DIVISION 01 – GENERAL REQUIREMENTS

Contract 4 – Marquis, Holstein & Thatcher Rehabilitation

Project Codes: 198326

July 2024

SUBSTITUTION PROCEDURES

1. DEFINITIONS

.1 Substitution: a Product, a manufacturer or both, not originally specified in the Contract Documents by proprietary name but proposed for use by Contractor in place of a Product, a manufacturer, or both, specified by proprietary name.

2. SUBSTITUTION PROCEDURES

.1 Contractor may propose a Substitution wherever a Product or manufacturer is specified by proprietary name(s), unless there is accompanying language indicating that Substitutions will not be considered.

.2 Provided a proposed Substitution submission includes all the information specified in this Section under Submission Requirements. For Proposed Substitutions, the Engineer will review and accept or reject the proposed Substitution.

.3 The Engineer may accept a Substitution if satisfied that:

.1 The proposed substitute Product is the same type as, is capable of performing the same functions as, interfaces with adjacent work the same as, and meets or exceeds the standard of quality, performance and, if applicable, appearance and maintenance considerations, of the specified Product,

.2 The proposed substitute manufacturer has capabilities comparable to the specified manufacturer, and

.3 The Substitution provides a benefit to the Owner.

.4 If Contractor fails to order a specified Product or order a Product specified by a manufacturer in an adequate time to meet the Contractor's construction schedule, the Engineer will not consider that a valid reason to accept a Substitution.

.5 During construction, if the Engineer accepts a Substitution and subject to Owner's agreement, the change in the Work will be documented in the form of either a Supplemental Instruction or Change Order as specified in Division 00 Section 00.45.00 - General Conditions.

.6 If a Substitution is accepted in the form of a Supplemental Instruction or Change Order, the Contractor shall not revert to an originally specified Product or manufacturer without the Engineer's prior written acceptance.

3. SUBMISSION REQUIREMENTS FOR PROPOSED SUBSTITUTIONS

.1 Include with each proposed Substitution the following information:

.1 Identification of the Substitution, including product name and manufacturer's name, address, telephone numbers, and website.

.2 Reason(s) for proposing the Substitution.

.3 A statement verifying that the Substitution will not affect the Contract Price and Contract Time or, if applicable, the amount and extent of a proposed increase or decrease in Contract Price and Contract Time on account of the Substitution.

.4 A statement verifying that the Substitution will not affect the performance or warranty of other parts of the Work.

.5 Manufacturer's Product literature for Substitution, including material descriptions, compliance with applicable codes and reference standards, performance and test data, compatibility and contiguous materials and systems, and environmental considerations.

.6 Product samples as applicable.

.7 A summarized comparison of the physical properties and performance characteristics of the specified Product and the Substitution, with any significant variations clearly highlighted.

.8 Availability of maintenance services and sources of replacement materials and parts for the Substitution, as applicable, including associated costs and time frames.

.9 If applicable, estimated life cycle cost savings resulting from the Substitution.

.10 Details of other projects and applications where the Substitution has been used.

.11 Identification of any consequential changes in the Work to accommodate the Substitution and any consequential effects on the performance of the Work as a whole. A later claim for an increase to the Contract Price or Contract Time for other changes in the Work attributable to the Substitution will not be considered.

END OF SECTION

MEASUREMENT AND PAYMENT

1. LUMP SUM CONTRACT ITEMS

.1 For Lump Sums, payments will be made on the basis of the Lump Sum Price or Prices in SECTION 00.11.05 BID FORM SUPPLEMENT E – UNIT PRICE FORM. The Lump Sum Price shall be full compensation for supplying materials as specified and for installing materials including hauling, placing, installing, cleaning, testing and placing in service together with all work subsidiary and incidental thereto for which separate payment is not provided elsewhere. The limits of the Lump Sum Prices are as shown on drawings and as specified.

2. UNIT PRICE CONTRACT ITEMS

.1 For Unit Prices, payments will be made on the basis of the unit prices in SECTION 00.11.05 BID FORM SUPPLEMENT E – UNIT PRICE FORM. The Contract Unit Price for supply of materials and installation of materials shall be full compensation for supplying, hauling, placing, installing, cleaning, testing, and placing in service together with all other work subsidiary and incidental thereto for which separate payment is not provided elsewhere.

3. MEASUREMENT AND PAYMENT METHODS – SITE PREPARATION

.1 Site Clearing – shall include cutting trees and brush, salvage of usable timber, burning if required and permitted, grubbing roots & stumps, disposal and clean-up of debris (including payment of charges to deposit at dump site if necessary). Limits of clearing are shown on the drawings.

Payment: Unit price bid per hectare cleared.

Measurement: Field survey of area cleared. Accuracy to 0.1 hectare.

.2 Stripping - shall include stripping topsoil and organic material from designated areas and to depths designated by the ENGINEER, loading and transporting, and stockpiling on the site or hauling to disposal; clean-up and all incidental work for which payment is not specified elsewhere.

Payment: Unit price bid per cubic meter of excavation. Overhaul will not be paid for stripping.

Measurement: Field survey of area stripped multiplied by the average thickness at sample holes or measure by survey before and after as determined by the ENGINEER.

.3 Common Excavation – Grading shall include excavation, loading, transporting within site limits, filling of embankments, stockpiling, and levelling. Grading shall also include clean-up, finishing, removal of debris, trimming and all incidental work for which payment is not specified elsewhere.

Payment: Unit price bid per cubic meter excavated by scrapper. Overhaul will not be paid unless there is a bid item in the schedule of quantities over 1.6km and has been approved by the Project Manager and Owner. There will be a separate unit rate price for material that is extremely wet and has to be loaded and hauled by Backhoe and all types of trucking.

Measurement: Survey cross sections before and after grading (less topsoil stripping quantity).

.4 Compaction of Fill – shall include compacting and drying materials placed as common excavation at the direction of the ENGINEER to the required density, grade, and cross-section.

Payment: Unit price per cubic meter of compacted fill.

Measurement: Survey cross sections at the location of the fill compaction before and after grading.

.5 Excavation Of Unsuitable Material – shall include excavation, loading, transporting, and stockpiling or spreading of material which by virtue of its inherent instability cannot be excavated using conventional earth moving equipment and techniques.

Payment: Unit price per cubic meter of unsuitable material excavated.

Measurement: Survey cross-sections at location of excavation before and after grading.

.6 New Ditch Excavation – shall include excavation, loading, transporting, filling of embankments, trimming and clean-up. Stripping and spreading topsoil are paid for separately.

Payment: Unit price bid per cubic meter excavated.

Measurement: Survey cross sections before and after ditch excavation.

.7 Old Ditch Excavation or Ditch Improvements – flow improvements that are not readily measurable due to wet conditions, bottom cleaning, widening or overgrowth of vegetation, will be paid by the hour for work is not quantifiable.

Payment: Force account or Prime Cost

Measurement: By force account accountability and daily time records.

.8 Topsoil replacement – shall include loading, hauling, placing, spreading and compacting previously stockpiled topsoil; and all clean-up and related work. Replacement shall be to original thickness and shall include rock removal, plowing, fertilizing, harrowing and supplying replacement topsoil to make up deficiencies in thickness, and all incidental work for which payment is not specified elsewhere.

Payment: Unit price bid per square meter of compacted topsoil for the depth specified. (Does not include seeding).

Measurement: Filed survey of area replaced.

.9 Erosion and Sediment Control Measures – shall include any site preparation work specific to these items noted in the schedule of quantities. Examples: Silt fencing, Straw wattles, Check dams, Topsoil supply and install along with various types of seeding along with amount of seed or thickness of topsoil. All ESC reporting as per the ECS report or as specified on the drawings. Note: Seeding, the amount and any type of installation will be for the seed added until germination has occurred and it has been accepted by the ENGINEER or City Department or both.

Payment: Unit prices noted in the schedule of quantities.

