bid is open to acceptance by the Owner for a period of sixty (60) days from the date of Bid closing.
6. d) All Bid Form Supplements called for by the Bid Documents form an integral part of this Bid.
   e) No member of the Owner's Council and no other officer or employee of the Owner is, will be, or has become interested, directly or indirectly, as a contracting party, partner, stock holder, surety or otherwise in, or in the performance of the Contract, or in the supply, work, or business to which it relates, or in any portion of the profits thereof, or any of the money to be derived there from.

☑

I/WE agree to be bound by the above declarations and have authority to bind the Corporation and submit this Bid on behalf of the Proponent.

- Lianna Young, Executive Assistant, Global Traffic Group

The proponent shall declare any potential conflict of interest that could arise from submitting a proposal on this RFP. Do you have a potential conflict of interest? ○ **Yes** ◉ **No**

The Proponent acknowledges and agrees that the addendum/addenda below form part of the RFP Document

Please check the box in the column "**I have reviewed this addendum"** below to acknowledge each of the addenda.

| File Name | I have reviewed the below addendum and attachments (if applicable) | Pages |
|---|---|---|
| **CW2023-059 Addendum 1**<br>Wed August 9 2023 03:49 PM | ☑ | 4 |

## Response to Request for Information for

# Automated Speed Enforcement Programme

## For the County of Wellington

**RFI Project Number: CW2023-059**

**Due Date: August 23, 2023**

**Submitted by:**

Redflex Traffic Systems (Canada) Limited

D.B.A Verra Mobility

1150 N Almar School Rd

Mesa AZ, United States

85201-3000

# Executive Summary

## Redflex (Verra Mobility) – Proven Solutions, Proven Outcomes

At Redflex (Verra Mobility), our single focus is to provide industry-leading photo enforcement solutions with a core mission of creating safer roadway environments. We proudly play a role in safeguarding millions of people worldwide, whether it be through automated speed enforcement, red light camera enforcement, school bus arm cameras, or bus lane camera enforcement. While some of our competitors have focused on integrating outside solutions, we have consistently invested in developing the industry's most advanced automated enforcement solutions, such as our Radarcam® enforcement solution, which has successfully been deployed in the Province of Ontario since 2019, the Province of Saskatchewan (SGI) since 2019, and the City of Calgary, Alberta for the past 10 years.

By actively listening to our customers, we are developing the technology needed to resolve our clients most important challenges. This has resulted in an outstanding customer renewal rate exceeding 90% in a very competitive marketplace.

## Better Products

In the 2019 ASE procurement by the City of Toronto, the Redflex (Verra Mobility) Radarcam® was tested side-by-side against competitor enforcement solutions. The Proof of Performance tested image contents, incident data, the ASE images, the ASE system, the ASE camera, the ASE camera housing, the vendor's maintenance procedures, and the ASE image processing hardware and software – the top scoring system was awarded the City of Toronto's ASE's contract. Out of a total of 44 items being reviewed, evaluated, and tested, the Radarcam® unit received the top score, solidifying its technology as best in the market.

## Superior Vehicle Detection and Lane Coverage

Although radar vehicle detection is the industry standard for speed detection, not all radars are the same. In conjunction with a dual radar, the Radarcam® platform utilizes proprietary radar algorithms that more successfully distinguish between similar types of vehicles, vehicles traveling at the same speed in different lanes, vehicles traveling in both directions concurrently, and closely clustered vehicles, allowing us to independently capture more simultaneous events. As a result, we outperform competitor systems that often rely on "off the shelf" radar software that miss violations on high volume or multi-lane roadways.

The dual radar technology of Radarcam® means that speeds of every single vehicle are automatically and independently verified before incident creation, virtually eliminating the risk of false positive detections. Radarcam® is also not subject to the missed detection deficiencies of

LIDAR during environmental conditions such as snow, fog, rain, or vehicle spray. Small differences in system performance and/or vehicle detection will produce significant variations in violation capture over the life of the program.

# Part A Experience and Qualifications

## Program Experience

Through the City of Toronto consortium agreement that was won by Redflex (Verra Mobility) in a competitive procurement, other government bodies in Ontario have been able to stand up their own programs under the framework without a competitive solicitation. This original contract for 5 years extends to July 2024 with an option of another 5-year extension, which is being planned by the City of Toronto to last until July 2029. In addition to the City of Toronto, these include the Town of Ajax, the City of Brampton, the Town of Caledon, the Region of Durham, the City of Guelph, the City of Hamilton, the City of London, the City of Mississauga, the Region of Niagara, the City of Ottawa, the City of Oakville, the Region of Peel, the City of Pickering, the City of Pickering, the Region of Waterloo, and the Region of York. There have also been commitments made from 10+ cities, municipalities and towns to establish programs with Reflex (Verra Mobility) between now and when the integration of AMPS takes effect. Today in Ontario, there are 244 cameras in operation, with plans for hundreds more by 2029 with our existing partners.

Outside of Ontario, with approximately 1,500 active photo enforcement systems installed across North America for over 100 clients (shown in Figure 1), Redflex (Verra Mobility) has the experience in the design and delivery of any and all automated speed enforcement systems. As an industry leader, we will continue to bring this dedication to excellence the Ontario municipalities who choose to participate in this program.

## Local Emphasis

Our Ontario operations include a head office located in Vaughn, Ontario. This team is supported by fourteen (14) local field service technicians, two (2) local full time technical leads, Toronto-based program management with oversight by Canadian Field Services Manager, Joel Smith, and our Account Director and former MTO director, Brenda Lewis.

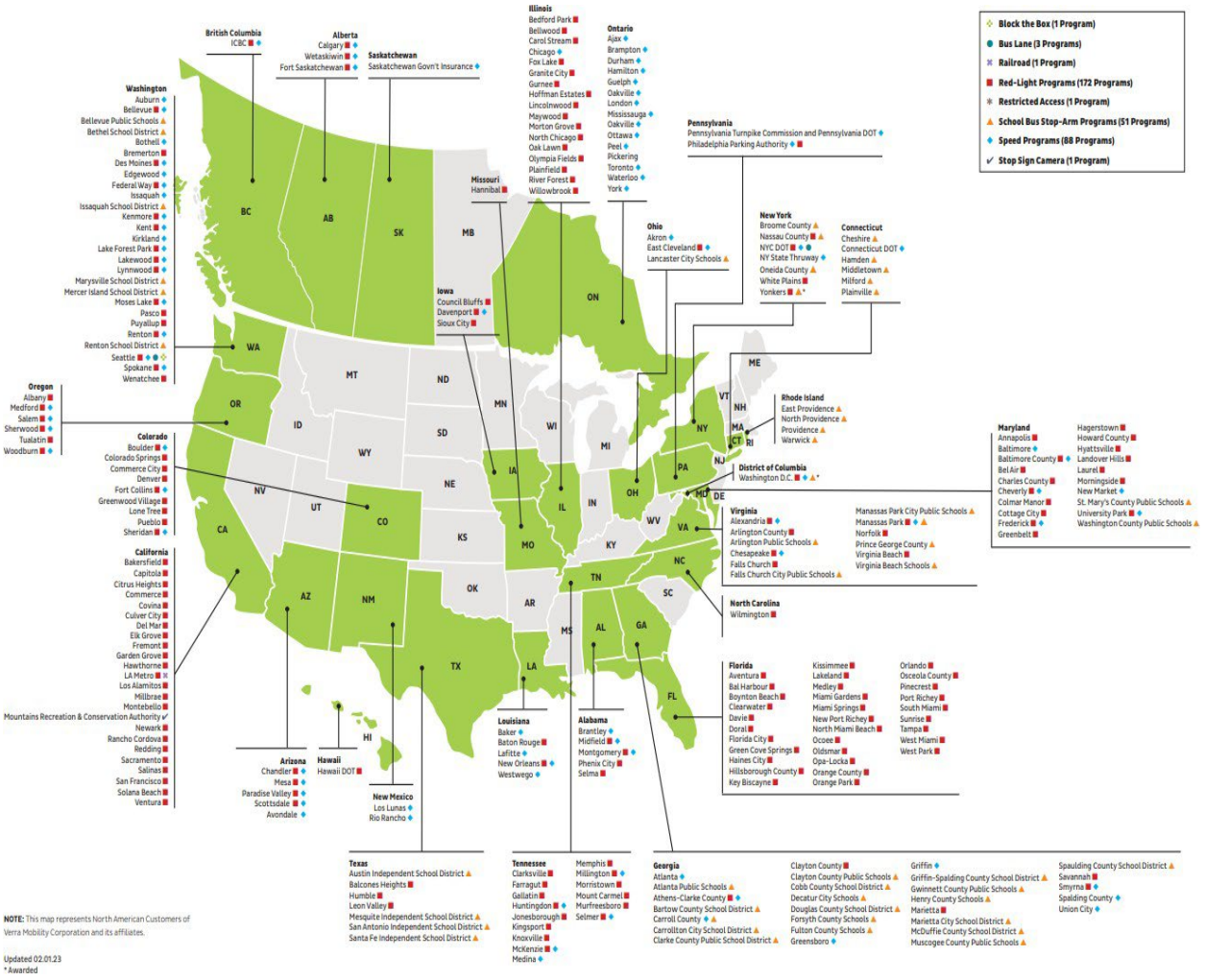


**Figure 1 - Redflex (Verra Mobility)'s North America Automated Enforcement Clients**

We provide services to more than 100 clients throughout North America.

Our experience in successfully delivering a program within a framework of provincial-level regulations, ensures our expertise in providing devices that meet the automated photo enforcement requirements under the Ontario Highway Traffic Act. Through partnering with customers within Canada at both the municipal and provincial level, Redflex (Verra Mobility) has gained valuable experience working with Canadian authorities such as Municipal Police, the RCMP, the Provincial Offices of Privacy Commissionaires, Ministries of Transportation as well as the Offices of the Solicitor General and Attorney General.

# Part B Costs and Revenue

## Functional Requirements

### B.1 Camera Operation Cost

All prices for camera operations are pre-established by the Toronto consortium agreement, and are included in Appendix D – Price Table form. The table below is a summary of the daily rate per camera for cameras that have been installed in that year. These rates reflex both the daily fees for mobile and for fixed cameras. A picture of the prices from the contract itself are included in the Appendix.

| Year 5 | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 |
|---|---|---|---|---|---|
| **July 16/23 - July 15/24** | **July 15/24 - July 16/25** | **July 15/25 - July 15/26** | **July 16/26 - July 15/27** | **July 16/27 - July 15/28** | **July 16/28 - July 15/29** |
| $ 259.34* | $ 86.37 | $ 94.61 | $ 105.59 | $ 131.22 | $ 259.34 |

For clients who sign part way through year 5, their daily camera rates are reduced to $86.37 beginning in year 6.

### B.2 Mobile and Fixed Costs

The set-up rates for mobile and fixed cameras are also pre-established by the Toronto consortium agreement. The initial camera set up fee for mobile units are a one-time fee of $253.29 per camera. If cities wish to re-deploy or move mobile cameras, this fee is $75 per move. Cities utilizing mobile cameras typically will move them every 3-4 months.

The construction of a fixed camera is $31,385.09. The reason for this increased cost is that a civil works construction must occur.

## B.3 Processing and Implementation Costs

As per the Toronto contract, there are no costs to the city from Redflex (Verra Mobility) for any implementation or administration of the program beyond the daily camera fees. Redflex (Verra Mobility) is responsible for the daily management and operations of the program up until the point of processing.

Additionally, an agreement is required between the Ministry of Transportation and the County of Wellington, in order for the County of Wellington to receive access to the MTO Database to do vehicle registration lookups.

Partners entering into the program have three options for processing:

1. Utilize the Toronto joint processing centre, which requires a separate contract with the Toronto Joint Processing Center (Trevor Kanhai from the City of Toronto is an appropriate contact to reach out to for these details). Redflex (Verra Mobility) is not privy to any information on what the costs are for processing with Toronto. This is the most common choice of municipalities and counties in the program. All business equipment (e.g. workstations, monitors, printers, etc.) and related software, as well as all Image Processing system hardware and software will remain in the Joint Processing Centres for the required period of ongoing functionality.
2. Establish an on-premise IIPS processing center with Redflex (Verra Mobility), in which Redflex (Verra Mobility) supplies all of the necessary back-end equipment, data, software, and support services. This is a one-time fee of approximately $829,000 CAD (subject to current exchange rates), which reflects the exact costs to Redflex (Verra Mobility) to support this JPC stand up. Krista Tanaka from Ottawa is a good individual to contact about this (contact information in references).
3. Establish a cloud-based processing center with Redflex (Verra Mobility). This option is being pursued by one existing partner and requires more context to determine prices.

## B.4 Revenue

We are not privy to the exact revenue incurred by the program, since there is no revenue split, and the government partner receives 100% of revenue from the program. However, we are aware that most of the government partners in the program do offset the daily camera fees through the revenue they accrue from the program. We encourage Wellington to reach out to Ottawa, Toronto, or any other municipality operating the program with Redflex (Verra Mobility) in Ontario to gather further information.

# Part C – APS, AMPS, POA

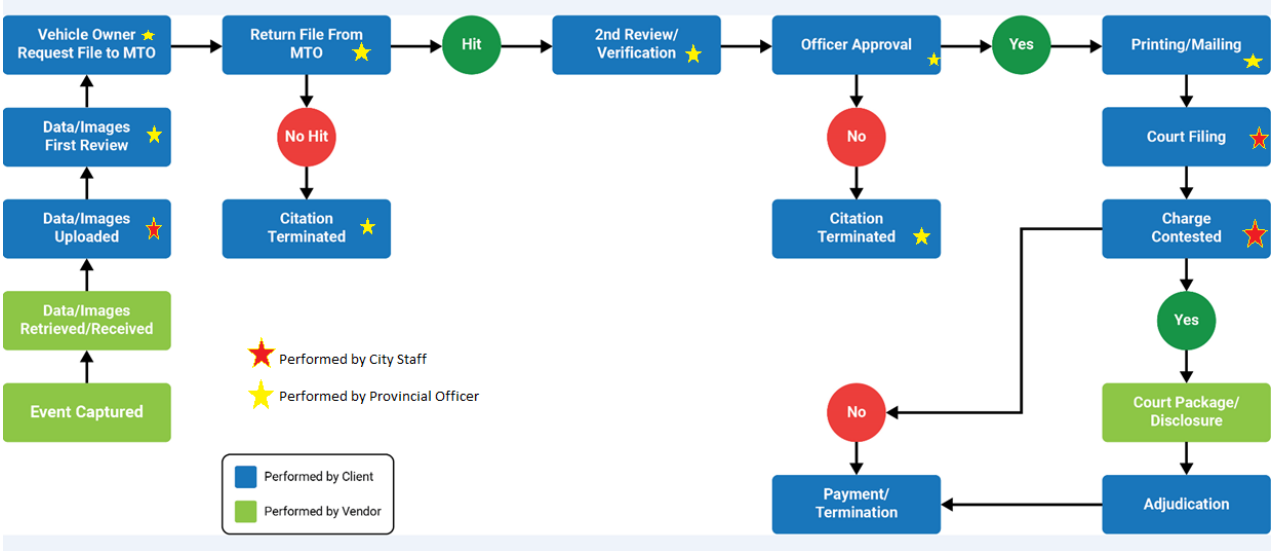


**Figure 2 - Redflex (Verra Mobility)'s process mapping**

### IIPS Process

Assuming the choice of IIPS, Redflex (Verra Mobility) will provide the County of Wellington with an on-premise photo enforcement case management solution, Incident and Infringement Processing System, (IIPS). This is a high performing and scalable photo enforcement case management and processing platform. It enables deployments and incidents to be imported, monitored, and processed end to end, removing the complexity of managing multiple systems and processes. The system architecture is designed to be scalable to support any number of users and transactions without impacting performance or availability.

IIPS can securely and automatically identify Image Storage Units (ISU) and import encrypted data from validated ASE sites. Deployment and incident data transferred to the ISUs and imported to the IIPS database and is validated to ensure no data loss occurs during the process. IIPS has import monitoring and error logging features to automatically identify any data transfer issues, along with functionality and tools to resolve issues.

Once validated ASE data has been imported to the IIPS database, Provincial Offences Officers (operators) review deployment test images and metadata and compare it to the Continuity of Evidence form to verify that the deployment conforms to the issuing City's business rules and requirements. Verified deployments are then moved to the next stage of the workflow; events/incident verification.

