

Revisions to the Qualification Procedures for ESPs in the Foundation Engineering Category TCP # 000-0159 Response to TCP Questions

ID#	Organization	Comments	MTO's Response
339	on my own behalf	Hello, I am a practicing Hydrogeologist, and our firm does not provide other geotechnical foundation services. Because this portion of the discipline falls within the foundation portion, it doesn't always align with the requirements and services typically provided by Hydrogeologists, as such, I suggest separating the requirements for a hydrogeologist from having certain foundation requirements: i.e. a soils lab.	Thank you for your suggestion. A RAQS approved soil and rock testing laboratory is needed for all specialties: Structures and Embankments, Tunnelling, Rock Engineering and Hydrogeology. Laboratory testing is considered necessary for Hydrogeological Assessments.
342	on my own behalf	Thank you for the copy of the notice recently published on MTOs Technical Consultation Portal regarding proposed revisions to the RAQS Qualification Procedures for ESPs in the Foundation Engineering category. Upon careful review we offer the following comments for consideration. We noted that existing MTO document titled Guideline for RAQS Appraisal and Registration dated Jan 2022 was the basis for the contemplated revisions.	Thank you for your comments.
		1. The changes are helpful since two documents will be compiled into a single document. Would MTO clarify that the January 2022 will be considered obsolete?	1. Yes. Confirmed.
		2. The revisions to the requirement to be eligible for high complexity Foundations would require a waiting period of three (3) years at medium complexity. It is our opinion that the eligibility requirements should not include aleatory timelines as each ESP would have different levels of qualified staff and experience. The evaluation should be based on the ESPs technical	2. The MTO may consider accepting a duration less than three years provided that the application demonstrates qualifications and experience commensurate with high complexity.

		ability and capability to carry out the gamut of engineering work for MTO Foundations projects. 3. An alternative to avoiding set timelines is to obtain the commitment of another ESP with high complexity Foundation's designation to carry out peer reviews of the proponent's high complexity Foundations reports until the levels of MTO review comments are considered acceptable.	3. The procurement of a subconsultant prequalified as High Complexity will be reviewed on a project specific basis. However, this will not upgrade the complexity status from Medium to High.
343	in my professional capacity, on	Comments for Qualification Procedures for ESP's in the Foundation Engineering Category	Thank you for your comments.
	behalf of my organization	1) The Qualification Criteria section indicates the following qualification requirements are applicable to all Specialties within Foundations Engineering Category: Applicant shall hold or be eligible to hold a valid Certificate of Authorization from PEO. Applicant shall hold or be eligible to hold a valid Certificate of Authorization from PGO for the Hydrogeology and for the Rock Engineering Specialties; and Applicants Key Personnel shall be licensed with PEO, or, for the Hydrogeology and for the Rock Engineering Specialties, be licensed with PGO and shall be listed on the Applicants Certificate of Authorization We believe that the applicant should already hold a valid Certificate of Authorization (from PEO or PGO) before applying to RAQS they would not be able to offer services without the Certificate of Authorization. Please review the need for applicants to hold a valid Certificate of Authorization from PGO for the Rock Engineering specialty and for the applicants Key Personnel to be licensed with PGO. Most engineers do not have dual licenses with PEO and PGO and it would be inappropriate for staff not	1. We do not see any ambiguity in the requirements. The service provider may have the Certificate of Authorization from PEO or Professional Geoscientists of Ontario (PGO) depending on the type of service they intend to provide. For Hydrogeology and Rock Engineering Specialties there is flexibility to have Certificate of Authorization either from PEO or PGO. Similarly for engineers working for a consulting firm (applicant) may be licensed by PEO or PGO depending on their engineering discipline/ areas of expertise.

registered with PEO to offer engineering services (i.e. Rock Engineering).