Measurement: As specified by the ENGINEER for each specific item in question or by Force account till the Prime Cost amount has been used up.

4. MEASUREMENT AND PAYMENT METHODS – STORM AND SANITARY SEWER LATERAL AND TRUNKS

.1 Supply and Installation of Storm Sewers - shall include the purchase, loading, transporting and unloading on site of all materials including wyes and bends, supply and placing Class "B" bedding and backfill in the pipe zone, laying, jointing, trenching, and Class II backfilling. Trenching and Class II backfilling shall include trenching, shoring, water control, backfilling, trench compaction of native soil as specified, disposal of excess material, and trench maintenance, as well as all incidental work for which separate payment is not specified elsewhere.

Payment: Unit price per linear meter of pipe installed. Unless specifically noted in the schedule there will be no additional payment for bends, wyes or special fittings.

Measurement: From center to center of manholes along the centerline and grade of the pipe, (in common trench situations, measurement shall be made for length along the sanitary sewer, and for depth to the lower invert elevation).

Depth: from the invert of the pipe installed to the ground surface as measured at the time the stakes are set. The depth range will be determined from measurements taken every 15m along the pipe alignment, and an average depth for payment will be taken for each section between manholes. For alignments that are pre-trenched or across open country, the average method will be used to a pre-agreed subgrade height before trenching but after stripping.

.2 Special Bedding – designed for specific trench conditions to include additional excavation, supply and install geo grid or textile as specified, washed gravel or concrete to the limits outlined on each specific project trench detail.

Payment: Unit price per linear meter of bedding installed.

Measurement: From center to center of manholes along the center line and grade of the pipe, (in common trench situations, measurement shall be made for length along the sanitary sewer).

.3 Manholes – complete with frames, covers, bases, slab tops, barrels, rungs, conical top, etc. trenching supply, installation, Class II backfill, and adjustment o final grade. Also included are grouting, benching, and all incidental work for which separate payment is not specified elsewhere. Extra payment will be made for special manhole construction, such as tee risers, control type manholes, catch basin manholes or chambers for specific items noted elsewhere in the Schedule of Quantities. Also included are grouting, waterproofing, benching, and all incidental work for which separate payment is not specified elsewhere.

Payment: Unit price per vertical meter or by the piece. Check the unit in the Schedule of Quantities.

Measurement: (to the nearest 10mm) Survey the lowest invert in the manhole to the top of the cast iron frame. (In catch basin manholes, measurement will be from bottom of sump).

Large Diameter Barrels or T-Risers: Measurement from the lowest invert to the top if the supporting adaptor plate or slab, or size change to a 1200 dia. Manhole.

.4 Catch Basin Leads – shall include excavation, supply and compacting of bedding materials; compacted backfilling, supply, laying jointing pipes and breaking into catch basins, manholes and mains as required with proper PVC to concrete adaptors as required.

Payment: Unit price per linear meter of pipe.

Measurement: Survey from the center of catch basins to the center line of the manhole or to the outside wall of the vault or tee section.

.5 Tie into Existing Sewers – included are all materials, labor, temporary supports and equipment necessary to make the connection. The manhole or sewer must be restored to an original condition. Any incidental items required to complete the connection shall be included.

Payment: Unit price for each completed connection.

.6 Camera Inspection – shall include supply of all equipment to perform the inspection including flushing, stringing of line and provision of a photographic record and videos, and written description of work not meeting and meeting the specifications. Note: Catch basin leads that are not straight or must curve around existing or designed structures will also require camera reporting. CB leads to CB manholes must also have camera reporting.

Payment: Unit price per linear meter of pipe inspected.

Measurement: Actual length of pipe inspected center of manhole to center of manhole including stubs from center of pipe or manhole to end of plug.

5. MEASUREMENT AND PAYMENT METHODS – WATERMAIN DISTRIBUTION

.1 Supply and Installation of Watermains – shall include the purchase of all materials including tees, bends, reducers, caps, cathodic protection, loading, transporting and unloading on site, supplying and placing of Class “B” bedding, backfilling in the pipe zone, laying, jointing, cleaning, joint restraint, supply and installation of thrust blocking testing and disinfecting, hydrant flow testing, trenching and Class II backfill. Trenching and Class II backfilling shall include trenching, shoring, water control, backfilling, trench compaction of native soil as specified, disposal of excess material, and trench maintenance, as well as all incidental work for which separate payment is not specified elsewhere.

Payment: Unit price per linear meter of pipe inspected.

Measurement: Length along the centerline of the pipe installed in the trench from center to center of fittings from the center of main to which branches or services are connected, to the end of pipe in the trench.

.2 Hydrants and Valves – shall include supply of materials, excavation, installation, including thrust blocks, cathodic protection, hydrant extensions, extended valve casing sections, temporary supports, testing, disinfecting, and backfilling, and all incidental work for which separate payment is not specified elsewhere.

Payment: Unit price per hydrant (including tee, hydrant lead, hydrant extension, valve, and extended valve casing section unless noted otherwise in the schedule of quantities). Unit price per valve (including extended valve casing section unless noted otherwise in the schedule of quantities). Unit price per mainline valve (including standard and extended valve casing sections).

Measurement: Number of complete units installed by grade sheet or field count.

.3 Tie to Existing Watermain – shall include the supply and installation of all materials including removal and disposal of thrust blocks, temporary supports, testing, disinfection and backfilling and

all incidental work for which separate payment is not specified elsewhere, to connect to an existing watermain.

Payment: Unit price per connection.

6. MEASUREMENT AND PAYMENT METHODS – LOT SERVICES

.1 Service Connections – shall include the supply and installation of sanitary sewer service pipe and fittings, storm sewer service pipe and fittings if required, and water service pipe including all fittings. Included are trenching, augering if required, supply and placing of bedding materials, Class II backfilling, laying, jointing, cleaning, exfiltration and infiltration testing, testing and disinfecting where applicable.

Payment: Unit price per completed single or dual service connections or as shown in the schedule of quantities.

.2 Service Risers – installed service risers shall include the purchase, loading, transportation and unloading on-site of all materials, supply and placing filled sandbags or concrete under wyes and bends, laying, jointing, cleaning and testing of pipe, any coring or saddling of the pipe to make this connection, with Class II backfill in the pipe zone, and all trenching required.

Payment: Unit price per service riser installed.

Measurement: Each service riser installation will only be made if the main line is over 4.2 meters or deeper below the future surface.

7. MEASUREMENT AND PAYMENT METHODS – CONCRETE

.1 Supply and Install Curbs, Walks and Swales – shall include excavation or fill to shape the subgrade, subgrade preparation, preparation of base, all mixing for compaction, re-compaction, supply and install all granular base course in varying thicknesses to match road structures and details, shaping and compaction, formwork, supply and placing of concrete, jointing, reinforcing, finishing, curing, sealing, supply and installation of wick drains as per the details and compacted backfilling to the top of the concrete unless directed by the On-site ENGINEER otherwise for landscaping.

Payment: Unit price per linear meter of sidewalk, walkway, curb and gutter, swale or lineal meter of coring.

Measurement: Survey sidewalk, curb and gutter, or swale – along the center line of separate walk or swale, or along curb face for curb and gutter monolithic curb, gutter and walk. There will be NO payment for overbuilds of any kind on the subgrade or granular.

Note: Addition of Cement for stabilizing where required is by the tonne under Road construction units, there is no payment for mixing, adding water, compaction or re-compaction.

Note: Coring out of excess clay material for separate concrete sidewalk, walkways and asphalt walks installation will be paid for as long as there is an onsite need to do so and is out of the control of the concrete installer. Prior approval must be obtained by the On-site ENGINEER.

Measurement and payment will be by the lineal meter of concrete structure installed and cored out as per limits of concrete work to complete the work.

