

SECTION 190 OCCUPATIONAL HEALTH AND SAFETY

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190.1 GENERAL

- .1 All work is to be performed in accordance with the requirements of the Newfoundland Occupational Health and Safety Act and Regulations as amended.
- .2 Subsequent to awarding of the tender and at least 10 (ten) working days prior to commencement of work, the contractor must submit to the Engineer copies of:
 - .1 A detailed Site Specific Safety Plan for the owner.
 - .2 It is the responsibility of the General Contractor to submit only one Site Specific Safety Plan that incorporates all relevant portions of their subcontractors safety documentation.
 - .3 A Safety Record Letter from the Occupational Health and Safety Division.
- .3 Acceptance of the Project Site Specific Safety Plan and other submitted documents by the Engineer shall only be viewed as acknowledgment that the contractor has submitted the required documentation under this specification section. The Engineer makes no representation and provides no warranty for the accuracy, completeness and legislative compliance of the Project Health and Safety Risk Management Plan and other submitted documents by this acceptance. Responsibility for errors and omissions in the Project Health and Safety risk Assessment and Management Plan and other submitted documents is not relieved by acceptance by Engineer.

190.2 PROJECT SAFETY PLAN

190.2.1 PROJECT SAFETY PLAN REQUIREMENTS

The contractor shall:

- .1 Conduct operations in accordance with latest edition of the Newfoundland Occupational Health and Safety (OH&S) Act and Regulations with specific reference to codes and standards referenced therein.
- .2 Prepare a detailed Project Site Specific Safety Plan for the Owner. The plan shall identify, evaluate and control job specific hazards through a detailed hazard assessment of the tendered project outlining phases of the project and hazards/controls associated with specific work, equipment, locations and task associated with the work conducted during each phase of the project. The plan shall also ensure adequate policies; procedures and safe work practices are in place to manage hazards identified in the hazard assessment that cannot be addressed through engineering controls.
- .3 Provide a copy of the project Site Specific Safety Plan to the Owner/Engineer.

190.2.2 PROJECT SITE SPECIFIC SAFETY PLAN

The written Site Specific Safety Plan shall incorporate the following:

- .1 An organizational structure, in the form of an organizational chart with contact information of the key positions, which shall establish the specific chain of command and specify the overall responsibilities of contractors' employees at the work site.
- .2 A comprehensive work plan which shall:
 - .1 Outline the phases of the project and the required tasks, equipment, positions, resources and objectives for each phase.
 - .2 Conduct a detailed hazard assessment of each project phase taking into consideration all of the requirements above (objectives, tasks, equipment, positions, resources, training, etc.)
 - .3 Identify the controls required for all identified hazards and project phases that may include engineering controls, policies, procedures, equipment, safe work practices, training and communication with staff, etc.
 - .4 Establish personnel requirements for implementing the plan and controls, and establish site specific training and notification requirements and schedules.
- .3 A personal protected equipment (PPE) Program refer **Section 190.4.5**.
- .4 An emergency response procedure refer **Section 190.2.3**
- .5 A hearing conservation program in accordance with Part VI, Section 68 of the OHS Regulations.
- .6 A health and safety training program.
- .7 A visitor safety and orientation policy that will include education on hazards, required PPE to be worn by visitors and accompaniment by staff while on site. This program shall also take into consideration the safety of the general public that may come in contact with the work site and appropriate measures for notification and safety.

- .8 General safety rules.
- .9 The Contractor shall ensure the maintenance of all equipment is conducted in accordance with the manufacturers' specifications and/or as required by the CSA standard adopted by the OHS Regulations specific to the equipment.
- .10 The contractor shall provide to the Engineer, as part of the safety plan, a recent (current year) inspection form for all powered mobile equipment that will be used in fulfilling the terms of the contract, including rented and subcontractors equipment. The inspection form shall, at a minimum, state that the equipment is in a safe operating condition. Confirmation of the inspection shall be provided on the "Record of Inspection" attached and signed by a person qualified to do so in accordance with Part 1, Section 2(1)(u) of the Occupational Health and Safety Regulations, 2009. A sample "Powered Mobile Equipment Annual Inspection Form" is attached at end of this section.
- .11 The contractor shall provide to the Engineer as part of the safety plan, a complete listing of employee names, their driver's license classification, expiry date, endorsements and the type of equipment (excavator, paver, loader etc...) that they are qualified to operate for the complete scope of work on the project. The Driver's License Number should not be provided as this is confidential information. Provision of the License Number may breach PIPEDA - the Personal Information Protection and Electronic Documents Act. (Federal Act) or ATIPPA - Access to Information and Protection of Privacy Act - Part IV. (Provincial Act of NL & Lab). This shall also include documentation where required of certification in power line hazards. This must be provided in tabular format or spreadsheet, including all of the aforementioned information, and be signed and dated by a member of the Contractor's management team.
- .12 The contractor shall provide to the Engineer as part of the safety plan an acceptable parking policy for all powered mobile equipment to be used on the project. The policy shall, at a minimum, be based on a hazard assessment that considers factors such as equipment type, potential for roll over, load capacity of the parking area, pedestrian and vehicular traffic, and potential for equipment tampering, equipment energy, and equipment contact with power lines. The checklist provided below must be included as a component of the site specific hazard assessment completed by the Contractor for all parking sites required for the project. The precise locations must be noted on the checklist along with the date of completion and signature of the individual completing the assessment.