During the first incident verification stage, operators can view incident images, metadata, etc., allowing the operator to decide if an offence has occurred. If there is sufficient evidence to charge, an offence operator can approve the offence, enlarge images, choose the appropriate image code from a drop down menu, enter the vehicle license plate information, and if desired, enter comments, and save all actions. Operators can choose to reject an incident by selecting the appropriate Reject/Image Code.

During the first incident verification stage, operators can view incident images, metadata, etc., allowing the operator to decide if an offence has occurred. If there is sufficient evidence to charge, an offence operator can approve the offence, enlarge images, choose the appropriate image code from a drop down menu, enter the vehicle license plate information, and if desired, enter comments, and save all actions. Operators can choose to reject an incident by selecting the appropriate Reject/Image Code storage device, which then is removed from the City's workstation and reconnected to IIPS workstation where the response data is imported into the IIPS database. This initiates the second incident verification stage.

IIPS features a "Double Blind' system of offence processing. During the second incident verification stage the operator reviews the incident and enters the vehicle license plate number if they determine an offence has occurred. Part of the double blind process is entering the plate number again during the second stage to ensure it matches the plate number entered during the first stage. If these two entries match, vehicle registration data returned from MTO/OPA will populate the appropriate fields. If there is sufficient evidence to charge an offence the operator can select the appropriate Image Code from a drop down menu and approve the incident. Operators can optionally reject the incident in this stage if there is insufficient evidence by choosing the appropriate Reject/Image Code.

Approved incidents result in the generation of a sequential offence number, an Offence Notice and a Certificate of Offence accompanied by the electronic signature of the of the approving operator. Copies of the Certificate of Offence and Certificate of Control are filed with the Court electronically. All records, including the Offence Notice, Certificate of Offence, and the Certificate of Control List can be reproduced as PDFs (or XML for the Certificate of Control list) to be printed/re-printed.

IIPS will print all Offence Notices and the Certificate of Offence (or other records) directly from within the application. Notice queues can be created and managed to sort and filter notices to be printed by location, date, time, City/Municipality, etc. Notices can be printed individually or in batches. Operators can create print reports to validate all records have been printed successfully. Court Files are created for each printed notice containing all the offence details appearing on the

Offence Notice and Certificate of Offence and their correspondence forms. Files can be saved to a selectable directory and can be exported to a USB drive or other portable storage device. Alternately Court Files can be sent safely and secured electronically.

### AMPS/POA/APS

Given the move to AMPS, we have worked with our partners to establish the back-office integrations necessary to allow for the change from case management from POA to AMPS. Functionally the system will work the same up until the point of case management, wherein our integration will enable the ticketing to be issued as Administrative Penalties rather than provincial offences.

For clients interested in beginning to work with us under a POA structure up until the point where AMPS is integrated across the province, we can also accomplish this quite easily.

We will work with the County of Wellington to establish a system that works best for their needs, as we have done with many other government partners in Ontario.

# Part D - Technical Capabilities

While other vendors in the industry are factory-authorized dealers, Redflex (Verra Mobility) is in the unique position of being a vendor that manufactures our own equipment. By developing, manufacturing, and utilizing our own equipment we are well equipped to offer a full-service product solution, which includes, maintenance, training, warranty services, repair, and replacements on all products provided to Wellington.

Redflex (Verra Mobility) proposes our dual radar Radarcam® speed enforcement system to meet Ontario's speed enforcement requirements. The Radarcam® clearly and consistently photographs and records the license plates of vehicles that have violated the posted speed limit and the position of the vehicle, regardless of reflectivity, glare or materials used to obscure the license plate from clear view at various viewing angles. One of the features of the Redflex (Verra Mobility) Radarcam® that sets it apart from its competitors is its dual radar camera system, which allows us to validate vehicle speed and position constantly by utilizing two distinctly different radar sensors to perform secondary speed verification by an independent device. Our proprietary method compares the results of a highly accurate Across-The-Road (ATR) speed radar with a secondary speed and ranging radar to allow an unparalleled assessment of moving traffic. Evaluating a vehicle in this manner allows the proprietary Redflex (Verra Mobility) software to filter out any radar reflections or other anomalies and only generate incidents with verified, correct speeds.  With the data collected from the dual radar system, we can confidently associate the speed and lane of a detected vehicle with visual overlays and associated data bar details.

## Radarcam® System Description

The Redflex (Verra Mobility) Radarcam® solution is a proven and robust system for portable speed enforcement. The system brings together the core NK7 platform with all the supporting components and systems to support enforcement programs in any given context. The Radarcam® solution features:

- On-board automatic Secondary Speed Verification (Dual radar)
- Multi and Simultaneous Vehicle Detection
- Real time lane discrimination
- Low-intensity directional Illumination for minimum driver and road worker destructions
- Ultra-sensitive high dynamic range camera ensuring crisp, clear imaging in low light conditions
- Bidirectional detection
- Modular – the enclosure can be used in a mobile deployment as container, in-vehicle, on a tripod or on a pole
- Vehicle Classification with the ability to Enforce different rules/speed for cars/trucks (receding mode)
- Ability to enforce different rules/speed for different lanes

## System Deployment

To meet Ontario's needs, the Radarcam® can be deployed in a mobile deployable housing unit for rapid deployment which can operate without a utility connection. Once the system is setup it is always fully operational (24/7), including evenings, weekends, and holidays, and can monitor up to four (4) lanes, without the need for an operator to be present. In addition, the system can be deployed as on a semi-fixed or fixed pole housing.

As depicted below, the equipment has been designed with a modular concept in mind to aid in easy access and maintenance. The internal enclosure equipped with the NK7 is a rotational unit and can be easily swapped if needed.

Our camera unit housings are securely locked. The camera housing units are designed to preserve the overall effectiveness and integrity of the program's operation and to protect the Redflex (Verra Mobility) camera units from extreme weather conditions and vandalism, ensuring minimal "downtime" and easy maintenance.

Figure 3 - Radarcam® Deployment on a Pole

In addition, the Radarcam® system can be deployed on a pole as a fixed/semi-fixed system inside a permanent housing, as shown in Figure 3.

The Radarcam® enforcement solution is more accurate and effective than other radar- or lidar-based systems, especially in harsh weather conditions such as extreme heat and cold, fog, rain, snow, smog, high humidity, darkness, shadows, bright sun, or other typical Canadian weather conditions. Each Redflex (Verra Mobility) housing (examples shown in Figure 4), is professionally engineered and built to industrial standards. The systems allow municipalities to set the threshold at which violators will be charged.

**Figure 4. NK7 Camera Housing**

Our mobile and semi-fixed units are secure, effective, and resilient in all weather conditions.

In addition, our system has the following features:

- Weather and vandalism-resistant enclosures built to the standards of the National Electrical Manufacturers Association (NEMA)

- Water-resistant (salt and freshwater) and dustproof IP65 enclosure, with sealed access panel
- Built from toughened aluminum; zinc-dipped and powder-painted in a grey desired by the City
- Double-walled for extra protection and heat convection
- Camera units are easily reachable without the utilization of lifts (bucket trucks)
- Equipped with shrouds that allow rotation and pivoting on the pole for optimal alignment (fixed solution)
- Tightly locked into place with eight guide bolts that are securely covered by another shroud to prevent tampering. These can only be accessed from within the housing. The housing locks are fashioned from toughened steel with the single key engaging the three-way bolts (fixed solution)

The Radarcam® solution not only allows us to accurately detect, capture and log speeding incidents in both directions concurrently (towards and away) but allows us to capture additional information and data that are useful in a variety of ways. This additional data collection capability allows us to perform vehicle classification (truck, car, or motorcycle by calculating a precise length), which can be used for overlength vehicle detection as well as classification, traffic counts and reporting of vehicle types and speed utilizing the roadway.

### *NK7-LX*

As described above, the Radarcam® utilizes the NK7 platform and can be deployed in a variety of housings. The NK7-LX (shown in Figure 5) is a self-contained speed measurement and capture device manufactured by Redflex (Verra Mobility). It is designed primarily for mobile vehicle-mounted applications. It is an approved traffic enforcement device in countries all over the world including USA, Canada, various countries in Europe, the Middle East as well as Australia and New Zealand. Models of the NK7 have been utilized throughout mobile programs worldwide.

**Figure 5. NK7-LX**

Self-contained speed measurement and capture device.

The NK7 comprises the major components for traffic detection and speed determination as dual radar unit, cameras, processing unit (computer) and power supply.

To enable traffic enforcement capabilities the NK7-LX needs to be able to perform vehicle detection, vehicle capture as well as device control and analysis. Each of these functions are described below.

### *NK7-LX Dual Radar Vehicle Detection*

The NK7-LX utilizes two different radar devices to enable the system to cross-check measured data and be certain of the enforcement detection as well as enable an exceptionally high detection rate for speeding vehicles. The two different radars provide a proven basis for enforcement grade speed and positioning measurement:

- Redflex (Verra Mobility) Radar SR – Speed measurement radar
- Redflex (Verra Mobility) Radar TR – Speed measurement and tracking radar

Both radar devices feed the raw data back into the processing unit, in which Redflex (Verra Mobility)'s proprietary radar analysis determines the vehicle location and vehicle speed to an extremely high reliability rate.

The NK7-LX when configured in accordance with the setup procedure will provide a highly accurate speed measurement system meeting tolerance of +/- 2KPH. The dual radar technology provides the following qualities:

- Enforcement across up to four lanes

- Independent secondary measurement of speed, which can be used as evidence of an offence and to increase detection rates – making the NK7-LX the first and only mobile enforcement device with two independent measurement devices
- A radar beam specifically designed for speed enforcement, giving greater flexibility to the location of deployment
- Consistent detection of motorbikes, even at high speed
- Versatility for use in all weather, temperature, and light conditions
- Provides the ability to detect and capture multiple vehicles simultaneously
- Capable of providing vehicle specific speed, lane, or target vehicle identification
- Proven and approved technology with deployments all over the world showcasing a trusted technology for speed enforcement

The NK7-LX has distinct advantages over laser-based vehicle detections, specifically:

- Radar is unaffected by heavy rain, fog, snow or other severe weather conditions.
- Radar utilizes a doppler speed measurement technique for highly accurate speed measurements

Using the dual radar technology will allow deployments in locations where traditional radars fail and will ensure higher capture rate of detections and violations, more than 98% (excluding uncontrollable events).

### *NK7-LX Main Camera (12MP)*

The Redflex (Verra Mobility) system utilizes a highly refined imaging process which has undergone continuous improvements while in use throughout Redflex (Verra Mobility)'s product range. The imaging system is enabled to meet a range of various Ontario requirements, including:

- The date on which the photograph is taken
- The time and location at which the photograph is taken
- The direction in which the vehicle activating the camera device is travelling (that is, towards or away from the device)
- In the case of a device that photographs a vehicle that is driven over the speed limit at a particular point on a length of road:
  - The speed at which the vehicle is travelling; and
  - The speed limit that applies to the length of road at which the photograph is taken.
- Securing images and detection through digital signing and encryption techniques

The NK7-LX main camera will capture ultra-high-quality image for every detected incident.

### *Image Capture*

The NK7-LX utilizes an industrial-grade 12MP camera which has shown to be a significant step forward in image capture technology. The camera provides clear and sharp images in all light conditions (even extreme lighting scenarios). Furthermore, when used in conjunction with the LED flash illumination the camera provides clear images during both day and night operations.


**Figure 6. NK7-LX Image Capture.**
The 12-megapixel camera; providing clear and sharp images in a wide range of conditions.

### *Image Enhancement*

Redflex (Verra Mobility) has developed and optimized industry-leading enhancement algorithms to make the captured detail clearer for adjudication and processing purposes.

**Figure 7. NK7-LX Image Enhancement.**
A test image used to compare different enhancement techniques: enhancement techniques have been applied to the right side of the photo; left is the original.

### *NK7-LX Processing Unit*

The NK7-LX processing unit is a modern industrial computer which provides a solid base for any traffic enforcement application. The unit has been specifically designed for ITS applications and will provide processing capability for the mobile program as well as additional capacity for extra functionality if needed in the future.

Some of the system features/specifications include.

- Intel i5-6440EQ quad core computer
- System watchdog

### *LED Flash for Mobile Systems*

A low-power, high-intensity LED flash provides targeted illumination on the object, without the stray light often resulting with Xenon units. The LED flash comprises 192 LEDs and will be installed within the main enclosure for mobile systems.

The LED flash will be configured for color imaging (viable flash) or monochrome imaging (infra-red). This flash system compliments the imaging of the NK7-LX to supply sufficient light for an offence capture at night.

For this proposal, Redflex (Verra Mobility) will provide visible LED flash for capturing color imaging.

### *High Output Xenon Flash*

For semi-fixed systems, Redflex (Verra Mobility) has the option of using a higher output Xenon flash as well as the LED flash mentioned above. The Xenon flash is more suited to large roadways where a wider flash pattern is required.

In this proposal, the Xenon flash will be configured for visible light if required and depending on the site geometry at semi-fixed locations.

## System Operation Overview

The Radarcam® system can detect the speed of all vehicle types from motorcycles and cars to large trucks and buses. The system can monitor the speed of multiple vehicle types simultaneously, in multiple lanes as the vehicles move through the radar beam.

Radarcam® has two radar units installed in the NK7 housing, one Speed radar for calculating the speed of the vehicle and one Tracking radar to track the vehicle and provide secondary speed calculation. The Speed radar is a device that can report the radial speed of moving objects that reflects a signal back to the transmitting radar. The device is connected through a SMARTCAM application to enable speed enforcement.

Radarcam® processes the information from the radars to determine which vehicle is being monitored, the vehicle speed, the lane in which the vehicle is travelling and the vehicle direction for each vehicle crossing the radar beam. The system processes the information in a fraction of a second to determine if an offence has occurred.

Redflex (Verra Mobility) systems will also measure the length of each vehicle, vehicle length is calculated by the two radars from vehicle beam entry to vehicle beam exit and based on the vehicle speed and the time of the vehicle within the beam. The vehicle length will allow vehicle classification.

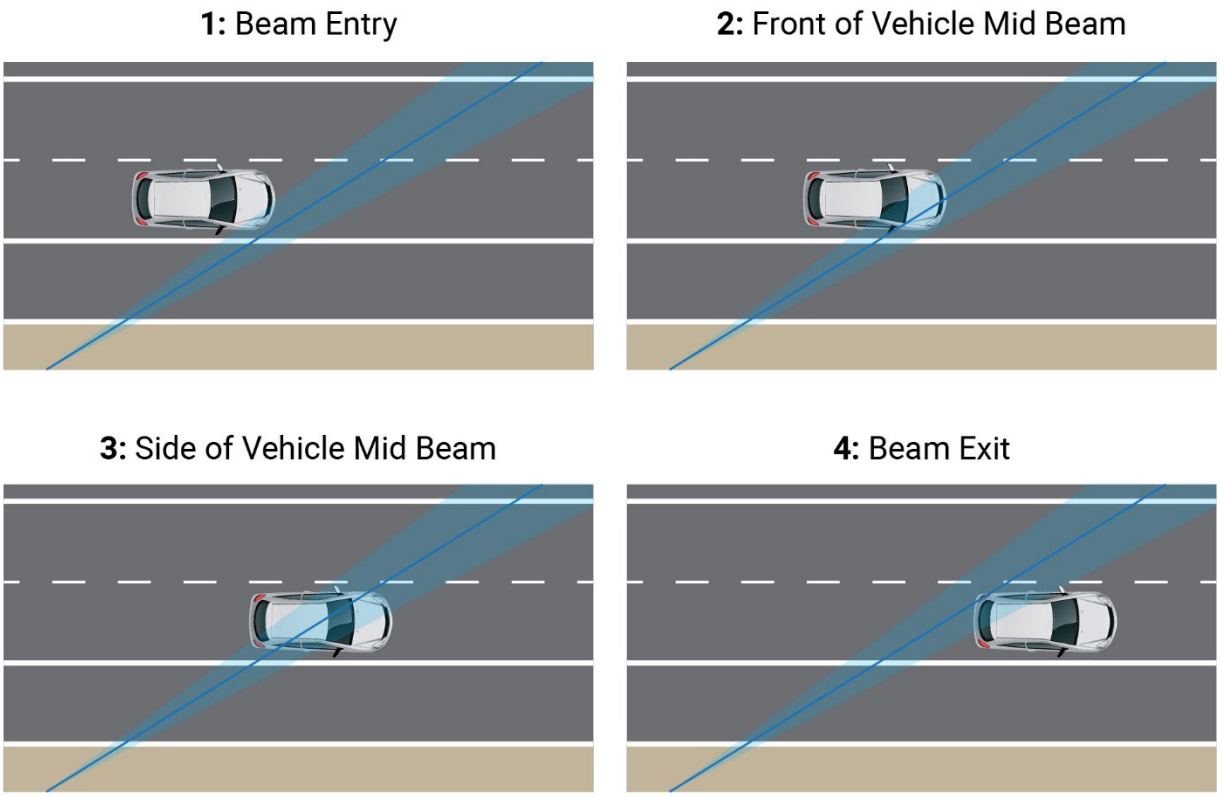


**Figure 8. Vehicle Detection Stages**

Our system measures the length of each vehicle, calculated by the two radars from vehicle beam entry to vehicle beam exit.