.2 Supply and Install Alley Crossings, Bus Stops and Pads, Curb Ramps Lane Crossings, Curb Ramps, and Other Miscellaneous Concrete – shall include excavation or fill to prepare subgrade, preparation of base, all mixing for compaction re-compaction, supply and install all granular base course in varying thicknesses to match road structures and details, shaping and compaction, all mixing for compaction, re-compaction, supply and install granular base course in varying thicknesses to match road structures or details, shaping and compaction, formwork, supply and placing concrete, jointing, reinforcing, finishing, curing, sealing, supply and installation of wick drains as per the details and backfilling.

Payment: Unit price per square meter of concrete work for alley crossing, bus stop and pads, curb ramps, median infill and etc.

Note: Addition of Cement for stabilizing is by the tonne under Road Construction units, there is no payment for mixing, adding water, compaction or re-compaction.

Measurement: Survey concrete work after construction.

Note: There is no additional payment for excavating these items at any time during construction unless pre-approved by the site ENGINEER.

8. MEASUREMENT AND PAYMENT METHODS – ROAD CONSTRUCTION

.1 Power, Telephone and Gas Crossings – shall include trenching, the purchase, loading, transporting and unloading onsite of all materials including tracer wire as required, supply and placing sand bedding, laying and jointing power, telephone and gas ducts and caps, backfilling and compaction with sand or native materials as required, supply and installation of marker posts, as well as all incidental work for which separate payment is not specified elsewhere.

Payment: Unit price per linear meter of trench and for each lineal meter of duct installed by size.

Measurement: From end to end of the duct crossing as staked by the ENGINEER.

.2 Grading – Excavation shall include excavating, loading, transporting within the site limits, spreading and levelling to grade and cross section. Embankment shall include excavating, loading, transporting within the site limits, spreading, adding water or drying as required, levelling and compacting material to the designated density, grade and cross section. Excavation and embankment also include temporary drainage, fine grading, finishing, trimming and all incidental work for which separate payment is not specified elsewhere. This work shall cover excavation or embankment within the carriageway which is carried out after concrete work is completed.

Payment: Unit price bid per cubic meter excavated, or embankment constructed.

Measurement: Survey cross sections before and after excavation or embankment construction. Each earth movement will be paid as embankment or excavation, but not as both.

.3 Subgrade Preparation - shall include scarifying the subgrade to the thickness specified, spreading, shaping, adding water or drying, rolling and compacting to the specified density. Where previously approved by the ENGINEER, cement may be added to assist in subgrade preparation.

Payment: a) Unit price bid per square meter of compacted subgrade to the thickness specified.

b) Unit price bid per tonne for addition of cement as applicable. Payment will be in addition to payment under the item for conventional subgrade preparation.

Note: Subgrade preparation under concrete work is included in the unit price for the concrete work.

Measurement: a) Subgrade will be from lip of gutter to lip of gutter.

b) Cement will be by the tonne (1000kg units) used on site confirmed by haul ticket or weigh scale slip showing delivery location, date and weight hauled. This weight may be verified by survey if there is a discrepancy.

c) For reinforced based materials will be by the square meters showing, measured in the filed by survey.

.4 Granular Base Course - shall include supply of City accepted specified gradated Type 3 crushed gravel, preparation of existing base, moistening, installation of granular base course aggregate, moistening, spreading, compacting as per the City compaction requirements, finishing and protecting the surface of the gravel until pavement is placed.

Payment: Unit price per square meter for each layer of specified compacted thickness.

Measurement: Will be from lip to gutter to lip of gutter by the square meter or by the tonne as per the schedule of quantities unit. There will be NO payment for any overbuilds.

.5 Hot Mix Asphaltic Concrete or Super Pave Asphaltic Concretes - shall include the preparation of the job mix design and job mix formula, supply of aggregates and asphalt, mixing, transporting, laying and compacting the asphalt course to the specified grade, thickness and density as per the City requirements. This item shall also include the adjustment of all utility structures, cleaning of the previous base, provision of tack coat as required, and clean-up.

Payment: Unit price per square meter of asphalt course in place to the specified thickness and density.

Measurement: Unit price per square meter of hot mix asphalt concrete in place to the specified thickness and density measured from the lip of gutter to the lip of gutter or to the edge of the full thickness of asphalt product.

.6 Remove Existing Surface Structures existing bollards, concrete work, pavement, etc. – shall include the removal and disposal of existing surface structures and all incidental work for which separate payment is not specified elsewhere.

Payment: a) Unit price per bollard.

b) Unit price bid per lineal meter of concrete curb, gutter or;

c) Unit price per square meter of pavement, base course gravel or soil cement.

Measurement: Will be surveyed field quantities of each item.

.7 Supply and Install Bollards, Knockdown Posts, or Other Barrier Posts – shall include the supply and installation of all materials and all incidental work for which payment is not specified elsewhere.

Payment: Unit price per item.

Measurement: Will be by surveyed field quantities of each item.

.8 Supply and Install Mini Barriers – shall include supply and installation of Mini Barriers as shown on the drawings. Checkerboard signs shall be included with the installation.

Payment: a) Unit price per dead end stub shall be included with the installation of three (3) mini barriers complete with checkerboard signs as required as stated in the schedule.

b) Or unit price per lineal meter of mini barrier including the spacing.

Measurement: Will be by surveyed field quantities of the item.

.9 Granular or Asphalt Walkways and Top of Bank Trail Walkways or Trails – There will be no extra payment for base gravel flaring or subgrade preparation outside of the asphalt.

.10 Alleys – There will be no extra payment for base gravel flaring or subgrade preparation outside of the asphalt.

.11 Temporary Access, Turnaround and Emergency Access – There will be no extra payment for base gravel flaring or subgrade preparation outside of the asphalt.

.12 Grinding of Asphalt – shall include all grinding required to ensure a proper tie-in to existing surface structures as per the City of North Battleford Specifications.

Payment: Unit price as per square meter of griding.

Measurement: Will be by surveyed field quantities of each item.

.13 Lane Markings – shall include all layout, grinding and cleaning of markings required for the installation of Painted or Thermoplastic lines as per the City of North Battleford pavement marking specifications.

Payment: Unit price per lineal meter including spacing along dashed lines.

Measurement: Will be by field quantities of each item.

9. MEASUREMENT AND PAYMENT METHODS – MISCELLANEOUS AND PROVISIONAL ITEMS

.1 Miscellaneous Items – shall include any work specific to this contract, not covered by items above, but noted in the schedule of quantities. Items designated in the contract as “Provisional” will be paid for at the applicable price only if they are used in the work.

Payment: Unit prices noted in the schedule of quantities.

Measurement: As specified by the ENGINEER for the specific item in question.

Note: Any other items of construction necessary to complete the work which are not noted as specific items in the schedule of quantities. Will be regarded as operations which are part of the work, and no additional payment will be made for these operations.

END OF SECTION

PAYMENT PROCEDURES

1. RELATED REQUIREMENTS

.1 Refer to Division 00 – Section 00.11.05 Bid Form Supplement E – Unit Price Form.
.2 Refer to Division 00 – Section 00.56.00 Supplementary Conditions

2. INVOICE SCHEDULE OF VALUES

.1 Provide the invoice schedule of values in an electronic spreadsheet format that provides for the inclusion of the following information:

.1 Identifying information including contract number, project number, title and location of the Work, name of Contractor, number and date of application for payment, and period covered by the application for payment.

.2 A work breakdown structure that is in accordance with the schedules under Section 00.11.05 BID FORM SUPPLEMENT E – UNIT PRICE FORM, sufficient and comprehensive to facilitate Engineer's evaluation of applications for payment at an appropriate level of detail.

3. CASH FLOW PROJECTION

.1 Prior to the first application for payment submit, for Engineer's review, a forecast of approximate monthly progress payments for each month of the Contract Time.

.2 Submit revised cash flow forecasts monthly.

4. WORKER'S COMPENSATION CLEARANCE

.1 Submit proof of workers' compensation clearance with each application for payment.

