

ENERGY CONSERVATION MEASURE UPGRADES FOR SHAW CENTRE ARENA CITY OF SALMON ARM

CCDC 01 SPECIFICATION

ISSUED FOR TENDER
2025-02-24

“The best way to predict the future is to
create it” – Abraham Lincoln

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1.1 WORK OF THE PROJECT

- .1 Work of the Project, of which Work of this Contract is a part, comprises the following:
 - .1 Provide, install, and support a new desuperheater.
 - .2 Provide and install new hot water storage tanks.
 - .3 Provide and install a new circulation pump.
 - .4 Provide and install new piping, valves, and accessories as noted on drawings.
 - .5 Commission system and integrate into existing controls.

1.2 WORK OF THIS CONTRACT

- .1 *Work of this Contract* comprises the following:
 - Supply and install a desuperheater to transfer excess heat from the refrigeration system to the hot water system.
- .2 *Municipal Address:* 2600 – 10 Avenue NE, Salmon Arm, British Columbia
- .3 *Legal Description:* Lot A, Plan 62641

1.3 DIVISION OF WORK

- .1 Division of the *Work* among *Subcontractors* and *Suppliers* is solely *Contractor's* responsibility. *Consultant* and *Owner* assume no responsibility to act as an arbiter to establish subcontract limits between Sections or Divisions of the *Work*.

1.4 SPECIFICATIONS LANGUAGE AND STYLE

- .1 These specifications are written in the imperative mood and in streamlined form. The imperative language is directed to *Contractor*, unless stated otherwise.
- .2 Complete sentences by reading "shall", " *Contractor* shall", "shall be", and similar phrases by inference. Where a colon (:) is used within sentences and phrases, read the words "shall be" by inference.
- .3 Fulfill and perform all indicated requirements whether stated imperatively or otherwise.
- .4 When used in the context of a *Product*, read the word "provide" to mean "supply and install to result in a complete installation ready for its intended use".

1.5 CONTRACT DOCUMENTS FOR CONSTRUCTION PURPOSES

- .1 *Owner* will supply *Contractor* with a complete set of *Contract Documents* in electronic form before commencement of the *Work*. *Contractor* may print hard copies for construction purposes as required.

1.6 DOCUMENTS AT THE SITE

- .1 Keep the following documents at *Place of the Work*, stored securely and in good order and available to *Owner* and *Consultant* in [hard copy] [and] [or] [electronic] form:
 - .1 Current Contract Documents, including Drawings, Specifications and addenda.

- .2 Change Orders, Change Directives, and Supplementary Instructions.
- .3 Reviewed Shop Drawings, Product data and samples.
- .4 Field test reports and records.
- .5 Construction progress schedule.
 - a. Meeting minutes.
 - b. Manufacturer's certifications.
 - c. Permits, inspection certificates, and other documents required by authorities having jurisdiction.
 - d. Current as-built drawings.
 - e. Material Safety Data Sheets (MSDS) for all controlled *Products*.

1.7 CONTRACTOR'S USE OF PREMISES

- .1 Except as otherwise specified, Contractor has unrestricted use of Place of the Work from time of Contract award until Ready-for-Takeover.
- .2 Confine *Construction Equipment*, *Temporary Work*, storage of *Products*, waste products and debris, and all other construction operations to limits required by laws, ordinances, permits, and *Contract Documents*, whichever is most restrictive. Do not unreasonably encumber *Place of the Work*.

END OF SECTION

1.1 SUMMARY OF CONTRACTUAL RELATIONSHIPS

- .1 This Section specifies administrative provisions related to the exercise of *Owner's* right to assign the *Contract* to another contractor ("prime contractor").
- .2 Upon award of the *Contract*, *Contractor* shall execute an agreement with *Owner* for performance of the *Contract*.
- .3 At a later date, *Owner* will enter into an agreement with prime contractor for performance of prime contract, the terms of which provide for the assignment of the *Contract* to prime contractor.
- .4 *Owner* intends to exercise its right under the *Contract* to assign the *Contract* to prime contractor, with *Contractor's* written consent by means of an assignment agreement in the form provided in Section 00 73 26 – Assignment Agreement.
- .5 Upon assignment of the *Contract*, *Contractor* shall become a subcontractor to prime contractor as set out in the assignment agreement.

1.2 PRIME CONTRACT AND PRIME CONTRACTOR

- .1 Prime contract:
- .2 Prime contractor: to be determined upon award of the prime contract

1.3 ASSIGNMENT OF CONTRACT

- .1 Project schedule calls for the prime contract to be awarded by April 10, 2025. Schedule is subject to change.
- .2 *Contractor* will be named as a "designated *Subcontractor*" and the *Contract* will be called an "assignable contract" in the contract documents for the prime contract.
- .3 The cost of the *Contract* will be included in the prime contract under a cash allowance. Prime contractor will, by the terms of the contract documents for the prime contract, be required to accept an assignment of, and assume complete responsibility for, the *Contract*.
- .4 As soon after award of the prime contract as *Owner* considers practicable, *Owner* will assign the *Contract* to the prime contractor.
- .5 The assignment will be made legally effective by means of an assignment agreement, to be signed by prime contractor, *Contractor*, and *Owner*.
- .6 *Owner* will give *Contractor* at least 5 *Working Days* notice in advance of the effective date of the assignment.
- .7 Upon assignment, all monies payable to *Contractor* as of the date of the assignment and all other *Owner's* obligations under the *Contract* shall become obligations of prime contractor, subject to the terms of the assignment agreement.
- .8 *Ready-for-Takeover* of the *Contract*, if not attained before the assignment, will be delayed so as to be attained concurrently with the date of *Ready-for-Takeover* of the prime contract. Time of release of holdback for the *Work* of the *Contract*,

commencement of warranty for the *Work* of the *Contract*, and other conditions of the *Contract* may therefore be affected and determined by the construction schedule for the prime contract, subject to the terms of the assignment agreement.

END OF SECTION

1.1 SUMMARY OF CONTRACTUAL RELATIONSHIPS

- .1 This Section specifies administrative provisions related to *Owner's* assignment of one or more other contracts (the "assignable contract(s)") to the *Contract*.
- .2 *Owner* has entered into one or more assignable contracts with one or more other entities ("designated subcontractors or suppliers") for performance of *Work* or supply of *Products* for the *Project*.
- .3 *Owner* intends to exercise its right under each assignable contract to assign such contract to *Contractor* by means of an assignment agreement in the form provided in Section 00 73 26 – Assignment Agreement.
- .4 Upon the assignment of each assignable contract, each designated subcontractor or supplier shall become a *Subcontractor* or *Supplier* to *Contractor* as set out in the assignment agreement.

1.2 ASSIGNABLE CONTRACTS AND DESIGNATED SUBCONTRACTORS/SUPPLIERS

.1 Assignable contract: Contract No. Designated

[subcontractor] [supplier]:

Name:

Address:

Contact Info:

.2 Assignable contract: Contract No. Designated

[subcontractor] [supplier]:

Address:

Contact Info:

1.3 ASSIGNMENT

- .1 As soon after award of the *Contract* as *Owner* considers practicable, *Owner* will assign each assignable contract to *Contractor*.
- .2 Each assignment will be made legally effective by means of an assignment agreement, to be signed by *Contractor*, the designated subcontractor or supplier, and *Owner*.
- .3 *Owner* will give *Contractor* at least 5 *Working Days* notice in advance of the effective date of the assignment.
- .4 Upon assignment, all monies payable to the assigned *Subcontractor* or *Supplier* as of the date of the assignment, and all other *Owner's* obligations under the assignable contract, shall become obligations of *Contractor*, subject to the terms of the assignment agreement.

1.4 CONTRACT DOCUMENTS

- .1 Contract documents for each assignable contract are provided as information under the *Contract*. Refer to Section 00 31 00 – Available Project Information.
- .2 Upon assignment, the contract documents for each assignable contract shall become *Contract Documents* under the *Contract*.

1.5 CONTRACT TIME AND SCHEDULING

- .1 Refer to the contract documents for each assignable contract for contract time provisions for each assignable contract.
- .2 Coordinate scheduling with each designated subcontractor or supplier and incorporate each assignable contract into the construction schedule for the *Contract*, so as to achieve [*Ready-for-Takeover*] [*Substantial Performance of the Work*], including the work of each assignable contract, within the *Contract Time* for the *Contract*.

1.6 CONTRACT PRICE AND COSTS

- .1 .Include the cost of each assignable contract as a cash allowance in the *Contract Price* for the *Contract*, as specified in Section 01 21 00 – Allowances

END OF SECTION

1.1 RESTRICTIONS ON USE OF PREMISES

- .1 Limit use of premises for *Work*, for storage, and for access, to allow;
 - .1 Work by other contractors.
 - .2 Public usage.
- .2 Coordinate use of premises under direction of *Owner*.

1.2 WORK SEQUENCE

- .1 Schedule and construct *Work* in stages to accommodate *Owner's* continued use of premises during construction.
- .2 Schedule and construct *Work* in stages to provide for continuous public usage. Do not close off public usage of facilities until use of one stage of *Work* will provide alternate usage.

