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| Solicitation No. - N° de l'invitation T8127-200020/A | Date 2020-08-28 |
| Client Reference No. - N° de référence du client T8127-200020 | GETS Ref. No. - N° de réf. de SEAG PW-\$MTB-005-15830 |
| File No. - N° de dossier MTB-0-43118 (005) | CCC No./N° CCC - FMS No./N° VME |
| Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2020-10-09 | |
| Time Zone Fuseau horaire Heure Avancée de l'Est HAE | |
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| Address Enquiries to: - Adresser toutes questions à: Chouinard, Judith | Buyer Id - Id de l'acheteur mtb005 |
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Request for Information (RFI)

MOTOR VEHICLE TEST CENTRE, BLAINVILLE, QUEBEC

1. Purpose and Nature of the RFI

Public Works and Government Services Canada (PWGSC), on behalf of Transport Canada (TC), is releasing this RFI in anticipation of an upcoming procurement for the provision of expert test services and the operation and maintenance of the Motor Vehicle Test Centre (MVTC) located in Blainville, Quebec

The objectives of this RFI are to:

- Gauge the level of interest from Industry to participate in a potential future procurement process. Information gathered will help inform decisions regarding appropriate procurement considerations; and
- Seek initial input and feedback from Industry through a list of questions presented in Annex C.

As a minimum, you are encouraged to indicate your interest in potentially bidding on a future procurement process by providing the information requested in Annex C, Section A. In addition, you are invited to assist Canada in refining the provisions of a potential new Contract by also responding to the questions in Annex C, Sections B and C.

The anticipated activities that would form part of a potential Contract are outlined in this RFI and are presented in two sections: Annex A for activities to be undertaken for the primary client (TC), and Annex B for activities related to increasing commercialization activities to promote and expand the utilization of services at the MVTC.

This RFI is neither a call for tender nor a Request for Proposal (RFP). No agreement or contract will be entered into based on this RFI. The issuance of this RFI is not to be considered in any way a commitment by the Government of Canada, nor as authority to potential respondents to undertake any work that could be charged to Canada. This RFI is not to be considered as a commitment to issue a subsequent solicitation or award contract(s) for the work described herein.

Although the information collected may be provided as commercial-in-confidence (and, if identified as such, will be treated accordingly by Canada), Canada may use the information to assist in drafting performance specifications (which are subject to change) and for budgetary purposes.





Respondents are encouraged to identify, in the information they share with Canada, any information that they feel is proprietary, third party or personal information. Please note that Canada may be obligated by law (e.g. in response to a request under the Access of Information and Privacy Act) to disclose proprietary or commercially-sensitive information concerning a respondent (for more information: <http://laws-lois.justice.gc.ca/eng/acts/a-1/>).

Respondents are asked to identify if their response, or any part of their response, is subject to the Controlled Goods Regulations.

Participation in this RFI is encouraged, but is not mandatory. There will be no short-listing of potential suppliers for the purposes of undertaking any future work as a result of this RFI. Similarly, participation in this RFI is not a condition or prerequisite for the participation in any potential subsequent solicitation.

Respondents will not be reimbursed for any cost incurred by participating in this RFI.

The RFI closing date published herein is not the deadline for comments or input. Comments and input will be accepted any time up to the time when/if a follow-on solicitation is published.



2. Background Information:

TC is a Canadian federal department responsible for promoting a safe, secure, efficient and environmentally responsible transportation system across the country. TC provides oversight and monitors the self-certification program of motor vehicle manufacturers and importers to ensure that their products comply with the regulations (CMVSS). TC also leads numerous research programs in support of regulatory and standards development. The testing associated with these activities is carried out at the MVTC.



Figure 1 - MVTC location

The MVTC is a world-class facility for automotive research and testing that is located in Blainville, Quebec (see Figure 1). The facility is located 40 km (25 mi) from the Montreal (YUL) airport and 45 km (28 mi) from downtown Montreal.

The MVTC was established by TC in 1978 and was operated by TC personnel until 1996, at which time its operations and management were contracted to a private-sector organization under the terms of a Government-owned, Contractor-operated (Go-Co) Contract. TC MVTC delivers its mandate through a GoCo model, whereby a private-sector organization (the Contractor) is responsible for managing and operating the site. Under the GoCo model, Transport Canada owns the site, and all facilities and assets. The Contractor is responsible for the day-to-day operations of the site. Following a recent analysis, TC has determined that a Go-Co governance model meets its needs, and will be used for the next contract as well.