5. STATUTORY DECLARATIONS

.1 Submit a statutory declaration with each application for payment except the first.

.2 An electronic Statutory Declaration of Progress Payments template is provided and must be used by the Contractor. The Contractor must not recreate, reformat, or modify the template, including altering font size, font type, or font color, or by adding colors, pictures or diagrams.

6. PAYMENT FOR PRODUCTS STORED ON OR OFF SITE

.1 Owner may, due to extraordinary circumstances and at Owner's sole discretion, make payments for Products delivered to and stored at a location prior to installation and other than Place of the Work, subject to:

.1 A request submitted by the Contractor in writing, with appropriate justification,

.2 Details of the storage location if stored on-site,

.3 Written confirmation that the materials will be stored in a Bondable storage facility if stored off-site, and

.4 Whatever conditions Owner or Engineer may establish for such payments, as required to protect Owner's interests.

END OF SECTION

STATUTORY DECLARATION OF PROGRESS PAYMENTS

Name of Contractor:	

Made by above-mentioned Contractor as condition for either:

Second and Subsequent Progress Payments; or	
Release of Holdback	

Application Payment Number:		Date:	

**Above-mentioned payment number is the last application for payment for which the Contractor has received payment.*

Contract Documents Information:

Name of Project:	
Date of Contract:	
Name of Owner:	The City of North Battleford

Declaration:

I solemnly declare that, as of the date of this declaration, I am an authorized signing officer, partner or sole proprietor of the Contractor, and such have authority to bind the Contractor, and have personal knowledge of the fact that all accounts for labor, subcontracts, products, services, and construction machinery and equipment which have been incurred directly by the Contractor in the performance of the work as required by the Contract, and for which the Owner might in any way be held responsible, have been paid in full as required by the Contract up to and including the latest progress payment received, as identified above, except for:

1) Holdback monies properly retained,
2) Payments deferred by agreement, or
3) Payment withheld by reason of legitimate dispute which has been identified to the party or parties from whom payment has been withheld.

I make this solemn declaration conscientiously believing it to be true, and knowing that it is one of the same force and effect as if made under oath.

Declared before me in _____ *(City/Town and Province)* this _____ day of _____ in the year _____.

_____ *(Name)*

_____ *(Title)*

_____ *(Signature)*

_____ *(A Commissioner of Oaths, Notary Public, Justice of the Peace, etc.)*

PROJECT MEETINGS

1. ADMINISTRATIVE

.1 Engineer to schedule and administer project meetings throughout the progress of the work.

.2 Engineer to prepare agenda for meetings.

.3 Engineer to distribute written notice of each meeting a minimum of two days in advance of the meeting date.

.4 Engineer to chair meetings.

.5 Engineer to record the meeting minutes. Including significant proceedings and decisions. Identify action by parties.

.6 Engineer to produce and distribute copies of minutes within 7 days after meetings. Contractor is responsible to transmit minutes to affected subcontractors not in attendance.

.7 Representative of Contractor, Subcontractor and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.

2. PRECONSTRUCTION MEETING

.1 Within 15 days after the award of the Contract, request a meeting of parties in the contract to discuss and resolve administrative procedures and responsibilities.

.2 The Owner, Engineer, Contractor, Subcontractors, field inspectors and supervisors may be requested to be in attendance.

.3 The Engineer to establish time and location of the meeting and notify parties concerned a minimum of 5 days before meeting.

.4 Incorporate mutually agreed variations to Contract Documents into Agreement, prior to signing.

.5 Agenda to include:

.1 Appointment of official representative of participants in the Work

.2 Establish lines of communication

.3 Review of contract agreement status.

.4 Review the requirements of permits governing the Work.

.5 Work sequence.

.6 Schedule of Work: formatted in accordance with Contract Documents.

.7 Schedule of submission of shop drawings and samples. Submit submittals in accordance with Section 01.56.00 Submittal Procedures.

.8 Requirements for temporary facilities, site sign, offices, storage sheds, utilities, fences.

.9 Delivery schedule of specified equipment.

.10 Site security.

.11 Management of proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, administrative requirements.

.12 Record drawings.

.13 Maintenance manuals.

.14 Commissioning planning and execution.

.15 Take-over procedures, acceptance, warranties.

.16 Monthly progress claims, administrative procedures, photographs, holdbacks.

.17 Appointment of inspection and testing agencies or firms.

.18 Insurances, transcript of policies.

3. PROGRESS MEETINGS

.1 During the course of Work, the Engineer to schedule progress meetings on a monthly basis.

.2 The Engineer, Contractor, Subcontractors, fields inspectors and supervisors may be requested to be in attendance.

.3 The Engineer to record minutes of meetings and circulate to attending parties and affected parties not in attendance within 7 days after the meeting.

.4 Agenda to include the following:

.1 Review, approval of minutes of the previous meeting.

.2 Review of Work progress since the previous meeting.

.3 Field observations, problems, conflicts.

.4 Problems that impede construction schedule.

.5 Review off-site fabrication delivery schedules.

.6 Corrective measures and procedures to regain projected schedule.

.7 Revision to the construction schedule.

.8 Progress schedule, during the succeeding work period.

.9 Review submittal schedules: expedite as required.

.10 Maintenance of quality standards.

.11 Review proposed changes for effect on construction schedule and on completion date.

.12 Other business.

END OF SECTION

CONSTRUCTION SCHEDULE – BAR (GANTT) CHART

1. DEFINITIONS

.1 Activity: element of Work performed during the course of the Project. Activity normally has expected duration and expected cost and expected resource requirements. Activities can be subdivided into tasks.

.2 Bar Chart (Gantt Chart): graphic display of schedule-related information. In a typical bar chart, activities or other Project elements are listed down left side of chart, dates are shown across top, and activity durations are shown as date-placed horizontal bars. Generally, Bar Charts should be derived from commercially available computerized project management system.

.3 Baseline: original approved plan (for project, work package, or activity), plus or minus approved scope changes.

.4 Construction Work Week: Monday to Friday, inclusive, will provide five-day work week and define schedule calendar working days as part of Bar (Gantt) Chart submission.

.5 Duration: number of work periods (not including holidays or other nonworking periods) required to complete the activity or other project element. Usually expressed as workdays or workweeks.

.6 Master Plan: a summary-level schedule that identifies major activities and key milestones.

.7 Milestone: significant event in the project, usually completion of a major deliverable.

.8 Project Schedule: planned dates for performing activities and the planned dates for meeting milestones. Dynamic, detailed record of tasks or activities that must be accomplished to satisfy Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout project life cycle.

.9 Project Planning, Monitoring and Control System: overall system operated by Consultant to enable monitoring of project work in relation to established milestones.

2. REQUIREMENTS

.1 Ensure Master Plan and Detail Schedules are practical and remain within specified Contract duration.

.2 Plan to complete Work in accordance with prescribed milestones and time frame.

.3 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.

3. ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide submittals in accordance with Section 01.56.00 – Submittal Procedures.

.2 Submit to the Engineer within 10 working days of Award of Contract, a Bar (Gantt) Chart as Master Plan for planning, monitoring and reporting of project progress.

4. MASTER PLAN

.1 Structure schedule to allow orderly planning, organizing and execution go Work as Bar Chart (Gantt).

.2 The Engineer will review and return revised schedules within 7 working days.

.3 Revise impractical schedule and resubmit within 7 working days.

.4 Accepted revised schedule will become Master Plan and be used as baseline for updates.

5. PROJECT SCHEDULE

.1 Ensure detailed Project Schedule is broken out to clearly display work on all projects within the construction package.

6. PROJECT SCHEDULE REPORTING

.1 Update Project Schedule on monthly basis reflecting activity changes and completions, as well as activities in progress, and at any time at the request of the Engineer.

.2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

7. PROJECT MEETINGS

.1 Discuss Project Schedule at regular site meetings, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or completion dates later than current approved dates shown on baseline schedule.