1.3 OWNER OCCUPANCY

- .1 *Owner* will occupy premises during entire construction period.
- .2 Cooperate with *Owner* in scheduling operations to minimize disruptions and to facilitate *Owner* usage.

1.4 RESTRICTED HOURS OF WORK IN OCCUPIED FACILITIES

- .1 Allow for hours of work restrictions in construction progress schedule.

1.5 NOISY WORK RESTRICTIONS IN OCCUPIED FACILITIES

- .1 Schedule excessively noisy work to avoid disturbance to building occupants. Perform excessive noise generating work outside of *Owner's* business hours.
- .2 Use powder actuated devices only with *Consultant's* written permission.

1.6 MAINTAINING LIFE SAFETY SYSTEMS IN OCCUPIED FACILITIES

- .1 Maintain operational life safety systems and public access to exits in occupied areas during all stages of the *Work*.
- .2 Determine nature and exact locations of existing fire and smoke sensors prior to the commencement of the *Work*. Avoid direct or indirect jarring while working in adjacent areas and exercise caution to avoid triggering these devices.
- .3 Be responsible for costs incurred by *Owner* on account of false fire alarms activated as a result of the execution of the *Work* without adequate precautions.

END OF SECTION

1.1 CASH ALLOWANCES FOR SUPPLY ONLY OF PRODUCTS

- .1 Amount of each cash allowance includes:
 - .1 Cost of *Products* as invoiced by the *Supplier*, including delivery and applicable taxes but excluding *Value Added Taxes*.
- .2 Amount of each cash allowance does not include costs of the following items, which costs shall be included in the *Contract Price* and not in the cash allowance:
 - .1 Unloading, handling and storage on site.
 - .2 Installation and all other related costs.
 - .3 Overheads and profits related to the cash allowance.

1.2 CASH ALLOWANCES FOR SUPPLY AND INSTALLATION OF PRODUCTS

- .1 Amount of each cash allowance includes:
 - .1 All costs to provide the specified *Products*, including supply, installation, and related costs, excluding *Value Added Taxes*.
 - .2 *Subcontractor's* and sub-*Subcontractor's* overheads and profits related to the cash allowance.
- .2 Amount of each cash allowance does not include *Contractor's* overhead and profit, and other related costs, which shall be included in the *Contract Price* and not in the cash allowance.

1.3 CASH ALLOWANCES FOR SERVICES

- .1 Amount of each cash allowance includes:
 - .1 All costs related to the services, excluding *Value Added Taxes*.
- .2 *Subcontractor's* and sub-*Subcontractor's* overheads and profits related to the cash allowance.
 - .1 Amount of each cash allowance does not include *Contractor's* overhead and profit, and other related costs, which shall be included in the *Contract Price* and not in the cash allowance.

1.4 CASH ALLOWANCES FOR ASSIGNABLE CONTRACTS

- .1 *Owner* has entered into assignable contracts, which will be assigned to this *Contractor* as specified in Section 01 11 22 – Assignable Contracts.
- .2 Amount of each cash allowance includes the amount payable by *Contractor* to the designated *Subcontractor* after assignment of the assignable contract, excluding *Value Added Taxes*.
- .3 Amount of each allowance does not include the *Contractor's* overhead and profit, and other related costs, which costs shall be included in the *Contract Price* and not in the cash allowance.

1.5 EXPENDITURE OF CASH ALLOWANCES

- .1 *Owner*, through *Consultant*, will provide *Contractor* with documentation required to permit pricing of a cash allowance item.
- .2 *Owner*, through *Consultant*, may request *Contractor* to identify potential *Suppliers* or *Subcontractors*, as applicable, and to obtain at least three competitive prices for each cash allowance item.
- .3 *Owner*, through *Consultant*, may request the *Contractor* to disclose originals of all bids, quotations, and other price related information received from potential *Suppliers* or *Subcontractors*.
- .4 *Owner*, through *Consultant*, will determine by whom and for what amount each cash allowance item will be performed. Obtain *Owner's* prior written approval in the form of a *Change Order* before entering into a subcontract, amending an existing subcontract, or performing own forces work included in a cash allowance. Upon issuance of the *Change Order*, the *Contractor's* responsibilities for a cash allowance item shall be the same as for other work of the *Contract*.

1.6 CONTINGENCY ALLOWANCE

- .1 Include in the *Contract Price* a contingency allowance in the amount of 15% of contract price.

END OD SECTION

1.1 DEFINITION

- .1 In this Section "Substitution" means a *Product*, a manufacturer, or both, not originally specified in *Contract Documents* by proprietary name but proposed for use by *Contractor* in place of a *Product*, a manufacturer, or both, specified by proprietary name.

1.2 SUBSTITUTION PROCEDURES

- .1 *Contractor* may propose a Substitution wherever a *Product* or manufacturer is specified by proprietary name(s) and accompanied by language such as "or equal", "or approved equal", or other similar words. Do not construe such language as an invitation to unilaterally provide a Substitution without *Consultant's* prior acceptance in writing. Do not order or install any Substitution without a *Supplemental Instruction* or *Change Order*.
- .2 Provided a proposed Substitution submission includes all of the information specified in this Section under Submission Requirements For Proposed Substitutions, *Consultant* will promptly review and accept or reject the proposed Substitution.
- .3 *Consultant* 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,
 - .3 and the Substitution provides a benefit to *Owner*.
- .4 If *Contractor* fails to order a specified *Product* or order a *Product* by a specified manufacturer in adequate time to meet *Contractor's* construction schedule, *Consultant* will not consider that a valid reason to accept a Substitution.
- .5 If *Consultant* 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 Section 01 26 00 – Contract Modification Procedures.
- .6 If a Substitution is accepted in the form of a Supplemental Instruction or Change Order, Contractor shall not revert to an originally specified Product or manufacturer without *Consultant's* prior written acceptance.

1.3 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 web site.
 - .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 the Substitution, including material descriptions, compliance with applicable codes and reference standards, performance and test data, compatibility with 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

1.1 SCHEDULE OF LABOUR RATES

- .1 Prior to the first application for payment, submit for the Consultant's review a schedule of labour rates for all trades and classifications of trades, such as journeymen, apprentices, and foremen that will be employed in the Work. Provide a breakdown of payroll burden component of labour rates.
- .2 Labour rates shall reflect the salaries, wages, and benefits paid to personnel in the direct employ of the Contractor, Subcontractors, and sub-Subcontractors, stated as hourly rates, that will be used when:
 - .1 preparing price quotations for Change Orders, and
 - .2 determining the cost of work attributable to Change Directives.
- .3 Labour rates stated in the schedule of labour rates shall be consistent with rates that will actually be paid, and payroll burden costs that will actually be incurred, in the normal performance of the Work, during regular working hours. Labour rates shall not include any additional overhead and profit component.
- .4 Where collective agreements apply, the labour rates shall not exceed those established by collective agreement.
- .5 Obtain the Owner's written acceptance of the schedule of labour rates before submitting the first Change Order quotation.
- .6 Accepted schedule of labour rates will be used solely for evaluating Change Order quotations and cost of performing work attributable to Change Directives.
- .7 The Contractor may request amendments to the accepted schedule of labour rates if changes in the labour rates that will actually be paid, or payroll burden cost that will actually be incurred, in the normal performance of the Work can be demonstrated. Obtain the Owner's written acceptance of such changes.

1.2 SCHEDULE OF EQUIPMENT RATES

- .1 Prior to the first application for payment, submit for the Consultant's review a schedule of equipment rates for Contractor owned Construction Equipment.
- .2 Equipment rates shall reflect the rates that will be used when:
 - .1 preparing price quotations for Change Orders, and
 - .2 determining the cost of work attributable to Change Directives.
- .3 Equipment rates stated in the schedule shall be consistent with local equipment rental market rates and shall not include any additional overhead and profit component.
- .4 Obtain the Owner's written acceptance of the schedule of equipment rates before submitting the first Change Order quotation.
- .5 Accepted schedule of equipment rates will be used solely for evaluating Change Order quotations and cost of performing work attributable to Change Directives.

- .6 The Contractor may request amendments to the accepted schedule of equipment rates if changes in local equipment rental market rates can be demonstrated. Obtain the Owner's written acceptance of such changes.

1.3 VALUATION OF CHANGES BASED ON AGREED UNIT PRICES

- .1 The Consultant may, at the outset of the Contract or at any other time, request the Contractor to submit unit prices anticipated to be required in valuing changes in the Work.
- .2 The Contractor shall submit such unit prices promptly upon request.
- .3 The unit prices shall be valid for a specified duration.
- .4 The unit prices shall exclude all fees for overhead and profit [and shall be subject to the percentage fees specified in this Section under Fees for Overhead and Profit – Change Orders].
- .5 The Consultant will evaluate the Contractor's quoted unit prices and, if accepted by the Owner in writing, the agreed unit prices shall be used to value subsequent proposed changes in the Work wherever they are applicable.