Figure 9 shows the radar vehicle tracking (blue dots) throughout the radar beam and the measured speed (red & orange dots).

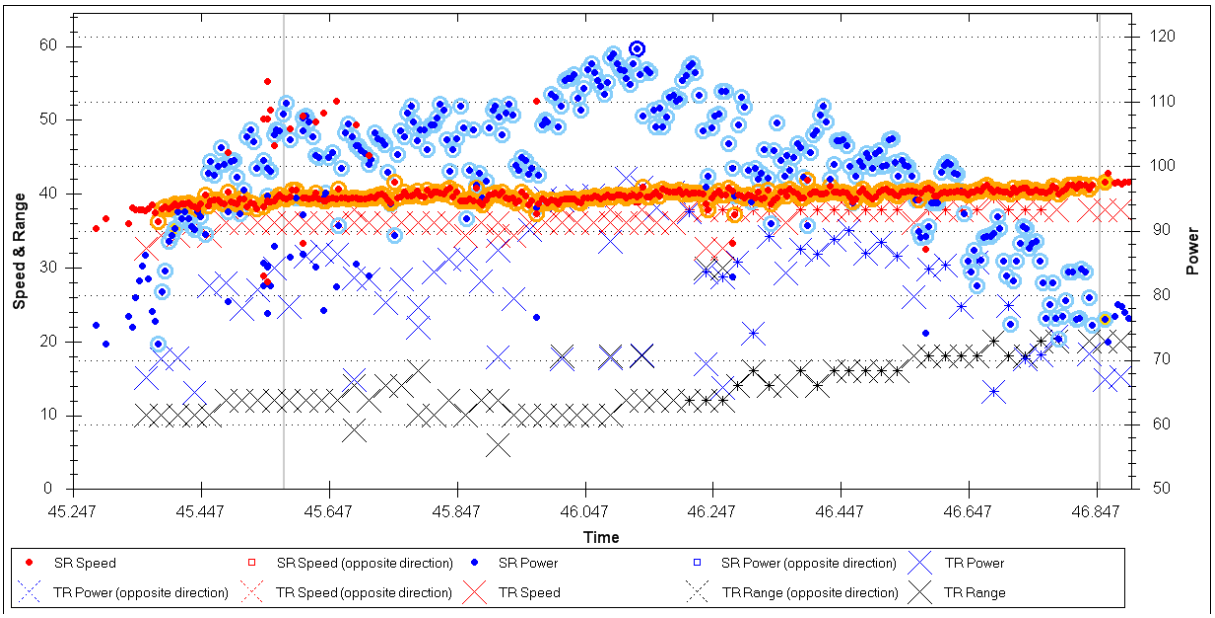


**Figure 9. Vehicle Detection throughout the Radar Beam**

Radar tracks vehicles (blue dots) throughout the radar beam and measured speed (red & orange dots).

## Image Capture

### *Rear Images*

For applications within Ontario, the Radarcam® system is configured to capture a single image showing the rear license plate of offending vehicles. Figure 10 illustrates rear detection image capture:

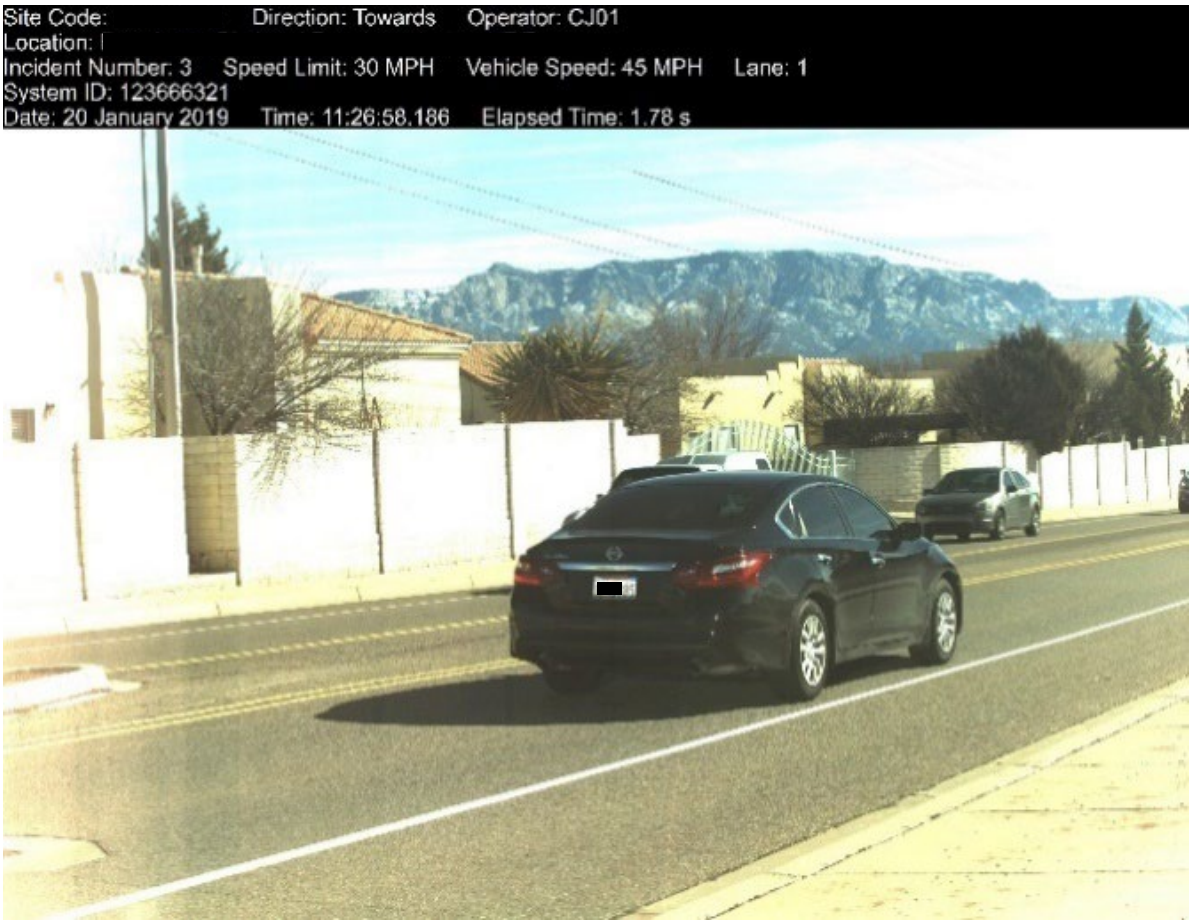


**Figure 10. Rear Image Example**

Radarcam® is configured to capture a single image showing the rear license plate of offending vehicles

### *Simultaneous Violations Detection*

Figure 11 illustrates simultaneous detection and violation capturing by the Redflex (Verra Mobility) monitoring system. Redflex (Verra Mobility) image sharing technology allows the camera system to “share” simultaneous image capture events while associating the relevant data in real time. This means multiple vehicles violating at the exact same time can be captured ensuring that events that occur within our 50 millisecond flash recharge rates can be successfully captured. This increases capture rates and contributes to the certainty of detection.

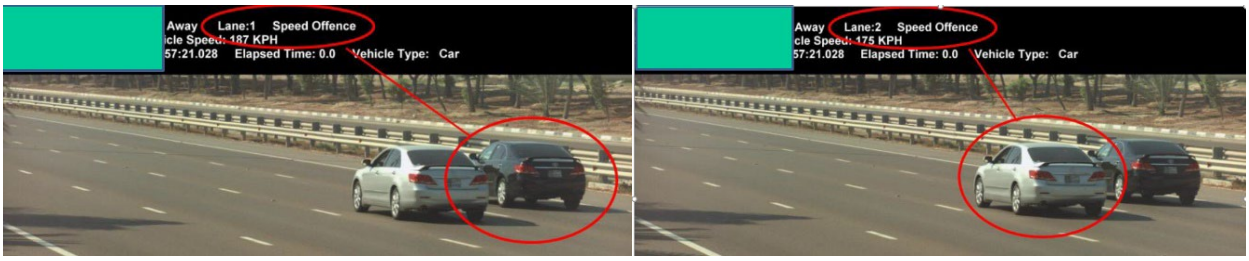


**Figure 11. Simultaneous Violations Detection**
The Radarcam system's ability to capture simultaneous incidents with "shared" images.

# Program Approach

## Solution Overview

### *Program Sign Up*

Should Wellington choose to proceed with the implementation of an ASE program, Redflex (Verra Mobility) will work closely with the county to discuss their requirements, objectives, goals, anticipated results, proposed locations, solution options, and the cost breakdown of their desired program.

### *Field Site Work*

**For Semi-Fixed Units:** After identification of enforcement zones by the County of Wellington, Redflex (Verra Mobility) will begin the design process. Redflex (Verra Mobility) will meet with Wellington and local hydro service providers for a site survey to determine the best placement of the enforcement equipment, to identify any potential challenges and hazards and connection points for power supply. Each system's installation will be carefully planned and executed to maximize the safety impact within community safety and school zones. Factors that will be considered when selecting equipment locations include evaluations of clearances, proximity to existing traffic cabinets, possible blockages, existing surroundings such as bus stops, driveways and alleyways, road conditions and preceding intersections that would affect typical driver behavior.

Redflex (Verra Mobility) will ensure that all roadside activities are compliant with Ontario Traffic Manual Book 7, and the Occupational Health and Safety Act and regulations for Construction Projects.

**For Mobile Units:** Once enforcement zones are identified, Redflex (Verra Mobility) will work with Wellington to identify suitable locations within the zone to place the portable enclosure.

Consideration is given to such things as proximity to local schools, bus stops, parking zones and existing utilities as well as distances from the edge of the roadway and free to place the unit, for example on the boulevard or section of sidewalk.

A comprehensive survey of the location is conducted through onsite visits and using online tools such as Google Earth/Street view to identify the most suitable location.

### *Execute Traffic Control Plan*

**For Semi-Fixed Units:** Our Program Manager, Joel Smith will work with our subcontractors and municipal traffic departments to ensure that all planned works comply with Ontario Traffic Manual Book 7, and the Occupational Health and Safety Act and regulations. Our subcontractors have hands-on experience with the elements of creating approved traffic management control plans and effectively managing traffic during construction and will minimize any impact to traffic flow.

**For Mobile Units:** The mobile ASE system is designed to minimize setup time and therefore the impact on the roadway and traffic. Typically, very short duration traffic control measures are put into place that don't require the long period closure of lanes. All work is conducted on the boulevard with no digging or drilling required.

### *Permits*

**For Semi-Fixed Units:** Our Program Manager, Joel Smith will liaise with the municipality to ensure design plans are reviewed and approved prior to Redflex (Verra Mobility) submitting the permit request. Our experience has been that the permitting process and type of permits required varies between municipalities. Joel will manage and monitor the engagement of our experienced subcontractors and local hydro service providers to ensure that municipal consent, construction, and road occupancy permits are in place prior to scheduled work commencing. Both Redflex (Verra Mobility) and our subcontractors hold insurance policies that are required for this type of work. We anticipate obtaining the required permits to take two weeks.

**For Mobile Units:** Because there is no digging, drilling, underpinning or long duration road closures required to install the mobile units, our experience within Ontario has been that only a road occupancy permit is required. Municipalities are often able to grant a blanket permit for the installation and operation of mobile units at several locations.

Once ASE locations are identified, Redflex (Verra Mobility) will submit the road occupancy permit applications detailing each location and the work being performed there. Our experience has been that obtaining a road occupancy permits takes less than one week.

### *Installation*

**For Semi-Fixed Units:** Redflex (Verra Mobility) will be responsible for the activities and subcontractor oversight of all construction and installation activities. Our proven construction process is as follows:

- **Permitting and locates:** Obtain permit approval for the ASE design packets from the City/Municipality. Locates will be established upon permitting and prior to construction.
- **Coordination meeting:** Prior to breaking ground, we will walk through each approach with our subcontractors to identify placement of equipment.
- **Breaking ground:** Using our subcontractors, we will remove the needed sections of sidewalk and parkway to allow directional boring and forming of the foundations required to support the enforcement infrastructure.
- **Equipment & power installation:** Equipment is placed on the newly poured foundations. Municipality personnel/engineers, Redflex (Verra Mobility) our subcontractors and the local Hydro service provider will meet on site to hook up the power and close off applicable permits.
- **Restoration:** The site is placed back into its original state, sidewalks and parkways are restored as needed.
- **Installation and configuration of enforcement equipment:** Redflex (Verra Mobility) technicians install, align, and configure the cameras and computers. Initial system configuration will be setup and go through a 3-day SAT to meet all the municipality's requirements; however, system configuration can be reassessed and modified throughout the life of the program. Tests include verifying speed accuracy, speed limit settings and system time.
- Documentation package created including test results, sample images and drawings.

**For Mobile Units:** For mobile ASE units, Redflex (Verra Mobility) will be responsible for all installation activities. As construction isn't typically needed, we do not need to utilize subcontractors. The following installation process occurs after a site has been selected:

- **Permitting:** Obtain Road access permit from the municipality to install the ASE system on the boulevard of municipal / regional roadways.
- **System preparation:** The mobile ASE system is pre-configured at Redflex (Verra Mobility)'s facility in Ontario with some location specific information
- **Equipment installation:** The mobile ASE system is transported to the location by Redflex (Verra Mobility) and assembled on the boulevard.

- **Configuration and testing:** The mobile system configuration is completed on site and functional checks are performed to confirm correct and accurate operation as installed. 3-day SAT to meet all the municipality's requirements; however, system configuration can be reassessed and modified throughout the life of the program. Tests include verifying speed accuracy, speed limit settings and system time.
- Documentation package created including test results, sample images and drawings.

# Part E – References

### *City of Toronto, Ontario | Automated Speed Enforcement*

| City of Brampton | |
|---|---|
| Name of Organization | City of Toronto, Ontario, Canada |
| Address of Organization | 100 Queen Street West<br>Toronto, ON M5H 2N2 |
| Contact Person | Trevor Kanhai – Project Manager – Automated Speed Enforcement |
| Email Address | Trevor.kanhai@toronto.ca |
| Telephone Number | 416.392-6495 |

### *City of Pickering| References Automated Speed Enforcement*

| Regional Municipality of Durham | |
|---|---|
| Name of Organization | City of Pickering |
| Address of Organization | One The Esplanade<br>Pickering, ON L1V 6K7 |
| Contact Person | Nathan Emery – Coordinator, Traffic Operations Serives |
| Email Address | nemery@pickering.ca |
| Telephone Number | 905-420-4660 |

*City of Ottawa, Ontario | Automated Speed Enforcement*

| City of Ottawa | |
|---|---|
| Name of Organization | City of Ottawa, Ontario, Canada |
| Address of Organization | 110 Laurier Ave W<br>Ottawa K1P 1J1 |
| Contact Person | Krista Tanaka – Manager, Traffic Safety and Movility |
| Email Address | Krista.Tanaka@ottawa.ca |
| Telephone Number | 613.580.2424 ext. 23597 |

We are happy to provide more references should you like to speed to other cities.

# Part F – Appendix

**Appendix "D" - Price Form - Table 1**

**RFP 9148-19-0048**

**PROVISION OF AUTOMATED SPEED ENFORCEMENT**

PRICE TO BE COMPLETED PER UNIT OF MEASURE SPECIFIED AND MUST INCLUDE SUPPLY, DELIVERY, LABOUR, MATERIALS AND ALL OTHER APPLICABLE CHARGES EXCLUDING HST. IN THE EVENT OF MATHEMATICAL ERRORS FOUND IN THE PRICING PAGES, THE UNIT PRICES QUOTED SHALL PREVAIL. EXTENSIONS AND TOTALS WILL BE CORRECTED ACCORDINGLY AND ADJUSTMENTS RESULTING FROM THE CORRECTION WILL BE APPLIED TO THE TOTAL EVALUATED PRICE QUOTED.

