



**TORONTO ZOO**

**Request for Tenders for  
Installation of Electric Vehicle Charging Stations**

**RFT No.: TZC T 04-2020-02**

**Contract No.:**

**Issued: 2020-02-14**

**TZC T 04-2020-02  
INSTALLATION OF ELECTRIC  
VEHICLE CHARGING STATIONS**

**SUBMISSION DEADLINE: Thursday, 2020-03-05 at 12:00 p.m. local time**

Bids are invited for Installation of Electric Vehicle Charging Stations all in accordance with this Request for Tender. This RFT is posted on the Toronto Zoo web site at <http://www.torontozoo.com/business>

**SUBMISSION**

The Tender submission must be sealed in an envelope using the attached mailing label and submitted to Supervisor, Purchasing & Supply c/o Reception, 361A Old Finch Ave., Toronto, ON M1B 5K7 by **Thursday, 2020-03-05 at 12:00 hours, 12:00 p.m. local standard time** (hereinafter referred to as the "Submission Deadline") as set out in Section 1.9 within this Instruction to Bidders.

**QUESTIONS REGARDING THIS RFT**

Questions regarding this RFT must be submitted in writing only to Peter Vasilopoulos, Supervisor, Purchasing & Supply no later than **Thursday, 2020-02-27 at 4:00 p.m. local time**) as set out in Section 1.8 within this Instruction to Bidders.

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**TZC T 04-2020-02 Installation of Electric Vehicle Charging Stations**  
**Part 1 – Instruction to Bidders – Section 1**

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**Part 1 – Instruction to Bidders – Section 1 – RFT SPECIFIC PROCESS AND SUBMISSION INSTRUCTIONS**

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**PART 1: REQUEST FOR TENDERS PROCESS**

**SECTION 1 - RFT SPECIFIC PROCESS AND SUBMISSION INSTRUCTIONS**

**1.1 Introduction**

- .1 This RFT is an invitation by the Toronto Zoo to install electric vehicle charging stations, and:
  - .1 to prospective Suppliers to submit bids for the performance of the Work, as further described in Part 3 (DRAWINGS AND SPECIFICATIONS) and the Contract (the "Project").
- .2 This RFT shall be interpreted in accordance with Section 3.123.3.10 (Governing Law) and 3.13 (RFT Definitions and Interpretation).
- .3 Invitation to submit a Bid, including participation in any pre-qualification, request for information or other similar process or exchange of information prior to the RFT, does not imply that a Supplier is automatically prequalified to meet the requirements of the RFT or that the factors which were examined during such process or exchange may not be re-examined or re-evaluated by the Toronto Zoo during the consideration and selection process for this RFT. It will still be necessary for the Supplier to demonstrate its qualifications through the RFT process.
- .4 The Successful Supplier will be required to execute the Contract with the Toronto Zoo for the provision of the Work. Suppliers should review the terms and conditions set out in Part 2 (FORM OF CONSTRUCTION AGREEMENT) to understand the Contract being entered into with the Toronto Zoo.

**1.2 Procurement Contact**

- .1 The contact Person at the Toronto Zoo for all matters related to the RFT process (the "**Procurement Contact**") is set out below:

<b>Name and Title</b>
Name: Peter Vasilopoulos Title: Supervisor, Purchasing & Supply Email: pvasilopoulos@torontozoo.ca

- .2 All communications relating to this RFT must be submitted to the Procurement Contact and only communications received by the Procurement Contact will be considered in the RFT process.
- .3 All permitted communications with the Procurement Contact will be deemed as having been received by the Procurement Contact on the dates and times

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### 1.3 RFT Documents

.1 This RFT is comprised of the following documents:

Part 1 – Request for Tender Process

Section 1 – RFT Process and Submission Instructions;

Section 2 – Evaluation, Acceptance and Execution;

Section 3 – Other RFT Terms and Conditions;

Part 2 – Form of Construction Agreement;

Part 3 – Drawings and Specifications;

Part 4 – Submission Forms, consisting of:

- Form A - Bid Submission Form;
- Appendix I - Experience and Qualifications Form;
- Appendix II - List of Subcontractors Form;
- Appendix III – Statutory Declaration Form;
- Appendix IV - Bid Bond;
- Appendix V – Agreement to Bond;

Part 5 – Pricing Form; and all Addenda.

- .2 Prior to submitting a Bid, Suppliers shall examine all components of the RFT (including all reference documents, appendices, forms and Addenda) and, in accordance with Section 1.8 (Questions) promptly notify the Procurement Contact of any perceived errors, omissions, conflicts, ambiguities or discrepancies in the RFT.
- .3 While the Toronto Zoo has used considerable efforts to ensure an accurate representation of information in this RFT, the information contained in this RFT is supplied solely as a guide for Bidders. The information is not guaranteed or warranted to be accurate by the Toronto Zoo, nor is it necessarily comprehensive or exhaustive. Nothing in this RFT is intended to relieve Bidders from forming their own opinions and conclusions with respect to the matters addressed in this RFT.
- .4 For clarity, no prequalification documents issued by the Toronto Zoo or prequalification submissions delivered by the Suppliers to the Toronto Zoo shall form a part of the RFT or the Contract.

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- .5 It shall be the responsibility of each Supplier to acquire, other sources or in person from the Procurement Contact, as specified in the RFT, any document that is referenced or mentioned in this RFT which is not included herein.
- .6 The failure of any Supplier to acquire, receive or examine any document, form, Addendum, or policy shall not relieve the Supplier of any obligation with respect to its Bid or the Contract. The Toronto Zoo is not responsible for any misunderstanding on the part of any Supplier concerning this RFT or its processes.

**1.4 Responding to the RFT and Prohibited Communications**

**Toronto Zoo website**

- .1 The RFT is available only through, the Toronto Zoo website at: <http://www.torontozoo.com/business>

**Prohibited Communications**

- .2 Suppliers (including potential Suppliers) shall not, and shall cause their representatives not to discuss, disclose or communicate, directly or indirectly, any details pertaining to or in connection with their Bid or this RFT to:
  - any employee, official, agent, elected or appointed official or other representative of the Toronto Zoo other than the Procurement Contact; or
  - anyone not specifically involved in their Bid (including, without limitation, any other Supplier),

except as may be authorized in writing by the Procurement Contact Other than the Procurement Contact, no Toronto Zoo representative, whether an official, agent or employee, is authorized to speak for the Toronto Zoo with respect to this RFT. Any Supplier who uses or relies on any representation, information, clarification, correspondence or other communication from any other Toronto Zoo representative does so entirely at the Supplier's own risk and the Toronto Zoo shall not be bound by such representation, information, clarification, correspondence or other communication.

- .3 Without limiting any other provision of this Section 1.4. any attempt by a Supplier to bypass the RFT process may be grounds for rejection of its Bid.

**1.5 RFT Timetable**

- .1 The Toronto Zoo's currently proposed schedule for each step in the RFT process is set out in below.

<b>Event</b>	<b>Date /Time</b>
Issue Date of RFT	2020-02-14
Site Visit / Pre-Bid Meeting	2020-02-20 at 8:30am

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<b>Event</b>	<b>Date /Time</b>
Deadline for Questions	2020-02-27 at 4:00pm
Submission Deadline	2020-03-05 at 12:00 noon
Bid Validity Period	90 days
Anticipated Award Date	2020-03-09

- .2 The Toronto Zoo reserves the right to, in the Toronto Zoo’s sole and absolute discretion, at any time:
- revise the RFT schedule, to accelerate, eliminate or postpone any of the dates or times set out in this RFT, including the Submission Deadline;
  - to add to, delete or re-order any of the milestones set out in this RFT, at any time; or
  - modify the RFT process.

1.6 In the event of an inconsistency or a conflict between the Submission Deadline as displayed in the Toronto Zoo website portal and the Submission Deadline as indicated in an Addendum, the Submission Deadline as displayed in the Toronto Zoo website portal shall take precedence.

1.7 Site Meetings

**.1 Optional Site Meeting**

**.1 All Suppliers are encouraged to attend an optional site meeting to familiarize themselves with the Project and ascertain the full extent of the Work required. The optional site meeting will take place at 8:30am local time on Thursday, 2020-02-20 at 361A Old Finch Ave, Toronto, ON M1B 5K7.**

.2 No statement or information provided in such meeting by either the Toronto Zoo or the Suppliers will amend any provision of this RFT or the Contract, or may be relied upon by a Supplier in the RFT process or its Bid, except and to the extent such statement or information is later confirmed through the issuance of an Addendum.

**1.7 Addenda**

.1 The RFT may only be amended by Addendum in accordance with this Section 1.7 (Addenda). Prior to the Submission Deadline, the Toronto Zoo may at any time or times modify the RFT in whole or in part through the issuance of an Addenda, if deemed necessary by the Toronto Zoo. Each Addendum shall form an integral part of this RFT.

.2 All Addenda will be posted on the <http://www.torontozoo.com/business> and Toronto Zoo, the Toronto Zoo is not responsible for any failure of such notice system or for notices not received by Suppliers.



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- .3 Suppliers must check the Toronto Zoo's <http://www.torontozoo.com/business> frequently to inform themselves of any posted Addendum. Toronto Zoo Suppliers shall be wholly responsible for checking and reviewing any posted Addenda and ensuring the completeness of the RFT (as amended) and their Bids (as impacted by such Addenda). The Toronto Zoo is not responsible for any incomplete or incorrect Bids resulting from the issuance of an Addendum or a Supplier's failure to update its Bid in response to an Addendum.
- .4 The Toronto Zoo will make reasonable efforts to issue the final Addendum (if any) in a sufficient time prior to the Submission Deadline to allow Suppliers to submit their Bids. If any Addendum requires substantial amendments to the RFT, the Toronto Zoo may, in its sole and absolute discretion, extend the Submission Deadline.
- .5 Other than documents issued as part of the RFT (including Addenda), the Toronto Zoo shall not be responsible for any explanations, instructions or interpretations even if provided by its actual or purported employees, designees or agents. No oral or written explanations, instructions or interpretations shall modify any of the requirements or provisions of the RFT unless in the form of an Addendum.
- .6 Any reference in this RFT to any document comprising this RFT includes any amendments to such document made in accordance with this Section 1.7 (Addenda).

#### 1.8 Questions

- .1 Prospective Suppliers finding errors, omissions, conflicts, ambiguities or discrepancies in the RFT or having questions, comments or concerns regarding this RFT, its process and related matters ("**Questions**") may submit such Questions to the Procurement Contact using the Toronto Zoo QBD form attached. The Toronto Zoo will make reasonable efforts to respond to Questions received by the deadline for Questions set out in the RFT timetable in Section 1.5 (RFT Timetable). However, the Toronto Zoo shall have no obligation to respond to any or all Questions, and the Toronto Zoo's determination as to whether or not it will respond to any Question shall be in the Toronto Zoo's sole and absolute discretion. The onus is on each Supplier to confirm the Toronto Zoo has received all correspondence from the Supplier.
- .2 Although it is the Toronto Zoo's practice to make available to all Questions received as well as responses to such Questions: (i) for Questions of an administrative nature; or (ii) where a prospective Supplier's Question is identified as commercially confidential in nature and where, the Toronto Zoo in its sole and absolute discretion deems the Question or response to be commercially confidential, the Toronto Zoo may provide a response only to that Supplier. The Toronto Zoo reserves the right to edit Questions for clarity and applicability to all Suppliers generally.
- .3 Pursuant to Section 1.7.1 (Addenda), responses to Questions prepared and circulated by the Toronto Zoo are not RFT documents and do not amend the RFT, unless such responses form part of an Addendum.

#### 1.9 Submission of Bids

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##### .1 General

- .1 Subject to Section 1.9.3 (Bid Bond) with respect to the submission of the Bid Bond, Bids must be in person Toronto Zoo prior to the Submission Deadline. Bids will be rejected as non-compliant if submitted by any other mechanism including, but not limited to, post, courier, fax, e-mail or orally, unless specifically requested Toronto Zoo
- .2 It is the Supplier's sole responsibility to ensure its Bid is received by the Submission Deadline in accordance with the requirements of this RFT. The receipt of Bids can be delayed due to a number of factors including "internet traffic", file transfer size and transmission speed. The Supplier should allow sufficient time to download, complete and upload, as applicable, the submission forms comprising its Bid and any attachments.
  - A Bid will only be considered to be submitted once it has been received by the Toronto Zoo. The time of such receipt is reflected by the time stamped by the Toronto Zoo.
- .3 Suppliers must submit their Bids in the format presented, prescribed and compatible with the requirements of the RFT and Toronto Zoo must include all attachments required by the Toronto Zoo. Failure to fully complete the forms presented in this RFT or to include and submit the required attachments or separate documentation, as applicable, may result in the bid being rejected as non-compliant.
- .4 The forms, documents and other items outlined in this Section 1.9 (Submission of Bids) must be completed in their entirety and submitted in the format presented and prescribed by the Toronto Zoo in accordance with the requirements of the RFT. Failure to so submit any such items may result in the Bid being rejected as non-compliant.
- .5 All Suppliers should exercise extreme care when completing their Bid submissions, as failure to complete the Bid fully or to comply with the requirements of this RFT may cause the Bid to be rejected as non-compliant.

##### .2 Bid Submission Form

- .1 Suppliers shall complete and submit all information and respond to all items in the Bid submission form set out in Part 4 (Bid Submission Form) ("**Bid Submission Form**").
- .2 The Bid Submission Form contains confirmatory statements and declarations in respect of the Toronto Zoo's Policies.

##### .3 Bid Bond

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- .1 In addition to the requirements set out in this RFT in respect of the submission of Toronto Zoo, each Supplier shall submit, a bid bond to secure the execution of the Contract by the Supplier (“**Bid Bond**”).
- .2 The Bid Bond shall be made out to the Toronto Zoo
  - .1 an original paper Bid Bond shall be enclosed with your submission delivered to Purchasing & Supply before the Submission Deadline at the following address:

Attention: Supervisor, Purchasing & Supply  
Toronto Zoo  
361A Old Finch Ave  
Toronto, ON  
M1B 5K7

Re: Bid Bond for Request for Tender No. TZC T 04-2020-02

Submitting a photocopy of the original paper Bid Bond is not acceptable. For clarity, the Toronto Zoo will not accept any original paper Bid Bonds that are delivered after the Submission Deadline and any original paper Bid Bond received after the Submission Deadline shall result in the Bid being rejected as non-compliant. **[The determination of whether the original paper Bid Bond is delivered by or before the Submission Deadline shall be based on the time and date stamp, the Supplier must ensure it receives from the Toronto Zoo at foregoing address]**

- .3 The Bid Bond shall be in the amount and in the form provided in Appendix IV of Part 4 (Bid Bond) or in another substantially similar format approved by the Toronto Zoo prior to Bid submission; and
- .4 The Bid Bond shall be signed and sealed by the Supplier and by a licensed surety company, authorized to carry on business in the Province of Ontario, and having a place of business in Ontario.
- .5 Failure of a Supplier to submit a Bid Bond, in compliance with the requirements of Sections 1.9.3.1 and 1.9.3.2 (Bid Bonds) shall result in the Bid being rejected as non-compliant.
- .4 **Experience and Qualifications Form**
  - .1 Each Supplier shall complete, and submit the Experience and Qualifications Form provided in Appendix I of Part 4 (Experience and Qualifications Form). In submitting such form the Supplier gives the Toronto Zoo consent to contact the references therein to confirm the information therein. Failure to provide the required information listed on the Experience and Qualifications Form shall render the Bid non-compliant. If, in the Toronto Zoo’s sole and absolute discretion, the references do not confirm the Supplier’s experience and

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qualifications as required by the RFT, the Bid will be declared non-compliant and will not be considered for acceptance.

- .2 The Toronto Zoo reserves the right to verify whether Suppliers are relying upon past experience of an Affiliated Person including the nature of the corporate relationship and its relevance to the Project. If, in the Toronto Zoo's sole and absolute discretion, it is determined that a Supplier is relying on an Affiliated Person's past experience and a transfer of the Affiliated Person's experience cannot be demonstrated as relevant to the Project then the Bid will be declared non-compliant and not be considered for acceptance.
  - .3 The Toronto Zoo reserves the right to verify past performance of the Supplier or its Affiliated Persons with the Toronto Zoo's performance records on relevant Toronto Zoo projects (including the Toronto Zoo's agencies, boards, commissions and corporations).
  - .4 The Toronto Zoo reserves the right to verify a mandatory certification of qualifications submitted by a Supplier for itself or its Affiliated Persons with any relevant third party certifying organization.
- .5 List of Subcontractors Form**
- .1 The Supplier shall complete and submit the form provided in Appendix II of Part 4 (List of Subcontractors Form) indicating the subcontractors it intends to employ to carry out each portion of the Work ("**Subcontractors**") indicated therein.
  - .2 Suppliers must not include companies under suspension by the Toronto Zoo on their list of Subcontractors.
- .6 Pricing Form**
- .1 Each Supplier shall complete and submit the Pricing Form set out in Part 5 (PRICING FORM) according to the instructions contained in such form.
  - .2 In completing the Pricing Form, Suppliers must take into account compliance with all of the requirements of the RFT, including Part 3 (DRAWINGS AND SPECIFICATIONS) and the terms of the Contract. The Toronto Zoo will assume, in evaluating all Bids, that compliance with such requirements has been accounted for in the completed Pricing Form.