1.4 METHOD OF CONTRACT PRICE ADJUSTMENT - CHANGE ORDERS

- .1 Unless otherwise agreed, the adjustment of the Contract Price on account of a proposed change in the Work shall be based on a quotation for a fixed price increase or decrease to the Contract Price regardless of the Contractor's actual expenditures and savings.
- .2 If unit prices included in the stipulated price contract are applicable to the proposed change, the adjustment of the Contract Price shall be based on those unit prices, to the extent they apply.
- .3 Unless otherwise agreed, the adjustment of Unit Prices affected by a proposed change in the Work shall be based on a quotation for an increase or decrease to existing Unit Prices, or new Unit Prices, as applicable, regardless of the Contractor's actual expenditures and savings.
- .4 If necessary and unless otherwise agreed, the adjustment of the GMP or the Target Contract Price on account of a proposed change in the Work shall be based on a quotation for an increase or decrease to the GMP or Target Contract Price. The increase or decrease shall include an adjustment to the Contractor's fixed fee, if any, as agreed by the Owner and the Contractor.

1.5 CHANGE ORDER PROCEDURES

- .1 Upon issuance by the Consultant to the Contractor of a proposed change in the Work, and unless otherwise requested in the proposed change or unless otherwise agreed:
 - .1 Submit to the Consultant a fixed price quotation for the proposed change in the Work within 5 business days after receipt of the proposed change in the Work.

- .2 If requested in the proposed change, provide a detailed breakdown of the price quotation including the following to the extent applicable, with appropriate supporting documentation:
 - a. Estimated labour costs, including hours and applicable hourly rates based on the accepted schedule of labour rates.
 - b. Estimated Product costs, including Supplier quotations, estimated quantities and unit prices.
 - c. Estimated Construction Equipment costs.
 - d. Enumeration of all other estimated costs included in the price quotation.
 - e. Estimated credit amounts for labour and Products not required on account of the proposed change.
 - f. Fees, not exceeding the applicable percentages for overhead and profit as specified in this Section.
 - g. Where applicable, Subcontractor quotations, also including a detailed breakdown of all of the above.
- .3 Include in the quotation the increase or decrease to the Contract Time, if any, for the proposed change, stated in number of days.
- .4 Include in the quotation the number of days for which the quotation is valid.
- .5 The quotation will be evaluated by the Consultant and the Owner and, if accepted by the Owner, be documented in the form of a signed Change Order.

1.6 FEES FOR OVERHEAD AND PROFIT – CHANGE ORDERS

- .1 Where the Contractor's price quotation for a Change Order results in a net increase to the Contract Price, the Contractor's entitlement to a fee for overhead and profit in the quotation shall be as follows, as applicable:
 - .1 For work to be performed by the Contractor's own forces, 15% of the Contractor's price quotation before the Contractor's fee is applied.
 - .2 For work to be performed by a Subcontractor, 10% of the Subcontractor's price quotation including the Subcontractor's fee.
- .2 Where a Subcontractor's price quotation for a Change Order results in a net increase to the Subcontractor's contract price, the Subcontractor's entitlement to a fee for overhead and profit in the quotation shall be as follows, as applicable:
 - .1 For work to be performed by the Subcontractor's own forces, 15% of the Subcontractor's price quotation before the Subcontractor's fee is applied.
 - .2 For work to be performed by a sub-Subcontractor, 10% of the sub-Subcontractor's price quotation including the sub-Subcontractor's fee.
- .3 Where the Contractor's or a Subcontractor's price quotation for a Change Order results in a net decrease in price before adjustment for fees for overhead and profit, such a

price quotation shall be for the net decrease without any adjustment for fees for overhead and profit.

1.7 METHOD OF CONTRACT PRICE ADJUSTMENT - CHANGE DIRECTIVES

- .1 Unless the Owner and the Contractor reach an earlier agreement on the adjustment to the Contract Price by means of a Change Order that cancels the Change Directive, the adjustment in the Contract Price for change carried out by way of a Change Directive shall be determined as specified in the General Conditions of Contract after the change in the Work is completed.

1.8 CHANGE DIRECTIVE PROCEDURES

- .1 If a Change Directive is issued for a change in the Work for which a proposed change was previously issued, but no Change Order has yet been signed, the Change Directive shall cancel the proposed change and any Contractor quotations related to that change in the Work.
- .2 When proceeding with a change in the Work under a Change Directive, keep accurate records of daily time sheets for labour and Construction Equipment, and invoices for Product and Construction Equipment costs. Submit such records to the Consultant weekly, until the Change Order superseding the Change Directive is issued.

1.9 FEES FOR OVERHEAD AND PROFIT – CHANGE DIRECTIVES

- .1 The Contractor's entitlement to a fee for overhead and profit on the Contractor's expenditures and savings attributable to a Change Directive shall be as follows, as applicable:
 - .1 For work performed by the Contractor's own forces, 15% of the Contractor's net increase in costs.
 - .2 For work performed by a Subcontractor, 10% of the sum of the Subcontractor's net increase in costs plus the Subcontractor's fee.
- .2 A Subcontractor's entitlement to a fee for overhead and profit on the Subcontractor's expenditures and savings attributable to a Change Directive shall be as follows, as applicable:
 - .1 For work performed by the Subcontractor's own forces, 15% of the Subcontractor's net increase in costs.
 - .2 For work performed by a Sub-subcontractor, 10% of the sum of the Sub-subcontractor's net increase in costs plus the Sub-subcontractor's fee.
- .3 Where a Change Directive results in net savings on account of work not required to be performed and a net decrease in the Contractor's or Subcontractor's cost, the net savings to the Contractor or Subcontractor shall be calculated without any adjustment for fees for overhead and profit.
- .4 When a Change Directive is ultimately recorded as a Change Order, there shall be no additional entitlement to fees for overhead and profit beyond those specified in this article.

1.10 SUPPLEMENTAL INSTRUCTIONS

- .1 The Consultant may issue Supplemental Instructions to provide clarifications to the Contract Documents, provide additional information, or make minor variations in the Work not involving adjustment in the Contract Price or Contract Time.
- .2 If the Contractor considers a Supplemental Instruction to require an adjustment in Contract Price or Contract Time, the Contractor shall promptly notify the Consultant and the Owner in writing and shall not proceed with any work related to the Supplemental Instruction pending receipt of a Change Order, a Change Directive, or, in accordance with the dispute resolution provisions of the General Conditions of Contract, a Notice in Writing of a dispute and instructions to proceed.

END OF SECTION

1.1 SCHEDULE OF VALUES

- .1 Prior to the first application for payment, submit for *Consultant's* review an initial schedule of values. Modify the initial schedule of values if and as requested by *Consultant*. Obtain *Consultant's* written acceptance of the initial schedule of values prior to the first application for payment.
- .2 Together with the first and all subsequent applications for payment, submit updated versions of the schedule of values to indicate the values, to the date of application for payment, of work performed and *Products* delivered to *Place of the Work*.
- .3 Provide the schedule of values in an electronic spreadsheet format based on [the format provided and content described in latest edition of CCDC 24 – A Guide to Model Forms and Support Documents.
- .4 Provide the schedule of values in an electronic spreadsheet format that provides for inclusion of the following information:
 - .1 Identifying information including 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 based on *Contractor*, *Subcontractor* and sub-*Subcontractor* work, *Specification* sections, and material and labour breakdown. Include separate line items for closeout procedures including closeout submittals, demonstration and training, start-up and testing.
 - .3 A work breakdown structure that is sufficiently detailed and comprehensive to facilitate *Consultant's* evaluation of applications for payment at an appropriate level of detail.
 - .4 Provisions for approved *Change Orders* allowances, unit price work and assignable contracts so that the breakdown amounts indicated in the schedule of values aggregate to the current total *Contract Price*. Also provide for indicating the estimated value of *Change Directives* within the schedule of values, separately from the current total *Contract Price*.
 - .5 For each item in the work breakdown structure, provide as a minimum the following information, under headings as indicated:
 - a. Breakdown Amount: A dollar amount, including an appropriate pro rata portion of *Contractor's* overhead and profit.
 - b. Performed to Date: The value of *Work* performed and *Products* delivered to *Place of the Work* up to the date of the application for payment, stated as a percentage of the *Contract Price* and in dollars.
 - c. Previously Performed: The value of *Work* performed and *Products* delivered to the *Place of the Work* for which payment has been previously certified, stated in dollars.
 - d. Current Period: The value of *Work* performed and *Products* delivered to *Place of the Work* for which *Contractor* is currently applying for payment, stated in dollars.

- e. Balance to Complete: The value of *Work* not yet performed and *Products* not yet delivered to *Place of the Work*, stated in dollars.

1.2 CASH FLOW PROJECTION

- .1 Prior to the first application for payment submit, for *Consultant's* review, a forecast of approximate monthly progress payments for each month of the *Contract Time*.
- .2 Submit revised cash flow forecasts when required due to significant changes in rate of progress of the *Work* or significant changes in the *Contract Price* or when requested by *Consultant*.