- 2) For the staff resource requirements at all three levels of complexities, it indicates the Key Personnel should be licensed in Ontario. Does the number of years of experience proposed for Key Personnel have to be all in Ontario or in Canada?
- 3) For Low Complexity, the document indicates that The Service Provider shall retain or own a laboratory that is registered in RAQS Soil and Rock Including Testing for Foundation Engineering Low Complexity. More detail is required on this requirement. Does the Service Provider just need to commit to retain a RAQS approved laboratory for any work carried out or do they need a written agreement in place with an approved laboratory at the time of application?
- 4) In describing the Foundation Engineering scope, what is meant by Construction Quality Management? Is this the same as Foundation Engineering Specialist (FES) for Contract Administration assignments? If so, would the staffing experience requirements presented here apply to future CA RFQs (FES work)?
- 5) Under High Complexity section, the document indicates Identifying one the Key Personnel licensed in Ontario with a minimum of 15 years experience as MTO Principal Contact and previously approved in medium/high complexity for a minimum of 3 years. Please clarify if this means a Key Personnel who is designated as MTO Principal Contact and who has a

- 2. The engineering experience gained in another jurisdiction will be acceptable and counted. However, for practicing in Ontario the service provider must be licensed in Ontario.
- 3. In case of outsourcing lab tests for low complexity registration, a written confirmation will be required.

- 4. Construction Quality Management is related to Foundation Engineering work. This is carried out by Foundation Engineering Specialist, retained by CA. Hence your understanding is correct. It is confirmed that staffing experience requirements in RAQS are applicable to FES work, but FES requirements may be augmented on any given project.
- 5. That is 15 years of engineering experience, not 15 years experience acting as MTO Designated Contact. So, once a consulting firm is registered in High Complexity, there will be already two engineers with minimum 15 years of engineering experience. One of those

		minimum of 15 years of experience, or (as written) 15 years experience as MTO Principal Contact. The latter would be difficult for succession planning for the Service Providers. Similar comment for other complexity levels.		engineers will be selected as MTO Designated Contact.
		6) For Section 2 (Geotechnical Structures and Embankments Medium Complexity): requirement for limited stability or settlement analysis seems low and is not clear. Suggest providing more detail such as settlement analysis based on oedometer test results and consolidation theory and stability analysis using limit equilibrium analysis under static and seismic conditions (High complexity would include finite element analysis, etc.).	6.	Noted. Thanks for the comments. We will consider suggested changes for future updates.
		7) Sections 7, 8 & 9 for Rock Engineering doesn't seem to present much differentiation between the complexity levels.	7.	Noted. Thanks for the comments. We will review and consider changes for future updates.
		8) Sections 10, 11 & 12 for Tunnelling doesn't seem to present much differentiation between the complexity levels other than what is presented in Table 1.	8.	Noted. Thanks for the comments. We will review and consider changes for future updates.
344	in my professional capacity, on behalf of my organization	We welcome the opportunity to review and provide our feedback to the Ministry of Transportations (MTO) changes to the RAQS systems Qualifications Procedures for Engineering Service Providers. Our company is committed to working with MTO to support its efforts to plan, design, construct and sustain the transportation portfolio as part of the government's commitment to the resiliency and prosperity of Ontario and its citizens. As such, we are presenting some practical revisions that can enable positive results for both MTO and its Engineering Service Provider partners.		

To provide best value to Ontarians, any changes to the present system should be made with the intent to enhance present capabilities, thereby supporting the needs of the portfolio by adding greater market capacity, incorporating new and innovative systems, processes, approaches, and capabilities from ESPs with experience and expertise gained from the successful delivery of projects for other clients and jurisdictions. It is our understanding that through this consultation that the ministry is seeking to facilitate greater engagement with a broader pool of qualified and experienced engineering firms to deliver its portfolio assignments as efficiently and effectively as possible. We understand that these objectives are in line to provide Ontarians better services, help Ontario Businesses grow, and save people time, in the spirit of the various bills passed through the Less Red Tape, Stronger Economy Act.

With this in mind, we have some concerns. From our experience we believe that the proposed changes to the qualification criteria for the Foundation Engineering category, rather than support the positive change all parties desire, will reduce competition, inhibit innovation, add bureaucracy, and actually prevent additional well-qualified firms from participating in the Ontario marketplace.

Further, the current qualification requirements firms must satisfy to be approved to undertake Medium and High Complexity Foundation Engineering assignments are already very restrictive. As a result, the sector is experiencing reduced market capacity and anti-competitive behaviours, and otherwise qualified and experienced engineering firms are being prevented from providing services to MTO.