The high-speed test track visually dominates the MVTC. Surrounding this banked oval is the low-speed track (a two-lane blacktop road). Within the boundary of the tracks are other test areas including a vehicle dynamics area, a brake test area and brake test ramp. An off-road course runs outside the low-speed track.



Figure 2 - Aerial view of MVTC test tracks

In addition to the outdoor facilities, the MVTC has several laboratories including for example: CAV technologies, quasi-static testing, crashworthiness evaluations, dummy calibrations and vulnerable user evaluations, and two environmental chambers.

The installations are described in greater detail in Annex D.



Figure 3 - Aerial view of MVTC Installation

2A. Current roles

The Contractor is responsible for:

- Providing reliable test services for TC compliance and research programs;
- Operating and maintaining the site;
- Recommending and/or implementing capital improvement projects; and
- Marketing the MVTC to attract other clients and generate revenues to partially offset operating and maintenance costs.

TC is owner of the MVTC and the technical authority for the Contract. The Department:

- Determines its compliance and research testing programs, purchases the test samples and defines the requirements associated with individual tests.
- Plans and approves the MVTC capital improvement strategy.



PWGSC is the contracting authority responsible for ensuring the integrity of the contractual agreement and compliance with the contract requirements. PWGSC is also responsible for negotiating contracts and amendments.

2B. Current Contract Funding Structure

The yearly operational budget, usually confirmed at the beginning of each fiscal year, includes operation & maintenance, test services, and material purchases. The Contract funding structure consists of two main categories:

- **Testing services:** Annual task authorizations are issued for the compliance and research work. Each task authorization request includes a statement of work, which includes the type and number of tests required for each compliance and research test program. Individual tests are charged at the contractual fixed rate for established test protocols and hourly labour rates for all other test services. The amount of testing work done for TC fluctuates depending on TC's budget and requirements.
- **Operations and maintenance:** TC pays the Contractor a fixed annual rate for the operation and maintenance of the MVTC, including on-site utilities, insurance and security. This fee also includes the cost of planning, implementation, and management of capital projects, as well as the yearly calibration of instruments.

For testing done at the MVTC for third-party clients (i.e. clients other than TC), the Contractor credits TC with a negotiated percentage of gross revenues to partially offset operations and maintenance costs.

At present, TC is considering a 5-year Contract with two possible 5-year extensions. The expected value could be approximately \$7M to \$15M per year. Under no circumstances can this information be considered as an indication of Canada's commitment regarding this requirement.

3. Potential Work Scope and Constraints

In general, the anticipated services for which any future Contractor would be responsible include:

- Providing reliable test services for TC compliance and research programs;
- Operating and maintaining the site;
- Recommending and implementing capital improvement projects; and
- Marketing the MVTC to attract other clients and generate revenues to partially offset operating and maintenance costs.

The current Contract has been in force since 2007 and will come to a close in October 2022. TC would like to include appropriate flexibility and incentives in the new Contract to enable any future Contractor to expand the MVTC into a dynamic motor vehicle safety research hub that connects Canadian researchers





across academia, industry and governments. TC would also like to foster the development of Canadian skills and expertise in the field of automotive testing and research and related fields. This may be achieved by developing the MVTC toward a collaborative research hub that attracts engineering talent and innovative testing and research activities. TC is actively pursuing efforts to create a collaborative environment at the MVTC that can stimulate growth and create jobs thereby increasing Canada's global competitiveness.

As new safety technologies are introduced, TC must continue to be responsive to the emerging and often complex motor vehicle safety needs of Canadians. To achieve this, TC invests strategically in the MVTC and relies extensively on the highly specialized expertise of the Contractor. Any future Contractor will be expected to provide similar specialized expertise.

4. Schedule

In providing responses, the following schedule should be utilized as a baseline:

- RFI Closing : October 9, 2020
- RFP Posting: Spring 2021
- Contract Award: Summer 2022

The above schedule is provided for planning purposes only and is subject to change or cancellation by Canada at any time.

5. Important Notes to Respondents

Interested Respondents may submit their responses to the PWGSC Contracting Authority, identified below via email:

Judith Chouinard
Chief, Supply Team Leader
Public Works and Government Services Canada
Telephone: 438-989-6856
E-mail: judith.chouinard@tpsgc-pwgsc.gc.ca

A point of contact for the Respondent must be included in the package.