Project :	Identify location:					
	Yes	No	Priority Level	Action By	Date Corrected	Initials
Powered Mobile Equipment Parking Areas						
Potential for Rollover <ul style="list-style-type: none"> • Light vehicle • Heavy equipment • ROPS equipped? • FOPS equipped? 						
Capacity of parking area based on a visual review by an experienced operator <ul style="list-style-type: none"> • Bearing capacity • Slope of area 						
Effect on other users <ul style="list-style-type: none"> • Vehicles • Pedestrians 						
Can equipment be tampered with						
Can equipment contact power lines						

Contractors are advised the powered mobile equipment inspection form referred to above is attached at the end of Section 190.

- .13 Where required for completion of the contract, specific programs and documents may be required to meet basic safety provisions required in the OHS Act and Regulations. These documents may include but are not limited to:
- .1 A diving program which shall contain standard operating procedures to be followed in the

- diving operation.
- .2 In circumstances involving pits and quarries that fall within the jurisdiction of the mining safety additions to the Occupational Health and Safety Regulations 5/12 released March 20th, 2012. Contractors may be required to provide the following documents certified by the appropriate professionals in accordance with the regulations:
 - .1 Mine design plan, certified by a professional engineer (where three or more benches are to be mined) (section 519).
 - .2 Ground Control Log Book (section 525)
 - .3 Electrical energy mine plan, certified by a professional engineer (section 679)
- .14 Periodically review and modify as required each component of the Project Health and Safety Risk Assessment and Management Plan when a new hazard is identified during completion of work and when an error or omission is identified in any part of the Project Health and Safety Risk Assessment and Management Plan.
- .15 Implement all requirements of the Project Site Specific Safety Plan.
 - .1 Take all necessary measures to immediately implement any engineering controls, administrative controls, personal protective equipment required or termination of work procedures to ensure compliance with the Project Site Specific Safety Plan and the Occupational Health and Safety Act and Regulations. All measures should be immediately communicated to staff.
- .16 The contractor shall:
 - .1 Prepare a detailed Project Site Specific Safety Plan which shall:
 - .1 Contain project phase hazard assessment results
 - .2 Identify engineering and administrative controls (work practices and procedures) to be implemented for managing identified and potential hazards, and comply with applicable federal and provincial legislation and more stringent requirements that have been specified in these specifications.
 - .2 Review for completeness the hazard assessment results immediately prior to commencing work, when a new hazard is identified during completion of work and when an error or omission is identified.
 - .3 Be solely responsible for investigating, evaluation and managing any report of actual or potential hazards.
 - .4 Retain copies of all completed hazard assessments at the project site and provide a copy to the Engineer/Architect.

190.2.3 EMERGENCY RESPONSE PLAN

- .1 Develop an emergency response plan for the job site and ensure that supervisors and workers are trained in the emergency response plan.
- .2 The emergency response plan shall address, as a minimum:
 - .1 Emergency recognition and evaluation (identification of each potential type of emergency and evaluation of requirements for response)
 - .2 Pre-emergency planning (included the assessment of controls to reduce the likelihood of such an emergency if possible)
 - .3 Personnel roles, lines of authority and communication (include a communication list of all emergency services in the immediate and surrounding areas)
 - .4 Safe distances and places of refuge
 - .5 Site security and control
 - .6 Evacuation routes and procedures
 - .7 Decontamination procedures which are not covered by the site specific safety plan.
 - .8 Emergency medical treatment and first aid.
 - .9 Emergency alarm, notification and response procedures including procedures for reporting incidents to local, provincial and federal government departments.
 - .10 PPE and emergency equipment.
 - .11 Procedures for handling emergency incidents.
 - .12 Site specific emergency response training requirements and rehearsal schedules shall be identified along with written rescue plan for high risk emergencies (i.e. fall rescue and confined space entry).
 - .13 For diving operation, refer to **Section 190.5.5**
 - .14 The emergency response procedures shall be part of the overall training program. Separate emergency rescue procedures are to be developed for fall rescues and confined space entry rescues. These rescue plans shall be drilled regularly and separately being

formally documented. The frequency at which all aspects of the emergency response plan will be rehearsed must be stated.

- .15 Provide adequate first aid facilities for the job site and ensure that a minimum number of workers are trained in first aid in accordance with the First Aid Regulations.

190.3 SAFETY MONITORING

190.3.1 HEALTH & SAFETY MONITORING

- .1 Periodic inspections of the contractor's work may be carried out by the Engineer and/ or the Department of Transportation and Works Occupational Health and Safety Consultants to maintain compliance with the Site Specific safety Plan or Health and Safety Program. Inspections will include visual inspections of site and documentation, as well as testing and sampling as required.
- .2 The contractor shall be responsible for any and all costs associated with delays as a result of contractor's failure to comply with the requirements outlined in Section 190.
- .3 The general contractor will be responsible to ensure that site inspections have been completed at no less than 1 week intervals. These site inspections shall include risk assessments where the nature of the ongoing work or tasks associated with the work increase in risk or significantly change due to phases in the project or project progression.
- .4 Toolbox meeting shall be held with staff no less than once per week and shall include review of and safety related information that is pertinent to the safety of employees, site and equipment.
- .5 All toolbox meetings, site inspections, risk assessments, OHS Committee meetings and any OHS Directives or reports shall be documented and submitted with the OHS Monthly reports each month.