Prices that are intended to be zero cost/no charge to the City are to be submitted in the space provided in the price schedule as "0.00". BIDDERS THAT DO NOT FULLY COMPLETE THE PRICE FORM (SUCH AS LEAVING THE LINES BLANK), OR HAVE UNCLEAR ANSWERS (SUCH AS "N/A", "-", or "TBD", DASHES, OR HYPHENS) WILL BE DECLARED NON-COMPLIDIANT.

| Item # | Description | Unit of Measure | Estimated Tiered Quantities & Pricing for Years 1 to 5. Quantities are provided in a tiered format in the top row of each line item (Row 6, 8, 10, 12, 14 of this excel sheet). Proponents MUST provide quotations for ALL tiers using the rows directly under the tiered quantities (Rows 7,9,11,13,15 of this excel sheet) in order to be considered for this RFP. For the purpose of evaluation, quantities and quotations in column E (the yellow and orange boxes) of this file will be used to determine the Extended Price and the subsequent Total Evaluated Bid Price. Proponents that fail to provide pricing in all tiers will be deemed non-compliant. | | | | | | Extended Price ($) For Five (5) Years from Date of Award (Yellow Box X Orange Box) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Tier 1 | Tier 2 | Tier 3 | Tier 4 | | | |
| 1 | Semi - Fixed Site Installation Setup Cost (Number of Semi-Fixed Sites Required to be built and approve through the Site Acceptance Test) Quantity Calculated using the formula: Sum of Semi-Fixed Sites Required in Year 1 as per Section 3.6. | Per Site | 88 | Up to 20 More than Tier 1 | 21 to 40 more than Tier 1 | 41+ more than Tier 1 | | | |
| | | | $ 31,385.09 | $ 30,757.38 | $ 30,142.24 | $ 29,539.39 | | | $ 2,761,887.56 |
| 2 | Semi - Fixed Site Initial Camera Setup Occurs ONLY once Per Camera (The First Time a Camera is Setup). Quantity Calculated using the formula: Sum of Semi-Fixed Camera's Required in Year 1 as per Section 3.6. | Per Camera | 32 | Up to 20 More than Tier 1 | 21 to 40 more than Tier 1 | 41+ more than Tier 1 | | | |
| | | | $ 253.29 | $ 248.22 | $ 243.26 | $ 238.39 | | | $ 8,105.24 |
| 3 | Semi - Fixed Site Redeployment Assumption that each ASE System will redeploy to a new location once per month. Quantity Calculated using the formula: (Line 2 Quantity x 12 times per Year) | Per Redeployment | 384 | Up to 20 More than Tier 1 | 21 to 40 more than Tier 1 | 41+ more than Tier 1 | | | |
| | | | $ 75.00 | $ 73.50 | $ 72.03 | $ 70.59 | | | $ 28,800.00 |
| 4 | Mobile Site - Initial Camera Setup Occurs ONLY once Per Camera (The First Time a Camera is Setup). Quantity Calculated using the formula: Sum of Mobile Camera's Required in Year 1 as per Section 3.6. | Per Camera | 145 | Up to 20 More than Tier 1 | 21 to 40 more than Tier 1 | 41+ more than Tier 1 | | | |
| | | | $ 253.29 | $ 248.22 | $ 243.26 | $ 238.39 | | | $ 36,726.87 |
| 6 | Mobile Site - Redeployment Assumption that each ASE System will redeploy to a new location once per month. Quantity Calculated using the formula: (Line 4 Quantity x 12 times per Year) | Per Redeployment | 1740 | Up to 20 More than Tier 1 | 21 to 40 more than Tier 1 | 41+ more than Tier 1 | | | |
| | | | $ 75.00 | $ 73.50 | $ 72.03 | $ 70.59 | | | $ 130,500.00 |

| Item # | Description | Unit of Measure | Estimated Tiered Quantities & Pricing for Years 1 to 10. Estimated Quantities were taken from "Table 1 - Estimated ASE Site Quantities - Addendum 3" and split by year in the manner described in the " Estimated Quantity" tab of this file. Proponents should be aware that these quantities have been provided as estimates ONLY and are for the sole purpose of evaluation only. Proponents are expected to submit quotations using the tiered format found below. This tiered format represents dynamic pricing dependant on the year of the contract that the Initial Camera Setup occurs. Tiers identified in Rows "E"thourgh "I" in Row 24, labelled as "Year 1 through Year 5" of this excel file, are for ASE Cameras with an Initial Camera Setup that occurs in Year 1 to Year 5 of the contract. ASE Cameras that are set up in any given tier, will maintain the pricing of that specific tier until the end of the first 5-year contract period. It is expected that proponents submit pricing for each tier such that all capital costs for each ASE Camera are amortized by the end of Year 5, regardless of which year the Initial Camera Setup occurred. In the event that the City exercises its discretion to renew the contract for additional five (5) year period, the Daily Rate Per Camera in Year 6-10, for all existing ASE Cameras (ASE Cameras with an Initial Camera Setup in Year 1 to year 5), shall be at the same rate. Proponents shall propose this Daily Rate Per Camera in cell J26 of this excel file. This City expects that this rate will be significantly reduced from the rates proposed in Year 1 to Year 5 as the capital costs should be amortized by the end of Year 5. Proponents must also provide the Daily Rate Per Camera for each of the years in Year 6 to Year 10 in Row 29 below. The Daily Rates Per Camera proposed in this row are ONLY for the for ASE Cameras that have an Initial Camera Setup in Year 6 to Year 10 of the contract. As mentioned previously, for ASE Cameras that have an Initial Camera setup in year 1 to 5 of the contract, the Daily Rate Per Camera in Year 6-10, should be provided in Cell J26 of this excel file. | | | | | | | | Extended Price ($) For Five (5) Years from Date of Award (Yellow Box X Orange Box) |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Time Frames | | | | | | | |
| | | | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6-10 (For ASE Cameras with an Initial Camera Setup in Year 1 to 5) | | |
| | | | #REF! | #REF! | #REF! | #REF! | #REF! | | | |
| 6 | Daily Rate Per Camera (Both Mobile & Semi-Fixed Sites) Quantity Calculated using the formula provided in "Estimated Quantity" Tab | Per Day Per Camera | $ 86.37 | $ 94.61 | $ 105.59 | $ 131.22 | $ 259.34 | $ 75.80 | | #REF! |
| | | | Year 6 | Year 7 | Year 8 | Year 9 | Year 10 | | | |
| | | | $ 86.37 | $ 94.61 | $ 105.59 | $ 131.22 | $ 259.34 | | | |

Copy of the pricing agreement from the Toronto Consortium Contract

# CW2023-059 - Automated Speed Enforcement Programme

Opening Date: July 24, 2023 4:00 PM

Closing Date: August 23, 2023 2:00 PM

---

### Vendor Details

| | |
|---|---|
| Company Name: | REDFLEX TRAFFIC SYSTEMS (CANADA) LIMITED |
| Does your company conduct business under any other name? If yes, please state: | RedFlex Verra Mobility |
| Address: | 1150 N Alma School Rd<br>Mesa, AZ 85201-3000 |
| Contact: | Matthew Lumsden |
| Email: | matthewlumsden25@gmail.com |
| Phone: | 647-215-5373 |
| HST#: | 85040 6067 RT0001 |

### Submission Details

| | |
|---|---|
| Created On: | Tuesday August 22, 2023 20:06:33 |
| Submitted On: | Wednesday August 23, 2023 13:39:23 |
| Submitted By: | Matthew Lumsden |
| Email: | matthew.lumsden@verramobility.com |
| Transaction #: | bacdc8d1-7522-4d6e-8487-1dcaeff17258 |
| Submitter's IP Address: | 192.151.178.180 |

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**Documents**

It is your responsibility to make sure the uploaded file(s) is/are not defective or corrupted and are able to be opened and viewed by the Owner. If the attached file(s) cannot be opened or viewed, your Bid Document may be rejected.

We having read, understood and accepted the Bid Documents for the above-named Project, including Addenda, and having visited the Place of the Work, hereby offer to perform the Work in accordance with the Bid Documents.

We declare that:

a) we agree to attain Substantial Performance of the Workafter receiving notice of contract award, and acknowledge that the construction duration may be considered by the Owner in evaluating this Bid and determining contract award. The date of contract award shall be the date the letter of award is sent to the Bidder.

b) we have arrived at this Bid without collusion with any competitor,

c) this Bid is open to acceptance by the Owner for a period of sixty (60) days
from the date of Bid closing, and

d) all Bid Form Supplements called for by the Bid Documents form an integral part of this Bid.

e) no member of the Owner's Council and no other officer or employee of the Owner is, will be, or has become interested, directly or indirectly, as a contracting party, partner, stock holder, surety or otherwise in, or in the performance of the Contract, or in the supply, work, or business to which it relates, or in any portion of the profits thereof, or any of the money to be derived therefrom.

f) We agree, to perform the Work in compliance with the Contract Documents.

- CW2023-059 Automated Speed Enforcement Programme Submission - County of Wellington RFI Response - Redflex Verra.docx - Wednesday August 23, 2023 13:37:36

## Addenda, Terms and Conditions

1. We, having read, understood and accepted the Bid Documents for the Project, including the Addendum's listed below and having visited the Place of the Work, hereby offer to perform the Work in accordance with the Bid Documents.
2. I/We, the undersigned, declare that:
3. a) We agree to attain Substantial Performance of the Work as directed by the Owner after receiving notice of contract award, and acknowledge that the construction duration may be considered by the Owner in evaluating this Bid and determining contract award. The date of contract award shall be the date the letter of award is sent to the Bidder.
4. b) We have arrived at this Bid without collusion with any competitor.
5. c) This Bid is open to acceptance by the Owner for a period of sixty (60) days from the date of Bid closing.
6. d) All Bid Form Supplements called for by the Bid Documents form an integral part of this Bid.
   e) No member of the Owner's Council and no other officer or employee of the Owner is, will be, or has become interested, directly or indirectly, as a contracting party, partner, stock holder, surety or otherwise in, or in the performance of the Contract, or in the supply, work, or business to which it relates, or in any portion of the profits thereof, or any of the money to be derived there from.

☑

I/WE agree to be bound by the above declarations and have authority to bind the Corporation and submit this Bid on behalf of the Proponent.

- Matthew Lumsden, Government Sales Executive , Redflex Traffic Systems (Canada) Limited

The proponent shall declare any potential conflict of interest that could arise from submitting a proposal on this RFP. Do you have a potential conflict of interest? ○ **Yes** ◉ **No**

The Proponent acknowledges and agrees that the addendum/addenda below form part of the RFP Document

Please check the box in the column "**I have reviewed this addendum"** below to acknowledge each of the addenda.

| File Name | I have reviewed the below addendum and attachments (if applicable) | Pages |
|---|---|---|
| **CW2023-059 Addendum 1**<br>Wed August 9 2023 03:49 PM | ☑ | 4 |

# Wellington County, Ontario

## RFI - Automated Speed Enforcement Program

**Due Date: 8/23/2023**


**Contact: Candice Holder-Mattadeen, Business Development Manager**

candice.holder-mattadeen@jenoptik.com

**D** 561.459.3330 | **W** 416-302-6207

JENOPTIK | Smart Mobility Solutions
Traffipax LLC
3615 Laird Rd, Units 2-3 Mississauga,
ON, CA · L5L 5Z8
website: www.jenoptik.com

Bid Manager: julio.figueroa@jenoptik.com
Bid Writer: daisy.arus@jenoptik.com

August 23, 2023

Mr. Finbarr O'Carroll
President of the Americas
Smart Mobility Solutions
3615 Laird Rd, Units 2-3 Mississauga,
ON, CA · L5L 5Z8
Phone # (561) 459-3330
finbarr.ocarroll@jenoptik.com

County of Wellington
74 Woolwich St. Guelph
Ontario N1H 3T9

RE: Response to RFI Automated Speed Enforcement Programme

Dear Evaluation Committee Members:

Jenoptik Smart Mobility Solutions Division presents our RFI response for the Automated Speed Enforcement Programme CW2023-059 for the County of Wellington, Ontario, Canada.

We at Jenoptik stand ready to deploy our fully integrated camera system solution for Wellington County**.** Our innovative technologies will reduce traffic violations and enhance community safety for all communities that adopt our systems. We believe we have the most advanced and proven technology globally, with over *4,000* Jenoptik systems installed across North America and more than 30,000 systems deployed globally. In fact, our technology is even used for off world exploration as featured on the Mars Rover launched by NASA.

We will work closely with County staff and safety enforcement to provide a complete turnkey solution tailored to the specific needs of the County. Our camera systems for Automated Speed Enforcement with our web-based Back Office Facility (BOF) and system integration will prove invaluable for the County and its safety enforcement. Our products and services will offer the most advanced analytical tools and applications that will enable safety enforcement to be more proactive not only against speed violations, but for other types of crimes as well. Our systems will enhance measures that may help prevent criminal activities such as:

| | | |
|---|---|---|
| Motor Vehicle Theft | Robbery | Burglaries |
| Amber Alerts | Trafficking | Homicide |

We design and manufacture all of our cameras and back office software and can provide 100% in-house support for any potential technical concerns. Our Automated Speed Enforcement camera system can monitor several lanes of traffic and operate day and night in all environmental and weather conditions. Unlike any other competitor systems, our technology also uses video analytics and artificial intelligence (AI). We will conduct all necessary site assessments, customize traffic enforcement camera systems, install new or existing poles, maintain, monitor performance, and provide exceptional customer support throughout the contract term.

Jenoptik's authorized representative will be our Area Field Sales Manager Candice Holder-Mattadeen. She will answer any questions regarding this proposal and will be available throughout the life of this project via email at Candice.Holder-Mattadeen@jenoptik.com or her direct phone number, +14 163 026207. Mrs. Holden-Mattadeen has extensive knowledge of traffic enforcement and community safety in Canada. She is an essential team member and can provide excellent support and expertise on our products and services for Wellington County, Ontario. With Jenoptik Smart Mobility Solutions Wellington County will always be in good hands.

Respectfully,
Mr. Finbarr O'Carroll President Americas
Jenoptik, Smart Mobility Solutions

# Our Background

Jenoptik's Automated Speed Enforcement Artificial Intelligence (AI) engine ensures best-in-class SPEED read and Traffic Enforcement available anywhere. Our camera systems are top-rated in adverse weather conditions, nighttime, and high-speed traffic. The ARLE cameras are robust, compact, durable, and reliable. Our Cameras can be installed on traffic lights, street lighting, and solar-powered trailers and integrated into patrol cars. The complete solution is designed, developed, and owned by Jenoptik and ensures the County of Wellington, Canada, receives the highest performance, support, and responsiveness.


## Green Future

As a manufacturing technology company, Jenoptik produces minimal emissions and focuses on our green initiative through our Sustainability Environmental Management program. We want to reduce energy consumption and the ensuing greenhouse gas emissions as much as we can by using commodities and materials carefully and safely. We want to avoid hazardous waste, and in many of our development processes, we have paid attention to environmental aspects and the economical use of resources. Through our regulated recycling and disposal programs, we minimize the impact on people and the environment by recycling, resource conservation (raw materials, water, etc.), energy and CO2 savings, and bio-diversity. Jenoptik is conscious of protecting our environment, and it is a key corporate priority and responsibility to grow sustainably in harmony with the environment and society.

Our Environmental Health and Safety team manages and controls environmental, health, and safety matters. We continuously conduct reviews and regular internal audits and obtain external up-to-date certifications to ensure our systems meet standards. In addition, depending on their environmental relevance, selected Jenoptik companies are certified compliant with the environmental and quality management standards.

## Global Market Presence

Jenoptik has a robust global presence and installation base supported by reliable partner networks with innovation as our driving force. Our most recent awarded contract in the USA is with the National Cooperative Purchasing Alliance (NCPA) https://www.ncpa.us/Vendors/Jenoptik for Red Light, Speed, and Automated License Plate Recognition (SPEED) solutions, a valuable and credible recognition. We are also very proud to also have a significant presence in Canada. We have projects in:

- **Province of Ontario RLC project:** Jenoptik has designed, developed, delivered and maintains a full “Turn Key” enforcement solution with over 600+ Red Light Cameras (equipped with Speed Enforcement capability) as part of the Province Wide Vision Zero program that aims to eliminate fatalities and serious injuries. Speed Enforcement cameras also being utilized for Speed studies by various Regions throughout Ontario.