1.3 WORKERS' COMPENSATION CLEARANCE

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

1.4 STATUTORY DECLARATIONS

- .1 Submit a statutory declaration in the form of CCDC 9A – Statutory Declaration of Progress Payment Distribution by *Contractor* with each application for payment except the first.

1.5 PAYMENT FOR PRODUCTS STORED 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 other than *Place of the Work*, subject to:
 - .1 a request submitted by *Contractor* in writing, with appropriate justification, and
 - .2 whatever conditions *Owner* or *Consultant* may establish for such payments, as required to protect *Owner's* interests.

1.6 RELEASE OF HOLDBACK

- .1 Builder lien holdback will be required.

END OF SECTION

1.1 CONSTRUCTION START-UP MEETING

- .1 Promptly after *Contract* award, *Consultant* will establish the time and location of a construction start-up meeting to review and discuss administrative procedures and responsibilities. *Consultant* will notify *Contractor* least 5 *Working Days* before the meeting.
- .2 Senior representatives of *Owner*, *Consultant*, and *Contractor*, including *Contractor's* project manager and site superintendent, and major *Subcontractors*, shall be in attendance.
- .3 *Consultant's* representative will chair the meeting and record and distribute the minutes.
- .4 Agenda will include following:
 - .1 Appointment of official representatives of *Owner*, *Contractor*, *Subcontractors*, *Consultant*, and subconsultants.
 - .2 *Project* communications.
 - .3 *Contract Documents* for construction purposes.
 - .4 Documents at the site.
 - .5 *Contractor's* use of premises.
 - .6 *Owner-supplied Products*.
 - .7 Assignable contracts.
 - .8 Work restrictions.
 - .9 Cash allowances.
 - .10 Substitution procedures.
 - .11 *Contract* modification procedures.
 - .12 Payment procedures.
 - .13 Construction progress meetings.
 - .14 Construction progress schedule, including long lead time items.
 - .15 Submittals schedule and procedures.
 - .16 Special procedures.
 - .17 Quality requirements, including testing and inspection procedures.
 - .18 *Contractor's* mobilization.
 - .19 Temporary utilities.
 - .20 Existing utility services.
 - .21 Construction facilities.
 - .22 Temporary barriers and enclosures.
 - .23 Temporary controls.
 - .24 Field engineering and layout of work.
 - .25 Site safety.

- .26 Site security.
- .27 Cleaning and waste management.
- .28 Closeout procedures and submittals.
- .29 Commissioning.
- .30 Other items.

1.2 CONSTRUCTION PROGRESS MEETINGS

- .1 Schedule regular construction progress meetings for the duration of the *Work*.
Consultant will prepare meeting agendas, chair the meetings, and record and distribute the minutes.
- .2 Arrange for and provide physical space for meetings.
- .3 *Consultant* will record in the meeting minutes significant decisions and identify action items and action dates by attendees or the parties they represent.
- .4 *Consultant* will distribute copies of minutes within three Working Days after each meeting to meeting attendees and any affected parties who may not be in attendance.
- .5 Ensure that *Subcontractors* attend as and when appropriate to the progress of the *Work*.
- .6 Agenda for each meeting shall include the following, as a minimum:
 - .1 Approval of minutes of previous meeting.
 - .2 Work progress since previous meeting.
 - .3 Field observations, including any problems, difficulties, or concerns.
 - .4 Construction progress schedule.
 - .5 Submittals schedule.
 - .6 Proposed changes in the *Work*.
 - .7 Requests for information.
 - .8 Site safety issues.
 - .9 Other business

END OF SECTION

1.1 SUMMARY

- .1 This Section specifies *Contractor's* responsibilities for preparation and submission of schedules and other documentation related to tracking construction progress.
- .2 The purpose of submitting progress schedules is to:
 - .1 inform *Owner* and *Consultant* of actual progress versus planned progress, and
 - .2 provide assurance that scheduling issues are being proactively identified and addressed in a timely manner, and that planned progress is being maintained as closely as possible.

1.2 CONSTRUCTION PROGRESS SCHEDULE

- .1 Format and Content:
 - .1 Prepare schedule in the form of a Critical Path Method (CPM) Gantt chart using appropriate scheduling software.
 - .2 Provide a work breakdown structure identifying key activities, work packages, and major milestones, including long delivery *Products*, inspection and testing activities, preparation and review of mock-ups, *Owner* decisions for cash allowances, shutdown or closure activities, delivery of *Owner* supplied *Products*, *Owner* performed work, demonstration and training activities, and similar items, at a sufficient level of detail to effectively manage construction progress.
 - .3 Indicate milestone date[s] for *Ready-for-Takeover* and *Substantial Performance of the Work*.
- .2 Submission:
 - .1 Submit initial schedule to Owner and Consultant within 15 Working Days after Contract award.
 - .2 Submit schedule via e-mail as .pdf files.
 - .3 Consultant will review format and content of initial schedule and request necessary changes, if any, within 5 Working Days after receipt.
 - .4 If changes are required, resubmit finalized initial schedule within 5 Working Days after return of review copy.
 - .5 Submit updated progress schedule bi-weekly to Owner and Consultant, indicating actual and projected start and finish dates with report date line and progress, activity relationships, critical path, float, and baseline comparison to current progress.

1.3 SUBMITTALS SCHEDULE

- .1 Format and Content:
 - .1 Prepare schedule identifying all required *Shop Drawing*, *Product* data, and sample submissions, including samples required for testing and including those for *Owner* supplied *Products*.
 - .2 Prepare schedule in electronic format.

- .3 Provide a separate line for each required submittal, organized by *Specifications* section names and numbers, and further broken down by individual *Products* and systems as required.
- .4 For each required submittal, show planned earliest date for initial submittal earliest date for return of reviewed submittal by *Consultant* and latest date for return of reviewed submittal without causing delay.
- .5 Allow time in schedule for resubmission of submittals, should resubmission be necessary.
- .2 Submission:
 - .1 Submit initial schedule to Consultant within 15 Working Days after Contract award.
 - .2 Submit schedule via e-mail as .pdf files.
 - .3 Consultant will review format and content of initial schedule and request necessary changes, if any, within 5 Working Days after receipt.
 - .4 If changes are required, resubmit finalized schedule within 5 Working Days after return of review copy.

1.4 SCHEDULE MANAGEMENT

- .1 A schedule submitted as specified and accepted by *Consultant* shall become the baseline schedule and shall be used as the baseline for updates.
- .2 At each regular progress meeting, review and discuss current construction progress and submittals schedules with *Consultant* and *Owner*, including activities that are behind schedule and planned measures to regain schedule slippage in key areas on or near the critical path.
- .3 Activities considered behind schedule are those with start or completion dates later than the dates shown on the baseline schedule.

1.5 RECORDING ACTUAL SITE CONDITIONS ON AS-BUILT DRAWINGS

- .1 Obtain a hard copy set of construction *Drawings* for the purpose of creating as-built drawings. Record information and maintain as-built drawings in clean, dry and legible condition.
- .2 Obtain from *Consultant* an electronic copy of the construction *Drawings* for the purpose of creating as-built drawings. Record information in electronic form, clearly identifying as-built deviations from the originally obtained construction *Drawings*.
- .3 Clearly label each drawing as "AS-BUILT DRAWING". Record information concurrently with construction progress. Do not conceal *Work* until required information is recorded.
- .4 Record actual construction including:
 - .1 Measured locations of pipes, ducts, conduits, outlets, fixtures, access panels, and appurtenances, referenced to visible and accessible features of construction.
 - .2 Field changes of dimension and detail.
 - .3 Changes made by *Change Orders* and *Supplemental Instructions*

- .4 References to *Shop Drawings*, where *Shop Drawings* show more detail.
- .5 Do not use as-built drawings for construction purposes.

1.6 PROGRESS PHOTOGRAPHS

- .1 Arrange for periodic digital photography to document and provide a photographic record of the progress of the *Work*.
- .2 Identify each photograph by project name and date taken.
- .3 Submission: Submit .jpg format files in standard resolution via e-mail at completion of building.
- .4 Do not use progress or any other *Project* photographs for promotional purposes without *Owner's* written consent.

END OF SECTION

1.1 ADMINISTRATIVE

- .1 Submit specified submittals to *Consultant* for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in the *Work*. Failure to submit in ample time is not considered sufficient reason for an extension of *Contract Time* or for *Product* substitutions or other deviations from the *Drawings* and *Specifications*.
- .2 Where required by authorities having jurisdiction, provide submittals to such authorities for review and approval.
- .3 Do not proceed with *Work* affected by a submittal until review is complete.
- .4 Present *Shop Drawings*, *Product* data, and samples in SI metric or imperial units.
- .5 Review submittals, provide verified field measurements where applicable, and affix *Contractor's* review stamp prior to submission to *Consultant*. *Contractor's* review stamp represents that necessary requirements have been determined and verified, and that the submittal has been checked and coordinated with requirements of the *Work* and *Contract Documents*.
- .6 Verify field measurements and that affected adjacent work is coordinated.
- .7 Submittals not meeting specified requirements will be returned with comments.
- .8 Reproduction of construction *Drawings* to serve as background for *Shop Drawings* is permitted. If construction *Drawings* are used for this purpose, remove references to *Consultant*.
- .9 Do not propose Substitutions or deviations from *Contract Documents* via *Shop Drawing*, *Product* data and sample submittals.