#### **1.10 Amendment of Bids**

- .1 Prior to the Submission Deadline, a Supplier may amend its Bid at any time after submission of the Bid Toronto Zoo and a Supplier may amend its Bid one or more times if it so wishes prior to the Submission Deadline.
- .2 If a Supplier amends its Bid, the Supplier must resubmit the Bid prior to the Submission Deadline Toronto Zoo the most recently submitted version of the Bid as

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dated and stamped recorded Toronto Zoo, shall be irrevocable and binding in accordance with the provisions of the RFT, and may be accepted by the Toronto Zoo in its sole and absolute discretion unless such Bid has been properly withdrawn in accordance with Section 1.11 (Withdrawal of Bids).

#### **1.11 Withdrawal of Bids**

- .1 A Bid may be withdrawn at any time prior to the Submission Deadline by delivering written notice of withdrawal to the Procurement Contact by means of email or in person Toronto Zoo before the Submission Deadline.
- .2 For clarity, a Bid may only be withdrawn by delivering such notice to the Procurement Contact prior to the Submission Deadline and cannot be withdrawn by any other means. If a Supplier fails to properly withdraw a Bid, the Bid shall be considered to be the Supplier's submitted Bid, shall be irrevocable and binding in accordance with the provisions of the RFT, and may be accepted by the Toronto Zoo in its sole and absolute discretion, notwithstanding such failure.
- .3 Any Bids that are properly withdrawn will not be examined or evaluated for the purpose of the RFT but shall be retained for the Toronto Zoo's record retention purposes.

#### **1.12 Bid Validity Period**

- .1 Upon the Submission Deadline, each submitted Bid shall be irrevocable and binding on Suppliers for the period of time following the Submission Deadline as set out in the RFT timetable in Section 1.5 (RFT Timetable) ("**Bid Validity Period**").
- .2 In exceptional circumstances, prior to the expiration of the Bid Validity Period, the Toronto Zoo may request Suppliers to extend the validity of their Bids and any accompanying Bid Bonds. The request and responses shall be made in writing by the Procurement Contact Toronto Zoo. A Supplier may refuse the Toronto Zoo's request without rendering its Bid non-compliant. A Supplier granting the request shall not be required or permitted to modify its Bid.

## SECTION 2 - EVALUATION, ACCEPTANCE AND EXECUTION

### 2.1 Evaluation

#### .1 Evaluation Process

.1 The Toronto Zoo will conduct the evaluation of Bids in the following two stages.

**Stage 1:** The Bids will be reviewed to determine whether they comply with all of the mandatory requirements of the RFT, including the requirements of Section 1.9 (Submission of Bids). Bids that are substantially incomplete or do not substantially comply with the requirements of this RFT will be excluded from consideration in Stage 2.

**Stage 2:** The compliant Bids will be ranked on the basis of the submitted pricing of each in accordance with the price evaluation method set out in the Pricing Form.

.2 Subject to its reserved rights set out in this Part, the Toronto Zoo may at any time and from time to time, in its sole and absolute discretion, revisit, revise, confirm or adjust the evaluations of a Bid at any time during the RFT process.

#### .2 Tied Bids

In the event that the Toronto Zoo receives two (2) or more Bids identical in price, the Toronto Zoo reserves the right to select one of such Bids as set out the Toronto Zoo's Policies. The Tied Bid procedure allows Toronto Zoo the tie to be broken by way of coin toss or lottery.

#### .3 Materially Unbalanced or Abnormally Low Bids

.1 A Bid is materially unbalanced if:

- it is based on prices which are significantly less than cost for some items and prices which are significantly overstated in relation to cost for other items; and
- the Toronto Zoo has determined that the Bid may not result in the lowest overall cost to the Toronto Zoo even though it may be the lowest submitted Bid; or
- it is so unbalanced as to be tantamount to allowing an advance payment.

.2 A Bid is abnormally low if the pricing, in combination with other constituent elements of the Bid, appears unreasonably low to the extent that the pricing raises material concerns with the Toronto Zoo as to the capability of the Supplier to perform the Contract on the basis of the offered pricing.

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- .3 If a materially unbalanced Bid or an abnormally low Bid is identified, the Toronto Zoo may seek clarification from the Supplier, including a detailed price analysis of its pricing in relation to the subject matter of the Contract, the scope of Work, the estimated quantities, the schedule for the performance of the Work, the allocation of risks and responsibilities and any other requirements of RFT.
- .4 If after evaluation of the price analysis, the Toronto Zoo determines that the Supplier has failed to demonstrate its capability to perform the Contract on the basis of the offered pricing, or that the offered pricing in constitutes a material risk to the Toronto Zoo, the Toronto Zoo may reject the Bid.

#### **2.2 Rights of the Toronto Zoo**

In addition to, but without limiting any other rights or options of the Toronto Zoo under this RFT, the Toronto Zoo may, in its sole and absolute discretion carry out the RFT process as it determines to be in the best interests of the Toronto Zoo and to be the most beneficial to Toronto Zoo. The Toronto Zoo may, in its sole and absolute discretion, exercise any or all of the following rights and options with respect to this RFT, at any time.

- .1 The Toronto Zoo may waive minor irregularities in any Bid.
- .2 The Toronto Zoo shall not be obliged to accept or reject any Bid (in whole or in part), including if:
  - the Bid contents appear to be incorrect, inaccurate or inappropriate;
  - the Supplier has engaged in conduct prohibited by the RFT; or
  - the Supplier or any member of a Supplier's Joint Venture is or becomes bankrupt, insolvent, makes an assignment for the benefit of its creditors generally or has a receiver appointed over all or a substantial part of its assets.
- .3 The Toronto Zoo may suspend, modify and/or cancel this RFT (with or without the substitution of another RFT) or the Project.
- .4 The lowest quoted price may not necessarily be accepted by the Toronto Zoo.
- .5 The Toronto Zoo may verify the validity of a Bid including the Supplier's statements, claims, qualifications or capabilities, by whatever means the Toronto Zoo deems appropriate including obtaining references other than those offered by the Supplier, and conduct investigations as to the qualifications of each Supplier.
- .6 The Toronto Zoo may, at any time during the RFT process, require (within such time period as set by the Toronto Zoo) one, some or all of the Suppliers to:
  - submit supplementary information or documentation clarifying any matters contained in their Bid;

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- meet with the Toronto Zoo to clarify aspects of their Bid;
- acknowledge and agree to the Toronto Zoo's interpretation of any aspect of a Bid,

provided, however, that the Toronto Zoo is not obliged to seek clarification of any aspect of a Bid and may request clarification from some but not all Suppliers. Such clarification may be in respect of clarification with respect to whether a Bid meets the mandatory requirements of the RFT or whether the Supplier meets the necessary experience and performance qualifications set out in the RFT, if any. Any supplementary information and documents submitted by a Supplier which have been accepted by the Toronto Zoo and the interpretations prepared by the Toronto Zoo which have been acknowledged and agreed to by a Supplier shall be considered to form part of the Bid.

- .7 The Toronto Zoo reserves the right to assess the ability of the Supplier to perform the Contract and may reject any Bid where, in the Toronto Zoo's sole determination, the personnel and/or resources of the Supplier are insufficient.
- .8 Bids that are improperly prepared, not in compliance with all of the requirements or instructions of the RFT, incomplete, improperly signed, conditional, qualified, illegible, obscure or contain reservations, additions not called for, arithmetical errors, omissions, erasures, alterations, or irregularities of any kind may, be considered informal or irregular and may be rejected or be retained by the Toronto Zoo for consideration and acceptance.
- .9 The Toronto Zoo may choose to meet with some or all of the Suppliers in connection with their Bids or the matters provided for in the RFT. The Toronto Zoo may visit the existing place or places of business of some or all Suppliers for purposes of clarification or verification.
- .10 The Toronto Zoo may award one or more contracts for portions or all of the Work to as many Suppliers and/or Other Persons as it deems appropriate, including awarding a contract for Work less than the scope or quantity contemplated in the Successful Supplier's Bid or the RFT.
- .11 The Toronto Zoo may issue a solicitation to one, some or all of the Suppliers and/or any Other Person.
- .12 After the Submission Deadline, the Toronto Zoo may increase or decrease the quantity of any unit of Work in accordance with the Contract.
- .13 The Toronto Zoo may exercise any other right or option provided for in, or in connection with, this RFT, including the rights and options set out in the Toronto Zoo's Policies.
- .14 The Toronto Zoo may do nothing in relation to the Bids or this RFT.



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##### **2.3 Contract Execution**

- .1 Once a Bid has been accepted by the Toronto Zoo, the Procurement Contact will notify the Successful Supplier that it has been awarded the Contract.
- .2 The Successful Supplier will be required to execute and deliver the Contract as well as the other documentation set out below in this Section 2.3.2 (Contract Execution) by taking the following steps within ten (10) Business Days after being notified by the Toronto Zoo that the Contract is ready for execution:
  - .1 execute and return the Contract, without any unilateral revisions to the Contract;
  - .2 obtain and deliver a performance bond and a labour and material payment bond for the due and proper performance of the Work, each in accordance with the requirements of the Contract and signed and sealed by the Supplier and its surety;
  - .3 arrange for the certificate of insurance in the form attached as a part of the Contract to be completed and signed (including stamp of insurance broker) and delivered to the Toronto Zoo;
  - .4 A letter from Workplace Safety and Insurance Board certifying that the Contractor is in good standing with the Board. A "letter of good standing" must be re-submitted throughout the Contract every 90 days.
- .3 Should the Successful Supplier fail to execute and deliver the Contract and deliver the accompanying documents in accordance with the requirements of Section 2.3.2 (Contract Execution), the Successful Supplier shall be deemed to have abandoned all rights and interests in the Contract and the RFT and the Toronto Zoo may, without prejudice to any other remedy or right which it may have, exercise all or any one or more of the following rights:
  - rescind its award of the Contract;
  - call on the Bid Bond;
  - accept the Bid of the next highest ranked Supplier and proceed to execute the Contract with such Supplier; or
  - suspend the Successful Supplier from participating in other Toronto Zoo procurement processes for such period of time as may be determined under the Supplier Performance Evaluation .

##### **2.4 Notification to Other Suppliers**

**Request for Tender**  
**TZC T 04-2020-01 Installation of Electric Vehicle Charging Stations**  
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Once the Successful Supplier is notified that the Toronto Zoo has awarded the Contract, the other Suppliers will be notified by the Toronto Zoo in writing Toronto Zoo of the outcome of the RFT process.

**2.5 Debriefing**

Unsuccessful Suppliers may request a debriefing after receipt of a notification of the outcome of the selection process. All requests must be in writing to the Procurement Contact Toronto Zoo. The intent of the debriefing information session is to aid the Supplier in presenting a better bid in subsequent procurement opportunities. Any debriefing provided is at the sole and absolute discretion of the Toronto Zoo, and not for the purpose of providing an opportunity to challenge the RFT process.

## **SECTION 3 - GENERAL RFT TERMS AND CONDITIONS**

### **3.1 General Process Terms and Conditions**

- .1 Suppliers acknowledge that their Bids are governed by the terms and conditions set out in this RFT as well as the by-laws, policies and procedures established by the Toronto Zoo (including the Toronto Zoo's Policies and Procedures) and any additional terms and conditions related to the provision of the Toronto Zoo and Suppliers will become familiar, and comply with, all of the foregoing. Each Supplier shall comply with the Toronto Zoo's Policies and Procedures including the specific policies set out in Form A of Part 4 – Bid Submission Form (Toronto Zoo's Policies and Procedures) and elsewhere in this RFT. It is the responsibility of the Supplier to review all such policies.
- .2 Suppliers should structure their bids in accordance with the instructions in this RFT. Where information is requested in this RFT, any response made in a Bid should reference the applicable section numbers of this RFT.
- .3 The Toronto Zoo will have no obligation to consider information, documentation or other content not included in a Bid for the purpose of evaluating the Bid. For clarity, the Toronto Zoo will not consider any content referred to in but not included in the Bid, including information referenced by links to websites or other external documents.

### **3.2 Suppliers Shall Bear Their Own Costs**

Each Supplier shall bear all costs, expenses and financial obligations associated with or incurred by the Supplier to: (i) prepare and present its Bid or to otherwise participate in the RFT process including, if applicable, costs incurred for samples, interviews or demonstrations; or (ii) to establish a legally binding contract with the Toronto Zoo.

### **3.3 Limitation of Liability**

- .1 Notwithstanding anything in the RFT and any express or implied duties or obligations of the Toronto Zoo to the contrary, the Toronto Zoo and each of its agencies, boards, commissions, elected officials, officers, employees, servants, agents, volunteers, suppliers, advisers and contracted personnel will have no liability to any Person, including any Supplier and prospective Supplier for any damages, costs, liabilities, losses or expenses including direct, indirect, special or punitive damages, or for loss of profits, loss of opportunity or loss of reputation arising out of or otherwise relating to:
  - this RFT,
  - participation of any such Person in this RFT process;
  - the provision and availability or lack of availability or accuracy of the Toronto Zoo RFT issued by the Toronto Zoo; or
  - the Toronto Zoo's acts or omissions in connection with the conduct of this RFT process, including the acceptance, non-acceptance or delay in acceptance by the Toronto Zoo of any Bid.
- .2 This limitation applies to all possible claims, whether arising in contract, tort, equity, or otherwise, including any claim for a breach by the Toronto Zoo of a duty of fairness, if any, or relating to a failure of the Toronto Zoo to comply with the rules set out in this

## Request for Tender

### TZC T 04-2020-02 Installation of Electric Vehicle Charging Stations

#### Part 1 – Instruction to Bidders – Section 3 – GENERAL RFT TERMS AND CONDITIONS

---

RFT. By submitting a Bid to the Toronto Zoo, each Supplier irrevocably and unconditionally waives any claims for damages, costs, liabilities, losses and expenses, and shall not seek any order for injunctive relief or specific performance, against the Toronto Zoo, its agencies, boards, commissions, elected officials, officers, employees, servants, agents, volunteers, advisers and contracted personnel.

- .3 Each Supplier agrees that, despite Section 3.3.1 (Limitation of Liability) or any limitations of liability or releases in favour of Toronto Zoo, if the Toronto Zoo is found to be liable, in any way whatsoever, for any act or omission in respect of the RFT Toronto Zoo to any Supplier or any other Person participating in the RFT process, and the aggregate amount of damages recoverable against Toronto Zoo for any matter relating to or arising from any act or omission by the Toronto Zoo, whether based upon an action or claim in contract, warranty, equity, negligence, intended conduct or otherwise, including any action or claim arising from the acts or omissions, negligent or otherwise, of the Toronto Zoo shall be no greater than the Supplier's cost of preparing its Bid.
- .4 Notwithstanding the Toronto Zoo's limitation of liability, the Supplier may seek a debriefing or may pursue a dispute of the RFT process in accordance with the Toronto Zoo's Policies and Legislation.

#### **3.4 Joint Venture Bids**

A Supplier may be a private legal entity or any combination of such entities in the form of a joint venture (**Joint Venture**) under and existing agreement or with the intent to enter into such an agreement as supported by a letter of intent. In the case of a Joint Venture, all members shall be jointly and severally liable for the execution of the entire contract if selected by the Toronto Zoo. The Joint Venture shall nominate a representative who shall have the authority to conduct all business on behalf of all members of the Joint Venture during the procurement process and for the execution and performance of any resulting contract.

#### **3.5 Participation in Multiple Bids**

Submission or participation in more than one Bid by a Supplier will result in the disqualification of all proposals in which the Supplier is involved. This does not limit the inclusion of the same subcontractor from being named in more than one Bid as a subcontractor only.