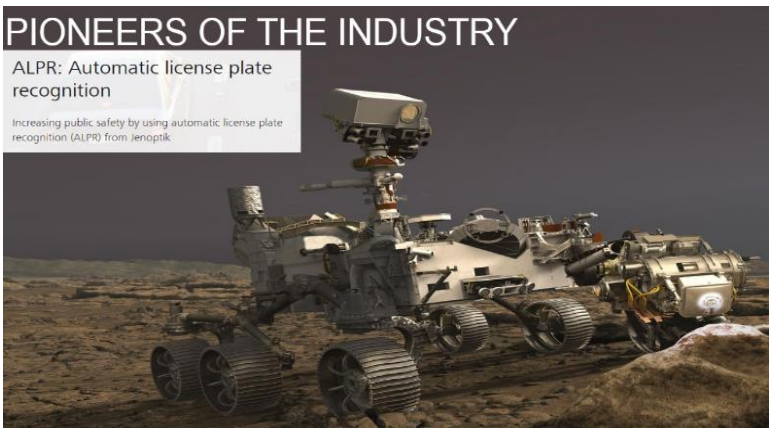
- **City of Edmonton:** Jenoptik has designed, developed, delivered, installed and maintains 35+ mobile and stationary Traffic Enforcement systems for over 5+ years as part of the Province Wide Vision Zero program that aims to eliminate fatalities and serious injuries.

- **Province of Quebec:** Jenoptik has designed, developed, delivered, installed and maintained over 50+ mobile and stationary Traffic Enforcement systems over 10+ years as part of the Province Vision Zero program that aims to eliminate fatalities and serious injuries.

It is worth noting that we have also won a contract with the City of New York as mentioned below:

- **City of New York:** Jenoptik has designed, developed and delivered over 1440 speed enforcement cameras solution as part of the city Vision Zero program that aims to eliminate fatalities and serious injuries.

Jenoptik Smart Mobility Solutions Division’s portfolio covers the full range of red light and speed enforcement systems and state of the art software for incident processing. Our portfolio also comprises turnkey solutions for traffic safety programs for public and private operators as well as the service provision of parts of, and/or complete traffic safety programs in the framework of public and private partnerships.

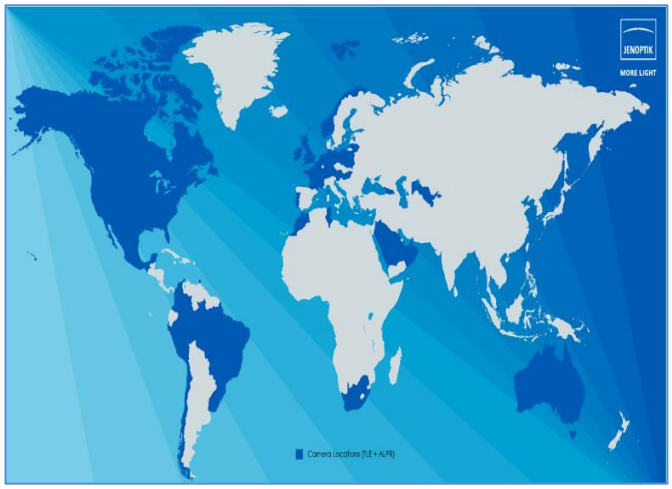



Being focused on the traffic safety market, Jenoptik Smart Mobility Solutions Division designs, develops and manufactures all critical system components in-house (detectors, cameras with processing units, flash units and enclosures), all of which are robust industrial grade components able to master the harsh on street requirements in traffic monitoring. Our products have a long life cycle; many of our systems are in operation for more than ten (10) years.

Thus, the extraordinary performance, quality and reliability as well as the high standards in data security of our products is guarantor for minimizing the total costs of ownership over their complete life cycle.

Top quality workmanship and our unmatched reliability have characterized our brand name just as much as our claim to practical operation. Our efficient development department for camera and sensor technology and incident processing has guaranteed our unique vertical integration, short cycles and a decisive cutting edge for many years.

We are also a Strategic Partner | Nlets of the National Law Enforcement Telecommunication System (Nlets); therefore, our car ownership records for in state and out-of-state drivers are retrieved using a recognized and secure resource. Nlets is a network communication center that connects over 55,000 law enforcement and judicial agencies in North America (all 50 states & territories, Mexico, and Canada). We are proud of our partnership status and continuing the mission of making our communities and roadways safer.




In Jenoptik, you will have an experienced global company with significant reach in many other countries that trust us with the safety of their citizens. Beside Canada and the USA we also have accounts in Portugal, the United Kingdom, Germany, Australia, and various locations in Latin America, among many others.

# The Best Automated Speed Enforcement Programme

Jenoptik will provide the most innovative generational integrated camera system for this project, combining decades of experience into a single, HD compact integrated unit. Our camera system monitors its performance and adjusts to different ambient lighting conditions.

Our systems deploy and operate under all circumstances, whether minor or complex, with extreme environments and challenging infrastructural conditions 24/7/365. Our products and services will always incorporate secure data transfer designed to comply with Federal, Provincial, and Local laws. We provide training for all enforcement officials and ongoing maintenance for all our systems, including calibration and technical support. Should there be vandalism or tampering, we will deploy our technicians to repair and assist the County where necessary.

The latest integrated camera combines decades of traffic enforcement experience into a single, highly capable, compact integrated unit. Our camera system is simple to install, configure and operate. Installation only requires a standard pole and power (110 VAC). The camera monitors its performance and adjusts to different ambient lighting conditions.

All integration and communications are wireless, using the cellphone network for communications to the central server. (Wired data connections via ADSL etc., are also possible, subject to County of Wellington requirements).

## Camera Equipment

The Jenoptik camera consists of high-resolution image sensors capable of capturing high-quality images. It has a variable focal length lens suitable to cover the range from one to four lanes plus any offset lane like a hard shoulder, bus, or turn lane without any restrictions to image quality and perceptibility of license plate characters on departing traffic.

Jenoptik cameras are optimized to work day and night, including unlit roads. The camera can switch to 'night' mode, optimizing capture for low light conditions and providing monochrome images for fast-moving vehicles.

Our solution provides advanced analytical tools that will enable the County to be proactive in keeping residents as safe as possible. No competitor can provide as complete a public safety solution for the County of Wellington as Jenoptik.

Jenoptik cameras can operate in two trigger modes, either auto-detecting vehicles as they pass through the field of view or by linking to an external trigger for applications where only specific vehicles are required to be identified.

In automatic mode, the camera interrogates every frame image captured by the camera and tracks vehicle number plates through the field of view, covering multiple lanes of traffic and flows in the same or opposite directions (depending upon site geometry and plate format). This detection provides an extremely robust way of locating number plates. For these reasons, our camera is one of the few camera solutions in the world certified for capturing vehicles traveling up to 299 KM in all weather and lighting conditions.

The latest generation of our integrated camera can monitor up to three lanes of high-speed traffic in the most challenging of conditions, by day or night. It is capable of bi-directional operation, boasting a greater resolution and more powerful processors. In addition, since Infrared is not visible to the human eye, the narrow band pass infrared active illumination with matched optical filters, dynamic camera control, and short shutter exposure time provides a high degree of immunity to the effects of sunlight and vehicle light emission. Our cameras can also be installed on traffic lights, street lighting, and solar-powered trailers and integrated into patrol cars.

Our cameras are configured through an easy-to-use GUI, which leads an installer through the key stages needed to operate a camera. This intuitive interface guides new and experienced users through the optimum setup configuration for the camera.

In addition, there are no third-party software or hardware elements. Our solution is designed 100% in-house ensuring the County will receive the highest customer support, performance, and responsiveness.

## Back Office Facility (BOF)

The Processing software is currently being used in Ontario by the City of Toronto for over a decade to processing Red Light & Speed violations. Our Back Office Facility is the product of 20 years of experience in aiding 75+ national and local safety enforcement agencies across the globe.

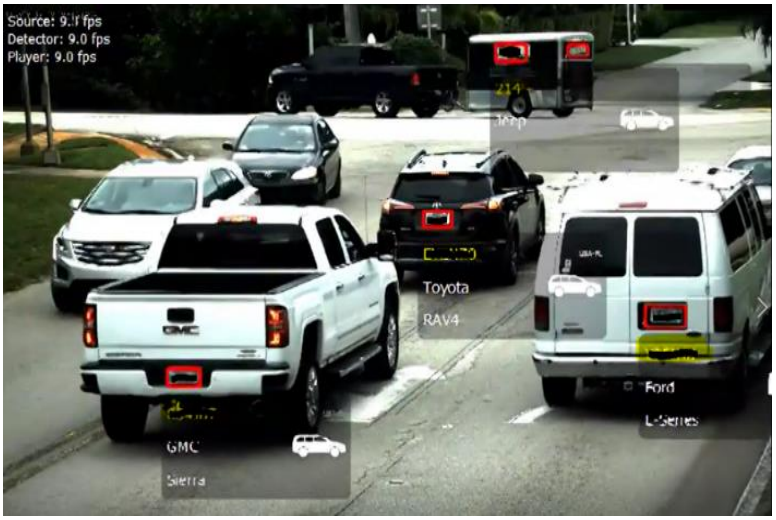
### Data Processing

Jenoptik Back Office Facility (BOF) solution combines software applications and services to provide a turnkey solution for evaluating Traffic infringements. It is the new concept for semi-automated processing of enforcement data received from measurement systems operating on the roadside. Utilizing SQL databases and file shares, the modern, user-friendly software is unique on the market and will significantly increase operational efficiency, optimizing resources while reducing processing times.

### Workflow

The heart of our BOF is the Workflow Service, which performs the actual process automation based on a pre-defined Workflow. This service calls other services to perform specific tasks and coordinate the infringement processing through the configured workflow activities. Some activities require human interaction, while others can be triggered regularly using a scheduler or administrator. All processing steps are tracked automatically and recorded in the system's database creating a detailed protocol tracking and audit trail for each infringement. Integration into third-party systems is achieved by using offline data exchange methodologies. BOF can address changes or additions to the desired business process by updating the central Workflow definition and introducing new services or applications providing the desired functionality. The current BOF workflow for processing red light incidents in the City of Toronto has been customized to meet the sophisticated processing legal requirements.

Jenoptik can comply with the specific requirements to identify each vehicle's unique characteristics. We see the bigger picture with additional vehicle information to detect them individually. Jenoptik's camera systems and our BOF can generate high accuracy on the reads of plates, decals, bumper stickers, make, model, classification, color recognition for applications in civil security, traffic intelligence, lane usage, and much more. We can customize each program to assist the County with its safety and security needs.




Our proposed solution provides simple tools for the County traffic enforcement officials to identify non-compliant registered plate holders. The images here are visual representations of how Jenoptik's Automated Speed Enforcement cameras can enforce simultaneously in both directions.

Jenoptik combines decades of speed enforcement experience into a single, highly capable, and compact integrated unit. Two high-resolution cameras combined with integral Infra-Red (IR) illuminators provide speed and scene overview images, including day/night mode allowing capture on a completely dark road. Images can be transferred via a wide range of communications media or stored on local high-capacity memory if communication should fail for a certain period. A GPS clock, compass, accelerometer, and two light sensors allow the camera to adapt dynamically to a changing operational environment, supporting even the most challenging applications.

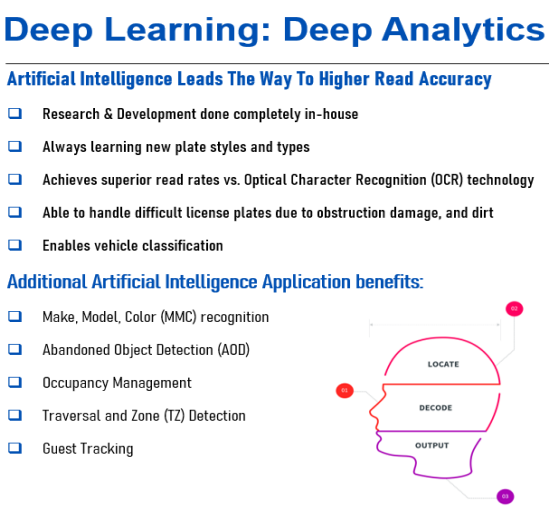
## Deep Learning Process

Jenoptik's Camera system is a fully self-contained compact intelligent camera that automatically reads number plates, captures still and speed violation images, and, where required, video clips for all passing vehicles. The full-performance system is centered on our patented camera system, deep learning software.

The Deep Learning Engine is an artificial intelligence (AI) trained in a similar fashion to a human being; for example, it is taught to recognize a "ball" – through correct and numerous repetitions. In this case, the AI is taught what a valid license plate looks like and how to read that license plate per State. It is trained to identify the font type, the font size, the spacing between letters, and the plate's design, amongst other features. This recognition is all done in a "black box," equivalent to our minds – there is no predetermined path to make a decision; it is entirely "organic."

Over a short period and with enough training data, the accuracy of this AI can be tremendous. The result of being "taught" is that the AI can identify and read plates in hundredths of a second and with incredible accuracy.

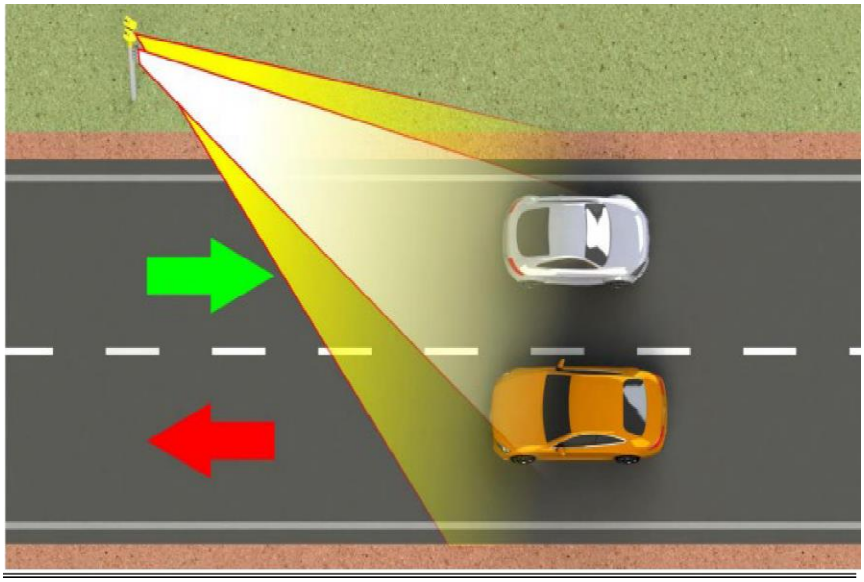
In comparison, "Conventional Speed" must segment (draw a box) each character in the license plate and then compare that segment to a collection of letters in the database (by country or State). This old system takes significantly more time and is much less reliable. If the segment or letter is obstructed (by a trailer, license plate frame, mud, etc.), then the technology is defeated and incapable of producing a read of the license plate. Deep Learning, on the other hand, does not "segment-and-compare"; it simply "looks" at the license plates and "reads" the characters as a human being would. This process has the benefit of being much more accurate and faster, meaning quicker alert notifications of hotlists or suspect vehicles.




## Operation

Once the camera is powered up and capturing data, it automatically monitors its performance and the environment around it. Image optimization happens automatically in response to ambient conditions. Onboard movement sensors can detect excessive camera movements due to vibration or vandalism. An alert message can be sent to the operator if the plate read falls below a configurable threshold value. Remote monitoring via WLAN, 3G/4G/LTE, Wi-Fi, or ADSL allows the camera to be viewed anytime without physical access.

Our video solution will provide the County with 24/7/365 Super High Definition (HD) live remote video streaming, download, playback capabilities, and video clip with detected violations. This HD solution has proven helpful to traffic and safety enforcement agencies for collecting evidence if vehicular or pedestrian collisions or criminal activity were to occur. Jenoptik's camera feeds its deep-learning artificial intelligence engine with clear, high-resolution images.



The camera only requires a connection to the main power supply (110 VAC 50/60Hz), which is suitable for many roadside environments. The file is then encrypted using strong encryption techniques based on asymmetric key pairs (different keys for encryption and decryption), ensuring data confidentiality.