Thank you for your comments. We note your concerns, however, MTO feels the developed qualification requirements ensure we have high quality services and deliverables.

More specifically, we draw your attention to the following additional concerns:

MTO projects delivered through Infrastructure Ontario typically require proponents to have RAQS approval for Foundation Engineering High Complexity. At the same time, IO requires exclusivity within their teams. The ongoing market consolidation trend has resulted in very few firms holding the Foundations High Complexity credential. Given that the respective terms of reference for the Design-Build, Technical Advisory and Owners Engineering mandates usually require proponents to have this qualification, all these firms typically are locked into project teams with exclusivity agreements well before RFPs are released. Consequently, the number of firms available to participate in any given opportunity is limited. These conditions limit the ability for more firms to compete, stifling diversity and innovation, or as we have observed" results in projects being delayed due to a lack of available fully qualified proponents. Even if a potential proponent is willing to engage a qualified subconsultant to assist with delivering the project, it cannot due to these circumstances.

- The requirement for firms to own a laboratory is not new. However, it has been an on-going barrier for engineering firms with highly skilled and experienced foundation engineers from being qualified to undertake engineering assignments for the ministry. Laboratories require a significant investment of capital and operating cost, and the RAQS approval process for these facilities through the Engineering Material Testing category is based on the ministry's needs to provide quality assurance services, and not for Foundation Engineering. As a suggestion, it would be much more

About 70 percent of MTO work falls under Structure and Embankment and the majority of our foundation engineering work fall under medium complexity. There are currently 14 Foundation Engineering Consultant registered on RAQS for providing Medium Complexity Foundation Engineering Services.

MTO does not want to unduly limit the number of firms who do Foundation work. MTO will review your concerns further.

Owning a laboratory is fundamental to providing foundation engineering services. Understanding the behaviour and properties of soil and rock is a fundamental pre-requisite to providing foundation engineering services.

The policy for medium and high complexity registered service providers to have their own labs was mandated in 2015 after consultation with service providers. It was felt that the service providers who own their

practical to allow firms to sub-contract to a RAQS approved laboratory; as with any prime/sub relationship, the Foundation Engineer consultant would ultimately be responsible for the laboratory results, and RFP requirements for the engineers presence during laboratory testing can address any further concerns.

own laboratory are in a better position to have accurate soil properties information. In case of a supplementary test, it is easier to have own laboratory where tests can be done quickly and in a timely fashion. There was also concern of transporting samples (such as sensitive soil samples in Shelby Tube). Transporting such samples to a distant laboratory can affect the accuracy of soil properties. Considering the above, MTO disagrees, firms need to own a laboratory to be qualified.

- Notwithstanding the above comment, many firms have already made substantial investments to become eligible under the current criteria. The ministry having changed the required criteria for qualification represents an unfair consequence for those firms that have made a commitment to proceed with these investments for which a return on investment will be delayed or unattainable. This approach is not in keeping with the spirit or intent of the Less Red Tape, Stronger Economy Act.

MTO considers that the laboratory requirement is an integral part of Foundation Engineering for Medium and High Complexity. This requirement is prudent to ensure public safety and is considered a smart investment decision in producing cost effective designs.

- For High Complexity Foundation Engineering, a new criterion is being proposed requiring Engineering Services Providers (ESPs) to be approved in medium complexity for a minimum of three years. This requirement is excessive and will result in further reducing the number of qualified firms available to participate in any given procurement, limiting marketplace competition. It will also limit the mobility of foundation engineers to join new firms as well as prevent additional otherwise established firms from participating in ministry procurements. Unintended consequences may include ESPs finding it difficult to

MTO will consider accepting a duration less than three years provided that the application demonstrates qualifications and experience commensurate with high complexity. recruit qualified staff if the firm itself is not qualified, and qualified staff may feel trapped in their current employment situation if they are not able to participate in the same complexity of MTO projects elsewhere.