1.2 SHOP DRAWINGS AND PRODUCT DATA

- .1 Indicate *Products*, methods of construction, and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of the *Work*.
- .2 Where *Products* attach or connect to other *Products*, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross-references to *Drawings*, *Specifications* and other already reviewed *Shop Drawings*.
- .3 Accompany submittals with a transmittal information including:
 - .1 Date.
 - .2 *Project* title and number.
 - .3 *Contractor's* name and address.
 - .4 Identification of each submittal item and quantity.
 - .5 Other pertinent data.
- .4 Shop Drawing submittals shall include:

- .1 Date and revision dates.
- .2 *Project* title and number.
- .3 Name and address of:
 - a. Subcontractor.
 - b. Supplier.
 - c. Manufacturer.
- .4 Contractor's stamp, date, and signature of Contractor's authorized representative responsible for Shop Drawing review, indicating that each Shop Drawing has been reviewed for compliance with Contract Documents and, where applicable, that field measurements have been verified.
- .5 Details of appropriate portions of the Work as applicable:
 - a. Fabrication.
 - b. Layout, showing dimensions, including identified field dimensions, and clearances.
 - c. Setting or erection details.
 - d. Capacities.
 - e. Performance characteristics.
 - f. Standards.
 - g. Operating weight.
 - h. Wiring diagrams.
 - i. Single line and schematic diagrams.
 - j. Relationships to other parts of the *Work*.
- .5 Product data submittals shall include material safety data sheets (MSDS) for all controlled Products.
- .6 Submit electronic copies of Shop Drawings where specified in the technical Specifications.
- .7 Submit electronic copies of Product data sheets or brochures where specified in the technical Specifications.
- .8 Where a submittal includes information not applicable to the Work, clearly identify applicable information and strike out non-applicable information.
- .9 Supplement standard information to include details applicable to Project.
- .10 Allow 5 Working Days for Consultant's review of each submittal and incorporate in submittals schedule specified in Section 01 32 00 – Construction Progress Documentation. Allow additional 5 Working Days where sub-Consultant or commissioning agent review is required.
- .11 If upon Consultant's review no errors or omissions are discovered, or if only minor corrections are required as indicated, submittal will be returned and fabrication or installation of Work may proceed.

- .12 If upon Consultant's review significant errors or omissions are discovered, a so noted copy will be returned for correction and resubmission. Do not commence fabrication or installation.
- .13 Consultant's notations on submittals are intended to ensure compliance with Contract Documents and are not intended to constitute a change in the Work requiring change to the Contract Price or Contract Time. If Contractor considers any Consultant's notation to be a change in the Work, promptly notify Consultant in writing before proceeding with the Work.
- .14 Resubmit corrected submittals through same procedure indicated above, before any fabrication or installation of the Work proceeds. When resubmitting, notify Consultant in writing of any revisions other than those requested by Consultant.

END OF SECTION

1.1 REFERENCE STANDARDS

- .1 "Reference standards" means consensus standards, trade association standards, guides, and other publications expressly referenced in *Contract Documents*.
- .2 Where an edition or version date is not specified, referenced standards shall be deemed to be the latest edition or revision issued by the publisher at the time of bid closing. However if a particular edition or revision date of a specified standard is referenced in an applicable code or other regulatory requirement, the regulatory referenced edition or version shall apply.
- .3 Reference standards establish minimum requirements. If *Contract Documents* call for requirements that differ from a referenced standard, the more stringent requirements shall govern.
- .4 If compliance with two or more reference standards is specified and the standards establish different or conflicting requirements, comply with the most stringent requirement. Refer uncertainties to *Consultant* for clarification.
- .5 Within the Specifications, reference may be made to the following standards writing, testing, or certification organizations by their acronyms or initialisms:
 - .1 AA - Aluminum Association
 - .2 ACI - American Concrete Institute
 - .3 AISC - American Institute of Steel Construction
 - .4 ANSI - American National Standards Institute
 - .5 ASME - American Society of Mechanical Engineers
 - .6 ASTM - American Society for Testing and Materials
 - .7 AWMAC - Architectural Woodwork Manufacturers Association of Canada
 - .8 AWPA - American Wire Producers Association
 - .9 CaGBC - Canadian Green Building Council
 - .10 CGSB - Canadian General Standards Board
 - .11 CISC - Canadian Institute of Steel Construction
 - .12 CPCI - Canadian Prestressed Concrete Institute
 - .13 CSA - Canadian Standards Association
 - .14 CSSBI - Canadian Sheet Steel Building Institute
 - .15 CWB – Canadian Welding Bureau
 - .16 ICEA - Insulated Cable Engineers Association
 - .17 IEEE - Institute of Electrical and Electronics Engineers
 - .18 IGMAC – Insulating Glass Manufacturers Association of Canada
 - .19 LEED - Leadership in Energy and Environmental Design
 - .20 MPP – Master Painters Institute
 - .21 MSS - Manufacturers Standardization Society of the Valve and Fittings Industry

- .22 NAAMM - National Association of Architectural Metal Manufacturers
- .23 NEMA - National Electrical Manufacturers Association
- .24 NFPA - National Fire Protection Association
- .25 NHLA - National Hardwood Lumber Association
- .26 NLGA - National Lumber Grades Authority
- .27 SSPC – The Society for Protective Coatings
- .28 TTMAC - Terrazzo, Tile and Marble Association of Canada
- .29 ULC - Underwriters' Laboratories of Canada

1.2 INDEPENDENT INSPECTION AND TESTING AGENCIES

- .1 Except as otherwise specified, *Owner* will retain and pay for independent inspection and testing agencies to inspect, test, or perform other quality control reviews of parts of the *Work*.
- .2 Retain and pay for inspection and testing that is for *Contractor's* own quality control or is required by regulatory requirements.
- .3 Section 01 21 00 – Allowances specifies a cash allowance for independent inspection and testing services to be retained and paid for by Contractor. Cash allowance excludes any inspection and testing that is for Contractor's own quality control or is required by regulatory requirements.
- .4 Employment of inspection and testing agencies by Contractor or Owner does not relieve Contractor from responsibility to perform the Work in accordance with Contract Documents.
- .5 Allow and arrange for inspection and testing agencies to have access to the Work, including access to off site manufacturing and fabrication plants.
- .6 For inspection and testing required by Contract Documents or by authorities having jurisdiction, provide Consultant and inspection and testing agencies with timely notification in advance of required inspection and testing.
- .7 Provide labour, Construction Equipment and temporary facilities to obtain and handle test samples on site.

1.3 INSPECTION AND TESTING AGENCY REPORTS

- .1 For inspection and testing required by *Contract Documents* or by regulatory requirements, and performed by *Contractor* retained inspection and testing agencies, submit to *Consultant* and *Owner* copies of reports. Submit within 5 days after completion of inspection and testing.
- .2 For inspection and testing performed by *Owner* retained inspection and testing agencies, copies of inspection and testing agency reports will be provided to *Contractor*.

1.4 MOCK-UPS

- .1 Prepare mock-ups of *Work* as specified in the technical *Specifications*. If a mock-up location is not indicated in the *Drawings* or *Specifications*, locate where directed by *Consultant*.
- .2 Modify mock-up as required until *Consultant* approval is obtained.
- .3 Approved mock-ups establish an acceptable standard for the *Work*.
- .4 Protect mock-ups from damage until the *Work* they represent is complete.
- .5 Unless otherwise specified in the technical *Specifications*, approved mock-ups forming part of the *Work* may remain as part of the *Work*.
- .6 Remove mock-ups only when the *Work* they represent is complete or when otherwise directed by *Consultant*.

END OF SECTION

1.1 CONSTRUCTION FACILITIES - GENERAL

- .1 Provide temporary construction facilities as necessary for performance of the *Work* and in compliance with applicable regulatory requirements.
- .2 Maintain temporary construction facilities in good condition for the duration of the *Work*.
- .3 Remove temporary construction facilities from *Place of the Work* when no longer required.

1.2 CONSTRUCTION PARKING

- .1 Limited parking will be permitted at *Place of the Work* for vehicles provided it does not disrupt continuing operation of the facility.

1.3 VEHICULAR ACCESS

- .1 Provide and maintain adequate access to *Place of the Work*.
- .2 Existing roads at *Place of the Work* may be used for access to *Place of the Work*, provided *Contractor* assumes responsibility for any damage caused by construction traffic, and prevents or promptly cleans up any mud tracking or material spillage.

1.4 SANITARY FACILITIES

- .1 Keep building sanitary facilities clean.