#### **3.6 Toronto Zoo Materials**

- .1 The RFT and all correspondence, data, plans, materials, drawings, specifications, reports, estimates, summaries, photographs, models and all other information and documentation in any form provided or made available to any Supplier or prospective Supplier by, or on behalf of, the Toronto Zoo in connection with, or arising out of this RFT (collectively, the "**Toronto Zoo Materials**") and all intellectual property rights therein:
  - are and shall remain the sole and absolute property of the Toronto Zoo;
  - must be treated by Suppliers and prospective Suppliers as confidential and Suppliers must maintain such confidentiality;

## Request for Tender

### TZC T 04-2020-02 Installation of Electric Vehicle Charging Stations

#### Part 1 – Instruction to Bidders – Section 3 – GENERAL RFT TERMS AND CONDITIONS

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- must not be disclosed without prior written authorization from the Toronto Zoo;
  - must not be used for any purpose other than for replying to this RFT, and for fulfillment of the Contract or any related subsequent agreement; and
  - immediately upon the request of the Toronto Zoo, must be returned by the Supplier to the Toronto Zoo and all electronic copies must be destroyed.
- .2 Unless and to the extent provided otherwise in the Contract, the Toronto Zoo and its advisers make no representation or warranty as to the accuracy or completeness of the Toronto Zoo Materials. Any quantities shown or data contained in the Toronto Zoo Materials are estimates only and are for the sole purpose of indicating to Suppliers the general scale and scope of the Work. Use of or reliance by Suppliers on the Toronto Zoo Materials Toronto Zoo shall be at the Supplier's sole risk and without recourse against the Toronto Zoo.
- .3 It is the Suppliers' responsibility to make their own independent investigations, due diligence, projections and conclusions, and consult their own advisors, to obtain all the information necessary to:
- verify and confirm the accuracy and completeness of the Toronto Zoo Materials, unless and to the extent provided otherwise in the Contract;
  - Toronto Zoo satisfy themselves as to all existing conditions affecting the Project or the Contract; and
  - prepare their Bids in response to this RFT.

#### **3.7 Ownership of Bid Materials**

- .1 The documentation comprising any Bid, along with all correspondence, data, plans, materials, drawings, specifications, reports, estimates, summaries, photographs, models and all other information and documentation in any form provided or made available to the Toronto Zoo by, or on behalf of, any Supplier in connection with, or arising out of this RFT (collectively, the "**Bid Materials**") and all intellectual property rights therein, once received by the Toronto Zoo:
- shall become the sole and absolute property of the Toronto Zoo;
  - shall become subject to MFIPPA, and the Toronto Zoo may be required to disclose the Bid Materials members of the public, pursuant to MFIPPA.
- .2 Each Supplier:
- represents and warrants that the information contained in its Bid Materials does not infringe any intellectual property right of any third party;
  - hereby assigns and transfer to the Toronto Zoo, and shall cause all its personnel and other third parties to assign and transfer to the Toronto Zoo, all right, title and interest in the Bid Materials, including intellectual property rights therein:

## Request for Tender

### TZC T 04-2020-02 Installation of Electric Vehicle Charging Stations

#### Part 1 – Instruction to Bidders – Section 3 – GENERAL RFT TERMS AND CONDITIONS

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- shall cause all its personnel and other third parties to waive, for the benefit of the Toronto Zoo, their respective moral rights (and any similar rights to the extent that such rights exist) in and to the Bid Materials; and
  - shall indemnify, defend and hold harmless the Toronto Zoo, City of Toronto and Toronto Regional Conservation Authority and its agencies, boards, commissions, elected officials, officers, employees, servants, agents, volunteers, advisers and contracted personnel, if any, against all claims, actions, suits and proceedings brought against, or losses, costs, expenses, damages suffered, sustained, or incurred by them which may be directly or indirectly attributable to, or arising or alleged to arise out of the infringement or alleged infringement of any patent, copyright, trademark, or other intellectual property right of a third party in connection with the Bid Materials.
- .3 Suppliers are also advised that MFIPPA does provide protection for confidential and proprietary business information. For the purposes of the Toronto Zoo's compliance with MFIPPA, Suppliers are advised to identify in their Bid Materials material any scientific, technical, commercial, proprietary or similar confidential information, the disclosure of which could cause them injury.
- .4 Each Supplier's name and total bid price may be made public. Bid Materials will, as necessary, be made available:
- on a confidential basis, to advisers retained by the Toronto Zoo to advise or assist with the RFT process;
  - to members of Council in accordance with the Toronto Zoo's procedures; and
  - to members of the public pursuant to MFIPPA.
- .5 The Toronto Zoo will not return the Bid or any other Bid Materials.

#### **3.8 Failure or Default of Supplier**

- .1 Without prejudice to any other right or remedy available to the Toronto Zoo under this RFT or at law, if the Supplier, for any reason, fails or defaults in respect of an obligation of the Supplier under the terms of the RFT, the Toronto Zoo may:
- disqualify the Supplier from the RFT and/or from competing for any future solicitations issued by the Toronto Zoo; and
  - require the Supplier to pay the Toronto Zoo the difference between its Bid and any other Bid which the Toronto Zoo accepts, if the latter is for a greater amount and, in addition, to pay the Toronto Zoo any other cost which the Toronto Zoo may incur by reason of the Supplier's failure or default.
- .2 The Supplier shall be ineligible to submit a new bid for any solicitations that the Toronto Zoo is required to reissue as a result of the Supplier's failure or default under the Contract or where the Toronto Zoo deems that the Supplier has abandoned the Contract.

#### **3.9 Trade Agreements**

## Request for Tender

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#### Part 1 – Instruction to Bidders – Section 3 – GENERAL RFT TERMS AND CONDITIONS

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Suppliers should be aware that procurements falling within the scope of the Canadian Free Trade Agreement or other trade agreements applicable to the Toronto Zoo are subject to such agreements, but the rights and obligations of the parties will be governed by the specific terms of this RFT

#### **3.10 Governing Law and Enforceability**

- .1 The terms and conditions of the RFT process are to be governed by and construed in accordance with the Toronto Zoo's Policies, the laws of the province of Ontario and the federal laws of Canada applicable therein.
- .2 If any provision of the RFT or its application to any party or circumstance is unenforceable, the provision shall be ineffective only to the extent of the unenforceability without: (i) invalidating the remaining provisions of the RFT; (ii) changing the fundamental nature of the obligations assumed by the parties; and (iii) affecting its application to other parties or circumstances.

#### **3.11 RFT Definitions and Interpretation**

##### **.1 Definitions**

Throughout this RFT, unless inconsistent with the subject matter or context, the following definitions shall apply other than in respect of Part 2 (FORM OF CONSTRUCTION AGREEMENT).

- .1 “**Addenda**” or “**Addendum**” means a document containing additional information and/or changes to the RFT issued by the Toronto Zoo on its website.
- .2 “**Bid**” means an offer submitted by a Supplier in response to the RFT, which includes all of the documentation necessary to satisfy the submission requirements of the RFT and “**Bids**” shall have a corresponding meaning;
- .3 “**Bid Bond**” has the meaning set out in Section 1.9.3 (Bid Bonds).
- .4 “**Bid Materials**” has the meaning set out in Section 3.7.1 (Ownership of Bid Materials).
- .5 “**Bid Submission Form**” has the meaning set out in Section 1.9.2 (Bid Submission Form).
- .6 “**Bid Validity Period**” has the meaning set out in Section 1.12. (Bid Validity Period).
- .7 “**Business Day**” means a day other than:
  - .1 a Saturday, Sunday, statutory holiday, or statutory vacation day that is observed by the Toronto Zoo of Toronto; or
  - .2 a day identified by the Toronto Zoo as a designated or statutory holiday
- .8 “**Toronto Zoo**” means the Board of Management of the Toronto Zoo.
- .9 “**Materials**” has the meaning set out in Section 3.6 (Toronto Zoo Materials).

## Request for Tender

### TZC T 04-2020-02 Installation of Electric Vehicle Charging Stations

#### Part 1 – Instruction to Bidders – Section 3 – GENERAL RFT TERMS AND CONDITIONS

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- .10 “**Contract**” means the contract in the form set out in Part 2 (FORM OF CONSTRUCTION AGREEMENT) to be executed by the Successful Supplier and the Toronto Zoo, which sets out the terms and conditions for the performance of the Work.
  - .11 “**Joint Venture**” has the meaning set out in Section 3.4 (Joint Venture Bids).
  - .12 “**MFIPPA**” means the *Municipal Freedom of Information and Protection of Privacy Act*, as amended, supplemented, re-enacted or replaced from time to time.
  - .13 “**Person**” means any individual, partnership, limited partnership, firm, joint venture, syndicate, company or corporation with or without share capital, trust, trustee, executor, administrator or other legal personal representative, governmental authority or entity however designated or constituted
  - .14 “**Procurement Contact**” has the meaning set out in Section 1.2 (Procurement Contact).
  - .15 “**Project**” has the meaning set out in Section 1.1 (Introduction).
  - .16 “**RFT**” means this RFT package in its entirety, including all documents listed in Section 1.3 (RFT Documents) and Addenda that may be issued by the Toronto Zoo.
  - .17 “**Subcontractor**” means a Person undertaking the execution of a part of the Work by virtue of an agreement with the Contractor.
  - .18 “**Submission Deadline**” means the specified deadline for Bids to be submitted to the Toronto Zoo as indicated in the RFT timetable in Section 1.5 (RFT Timetable).
  - .19 “**Successful Supplier**” means the Supplier that has been selected to enter into the Contract for the performance of the Work.
  - .20 “**Supplier**” means a Person, including, where applicable, a Joint Bid Team, that submits a Bid in response to this RFT and “**Suppliers**” shall have a corresponding meaning.
  - .21 “**Work**” means all work, services and deliverables to be provided by a Contractor in respect of the Project as described in this RFT.
- .2 **Interpretation of the RFT**
- .1 Except where otherwise requested, all documents relating to the Bid and all communications between Suppliers and the Toronto Zoo will be in the English language.
  - .2 Except where otherwise disclosed, all references to times in this RFT will mean local time in Toronto, Ontario, Canada.
  - .3 The phrase “includes” “, include” or “including” means “includes, without limitation” or “including” or “include, without limitation”.



**Request for Tender**

**TZC T 04-2020-02 Installation of Electric Vehicle Charging Stations**

**Part 1 – Instruction to Bidders – Section 3 – GENERAL RFT TERMS AND CONDITIONS**

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- .4 In the RFT, unless the context otherwise requires, words importing the singular include the plural and vice versa and words importing gender include all genders.
- .5 Unless otherwise stated herein, all amounts in the RFT are in Canadian dollars, including any amounts provided in the Pricing Form.
- .6 In addition to the words defined in Section 13.13.1 (Definitions), the other words used in this RFT shall be interpreted consistent with the definitions contained in the Toronto Zoo's Policies..

**Request for Tender**  
**TZC T 04-2020-02 Installation of Electric Vehicle Charging Stations**  
**Part 1 – Instruction to Bidders – SUBMISSION LABEL**

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**QUESTIONS ON BID DOCUMENTS (QBD)**

**Deadline:** 4:00 p.m. on Thursday, 2020-02-27.

See Section Instructions to Bidders 1.8

Contact:

To: The Toronto Zoo  
361A Old Finch Avenue  
Toronto, ON M1B 5K7  
Tel: (416) 392-5916  
Fax: (416) 392-6711  
Attn: Peter Vasilopoulos pvasilopoulos@torontozoo.ca

From: \_\_\_\_\_ Date: \_\_\_\_\_  
Firm: \_\_\_\_\_ Tel: \_\_\_\_\_  
Spec \_\_\_\_\_ Paragraph(s) \_\_\_\_\_  
Section: \_\_\_\_\_ : \_\_\_\_\_  
Drawing \_\_\_\_\_  
Sheet: \_\_\_\_\_ Detail(s): \_\_\_\_\_

Question(s) \_\_\_\_\_  
: \_\_\_\_\_

Mark this box if the QBD can be answered by Bidder's review of the documents. Reply with location(s) where the information can be obtained.

Reply: \_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_ Firm: \_\_\_\_\_ Date: \_\_\_\_\_

---

The reply is an answer to a Bidder's question. The reply does not change the Bid Documents unless the information contained therein is issued in an Addendum. At the sole discretion of the Toronto Zoo, the question and reply may be returned to the questioner and distributed to all bidding general contractors for informational purposes.

**SUBMISSION LABEL**

This address label should be affixed to the front of your sealed tender, quotation and proposal envelope/package submission. Toronto Zoo will not be held responsible for envelopes and packages that are not properly labelled or submitted to an address other than the one listed on this label.

---

Vendor Name \_\_\_\_\_

**TZC T 04-2020-01 – Installation of Electric Vehicle Charging Stations**  
**Submission Deadline: Thursday, 2020-03-05, 12:00 (noon) local time**

**TO BE RETURNED TO**

**TORONTO ZOO**  
**C/O SUPERVISOR, PURCHASING & SUPPLY**  
**ADMINISTRATIVE SUPPORT CENTRE**  
**361A OLD FINCH AVE.**  
**TORONTO, ONTARIO**  
**M1B 5K7**



**CONSTRUCTION AGREEMENT  
CONTRACT TZC T 04-2020-02**

for

**Facilities & Infrastructure, Project Management  
Branch**

**Installation of Electric Vehicle Charging Stations**

**NOTICE RE: CONSTRUCTION ACT**

\* Parts I.1 (Prompt Payment) and II.1 (Adjudication) of the Construction Act apply with respect to this Agreement and all subcontracts thereunder.

\* All claims for lien (Form 12) must be completed and submitted through the City of Toronto's website at [www.toronto.ca/liens](http://www.toronto.ca/liens), pursuant to section 34(3.1) of the Construction Act and section 11.1 of O. Reg 304/18.

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**AGREEMENT BETWEEN OWNER AND CONTRACTOR**

**This Agreement** entered into on the Effective Date

**between**

**The Board of Management of the Toronto Zoo**

**(“Owner”)**

and

● **[Note to Finalization before Execution: Insert Legal Name of Contractor]**

**(“Contractor”)**

**WHEREAS** Parts I.1 (Prompt Payment) and II.1 (Adjudication) of the Construction Act apply with respect to this Agreement and all subcontracts thereunder as the Owner commenced a procurement process for the improvement that is subject of the Agreement (“**Procurement Process**”) on or after October 1, 2019;

**AND WHEREAS** ● **[Note to Finalization before Execution: Complete recitals];**

**NOW THEREFORE** in consideration of the mutual covenants herein contained, the Owner and the Contractor agree as follows:

**1. THE WORK**

The Contractor shall:

- 1.1 perform the Work required by the Agreement for the Project located at the Site; and
- 1.2 do and fulfill everything indicated by the Agreement; and
- 1.3 commence the Work on the Commencement Date and, subject to adjustment in Contract Time as provided for in the Agreement, attain Substantial Performance of the Work, by the Scheduled Date for Substantial Performance of the Work, and otherwise perform the Work in accordance with the Construction Schedule.

**2. CONTRACT PRICE**

- 2.1 The price for the Work (including any changes in the Work), which excludes Value Added Taxes, is the sum of, if applicable:
  - .1 in respect of the Fixed Price Work, the Fixed Price; plus
  - .2 in respect of the Unit Price Work, the Total Price of Unit Price Work; plus

## Construction Agreement

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- .3 in respect of T&M Changes in the Work recorded in a Change Order, the T&M Price, (the “**Contract Price**”).
- 2.2 Value Added Taxes in the percentage amount of thirteen percent (13%) are payable by the Owner to the Contractor.
- 2.3 The Contract Price shall only be subject to adjustment as provided in the Agreement.
- 2.4 All amounts in the Agreement are expressed and payable in Canadian currency, unless expressly noted otherwise.

### **3. DOCUMENTS COMPRISING THE AGREEMENT**

- 3.1 The following documents whether attached hereto or referred to herein form an integral part of the Agreement:
- Schedule A – Information Sheet
  - Schedule B – Pricing Form
  - Schedule C – Definitions
  - Schedule D – General Conditions
  - Schedule E – Valuing Changes in the Work
  - Schedule F – Owner Policies, Procedures, By-Laws and Other Requirements
  - Schedule G – Forms
    - Form 1 – Proper Invoice
    - Form 2 – Certificate of Insurance
    - Form 3 – Tax Statutory Declaration
    - Form 4 – Notice of Adjudication
  - Schedule H – Drawings and Specifications
  - Construction Schedule
  - Supplemental Instructions
  - any other document identified elsewhere in the Agreement as a document forming part of the Agreement.

**Construction Agreement**

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The parties hereto have executed this Agreement by the hands of their duly authorized representatives.