Once the information has been encrypted using the public key, its information is inaccessible to anyone not possessing a matching private key. Any attempt to read encrypted information without the ability to decrypt it is a pointless exercise, as it

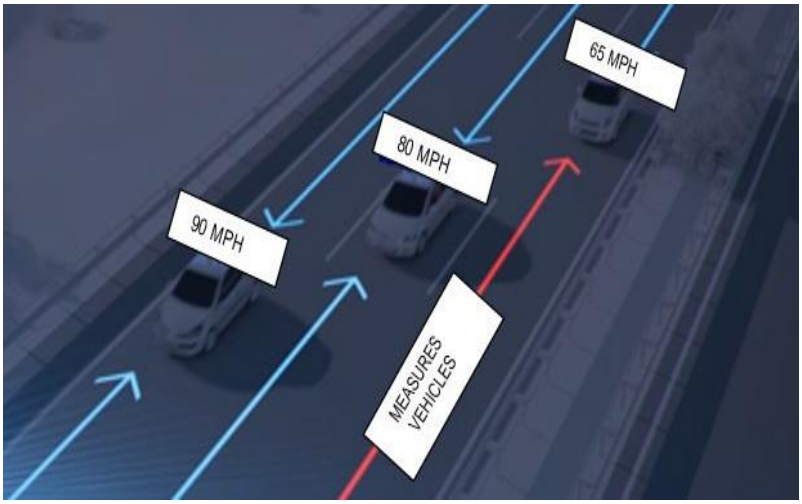
appears to be random data when opened.

Following each plate read, an evidential record – data and images – is created. The photos include a plate patch and one or more overview images. Data can be encrypted using the latest DES or AES standards. The evidential records for vehicles of interest can then be transmitted via a wide range of communications media, wired or wireless, or stored on local high-capa memory. The camera can be configured to read characters in the formats issued by all countries and read all countries' plates at maximum vehicle speeds.

## Speed Detection

There is a continual video analytical process for every image captured by the context camera to detect changes in the light state of the configured traffic signals, i.e., every image frame is examined for traffic signal status. This information is processed and stored as a history of light state changes for all configured Traffic Lights.

The system can also differentiate between various classes of vehicles, enabling monitoring of different speed limits according to vehicle class.




Our 3D tracking radar detects the presence of multiple vehicles simultaneously in his viewing area and determines their trajectory and moving speed. When the red light is active, and the vehicle touches the programmed trigger line in the enforcement area, the radar sensor will trigger the offense photography sequence in the camera.

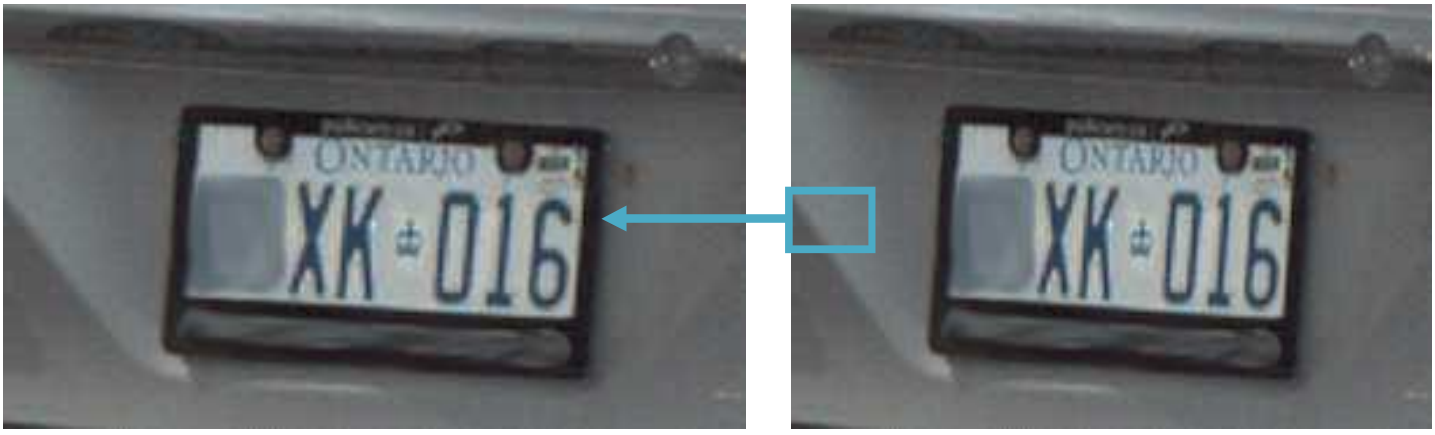
The camera will then take two images of the offending vehicle, a primary image at the trigger line position and a secondary image after a fixed configurable distance. In both images, the offending vehicle is marked (line). This configuration will allow the back office to confirm the violating vehicle's correctness visually, even if more than one vehicle is displayed in the offense image.

The 3D tracking radar monitors permanently if any vehicle is present in its detection area and surveyed travel direction. The 3D tracking radar detects simultaneously the presence for multiple vehicles in its viewing area and determines their trajectory and moving speed. If the speed value of a vehicle exceeds a configurable trigger limit, the radar sensor will trigger the rear offence photography from the Smart Camera IV. Optionally the 3D tracking radar can be setup to allow enforcement of two different speed limits for passenger cars and trucks. To allow for speed measurement value plausibility the Smart Camera IV will take a primary image and a secondary image after a fixed configurable distance on which the offence case correctness can be checked by visual inspection of the vehicle image marker area. The measurement is correct if the marker (line) on the secondary image is pointing to the same violating vehicle even if there is more than one vehicle displayed in the offence image.


Primary image with its vehicle image marker


Secondary image with its vehicle image marker

The 32 mega pixel color Smart Camera IV imager and its selected focal length of the lens are suitable to cover the range from one to four lanes plus an offset lane like a hard shoulder, bus or turn lane without restrictions to image quality and perceptibility of license plate characters on departing traffic. The following test shot shows the excellent image quality of a SmartCamera IV with 32 megapixels:




The thoroughly developed system and its image documentation components provide clear plate images with even its small province tag characters sharply displayed and readable on even the most far away lane and therefore compliant to RFP class 1 image quality requirement.

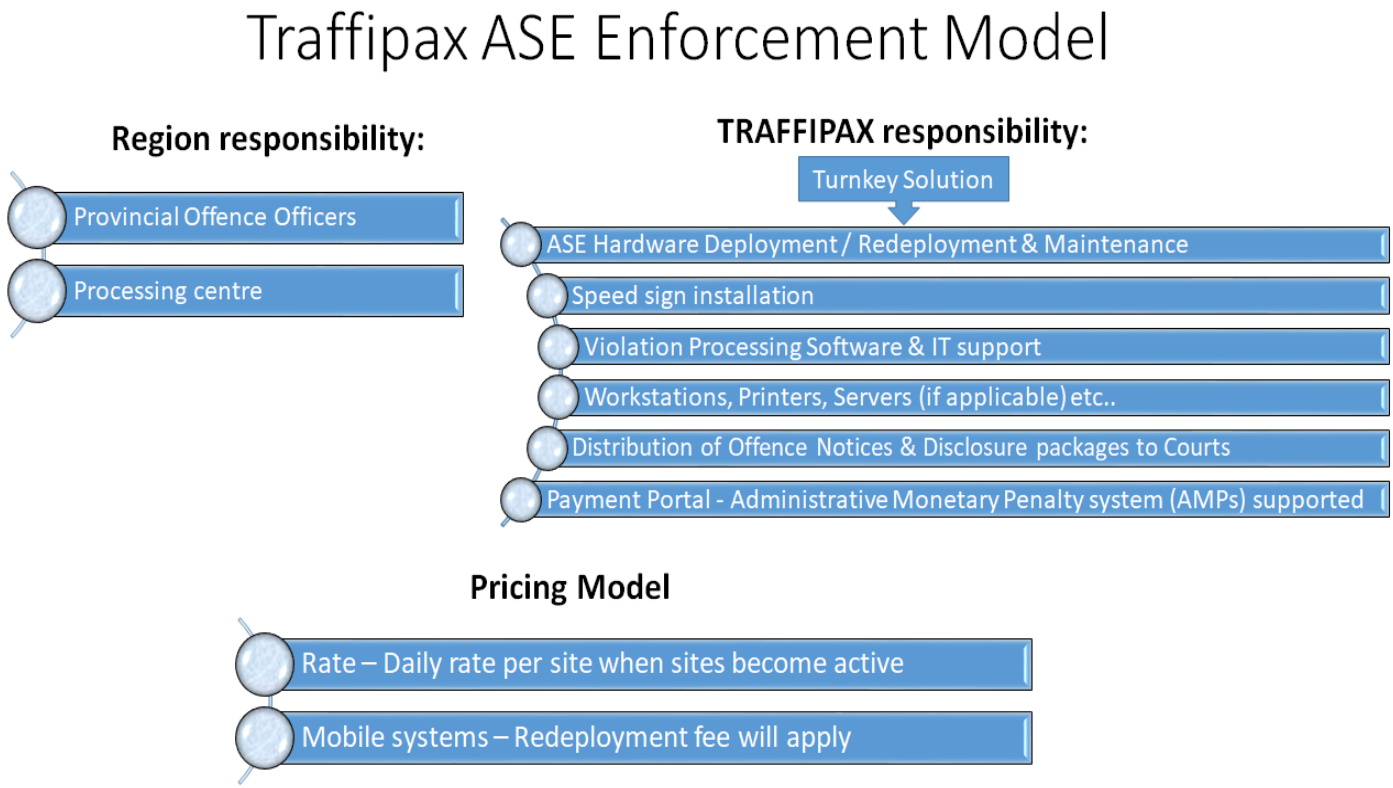
| Conventional camera image – camera not specially developed for traffic surveillance | Jenoptik Camera – developed specifically for traffic surveillance |
|---|---|
|  |  |

*High-resolution image: clear readability of province*

Our cameras are capable of operating effectively in all weather and light typical to Canadian conditions, including extreme heat and cold, fog, rain, snow, darkness, shadows and bright sun and high humidity.

## Support

Jenoptik has a dedicated warehouse and support center that can provide call support, repair, documentation, training, engineering support, and the capability to meet scheduled and emergency maintenance requirements. Jenoptik's innovative method of continuous improvement driven by service support, feedback, and maintenance has extended our traffic enforcement solutions' functionality and helped sustain a high level of performance.

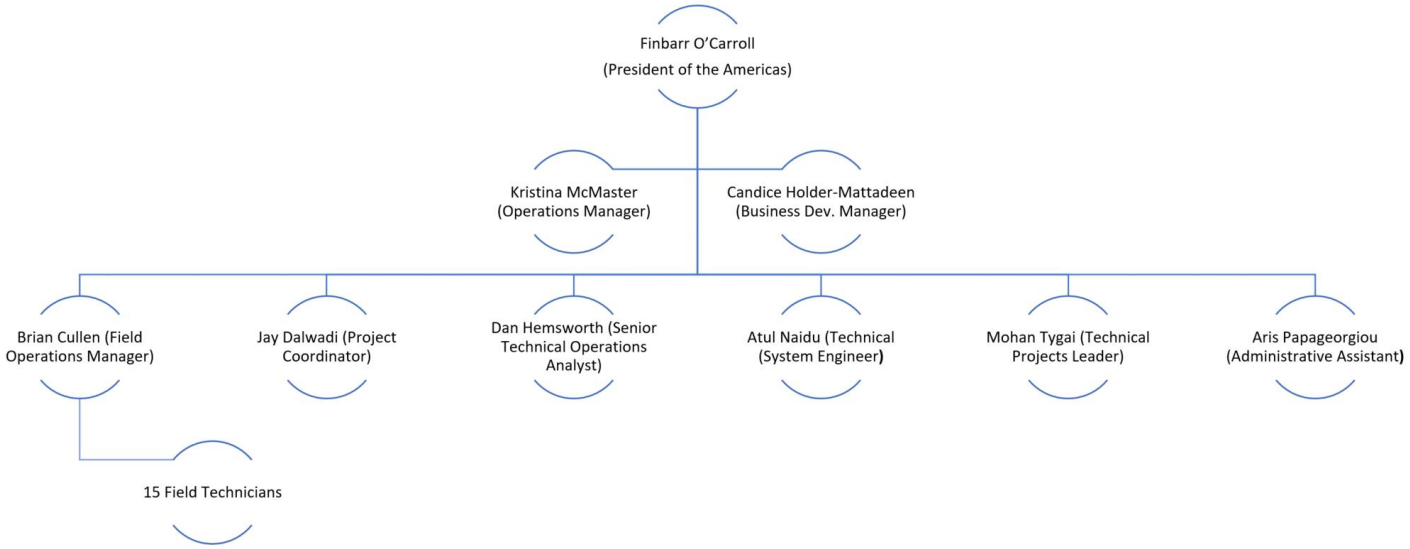






## Our Team Stands Ready for the County of Wellington

Each of our team members has significant knowledge and unique expertise in traffic safety and civil security. Candice Holder-Mattadeen and Kristina McMaster will coordinate all related matters of this RFP and lead the implementation support team. Our team of professionals will ensure precise communication with the County and assist with all public awareness and outreach for this project.




| PROJECT TEAM | RESPONSIBILITIES |
|---|---|
| Production & Operational | Our Team will be responsible for all camera production and the procurement of ancillary equipment. Our production team will customize, design and manufacture advanced quality systems, including the latest software. Our experienced and certified Project Manager is assigned as fundamentally responsible for the successful delivery of all Jenoptik systems. The PM will ensure our processing team will adhere to governing statutes, laws, compliance, and operational standards throughout all project phases to meet timelines and avoid oversights. |
| Quality Assurance | Our Team will ensure the highest quality production standards of all systems required for the project. The Team performs daily routine visual inspections of each system and notifies the appropriate parties accordingly. |
| Software Support | Our software team configures and operates ticket processing software and remote software support. |
| Technical & Field Support | Our Team is responsible for configuring and testing equipment and systems ready for deployment into the field providing second-line technical support for users to resolve and get equipment back into service as quickly as possible. This department is also responsible for testing and releasing software, including the change management process for introducing new releases into the field. Our qualified technicians are responsible for installing and configuring systems onsite. We will install, test methods in the field, report, track progress and monitor systems downtime. |
| Customer Service & Support | Our software team configures and operates ticket processing software and remote software support. |

## Turn Around Time

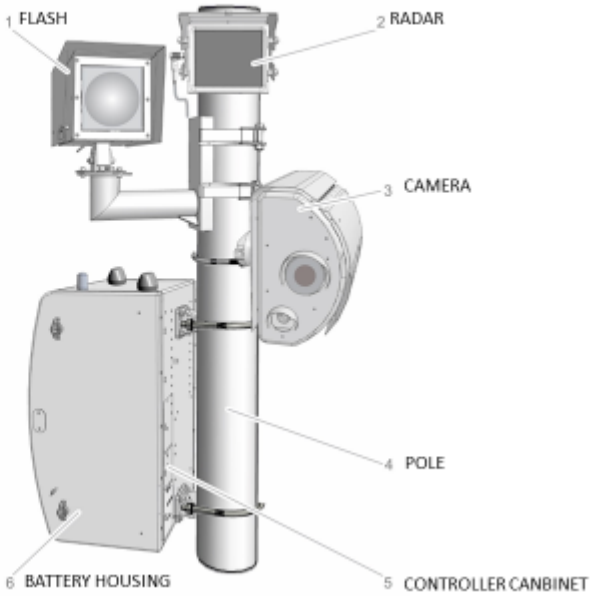
Below are our typical turn around time for the installation of our systems once awarded the contract.