.2 Weather related delays with their remedial measures will be discussed and negotiated.

END OF SECTION

SUBMITTAL PROCEDURES

1. RELATED REQUIREMENTS

.1 Section 01.67.00 – Health and Safety Requirements

.1 Submit site-specific Health and Safety Plan

.2 Submit electronic copies of Contractor's authorized representative's work site health and safety inspection reports to the Consultant.

.3 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.

.4 Submit copies of incident and accident reports.

.2 Section 01.78.00 – Environmental Procedures

.1 Submit site-specific Environmental Protection Plan (EPP) as required within Section 01.78.00 – Environmental Procedures.

.3 Section 01.111.00 – Traffic Control Plan.

.1 Submit Traffic Accommodation Plan in accordance with Saskatchewan Ministry of Highways and Traffic Control Device Manual for Work Zones at least one week prior to the Pre-construction Meeting for all locations where work occurs within 10 meters of a roadway.

.4 Section 01.155.00 – Closeout Submittals.

.1 Submit all documents as required in Section 01.155.00 Closeout Procedures

2. ADMINISTRATIVE

.1 Submit to the Engineer submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.

.2 Do not proceed with Work affected by submittal until review is complete.

.3 Present shop drawings, product data, samples and mock-ups in SI Metric units.

.4 Where items or information is not produced in SI Metric units converted values are acceptable.

.5 Review submittals prior to submission to the Engineer. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated, and identified as to specific project will be returned without being examined and considered rejected.

.6 Notify the Engineer, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.

.7 Verify field measurements and affected adjacent Work are coordinated.

.8 Contractor's responsibility for errors and omissions in submission is not relieved by the Engineer's review of submittals.

.9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by the Engineer's review.

.10 Keep one reviewed copy of each submission on site.

3. PHOTOGRAPHIC DOCUMENTATION

.1 Submit electronic copies of color digital photography in either .jpg or .pdf format, standard resolution, monthly, with progress statement and as directed by the Engineer.

.2 Project identification: name and number of project and date of capture indicated.

.3 Number of viewpoints: 4 locations

.1 Viewpoints and their location as determined by the Engineer.

.4 Frequency of photographic documentation: monthly and as directed by the Engineer.

4. CERTIFICATES AND TRANSCRIPTS

.1 Immediately after award of Contract, submit the Worker's Compensation Board status.

.2 Submit transcription of insurance immediately after award of the Contract.

END OF SECTION

HEALTH AND SAFETY REQUIREMENTS

1. ACTION AND INFORMATION SUBMITTALS

.1 Submit in accordance with Section 01.56.00 – Submittal Procedures

.2 Submit site-specific Health and Safety Plan: within 7 days after the date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:

.1 Results of site-specific safety hazard assessment.

.2 Results of safety and health risk or hazard analysis for site tasks and operation.

.3 Submit electronic copies of Contractor's authorized representative's work site health and safety inspection reports to the Engineer.

.4 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.

.5 Submit copies of incident and accident reports.

2. FILING OF NOTICE

.1 File Notice of Project with Saskatchewan authorities prior to the beginning of the Work.

.2 Work zone locations include:

.1 Refer to Section 01.01.00 – Summary of Work

.3 Contractor shall agree to install proper site separation and identification in order to maintain time and space at all times throughout life of the project.

3. SAFETY ASSESSMENT

.1 Perform site-specific safety hazard assessment related to the project.

4. MEETINGS

.1 Schedule and administer Health and Safety meeting with the Engineer prior to commencement of Work. This meeting may be included in the pre-construction meeting.

5. RESPONSIBILITY

.1 For the purposes of his Contract with respect to Health and Safety, the following definitions apply:

a. Contractor – A Contractor is an individual, business or other entity retained by the City who performs their service for the City. This term applies to all contractors, all contractor employees and any sub-contractors hired by the Contractor.

b. Service Provider – Includes contractors, subcontractors, consultants and suppliers who complete business on City properties or worksites.

c. Competent Worker – With respect to a particular task or duty, includes a worker who is being trained to perform that task or carry out that duty who is under close and competent supervision during that training.

d. Health and Safety Coordinator – City representative who is a resource for Occupational Health and Safety Acts and Regulations interpretation and implementation.

e. Project Leader – City representative who is responsible for the completion of the work that the contractor or service provider has been engaged for.

.2 The Health and Safety Coordinator will:

a. Assist with identifying and resolving health and safety issues.

b. Coordinate pre-construction meetings with the Project Leader.

c. Complete planned and unplanned work site inspections, make health and safety recommendations as required.

.3 Contractors / Service Providers will:

a. Cooperate and comply with the City of North Battleford Safety Program.

b. Perform all work in a safe manner and refuse to participate in unsafe activities.

c. Provide Competent Workers.

d. Provide necessary education, training and safety equipment of their employees.

e. The Contract shall have complete control of the work and work are and will provide accurate and competent supervision of the workers.

f. Inspect the project work areas and correct any hazards identified.

g. Investigate any accidents, injuries or near misses, no matter how slight, (including property damage), and provide a copy of the investigation report to the City Project Leader and City Health and Safety Coordinator or designated alternate.

h. Address any non-compliance issues with their staff and take appropriate corrective and/or disciplinary action.

i. The Contractor will ensure the following Emergency Procedures are in place for all worksites on or in City property and are understood by all onsite staff and sub-contractors. Copies of the procedures will be forwarded by the Contractor to the Health and Safety Coordinator:
   - Emergency procedures
   - Emergency evacuation plan
   - First Aid

j. Hold a documented toolbox meeting and other safety meetings as required during the execution of the work. Copies of the Toolbox and Safety Meetings to be made available to the City upon request.

k. Contractors shall ensure that a risk assessment is completed on all projects. Documentation verifying the Contractor's staff and sub contractors have completed the necessary safety training for work being performed will be made available to the City upon request.

l. The Contractor is responsible for supplying, and for ensuring all workers wear required PPE and that such PPE is kept in good condition.

m. Provide a current and active WCB account number and COR number (if certified).

n. Cooperate with the City in all matters relating to health and safety.

6. POSTING OF DOCUMENTS

.1 Ensure applicable items, articles, notices and orders are posted in a conspicuous location on site in accordance with Acts and Regulations of Saskatchewan having jurisdiction.

7. CORRECTION OF NON-COMPLIANCE

.1 Immediately address health and safety non-compliance issues identified by the authority having jurisdiction.

.2 Provide the Engineer with written report of action taken to correct non-compliance of health and safety issues identified.

.3 The Engineer may stop Work if non-compliance of Health and Safety regulations is not corrected.

8. POWDER ACTUATED DEVICES

.1 Use powder actuated devices only after receipt of written permission from the Engineer

END OF SECTION

ENVIRONMENTAL PROCEDURES

1. DEFINITIONS

.1 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavorably alter ecological balances of importance to human life; affect other species of importance to humans; or degrade environment aesthetically, culturally and/or historically.

.2 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction.

2. REFERENCE STANDARDS

.1 Canadian Society of Landscape Architects (CSLA) / Canadian Nursery Landscape Association (CNLA)

.1 Canadian Landscape Standard 2016, First Edition
.2 Canadian Nursery Stock Standard 2017, Ninth Edition

.2 United States Environmental Protection Agency (EPA), Office of Water

.1 EPA-883-R-06-004, Developing Your Stormwater Pollution Prevention Plan: A Guide for Construction Sites

3. ACTION AND INFORMATION SUBMITTALS

.1 Submit in accordance with Section 01.56.00 – Submittal Procedures.

.2 Submit Environmental Protection Plan (EPP) for review and approval by the Engineer before delivering materials to site or commencing construction activities.

.3 EPP shall include comprehensive overview of known or potential environmental issues to be addressed on site during construction.

.4 Address topics at level of detail commensurate with environmental issue and required construction tasks.

.5 Include in Environmental Protection Plan (EPP);

.1 Names of persons responsible for ensuring adherence to EPP.