190.3.2 SUPERVISION

- .1 Carry out work under the direct supervision of competent persons responsible for safety by ensuring the work complies with the appropriate section of OH&S Act and Regulations, latest edition.
- .2 Any person assigned to supervisory duties on site shall not conduct significant work in relation to the contract that inhibits them from the ability to properly supervise the work site.
- .3 Assign a sufficient number of supervisory personnel to the work site. Supervisory personnel should also be trained and aware of the requirements in the Traffic Control Manual for signage and ensure the correct signage plan is utilized on site and staff have been notified of the requirements therein. Road signage must be inspected for accuracy by the supervisor upon set-up, each morning prior to work and at any point in which the signage requires change during the work day or life of the contract. A Traffic Control Signage log will be provided by the Department of Transportation and Works and must be submitted with the Contractor Monthly OHS Performance Report.
- .4 Supervisors shall have knowledge and understanding of the principals of trenching and excavation and shall refer to the OHS Regulations and the trenching and excavation safety guide from Service NL prior to and during such work.
- .5 Provide a suitable means of communications for workers required to work alone.

190.3.3 CONTRACTORS SAFETY OFFICER

- .1 A Contractor's Safety Officer is mandatory and they will be responsible for the implementation and monitoring of the Project Site Specific Safety Plan, and will have the authority to implement health and safety changes as directed by the Engineer. The Safety Officer shall have as a minimum:
 - .1 Completed training in hazard recognition evaluation and control.
 - .2 Completed training in accident incident investigations.
 - .3 Experience in the development and implementation of safe work practices and procedures.
 - .4 Knowledge, understanding and experience in the use of the Traffic Control Manual
 - .5 Flag persons training certified by the WHSCC.
 - .6 Knowledge and experience in trenching and excavation that includes and understanding of the Occupational Health and Safety Regulations 5/12.
 - .7 Power line hazards training certified by the WHSCC.

- .8 Knowledge and understanding of equipment maintenance and inspections required for preventive safety.
 - .9 Training and experience in the use, care and maintenance of PPE to be used on site.
 - .10 Completed training in Standard First Aid.
 - .11 Complete understanding, knowledge and familiarity with the Site Specific Safety Plan, Applicable codes and standards as well as the Occupational Health and Safety Act and Regulations that include the newly released parts XXVII – XXXIII related to Mining.
- .2 Where the work and/or contract require high risk activities, specific training of the CSO may be necessary in specific areas of safety. The list below is in no way an all encompassing list of required training, though represents some of the areas of high risk encountered in past contracts and the training required to mitigate and control hazards related to the specified activities. The contractor will be responsible through the risk assessment conducted during the development of the site specific safety plan to identify areas of high risk and ensure that the CSO is competent and has adequate knowledge to ensure adequate controls are in place to mitigate the risks to workers and abide by all applicable legislation, codes and standards.
- .1 Completed training in the use, maintenance of fall protection systems certified by the WHSCC.
 - .2 Completed training in the design and construction of scaffolding as referenced in the applicable CSA Standard.
 - .3 Completed training in confined space entry protocols, techniques and rescue plan as certified by the WHSCC.
- .3 With respect to project tasks and elements, the contractor safety officer shall be competent and qualified.

190.3.4 HEALTH AND SAFETY COMMITTEE

The contractor shall:

- .1 Establish an Occupational Health and Safety Committee where ten or more workers are employed on the job site as per the OH&S Act and Regulations
- .2 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .3 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site specific Health and Safety Plan.
- .4 Provide a copy of all committee minutes with the Contractor Monthly OHS Performance Report.

190.3.5 RESPONSIBILITY

Should any unforeseen or peculiar safety related factor, hazard, or condition become evident during performance of Work, the contractor must:

- .1 Follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations.
- .2 Advise Engineer verbally and in writing
- .3 Where life safety risks exist, the contractor must stop the work until such time as the risk can be mitigated to a safe level.
- .4 Make appropriate steps to ensure that the hazards are mitigated to a safe level, workers are notified of the hazards and how to protect themselves. As well workers must be provided with any new safe work practices or information regarding mitigation of the risk.

190.3.6 INSTRUCTION AND TRAINING

- .1 Workers shall not participate in or supervise any activity on the work site until they have been trained to a level required by this job function and responsibility. Training shall, as a minimum, thoroughly cover the following:
 - .1 Federal and Provincial Health and Safety Legislation requirements including roles and responsibilities of workers and person(s) responsible for implementing, monitoring and enforcing health and safety requirements.
 - .2 All workers will be instructed and trained on the hazards associated with work they will be performing and how to protect themselves. This will include a review of all safe work practices, the reporting and documentation of hazards, reporting accidents and injuries

as well as, formal training in areas of high risk (i.e. fall protection, power line hazards, traffic control persons training). This must be documented through on site orientations and copies of these records provided to the Resident Engineer prior to commencing work.