Canada reserves the right to request additional information for clarification purposes during the review of the responses to this RFI, and/or to consider a subsequent modification of the response put forward by a Respondent.

Changes to this RFI may occur and will be advertised on the Government Electronic Tendering System. Canada asks Respondents to visit Buyandsell.gc.ca regularly to check for changes, if any.





6. Closing date for the RFI

Responses to this RFI are to be submitted to the PWGSC Contracting Authority identified above, on or before October 9, 2020. Canada may, at its discretion, review and consider responses received after the RFI closing date.



Annex A – Scope of Work for TC Activities

A. General considerations

Any future Contractor will be responsible for undertaking the following activities for TC:

- Executing Compliance Test Programs (see Section B below)
- Executing Research Test Programs (see Section C below)
- Operating and managing the facilities (see Section D below)
- Implementing capital projects funded by TC (see Section E below)

Similar to the current Contract, any future Contractor will be expected to work with TC in a bilingual environment (French and English) and all documentation will need to be delivered in both languages. French is the official language of the province of Quebec. It is mandatory for companies with 50 employees or more to use French as the language of communication within the workplace.

Please refer to Annex C (Section B), for questions related to TC activities, to which we are seeking your input.

B. Executing TC's Compliance Test Program

B.1. Current Activities

The Compliance Test Programs include a series of tests conducted upon new vehicles and child seats to monitor their compliance with the CMVSS as established under the authority of the *Motor Vehicle Safety Act*. TC plans the Compliance Test Programs at the beginning of each fiscal year; test samples are acquired, and required tests and timelines are identified. The test matrix includes a mix of vehicle dynamic testing, structural testing, component testing and crashworthiness testing. It is important to note that the scope of the compliance program depends on yearly budget allocations as well as test sample availability, and that TC purchases all test samples. Vehicle samples can include passenger cars, light and heavy-duty trucks, and buses.

Determination of non-compliance with the applicable standard is determined solely by TC who may communicate and follow up directly with the vehicle manufacturer and/or importer.

Responsibilities of the Contractor

The Contractor must carry out the tests in accordance with regulatory test protocols while ensuring the highest degree of accuracy, repeatability and safety. Each test must be completed according to the agreed upon schedule, within that same fiscal year. The electronic data is generally made available within



24 hours of test completion with a bilingual (English and French) report delivered to TC within four weeks of each vehicle component test completion. The compliance program must be completed within the same fiscal year. Instances of potential non-compliance must be reported immediately to TC.

The Contractor is responsible for the yearly calibration of all test equipment and instrumentation. The Contractor is responsible for protecting all test equipment and instrumentation from damage and ensuring that it remains in good working condition. As such, the Contractor is responsible for conducting pre and post-test inspections in addition to regular preventive maintenance and troubleshooting to ensure uninterrupted services and to extend the service life. Test equipment and instrumentation required for compliance programs must remain at the MVTC.

Documentation and data are critical elements of the compliance programs. The Contractor is responsible for the appropriate acquisition of data as per the applicable standard, quality control, storage, safe transfer and protection from unauthorized access.

It is anticipated that any future Contractor will be required to continue providing similar services.

B.2. Future expectations of the Contractor

Compliance programs are expected to continue to evolve and diversify. The harmonization of regulations with the US NHTSA will continue to be a priority, though other international regulatory frameworks may also gain importance if these can be shown to address the road transportation safety needs of Canadians.

Overall, it is expected that any future Contractor will have substantial, proven experience and extensive expertise in conducting motor vehicle safety compliance test programs; the design and fabrication of custom test fixtures; and the development of tools to automate test compliance test methods.

Any future Contractor will be expected to have an experienced and skilled team permanently assigned to the MVTC to provide TC with uninterrupted services. These services may include the planning and the implementation of new regulatory test programs; the planning and management of material acquisitions to optimize integration with test instruments and equipment that are already in use; as well as the planning and development of new laboratory procedures to maximize accuracy, repeatability and safety.