.2 Names and qualifications of persons responsible for manifesting hazardous waste to be removed from site.

.3 Names and qualifications of persons responsible for training site personnel.

.4 Descriptions of environmental protection personnel training program.

.5 Submit a Spill Control Plan (SCP) including procedures, instructions, and reports to be used in event of unforeseen spill of regulated substance.

.6 Submit a Solid Waste Disposal Plan (SWDP) for non-hazardous solid wastes identifying methods and locations for solid waste disposal including clearing debris.

.7 Submit a site-specific Contaminant Prevention Plan (CPP) identifying the proper procedures and actions to be implemented to prevent potentially or expected hazardous substances due to the presence of any hazardous substances within the project site. The intent of the CPP is to:

.1 Prevent introduction of designated substances (DS) into air, water, or ground;

.2 Detail provisions for storage and handling of these materials in compliance with Federal, Provincial, and Municipal laws.

4. SITE CLEARING AND PLANT PROTECTION

.1 Protect trees and plants on site and adjacent properties in accordance with the Canadian Standard – First Edition, Section 03 – Site Preparation and Protection of Existing Site Elements.

.2 Protect trees and shrubs adjacent to construction work, storage areas, boulevards, trucking lanes, and encase with protective wood framework from level grade to height of two (2) meters minimum. Ensure that control measures used for protection are in compliance with Municipal laws and regulations.

.3 Protect roots of designated trees to dripline during excavation and site grading to prevent disturbance or damage.

.1 Avoid unnecessary traffic, dumping and storage of materials over root zones.

.4 Minimize stripping of topsoil and vegetation.

.5 Restrict tree removal to areas indicated or designated by the Engineer. Obtain permits before trees removal in accordance with the requirements to the authorities having jurisdiction.

5. POLLUTION CONTROL

.1 Maintain temporary erosion and pollution control features installed under this Contract in accordance with the site specific EPP.

.2 Control emissions from equipment and plants in accordance with local authorities' emission requirements. Check with local authorities for any environmental compliance requirements.

.3 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

6. HISTORICAL DISCOVERIES / CONTROL

.1 Refer to site-specific project plans for procedures in identifying and protecting historical and archaeological resources previously known to be on project site or discovered during construction.

.1 Plan to include methods to ensure protection of known or discovered resources and identify lines of communication between Contractor personnel and the Engineer.

.2 Promptly report the discovery of contaminated soils to the Engineer. Failure to do so will result in the consultant issuing an indefinite stop work order.

.3 The Engineer may implement additional health and safety procedures for substance discoveries, which could include stopping work in the area of contamination discovery, securing the worksite and taking appropriate measures to protect workers in public safety.

.4 Laboratory testing may be conducted as designated by the Consultant if suspected contaminated water or soil is encountered at the expense of the Owner. Testing must be completed by a certified laboratory.

.5 The discover of a substance must be reported to the Saskatchewan Ministry of Environment if:

.1 The substance may cause or is causing an adverse effect.

.2 The substance discovered is in a quantity or concentration that could pose a serious risk to the environment or public health or safety, or

.3 The substance meets the criteria set out by the provincial Discharge and Discovery Reporting Standard for the applicable media with respect to that substance.

.6 Upon completion of investigation, the Engineer will advise the Contractor on any necessary rectification actions to be taken before commencing with work.

7. NOTIFICATION

.1 The Engineer will notify Contractor in writing of observed non-compliance with Federal, Provincial environmental laws and regulations or Municipal environmental laws, permits, and other elements of site-specific plans, as applicable.

.2 Contractor after receipt of such notice, shall inform the Engineer of proposed corrective action and take such action to obtain approval of the Engineer.

.1 Take action only after receipt of written approval by the Engineer.

.3 The Engineer will issue stop order of work until satisfactory corrective action has been taken.

8. CLEANING

.1 Progress Cleaning: clean in accordance with Section 01.144.00 – Cleaning.

.1 Leave work areas clean at the end of each day.

.2 Burying rubbish and waste materials on site is not permitted unless approved in writing by the Engineer.

.3 Ensure public waterways, storm and sanitary sewers remain free of waste and volatile materials disposal.

.4 Proceed with final cleaning upon completion and removal of surplus materials, rubbish, tools and equipment in accordance with Section 01.144.00 – Cleaning.

.5 Separate waste materials for reuse and recycling, remove recycling containers and bins from site and dispose of materials at appropriate facility.

END OF SECTION

CONSTRUCTION FACILITIES

1. RELATED REQUIREMENTS

.1 Submit in accordance with Section 01.56.00 – Submittal Procedures

2. REFERENCE STANDARDS

.1 CSA Group (CSA)

.1 CSA-A23.1/A23.2-04 Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.
.2 CSA-012100M1978(R2003), Douglas Fir Plywood
.3 CAN/CSA-Z321-96(R2001), Signs and Symbols for the Occupational Environment.

3. ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide submittals in accordance with Section 01.56.00 – Submittal Procedures.

4. INSTALLATION AND REMOVAL

.1 Prepare site plan indicating proposed location and dimensions of area to be fenced and used by Contractor, number of trailers to be used (if any), avenues of ingress/egress to fenced area and details of fence installation.

.2 Identify areas which have to be gravelled to prevent tracking of mud.

.3 Indicate use of supplemental or other staging area.

.4 Provide construction facilities in order to execute work expeditiously.

.5 Remove from site all such work after use.

5. HOISTING

.1 Provide, operate and maintain hoists and cranes required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for their use of hoists.

.2 Hoists and cranes to be operated by qualified operators.

6. SITE STORAGE / LOADING

.1 Confine work and operations of employees by Contract Documents. Do not unreasonably impede premises with products.

.2 Do not load or permit to load any part of Work with weight or force that will endanger Work.

7. CONSTRUCTION PARKING

.1 Parking will be permitted on site provided it does not disrupt performance of Work.

.2 Provide and maintain adequate access to the project site.

8. SECURITY

.1 The Contractor will provide security fencing for materials, and enclosures and surrounding working areas.

.2 If required, pay for responsible security personnel to guard site and contents of site after working hours and during holidays.

9. EQUIPMENT, TOOL AND MATERIALS STORAGE

.1 Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.

.2 Locate materials not required to be stored in weatherproof sheds on site in manner to cause least interference with work activities.

10. SANITARY FACILITIES

.1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.

.2 Post notices and take precautions as required by local health authorities. Keep area and premises in sanitary condition.

.3 Permanent facilities may be used only on approval of the Owner.

11. CONSTRUCTION SIGNAGE

.1 Provide and erect project sign, within three weeks of signing Contract, in a location designated by the Owner.

.2 Where required by the funding agreement, sign to comply with requirements of federal/provincial funding agreements.

.3 No other signs or advertisements, other than warning signs, are permitted on site.

.4 Signs and notices for safety and instruction in both official languages Graphic symbols to CAN/CSA-Z321.

.5 Maintain approved signs and notices in good condition for duration of project, and dispose off-site upon completion of project or earlier if directed by the Engineer.

12. PROTECTION AND MAINTENANCE OF TRAFFIC AND TRAVELLED WAYS

.1 Provide access and temporary relocated roads as necessary to maintain traffic flow during construction.

.2 Maintain and protect traffic on affected roads during construction period except as otherwise specifically directed by the Engineer.

.3 Provide measures for protection and diversion of traffic, provide safe and secure locations for material deliveries and offloading areas, including provision of watch-persons and flag-persons, erection of

barricades, placing of lights around and in front of equipment and work, and erection and maintenance of adequate warning, danger, and direction signs.

.4 Protect travelling public from damage to person and property.

.5 Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic.

.6 Verify adequacy of existing roads and allowable load limit on these roads. Contractor: responsible for repair of damage to roads caused by construction operations.

.7 Construct and maintain access roads as necessary.