- .3 Safety and health hazards associated with working on a contaminated site including recognition of symptoms and signs which might indicate over exposure to hazards.
- .4 Limitations, use, maintenance and disinfection – decontamination of personal protective equipment associated with completing work.
- .5 Limitations, use, maintenance and care of engineering controls and equipment.
- .6 Limitations and use of emergency notifications and response equipment including emergency response protocol.
- .7 Work practices and procedures to minimize the risk of an accident and hazardous occurrence from exposure to a hazard.
- .8 Appropriate number of persons trained in emergency and Standard First Aid according to the First Aid Regulations.
- .9 Department of Transportation and Works, Traffic Control Manual.
- .2 Contractors must provide and maintain training of workers, as required, by Federal and Provincial legislation.
- .3 Copies of all training records shall be provided to the Engineer for review, before a worker is to enter the work site. These records must be provided in tabular or spreadsheet format, stating the employee's name, training obtained and expiry dates, and be signed and dated by a member of the Contractor's management team.
- .4 Authorized visitors shall not access the work site until they have been:
 - .1 Notified of the names of persons responsible for implementing, monitoring and enforcing the Site Specific Safety Plan.
 - .2 Briefed on safety and health hazards present on the site.
 - .3 Instructed in the proper use and limitations of personal protective equipment.
 - .4 Briefed as the emergency response protocol including notification and evacuation process.
 - .5 Informed of practices and procedures to minimize risks from hazards and applicable to activities performed by visitors.
 - .6 Accompanied while on site.

190.3.7 CONSTRUCTION SAFETY MEASURES

The contractor shall:

- .1 Observe construction safety measures of Provincial Government, OH&S Act and Regulations, Workplace Health and Safety and Compensation Commission and Municipal Authority provided that in any case of conflict or discrepancy more stringent requirements shall apply.
- .2 Administer the project in a manner that will ensure, at all times, full compliance with Federal and Provincial Acts, regulations and applicable safety codes and the site Health and Safety Risk Assessment and Management Plan.
- .3 Provide Engineer/Architect with copies of all orders, directions and any other documentation, issued by the Provincial Department of Service NL and Human Resources Development Canada (HRDC).
- .4 Forward copies of all orders, directions or any other documentation immediately after receipt.

190.3.8 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices, minutes and orders are posted in conspicuous location on site in accordance with all Acts and Regulations.

190.3.9 NOTIFICATION

- .1 For projects exceeding thirty (30) days or more, the contractor shall, prior to the commencement of work, notify in writing the Work Place Health and Safety Division, Department of Government Services with the following information and provide a copy to the Engineer:
 - .1 Name and location of construction site
 - .2 Company name and mailing address of contractor doing the work
 - .3 The number of workers to be employed
 - .4 A copy of the Health and Safety Risk Assessment and Management Plan if requested

190.3.10 CORRECTION OF NONCOMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Engineer.
- .2 Provide Engineer/Architect with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Engineer/Architect may stop work if noncompliance of health and safety regulations is not corrected.

190.4 SAFETY REGULATIONS

190.4.1 WHMIS

- .1 Ensure that all controlled products are in accordance with the Workplace Hazardous Materials Information System (WHMIS) Regulations and Chemical Substances of the OH&S Act and Regulations regarding use, handling, labeling, storage, and disposal of hazardous materials.
- .2 Deliver copies of relevant Material Safety Data Sheets (MSDS) to job site and the Engineer. The MSDS must be acceptable to Labour Canada and Health and Welfare Canada for all controlled products that will be used in the performance of this work.
- .3 Train workers required to use or work in close proximity to controlled products as per OH&S Act and Regulations. This must be documented as part of the on site orientation and a copy provided to the engineer.
- .4 Label controlled products at jobsite as per OH&S and Regulations.
- .5 Provide appropriate emergency facilities as specified in the MSDS where workers might be exposed to contact with chemicals, e.g. eyewash facilities, emergency shower.
 - .1 Workers to be trained in use of such emergency equipment.
- .6 Contractor shall provide appropriate personal protective equipment as specified in the MSDS where workers are required to use controlled products.
 - .1 Properly fit workers for personal protective equipment
 - .2 Train workers in care, use and maintenance of personal protective equipment.
- .7 No controlled products are to be brought onsite without prior approved MSDS.
- .8 The MSDS are to remain on site at all times.

190.4.2 OVERLOADING

- .1 Ensure no part of work or associated equipment is subjected to loading that will endanger its safety or will cause permanent deformation.

190.4.3 FALSEWORK

- .1 Design and construct falsework in accordance with CSA S269.1.

190.4.4 SCAFFOLDING

- .1 Design, erect and maintain scaffolding in accordance with CSA S269.2M87: *Access Scaffolding for Construction Purposes* and Part XI: sections 147-249 of the OH&S Regulations.
- .2 Ensure that fall protection devices are used by all workers working at elevations of 1.22 meters or greater in accordance with CSA Z259 and CSA S269.2M87.
- .3 All workers performing work at height and who will be required to utilize a fall arrest system must be trained in a fall protection program certified by the WHSCC.
- .4 Scaffolding shall be inspected each day prior to use by a competent inspector. Records and copies of these inspections shall be kept on site and provided upon request to Department of Transportation and Works officials, resident engineer, etc.
- .5 Scaffolding inspection reports may be required to be provided with the monthly OHS performance reports, at the discretion of the resident engineer.