SIGNED AND DELIVERED

in the presence of:

**The Board of Management of the Toronto Zoo**

● **[Note to Finalization before Execution:  
Authority stamp to be completed by the  
Owner]**

By:

\_\_\_\_\_  
Name: ●  
Title: ●  
I have authority to bind the corporation

By:

\_\_\_\_\_  
Name: ●  
Title: ●  
I have authority to bind the corporation

● **[Note to Finalization before Execution:  
Insert Legal Name of Contractor]**

By:

\_\_\_\_\_  
Name: ●  
Title: ●  
I have authority to bind the corporation

By:

\_\_\_\_\_  
Name: ●  
Title: ●  
I have authority to bind the corporation

**[Note to Finalization before RFT/Execution: If the Contractor is an individual, use the following signature block. Delete signature block not used. Consult Legal Services if needed.]**

SIGNED, SEALED & DELIVERED

In the presence of:

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Name

**SCHEDULE A  
INFORMATION SHEET**

**[Note to Finalization before Execution: Revise A.3, A.4, A.5 and A.6 with information provided after award.]**

The following table provides information cross-referenced in the provisions of the Agreement. All reference to GCs are located in Schedule D – General Conditions.

<b>Row</b>	<b>Input Information</b>	<b>Reference</b>	<b>Description</b>
<b>A. Names and Information</b>			
<b>A.1</b>	Project	Sch. C, Definition 79 & GC 3.8.2.3(1)	Supply all labour, tools, materials, and equipment required to install charging stations for electric vehicles at the Toronto Zoo.
<b>A.2</b>	Site	Definition 90	Work under this contract will take place at: 361A Old Finch Ave, Toronto, ON M1B 5K7
<b>A.3</b>	Notice information	GC 1.6.1.2, GC 1.6.1.3 & GC 1.6.1.4	To be provided after award.
<b>A.4</b>	Identity of Contract Administrator	Sch. C, Definition 24	To be provided after award.
<b>A.5</b>	Identity of Owner Representative	Sch. C, Definition 70	To be provided after award.
<b>A.6</b>	Approved Subcontractors	GC 3.8.3, GC 3.8.3.1 & GC 3.8.3.2	To be entered after award.
<b>B. Pricing, Markups and Liquidated Damages</b>			
<b>B.1</b>	Contractor's Markup for negotiated fixed price and negotiated unit price changes in the Work performed by Contractor	Sch. E, s. 2.2.3.1	Not Applicable  Note: All markups for Labour and Equipment shall be included in the Unit Bid Prices. No additional markups will be paid.
<b>B.2</b>	Total Cumulative Markup allowed for Contractor,	Sch. E, s. 2.2.3.2	Zero percent (0%)

**Construction Agreement  
Schedule A – Information Sheet**

Row	Input Information	Reference	Description
	Subcontractors, Suppliers and Sub-subcontractors on negotiated fixed price and negotiated unit price changes in the Work performed by Subcontractors, Suppliers or Sub-subcontractors (and not performed by the Contractor)		
<b>B.3</b>	T&M Percentage Markup for changes in the Work performed by Contractor	Sch. E, s. 3.3.1	Ten percent (10%)
<b>B.4</b>	Total Cumulative T&M Percentage Markup allowed for Contractor, Subcontractors, Suppliers and Sub-subcontractors on changes in the Work performed by Subcontractors, Suppliers or Sub-subcontractors (and not performed by the Contractor)	Sch. E, s. 3.3.2	Fifteen percent (15%)
<b>B.5</b>	Markup for Cash Allowance overages	GC 6.1.4	Ten percent (10%)
<b>B.6</b>	Amounts of Delay Liquidated Damages	GC 7.6.1	None.
<b>B.7</b>	Changes in the Work on a Time & Material Basis	Sch. E, s. 3	Vertical approach.
<b>B.8</b>	Schedule A Schedule of Prices	Sch. B	Not applicable.

**Construction Agreement  
Schedule A – Information Sheet**

Row	Input Information	Reference	Description
	for Changes in the Work		
<b>B.9</b>	Invoice Period	Sch. C, Definition 54	No change to default Invoice Period
<b>B.10</b>	Giving of a Proper Invoice	GC 5.3.1	Proper invoices shall be given to the Owner by referencing GC 1.6.1.1
<b>C. Dates, Time Periods and Deadlines</b>			
<b>C.1</b>	Effective Date	Sch. C, Definition 40	To be finalized after award.
<b>C.2</b>	Commencement Date	Sch. C, Definition 17 & GC 3.1.6	2020-03-09
<b>C.3</b>	Key Work Milestones	Sch. C, Definition 55	Not applicable
<b>C.4</b>	Scheduled Date for Substantial Performance of the Work	Sch. C, Definition 86	2020-04-17
<b>C.5</b>	Scheduled Date for Total Performance of the Work	Sch. C, Definition 87	2020-04-30
<b>C.6</b>	Warranty Period	Sch. C, Definition 113	No change to default Warranty Period.
<b>C.7</b>	Working Days	Sch. C, Definition 115	No change to default Working Days.
<b>C.8</b>	Number of Days for Contract Administrator to Issue a Certificate for Payment	GC 5.4.1.2	28 Calendar Days after receipt of a Proper Invoice.

**Construction Agreement  
Schedule A – Information Sheet**

<b>Row</b>	<b>Input Information</b>	<b>Reference</b>	<b>Description</b>
<b>C.9</b>	Deadline to acknowledge a Contemplated Change Order	GC 7.2.1	No change to default of 10 Working Days.
<b>C.10</b>	Deadline to respond to a Change Directive	GC 7.3.5	5 Working Days.
<b>C.11</b>	Suspension Period for Stop Work Orders	GC 11.2.1	No change to default of 60 Working Days.
<b>D. Insurance, Contract Security, Bonds and Contractual Holdback</b>			
<b>D.1</b>	Insurance Coverages	GC 8.1.1.1, GC 8.1.1.2, GC 8.1.1.3 & GC 8.1.3	Automobile Liability Insurance shall have limits of not less than two million dollars (\$2,000,000).  Pollution Liability Insurance coverage is not required.
<b>D.2</b>	Additional Contract Security	GC 8.2.1	Not Applicable
<b>D.3</b>	Amount of the Contractual Holdback	GC 8.4.1	Not Applicable
<b>D.4</b>	Percentage by which Contractual Holdback is Reduced after Total Performance of the Work	GC 8.4.3	Not Applicable
<b>D.5</b>	Surety Bonds	GC 8.3.1	No change to requirements in GC 8.3.1
<b>E. Miscellaneous</b>			
<b>E.1.</b>	Alternate order of priority of the Agreement Documents	GC 1.1.7.1	No change to default order of priority
<b>E.2.</b>	Allowable Portion of the Work for Subcontracting	GC 3.8.1	Not Applicable
<b>E.3.</b>	Accuracy of Utilities and Structures	GC 4.1.4.1	Contractor to rely on accuracy of positions of Utilities and Structures provided in the Agreement, subject to the following tolerances: on any

**Construction Agreement  
Schedule A – Information Sheet**

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Row	Input Information	Reference	Description
			drawing, 2 meters horizontally, and 1 metre vertically
<b>E.4.</b>	Fair Wage Schedule	Sch. F, if applicable	Fair Wage Policy is applicable. Use the City of Toronto's Fair Wage Policy available at <a href="https://www.toronto.ca/business-economy/doing-business-with-the-city/understanding-the-procurement-process/fair-wage-office-policy/fair-wage-policy/">https://www.toronto.ca/business-economy/doing-business-with-the-city/understanding-the-procurement-process/fair-wage-office-policy/fair-wage-policy/</a>
<b>E.5.</b>	Workforce Development Plan	Sch. F, if included	There is <u>no requirement</u> for a Workforce Development Plan under this Agreement.



**SCHEDULE B**

**PRICING FORM**

**Pricing Form is provided within the Tender Posting (Part 5) on the Toronto Zoo's Website**

**[Note to Finalization before Execution: Attach Pricing Form]**

**SCHEDULE C**

**DEFINITIONS**

The following Definitions shall apply to the Agreement.

- 1. Adjudicable Dispute**  
A dispute respecting an Adjudicable Matter and that complies with GC 12.1.2.
- 2. Adjudicable Matter**  
Any matter:
  1. referred to in s. 13.5(1) of the Construction Act, other than in paragraph 7;
  2. that is prescribed under the Construction Act as referable to adjudication; or
  3. agreed to by the parties pursuant to GC 12.2.1.2.
- 3. Adjudication**  
Adjudication means a construction dispute interim adjudication under Part B.1 of the Construction Act.
- 4. Adjudicator**  
Adjudicator means an individual who is qualified by the Authority as an adjudicator.
- 5. Agreement**  
Agreement means the agreement between Owner and Contractor and the Schedules attached thereto, as the same may be amended, supplemented, restated or replaced from time to time in writing upon the mutual agreement of the parties or as may be otherwise provided for in the Agreement.
- 6. Allowance**  
Allowance means a Cash Allowance or Provisional Allowance, as applicable.
- 7. As-Built Drawings**  
As-Built Drawings has the meaning set out in GC 3.10.2.
- 8. Authority**  
Authority means the Authorized Nominating Authority designated under the Construction Act.
- 9. Calendar Day**  
Calendar Day means a calendar day.
- 10. Cash Allowance**  
Cash Allowance means the allowances, if any, identified in the Pricing Form for known items included in the Work where the actual cost was unknown at the time of tender. The Contractor's overhead and profit is excluded from Cash Allowance and is carried in other pricing as set out in GC 6.1.2.

## Construction Agreement Schedule C – Definitions

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- 11. Certificate of Recognition (COR™)**  
Certificate of Recognition (COR™) means the nationally recognized occupational health and safety certification granted to qualifying firms by the Infrastructure Health and Safety Association (IHSA) of Ontario or its successor.
- 12. Change Directive**  
A Change Directive means a written instruction, which shall be deemed incorporated into and forming part of the Agreement, prepared by the Contract Administrator and signed by the Owner directing the Contractor to proceed with a change in the Work prior to or in the absence of the Owner and the Contractor agreeing upon adjustments in the Contract Price and the Contract Time.
- 13. Change Order**  
A Change Order means a written amendment to the Agreement, which shall be deemed incorporated into and forming part of the Agreement, prepared by the Contract Administrator and signed by the Owner and the Contractor stating their agreement upon:
1. a change in the Work;
  2. the method of adjustment or the amount of the adjustment in the Contract Price, if any; and
  3. the extent of the adjustment in the Contract Time, if any.
- 14. City**  
City means the City of Toronto. The words “City” or “City of Toronto” wherever used in the Agreement shall be regarded as synonymous.
- 15. Claims**  
Claims means any and all actual, threatened or potential claims, demands, proceedings, complaints, grievances, actions, adjudications, litigation, applications, suits, causes of action, orders, charges, arbitrations or other similar process, of whatsoever kind or nature (whether civil, administrative, regulatory, arbitral or otherwise), and Losses in respect of the foregoing matters.
- 16. Claim Notice**  
Claim Notice has the meaning set out in GC 6.7.1.
- 17. Commencement Date**  
Commencement Date means the commencement date for the performance of the Work as set out in row C.2 of the Information Sheet, or if no such date is set out, the date described in the Notice in Writing issued by the Owner to the Contractor, pursuant to GC 3.1.6 directing the Contractor to commence the performance of the Work.
- 18. Confidential Information**  
Confidential Information means any and all (as the context requires) information of the disclosing party (including information in respect of or in connection with the Project or the performance of the Work) that is confidential to the disclosing party, or would reasonably be considered confidential, and that is disclosed orally or in writing by or on behalf of the disclosing party, to the receiving party pursuant to the Agreement, including

## Construction Agreement Schedule C – Definitions

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during the performance of the Work, regardless of whether the Information is specifically identified or marked as “Confidential”, “Restricted” or “Secret”. For the purposes of the Agreement, all Personal Information shall constitute Confidential Information.

### 19. Conflict of Interest

Conflict of Interest means any situation or circumstance where in relation to the performance of its obligations under the Agreement, the Contractor’s other commitments, relationships or financial interests:

1. could or could be seen to exercise an improper influence over the objective, unbiased and impartial exercise of its independent judgment; or
2. could or could be seen to compromise, impair or be incompatible with the effective performance of its contractual obligations.

### 20. Construction Act

Construction Act means the *Construction Act*, RSO 1990, c. C 30.

### 21. Construction Equipment

Construction Equipment means all tools, machinery and equipment, either operated or not operated, that is required for preparing, fabricating, conveying, erecting, or otherwise performing the Work but is not incorporated into the Work.

### 22. Construction Schedule

Construction Schedule has the meaning set out in GC 3.5.1.1.

### 23. Contemplated Change Order

Contemplated Change Order has the meaning set out in GC 6.2.1.

### 24. Contract Administrator

Contract Administrator means the Person designated by the Owner in row A.4 of the Information Sheet to be the Owner’s day to day administrator for the purposes of the Agreement or such other Person as may be designated by the Owner, from time to time. The words “Engineer”, “Architect” or “Consultant” wherever used in the Agreement shall be regarded as synonymous with the Contract Administrator, unless identified otherwise in row A.4 of the Information Sheet or if the Owner notifies the Contractor otherwise in writing.

### 25. Contract Price

Contract Price has the meaning set out in paragraph 2.1 of Section 2 of the Agreement – CONTRACT PRICE.

### 26. Contract Time

Contract Time means the time stipulated in paragraph 1.3 of Section 1 of the Agreement - THE WORK from the Commencement Date to the Scheduled Date for Substantial Performance of the Work.

## Construction Agreement

### Schedule C – Definitions

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- 27. Contractor**  
Contractor means the Person identified as such on page 1 of the Agreement. The term Contractor means the Contractor or the Contractor's authorized representative as designated to the Owner in writing.
- 28. Contractor Parties**  
Contractor Parties means the Contractor, Subcontractors, Suppliers and Sub-subcontractors and their respective Personnel.
- 29. Contractor Project Manager**  
Contractor Project Manager has the meaning set out in GC 3.7.3.1.
- 30. Contractor Records**  
Contractor Records means the Contractor's books, payrolls, accounts, invoices, purchase orders, receipts or other information or documentation.
- 31. Contractor Site Supervisor**  
Contractor Site Supervisor has the meaning set out in GC 3.7.3.2.
- 32. Contractual Holdback**  
Contractual Holdback has the meaning set out in GC 7.4.1.
- 33. Contractor Prepared Documents**  
Contractor Prepared Documents has the meaning set out in GC 12.3.1.
- 34. Current Schedule**  
Current Schedule means the Contractor's most up-to-date working schedule, prepared based on the Construction Schedule, indicating for a specific reporting period the actual progress of the Work and forecasting of future progress and performance to complete the Work.
- 35. Daily Contractor Work Records**  
Daily Contractor Work Records mean daily Contractor Records detailing labour (including the number and categories of Personnel and hours worked or on standby) and Construction Equipment (including types and quantities) employed and Product (including descriptions and quantities) used.
- 36. Deficiency or Deficient**  
Deficiency or Deficient means any aspect of the Work (including Products) that fails to comply with, or conform to, the requirements of the Agreement including Laws and the Standard of Care, whether or not such non-compliance or non-conformances occur, or are discovered, prior to or during the Warranty Period. Deficiency or Deficient includes deficiencies in application, engineering, manufacture, installation, construction, workmanship or materials (to the extent the Work includes such elements) and deficiencies in Products.
- 37. Delay Liquidated Damages**  
Delay Liquidated Damages has the meaning set out in GC 6.6.1.

## Construction Agreement

### Schedule C – Definitions

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#### 38. **Dispute**

Dispute means all disputes between the parties arising out of or in connection with the Agreement including as to:

1. the interpretation, application or administration of the Agreement;
2. findings or determinations under the Agreement, including under GC 6.7.6; or
3. the performance of the Work.

#### 39. **Drawings**

Drawings means the graphic and pictorial portions of the Agreement as attached or listed in Schedule H – Drawings and Specifications or elsewhere in the Agreement wherever located and whenever issued, showing the design, location and dimensions of the Work, generally including plans, elevations, sections, details, and diagrams, as the same may be amended, supplemented or replaced from time to time by the Owner.

#### 40. **Effective Date**

Effective Date means the effective date of the Agreement as set out in row C.1 of the Information Sheet.

#### 41. **Equivalent OHS Certification**

Equivalent OHS Certification means an occupational health and safety certification issued to qualifying firms by an independent third-party organization and accepted by the Owner (in the Owner's sole discretion) as equivalent to the Certificate of Recognition (COR™).

#### 42. **Estimate of Units**

Estimate of Units means an estimate of the total units performed during the identified period for each item of the Unit Price Work, as may be amended by the Contract Administrator or Owner Representative.

#### 43. **Estimate of Units for Completion**

Estimate of Units for Completion means the Estimate of Units as of the Effective Date for the total performance of the applicable item of Unit Price Work, as may be set out in the Pricing Form.

#### 44. **Extended Warranty Periods**

Extended Warranty Periods has the meaning set out in GC 8.3.6.

#### 45. **Fair Wage Policy**

Fair Wage Policy means the Owner's Fair Wage Policy, if any such policy is identified in Schedule F - Owner Policies, Procedures, By-Laws and Other Requirements.