.8 Provide necessary lighting, signs, barricades, and distinctive markings for safe movement of traffic.

.9 Dust control: adequate to ensure safe operation at all times and minimize dust drift onto adjacent properties and roadways.

.10 Location, grade, width, and alignment of construction and hauling roads: subject to approval by the Engineer.

.11 Lighting: to assure full and clear visibility for full width of haul road and work areas during night work operations.

.12 Provide snow removal on work site during period of Work.

.13 Remove, upon completion of work, haul roads designated by the Engineer.

13. CLEAN-UP

.1 The CONTRACTOR'S working area shall be maintained in a clean and orderly manner, and clean-up of the project shall be carried on as work progresses. Waste materials shall not be allowed to accumulate, haul routes must be maintained in a clean and drivable condition and on completion of construction the CONTRACTOR shall remove all waste materials and temporary facilities. Any dirt or mud tracked onto paved or surface roadways shall be immediately cleaned upon discovery.

.2 The site is to be kept in a clean and orderly manner to the satisfaction of the ENGINEER. The ENGINEER at any time may identify in writing that the condition of the site is not to their satisfaction and the CONTRACTOR shall correct the situation at no expense to the Owner.

.3 Store materials resulting from demolition activities that are salvageable.

END OF SECTION

TRAFFIC CONTROL

1. REFERENCE STANDARDS

.1 Saskatchewan Ministry of Highways and Infrastructure:

.1 Traffic Control Device Manual for Work Zones – 19.

2. ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide submittals in accordance with Section 01.56.00 – Submittal Procedures.

3. TRAFFIC ACCOMMODATION PLAN

.1 Provide the Engineer with a Traffic Accommodation Plan in accordance with Saskatchewan Ministry of Highways Traffic Control Device Manual for Work Zones at least one week prior to the pre-construction meeting.

.2 Provide traffic control plan for residential areas, submit to Consultant in advance of executing the Work.

.3 Approval of more than one Work Area does not change the requirements of 2.1.

4. PROTECTION OF PUBLIC TRAFFIC

.1 Comply with requirements of Acts, Regulations and By-Laws in force for regulation of traffic use of roadways upon or over which it is necessary to carry out Work or haul materials or equipment.

.2 When working on travelled way:

.1 Place equipment in position to minimize interference and hazard to travelling public.

.2 Keep equipment units close together as working conditions permit and preferably on same side of travelled way.

.3 Do not leave equipment on travelled way overnight.

.3 Close lanes of road only after receipt of written approval from the Engineer.

.1 Before re-routing traffic, erect suitable signs and devices to Traffic Control Device Manual for Work Zones.

.2 Keep equipment units close together as working conditions permit and preferably on same side of travelled way.

.4 Keep travelled way graded, free from potholes and of sufficient width for required number of lanes of traffic.

.1 Provide 8-meter-wide minimum temporary roadway for traffic in two-way sections through Work and on detours.

.2 Provide 5-meter-wide minimum temporary roadway for traffic in two-way sections through Work and on detours.

.5 Provide and maintain road access and egress to property fronting along Work under Contract and in areas as indicated, except where other means of road access exist that meet approval of the Engineer.

5. INFORMATIONAL AND WARNING DEVICES

.1 Provide and maintain signs, flashing warning lights and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Project Work which requires road user response.

.2 Supply and erect signs, delineators, barricades and miscellaneous warning devices to Traffic Control Device Manual for Work Zones.

.3 Place signs and other devices in locations recommended in Traffic Control Device Manual for Work Zones.

.4 Meet with Engineer prior to commencement of Work to prepare list of signs and other devices required for project. If situation on site changes, revise list to approval of the Engineer.

.5 Continually maintain traffic control devices in use:

.1 Place Check signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.

.2 Remove or cover signs which do not apply to conditions existing from day to day.

6. CONTROL OF PUBLIC TRAFFIC

.1 Provide competent flag personnel, trained in accordance with, and properly equipped to Traffic Control Device Manual for Work Zones for situations as follows:

.1 When public traffic is required to pass working vehicles or equipment that block all or part of travelled roadway.

.2 When it is necessary to institute a one-way traffic system through construction area or other blockage where traffic volumes are heavy, approach speeds are high and traffic signal system is not in use.

.3 When workmen or equipment are employed on travelled way over brow of hills, around sharp curves or at other locations where oncoming traffic would not otherwise have adequate warning.

.4 Where temporary protection is required while other traffic control devices are being erected or taken down.

.5 For emergency protection when other traffic control devices are not readily available.

.6 In situations where complete protection for workers, working equipment and public traffic is not provided by other traffic control devices.

.7 At each end of restricted sections where pilot cars are required.

.8 Delays to public traffic due to contractor's operators: 15 minutes maximum unless otherwise approved by the consultant.

.2 Equip pilot cars with orange flashing lights and signs clearly designating vehicles as pilot cars if pilot cars are required.

.3 Where roadway, carrying two-way traffic, is restricted to one lane, for 24 hours each day, provide portable traffic signal system.

.1 Adjust, as necessary, and regularly maintain system during period of restriction.

.2 Ensure signal system meets requirements of Traffic Control Device Manual for Work Zones.

END OF SECTION

TEMPORARY BARRIERS AND ENCLOSURES

1. INSTALLATION AND REMOVAL

.1 Provide temporary controls in order to execute Work expeditiously.

.2 Remove from site all such work after use.

2. GUARD RAILS AND BARRICADES

.1 Provide secure, rigid guard rails and barricades around deep excavations, open pits, and entrance points to excavations.

.2 Provide as required by governing authorities.

3. ACCESS TO SITE

.1 Provide and maintain access roads, sidewalk crossings, ramps, and construction runways as may be required for access to Work.

.2 Do not permit public access to the site.

4. PUBLIC TRAFFIC FLOW

.1 Provide and maintain competent signal flag operators as per 01.111.00 – Traffic Control.

5. FIRE ROUTES

.1 Maintain access to property including overhead clearances for use by emergency response vehicles.

6. PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY

.1 Protect surrounding private and public property from damage during performance of Work.

.2 Be responsible for damage incurred.

7. PROTECTION OF BUILDING FINISHES

.1 Provide protection for finished and partially finished building finishes and equipment during performance of the Work.

.2 Provide necessary screens, covers and hoardings.

.3 Confirm with the Engineer locations and installation schedule 3 days prior to installation.

.4 Be responsible for damage incurred due to lack of improper protection.

END OF SECTION

COMMON PRODUCT REQUIREMENTS

1. QUALITY

.1 Products, materials, equipment, and articles incorporated in Work shall be new, not damaged, or defective, and of the best quality for the purpose intended. If requested, provide evidence as to type, source and quality of products provided.

.2 Procurement policy is to acquire, in cost effective manner, items containing the highest percentage of recycled and recovered materials practicable consistent with maintaining satisfactory levels of competition. Make reasonable efforts to use recycled and recovered materials and in otherwise utilizing recycled and recovered materials in execution of work.

.3 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility but is a precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.

.4 Should disputes arise as to quality or fitness of products, the decision rests strictly with the Engineer based upon requirements of Contract Documents.

.5 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.

.6 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

2. AVAILABILITY

.1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.

.2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.

.3 Store products subject to damage from weather in weatherproof enclosures.

.4 Store cementitious products clear of earth or concrete floors, and away from walls.

.5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.

.6 Store sheet materials, lumber and piping on flat, solid supports and keep clear of ground. Slope to shed moisture.

.7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.

.8 Remove and replace damaged products at own expense and to satisfaction of the Engineer.

.9 Touch-up damaged factory finished surfaces to the Engineer's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

3. MANUFACTURER'S INSTRUCTIONS

.1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.

.2 Notify the Engineer in writing, of conflicts between specifications and manufacturer's instructions, so that the Engineer will establish a course of action.

.3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes the Engineer to require removal and re-installation at no increase in Contract Price or Contract Time.