190.4.5 PERSONAL PROTECTIVE EQUIPMENT

- .1 A personal protected equipment (PPE) Program which shall detail PPE:
 - .1 Selection criteria based on site hazards.
 - .2 Use, maintenance, inspection and storage requirements and procedures.
 - .3 Decontamination and disposal procedures.
 - .4 Inspection procedures prior to during and after use, and other appropriate medical considerations.
 - .5 Limitations during temperature extremes, heat stress and other appropriate medical consideration.
- .2 In addition to those requirements set forth in the Occupational Health and Safety Act and Regulations, all persons, including those employed by the contractor or sub-contractors, working on projects for The Department of Transportation and Works shall wear the following mandatory Personal Protective Equipment at **ALL** times while working on the project.
 - .1 CSA approved safety boots meeting the CSA Z195 Standard.
 - .2 CSA approved hard hat meeting the CSA Z94.1 Standard.
 - .3 High visibility apparel as defined in Occupational Health and Safety Regulations.
 - .4 Where noise exceeds standards set out in the Occupational Health and Safety Regulations hearing protection shall be worn, and hearing conservation program implemented.
 - .5 Other personal protective equipment, as may be required by the work tasks, hazard assessments or the Contractor, depending on duties being performed.

190.4.6 TRAFFIC CONTROL

- .1 Provide traffic control measures when working on, or adjacent to, roadways. This will include but is not limited to appropriate signage, traffic control persons and control vehicles.
- .2 Traffic control measures to conform with "Traffic Control Manual for Roadway Work Operations", Department of Transportation and Works.
- .3 Daily completion of the Department of Transportation and Works, contractor daily traffic control signage log. This log is to be completed daily at a minimum and at any point where the signage required changes to ensure accuracy. The log will be submitted monthly with the contractor OHS Monthly performance report and may be inspected randomly by staff of Transportation and works for completion and accuracy.
- .4 Signage utilized on site shall meet the requirements of the Traffic Control Manual. This shall include though is not limited to;
 - .1 Signage shall be a minimum of 1.5 meters (this may include the use of flags)
 - .2 Signage should be in a vertical and highly visible position
 - .3 Only sandbags shall be utilized as an acceptable form of weighting for signage.
 - .4 Contractors shall remove appropriate signage during end of the work day and where required. This shall include but not be limited to speed limit reductions and flag persons signage where required.
- .5 Specific traffic control plans shall be made and provided to the Engineer with accompanying hazard assessments that identify hazards unique to the work. This shall include potential additional decreases in speed, accounting for seasonal heavy equipment, size of lanes and barriers to protect workers from traffic on projects.
- .6 Traffic control plans for all portions of the contract work shall be submitted to the Engineer with site specific safety plans to the Department with accompanying hazards assessments. These traffic control plans must note the location, plan number if referencing a plan contained in the Traffic Control Manual, spacing of signs, location and number of flag persons and be prepared in a professional manner. If the construction situation is not specifically addressed in the Traffic Control Manual then the Contractor must provide the engineer with a site specific traffic control plan addressing all of the items listed above in a professional format.
- .7 The contractor shall ensure that a competent individual is responsible for monitoring, maintaining and adjusting traffic control plans throughout the life of the project. This individual shall have been briefed and provided with a copy of the traffic control plans and must also complete the traffic control signage log to accompany the contractor OHS monthly performance requirements. This individual must be provided with the authority to make changes with respect to signage and have the resources to communicate with the engineer. Training as a traffic control person would be beneficial in this position.
- .8 Contractors should plan their work activities daily to ensure work will not occur in twilight or dark hours. However, if this does occur due to unforeseen circumstances, the Contractor shall

have provisions in place for illumination of the work area and ensure the TCP's are properly equipped as required.

190.4.7 WORKING AT HEIGHT

- .1 Fall Protection devices in accordance with the regulations are required at a height of 1.22 meters. Where fall protection is inadequate and the work is at a height equal or greater than 3.05 meters fall restraint or fall arrest devices are to be used by all workers in accordance with CSA Z259.
- .2 All workers performing work at height and who will be required to utilize a fall arrest system must be trained in a fall protection program certified by the WHSCC.
- .3 A list of all persons trained in WHSCC certified fall protection training shall be kept and maintained on site and may be combined with other training records as required in a tabular or spreadsheet format listed throughout section 190.
- .4 Regular inspections of all fall protection and fall arrest equipment are required and records shall be maintained and kept on site. Daily inspections of fall restraint and horizontal fall protection/arrest systems shall be conducted. This requirement is to form part of the Contractors' Site Specific Safety Plan.
- .5 Manufacturer's specifications for engineered fall protection/arrest/restraint systems shall be kept on site at all times.
- .6 Anchor points for fall arrest systems shall be identified and certified annually by a professional engineer as per CSA standards.
- .7 Prior to working at height workers shall be instructed in a Contractor SWP for working at height and associated rescue plans for working at height developed specific to the work, locations and risks.
- .8 Rescue equipment for fall rescues shall be kept in close proximity to workers working at height.
- .9 Where necessary the contractor shall ensure that adequate protection from falling debris is addressed in site specific safety plans, this may include debris nets, barriers, etc.

190.4.8 WORKING OVER OR NEAR WATER

- .1 Where the risk of entering the water is identified and other means of fall protection or rescue are not adequate to prevent the worker from entering the water, rescue from water plans shall be developed and trained with workers on site.
- .2 A list of all persons trained in water rescue will be kept and maintained on site.
- .3 Workers shall be required to wear personal flotation devices where the workers are at a risk of entering the water.
- .4 Life saving equipment shall be available near entry site for water rescue and may include life boats, throw lines, life preservers, etc.

190.4.9 ACCESS, EGRESS AND WALKWAYS

- .1 All accesses, egresses and walkways shall be continuously monitored for hazards that may include slips, trips, slippery conditions and other hazards.
- .2 Provisions for snow clearing of walkways, accesses and egresses shall be developed.
- .3 All access, egress hatches, holes or other potential hazards of this nature shall be identified, covered and clearly identified to workers.