#### 46. **Final Acceptance Certificate**

Final Acceptance Certificate has the meaning set out in GC 4.13.1.

#### 47. **Fixed Price**

Fixed Price means the fixed price for the Fixed Price Work set out in the Pricing Form, and as may be adjusted by Change Order.

## Construction Agreement

### Schedule C – Definitions

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- 48. Fixed Price Work**  
Fixed Price Work means the portion of the Work paid for on a Fixed Price basis.
- 49. GC**  
GC means the General Conditions.
- 50. Governmental Authority**  
Governmental Authority means any federal, provincial or municipal government, parliament or legislature, or any regulatory authority, agency, tribunal, commission, board or department of any such government, parliament or legislature, or any court or other law, regulation or rule-making entity, each having jurisdiction in the relevant circumstances, including, for clarity, any Person acting under the authority of any Governmental Authority and, with respect to taxes, whether domestic or foreign.
- 51. Hazardous Material**  
Hazardous Material means any contaminant, pollutant, dangerous substance, potentially dangerous substance, noxious substance, toxic substance, hazardous waste, flammable material, explosive material, radioactive material, urea formaldehyde foam insulation, asbestos, polychlorinated biphenyls, coal tar and any other biological or chemical agent, substance or material named, described, declared or defined to be hazardous, toxic, or a contaminant or pollutant in, or pursuant to, any applicable Laws.
- 52. Highway**  
Highway means a common and public highway, any part of which is intended for or used by the general public for the passage of vehicles and includes the area between the lateral property lines thereof.
- 53. Indemnitees**  
Indemnitees has the meaning set out in GC 8.1.1.
- 54. Invoice Period**  
Unless otherwise specified in row B.9 of the Information Sheet, Invoice Period means the one-month long period which commences on the Commencement Date and ends on the day prior to the same date as the Commencement Date in the next successive calendar month and each subsequent one-month long period thereafter.
- 55. Key Work Milestones**  
Key Work Milestones means the major milestones for the performance of the Work as set out in row C.3 of the Information Sheet, if any, as such milestones may be revised by Change Order or Change Directive.
- 56. Laws**  
Laws means all:
1. laws, orders-in-council, by-laws, codes, rules, regulations and statutes of any Governmental Authority;
  2. orders, decisions, judgments, injunctions, decrees, awards, directives, rulings and writs of any court, tribunal, arbitrator, Governmental Authority or other Person having jurisdiction;

**Construction Agreement**  
**Schedule C – Definitions**

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3. legally enforceable consents, approvals, policies and guidelines of any Governmental Authority; and

4. any requirements under or prescribed by applicable common law,

which are applicable to the Owner, Contractor, the Project, Site, Work or obligations under the Agreement.

**57. Lien Holdback**

Lien Holdback means the ten percent (10%) holdback retained pursuant to Part IV of the Construction Act.

**58. Losses**

Losses means any and all losses, debts, expenses, liabilities, damages, obligations, payments, fines and costs.

**59. Major Item**

Major Item means any item of Unit Price Work that has a value, calculated on the basis of its Estimate of Units for Completion multiplied by its Unit Price, which is equal to or greater than the lesser of:

1. \$100,000; and

2. 5% of the estimated Total Price of Unit Price Work (calculated using the Estimate of Units for Completion for all items of Unit Price Work).

**60. MFIPPA**

MFIPPA means the *Municipal Freedom of Information and Protection of Privacy Act*.

**61. Notice in Writing**

A Notice in Writing means a written communication between the parties or between them and the Contract Administrator that is transmitted in accordance with the provisions of GC 1.6.1 and GC 1.6.2.

**62. Notice of Adjudication**

Notice of Adjudication means a written notice of Adjudication, which:

1. complies with Section 13.7(1) of the Construction Act; and

2. is substantially in the form attached as Form 4 of Schedule G – Forms, including the submission of all applicable attachments.

**63. Notice of Negotiations**

Notice of Negotiations has the meaning set out in GC 11.3.1.

**64. OHSA**

OHSA means the *Occupational Health and Safety Act (Ontario)*.

**65. OPS**

OPS means the Ontario Provincial Standards.



## Construction Agreement Schedule C – Definitions

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- 66. Other Work**  
Other Work has the meaning set out in GC 4.2.1.3.
- 67. Owner**  
The Owner means the City of Toronto or its agency, board or commission as more particularly set out on page 1 of the Agreement.
- 68. Owner Documents**  
Owner Documents means, collectively, the Owner Prepared Documents and Contractor Prepared Documents.
- 69. Owner Prepared Documents**  
Owner Prepared Documents has the meaning set out in GC 1.1.11.
- 70. Owner Representative**  
The Owner Representative means the Person designated by the Owner in row A.5 of the Information Sheet to have the authority to bind the Owner for the purposes of the Agreement or such other Person as may be designated by the Owner, from time to time.
- 71. Owner Supplied Material**  
Owner Supplied Material means the material and/or equipment identified or referenced in the Drawings, Specifications or elsewhere in the Agreement as supplied by the Owner for incorporation into the Project, which is to be installed, tested, commissioned and otherwise dealt with, as applicable, by the Contractor in accordance with the Agreement.
- 72. Owner's Policies, Procedures and By-laws**  
Owner's Policies, Procedures and By-Laws means the policies and procedures of the Owner and the by-laws of the City of Toronto, as may be amended, supplemented or replaced from time to time, including the policies, procedures and by-laws referenced in Schedule F - Owner Policies, Procedures, By-Laws and Other Requirements.
- 73. Person**  
Person means any individual, partnership, limited partnership, joint venture, syndicate, company or corporation with or without share capital, trust, trustee, executor, administrator or other legal personal representative, Governmental Authority or entity however designated or constituted.
- 74. Personal Information**  
Personal Information means all information captured by the definition of "personal information" contained in MFIPPA, regardless of whether MFIPPA is applicable to such information.
- 75. Personnel**  
Personnel means with respect to a Person, its employees, invitees, directors, officers, representatives and agents, and any other person for whom the Person is directly or indirectly responsible under contract or law.
- 76. Pricing Form**  
Pricing Form means the pricing form set out in Schedule B – Pricing Form.

## Construction Agreement

### Schedule C – Definitions

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- 77. Procurement Process**  
Procurement Process has the meaning set out in the recitals to the Agreement.
- 78. Product**  
Product or Products means products, goods, material, machinery, devices, equipment, and fixtures forming the Work or any part thereof, but does not include Construction Equipment and Owner Supplied Material.
- 79. Project**  
Project means the project as described in row A.1 of the Information Sheet, of which the Work may be the whole or a part.
- 80. Proper Invoice**  
Proper Invoice means an invoice from the Contractor to the Owner on account as provided in 4.7 - OWNER'S OBLIGATION TO PAY, which is in compliance with the requirements of 4.8.
- 81. Provide**  
Provide means to supply and install.
- 82. Provisional Allowance**  
Provisional Allowance means the allowances, if any, identified in a schedule of prices in the Pricing Form for alterations, extras and deductions. Provisional Allowance items include overhead and profit.
- 83. QA/QC Plan**  
QA/QC Plan has the meaning set out in GC 3.13.2.
- 84. Recovery Plan**  
Recovery Plan has the meaning set out in GC 6.5.6.1.
- 85. Rules**  
Rules means the *Rules of Civil Procedure*, RRO 1990, Reg 194.
- 86. Scheduled Date for Substantial Performance of the Work**  
Scheduled Date for Substantial Performance of the Work means the scheduled date for Substantial Performance of the Work as set out in row C.4 of the Information Sheet, or if no such date is set out, the number of Calendar Days or Working Days after the Commencement Date specified in row C.4 of the Information Sheet.
- 87. Scheduled Date for Total Performance of the Work**  
Scheduled Date for Total Performance of the Work means the scheduled date for Total Performance of the Work as set out in row C.5 of the Information Sheet, or if no such date is set out, the number of Calendar Days or Working Days after the Commencement Date specified in row C.5 of the Information Sheet.

## Construction Agreement

### Schedule C – Definitions

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**88. Schedules**

Schedules means the schedules to the Agreement listed in paragraph 3.1 of Section 3 of the Agreement – DOCUMENTS COMPRISING THE AGREEMENT and includes any appendices thereto.

**89. Shop Drawings**

Shop Drawings means the drawings, diagrams, illustrations, schedules, performance charts, brochures, Product data, and other data which the Contractor provides to illustrate details of portions of the Work.

**90. Site**

Site means the designated site or location of the Work identified in row A.2 of the Information Sheet.

**91. Special Specification**

Special Specification means a Specification containing requirements specific to the Work that are not included in any Standard Specification or which are intended to amend, supplement or replace part or all of a Standard Specification, as the same may be amended, supplemented or replaced from time to time by the Owner.

**92. Specifications**

Specifications means that portion of the Agreement as attached or listed in Schedule H – Drawings and Specifications or elsewhere in the Agreement, wherever located and whenever issued, consisting of the written descriptions, requirements, instructions and standards for Products, systems, performance, installation, workmanship, quality, and the services necessary for the performance of the Work, as the same may be amended, supplemented or replaced from time to time by the Owner.

**93. Standard Drawing**

Standard Drawing means a Drawing listed in the Schedule H – Drawings and Specifications as a standard drawing, as the same may be amended, supplemented or replaced from time to time by the Owner. The City of Toronto's Standard Drawings can be found on-line at [www.toronto.ca/ecs-standards](http://www.toronto.ca/ecs-standards). Any of the OPS' Standard Drawings can be acquired from the OPS. Information about OPS can be found at [www.ops.on.ca](http://www.ops.on.ca).

**94. Standard of Care**

Standard of Care has the meaning set out in GC 3.13.1.

**95. Standard Specification**

Standard Specification means a Specification listed in Schedule H – Drawings and Specifications as a standard Specification, as the same may be amended, supplemented or replaced from time to time by the Owner. The City of Toronto's Standard Specifications can be found on-line at [www.toronto.ca/ecs-standards](http://www.toronto.ca/ecs-standards). Any of the OPS' Standard Specifications can be acquired from the OPS.

**96. Subcontractor**

Subcontractor means a Person having a direct contract with the Contractor to perform a part or parts of the Work at the Site.

**Construction Agreement**  
**Schedule C – Definitions**

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**97. Subject Matter of Indemnity**

Subject Matter of Indemnity has the meaning set out in GC 8.1.1.

**98. Submittals**

Submittals means documents or items required by the Agreement to be provided by the Contractor in accordance with the Agreement such as:

1. Shop Drawings, samples, models, mock-ups to indicate details or characteristics, before the portion of the Work that they represent can be incorporated into the Work; and
2. As-Built Drawings and manuals to provide instructions as to the operation and maintenance of the Work.

**99. Substantial Performance of the Work**

Substantial Performance of the Work means:

1. the requirements set out in the Construction Act for a contract to be “substantially performed” have been met, including the Work being ready for use. For clarity, the Work shall not be “ready for use” until it has satisfied all the requirements for “ready for use” in the Specifications or elsewhere in the Agreement; and
2. the Contractor has submitted to the Contract Administrator all items required by the Specifications for Substantial Performance of the Work.

**100. Substitution**

Substitution has the meaning set out in GC 3.9.4.2.

**101. Sub-subcontractor**

Sub-subcontractor means a Person having a direct contract with a Subcontractor or Supplier or any other subcontractor or supplier at any tier, to perform a part or parts of the Work, or to supply Products. For greater certainty, Sub-subcontractors do not include the Subcontractors or the Suppliers.

**102. Supplemental Instruction**

A Supplemental Instruction means an instruction issued in writing, not involving adjustment in the Contract Price or Contract Time, in the form of Specifications, Drawings, schedules, samples, models or written instructions, which are consistent with the intent of the Agreement and issued by the Contract Administrator to supplement the Agreement as required for the performance of the Work.

**103. Supplier**

Supplier means a Person having a direct contract with the Contractor to supply Products.

**104. Temporary Work**

Temporary Work means temporary supports, structures, facilities, services, and other temporary items, excluding Construction Equipment, required for the execution of the Work but not incorporated into the Work.

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- 105. Total Performance of the Work or Totally Performed**  
Total Performance of the Work or Totally Performed means when the entire Work (except for the correction of Deficiencies that are identified after the receipt of the Proper Invoice for payment, in accordance with 4.12) has been fully and totally performed to the requirements of the Agreement (including completion in accordance with the Construction Act and the correction of all Deficiencies that were identified prior to the receipt of such Proper Invoice) as certified by the Contract Administrator in the certificate of payment issued to the Owner pursuant to GC 4.12.1.4.
- 106. Total Price of Unit Price Work**  
Total Price of Unit Price Work means the aggregate amount of, for all items of Unit Price Work, the total units required by the Owner under the Agreement for each item of Unit Price Work multiplied by the Unit Price of each such item.
- 107. T&M Changes in the Work**  
T&M Changes in the Work means changes in the Work performed on a time and material basis in accordance with Section 3 of Schedule E – Valuing Changes in the Work.
- 108. T&M Price**  
T&M has the meaning set out in section 3.1 of Schedule E – Valuing Changes in the Work.
- 109. Unit Price**  
Unit Price means the unit price for an item of Unit Price Work set out in the Pricing Form.
- 110. Unit Price Work**  
Unit Price Work means the portion of the Work paid for on a Unit Price basis.
- 111. Utilities and Structures**  
Utilities and Structures has the meaning set out in GC 4.1.4.1.
- 112. Value Added Taxes**  
Value Added Taxes means such sum as shall be levied upon the Contract Price by the Federal or any Provincial or Territorial Government and is computed as a percentage of the Contract Price and includes the Goods and Services Tax, the Harmonized Sales Tax, and any similar tax, the collection of which have been imposed on the Contractor by the tax legislation.
- 113. Warranty Period**  
Warranty Period means the warranty period under the Agreement in respect of the Work (except for the Extended Warranty Periods as described in GC 8.3.6), which is two (2) years from the date of Substantial Performance of the Work or such other period as may be specified in row C.6 of the Information Sheet or elsewhere in the Agreement.
- 114. Work**  
The Work means the total construction, Products, installation, commissioning, checkout, start-up, testing and related services, deliverables and other obligations as set out in,

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required by, reasonably inferable from or described in the Agreement. For clarity, the Work does not include the supply of Owner Supplied Material.

**115. Working Day**

Unless otherwise specified in row C.7 of the Information Sheet, Working Day means a Calendar Day other than:

1. a Saturday, Sunday, statutory holiday that is observed by the construction industry in the area of the Site; or
2. a Calendar Day identified by the City of Toronto as a designated or statutory holiday.

**116. WSIB**

WSIB means the Workplace Safety & Insurance Board.

**SCHEDULE D**

**GENERAL CONDITIONS**

**1. GENERAL PROVISIONS**

**1.1 INTERPRETATION**

1.1.1 The intent of the Agreement is to include the labour, Products and services required for the performance and completion of the Work by the Contractor in accordance with the Agreement or properly inferable from them.

1.1.2 If, subsequent to the Effective Date, changes are made by the Owner to any Standard Specifications, Special Specifications, Standard Drawings or any other Drawing or Specification which affect the cost of the performance of the Work or Contract Time, any claim by the Contractor must be submitted in accordance with the requirements of 6.7 - CLAIMS PROCEDURE and the Owner may submit a change in accordance with the requirements of 6.1 – OWNER’S RIGHT TO MAKE CHANGES.

1.1.3 Subject to any rights or remedies which may be available to the Owner, nothing contained in the Agreement shall create any contractual relationship between:

- .1 the Owner and a Contractor Party performing any portion of the Work;
- .2 the Contract Administrator and a Contractor Party performing any portion of the Work; or
- .3 the Owner Representative and a Contractor Party performing any portion of the Work.

1.1.4 Words and abbreviations which have well known technical or trade meanings are used in the Agreement in accordance with such recognized meanings.

1.1.5 In the Agreement, unless the context otherwise requires, words importing the singular include the plural and vice versa and words importing gender include all gender.

1.1.6 Neither the organization of the Specifications nor the arrangement of Drawings shall control the Contractor in dividing the Work among Subcontractors and Suppliers.