Although the requirements indicate that demonstrated experience from any jurisdiction similar to Ontario is acceptable, it also includes a requirement to have a key person having a minimum number of years of experience as a MTO Principal Contact, which one cannot attain unless they are working on MTO projects. These minimum years as Principal Contact is impossible to achieve for any firm other than those that already have been working with MTO for many years. For High Complexity, someone with 15 years experience serving as Principal Contact will be close to retirement age this is simply not sustainable. For Low Complexity, it is not understood how an individual can gain such approval given that the criteria is to have a key person that already has 5 years of experience as a Principal Contact.

- It is our opinion that qualifications through RAQS should be considered as a first gate-check in determining an ESPs suitability to serve but should not act as a barrier to firms seeking to obtain qualification to successfully win the ability to undertake ministry assignments. Rather, more detailed criteria should be stipulated through RFPs to suit ministry needs on a project-by-project basis, or further opportunities need to

To clarify, the MTO Principal Contact must be identified as one of the key personnel approved for the specialty. This person does not need any prior experience as the MTO Principal Contact.

Experience beyond the MTO will be considered as part of the 5,10 and 15 year experience requirement. It should be noted that a Designated Principal Foundation Contact is not an additional employee of a firm but selected from the already qualified engineers in a firm with 5,10 and 15-years experience for Low, Medium and High Complexity categories in Foundation Engineering. The MTO Designated Contact is the most senior engineer and a long-time employee of a firm. The MTO Designated Contact is not only a QC verifier, but also a contact person who can be easily and quickly contacted for any enquiries or in any emergency.

Agreed, project specific requirements will be specified, however RAQS prequalification at both the company level and key personnel level, will continue to be required. be provided to allow more firms to qualify and help the industry thrive.

In the spirit of trying to achieve the best potential outcome as previously defined, the new criteria as presented do not provide a means for practical and qualifications-based entry into the MTO Foundation Engineering market; they will serve only to perpetuate and reduce the small group of firms already providing these services for MTO. The criteria will also create a barrier for firms to attract suitably qualified staff. Qualified personnel will be limited in their mobility among firms as any such move will require a multi-year repeat of the qualification process. Qualified firms will find it difficult to manage a succession plan if their qualified personnel leave and will suddenly face requalifying as if they are new to the market, further shrinking the pool of eligible companies able to undertake ministry assignments. As such, the ministry's new criteria serve only to benefit the current small cohort of large established Foundation Engineering companies.

Further, the new criteria prevent firms from pursuing work with other clients that use MTOs RAQS as a qualification criterion thereby perpetuating current broader market capacity problems, negatively contributing to an already frustrated condition. To promote competition, succession planning, and address the current industry workforce availability challenges we respectfully request the following changes:

Clearly state that appropriate experience gained through complex work completed for municipalities in Ontario or similar Ministry/Department of Transportation

MTO disagrees that the new criteria serve only to benefit the current small cohort of large established Foundation Engineering companies. Experience qualifications are portable and can be transfer to a new company. Firms who lose key personnel have 120 days to find replacement staff before becoming disqualified. It is incumbent on the company to recruit and develop their staff.

MTO believes that the qualification criteria are designed for the sole purposes of service provider's qualifications-based entry. Other small service providers who do not have sufficient staff and experience to handle big and more complex projects work on low complexity projects. As they grow, they move to higher complexity. That in our opinion is succession planning.

The Policy and Guidelines in Qualification Procedures for Engineering Service Providers does not preclude any

agencies in Canada or USA as acceptable medium or high complexity experience, and that qualifications are not based exclusively on MTO experience.

experience of a service provider. A Service Provider's proven experience from other jurisdiction, agencies or consulting firms is considered in the application evaluation.

Consider the experience gained in comparable international jurisdictions, in the spirit of Bill 98, Fairness for Ontario's Internationally Trained Workers Act, 2022.

Experience beyond the MTO will be considered as part of the 5,10 and 15 year experience requirement.

Delete the requirement for experience as a MTO Principal Contact for High, Medium and Low complexity approvals. Rather, allow senior level experience, perhaps combined with interviews of the key personnel.

To clarify, the MTO Principal Contact must be identified as one of the key personnel approved for the specialty. This person does not need any prior experience as the MTO Principal Contact.