190.4.10 RIGGING AND SLINGING

- .1 All workers required to perform work related to rigging and slinging shall be trained and deemed competent in such operations and practices.
- .2 All rigging and slinging equipment on site shall be maintained and inspected according to the manufacturers specifications, CSA Standards and OHS Regulations.
- .3 All rigging and slinging equipment shall have the working load limit marked and visible on the product.
- .4 All rigging and slinging operations shall at a minimum meet the requirements of the OHS act and regulations.
- .5 Any rigging and slinging equipment identified in daily inspections or otherwise identified as damaged, worn or unacceptable to manufactures specifications, appropriate standards or OHS Regulations shall be immediately taken out of service and destroyed.

190.5 SAFETY OPERATIONS

190.5.1 EXCAVATION OPERATIONS

- .1 Protect excavations more than 1.25 meters deep against cave ins or wall collapse by side wall sloping to the appropriate angle of repose, an engineered shoring/sheathing system or an approved trench box.
- .2 Provide a ladder where excavation greater than 1.25 meters deep, extending from the bottom of the excavation to at least 0.91 meters above the top of the excavation.
- .3 Ensure that all excavations less than 1.25 meters deep are effectively protected when hazardous ground movement may be expected.
- .4 Design trench boxes, certified by a registered Professional Engineer, and fabricated by a reputable manufacturer. Provide the manufacturer's Depth Certificate Statement permanently affixed. Use trench boxes in strict accordance with manufacturer's instructions and depth certification data.
- .5 For excavations deeper than six (6) meters, provide a certificate from a registered Professional Engineer stating that the protection methods proposed have been properly designed in accordance with accepted engineering practice. The engineer's certificate shall verify that the trench boxes, if used, are properly designed and constructed to suit the depth and soil conditions.
- .6 Ensure that the superintendent and every crew chief, foreperson and lead hand engaged in trenching operations or working in trenches have in his/her possession a copy of the Occupational Health and Safety Regulations: Part XVII: Construction, Excavation and Demolition and Part XVIII: Excavation, Underground Work and Rock Crushing.

190.5.2 BLASTING OPERATIONS

When Blasting is Required

- .1 Valid Blaster's Certificate and Certificates of Qualification acceptable to the OHS Regulations 5/12 under section 419 identifying the Level of Qualification for the project requirements (Journey Persons Blaster Certificate will still be accepted). An acceptable letter of extension of blasters certificate from the Industrial Training Division of the Provincial Department of Education is required when certificate expires (5 years max.). Certificate numbers and names are required for all blasters proposed for the project.
- .2 Temporary Magazine License, when required
- .3 Explosives Vehicle Certificate, when required, issued by Transport Canada for transport of explosives regulated under the Transportation of Dangerous Goods Act.
- .4 Blaster resume which clearly states and demonstrates:
 - .1 Minimum five (5) years of experience in handling, storage and detonation of explosives.
 - .2 Training at a blaster's school which is acceptable to the provincial government.
- .5 Ensure blasting operations are carried out under the direct visual supervision of a certified Blaster either registered with the Industrial Training Division of the Provincial Department of Education or has been issued a certificate from completion of a program approved by the Provincial Department of Government Services. Ensure that the certificate level is appropriate for the blasting activities which will occur. Comply with the requirements of:
 - .1 Explosives Act.
 - .2 Explosives Regulations.
 - .3 Newfoundland Regulation 5/12, Occupational Health and Safety Regulations.
 - .4 Role of certified blaster set out in section 419 of the Occupational Health and Safety Regulations 5/12.
- .6 Store explosives in accordance with the "Explosives Act (Canada)" and transport, handle and use in the manner prescribed by the manufacturer of the substance and subject to specific regulations. An inventory of explosives shall be kept.
- .7 Ensure that workers required to transport explosives have a valid Transportation of Dangerous Goods Training Certification in accordance with the "Act to Promote Public Safety in the Transportation of Dangerous Goods, and the "Explosives Act (Canada)". Vehicle used to transport explosives on site shall be placarded and explosives shall be transported in containers lined with wood (reference section 428 of the Occupational Health and Safety Regulations 5/12 comply with section 42. Detonators shall not be placed in a magazine or daybox with other types of explosives or in a compartment of a vehicle with another type of explosive.

- .8 Use of explosives on site shall comply with the Occupational Health and Safety Regulations 5/12 General Blasting requirements are set out in Part XIX of the Regulations Loaded holes shall be clearly identified with barricades put in place to prevent access to the holes. Drilling shall not be done closer to a loaded bore hole than a distance half the total depth of the hole being drilled and in no case shall drilling be conducted at a distance closer than 6m from a loaded borehole. Drill cuttings shall not be used as stemming material.
- .9 Advise the public by suitable public notices, advertisements, house to house contacts etc. for blasting operations in close proximity to areas occupied by the public. Advise of the warning device to be sounded and the procedure to be used before detonation of individual blasts. Roads and approaches to the danger area are guarded or barricaded to prevent anyone from entering. Loaded holes which have not been fired by the end of the day shall not be left unattended.
- .10 Prior to detonation of a blast, give sufficient warning in every direction and ensure that all persons have reached a place of safety before the blast is fired.
- .11 File an Emergency Response Assistance Plan with the Explosives Branch, Natural Resources Canada.
- .12 Blaster shall:
 - .1 Be solely responsible for implementation of the Explosives Management Program.
 - .2 Have a valid blaster's safety certificate from the Department of Education Division of Institutions and Industrial Education, and have a valid temporary Magazine License, when required, issued by Natural Resources Canada, for storage and explosives.
 - .3 Possess a thorough working knowledge of the Federal Explosives Act and Provincial Regulations.
 - .4 Possess a specialized training in handling storage and detonation of explosives.
 - .5 Keep a field journal concerning the blast activities.