1.1.7 Subject to GC 1.1.9, if there is an inconsistency or a conflict within the Agreement:

- .1 the order of priority of documents, from highest to lowest, shall be, unless otherwise provided for in row E.1 of the Information Sheet:
  - (1) any amendment to the Agreement made in accordance with the terms and conditions of the Agreement, shall take precedence only over those specific provisions of the Agreement expressly amended, in order of most recent date issued (if any),
  - (2) Schedule A - Information Sheet and Schedule B – Pricing Form,

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### Schedule D – General Conditions

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- (3) the Agreement (excluding the Schedules),
  - (4) the Schedules of Agreement in the following order: Schedule F – Owner Policies, Procedures, By-Laws and Other Requirements, Schedule D – General Conditions and all remaining Schedules other than Schedule H – Drawings and Specifications,
  - (5) Supplemental Instructions,
  - (6) the summary of the Work as described in the Specifications,
  - (7) the Specifications (other than the summary of the Work and the material and finishing schedules in the Specifications),
  - (8) material and finishing schedules in the Drawings and Specifications,
  - (9) the Drawings (other than the material and finishing schedules in the Drawings),
  - (10) Construction Schedule, and
  - (11) any other document identified elsewhere in the Agreement as a document forming part of the Agreement
- .2 Drawings of larger scale shall govern over those of smaller scale of the same date;
  - .3 dimensions shown on Drawings shall govern over dimensions scaled from Drawings;
  - .4 detailed Drawings shall govern over general Drawings;
  - .5 later dated documents shall govern over earlier documents of the same type; and
  - .6 Special Specifications shall govern over Standard Specifications.
- 1.1.8 Subject to GC 1.1.9, if there is an inconsistency or a conflict within the contents of Standard Specifications and Standard Drawings, the order of priority from highest to lowest shall be:
- .1 City of Toronto Standard Specifications and City of Toronto Standard Drawings, including any amendments; then
  - .2 OPS Standard Specifications and OPS Standard Drawings, including any amendments; then
  - .3 other Standard Specifications and Standard Drawings referenced in the City of Toronto Standard Specifications and City of Toronto Standard Drawings or OPS Standard Specifications and OPS Standard Drawings, including, as applicable, those produced by Canadian Standards Association, Canadian General



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Standards Board, American Society for Testing and Materials and American National Standards Institute.

- 1.1.9 Notwithstanding GC 1.1.7 and 1.1.8, any provision within the Agreement establishing a higher standard of safety, reliability, durability, performance, service or quality shall take precedence over a provision establishing a lower standard of safety, reliability, durability, performance, service or quality.
- 1.1.10 The Owner shall provide the Contractor, without charge, one (1) electronic copy and up to three (3) hard copies of the Agreement other than the specifications of Canadian, United States of America or internationally recognized standards associations (including the Standard Specifications and Standard Drawings), in which case, such documents are the responsibility of the Contractor to obtain as the case may be. If requested by the Contractor, the Owner shall provide additional copies and the Contractor shall be responsible for the cost of printing, handling and shipping.
- 1.1.11 All Specifications, Drawings, models and other applicable Agreement documents and any other correspondence, data, plans, drawings, specifications, reports, estimates, summaries, photographs, models, mock-ups, information and documentation in any form, and copies thereof, furnished by the Contract Administrator or the Owner (collectively, the “**Owner Prepared Documents**”) are not the property of the Contractor. All Owner Prepared Documents furnished by the Contract Administrator or Owner are to be used by the Contractor only with respect to the Work and are not to be used on other work. The Owner Prepared Documents are not to be copied or altered in any manner by the Contractor without the written authorization of the Contract Administrator or the Owner.
- 1.1.12 The Owner may issue to the Contractor one or more purchase orders in respect of the Work and/or Agreement. Any such purchase order shall be solely for the convenience of the Owner in administering its internal procedures, and notwithstanding any of the provisions set out in such purchase order, shall not create any binding obligations of either party or in any way be deemed to amend, restate, supplement or replace any of the Agreement or otherwise be considered to form a part of the Agreement.

## 1.2 ENTIRE AGREEMENT AND AMENDMENTS

- 1.2.1 The Agreement embodies and constitutes the sole and entire agreement between the parties hereto. There are no terms, obligations, covenants or conditions between the parties hereto, other than as contained herein. The Agreement is complementary and what is required by any:
- .1 part thereof shall be considered as being required by the whole; and
  - .2 one document forming a part of the Agreement shall be as binding as if required by all. The Agreement supersedes all prior negotiations, representations or agreements, either written or verbal, relating in any manner to the Work, including the documents from the Procurement Process.

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1.2.2 The Agreement may be amended only as provided in the Agreement. No amendment of the Agreement shall be valid unless executed by an instrument in writing by the parties, except as provided for in the Agreement. Neither the Agreement, nor any term hereof, can be amended in whole or in part, except by such instrument in writing, except as provided for in the Agreement, and no subsequent verbal agreement shall have any validity whatsoever.

1.2.3 Unless expressly provided otherwise in the Agreement including GC 2.4.1:

.1 no verbal arrangement or agreement, relating to the Work, the Agreement or any other matter concerning the Agreement or Work, will be of any force or effect unless it is in writing and signed by duly authorized representative of the Owner; and

.2 the Owner and the Contract Administrator shall not be bound by any verbal communication or representation or conduct whatsoever, including any instruction, amendment or clarification of the Agreement, or any representation, information, advice, inference or suggestion, from any Person (including but not limited to an elected official, Personnel, independent contractor or any other Person acting on the behalf of or at the direction of the Owner or Owner Representative or other representative of the Owner including the Contract Administrator) concerning the Agreement, or any other matter concerning the Agreement or Work. Where in the Agreement a reference is made to the express written agreement, approval or consent of the Owner or the Contract Administrator, it shall be understood that the Owner or the Contract Administrator, as applicable, shall not be deemed or construed to have agreed to any stipulation, specification, exclusion, limitation or other term or condition that deviates from or amends a provision set out in the Agreement, unless that deviation or amendment is expressly confirmed in the executed Agreement or in a written and express amendment to the Agreement by a duly authorized representative of the Owner.

**1.3 LAW OF THE AGREEMENT AND INTERPRETATION**

1.3.1 The laws of the Province of Ontario and the federal laws of Canada applicable therein shall govern the interpretation of the Agreement.

1.3.2 The phrase “includes”, “include” or “including” means “includes, without limitation” or “including” or “include, without limitation,”.

1.3.3 If any provision of the Agreement or its application to any party or circumstance is unenforceable, the provision shall be ineffective only to the extent of the unenforceability without: (.1) invalidating the remaining provisions of the Agreement; (.2) changing the fundamental nature of the obligations assumed by the parties; and (.3) affecting its application to other parties or circumstances.

1.3.4 Except as otherwise expressly provided for in the Agreement, any reference in the Agreement to a statute or code or rule promulgated under a statute or to any provision of a statute, code or rule promulgated under a statute shall be a reference to the statute, code, rule or provision, as amended, supplemented, re-enacted or

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replaced from time to time. Any reference to a statute shall be a reference to the statute and its underlying regulations.

1.3.5 The terms of the Agreement, which expressly or by their nature are intended to survive the termination or discharge of the Agreement (including all indemnities, representations and warranties of the Contractor) shall survive such termination or discharge.

1.3.6 For the purposes of the Agreement, all documents and communications pertaining to the Agreement shall be in the English language.

#### **1.4 RIGHTS AND REMEDIES**

1.4.1 Except as expressly provided in the Agreement, the duties and obligations imposed by the Agreement and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by Laws.

1.4.2 No act or failure to act by the Owner, the Contract Administrator or Contractor shall, except as may be specifically agreed:

- .1 constitute a waiver of any right or duty afforded any of them under the Agreement;
- .2 constitute an approval of or acquiescence in any breach, default or non-observance thereunder; or
- .3 operate as a waiver of any such right or duty of the Owner in respect of any continuing or subsequent default, breach or non-observance, or so as to defeat or affect in any way such right or duty in respect of any such continuing or subsequent default, breach or non-observance.

1.4.3 The Contractor acknowledges and agrees that the exercise by the Owner of any of its rights or remedies under the Agreement, including the Owner's rights and remedies under 10. DEFAULT, TERMINATION AND SUSPENSION shall not result in irreparable harm to the Contractor and the Contractor shall not seek any order for injunctive relief, specific performance, certiorari or mandamus from any arbitral tribunal or court of law in relation to such exercise.

#### **1.5 ASSIGNMENT AND SUCCESSION**

1.5.1 The Contractor shall not assign the Agreement, either in whole or in part, without the written consent of the Owner, which consent may be withheld or given subject to such terms and conditions as the Owner deems appropriate.

1.5.2 Notwithstanding the foregoing, the Contractor acknowledges and agrees that the Owner may assign the Agreement, or any portion thereof, without the consent of the Contractor.

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1.5.3 The Agreement shall enure to the benefit of and be binding upon the parties hereto, their respective heirs, legal representatives, successors, and permitted assigns.

**1.6 RECEIPT OF AND ADDRESSES FOR NOTICES AND DOCUMENTATION**

1.6.1 Subject to GC 1.6.3, the parties agree that any Notice in Writing required to be given or that may be given under this Agreement shall be given in writing only by one of the following methods:

- .1 electronic mail to the name and address set out in row A.3 of the Information Sheet, including the name and telephone number of a person at the sender to contact in the event of a transmission problem;
- .2 delivery by hand to the name and address set out in row A.3 of the Information Sheet;
- .3 registered mail to the name and address set out in row A.3 of the Information Sheet; or
- .4 courier to the name and address set out set out in row A.3 of the Information Sheet.

1.6.2 For purposes of this Agreement:

- .1 a Notice in Writing sent by electronic mail which is transmitted prior to 5:00 p.m. on a Working Day, shall be deemed to have been received by the recipient on that Calendar Day, or on the next Working Day, if delivered after 5:00 p.m. or on a Calendar Day which is not a Working Day; provided that during the transmission of which no indication of failure of receipt is communicated to the sender;
- .2 a Notice in Writing delivered by hand or courier prior to 5:00 p.m. on a Working Day, shall be deemed to have been received by the recipient on such Calendar Day of delivery, or on the next Working Day, if delivered after 5:00 p.m. or on a Calendar Day which is not a Working Day; or
- .3 a Notice in Writing which is sent by registered mail is deemed to be received by the party to whom the Notice in Writing is addressed on the fifth (5<sup>th</sup>) Working Day after the date of mailing, where the date appearing on the postal registration receipt shall be deemed conclusively to be the date of mailing.

1.6.3 Notwithstanding GC 1.6.1, the parties agree that documents and notices required to be given or that may be given under the Construction Act shall be given in writing by a means or method permitted for under the Construction Act unless such means or methods are stipulated elsewhere in the Agreement.

1.6.4 Either Party may change its address or other contact particulars as set out in GC 1.6.1 by giving a Notice in Writing to the other in the manner set out in GC 1.6.1.

**1.7 CONFLICTS OF INTEREST**

1.7.1 The Contractor shall:

- .1 avoid any Conflict of Interest in the performance of its contractual obligations;
- .2 disclose to the Owner without delay any actual or potential Conflict of Interest that arises during the performance of its contractual obligations;
- .3 comply with any reasonable requirements prescribed by the Owner to resolve any Conflict of Interest; and
- .4 comply with the other requirements of Chapter 195, Purchasing, of the Toronto Municipal Code in respect of conflicts of interest and unfair advantages (as defined therein).

For clarity, the Owner shall be entitled to exercise any rights or remedies which may be available to the City of Toronto pursuant to Chapter 195, Purchasing, of the Toronto Municipal Code in respect of conflicts of interest and unfair advantages (as defined therein).

**1.8 MISCELLANEOUS**

1.8.1 The Contractor is an independent contractor and is not an agent of the Owner.

1.8.2 The Contractor shall not publish, issue or make any statements or news release, electronic, graphic, pictorial or otherwise, concerning the Agreement, the Work, or the Project, without the express prior written consent of the Owner.

**2. ADMINISTRATION OF THE AGREEMENT**

**2.1 AUTHORITY OF THE CONTRACT ADMINISTRATOR AND THE OWNER REPRESENTATIVE**

2.1.1 The Contract Administrator shall have no authority to bind the Owner, unless otherwise provided for in writing by the Owner.

2.1.2 The Owner Representative shall be the Owner's representative during construction and until the issuance by the Contract Administrator of the Final Acceptance Certificate. Only the Owner Representative shall have the authority to bind the Owner for the purposes of the Agreement. The Owner Representative may be a Personnel of the Owner or any other Person including the same Person as the Contract Administrator.

2.1.3 The Owner Representative will execute Change Orders and Change Directives as provided in 6.2 - CHANGE ORDER and 6.3 - CHANGE DIRECTIVE.

2.1.4 All instructions and documents issued to the Contractor will be issued by the Contract Administrator or the Owner Representative, as the case may be, and the Contractor shall not recognize instructions issued by other Personnel of the Owner or any other

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document issued by other Personnel of the Owner as amending, supplementing or clarifying the Agreement.

#### **2.2 ROLE OF THE CONTRACT ADMINISTRATOR**

- 2.2.1 The Contract Administrator will provide administration of the Agreement as described in the Agreement. The Contract Administrator may be a third party, including an architect or engineer or other consultant, or a Personnel of the Owner.
- 2.2.2 The Contract Administrator will visit the Site at intervals appropriate to the progress of construction to become familiar with the progress and quality of the Work and to determine if the Work is proceeding in general conformity with the Agreement.
- 2.2.3 If the Owner and the Contract Administrator agree, the Contract Administrator will provide at the Site, one or more project representatives to assist in carrying out the Contract Administrator's responsibilities.
- 2.2.4 The Contract Administrator will promptly inform the Owner of the date of receipt of Proper Invoices as provided in 4.9 - PROGRESS PAYMENT.
- 2.2.5 The Contract Administrator will review the Work for its conformity with the Agreement and record the necessary data to establish payment quantities under the schedule of quantities and Unit Prices for Unit Price Work or to assess the value of the Work completed in the case of Fixed Price Work. Based on such records and the Contract Administrator's evaluation of the Proper Invoices, the Contract Administrator will determine the amounts owing to the Contractor under the Agreement and will issue certificates for payment as provided in 4.5.3. CONTRACT PRICE AND PAYMENT.
- 2.2.6 The Contract Administrator will not be responsible for and will not have control, charge or supervision of construction means, methods, techniques, sequences, or procedures, or for health and safety precautions and programs required in connection with the Work in accordance with the applicable health and safety Laws or general construction practice. The Contract Administrator will not be responsible for the Contractor's failure to carry out the Work in accordance with the Agreement. The Contract Administrator will not have control over, charge of or be responsible for the acts or omissions of the Contractor Parties performing portions of the Work.
- 2.2.7 The Contract Administrator will be, in the first instance, the interpreter of the requirements of the Agreement.
- 2.2.8 Matters in question relating to the performance of the Work or the interpretation of the Agreement shall be initially referred in writing to the Contract Administrator by the party raising the question for interpretations and findings and copied to the other party.
- 2.2.9 Interpretations and findings of the Contract Administrator shall be consistent with the intent of the Agreement. In making such interpretations and findings, the Contract Administrator will not show partiality to either the Owner or the Contractor.

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- 2.2.10 The Contract Administrator’s interpretations and findings will be given in writing to the parties within a reasonable time and shall be subject to either party’s right to dispute such interpretations and findings in accordance with 11. DISPUTE RESOLUTION.
- 2.2.11 The Contract Administrator will investigate all Claim Notices made by the Contractor pursuant to 6.7 - CLAIMS PROCEDURE and will make findings as set out in 6.7 - CLAIMS PROCEDURE and issue appropriate instructions.
- 2.2.12 During the progress of the Work the Contract Administrator will provide Supplemental Instructions to the Contractor with reasonable promptness or in accordance with a schedule for such Supplemental Instructions agreed to by the Contract Administrator and the Contractor.
- 2.2.13 The Contract Administrator will review and take appropriate action upon Shop Drawings, samples and other Contractor’s Submittals and submissions, in accordance with the Agreement.
- 2.2.14 The Contract Administrator will prepare Change Orders and Change Directives as provided in 6.2 - CHANGE ORDER and 6.3 - CHANGE DIRECTIVE. For clarity, Change Directives must be signed by the Owner and Change Orders must be signed by both the Owner and the Contractor.
- 2.2.15 The Contract Administrator and the Contractor will jointly conduct reviews of the Work to determine the date of Substantial Performance of the Work and Total Performance of the Work as provided in 4.10 - SUBSTANTIAL PERFORMANCE OF THE WORK and 4.12 - PAYMENTS UPON TOTAL PERFORMANCE OF THE WORK, respectively.
- 2.2.16 All certificates issued by the Contract Administrator will be to the best of the Contract Administrator’s knowledge, information and belief. By issuing any certificate, the Contract Administrator does not guarantee the Work is correct or complete.
- 2.2.17 The Contract Administrator will receive and review written warranties and related documents required by the Agreement and provided by the Contractor.
- 2.2.18 If the Contract Administrator observes that any Personnel of the Contractor, Subcontractors, Suppliers or Sub-subcontractors is potentially incompetent, disorderly or a detriment to the Project, then the Contract Administrator shall provide Notice in Writing to the Contractor and the Contractor, at the Contractor’s cost and without any extension of the Contract Time, shall, in accordance with its obligations under the Agreement, immediately remove such Personnel from the Site if the Contractor determines that such Personnel should be immediately removed from the Site. If such Personnel is removed, the Contractor, at the Contractor's cost and without any extension of the Contract Time, shall provide replacement Personnel acceptable to the Contract Administrator. Such incompetent, disorderly or detrimental Personnel shall not return to the Site without the prior written consent of the Contract Administrator.
- 2.2.19 The Contract Administrator shall have the authority to temporarily suspend the Work for such reasonable time as may be necessary, for the following reasons:

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- .1 for the Contractor to remedy its non-compliance with the provisions of the Agreement;
- .2 to facilitate the checking of any portion of the Contractor's construction layout;
- .3 to facilitate the inspection of any portion of the Work by the Contract Administrator.