4. QUALITY OF WORK

.1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify the Engineer if required Work is such as to make it impractical to produce required results.

.2 Do not employ anyone unskilled in their required duties. The Engineer reserves right to require dismissal from site, workers deemed incompetent, unskilled, or careless.

.3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with the Engineer, whose decision is final.

5. COORDINATION

.1 Ensure co-operation of workers in laying out Work. Maintain efficient and continuous supervision.

.2 Be responsible for coordination and placement of openings, sleeves, and accessories.

6. REMEDIAL WORK

.1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Coordinate adjacent affected Work as required.

.2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

7. FASTENINGS

.1 Provide metal fastenings and accessories in same texture, color and finish as adjacent materials, unless indicated otherwise.

.2 Prevent electrolytic action between dissimilar metals and materials.

.3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work.

.4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.

.5 Keep exposed fastenings to a minimum, space evenly and install neatly.

.6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

8. FASTENINGS - EQUIPMENT

.1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.

.2 Use heavy hexagon heads, semi-finished unless otherwise specified. Use No. 304 stainless steel for exterior areas.

.3 Bolts may not project more than one diameter beyond nuts.

.4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

9. PROTECTION OF WORK IN PROGRESS

.1 Prevent overloading of parts of building. Do not cut, drill, or sleeve load bearing structural member, unless specifically indicated without written approval of the Engineer.

10. EXISTING UTILITIES

.1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, and pedestrian and vehicular traffic.

.2 Protect, relocate, or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

END OF SECTION

CLEANING

1. PROJECT CLEANLINESS

.1 Maintain Work in tidy condition, free from accumulation of waste products and debris, including that caused by Owner or other Contractors.

.2 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by the Engineer. Do not burn waste materials on-site, unless approved by the Engineer.

.3 Clear snow and ice within the site if applicable, bank/pile snow in designated areas only.

.4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.

.5 Provide on-site waste containers for collection of waste materials and debris.

.6 Dispose of waste materials and debris off site.

.7 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

.8 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

2. FINAL CLEANING

.1 When work is substantially performed, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.

.2 Remove waste products and debris other than that caused by others and leave work clean and suitable for occupancy.

.3 Prior to final review remove surplus products, tools, construction machinery and equipment.

.4 Remove waste products and debris including that caused by Owner and other Contractors.

.5 Remove waste materials from site at regularly scheduled times or dispose of as directed by the Engineer. Do not burn waste materials on site, unless approved by the Engineer.

.6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.

.7 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and mechanical and electrical fixtures. Replace broken, scratched, or disfigured glass.

.8 Clean lighting reflectors, lenses, and other lighting surfaces.

.9 Broom clean and wash exterior walkways, surfaces; rake clean other surfaces of grounds.

.10 Remove dirt and other disfiguration from exterior surfaces.

.11 Sweep and clean paved areas.

.12 Clean equipment and fixtures to sanitary condition; clean or replace filters of mechanical equipment.

.13 Clean drainage systems.

END OF SECTION

CLOSEOUT SUBMTTALS

1. ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide submittals in accordance with Section 01.56.00 – Submittal Procedures.

.2 Provide spare parts, maintenance materials and special tools of same quality and manufacture as products provided in the Work.

.3 Provide evidence, if requested, for type, source and quality of products supplied.

2. CONTENTS – PROJECT RECORD DOCUMENTS

.1 Table of Contents for Each Volume: provide title of project;

.1 Date of submission; names

.2 Addresses and telephone numbers of Engineer and Contractor with name of responsible parties.

.3 Schedule of products and systems, indexed to content of volume.

.2 For each product or system:

.1 List names, addresses and telephone numbers of subcontractors and suppliers, including local sources of supplies and replacement parts.

.3 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete inapplicable information.

.4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.

.5 Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions as required to supplement product data.

3. AS-BUILT DOCUMENTS AND SAMPLES

.1 Maintain, in addition to requirements in General Conditions, at the site for the Engineer one record copy of:

.1 Contract Drawings.

.2 Specifications.

.3 Addenda.

.4 Change Orders and other modifications to the Contract.

.5 Reviewed shop drawings, product data and samples.

.6 Field test records.

.7 Inspection certificates.

.8 Manufacturer's certificates.

.2 Store record documents and samples in field office apart form documents used for construction.

.1 Provide files, racks, and secure storage.

.3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual.

.1 Label each document "PROJECT RECORD" in neat, large, printed letters.

.4 Maintain record documents in clean, dry and legible condition.

.1 Do not use record documents for construction purposes.

.5 Keep record documents and samples available for inspection by the Engineer.

4. RECORDING INFORMATION ON PROJECT RECORD DOCUMENTS

.1 Record information on set of black line opaque drawings, provided by the Engineer.

.2 Use felt tip marking pens, maintaining separate colors for each major system, for recording information.

.3 Record information concurrently with construction progress.

.1 Do not conceal Work until required information is recorded.

.4 Contract Drawings and Shop Drawings: mark each item to record actual construction, including:

.1 Measured depths of elements of foundation in relation to finish first floor datum.

.2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.

.3 Measured location of internal utilities and appurtenances, referenced to visible and accessible features of construction.

.4 Field changes of dimension and detail.

.5 Changes made by change orders.

.6 Details not on original Contract Drawings.

.7 Referenced Standards to related Shop Drawings and modifications.

.5 Specifications: mark each item to record actual construction, including:

.1 Manufacturer, trade name, and catalogue number of each product installed particularly optional items and substitute items.

.2 Changes made by Addenda and change orders.

.6 Other Documents: maintain manufacturer's certifications, inspection, certifications, and field test records, required by individual specifications sections.

.7 Provide digital photos, if requested, for site records.

5. WARRANTIES AND BONDS

.1 Develop warranty management plan to contain information relevant to Warranties.

.2 Submit warranty management plan, 30 days before planned application for Substantial Performance, to Consultant approval.

.3 Warranty management plan to include required actions and documents to assure that the Owner receives warranties to which it is entitled.

.4 Provide plan in narrative form and contain sufficient detail to make it suitable for use by future maintenance and repair personnel.

.5 Assemble approved information in binder, submit upon acceptance of work and organize binder as follows:

.1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.

.2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

.3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.

.4 Verify that documents are in proper form, contain full information, and are notarized.

.5 Co-execute submittals when required.

.6 Retain warranties and bonds until time specified for submittal.

.6 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial Performance is determined.

.7 Conduct joint 8-month warranty inspection, measured from the time of Substantial Performance,

.1 Coordinate warranty inspection meeting with the Engineer.

.8 Include information contained in warranty management plan as follows:

.1 Roles and responsibilities of personnel associated with warranty process, including points of contact and telephone numbers within the organizations of Contractors, subcontractors, manufacturers or suppliers involved.

.2 Provide list for each warranted equipment, item, feature or construction or system indicating:
   a. Name of Item.
   b. Model and serial numbers.
   c. Location where installed.
   d. Name and phone numbers of manufacturers or suppliers.
   e. Names, addresses and telephone numbers of sources of spare parts.
   f. Warranties and terms of warranty: include one-year overall warranty of construction. Indicate items that have extended warranties and show separate warranty expiration dates.
   g. Cross-reference to warranty certificates as applicable.
   h. Starting point and duration of warranty period.
   i. Summary of maintenance procedures required to continue warranty in force.
   j. Cross-reference to specific pertinent Operation and Maintenance manuals.
   k. Organization, names and phone numbers of persons to call for warranty service.
   l. Typical response time and repair time expected for various warranted equipment.

.3 Contractor's plans for attendance at 8-month post-construction warranty inspections.

.4 Procedure and status of tagging of equipment covered by extended warranties.

.5 Post copies of instructions near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

.9 Respond in a timely manner to oral or written notification of required construction warranty repair work.

.10 Written verification to follow oral instructions.

.1 Failure to respond will be cause for the Engineer to proceed with action against the Contractor.

END OF SECTION