190.5.3 HEAVY EQUIPMENT OPERATIONS

- .1 Ensure mobile equipment used on job site is of the type specified in OH&S Act and Regulations (specific to sections 261-263) shall be fitted with a Roll Over Protective Structure (ROPS) and Falling Object Protective Structures (FOPS).
- .2 Operators of mobile equipment shall have adequate instruction and competent in the operation of mobile equipment.
- .3 Provide certificate of training in Power Line Hazards for operators of heavy equipment.
- .4 Obtain written clearance from the power utility where equipment is used in close proximity to (within 5.5 meters) overhead or underground power lines.
- .5 Equip cranes with:
 - .1 A mechanism which will effectively prevent the hook assembly from running into the top boom pulley.
 - .2 A legible load chart
 - .3 A maintenance log book
- .6 Heavy equipment shall not be parked overnight on road shoulders, where exposure to the public may be present.

190.5.4 BRUSH CLEARING OPERATIONS

- .1 Ensure workers using chain saws are competent and wear the following safety equipment:
 - .1 CSA approved safety hat
 - .2 Hearing protection, e.g. ear muffs
 - .3 CSA approved chain saw pants
 - .4 CSA approved chain saw boots
 - .5 Approved eye protection
 - .6 Cut resistant gloves
- .2 Ensure that all workers using brush saws wear the following safety equipment:
 - .1 CSA approved safety hat fitted with face screen or shield or approved safety glasses
 - .2 Hearing protection, e.g. ear muffs
 - .3 CSA approved safety footwear
- .3 Chain saws must be equipped with a chain brake
- .4 A safe work practice (SWP) must be developed, implemented and all workers trained in the SWP prior to undertaking such tasks and utilizing tree and brush clearing equipment.

190.5.5 DIVING OPERATIONS

When Diving is Required

- .1 Diver(s) and dive supervisor (s)
 - .1 Copy of valid Diving Certificate and Supervisor Certificate from the Diving Certification Board of Canada (or equivalent) for the required work on the project. (i.e. Restricted SCUBA Diver, Unrestricted SCUBA Diver, SCUBA Supervisor, Restricted Surface-Supplier Diver, Unrestricted Surface-Supplied Diver, etc. (See www.divercertification.com).
 - .2 Resume which clearly demonstrates years of experience for the specific type (SCUBA, Surface Supplied Air, etc.) of diving to be performed at the site and projects completed to achieve minimum number of logged bottom time hours.
 - .3 First Aid and CPR Training Certification
- .2 Dive tender(s) resume which clearly states relevant training (including first aid and (CPR) and experience for the specific task (i.e. dive tender log book).
- .3 Current (less than one year) medical examination certificate (s) from a licensed medical doctor in the Province of Newfoundland and Labrador who is knowledgeable and competent in diving and hyperbaric medicine for all dives.
- .4 Certificates of Analysis for quality/purity of breathing air to be used by diver(s).
- .5 Documentation showing that diving life support equipment is in good working order and properly maintained.
- .6 Copies of documentation shall be submitted to show:
 - .1 An up-to-date dive site listing of the contact Hyperbaric facility and phone numbers for each location.
 - .2 Written arrangements with standby physician(s) specializing in diving/hyperbaric medicine for contingent emergency response and post dive follow-up for 48 hours after dive is completed.
 - .3 Effective means of communication between the diving supervisor and physician are available.
 - .4 The name, location and telephone number of the hospital and emergency department nearest the dive site.
- .7 For diving operations, emergency rescue procedure includes:
 - .1 Managing deteriorating environmental conditions
 - .2 Managing unexpected weather or sea state condition
 - .3 Evacuation of diver(s) under pressures greater than atmospheric pressure
 - .4 In water emergency transfers
 - .5 Managing failing of equipment below the surface that impairs the ability of a diver to complete a dive.
 - .6 Managing failure of any major component of diving plant or equipment
 - .7 Emergency signaling between divers involved in the diving program and between the diver(s) and the attendants using umbilical, tethers or other suitable methods.
 - .8 Mobilizing standby divers
 - .9 Mobilizing crafts, standby boats and any other devices to be used for rescue
 - .10 Contacting evacuation, rescue, treatment facilities and medical services that will be used in the diving program.
 - .11 Operation of emergency power and lighting facilities
- .8 Ensure diving operations conform to CSA Z275.2-92 Occupational Safety Code for Diving Operations and CSA Z275.4-97 Competency Standard for Diving Operations or later edition.
- .9 Sampling:
 - .1 Prior to commencing diving activities, sample water and analyze sample(s) for:
 - .1 Fecal Coliforms (*Escherichia coli*)
 - .2 Total Coliforms
 - .3 Any health hazard identified during the site specific hazard assessment.
 - .4 Any parameter as directed by the Department of Government Services, Government of Newfoundland and Labrador.
 - .2 Water will be designated a contaminant if the chemical concentration of a contaminant exceeds:
 - .1 200 fecal Coliforms (*Escherichia coli*) per 1000 milliliter of water.
 - .2 100 times the guidelines concentration established in the most recent Guidelines of Canadian Drinking Water Quality.
 - .3 Any other criteria established by the Newfoundland Department of Government Services.