More accurately classify the complexity of ministry assignments. It is our observation that current practices sees many projects classified as high complexity could more appropriately be classified as medium or low complexity. Doing so will enable firms to gain more low and medium complexity assignment experience, thereby broadening and deepening the pool of qualified consults over time

Careful review and determination will be implemented moving forward. MTO will review each project carefully to assess the complexity of the work and to determine whether the project should be assigned High Complexity or Medium Complexity. The majority of MTO Foundation projects, up to 70 percent, are classified as medium complexity and that allows many service providers in lower complexity to work on the project..

Consider the experience of key personnel obtained while employed at other firms, thereby enabling a firm the ability to undertake high complexity assignments sooner.

Experience beyond the MTO will be considered as part of the 5,10 and 15 year experience requirement.

Consider eliminating the laboratory ownership requirement, as this is a significant barrier to doing

Owning a laboratory is fundamental to providing quality foundation engineering

		business and forces firms to make unsustainable capital and operating investments for tests that are conducted on an infrequent basis.	services. Understanding the behaviour and properties of soil and rock is a fundamental pre-requisite to providing foundation engineering services.
345	on my own behalf	I respect and acknowledge MTOs desire to have experienced foundation engineers involved in their projects, given the potential for ground and groundwater-related risks in design and construction. However, I am concerned that some of the proposed changes will limit qualified individuals and firms both for MTO projects and for non-MTO projects; for example, Infrastructure Ontario, Metrolinx and other agencies/jurisdictions also refer to MTO RAQS	Thank you for your acknowledgment and belief that experienced foundation engineers should be involved in public projects given the potential for associated risk. MTO does not believe that the proposed changes will limit the number of firms unduly. Noting this, MTO will monitor and
		requirements for geotechnical/foundation engineering and hydrogeology in conventional and alternate procurement contracts. The proposed changes would limit the ability of firms to respond to these requirements, and either restrict competition or potentially limit opportunities for innovations that have been developed in other jurisdictions. Neither of these impacts represent good value for delivering MTOs infrastructure projects, nor infrastructure projects delivered by other agencies.	consider further changes if needed
		Specifically, my concern is around the requirement to have one individual in a firm with a minimum of 5, 10 or 15 years as a Designated Principal Foundations Contact for low, medium and high complexity	Experience is an essential component of Foundation Engineering due to the nature of the discipline.
		foundation engineering services respectively. These timelines, and particularly the 10- and 15-year timelines for at least one individual in medium and high complexity, will effectively limit the provision of	Experience beyond the MTO will be considered as part of the 5,10 and 15 year experience requirement.
		foundation engineering services to firms who have already been providing MTO with such services for a number of years, or to those firms who are able to lure such an individual from another firm. A relatively small	It should be noted that a Designated MTO Principal Foundation Contact is not an additional employee of a firm but selected from the already qualified engineers in a

number of individuals already hold a Designated Principal Foundations Contact role at medium or high complexity many for less than 10 years or 15 years, or proposed change that would require a firm to have a minimum of one individual with 5/10/15 years of experience as a Designated Principal Foundations Contact. For example, one or more of the following could be considered (and I'm confident there are other approaches by which MTO can gain confidence in the experience provided by their foundation engineering service providers):

else close to retirement and I believe this small pool will limit rather than promote the experience and wisdom that MTO should seek from multiple firms in delivering foundation engineering aspects of their projects. While I appreciate the value in having an individual with experience in this role within a company, ostensibly so that individual may provide mentoring and guidance to newer colleagues taking on that same role, I suggest other criteria be considered to gain the experience, wisdom and expertise that MTO seeks via the currently

firm with 5,10 and 15-years experience for Low, Medium and High Complexity categories in Foundation Engineering, to be the contact for MTO.

It should be also noted that for MTO Designated Contact the required experience is engineering experience, not number of years of experience acting as MTO Designated Contact. So, once a consulting firm is registered in High Complexity, there will be already two engineers with minimum 15 years of engineering experience. One of those engineers will be selected as MTO Designated Contact.

individual with the requisite number or any number of years in a Designated Principal Foundations Contact role for example, a given number of years of experience on MTO projects as a project engineer and senior engineer, and explicitly and especially a given number of years of experience on transportation infrastructure projects in other jurisdictions in Canada (hence familiarity with CHBDC), US DOTs, and/or international experience. There are great opportunities to bring ideas that may be innovative in Ontario's infrastructure market that have been developed and applied in US or international projects, and in fact I would endorse an

approach that embraces more engineers with

Preferably, provide alternatives to having one

Experience beyond the MTO will be considered as part of the 5,10 and 15 year experience requirement.