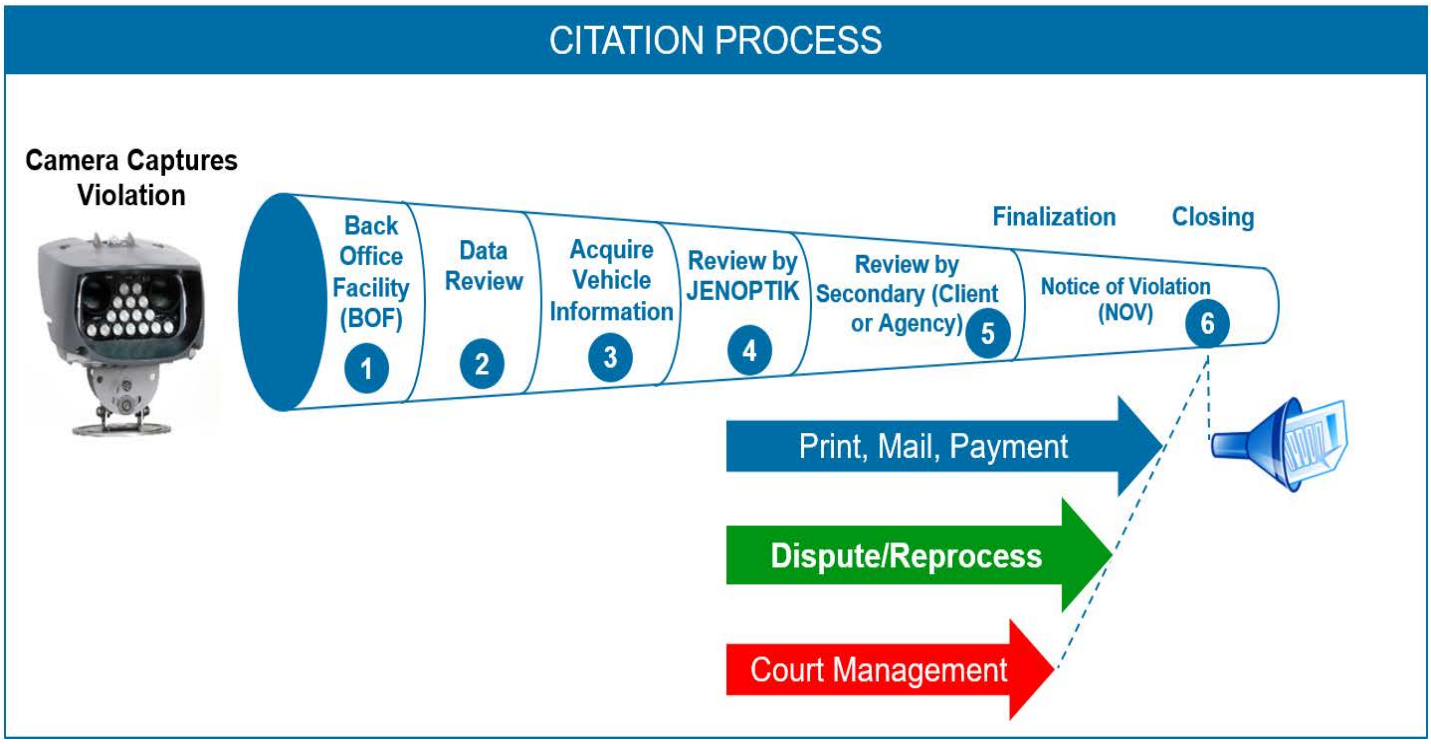
### ASE FIXED SOLUTION DEPLOYMENT

| | |
|---|---|
| SITE SURVEY & APPROVAL | 3 WEEKS |
| SPEED SIGN INSTALLATION | 1 WEEK |
| SITE CONSTRUCTION | 15 WEEKS |
| ESA APPROVALS | 1 WEEK |
| SYSTEM DEPLOYMENT | 1 WEEK |
| QUALITY CHECK | 1 WEEK |
| ACTIVATION | 1 WEEK |


### ASE MOBILE SOLUTION DEPLOYMENT / REDEPLOYMENT

| | |
|---|---|
| SITE SURVEY & APPROVAL | 3 WEEKS |
| SPEED SIGN INSTALLATION | 1 WEEK |
| ESA APPROVALS | 1 WEEK |
| SYSTEM DEPLOYMENT | 1 WEEK |
| QUALITY CHECK | 1 WEEK |
| ACTIVATION | 1 WEEK |






## Qualifications of Our Firm

Our Traffic enforcement system has a significant performance rate everywhere our systems are deployed. We currently have over 30,000 systems in use all around the globe. Our clients range from law enforcement departments, municipalities, and other public authorities to privately owned entities and in-direct distributors who trust us with the safety of their citizens and property. Jenoptik's longest project, with annual estimated revenue greater than $20 million in the continental United States, is our involvement with the New York City Automated Speed Enforcement Program. We supplied the program with over 2600 cameras for their traffic enforcement systems in school zones. By doing so, we are proud to be part of a holistic plan to protect children, teachers, parents, and citizens throughout all New York City boroughs. Outside the United States, we service the city of Toronto, Canada, where we have deployed over 600 Red Light Enforcement cameras and provide the city with a robust integrated solution, including issuing tickets, customer service, and maintaining all our systems.

Our most significant qualifications in North America are:

City of Toronto & participating municipalities in Province of Ontario
Point of Contact: Jeffrey Catlin
Email: jeffrey.catlin@toronto.ca
Address: 703 Don Mills Road Toronto, ON M3C 3N3
Phone: 416.338.2015
Years Serviced: Current since 2007
Annual Volume: Over $9 million Canadian dollars in total services

Description of Services: Red Light Cameras in the Province of Ontario, Red light offenses have become a necessity in the Province of Ontario. The program aims to reduce angle collision and increase traffic safety significantly.
This project includes delivering, installing, and maintaining more than 600 Red Light Enforcement systems and the Image Processing Software and IT infrastructure.

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Webb County Sheriff Office, Laredo, TX
Point of Contact: Captain Federico Calderon
Email: fcalderon@webbcountytx.gov
Address: 902 Victoria St., Laredo, TX 78040
Phone: 956.523.4900
Years Serviced: Current – in operation since 2019
Annual Volume: Over $400,000 in total services
Description of Services: SPEED rapid deployment trailers and SPEED database. System Overview/Date of Contract/Date System was fully Operational: June 2020. The delivery of SPEED systems and Rapid Deployment Trailers with SPEED data analysis software and Back Office Facility. Provisioned an end-to-end solution for processing public safety and border security live alerting and analytics aspects of the back-office operations. Installation and commissioning of the systems, training dispatch, deputies, and admin staff on back-office software applications. Hosting SPEED data on AWS GOV cloud.

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City of Homestead, Florida Police Department
Point of Contact: Sgt. Victor Agosto
Email: victor.agosto@homesteadpolice.com
Address: 45 NW 1st Ave, Homestead, FL 33030
Phone: 305.224.5444
Years Serviced: Current – in operation since 2019
Annual Volume: $50,000
Description of Services: SPEED rapid deployment trailers and SPEED database. System Overview/Date of Contract/Date System was fully Operational: March 2021. We delivered Rapid Deployment Trailers with SPEED data analysis software Back Office Facility. Provisioned an end-to-end solution for processing the back-office operations' public safety live alerting and analytics aspect. Installation and commissioning of the systems and training dispatch, officers, and administration staff on back-office software applications. Hosting SPEED data on AWS GOV cloud.

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Refugio County Sheriff's Office
Point of Contact: Chief Gary Wright
Email: gary.wright@co.refugio.tx.us
Address: 808 Commerce St., Refugio, TX 78377
Phone: 956.585.4855
Years Serviced: Current – in operation since February 2022
Annual Volume: $150K
Description of Services: Provide Rapid Deployment SPEED trailer solution. Equipment delivery, installation, and commissioning of the Rapid Deployment Trailer with SPEED data analysis software, Back Office Facility (BOF), and data hosting for public safety use. Provisioned an end-to-end solution for processing the back-office operations' public safety live alerting and analytics aspect. Provide camera equipment installation and commissioning of the systems and training dispatch, officers, and administration staff on back-office software applications support. Hosting SPEED data on AWS GOV cloud.

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City of Laredo Police Department
Point of Contact: Sargent Edgar Garcia
Email: egarza3@ci.laredo.tx.us
Address: 4712 Maher Ave, Laredo, TX 78041
Phone: 956.795.2864
Years Serviced: 2022
Annual Volume: $300K
Description of Services: Rapid Deployment SPEED trailer solution. Equipment was delivery, installation, and commissioning of the Rapid Deployment Trailer with SPEED data analysis software, Back Office Facility (BOF), and data hosting for public safety use. Provisioned an end-to-end solution for processing the back-office operations' public safety live alerting and analytics aspect. Provide camera equipment installation and commissioning of the systems and training dispatch, officers, and administration staff on back-office software applications support. Hosting SPEED data on AWS GOV.

## The Best Traffic Enforcement & Traffic Safety Solution

Jenoptik's committed team and internal resources will be readily available to collaborate with County of Wellington officials. Each team member, individually and combined, has significant knowledge and unique expertise in traffic safety and civil security.

The implementation support team will include our Project Managers and engineers, coordinating all related matters with the County. Our team of professionals will ensure precise communication and assist with all public awareness and outreach for this project.

We hope you agree that Jenoptik offers the best traffic enforcement and safety solution for Wellington County. We are committed to ensuring residents and visitors have the best traffic enforcement solution available anywhere.

Together with our advanced technology and systems, Jenoptik and County of Wellington will ensure a safer experience for all residents and visitors. Safety, Efficiency, and Reliability is our pledge to you and the people of the County of Wellington, Ontario, Canada. We are ready to work for you and hope to hear from you soon.

**Finbarr O'Carroll**
**President Americas**

Budgetary Quotation

MORE LIGHT

Date 8/23/2023

Prepared by: Traffipax LLC
Jenoptik Smart Mobility Solutions
3615 Laird Rd, Units 2-3 Mississauga,
ON, CA · L5L 5Z8

Prepared for: County of Wellington
74 Woolwich St. Guelph
Ontario N1H 3T9

Comments: RFI

| Item | Description | Unit Price | Quantity |
|---|---|---|---|
| | ASE Camera installation/operation/rental fee: per camera | | 1 |
| | 6 month term (daily fee per camera) | $29.00 | |
| | 12 month term (daily fee per camera) | $26.00 | |
| | 24 month term (daily fee per camera) | $24.00 | |
| 2 | Data Processing Cost | | 1 |
| | Fee per ticket issued (Dollar amount based on $50 ticket fee 40% of ticket fee for all other) | | |
| | Minimum processing fees/criteria (per hour per camera) | | |
| | Sworn Certification/Issue Notices of Offence by Provincial Offences Officer (per hour per camera) | | |
| 3 | Cost per installed sign per site (Signage as required by O.Reg 398/19 and the MTO) | $150.00 | 1 |
| 4 | Fixed Site: Installation/Placement (Fixed sites are permanent and removed at end of contract) | $25,000.00 | 1 |
| 5 | Mobile Site: Installation/Placement (Mobile sites are temporary and moved when requested. Pricing is per request to place equipment or to remove the equipment) | $1,500.00 | 1 |
| | *ALL PRICES PLUS (+) 13% TAXES | | |

If you have any questions concerning this quotation, please contact:

Candice Holder-Mattadeen, Business Development Manager
Email: candice.holder-mattadeen@jenoptik.com
Phone#: 416-302-6207 or 561-459-3330

Thank you for your business!

In all other respect our General Terms of Sale shall apply, published on our website https://www.jenoptik.com/gtc. Due to current and possible future restrictions of an economic, legal or other nature caused by the COVID-19 pandemic, Jenoptik expressly points out that any delivery-, service- and acceptance dates as well as quantities set forth below are non-binding in any case as long as Jenoptik is directly or indirectly prevented from fulfilling its obligations due to or as a consequence of the COVID-19 pandemic. The same applies if subcontractors or sub suppliers of Jenoptik do not or not in a timely manner fully comply with their obligations towards Jenoptik due to or as a consequence of the COVID-19 pandemic. The delivery, service and acceptance dates shall be postponed by a reasonable period necessary to overcome any impact caused by the COVID-19 pandemic.

# CW2023-059 - Automated Speed Enforcement Programme

Opening Date: July 24, 2023 4:00 PM

Closing Date: August 23, 2023 2:00 PM

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### Vendor Details

| | |
|---|---|
| Company Name: | Traffipax LLC |
| Does your company conduct business under any other name? If yes, please state: | Florida |
| Address: | www.jenoptik.com<br>Mississauga, Ontario L4W5G5 |
| Contact: | JENOPTIK Holder |
| Email: | trafficenforcement@jenoptik.com |
| Phone: | 416-302-6207 |
| Fax: | 561-459-3330 |
| HST#: | 043459191 |

### Submission Details

| | |
|---|---|
| Created On: | Wednesday August 23, 2023 10:26:33 |
| Submitted On: | Wednesday August 23, 2023 10:34:37 |
| Submitted By: | JENOPTIK Holder |
| Email: | trafficenforcement@jenoptik.com |
| Transaction #: | f6c0155e-a441-4788-bb70-337f33a5a057 |
| Submitter's IP Address: | 170.55.35.186 |

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**Documents**

It is your responsibility to make sure the uploaded file(s) is/are not defective or corrupted and are able to be opened and viewed by the Owner. If the attached file(s) cannot be opened or viewed, your Bid Document may be rejected.

We having read, understood and accepted the Bid Documents for the above-named Project, including Addenda, and having visited the Place of the Work, hereby offer to perform the Work in accordance with the Bid Documents.

We declare that:

a) we agree to attain Substantial Performance of the Workafter receiving notice of contract award, and acknowledge that the construction duration may be considered by the Owner in evaluating this Bid and determining contract award. The date of contract award shall be the date the letter of award is sent to the Bidder.

b) we have arrived at this Bid without collusion with any competitor,

c) this Bid is open to acceptance by the Owner for a period of sixty (60) days
from the date of Bid closing, and

d) all Bid Form Supplements called for by the Bid Documents form an integral part of this Bid.

e) no member of the Owner's Council and no other officer or employee of the Owner is, will be, or has become interested, directly or indirectly, as a contracting party, partner, stock holder, surety or otherwise in, or in the performance of the Contract, or in the supply, work, or business to which it relates, or in any portion of the profits thereof, or any of the money to be derived therefrom.

f) We agree, to perform the Work in compliance with the Contract Documents.

- CW2023-059 Automated Speed Enforcement Programme Submission - Jenoptik Response - RFI County of Wellington Automated Speed Enforcement Programme due 8-23-23.pdf - Wednesday August 23, 2023 10:27:27

## Addenda, Terms and Conditions

1. We, having read, understood and accepted the Bid Documents for the Project, including the Addendum's listed below and having visited the Place of the Work, hereby offer to perform the Work in accordance with the Bid Documents.
2. I/We, the undersigned, declare that:
3. a) We agree to attain Substantial Performance of the Work as directed by the Owner after receiving notice of contract award, and acknowledge that the construction duration may be considered by the Owner in evaluating this Bid and determining contract award. The date of contract award shall be the date the letter of award is sent to the Bidder.
4. b) We have arrived at this Bid without collusion with any competitor.
5. c) This Bid is open to acceptance by the Owner for a period of sixty (60) days from the date of Bid closing.
6. d) All Bid Form Supplements called for by the Bid Documents form an integral part of this Bid.
   e) No member of the Owner's Council and no other officer or employee of the Owner is, will be, or has become interested, directly or indirectly, as a contracting party, partner, stock holder, surety or otherwise in, or in the performance of the Contract, or in the supply, work, or business to which it relates, or in any portion of the profits thereof, or any of the money to be derived there from.

☑

I/WE agree to be bound by the above declarations and have authority to bind the Corporation and submit this Bid on behalf of the Proponent.

- Candice Holder, Business Development Manager , Traffipax, LLC., JENOPTIK, Smart Mobility Solutions Divisio

The proponent shall declare any potential conflict of interest that could arise from submitting a proposal on this RFP. Do you have a potential conflict of interest? ○ **Yes** ◉ **No**

The Proponent acknowledges and agrees that the addendum/addenda below form part of the RFP Document

Please check the box in the column "**I have reviewed this addendum"** below to acknowledge each of the addenda.

| File Name | I have reviewed the below addendum and attachments (if applicable) | Pages |
|---|---|---|
| **CW2023-059 Addendum 1**<br>Wed August 9 2023 03:49 PM | ☑ | 4 |

# COUNTY OF WELLINGTON

# COMMITTEE REPORT

**To:** Chair and Members of the Roads Committee
**From:** Joe de Koning, Manager of Roads
**Date:** Tuesday, September 12, 2023
**Subject:** **Updated Warrant for Speed Radar Signs**

## Background:

As previously outlined from June's 2023 Warrant for Speed Radar Signs Committee Report (attached), a request was made to include consideration of school zones.

Staff have revised the data based decision matrix to determine the warrant for a Speed Radar Sign. The warrant analysis considers the following data:

- TAC appropriate posted speed limit
- 85$^{th}$ Percentile Speed

The warrant analysis scores the following risk factors:

- School Zone
- Posted Speed
- Urban Area
- Presence of Sidewalk
- Presence of Shoulder or Curb

Corridors where the TAC Analysis shows that the posted speed limit is not appropriate will be subject to a speed review.