- .10 Sample analysis is to be completed by a laboratory that is accredited by the Canadian Associates of Environmental and Analytical Laboratories (CAEAL) or other national equivalent.
- .11 Dive personnel must meet the minimum competency requirements of CSA 275.4-97.
 - .1 The Dive supervisor(s) shall as a minimum:
 - .1 Possess a Valid Diving Certificate, or equivalent, for a minimum of three (3) years for the type of diving to be performed.
 - .2 Possess a Valid Diving Certificate, or equivalent, for a minimum of three (3) years for the type of diving to be performed.
 - .3 Have completed fifty (50) hours of dive supervision for the type of diving to be performed.
 - .2 Diver(s) shall as a minimum:
 - .1 Possess a valid Diving Certificate or equivalent, for the type of diving to be performed.
 - .2 Have completed fifty (50) hours of logged dive time for the type of diving to be performed.
- .12 A diving operation shall be interrupted or discontinued or not commenced when:
 - .1 Continuation of the diving operation would or is likely to compromise the safety of any person involved in the diving operation.
 - .2 The water currents at the underwater work site are likely to compromise the safety of any person involved in the diving operation.
 - .3 Combustible material is stored too close for safety to any diving plant and equipment used in the diving operation.
- .13 A diving operation shall:
 - .1 Not be conducted in the vicinity for any other activity that might pose a danger to any person involved in the diving operation.
 - .2 Not use any craft that has insufficient power or stability for the safe continuity of the diving operation.
 - .3 Provide measures for making work area boundary and stopping unauthorized entry into the work area.
 - .4 Provide adequate illumination of the dive site and the underwater work site of the diving operation.
- .14 Provide, at the work site while completing diving operations, a diving operations log book that is permanently bound and has numbered pages.
 - .1 Produce on request, any log books, records or other documentation associated with the diving operation, for inspection by Engineer/Architect.
 - .2 As a minimum, for each diving operation enter into the diving operation logbook:
 - .1 date and time the diving operation commenced and terminated including any time the diving operation was interrupted
 - .2 name of supervisor; names of all other persons involved
 - .3 the procedures followed
 - .4 the decompression table and the schedule in that the decompression table was used
 - .5 the maximum depth, bottom time, dive time and total dive time for each dive
 - .6 the type of diving plant and equipment and the type of breathing mixture used
 - .7 the type of discomfort, injury or illness including decompression sickness, suffered by any person involved
 - .8 any environmental conditions that affected or might have affected the diving operation
 - .9 any other factors relevant to the safety to health of any person involved
- .15 Diving in free swim mode is not permitted at the work site.
- .16 Provide separate first aid supplies for dive operation. All dive team personnel shall be trained in first aid and cardiopulmonary resuscitation (CPR).
- .17 Provide medical oxygen for emergency response at work site. The dive supervisor shall be trained in administering medical oxygen.

190.5.6 CONFINED SPACE OPERATIONS

When Confine Space Entry is Required

- .1 Copies of confined space entry training certificates acceptable to the WHSCC where entry to confined spaces may be required, as well as, copies of confined space entry programs, confined space assessments, confined space entry permits, safe work practices and rescue plans.
- .2 Ensure confined operations are carried out under the Occupational Health and Safety Act and Newfoundland Regulation 70/09, Occupational Health and Safety Regulations PART XXVII CONFINED SPACE ENTRY.
- .3 All staff required to enter a confined space shall be trained in confined space entry through a program certified by the WHSCC.
- .4 The contractor shall ensure that all appropriate policies, assessments, testing and rescue plans are in place, communicated to workers and utilized prior to confined space entry.

190.5.7 CRANE OPERATIONS

- .1 All training records and certifications for operators of cranes shall be kept on site and maintained. This training shall meet the requirements of the OHS Act and Regulations, CSA standards and identify the operators as competent.
- .2 Manufacturers' specifications for all lifting equipment shall be kept on site.
- .3 All lifting equipment shall be inspected and maintained in accordance with the appropriate CSA standards and manufacturers specifications by a competent and qualified individual.
- .4 All maintenance records for lifting equipment is maintained and available upon request.
- .5 Safe Work Practices for all crane operations and working around cranes shall be developed and reviewed with operators and staff.
- .6 Safe Work Practices for crane operating shall be developed and reviewed with all operators. Additional attention shall be provided for safe work practices related to operations for tandem crane lifts.
- .7 Where tandem crane lifts are required for the construction, maintenance and or repair of a structure, road or bridge a hazards assessment and corresponding plan/procedures shall be developed.
- .8 Operators and signalers shall have radios or other suitable means of communications.
- .9 Where an apprentice crane operator will be operating a crane he/she shall be under the direct supervision of a journey person operator as required by the industrial training division of the Department of Education.
- .10 Load capacity of the crane shall be clearly marked in a visible location.

190.6 OWNER'S STATEMENT

- .1 ***The owner shall not be responsible for injury or damage occasioned by a failure of the Contractor to adhere to these provisions.***