END OF SECTION

1.1 BARRIERS AND ENCLOSURES - GENERAL

- .1 Provide temporary barriers and enclosures necessary to protect the public and building occupants and to secure *Place of the Work* during performance of the *Work*.
- .2 Comply with applicable regulatory requirements.
- .3 Maintain temporary barriers and enclosures in good condition for the duration of the
- .4 *Work*.
- .5 Remove temporary barriers and enclosures from *Place of the Work* when no longer required.

1.2 EXTERIOR HOARDING

- .1 Erect temporary exterior site hoarding as required and to comply with applicable regulatory requirements and as follows:
 - .1 Use lumber framing and, minimum 13mm thick exterior grade plywood.
 - .2 Provide lockable access gates for *Construction Equipment* and lockable pedestrian doors as required to facilitate construction access.
 - .3 Erect and maintain pedestrian walkways including roof and side covers, complete with pedestrian signage and electrical lighting.

1.3 FIRE ROUTES

- .1 Maintain fire access routes, including overhead clearances, for use by emergency response vehicles.

1.4 PROTECTION OF BUILDING FINISHES

- .1 Provide necessary temporary barriers and enclosures to protect existing and completed or partially completed finished surfaces from damage during performance of the *Work*.

END OF SECTION

1.1 TEMPORARY CONTROLS - GENERAL

- .1 Provide temporary controls as necessary for performance of the *Work* and in compliance with applicable regulatory requirements.
- .2 Maintain temporary controls in good condition for the duration of the *Work*.
- .3 Remove temporary controls and *Construction Equipment* used to provide temporary controls from *Place of the Work* when no longer required.

1.2 DUST AND PARTICULATE CONTROL

- .1 Implement and maintain dust and particulate control measures in accordance with applicable regulatory requirements.
- .2 Execute *Work* by methods that minimize dust from construction operations and spreading of dust on site or to adjacent properties.
- .3 Provide temporary enclosures to prevent extraneous materials resulting from sandblasting or similar operations from contaminating air beyond immediate work area.
- .4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.
- .5 Use appropriate covers on trucks hauling fine, dusty, or loose materials.

1.3 POLLUTION CONTROL

- .1 Take measures to prevent contamination of soil, water, and atmosphere through uncontrolled discharge of noxious or toxic substances and other pollutants, potentially causing environmental damage.
- .2 Be prepared, by maintaining appropriate materials, equipment, and trained personnel on site, to intercept, clean up, and dispose of spills or releases that may occur. Promptly report spills and releases that may occur to:
 - .1 authority having jurisdiction,
 - .2 person causing or having control of pollution source, if known, and
 - .3 Owner and Consultant.
- .3 Contact manufacturer of pollutant, if known and applicable, to obtain material safety data sheets (MSDS) and ascertain hazards involved and precautions and measures required in cleanup or mitigating actions.
- .4 Take immediate action to contain and mitigate harmful effects of the spill or release.

END OF SECTION

1.1 GENERAL

- .1 Provide *Products* that are not damaged or defective, and suitable for purpose intended, subject to specified requirements. If requested by *Consultant*, furnish evidence as to type, source and quality of *Products* provided.
- .2 Unless otherwise specified, maintain uniformity of manufacture for like items throughout.
- .3 Permanent manufacturer's markings, labels, trademarks, and nameplates on *Products* are not acceptable in prominent locations, except where required by regulatory requirements or for operating instructions, or when located in mechanical or electrical rooms.

1.2 PRODUCT OPTIONS

- .1 Subject to the provisions of Section 01 25 00 –Substitution Procedures:
 - .1 Wherever a *Product* or manufacturer is specified by a single proprietary name, provide the named *Product* only.
 - .2 Wherever more than one *Product* or manufacturer is specified by proprietary name for a single application, provide any one of the named *Products*.
- .2 Wherever a *Product* is specified by reference to a standard only, provide any *Product* that meets or exceeds the specified standard. If requested by *Consultant*, submit information verifying that the proposed *Product* meets or exceeds the specified standard.
- .3 Wherever a *Product* is specified by descriptive or performance requirements only, provide any *Product* that meets or exceeds the specified requirements. If requested by *Consultant*, submit information verifying that the proposed *Product* meets or exceeds the specified requirements.

1.3 PRODUCT AVAILABILITY AND DELIVERY TIMES

- .1 Promptly upon Contract award and periodically during construction, review and confirm *Product* availability and delivery times. Order *Products* in sufficient time to meet the construction progress schedule and the *Contract Time*.
- .2 If a specified *Product* is no longer available, promptly notify *Consultant*. *Consultant* will take action as required.
- .3 If delivery delays are foreseeable, for any reason, promptly notify *Consultant*.
 - .1 If a delivery delay is beyond *Contractor's* control, *Consultant* will provide direction.
 - .2 If a delivery delay is caused by something that was or is within *Contractor's* control, *Contractor* shall propose actions to maintain the construction progress schedule for *Consultant's* review and acceptance.

1.4 STORAGE, HANDLING, AND PROTECTION

- .1 Store, handle, and protect *Products* during transportation to *Place of the Work* and before, during, and after installation in a manner to prevent damage, adulteration, deterioration and soiling.
- .2 Comply with manufacturer's instructions for storage, handling and protection.
- .3 Store packaged or bundled *Products* in original and undamaged condition with manufacturer's seals and labels intact. Do not remove from packaging or bundling until required in *Work*.
- .4 Comply with the requirements of the workplace hazardous materials information system (WHMIS) regarding use, handling, storage, and disposal of hazardous materials, including requirements for labeling and the provision of material safety data sheets (MSDS).
- .5 Store *Products* subject to damage from weather in weatherproof enclosures.
- .6 Store sheet *Products* on flat, solid, supports and keep clear of ground. Slope to shed moisture.
- .7 Remove and replace damaged *Products*.

END OF SECTION

1.1 SUMMARY

- .1 Except where otherwise specified in technical *Specifications* or otherwise indicated on *Drawings*, comply with requirements of this Section.

1.2 MANUFACTURER'S INSTRUCTIONS

- .1 Install, erect, or apply *Products* in strict accordance with manufacturer's instructions.
- .2 Notify *Consultant*, in writing, of conflicts between *Contract Documents* and manufacturer's instructions where, in *Contractor's* opinion, conformance with *Contract Documents* instead of the manufacturer's instructions may be detrimental to the *Work* or may jeopardize the manufacturer's warranty.
- .3 Do not rely on labels or enclosures provided with *Products*. Obtain written instructions directly from manufacturers.
- .4 Provide manufacturer's representatives with access to the *Work* at all times. Render assistance and facilities for such access so that manufacturer's representatives may properly perform their responsibilities.

1.3 CONCEALMENT

- .1 Conceal pipes, ducts, and wiring in floors, walls and ceilings in finished areas:
 - .1 after review by *Consultant* and authority having jurisdiction, and
 - .2 where locations differ from those shown on *Drawings*, after recording actual locations on as-built drawings.
- .2 Provide incidental furring or other enclosures as required.
- .3 Notify *Consultant* in writing of interferences before installation.

1.4 FASTENINGS - GENERAL

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials.
- .2 Prevent electrolytic action and corrosion between dissimilar metals and materials by using suitable non-metallic strips, washers, sleeves, or other permanent separators to avoid direct contact.
- .3 Use non-corrosive fasteners and anchors for securing exterior work [and in spaces where high humidity levels are anticipated.
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Do not use fastenings or fastening methods that may cause spalling or cracking of material to which anchorage is made.

1.5 FASTENINGS - EQUIPMENT

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Bolts shall not project more than one diameter beyond nuts.

1.6 FIRE RATED ASSEMBLIES

- .1 When penetrating fire rated walls, ceiling, or floor assemblies, completely seal voids with fire-stopping materials, smoke seals, or both, in full thickness of the construction element as required to maintain the integrity of the fire rated assembly.

1.7 LOCATION OF FIXTURES, OUTLETS AND DEVICES

- .1 Consider location of fixtures, outlets, and devices indicated on *Drawings* as approximate.
- .2 Locate fixtures, outlets, and devices to provide minimum interference, maximum usable space, and as required to meet safety, access, maintenance, acoustic, and regulatory, including barrier free, requirements.
- .3 Promptly notify *Consultant* in writing of conflicting installation requirements for fixtures, outlets, and devices. If requested, indicate proposed locations and obtain approval for actual locations.

1.8 PROTECTION OF COMPLETED WORK AND WORK IN PROGRESS

- .1 Adequately protect parts of the *Work* completed and in progress from any kind of damage.
- .2 Promptly remove, replace, clean, or repair, as directed by *Consultant*, work damaged as a result of inadequate protection.
- .3 Do not load or permit to be loaded any part of the *Work* with a weight or force that will endanger the safety or integrity of the *Work*.

1.9 REMEDIAL WORK

- .1 Notify *Consultant* of, and perform remedial work required to, repair or replace defective or unacceptable work. Ensure that properly qualified workers perform remedial work.
- .2 Coordinate adjacent affected work as required.