Corridors where the TAC Analysis shows that the posted speed limit is appropriate and the 85$^{th}$ percentile speed is greater than 20 km/h over the posted speed automatically warrant a radar sign.

Corridors where the accumulated points based on risk factors total 10 or more warrant the installation of a speed radar sign.

## Recommendation:

That the report entitled Updated Warrant for Speed Radar Signs be received for information;

And that the warrant criteria for Speed Radar Signs be adopted to determine suitable sign locations.

Respectfully submitted,

Joe de Koning, P. Eng.
Manager of Roads

Attachment: Speed Radar Sign – Updated Decision Matrix
June Report – Warrant for Speed Radar Signs

## Decision Matrix

| | | | |
|---|---|---|---|
| TAC Analysis Shows appropriate Speed | Yes<br>Continue | No<br>Review Appropriate Speed | |
| 85th Percentile Speed | Greater than 20<br>Install Radar Sign | Less than 10<br>No issue | 10 - 20 km/h<br>Continue |

| Risk Factor | High (Score 3) | Medium (Score 2) | Low (Score 1) |
|---|---|---|---|
| | | | |
| School zone | N/A | N/A | yes |
| | | | |
| Posted Speed (Km/h) | 40 | 50 | 60 |
| | | | |
| Urban Area | yes | N/A | no |
| | | | |
| Presence of Sidewalk | None | On one side | On both sides |
| | | | |
| Shoulder width equal to or greater than 1.5m | None | On one side | On both sides |
| | | | |
| Curb and gutter | None | On one side | On both sides |

Score of 10 or greater will warrant radar sign installation

# COUNTY OF WELLINGTON

# COMMITTEE REPORT

**To:** Chair and Members of the Roads Committee
**From:** Joe de Koning, Manager of Roads
**Date:** Tuesday, June 13, 2023
**Subject:** **Warrant for Speed Radar Signs**

## Background:

In 2022, County Council adopted the Road Map (Roads Master Action Plan). The Road MAP provides staff with tools to create safer road environments within the County of Wellington. A tool from the Road MAP, Speed Management Guidelines is the use of Speed Radar Signs. Traditionally these signs were installed where the community paid for the purchase and installation. With the adoption of the Road MAP and consistent funding for Speed Management in the Capital budget, the purchase and installation of Speed Radar Signs can now be at County cost. To be consistent in application, a warrant system for the installation of these signs is required.

Staff have worked to create a data based decision matrix to determine the warrant for a Speed Radar Sign.
The warrant analysis considers the following data:

- TAC appropriate posted speed limit
- 85$^{th}$ Percentile Speed

The warrant analysis scores the following risk factors:

- Posted Speed
- Urban Area
- Presence of Sidewalk
- Presence of Shoulder or Curb

Corridors where the TAC Analysis shows that the posted speed limit is not appropriate will be subject to a speed review.

Corridors where the TAC Analysis shows that the posted speed limit is appropriate and the 85$^{th}$ percentile speed is greater than 20 km/h over the posted speed automatically warrant a radar sign.

Corridors where the accumulated points based on risk factors total 9 or more warrant the installation of a speed radar sign.

Two current areas of public interest with respect to speeding are;

- WR 16 Damascus (Wellington North)
- WR 19 Belwood (Centre Wellington)

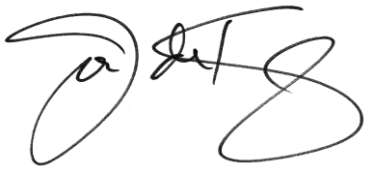
By using the Warrant matrix both of these segments would qualify for Speed Radar Signs.

## Recommendation:

That the report entitled Warrant for Speed Radar Signs be received for information;

And that the warrant criteria for Speed Radar Signs be adopted to determine suitable sign locations;

Respectfully submitted,



Joe de Koning, P. Eng.
Manager of Roads

Attachment: Speed Radar Sign – Decision Matrix
Speed Radar Sign – Segment Analysis

## Decision Matrix

| TAC Analysis Shows appropriate Speed | Yes<br>Continue | No<br>Review Appropriate Speed | |
|---|---|---|---|
| 85th Percentile Speed | Greater than 20<br>Install Radar Sign | Less than 10<br>No issue | 10 - 20 km/h<br>Continue |

| Risk Factor | High (Score 3) | Medium (Score 2) | Low (Score 1) |
|---|---|---|---|
| | | | |
| Posted Speed (Km/h) | 40 | 50 | 60+ |
| | | | |
| Urban Area | yes | N/A | no |
| | | | |
| Presence of Sidewalk | None | On one side | On both sides |
| | | | |
| 1.5m Shoulder width or Curb | None | On one side | On both sides |

Score of 9 or greater will warrant radar sign installation

## Segment Analysis

| | Posted Speed (Km/h) | Urban Area | Presence of Sidewalk | 1.5m Shoulder or Curb | Total Score |
|---|---|---|---|---|---|
| Wellington Road 19 from Smith St to North Broadway (WR 26) | 2 | 3 | 3 | 2 | 10 |
| Wellington Road 16 (WR 16) in Damascus | 2 | 3 | 3 | 3 | 11 |

Both section meets requirements and radar sign installation is recommended

# COUNTY OF WELLINGTON

# COMMITTEE REPORT

**To:** Chair and Members of the Roads Committee
**From:** Don Kudo, P. Eng. County Engineer
**Date:** Tuesday, September 12, 2023
**Subject:** **Intersection Improvements – Capital Budget and Future Work**

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## Background:

The Roads Committee received a report at the April, 2023 meeting entitled Intersection Assessments – Roundabouts and Traffic Signals that provided information on proposed intersection improvements with respect to traffic control utilizing signalization or roundabouts. The report summarized the existing intersection inventory of signalized intersections and roundabouts, and the current budget forecast for future signalized intersections and roundabouts to be constructed. The report detailed the many site specific factors, technical warrants, and guidelines used to determine appropriate traffic control measures at intersections throughout the County.

The intent of this current report is to provide the Committee with a detailed summary of the forecasted intersection improvements in the 10-year capital budget forecast. In addition to the budget forecast, intersections with recently completed traffic studies are included in the attached chart and map to provide an overall summary of current and prospective intersection improvements.

In total, 28 intersection improvements are planned to be completed from 2024 to 2033 with an estimated total budget of $40,650,000. This includes 25 permanent traffic signals or roundabouts, 2 temporary traffic signals and one traffic calming measure. It is projected, on average two to three intersection improvements will be completed each year during the 10 year period. Intersections were prioritized through the Road Master Action Plan (Road MAP) and technical warrants. There are 5 additional locations that have been highlighted as “Under Review” due to studies at the intersections suggesting an improvement may be required. Additional studies are needed at these intersections to monitor and confirm status for future consideration.

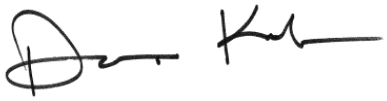
The immediate implementation of required intersection control that meet the minimum technical justification criteria may not be possible due to funding limitations and other constraints such as property, design, boundary locations and project delivery. The current strategy to prioritize permanent intersection improvements is for intersection projects to coincide with other adjacent planned road projects such as repaving or reconstruction road work. This provides project integration and alignment for overall capital road projects to be efficiently constructed from a cost and construction basis. In cases where safety is of high concern or no nearby road improvements have been projected, the installation of temporary traffic signals will be considered as an interim measure until a long term solution is determined.

Staff believe that the current strategy, budget forecast and intersection priorities as summarized in the attached chart and map will help inform 2024 Capital Budget discussions.

## Recommendation:

That the Intersection Improvements – Capital Budget and Future Work report be received for information.

Respectfully submitted,



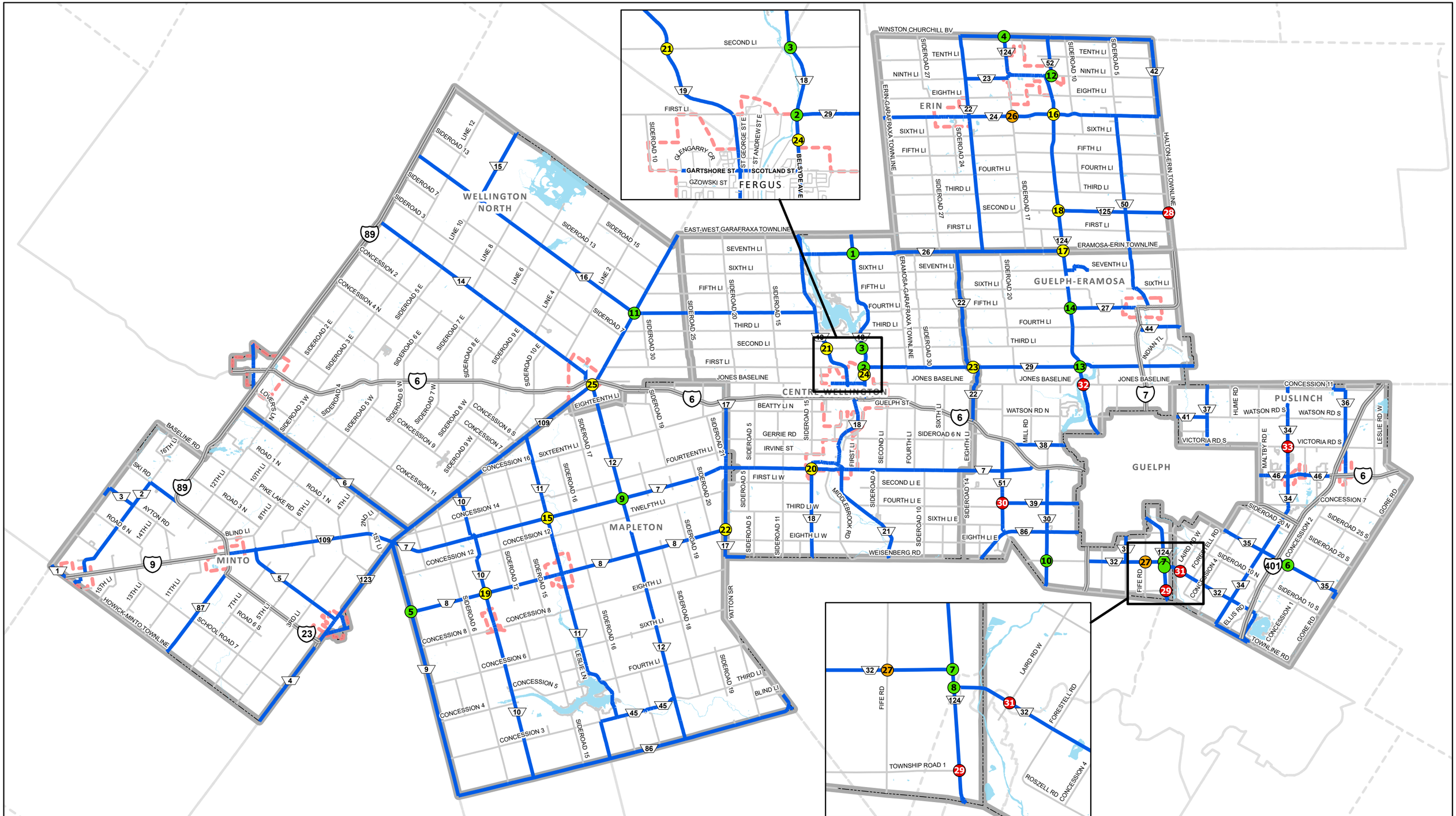
Don Kudo, P. Eng.
County Engineer

Attachments Chart - Intersection Improvements
Map - Intersection Improvements – Proposed Future Works

## Intersection Improvements

| Map Number | Location | Proposed Timing | Intersection Improvement Type | Estimated Cost |
|---|---|---|---|---|
| 1 | Wellington Road 18 at Wellington Road 26 | 2024 | Temporary Traffic Signals to Roundabout | $ 1,750,000.00 |
| 2 | Wellington Road 18 at Wellington Road 29 | 2024 | New Roundabout | $ 1,750,000.00 |
| 3 | Wellington Road 18 at Second Line | 2024 | New Roundabout | $ 1,750,000.00 |
| 4 | Wellington Road 124 at Winston Churchill Blvd (WR 25) | 2024 | Development Driven/Funded Traffic Signals | N/A |
| 5 | Wellington Road 8 at Wellington Road 9 | 2025 | Temporary Traffic Signals to Roundabout | $ 1,750,000.00 |
| 6 | Wellington Road 35 at Concession 2 | 2025 | Introduce Traffic Calming | $ 150,000.00 |
| 7 | Wellington Road 124 at Wellington Road 32 N | 2026 | Existing Traffic Signals to Roundabout | $ 1,750,000.00 |
| 8 | Wellington Road 124 at Wellington Road 32 S | 2026 | Existing Traffic Signals to Roundabout | $ 1,750,000.00 |
| 9 | Wellington Road 7 at Wellington Road 12 | 2027 | Temporary Traffic Signals to Roundabout | $ 1,750,000.00 |
| 10 | Wellington Road 30 at Township Road 3 | 2027 | New Roundabout | $ 1,750,000.00 |
| 11 | Wellington Road 109 at Wellington Road 16 | 2028 | New Roundabout | $ 1,750,000.00 |
| 12 | Wellington Road 52 at Ninth Line | 2028 | New Roundabout | $ 1,750,000.00 |
| 13 | Wellington Road 124 at Wellington Road 29 | 2028 | Existing Traffic Signals to Roundabout | $ 1,750,000.00 |
| 14 | Wellington Road 124 at Wellington Road 27 | 2028 | Existing Traffic Signals to Roundabout | $ 1,750,000.00 |
| 15 | Wellington Road 7 at Wellington Road 11 | 2029 | New Roundabout | $ 1,750,000.00 |
| 16 | Wellington Road 124 at Wellington Road 24 | 2029 | Existing Traffic Signals to Roundabout | $ 1,750,000.00 |
| 17 | Wellington Road 124 at Wellington Road 26 | 2029 | New Roundabout | $ 1,750,000.00 |
| 18 | Wellington Road 124 at Wellington Road 125 | 2029 | Existing Traffic Signals to Roundabout | $ 1,750,000.00 |
| 19 | Wellington Road 8 at Wellington Road 10 | 2030 | New Roundabout | $ 1,750,000.00 |
| 20 | Wellington Road 7 at Wellington Road 18 | 2032 | Existing Traffic Signals to Roundabout | $ 1,750,000.00 |
| 21 | Wellington Road 19 at Second Line | 2032 | New Roundabout | $ 1,750,000.00 |
| 22 | Wellington Road 17 at Wellington Road 8 | 2032 | New Roundabout | $ 1,750,000.00 |
| 23 | Wellington Road 29 at Wellington Road 22 | 2032 | New Roundabout | $ 1,750,000.00 |
| 24 | Wellington Road 18 at Orangville Road | 2033 | Traffic Signals | $ 1,000,000.00 |
| 25 | Wellington Road 109 at Wellington Road 12 east | 2033 | Roundabout | $ 1,750,000.00 |
| 26 | Wellington Road 24 at Sideroad 17 | 2024 | Temporary Signals | $ 500,000.00 |
| 27 | Wellington Road 32 at Fife Road | 2024 | Temporary Signals | $ 500,000.00 |
| 28 | Wellington Road 125 at Sideroad 32 | - | Under Review - Potential Roundabout | N/A |
| 29 | Wellington Road 124 at Township Road 1 | - | Under Review - After completion of WR124 reconstruction | N/A |
| 30 | Wellington Road 51 at Wellington Road 39 | 2027 | Under Review - Potential Roundabout | N/A |
| 31 | Wellington Road 32 at Laird Road | - | Under Review - Potential Roundabout | N/A |
| 32 | Wellington Road 124 at Jones Baseline N/S | - | Under Review - Potential Roundabout | N/A |
| 33 | Wellington Road 34 at Victoria Road | - | Under Review - Potential Roundabout | N/A |
| | | | | **$ 40,650,000.00** |

Attachment 1 - Intersections Improvements Summary Chart




**WELLINGTON COUNTY**

- BUDGET YEAR 2024 - 2028
- BUDGET YEAR 2029 - 2033
- TEMPORARY SIGNALS
- BEING EXAMINED
- LOCAL ROAD
- COUNTY ROAD
- HIGHWAY

# INTERSECTION IMPROVEMENTS

PROPOSED FUTURE WORKS

0 0.5 1 2 Km

Scale: 1:245,000

Date: August 2023

Produced by: County of Wellington Roads Department