C. Executing TC's Research Test Programs

C.1. Current Activities

TC led research programs operate within a framework of planned studies designed to address issues arising from the Canadian regulatory plan, field data, in-house research, international working group participation and communications with industry and other government research groups. The primary purpose of this research is to provide the scientific evidence needed for the development of new, or for the modification of existing regulations and safety standards. The research programs support Canada's efforts to address the vehicle safety needs of Canadians while aligning with other regulatory bodies internationally. The sustainability of the research programs is contingent upon data quality and adherence to recognized test protocols.

Research programs at the MVTC focus on occupant protection and crash avoidance, the evaluation of CAV technologies including ADAS, vehicle dynamics as well as the protection of vulnerable road users. The scope of the research programs depends on yearly budget allocations as well as test sample availability. TC purchases all test samples and will re-use test samples or share tests with other programs to augment cost effectiveness. Vehicle samples can include passenger cars, light and heavy-duty trucks, buses of all types and/or motor vehicle products not sold in Canada.

Responsibilities of the Contractor

The Contractor, under the current Contract, is required to conduct the tasks, produce the deliverables and purchase the materials identified in each statement of work and attached to the task authorization. While there may be some flexibility with respect to scheduling of tests and deliverables, TC's annual research plan must be executed within that same fiscal year.

Sample tasks include:

- Vehicle preparation including instrumentation, camera and lighting installation, on-board data acquisition fixation, ballasting and / or structural modifications, installation of instrumentation to interface with vehicles brake system, ABS instrumentation, vehicle dynamics and / or electronic stability control systems;
- ATD technology and prototype preparation and/or modification for the purpose of crashworthiness and biofidelity studies. Maintenance, installation and troubleshooting of instrumentation, in-dummy and on-board DAS and related software;
- On-board and off-board high-speed digital photography of dummy kinematics and/or vehicle performance. Programming, customizing and troubleshooting of related software;
- Development of test environments and software interfaces for the assessment of all connected and automated technologies;



- Evaluation of ADAS and CAV technologies through the incremental development of test scenarios and programming of driving robots, targets and onboard/roadside units.
- Troubleshooting, maintenance, tuning to optimize performance and/ or repair of specialized equipment used in the execution of tests. For example, sleds, propulsion system, automated driving systems and related communications, environmental chambers, and computer networks.

It is anticipated that any future Contractor will be required to continue providing similar services.

C.2. Future expectations of the Contractor

Research programs are expected to continue to evolve and diversify. It is expected that any future Contractor will have substantial, proven experience and extensive expertise in conducting motor vehicle safety research test programs; the design and fabrication of custom test fixtures; and the development of tools to assess emerging vehicle technologies. As the mobility needs of Canadians evolve and the distribution of injury risk is altered, research priorities will need to be realigned. Significant expertise will be required to merge the science of CAV technologies with that of crashworthiness. This specialized knowledge and experience will be necessary to guide TC's capital investment opportunities and maintain the MVTC as a leading state-of-the-art motor vehicle test facility.

Any future Contractor will be expected to have an experienced and skilled team permanently assigned to the MVTC to deliver uninterrupted excellence-based services. Adaptability as well as a strong sense of innovation will be necessary to help TC remain at the forefront of motor vehicle research. Data protection and document production are also key activities that will be expected from any future Contractor.

D. Operating and Managing the Facilities

D.1. Current Activities

Responsibilities of the Contractor

The Contractor is responsible for the continuous operations and maintenance of the MVTC facilities. These responsibilities are categorized into two distinct classes and include:

- a) Instruments, equipment and infrastructure used for testing (this includes test tacks, environmental chambers and the computer network):
 - Yearly calibration of all instruments as well as equipment used for the calibration of instruments;
 - Pre and post-test inspection;
 - Preventive maintenance;
 - Trouble shooting and expeditious repair of test equipment;
 - Recommendations for improvements or replacement; and
 - Protection from unauthorized access.

b) Material and infrastructure not directly used for testing:

- Inspection, cleaning and maintenance of the buildings, fences, walkways, access roads, parking and ditches;
- Maintenance of mechanical and electrical systems, including elevators;
- Protection from unauthorized access; and
- Tracking the condition of major infrastructure assets and making recommendations for enhancement or repair.

The Contractor is responsible for ensuring compliance with applicable laws, regulations, and safety standards, including but not limited to environmental protection and occupational Health and Safety standards. The Contractor is also expected to detect and provide immediate response to threats that could result in harm to personnel, the environment or the site (i.e., fire, gas leaks and power failures).