END OF SECTION

1.1 REQUEST FOR CUTTING, PATCHING AND REMEDIAL WORK

- .1 Submit written request in advance of cutting, coring, or alteration which affects or is likely to affect:
 - .1 Structural integrity of any element of the *Work*.
 - .2 Integrity of weather-exposed or moisture-resistant elements.
 - .3 Efficiency, maintenance, or safety of any operational element.
 - .4 Visual qualities of sight-exposed elements.
 - .5 Work of *Owner* or other contractors.
 - .6 Warranty of *Products* affected.
- .2 Include in request:
 - .1 Identification of *Project*.
 - .2 Location and description of affected work, including drawings or sketches as required.
 - .3 Statement on necessity for cutting or alteration.
 - .4 Description of proposed work, and *Products* to be used.
 - .5 Alternatives to cutting and patching.
 - .6 Effect on work of *Owner* or other contractors.
 - .7 Written permission of affected other contractors.
 - .8 Date and time work will be executed.

1.2 PRODUCTS

- .1 Unless otherwise specified, when replacing existing or previously installed *Products* in the course of cutting and patching work, use replacement *Products* of the same character and quality as those being replaced.
- .2 If an existing or previously installed *Product* must be replaced with a different *Product*, submit request for substitution in accordance with Section 01 25 00 - Substitution Procedures.

1.3 PREPARATION

- .1 Provide supports to ensure structural integrity of surroundings; provide devices and methods to protect other portions of the *Work* from damage.
- .2 Provide protection from elements for areas that may be exposed by uncovering work.

1.4 CUTTING, PATCHING, AND REMEDIAL WORK

- .1 Coordinate and perform the *Work* to ensure that cutting and patching work is kept to a minimum.
- .2 Perform cutting, fitting, patching, and remedial work to make the affected parts of the *Work* come together properly and complete the *Work*.

- .3 Provide openings in non-structural elements of the *Work* for penetrations of mechanical and electrical work.
- .4 Perform cutting by methods to avoid damage to other work
- .5 Provide proper surfaces to receive patching, remedial work, and finishing.
- .6 Perform cutting, patching, and remedial work using competent and qualified specialists familiar with the *Products* affected, in a manner that neither damages nor endangers the *Work*.
- .7 Do not use pneumatic or impact tools where inappropriate.
- .8 Ensure that cutting, patching, and remedial work does not jeopardize manufacturers' warranties.
- .9 Refinish surfaces to match adjacent finishes. For continuous surfaces refinish to nearest intersection. For an assembly, refinish entire unit.
- .10 Fit work to pipes, sleeves, ducts, conduit, and other penetrations through surfaces with suitable allowance for deflection, expansion, contraction, acoustic isolation, and firestopping.
- .11 Maintain fire ratings of fire rated assemblies where cutting, patching, or remedial work is performed. Completely seal voids or penetrations of assembly with firestopping material to full depth or with suitably rated devices.

END OF SECTION

1.1 REGULATORY REQUIREMENTS

- .1 Comply with applicable regulatory requirements when disposing of waste materials.
- .2 Obtain permits from authorities having jurisdiction and pay disposal fees where required for disposal of waste materials and recyclables.

1.2 GENERAL CLEANING REQUIREMENTS

- .1 Provide adequate ventilation during use of volatile or noxious substances. Do not rely on building ventilation systems for this purpose.
- .2 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .3 Prevent cross-contamination during the cleaning process.
- .4 Notify the *Consultant* of the need for cleaning caused by *Owner* or other contractors.

1.3 PROGRESSIVE CLEANING AND WASTE MANAGEMENT

- .1 Maintain the *Work* in a tidy and safe condition, free from accumulation of waste materials and construction debris.
- .2 Provide appropriate, clearly marked, containers for collection of waste materials and recyclables.
- .3 Remove waste materials and recyclables from work areas, separate, and deposit in designated containers at end of each *Working Day*. Collect packaging materials for recycling or reuse.
- .4 Remove waste materials and recyclables from *Place of the Work* at regular intervals.
- .5 Clean interior building areas prior to start of finish work and maintain free of dust and other contaminants during finishing operations.
- .6 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly finished surfaces nor contaminate building systems.

1.4 FINAL CLEANING

- .1 Before final cleaning, arrange a meeting at *Place of the Work* to determine the acceptable standard of cleaning. Ensure that *Owner*, *Contractor* and cleaning company are in attendance.
- .2 Remove from *Place of the Work* surplus *Products*, waste materials, recyclables, *Temporary Work*, and *Construction Equipment* not required to perform any remaining work.
- .3 Provide professional cleaning by a qualified, established cleaning company.
- .4 Lock or otherwise restrict access to each room or area after completing final cleaning in that area.

- .5 Re-clean as necessary areas that have been accessed by *Contractor's* workers prior to *Owner* occupancy.
- .6 Remove stains, spots, marks, and dirt from finished surfaces, electrical and mechanical fixtures, furniture fitments, walls, and floors.
- .7 Vacuum clean and dust exposed wall and floor surfaces.
- .8 Clean mechanical, electrical, and other equipment. Replace filters for mechanical equipment if equipment is used during construction.
- .9 Remove waste material and debris from crawlspaces and other accessible concealed spaces.

1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Dispose of waste materials and recyclables at appropriate municipal landfills and recycling facilities in accordance with applicable regulatory requirements.
- .2 Do not burn or bury waste materials at *Place of the Work*.
- .3 Do not dispose of volatile and other liquid waste such as mineral spirits, oil, paints and other coating materials, paint thinners, cleaners, and similar materials together with dry waste materials or on the ground, in waterways, or in storm or sanitary sewers. Collect such waste materials in appropriate covered containers, promptly remove from *Place of the Work*, and dispose of at recycling facilities or as otherwise permitted by applicable regulatory requirements.
- .4 Cover or wet down dry waste materials to prevent blowing dust and debris.

END OF SECTION

1.1 READY-FOR-TAKEOVER

- .1 The prerequisites to attaining *Ready-for-Takeover* of the *Work* are described in the General Conditions of the *Contract*.

1.2 INSPECTION AND REVIEW BEFORE READY-FOR-TAKEOVER

- .1 *Contractor's* Inspection: Before applying for the *Consultant's* review to establish *Ready-for-Takeover* of the *Work*:
 - .1 Ensure that the specified prerequisites to *Ready-for-Takeover* of the *Work* are completed.
 - .2 Conduct an inspection of the *Work* to identify defective, deficient, or incomplete work.
 - .3 Prepare a comprehensive and detailed list of items to be completed or corrected.
 - .4 Provide an anticipated schedule and costs for items to be completed or corrected.
- .2 *Consultant's* Review: Upon receipt of the *Contractor's* application for review, together with the *Contractor's* list of items to be completed or corrected, the *Consultant* and the *Contractor* shall arrange a mutually satisfactory agreed date and time to jointly review the *Work*. The *Consultant* will advise the *Contractor* whether or not the *Work* is *Ready-for-Takeover*. Add additional items, if any, to the *Contractor's* list of items to be completed or corrected. Provide the *Consultant* with a copy of the revised list.
- .3 Maintain the list of items to be completed or corrected and promptly correct or complete defective, deficient and incomplete work. The *Contractor's* inspection and *Consultant's* review procedures specified above shall be repeated until the *Work* is *Ready-for-Takeover* and no items remain on the *Contractor's* list of items to be completed or corrected.
- .4 When the *Consultant* determines that the *Work* is *Ready-for-Takeover*, the *Consultant* will notify the *Contractor* and the *Owner* in writing to that effect.

1.3 PREREQUISITES TO FINAL PAYMENT

- .1 After *Ready-for-Takeover* of the *Work* and before submitting an application for final payment in accordance with the General Conditions of Contract:
 - .1 Correct or complete all remaining defective, deficient, and incomplete work.
 - .2 Remove from the *Place of the Work* all remaining surplus *Products*, *Construction Equipment*, and *Temporary Work*.
 - .3 Perform final cleaning and waste removal necessitated by the *Contractor's* work performed after *Ready-for-Takeover*, as specified in Section 01 74 00 – Cleaning and Waste Management.

1.4 SUBSTANTIAL PERFORMANCE OF THE WORK

- .1 The prerequisites to, and the procedures for, attaining substantial performance of the *Work*, or similar such milestone as provided for in the lien legislation applicable to the *Place of the Work*, shall be:

- .1 independent of those for attaining *Ready-for-Takeover* of the *Work*, and
- .2 in accordance with the lien legislation applicable to the *Place of the Work*.

END OF SECTION

1.1 OPERATION AND MAINTENANCE MANUAL

- .1 Prepare a comprehensive operation and maintenance manual
- .2 *Contract*, using personnel qualified and experienced for this task.
- .3 Submit an initial draft of the operation and maintenance manual for *Consultant's* review. If required by *Consultant's* review comments, revise manual contents and resubmit for *Consultant's* review. If required, repeat this process until *Consultant* accepts the draft manual in writing.
- .4 Submit final version to *Owner* in hard copy and electronic format. Provide two hard copies.