A Service Provider's proven experience from other jurisdiction, agencies or consulting firms is considered in the application evaluation.

backgrounds from outside of Ontario. Diversity of education thought, and experience will ultimate make teams and projects stronger.

- o Incorporate an interview approach rather than strict paper approach to gain a better measure of an individuals experience and to afford MTO an opportunity to stress to the individual what they seek from the Designated Principal Foundations Contact role. I suggest the real measure is not just in being able to meet on paper MTOs Guideline for Foundation Engineering services, but being able to share wisdom from when things have not gone as planned, where special provisions have been required and the lessons learned from their application, involvement in construction contractor claims, etc.
- o If MTO is determined to entail the requirement to have one individual with a minimum number of years as Designated Principal Foundations Contact, then I would urge both the implementation of a graduated implementation period, as well as application of a lower number of years in the Designated Principal Contact role for that one individual. For example, one or two years for Low Complexity based on the elements/types of work in this category, and three to five years for Medium or High Complexity if such a requirement for a firm to have one individual with such a number of years is needed at all.

Phased approach will be implemented as required where MTO will review applications as an initial phase, with potential subsequent phase that includes face-to-face and/or virtual meeting(s) to gather additional information or to seek clarification to facilitate the review.

Experience is an essential component of Foundation Engineering due to the nature of the discipline.

Experience beyond the MTO will be considered as part of the 5,10 and 15 year experience requirement.

It should be noted that a Designated Principal Foundation Contact is not an additional employee of a firm but selected from the already qualified engineers in a firm with 5,10 and 15-years experience for Low, Medium and High Complexity categories in Foundation Engineering, to be the contact for MTO.

		Thank you for the opportunity to provide input on MTOs draft proposal for revisions to the qualification procedures for the foundation engineering category while I appreciate MTOs desire for experience in delivery of foundation engineering services given the implications for ground-related risk on design and construction, I would urge the Ministry to reconsider the unintended consequences of the proposed changes that may ultimately limit the pool of service providers, reduce competition and reduce innovation. With warm regards, Lisa Coyne	Thank you for your comments, we will review your concerns further.
Submitted via email to Seyed Tabib	ACEC	On behalf of the Association of Consulting Engineering Companies-Ontario (ACEC-Ontario), and its 140 member firms operating across the province, we are writing to provide a response to the Ministry of Transportation's (MTO) on the proposed revisions to the prequalification criteria for specialties in the Foundation Engineering Category. This response represents feedback that ACEC-Ontario received from both very large and small firms providing foundation engineering services to MTO and other clients. ACEC-Ontario is concerned that the proposed changes will reduce competition, inhibit innovation, add bureaucracy, and prevent additional well-qualified firms from participating in the Ontario marketplace. Concerns	MTO thanks ACEC-Ontario for their comments on the proposed updates to the Qualification Procedures for ESP's in the Foundation Engineering Category.
		First and foremost, we are concerned with the requirement to have one individual in a firm with a minimum of 5, 10 or 15 years as a Designated Principal Foundations Contact for low, medium, and high complexity foundation engineering services. These minimum years as Principal Contact is impossible to achieve for firms other than those that already have	The Designated Principal Foundation Contact is not an additional employee of a firm but selected from the already qualified engineers in a firm with 5,10 and 15-years experience for Low, Medium and High Complexity categories in Foundation Engineering, to be the contact for MTO.

been working with MTO for many years. And even though the requirements indicate that demonstrated experience from any jurisdiction similar to Ontario is acceptable, the key person must still have a minimum number of years of experience as a MTO Principal Contact, which they cannot attain unless they are working on MTO projects.