It is anticipated that any future Contractor will be required to continue providing similar, uninterrupted services.

D.2. Future expectations of the Contractor

Any future Contractor is expected to implement the appropriate management structure and level of reporting. Status reports must be prepared and regularly delivered for various areas of activities (such as: Health, Safety and Security; Environmental; Calibration; Maintenance; Tests Schedule; Financial). Substantial increases in the utilization of the MVTC by other Federal departments or private clients may require additional coordination to ensure that TC retains priority access to services and that the equipment and instruments are maintained in proper working condition and available for TC programs. The inventory of test equipment and instrumentation to support test requirements is expected to continue to expand.

E. Implementing capital projects funded by TC

E.1. Current Activities

Capital projects include expenditures valued at \$10,000 or more to purchase, construct, or modify a fixed asset. TC secures annual funding for planned projects which can be shown to increase the capacity, capability, efficiency, effectiveness of the MVTC and/or to extend the life cycle of an existing fixed asset. Funding for each project is allocated on a yearly basis and as a function of Departmental priorities and budget. This includes projects that may span several years. Projects can be categorized into one of two categories:



a) Instruments, equipment or infrastructure used for testing.

These are typically highly specialized projects requiring in-depth knowledge of the test requirements, the suppliers and the limitations associated with the systems available on the market. These projects also require in-depth knowledge of the systems that are already in place and with which the new acquisition must be compatible.

Examples of past or ongoing projects include:

- Modernization of the crash lab in 2011;
- The acquisition of ATDs, high-speed cameras, DAS units, automated driving systems test equipment, ADAS and CAV targets;
- The repairs of test tracks; and
- Upgrades/improvements/repairs to the refrigeration system in the environmental chambers, to the VTS and the hydraulic/pneumatic sleds.

b) Investments/improvements to buildings and other fixed assets not directly related to testing

These projects require a good understanding of the site requirements and knowledge of existing buildings. Planning and integration of these projects require substantial effort to minimize disruptions to operations and ensure seamless integration with an existing ageing infrastructure. Many of these projects are affected by inclement weather and construction trades' availability. Completion within the fiscal calendar can be challenging.

Examples of past or ongoing projects include:

- Heating ventilation and air conditioning (HVAC) replacement;
- Sewage upgrade;
- Roof repairs; and
- Fire pumps replacement.

A task authorization with a detailed statement of work is issued to the Contractor by PWGSC prior to the beginning of each project as per the two categories above. The Contractor is responsible for proposing the acquisition strategy and ensuring that the Federal procurement guidelines are respected when carrying out the acquisition and commissioning. The costs associated with the management of capital projects is currently included in the annual operating and maintenance fee.

It is anticipated that any future Contractor will be required to continue providing similar services.

E.2. Future expectations of the Contractor

Any future Contractor will be required to participate in the planning and provide technical recommendations for all capital projects. Depending on the type and scope of the project, the Contractor may be required to obtain estimates, prepare requirements and tender documents, develop evaluation criteria, and conduct commissioning when applicable. For specialized test equipment, any future Contractor may be required to design and fabricate test fixtures and develop tools such as software interfaces. Some infrastructure projects (not used for testing) may be managed by PWGSC.

At this stage, there are no pre-defined capital projects for the 2022+ period to be communicated to potential future Contractors, but in general, any future Contractor should expect that the implementation of capital projects at the MVTC will be an iterative and constant process, with ongoing construction and upgrades to facilities, equipment and capabilities. TC's capital project strategy is constrained by annual budget allocations and priorities.

The following are examples of possible projects that could be undertaken at the MVTC and for which some degree of the aforementioned Contractor engagement may be required:

- Upgrades to existing tracks or construction of new test tracks;
- Design and construction of a controlled simulated urban environment to expand CAV technologies;
- Laboratory space to prepare commercial vehicles for testing and conduct post-test inspections;
- Construction of accommodations for third parties using the MVTC;
- Acquisition of THOR 5th percentile and new generation pediatric ATDs with and without on-board DAS;
- Upgrades to cameras and lighting;
- Design and fabrication of test bucks for the sleds and new mobile barriers; and
- Replacement of windows and doors, repair and paving of access roads and construction of perimeter fence.

Annex B – Scope of Work for Commercialization

Please refer to Annex C (Section C) for questions related to MVTC commercialization, to which we are seeking your input.