The Contractor shall not be entitled to any increase in the Contract Price or extension of the Contract Time in these circumstances.

### **2.3 REVIEW AND INSPECTION OF THE WORK**

2.3.1 The Owner and the Contract Administrator shall have access to the Work at all times. The Contractor shall provide sufficient, safe and proper facilities and assistance at all times for the review of the Work by the Contract Administrator and Owner and the inspection of the Work by Governmental Authorities and quasi-governmental authorities. If parts of the Work are in preparation at locations other than the Site, the Owner and the Contract Administrator shall be given access to such Work whenever it is in progress.

2.3.2 If tests, inspections or approvals for the Work are required by the Agreement, or by the Contract Administrator's instructions, or by Laws, the Contractor shall give the Contract Administrator no less than three (3) Working Days notification of when the Work will be ready for review and inspection and make available for inspection or testing a sample of any Product. All inspection, sampling, and testing of Products shall be carried out on a random basis in accordance with the standard inspection or testing methods required for the Product. The Contractor shall arrange for and shall give the Contract Administrator reasonable notification of the date and time of inspections by other authorities and shall notify the Contract Administrator of the sources of supply of Products sufficiently in advance of the Product shipping dates to enable the Contract Administrator to perform any required inspection, sampling and testing. The Contractor shall obtain for the Contract Administrator the right to enter onto the premises of the Product manufacturer or supplier to carry out such inspection, sampling and testing. The Owner shall not be responsible for any delays to the performance of the Work where the Contractor fails to give sufficient advance notice to the Contract Administrator to enable the Contract Administrator to carry out the required inspection, sampling and testing.

2.3.3 The Contractor shall furnish promptly to the Contract Administrator, and in no event later than within fourteen (14) Calendar Days after receipt thereof, two copies of certificates and inspection reports relating to the Work prepared by Governmental Authorities and quasi-governmental authorities.

2.3.4 If the Contractor covers, or permits to be covered, Work that has been designated for special tests, inspections or approvals before such special tests, inspections or approvals are made, given or completed, the Contractor shall, if so directed, uncover such Work, have the inspections or tests satisfactorily completed, and make good covering Work at the Contractor's cost and without any extension of the Contract Time.



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- 2.3.5 Subject to GC 2.3.4, the Contract Administrator may order any portion or portions of the Work to be examined to confirm that such Work is in accordance with the requirements of the Agreement. If the Work is not in accordance with the requirements of the Agreement, the Contractor shall correct the Work and pay the cost of examination and correction and without any extension of the Contract Time. If the Work is in accordance with the requirements of the Agreement, the Owner shall pay the cost of examination and restoration.
- 2.3.6 The Contractor shall pay the cost of making any test or inspection whether to be performed by the Contractor, Contract Administrator, Owner, Governmental Authorities or quasi-governmental authorities, including the cost of samples required for such test or inspection, if such test or inspection is required by the Agreement or is required by Laws.
- 2.3.7 If any portion or portions of the Work is found to be Deficient in initial tests or inspections as determined by the Contractor, Owner, Contract Administrator, Governmental Authorities or quasi-governmental authorities, the costs of re-testing and re-inspections shall be borne by the Contractor and with no adjustment in the Contract Price or any extension of the Contract Time.
- 2.3.8 The Contractor shall provide any documentation requested by the Owner, where that documentation relates to any of the Work. The Contractor shall ensure that all such documentation is provided no later than ten (10) Calendar Days following the receipt of any such request.
- 2.3.9 The Contract Administrator and Owner will each have authority to reject any portion of the Work which in the Contract Administrator's or Owner's opinion is Deficient. Whenever the Contract Administrator or Owner considers it necessary or advisable, the Contract Administrator or Owner will have authority to require inspection or testing of Work, whether or not such Work is fabricated, installed or completed.
- 2.3.10 Any review, inspection, comment, acceptance, approval, audit, survey or rejection, or failure to review, inspect, comment, accept, approve, audit, survey or reject, by the Owner or the Contract Administrator of the Work (including Products or any documents prepared by the Contractor, Subcontractors, Suppliers or Sub-subcontractors, in whole or in part) or the issuance of any certificates or the making of any payment by the Owner or the presence of the Owner or the Contract Administrator at the Site or the receipt or taking delivery by the Owner of any Products, shall not:
- .1 constitute acceptance of the Work (including Products) or any Deficiencies or relieve the Contractor of its responsibility therefor;
  - .2 impose on the Owner or the Contract Administrator the responsibility for the sequencing, scheduling or progress of the Work;
  - .3 be deemed to confirm that any schedule is a reasonable plan for providing the Work in accordance with the relevant Construction Schedule;

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- .4 constitute an approval, disapproval, endorsement or confirmation of any Work (including Products or any document prepared by the Contractor, Subcontractors, Suppliers or Sub-subcontractors, in whole or in part) or an acknowledgment by the Owner or the Contract Administrator that any Work (including Products and such documents) satisfies the requirements of the Agreement;
- .5 affect or change the Contractor's obligation to perform the Work in accordance with the Agreement and relieve the Contractor from any liability arising from its failure to properly perform the Work;
- .6 give rise to any duty or responsibility of the Owner or the Contract Administrator to the Contractor Parties performing any of the Work; or
- .7 except as otherwise provided in the Agreement, have the effect of waiving or diminishing any obligation of, or limiting any liability of, the Contractor or of transferring any obligation under the Agreement from the Contractor to the Owner or the Contract Administrator or otherwise have the effect of amending the Agreement.

Any review or approval by the Owner and/or Contract Administrator is intended only to ascertain that the document or the performance of the Contractor's duties, liabilities, responsibilities or obligations under the Agreement including the Work generally meets the intention of the Agreement and is not an assurance or confirmation of the adequacy, quality, fitness, suitability or correctness of the Contractor's obligations, responsibilities, duties and liabilities under the Agreement including the Work, for which the Contractor is solely responsible in accordance with the Agreement.

- 2.3.11 Any Deficiencies arising from Work done by the Contractor without consulting the Contract Administrator or the Owner when the Work required the acceptance of or review with same, or when the Contractor should have sought the acceptance of Contract Administrator or Owner, shall be corrected at the cost of the Contractor (without increase in the Fixed Price or Unit Prices) and without any extension of the Contract Time.

**2.4 EMERGENCY SITUATIONS**

- 2.4.1 If the Contract Administrator or Owner determines, in their sole and absolute discretion, that there is an emergency situation, then the Contract Administrator or Owner, as applicable, may instruct the Contractor to take action to remedy the situation verbally or in writing. If such instruction is verbal, the Contract Administrator or Owner, as applicable, shall provide timely confirmation of such instruction in writing. If the Contractor does not take timely action, or if the Contractor is not available, the Contract Administrator or Owner may direct others to remedy the situation. If the emergency situation is the fault of the Contractor, the remedial Work shall be done at the cost of the Contractor and without any extension of the Contract Time.

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**2.5 DEFICIENCIES**

- 2.5.1 The Contractor shall promptly correct all Deficiencies, including Deficiencies that have been identified by the Contract Administrator and/or Owner, at the Contractor's cost (and with no adjustment in the Fixed Price or Unit Prices) and without any extension of the Contract Time, whether or not the Deficiency has been incorporated in the Work and whether or not the Deficiency is the result of poor workmanship, use of Deficient products or damage through carelessness or other act or omission of a Contractor Personnel, provided that:
- .1 the Contractor shall correct, in a manner acceptable to the Owner or the Contract Administrator, all Deficiencies, whether or not they are specifically identified by the Contract Administrator or Owner; and
  - .2 the Contractor shall prioritize the correction of any Deficiencies which, in the sole discretion of the Owner, adversely affects the work or operations of the Owner or other contractors or there is a risk of bodily injury to any individual or physical loss of or damage to property.
- 2.5.2 The Contractor shall remove rejected Products from the Site expeditiously after the notification to that effect from the Contract Administrator or Owner. Where the Contractor fails to comply with such notice, the Contract Administrator or Owner may cause the rejected Products to be removed from the Site and disposed of in what the Contract Administrator or Owner considers to be the most appropriate manner, and the Contractor shall pay the costs of disposal.
- 2.5.3 The Contractor shall promptly make good damage or destruction to the Owner's or other contractors' work, other property of the Owner, or any other property as a result of Deficiencies or the correction of Deficiencies at the Contractor's cost (and with no adjustment in the Fixed Price or Unit Prices) and without any extension of the Contract Time.
- 2.5.4 If the Contractor fails to promptly carry out the correction of Deficiencies or make good damage or destruction to the Owner's or other contractors' work, other property of the Owner, or any other property as required by this 2.5 – DEFICIENCIES, the Owner may correct the Deficiencies or make good such work or property and hold the Contractor responsible for all costs thereof.
- 2.5.5 If in the opinion of the Contract Administrator or Owner it is not expedient to correct a Deficiency, the Owner may, in accordance with 4.15 – OWNER'S SET-OFF, set-off the greater of (i) the difference in value between the Work as performed and that called for by the Agreement and (ii) the cost to correct such Deficiency. If the Owner and the Contractor do not agree on the difference in value or the cost to correct such Deficiency, they shall refer the matter to the Contract Administrator for determination.
- 2.5.6 No payment by the Owner under the Agreement nor partial or entire use or occupancy of the Work by the Owner shall constitute an acceptance of any portion of the Work (including Products) which is Deficient.

**2.6 CONTRACTOR RECORDS**

- 2.6.1 Prior to the issuance of the final certificate for payment, and thereafter until the later of two (2) years after the end of the Warranty Period, or all Claims in respect of the Agreement being settled, the Contractor shall maintain and keep accurate Contractor Records in respect of Work (including in respect of Fixed Price Work, Construction Equipment, Products, component costs reflecting the taxes and customs duties, including excise taxes and changes in the Work). Without limiting the generality of the foregoing, the Contractor Records shall be of sufficient detail to support the total cost of any Work (other than Fixed Price Work), changes in the Work, Cash Allowances expenditures and taxes and duties. For Fixed Price Work, the Contractor Records shall be of sufficient detail for the Owner to ascertain the Contractor's compliance with the Fair Wage Policy, if any.
- 2.6.2 The Contractor shall cause the Subcontractors, Suppliers and Sub-subcontractors, to:
- .1 maintain and keep accurate Contractor Records in respect of all items for which the Contractor is required by the Agreement to maintain and keep Contractor Records; and
  - .2 allow the Owner to inspect and audit such Contractor Records, for the same period of time.
- 2.6.3 Without limiting the generality of 12.3, the Owner may inspect and audit the Contractor Records at any time during the period in which the Contractor is required to maintain and keep such Contractor Records. The Contractor shall, at its cost, supply certified copies (and notarized if maintained outside of Ontario) of any part of the Contractor Records required whenever requested by the Owner.

**3. EXECUTION OF THE WORK**

**3.1 CONTROL AND COMMENCEMENT OF THE WORK**

- 3.1.1 The Contractor shall, and shall cause the Subcontractors, Suppliers and Sub-subcontractors to, perform the Work in accordance with the Agreement and comply with the Agreement. The Contractor shall have total control of the Work and shall effectively direct and supervise the Work so as to ensure conformity with the Agreement.
- 3.1.2 The Contractor shall be solely responsible for construction means, methods, techniques, sequences, and procedures and for co-ordinating the various parts of the Work under the Agreement, even if such means, methods, techniques, sequences or procedures are set out in the Owner Prepared Documents.
- 3.1.3 The Contractor shall not enter upon or occupy any property of a third party for any purpose, unless the Contractor has received prior written permission from the property owner.
- 3.1.4 Except for such Work as may be required by the Contract Administrator to maintain the Work in a safe and satisfactory condition or as otherwise expressly allowed by the

## **Construction Agreement**

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Agreement, the Contractor shall not carry on Work at the Site on Calendar Days other than Working Days without permission in writing from the Contract Administrator.

- 3.1.5 The Contractor shall, at all times and as part of the Work, fully assist, co-operate, consult and co-ordinate with the Contract Administrator, the Owner Representative and any other Persons retained or identified by the Owner which are related to or connected with the Project or performing work at or near the Site. The objective of such assistance, co-operation, consultation and co-ordination is to make certain the Work is properly co-ordinated with and integrated with the work, services and operations of such entities.
- 3.1.6 The Contractor shall not commence the Work or deliver anything to the Site prior to the Commencement Date. If no date is set out for the Commencement Date in row C.2 of the Information Sheet, the Owner shall be entitled to issue a Notice in Writing to the Contractor directing the Contractor to commence the performance of the Work on the date described therein.

### **3.2 SUPPLEMENTAL INSTRUCTIONS**

- 3.2.1 The Contract Administrator may, during the progress of the Work, issue Supplemental Instructions, which shall be deemed incorporated into and forming part of the Agreement. Supplemental Instructions shall only be issued by the Contract Administrator.
- 3.2.2 Upon receipt of a Supplemental Instruction, the Contractor shall immediately proceed to perform the Work in accordance with such Supplemental Instruction and otherwise in accordance with the Agreement, unless the Contractor is of the opinion that such Supplemental Instructions require a change in the Contract Price and/or extension of the Contract Time, in which case the Contractor shall proceed in accordance with GC 3.2.3.
- 3.2.3 If the Contractor, after receiving Supplemental Instructions, is of an opinion that such Supplemental Instructions require a change in the Contract Price and/or extension of the Contract Time, then the Contractor shall promptly notify the Owner and Contract Administrator of such and submit a Claim Notice in accordance with the requirements of 6.7 - CLAIMS PROCEDURE. The Contractor shall not proceed with the Work in respect of such Supplemental Instruction until it has received further instruction from the Contract Administrator. If, pursuant to 6.7 - CLAIMS PROCEDURE it is subsequently determined that the Claim Notice in respect of such Supplemental Instructions is valid, then such determination shall be reflected in a Change Directive issued pursuant to 6.3 – CHANGE DIRECTIVE.

**3.3 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS**

- 3.3.1 The Owner reserves the right to award separate contracts in connection with other parts of the Project to other contractors and to perform work with its Personnel. Such work by other contractors or Owner's Personnel may include utility relocation and surveying, testing, sampling and quality assurance estimates prior to, and possibly during, the Work.
- 3.3.2 Subject to and without limitation to 4.2 – HEALTH AND SAFETY, when separate contracts are awarded for other parts of the Project, or when work is performed by the Owner's Personnel, the Contractor shall:
- .1 co-ordinate, schedule and sequence the activities and work of other contractors and Owner's Personnel on the Project with the Work; and
  - .2 promptly report to the Contract Administrator in writing, and in no event later than within five (5) Working Days of discovery thereof, any apparent deficiencies in the work of other contractors or of the Owner's Personnel, where such work affects the proper execution of any portion of the Work, prior to proceeding with that portion of the Work. Failure by the Contractor to so report shall invalidate any Claims against the Owner by reason of deficiencies in the work of other contractors or Owner's Personnel except those deficiencies not then reasonably discoverable,
- 3.3.3 Where the Agreement identifies work to be performed by other contractors or the Owner's Personnel, the Contractor shall co-ordinate the Construction Schedule (and access to the Site) with the work of other contractors and the Owner's Personnel so as to mitigate the risk of delay and disruption under the Agreement and for the other contractors and the Owner's Personnel.
- 3.3.4 Disputes and other matters in question between the Contractor and other contractors shall be dealt with as provided in 11. DISPUTE RESOLUTION provided the other contractors have reciprocal obligations. The Contractor shall be deemed to have consented to arbitration of any dispute with any other contractor whose contract with the Owner contains a similar agreement to arbitrate.
- 3.3.5 Notwithstanding that the Owner may award separate contracts in connection with other parts of the Project to other contractors and perform work with its Personnel, the performance of such work or connection of such work onto the Work, by the Owner's Personnel or by other contractors, will not limit or relieve the Contractor of its obligations and responsibilities under the Agreement (including warranty) unless a Deficiency has been created by the Owner's Personnel or Owner's other contractors.
- 3.3.6 When requested in writing by the Contract Administrator or Owner, the Contractor shall stop Work on the Project so as to avoid interference with work being performed at adjacent or impacted construction projects of the Owner that are unrelated to the Project. The Contractor shall not be entitled to an extension of the Contract Time or to an increase in the Contract Price unless, and only to the extent, the event which caused the cessation of the Work would entitle the Contractor to an extension of the

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Contract Time or the reimbursement of the Contractor's Losses as provided in GC 6.5.1, 6.5.2 or 6.5.3.