It should also be noted that there are only a relatively small number of individuals who hold such a role, particularly at medium or high complexity. When it comes to High Complexity, someone with 15 years experience serving as Principal Contact will be close to retirement age. For Low Complexity, it is not clear how someone will be approved given that the criteria is to have a key person that already has 5 years of experience as a Principal Contact.

Moreover, the proposal requiring Engineering Services Providers (ESPs) to be approved in medium complexity for a minimum of three years is excessive. It will reduce the number of qualified firms available to participate in any given procurement, thereby limiting marketplace competition. It will also limit the mobility of foundation engineers to join new firms as well as prevent additional otherwise established firms from participating in ministry procurements. Unintended consequences may include ESPs finding it difficult to recruit qualified staff if the firm itself is not qualified, and qualified staff may feel trapped in their current employment situation if they are not able to participate in the same complexity of MTO projects elsewhere.

Indeed, the eligibility requirements should not include arbitrary timelines as each ESP would have different levels of qualified staff and experience. The evaluation should be based on the ESP's technical ability and Experience beyond the MTO will be considered as part of the 5,10 and 15 year experience requirement.

Experience is an essential component of Foundation Engineering due to the nature of the discipline.

Experience beyond the MTO will be considered as part of the 5,10 and 15 year experience requirement. Experience qualifications are portable and can be transferred to a new company. Firms who lose key personnel have 180 days to find replacement staff before coming disqualified. It is incumbent on the company to recruit and develop their staff.

capability to carry out the gamut of engineering work for MTO Foundations projects.

There are also concerns that the proposed new criteria will prevent firms from pursuing work with other clients that use MTO's RAQS as a qualification criterion. For example, Infrastructure Ontario (IO), Metrolinx and other agencies or jurisdictions refer to MTO RAQS requirements for geotechnical / foundation engineering and hydrogeology in conventional and alternate procurement contracts. The proposed changes would therefore limit the ability of firms to respond to these requirements, and either restrict competition or potentially limit opportunities for innovations that have been developed in other jurisdictions.

Recommendations

To promote competition, succession planning, and address the current industry workforce availability challenges, ACEC-Ontario proposes the following recommendations to MTO:

- Clearly state that appropriate experience gained through complex work completed for municipalities in Ontario or similar Ministry/Department of Transportation agencies in Canada or USA as acceptable medium or high complexity experience, and that qualifications are not based exclusively on MTO experience.
- Consider the experience gained in comparable international jurisdictions.
- Delete the requirement for experience as a MTO Principal Contact for High, Medium, and Low complexity approvals. Instead, allow senior level

Response to Recommendations

Experience from other jurisdictions will be eligible in submissions and experience will NOT be restricted to MTO.

The MTO Principal Contact acts as a direct liaison to the MTO and satisfies the expected leadership. We feel that is an effective organizational requirement.

It should be noted that a Designated Principal Foundation Contact is not an additional employee of a firm but selected from the already qualified engineers in a firm with 5,10 and 15-years experience for Low, Medium and High Complexity categories in Foundation Engineering, to be the contact for MTO.

experience, perhaps combined with interviews of the key personnel.

 More accurately classify the complexity of ministry assignments. Currently, many projects classified as high complexity could more appropriately be classified as medium or low complexity. Doing so will enable firms to gain more low and medium complexity assignment experience, thereby broadening and deepening the pool of qualified consultants over time.

- Consider the experience of key personnel obtained while employed at other firms, thereby enabling a firm the ability to undertake high complexity assignments sooner.
- Consider eliminating the laboratory ownership requirement, as this is a significant barrier to doing business and forces firms to make unsustainable capital and operating investments for tests that are conducted on an infrequent basis.

More emphasis will be placed on the scoping of the project and discerning the complexity of the project. For some projects it is hard to know in the beginning if they are medium or high complexity. Majority of MTO Foundation projects, up to 70 percent, are classified as medium complexity and that allows many service providers in lower complexity to work on the project. Later on, some medium complexity projects require involvement of high complexity consultants as well.

A Service Provider's proven experience from other jurisdiction, agencies or consulting firms is considered in our evaluation.

Owning a laboratory is fundamental to providing quality foundation engineering services. Understanding the behaviour and properties of soil and rock is a fundamental pre-requisite to providing foundation engineering services.