A. Responsibilities of the Contractor

The Contractor is responsible for promoting the utilization of services offered at the facility by third-party clients, in keeping with TC's core mandate of ensuring a safer, smarter, more efficient and more environmentally sustainable transportation system in Canada. It is anticipated that any future Contractor will be required to continue providing similar services.

B. Opportunities

The Greater Montreal Area is becoming a key North American location in the future of mobility and smart transportation, and the MVTC is at the heart of this booming ecosystem. Montreal is a recognized international hub for AI development.

Recognizing that the transportation industry is evolving quickly, TC would like to take advantage of opportunities to grow the MVTC, enhance its capabilities in line with emerging technologies in the transportation sector, and encourage greater utilization of the services offered on the site by vehicle and component manufacturers, researchers, technology developers, academics, other federal government departments, and all levels of government.

While TC compliance and research testing activities will remain the core mandate of any future Contractor, the development of additional business opportunities that support this ecosystem and that contribute to the development of the MVTC will be encouraged by TC, as long as such opportunities do not interfere with TC's testing and research programs. This includes the possibility of attracting outside investment in the facility to ensure the MVTC's long-term sustainability, and possibly encouraging long-term leasing opportunities for anchor tenants.



Annex C – Questions to Industry

A. General questions

- 1) What is your company's name and where are you located? Do you currently have activities in Canada? Can you please share your website address?
- 2) Do you have experience managing and operating a testing facility, as well as providing engineering and testing services? Can you provide a high-level description of this facility and the related services that have been provided?
- 3) Are you familiar with the operations of the MVTC? Have you ever visited the MVTC?
- 4) Do you have experience contracting with government entities, either within or outside Canada? If so, can you provide examples of such contracts and key aspects of these contracts?
- 5) As per the information presented in this document, would you consider participating in the anticipated procurement process? What factors or conditions would be key to your decision making?

B. Questions related to services provided to TC

- 6) As described in this RFI, the services required by TC are both highly specialized and diverse. Based on your experience:
 - a) Does the proposed contract length (5 years + 5 years + 5 years) allow for the recruitment and retention of necessary talent? If not, why? What would be a reasonable contract length to have skilled experts on-site from contract onset to closure?
 - b) What would you consider to be Industry best practices to balance the need for timely on-site services with value for money?
 - c) Since required skills and expertise will need to evolve over time to meet emerging testing requirements, what would you consider Industry best practices to attract and maintain such on-site skills and expertise over time?



- 7) TC is considering using a variable payment structure for the future Contract. Recognizing that TC is publicly funded through yearly appropriations:
- a) Compliance and research testing
 - What Industry best practices should be considered when developing the pricing scheme for compliance and research testing services? What activities are better suited to, for example, fixed fee per activity, rate card based on volume or lump sum types of payments?
 - What Industry best practices should be considered to adjust payments over the duration of the Contract period, in order to offset externalities such as competition to attract or retain talent, inflation, deployment of new standards or new classes of expertise, etc.?
 - b) Facilities management
 - What Industry best practices should be considered when developing the pricing scheme for the delivery of facility management services (cost plus, lump sum, others, etc.)?
- 8) To maintain alignment with Industry best practices, TC is evaluating the inclusion of a performance regime in the Contract to reward contract performance. According to Industry standards and precedents, what are your views on the effectiveness of implementing a performance-based contract for the services described in this RFI? Are there any particular mechanisms that could be considered in the future Contract?
- 9) What do you see as the top risks or challenges related to the ability to carry out the various expectations outlined in this RFI?
- 10) Are there any other relevant matters regarding TC activities that you would like to share with us?

C. Questions related to the commercialization of the MVTC

- 11) In order to generate revenues to offset the costs associated with maintaining a state-of-the art facility, the Contract will require the Contractor to identify additional sources of revenue. As such, TC would be willing to consider innovative ideas that generate revenues and promote usage by other federal departments, public institutions and private industry. In this regard:



- a) What Industry best practices should be considered in managing such initiatives to both the benefits of Canada and the Contractor?
 - b) How can contractual provisions, incentives or payment schemes help support the Contractor's efforts to expand a client base? Based on your knowledge of Industry best practices, is there any specific mechanism that would help to target specific types of new clients (e.g. other government departments, industry, academia, insurance companies, etc.), with the overall objective to generate further revenues?
 - c) What Industry best practices should be considered to foster the development of initiatives between the Contractor and academia and/or not for profit organizations in order to advance vehicle safety or broader mobility issues? What would you see as TC's role in fostering such initiatives?
- 12) Recognizing that TC is publicly funded through yearly appropriations and that it would like to encourage expansion of the MVTC:
- a) What are some Industry best practices on how the Contract could frame the pursuit of external business opportunities that maximize revenue generation while remaining consistent with the intended use of the MVTC?
 - b) How can the Contract support on-site investment by third parties?
 - c) What contract provisions would facilitate the Contractor's efforts to expand the MVTC's usage (e.g. ability for the Contractor to invest in the facility, a simple process that enables the Contractor to provide long-term leases to third parties, etc.)?
- 13) What are some Industry best practices that have been successful for encouraging innovation?
- 14) Given that it is the Contractor's responsibility to promote and commercialize the MVTC, what should be the role of TC, if any?
- 15) Are there any other relevant matters regarding commercialization that you would like to share with us?

Annex D – Description of installations and buildings

Current installations are described below:

| Asset | Description | Key dates | Key features |
|---------------------------------------|---|--|---|
| Alpha track (low-speed track) | This two-lane oval track is ideal for fuel consumption trials, electric vehicle evaluations, mileage accumulation and any testing that requires continuous long-distance operation of a vehicle. | <ul style="list-style-type: none"> Track built in 1979 Repaved with 2 inches above existing surface in 1989 Partial repair in 1994 Repairs to be planned within 5 years (2020-2025) | <ul style="list-style-type: none"> Length: 6.9 km (4.3 mi) Asphalt Speed limit of 120 km/h (62 mph) Includes two mild S-turns |
| Bravo track (high-speed track) | Designed for high-speed and endurance testing, this oval track consists of two straight sections connected at each end by banked curves. | <ul style="list-style-type: none"> Track built in 1978 Concrete sidewalks poured under the guardrails in 1998. Sealant between slabs redone in 2006 Shoulders repaved in 2006 Concrete drain outlet installed in 2006 Repairs to be planned within 5 years (2020-2025) | <ul style="list-style-type: none"> Length: 6.5 km (4.0 mi) Concrete surface 46° peak banking Load-bearing capacity of 25 000 lbs/axle No speed limit Maximum hands-off neutral speed within the curved sections of 180 km/h (112 mph) |
| Charlie track (braking pad) | This area is designed to represent a typical section of a highway. It provides an excellent test environment to evaluate the performance of ABS and traction control systems. CAV tests can be carried out on this track. | <ul style="list-style-type: none"> Track built in 1978 First 2 inches removed and repaved entirely in 2009 Next upgrade in 10-15 years (2030-2035) | <ul style="list-style-type: none"> Dimension: 670 m x 27 m (2,200 ft x 90 ft) Includes a Jennite® surface of 154 m x 5.4 m (505 ft x 18 ft) Has a peak friction coefficient (PFC) of 0.9 when dry and 0.5 when wet Includes an acceleration loop |
| Immersion pit | Located next to the Charlie track, this pit is used to evaluate vehicle braking performance in wet conditions. | <ul style="list-style-type: none"> Track built in 1978 Sealant between slab joints redone in 1998 No upgrade planned | <ul style="list-style-type: none"> Water depths: 1.3 m (4.3 ft) Diameter: 38.1 m (125 ft) Lane width: 7.6 m (25 ft) |
| Delta track | The paved surface is ideal for stability and | <ul style="list-style-type: none"> Track built in 1978 | <ul style="list-style-type: none"> Direct access from the high-speed track |