1.2 OPERATION AND MAINTENANCE MANUAL FORMAT

- .1 Organize data in the form of an instructional manual.
- .2 Binders: vinyl, hard covered, three D-rings, loose leaf, 216 x 279 mm, with spine and face pockets.
- .3 When multiple binders are used, correlate data into related consistent groupings. Identify contents of each binder on spine.
- .4 Cover: Identify each binder with typed or printed title "Operation and Maintenance Manual", name of Project or facility, and subject matter of contents.
- .5 Arrange content by systems, under Section numbers and sequence of Table of Contents.
- .6 Provide tabbed fly leaf for each separate *Product* or system, with typed description of *Product* and major component parts of equipment.
- .7 Text: Manufacturer's printed data, or typewritten data.
- .8 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- .9 Provide electronic copy of manual in PDF format.
- .10 Provide electronic copy of Shop *Drawings* in manual as pdfs.

1.3 OPERATION AND MAINTENANCE MANUAL – GENERAL CONTENT

- .1 Table of contents for each volume.
- .2 Introductory information including:
 - .1 Date of manual submission.
 - .2 Complete contact information for *Consultant*, subconsultants, other consultants, and
 - .3 *Contractor*, with names of responsible parties.
 - .4 Schedule of *Products* and systems indexed to content of volume.

- .3 For each *Product* or system, include complete contact information for *Subcontractors*, *Suppliers* and manufacturers, including local sources for supplies and replacement parts.
- .4 *Product Data*: mark each sheet to clearly identify specific products, options, and component parts, and data applicable to installation. Delete or strike out inapplicable information. Supplement with additional information as required.
- .5 Reviewed *Shop Drawings*.
- .6 Permits, certificates, letters of assurance and other relevant documents issued by or required by authorities having jurisdiction.
- .7 Warranties.
- .8 Operating and maintenance procedures, incorporating manufacturer's operating and maintenance instructions, in a logical sequence.
- .9 Training materials as specified in Section 01 79 00 - Demonstration and Training.

1.4 OPERATION AND MAINTENANCE MANUAL - EQUIPMENT AND SYSTEMS CONTENT

- .1 Each Item of Equipment and Each System: include description of unit or system and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- .2 Panel Board Circuit Directories: provide electrical service characteristics, controls, and communications.
- .3 Include installed colour coded wiring diagrams.
- .4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- .5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .6 Provide servicing and lubrication schedule, and list of lubricants required.
- .7 Include manufacturer's printed operation and maintenance instructions.
- .8 Include sequence of operation by controls manufacturer.
- .9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .10 Provide installed control diagrams by controls manufacturer.
- .11 Provide *Contractor's* coordination drawings, with installed colour coded piping diagrams.

- .12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- .13 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- .14 Include testing and balancing reports.
- .15 Include additional content as specified in technical *Specifications* sections.

1.5 OPERATION AND MAINTENANCE MANUAL - PRODUCTS AND FINISHES CONTENT

- .1 Include *Product* data, with catalogue number, options selected, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured *Products*.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Include an outline of requirements for routine and special inspections and for regular maintenance to ensure that on-going performance of the building envelope will meet the initial building envelope criteria.
- .4 Include additional content as specified in technical *Specifications* sections.

1.6 OPERATION AND MAINTENANCE MANUAL - WARRANTIES CONTENT

- .1 Separate each warranty with index tab sheets keyed to Table of Contents listing.
- .2 List each warrantor with complete contact information.
- .3 Verify that documents are in proper form and contain full information. Ensure that warranties are for the correct duration and are in *Owner's* name.

1.7 CONTRACTOR'S AS-BUILT DRAWINGS

- .1 Submit final as-built drawings in the form specified in Section 01 32 00 – Construction Progress Documentation to *Owner* and *Consultant*.

1.8 PROJECT RECORD DRAWINGS

- .1 Transfer all information marked up on the as-built drawings during the progress of the *Work* to a master set of record drawing files provided by *Consultant*, in electronic format.
- .2 Mark revised drawings as "RECORD DRAWINGS".
- .3 Submit completed record drawings in hard copy and electronic form to *Owner*. Provide two hard copy sets.

1.9 SPARE PARTS, MAINTENANCE MATERIALS, AND SPECIAL TOOLS

- .1 Supply spare parts, maintenance materials, and special tools in quantities specified in technical *Specifications* sections.

- .2 Ensure spare parts and maintenance materials are new, not damaged nor defective, and of same quality, manufacturer, and batch or production run as installed *Products*.
- .3 Provide tags for special tools identifying their function and associated *Product*.
- .4 Deliver to and store items at location directed by *Owner* at *Place of the Work*. Store in original packaging with manufacturer's labels intact and in a manner to prevent damage or deterioration.
- .5 Catalogue all items and submit to *Consultant* an inventory listing organized by *Specifications* section. Include *Consultant* reviewed inventory listing in operation and maintenance manual.

END OF SECTION

1.1 SUMMARY

- .1 Demonstrate and provide training to *Owner's* personnel on operation and maintenance of equipment and systems prior to scheduled date of *Ready-for- Takeover of the Work*.
- .2 *Owner* will provide list of personnel to receive training and will coordinate their attendance at agreed upon times.
- .3 Coordinate and schedule demonstration and training provided by *Subcontractors* and
- .4 *Suppliers*.

1.2 SUBMITTALS

- .1 Submit proposed dates, times, durations, and locations for demonstration and training of each item of equipment and each system for which demonstration and training is required. Allow sufficient time for training and demonstration for each item of equipment or system, or time as may be specified in technical *Specifications*.
- .2 *Consultant* and *Owner* will review submittal and advise *Contractor* of any necessary revisions.
- .3 Submit report(s) within 5 *Working Days* after completion of demonstration and training:
 - .1 identifying time and date of each demonstration and training session,
 - .2 summarizing the demonstration and training performed, and
 - .3 including a list of attendees.

1.3 PREREQUISITES TO DEMONSTRATION AND TRAINING

- .1 Testing, adjusting, and balancing has been performed in accordance with *Contract Documents*.
- .2 Equipment and systems are fully operational.
- .3 Copy of completed operation and maintenance manual is available for use in demonstration and training.
- .4 Conditions for demonstration and training comply with requirements specified in technical *Specifications*.

1.4 DEMONSTRATION AND TRAINING

- .1 Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, and maintenance of each item of equipment and system.
- .2 Review operation and maintenance manual in detail to explain all aspects of operation and maintenance.
- .3 Prepare and insert additional information in operation and maintenance manual if required.

END OF SECTION

1.1 COMMISSIONING AGENCY

- .1 *Contractor* shall retain and pay for a commissioning agency to provide commissioning services for the *Project*.

1.2 CONTRACTOR RESPONSIBILITIES

- .1 Prepare each system ready for commissioning. Verify systems installation is complete and in operation.
- .2 Coordinate commissioning with and assist commissioning agency.
- .3 Perform and document verification, performance testing, adjusting, and balancing operations.
- .4 Cooperate with commissioning agency and provide access to equipment and systems.
- .5 Provide personnel and operate systems at designated times, and under conditions required for proper commissioning.
- .6 Make instruments available to commissioning agency to facilitate spot checks during commissioning.
- .7 Participate in commissioning meetings.
- .8 Complete commissioning forms as requested by commissioning agency.
- .9 Correct deficiencies identified in commissioning process.
- .10 Incorporate commissioning data into operation and maintenance manual.
- .11 Ensure that commissioning agency participates in demonstration and training as specified in Section 01 79 00 – Demonstration and Training.

1.3 COMMISSIONING AGENCY RESPONSIBILITIES

- .1 The commissioning agency shall:
 - .1 Prepare a commissioning plan, including systems to be commissioned, forms, checklists and responsibilities of commissioning team members.
 - .2 Implement the commissioning plan and lead the commissioning team through start-up, verification, performance testing, training, and document preparation.
 - .3 Convene, chair, prepare and distribute minutes of commissioning meetings.
 - .4 Supervise commissioning activities and witness inspections and tests.
 - .5 Make periodic site visits for the purpose of selective checking of accuracy of commissioning form submissions, witness testing, and review of mock-ups.
 - .6 Review content of operations and maintenance manual.
 - .7 Provide instruments necessary for commissioning.

1.4 CONSULTANT RESPONSIBILITIES

- .1 Consultant will:

- .1 Participate in commissioning meetings.
- .2 Review verification and performance test results and direct *Contractor* to correct defects or deficiencies in the *Work*.
- .3 Initiate *Change Orders* or *Change Directives* identified as necessary by the commissioning process.
- .4 Review final commissioning report.

1.5 OWNER RESPONSIBILITIES

- .1 Owner will:
 - .1 Assign operations and maintenance personnel to participate in meetings, and witnessing of demonstration, and training.
 - .2 Designate a person to acknowledge receipt of reports.

END OF SECTION