| Asset | Description | Key dates | Key features |
|------------------------------------|---|---|--|
| (dynamic testing area) | noise testing, as well as for advanced driving courses. CAV tests can be carried out on this track. | <ul style="list-style-type: none"> ▪ First two inches removed and repaved entirely in 1998-1999 ▪ Ultrathin layer installed in 2002 ▪ First two inches removed and repaved entirely in 2014 ▪ Next upgrade in 15-20 years (2035-2040) | <ul style="list-style-type: none"> ▪ Triangular shape with a base of 670 m and distance to apex of 500 m (2,198 ft x 1,640 ft) ▪ 82,000 m² (882,640 sq ft) surface ▪ The track has a 0% gradient in the East-West direction and a 0.6% gradient in the North-South direction |
| Echo and Foxtrot fields | These are two large adjacent grass areas intended for year-round specialized testing and events. | <ul style="list-style-type: none"> ▪ Track built in 1978 ▪ No upgrade since construction ▪ No upgrade planned | <ul style="list-style-type: none"> ▪ Echo: 300m x 300m (1,000 ft x 1,000 ft) ▪ Foxtrot: 150m x 300m (500 ft x 1,000 ft) |
| Hotel (Hill) track | The braking ramp is ideal for testing parking brakes, clutches, immobilizers and transmissions. | <ul style="list-style-type: none"> ▪ Track built in 1978 ▪ Sealant between slabs redone in 2000 ▪ Cracks in concrete will need to be repaired within the next 5 years | <ul style="list-style-type: none"> ▪ 4.6 m (15 ft) wide concrete ramp ▪ 6.1 m (20 ft) high ▪ Includes two distinct gradients of 20% and 30% |
| Kilo track | Accessible year-round, Kilo track is a gravel road used for off-road and sport utility vehicle evaluations. | <ul style="list-style-type: none"> ▪ Track built in 1978 ▪ Gravel added as required ▪ No upgrade planned | <ul style="list-style-type: none"> ▪ Total length: 9 km (5.6 mi) |
| Lima track (off-road track) | Lima track is a fully customizable area used to test the extreme off-road capabilities of a vehicle. | <ul style="list-style-type: none"> ▪ Track built in 1978 ▪ Last upgrade in 2002 ▪ No upgrade planned | <ul style="list-style-type: none"> ▪ Dimension: 47,000 m² (505,000 sq ft) |

Buildings

Main indoor test facilities and labs are described below:

| Asset | Description | Construction year |
|------------------------------------|---|--|
| Crash lab | <p>The collision laboratory offers a wide range of collision configurations and sled testing options. The crash area has four guided tracks and a closed-loop electrical propulsion system to offer optimal accuracy of impact point and speed.</p> <p>Within the crash lab, there are:</p> <ul style="list-style-type: none"> - An acceleration sled - A deceleration sled - A dummy calibration laboratory | 1978, with upgrades/additions in 2001, 2006, 2007 and 2010 |
| Main laboratory | Laboratory including equipment and technology for VTS testing, pendulums for low-impact speed testing, dynamometers and machine shop. | 1978, with multiple upgrades/additions |
| Pedestrian laboratory | The pedestrian laboratory is equipped with a BIA Universal Impact Simulation Test System used to simulate occupant and pedestrian impacts using a series of interchangeable impactors. | 2010 |
| Large environmental chamber | Hot and cold weather testing chamber that can accommodate large transport vehicles, helicopters or small planes. | 1978, with upgrades/additions in 1999, 2002, 2005, 2010, 2014 and 2017 |
| Small environmental chamber | Hot and cold weather testing chamber that can accommodate small component testing, passenger cars and accompanying equipment. | Same as Large Chamber |



Glossary

| | |
|-------------------------------|---|
| ABS | Anti-lock Braking System |
| ADAS | Advanced Driver-Assistance Systems |
| AI | Artificial Intelligence |
| ATD | Anthropomorphic Test Device |
| CAV | Connected Vehicles/Automated Vehicles |
| Contract | An agreement between two or more persons, which creates an obligation to do or not to do a particular thing. Its essentials are competent parties, subject matter, a legal consideration, mutuality of agreement and mutuality of obligation. |
| Contractor | One who contracts to perform work or furnish materials in accordance with a Contract |
| CMVSS | Canada Motor Vehicle Safety Standard |
| DAS | Data Acquisition System |
| Go-Co | Government-Owned Contractor-Operated |
| Industry | Stakeholders from the vehicle testing sector |
| m, km, km/h, mi, ft, sq ft | Meter, Kilometer, Kilometer per hour, Mile, Feet, Square feet |
| MVTC | Motor Vehicle Test Centre |
| NHTSA | National Highway Traffic Safety Administration |
| PWGSC | Publics Works and Government Services Canada |
| Respondent | Entities that respond to this RFI |
| RFI | Request for Information |
| RFP | Request for Proposals |
| TC | Transport Canada |
| US | United States |
| VTS | Vehicle Test Structure |