#### **3.4 TEMPORARY WORK**

3.4.1 The Contractor shall have the sole responsibility for the design, erection, operation, maintenance, removal and repair of Temporary Work.

3.4.2 The Contractor shall engage and pay for registered professional engineering Personnel skilled in the appropriate disciplines to perform those functions referred to in GC 3.4.1 where required by Laws or by the Agreement and in all cases where such Temporary Work is of such a nature that professional engineering skill is required or prudent to produce safe and satisfactory results.

3.4.3 Notwithstanding the provisions of 3.1 - CONTROL OF THE WORK, GC 3.4.1 and 3.4.2 or provisions to the contrary elsewhere in the Agreement, but subject to 3.6 – DOCUMENT REVIEW, where the Agreement includes designs for Temporary Work:

- .1 such designs shall be considered to be part of the design of the Work and the Contractor shall not be held responsible for that part of the design; and
- .2 the Contractor shall, however, be responsible for the execution of such design in the same manner as for the execution of the Work.

3.4.4 2.3 - REVIEW AND INSPECTION OF THE WORK and the requirements for Shop Drawings in 3.11 – SHOP DRAWINGS also apply to the Temporary Work.

#### **3.5 CONSTRUCTION SCHEDULE**

3.5.1 The Contractor shall:

- .1 prepare and submit to the Owner and the Contract Administrator within seven (7) Calendar Days from the Commencement Date, unless otherwise stipulated elsewhere in the Agreement or agreed to by the Contract Administrator, a construction schedule for their review and acceptance that indicates the timing of the major activities of the Work and provides sufficient detail of the critical events and their inter-relationship to demonstrate the Work shall be performed in conformity with the Contract Time. The construction schedule shall:
  - (1) take into account the phasing and sequencing of construction and the completion dates contained in the Agreement or as otherwise required by the Contract Administrator or the Owner;
  - (2) include and conform to the Key Work Milestones or any other milestones for the performance of the Work set out in the Agreement;
  - (3) be of a computerised type and provided in both electronic format and hard copy;

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- (4) show the Project critical path and the critical path must be identified in a contrasting colour (red) from the other activities;
- (5) clearly show, in weekly intervals, the logic and timing of major activities, proposed start dates and estimated duration for activities; and
- (6) have a level of detail sufficient to identify the Contractor and each specific Subcontractor and their respective parts of the Work and the specific location thereof.

Once approved by the Owner and the Contract Administrator, the construction schedule submitted by the Contractor under this GC 3.5.1.1, as updated by the Contractor and approved by the Owner and Contract Administrator, shall become the “**Construction Schedule**”. The Construction Schedule (and any approved updates) shall be the benchmark against which the progress of the Work is to be measured for the purposes of the Agreement;

- .2 monitor the progress of the Work relative to the Construction Schedule;
- .3 maintain a Current Schedule and update the Current Schedule every two (2) weeks, unless otherwise stipulated elsewhere in the Agreement or agreed to by the Contract Administrator, and provide the updated Current Schedule to the Owner and Contract Administrator. For clarity, the Current Schedule shall be used for information purposes only;
- .4 advise the Contract Administrator of any revisions required to the Construction Schedule as the result of extensions of the Contract Time as provided in 6.CHANGES IN THE WORK and provide the Owner and Contract Administrator for approval, an updated Construction Schedule reflecting such extensions; and
- .5 perform the Work in accordance with the Construction Schedule including the Key Work Milestones.

3.5.2 If the Contractor fails to submit the initial or any updated Construction Schedule satisfactory to the Contract Administrator, the Owner shall be entitled to withhold or delay payments under the Agreement until the Contractor complies with the requirements of GC 3.5.1.

### 3.6 DOCUMENT REVIEW AND EXAMINATION OF SITE

3.6.1 The Contractor shall review the Agreement in accordance with the Standard of Care. The Contractor shall report to the Contract Administrator, no later than three (3) Working Days after discovery by the Contractor, any error, inconsistency or omission the Contractor may discover. The Contractor shall not be liable for Losses resulting from errors, inconsistencies or omissions in the Agreement, which the Contractor did not discover, provided that the Contractor exercised such Standard of Care. The Contractor shall be liable and responsible for Losses (and without any extension of the Contract Time) resulting from errors, inconsistencies or omissions in the Agreement if it recognizes, or should have recognized, exercising such Standard of Care, such errors, inconsistencies or omissions, yet fails to raise such errors,



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inconsistencies or omissions to the Contract Administrator's attention prior to performing the affected portion of the Work.

- 3.6.2 If the Contractor does discover any error, inconsistency or omission in the Agreement or has any doubt as to the meaning or intent of any part thereof, the Contractor shall not proceed with the Work affected until the Contractor has reported to the Contract Administrator and received corrected or missing information, instructions or explanations from the Contract Administrator in writing. The Contractor shall comply with such information, instructions or explanations. The Contractor shall cooperate in good faith with the Owner and the Contract Administrator to resolve any error, omission or inconsistency in the Agreement in a manner that will not result in increased cost to the Owner or any extension of the Contract Time.
- 3.6.3 The Owner makes no representation, warranty or guarantee about the accuracy, completeness, feasibility or any other aspect of the documents or information provided by the Owner including interpretations of data or opinions expressed in any subsurface report or geotechnical report. Accordingly, the Contractor shall review and otherwise deal with such documents or information in accordance with the requirements of GC 3.6.1 and 3.6.2.
- 3.6.4 Without limitation to any specific obligations in the Drawings and Specifications in respect of the examination of the Site and surrounding area, the Contractor represents and warrants that in entering into the Agreement with the Owner and acting in accordance with the Standard of Care, it has examined the Site and surrounding area and it has satisfied itself as to the scope and character of the Work, all conditions and information affecting the Work, including the nature of the Work and the Site, access to the Site and weather conditions or that, not having acted in such a manner, the Contractor has assumed and does hereby assume all risk of conditions now existing or arising in the course of the Work which might or could make the Work more expensive or more onerous to fulfil and which a contractor acting in accordance with the Standard of Care would have discovered. The cost and time of all conditions referred to in this GC 3.6.4 form part of the Fixed Price and Unit Prices and the Contract Time and shall not be the basis for an increase in the Fixed Price or Unit Prices or any extension of the Contract Time.

## **3.7 SUPERVISION**

- 3.7.1 The Contractor shall provide all necessary supervision.
- 3.7.2 The Contractor shall:
- .1 furnish competent and adequate Personnel, who shall be in attendance at the Site at all times, as necessary, for the proper administration, co-ordination, supervision and superintendence of the Work;
  - .2 organize the procurement of all Products and Construction Equipment so that they will be available in advance of the time they are needed for the Work; and
  - .3 keep an adequate force of skilled Personnel on the job to complete the Work in accordance with all requirements of the Agreement.

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- 3.7.3 Prior to commencement of the Work, unless otherwise stipulated elsewhere in the Agreement or agreed to by the Contract Administrator, the Contractor shall select a competent and experienced:
- .1 Project manager (the “**Contractor Project Manager**”) who shall:
    - (1) be in attendance at the Site or otherwise engaged in the Work at all times, or for such other period of attendance as required by the Agreement including the Specifications;
    - (2) have full responsibility for the prosecution of the Work, with full authority to act in all matters as may be necessary for the proper co-ordination, supervision, direction and technical administration of the Work;
    - (3) attend site meetings in order to render reports on the progress of the Work; and
    - (4) have authority to bind the Contractor in all matters related to the Agreement; and
  - .2 supervisor of the Site (the “**Contractor Site Supervisor**”) who shall be in attendance at the Site at all times while Work is being performed, or for such other period of attendance as required by the Agreement including the Specifications and shall have full responsibility for the day to day field supervision and superintendence of the Work.
- 3.7.4 The Contractor Project Manager and the Contractor Site Supervisor, if applicable:
- .1 shall represent the Contractor at the Site; and
  - .2 may be the same individual if specified as such in the Specifications.
- 3.7.5 Information, notices and instructions given to the Contractor Project Manager and/or the Contractor Site Supervisor, if applicable, shall be deemed to have been received by the Contractor, other than notices that are required to be delivered in accordance with 1.6 - RECEIPT OF AND ADDRESSES FOR NOTICES AND DOCUMENTATION.
- 3.7.6 At the request of the Owner, the Contractor shall supply complete information including written job-specific qualification records for any Personnel of the Contractor, Subcontractors, Suppliers or Sub-subcontractors. Such records will detail the activities that each such Personnel has been trained and qualified to perform.
- 3.7.7 If the Owner observes that any Personnel of the Contractor, Subcontractors, suppliers or Sub-subcontractors is potentially incompetent, disorderly or a detriment to the Project, then the Owner shall provide Notice in Writing to the Contractor and the Contractor, at the Contractor's cost and without any extension of the Contract Time, shall, in accordance with its obligations under the Agreement, immediately remove such Personnel from the Site if the Contractor determines that such Personnel should be immediately removed from the Site. If such Personnel is

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removed, the Contractor, at the Contractor's cost and without any extension of the Contract Time, shall provide replacement Personnel acceptable to the Owner. Such incompetent, disorderly or detrimental Personnel shall not return to the Site without the prior written consent of the Owner or Contract Administrator.

3.7.8 Without limiting the obligations of the Contractor described in 3.3 – CONSTRUCTION BY OWNER OR OTHER CONTRACTORS and 4.2 – HEALTH AND SAFETY, if the Owner or Contract Administrator observes that any Personnel of the Contractor, Subcontractors, Suppliers or Sub-subcontractors poses an imminent risk to the health and safety of other persons, then the Owner or Contract Administrator can require the Contractor to immediately remove such Personnel from the Site at the Contractor's cost and without any extension of the Contract Time, and in accordance with its obligations under the Agreement. The Contractor, at the Contractor's cost and without any extension of the Contract Time, shall provide replacement Personnel acceptable to the Owner. The Personnel that posed an imminent risk to the health and safety of other persons shall not return to the Site without the prior written consent of the Owner or Contract Administrator.

3.7.9 The Contractor shall provide the Owner and the Contract Administrator with the names, work addresses and mobile telephone numbers of the Contractor Project Manager, the Contractor Site Supervisor and other responsible field Personnel who may be contacted for emergency and other reasons during non-working hours and update as necessary.

**3.8 SUBCONTRACTORS AND SUPPLIERS**

3.8.1 The Contractor may, subject to this 3.8 – SUBCONTRACTORS AND SUPPLIERS, subcontract portions of the Work, which shall not exceed the portion set out in row E.2 of the Information Sheet, to Subcontractors and Suppliers. The Contractor shall, and shall cause the Subcontractors, Suppliers and Sub-subcontractors to, perform the Work in accordance with the Agreement. The Contractor shall be fully responsible to the Owner for the Subcontractors', Suppliers' and Sub-subcontractors' failure to abide by the obligations of the Agreement.

3.8.2 The Contractor shall preserve and protect the rights of the parties under the Agreement with respect to the portion of the Work to be performed under subcontract, and shall:

- .1 enter into subcontracts with Subcontractors and Suppliers to require them to perform their portion of the Work as provided in the Agreement;
- .2 provide the Owner or Contract Administrator with a redacted copy of any subcontract with a Subcontractor or Supplier, and all applicable amendments and changes, promptly upon request of the Owner, and in no event later than within five (5) Working Days of such request.
- .3 incorporate, or cause to be incorporated, into all subcontracts with Subcontractors and Suppliers the terms and conditions of the Agreement, including:

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- (1) the contract number set out on the cover page of the Agreement and Project description set out in row A.1 of the Information Sheet;
  - (2) 8.3 – WARRANTY, GC 12.2.4 and Schedule F - Owner Policies, Procedures, By-Laws and Other Requirements;
  - (3) a provision requiring the Subcontractor or Supplier to provide adequate notice to the Contractor in order for the Contractor to fulfill its obligations under GC 11.2.16. For clarity, such provision shall include a requirement that the Subcontractor or Supplier include a similar provision in all its subcontracts with Sub-subcontractors and all such Sub-subcontractors to include a similar provision in all their subcontracts with their Sub-subcontractors and so on within every tier of the construction pyramid; and
  - (4) a provision that permits the Contractor's interest in the subcontract to be immediately assigned, at the same price and in the Owner's sole and absolute discretion, to the Owner or the Owner's designee upon Notice in Writing thereof given by the Owner to both Contractor and Subcontractor or Supplier, as the case may be, for nominal consideration of \$5.00, provided, however, that until the Owner has given such Notice in Writing, nothing herein contained shall be deemed to create any contractual or other liability upon the Owner for the performance of obligations under such subcontracts and the Contractor shall be fully responsible and liable for all of its obligations and liabilities (if any) under such subcontracts; and
- .4 have control over, charge of, and be fully responsible to the Owner for, the acts and omissions of Subcontractors, Suppliers and their Personnel and for the acts and omissions of Personnel of the Contractor even if such Subcontractor or Supplier was approved or selected by the Owner.
- 3.8.3 Unless expressly stated otherwise in row A.6 of the Information Sheet, the Contractor may only use the Subcontractors and Suppliers identified in row A.6 of the Information Sheet for the specific portion of the Work which they are identified as performing for the Project. Contractor shall not:
- .1 change any of such identified Subcontractors or Supplier or let any subcontracts for the performance of the Work to Subcontractors and Suppliers that have not been identified in row A.6 of the Information Sheet;
  - .2 use a Subcontractor or Supplier to perform Work which has not been identified in row A.6 of the Information Sheet as being performed by such Subcontractor or Supplier,
- without the prior written approval of the Owner. The Owner shall be entitled to a minimum of ten (10) Working Days to review and approve any such request for approval by the Contractor. Without limiting the generality of the factors or criteria which the Owner and Contract Administrator may consider during such review and approval process, the Owner shall be entitled to consider the proposed Subcontractor's or Supplier's compliance with the Owner's Policies, Procedures and By-laws. Any approved replacement of a Subcontractor or Supplier shall be made

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with no increase in the Contract Price and extension of the Contract Time and any costs incurred by the Owner for the services of the Contract Administrator in reviewing such proposed replacement shall be borne by the Contractor.

- 3.8.4 The Owner's consent to subcontracting by the Contractor shall not be construed as relieving the Contractor from any obligation under the Agreement and shall not impose any liability on the Owner.
- 3.8.5 The Owner, through the Contract Administrator, may provide to a Subcontractor, Supplier and Sub-subcontractor information as to the percentage of the Subcontractor's or Supplier's Work which has been certified for payment.
- 3.8.6 The Contractor shall pay the Subcontractors and Suppliers on a timely basis in accordance with the terms of their respective subcontracts and applicable Laws.

### **3.9 LABOUR AND PRODUCTS**

- 3.9.1 The Contractor shall provide and pay for labour, Products, Construction Equipment, water, heat, light, power, transportation, and other facilities and services necessary for the performance of the Work in accordance with the Agreement. Without limiting the generality of the foregoing, the Contractor shall pay its Personnel, and shall cause the Subcontractors and Suppliers to pay their Personnel, performing the Work, in accordance with the labour related provisions set out in the Agreement and at intervals no less than those required by such Personnel's employment or labour agreements.
- 3.9.2 The Contractor covenants and agrees that the Work, including all Products and components thereof, shall conform to the Agreement in all respects, and, unless otherwise specified in the Agreement, shall be of merchantable quality and fit for their intended purpose as described in the Contract Documents and shall be new and free from Deficiencies. Products which are not specified shall be of a quality consistent with those specified and the use of such Products shall be subject to the acceptance of the Contract Administrator or Owner. This GC 3.9.2 shall be in addition to and not in limitation of any other right or remedy granted by the Agreement or otherwise available to the Owner.
- 3.9.3 Title to the Work including the Products (and each portion thereof) shall pass to the Owner immediately upon payment therefore (subject to applicable holdback that is not then due) or upon incorporation of the Products into the Work at the Site, whichever first occurs, free and clear of all liens, charges and encumbrances (subject to any rights or remedies provided by the Construction Act, if applicable). Notwithstanding any transfer of title to the Work or any portion thereof to the Owner, the Contractor shall be responsible for and bear the risk of Loss with respect to the Work (including Products delivered to the Site, whether or not incorporated into the Work) until the date of Total Performance of the Work. Title to Owner Supplied Material shall remain with the Owner at all times.

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#### 3.9.4 Substitutions

- .1 The Contractor shall not substitute any Product without the prior written approval of the Contract Administrator and the Owner.
- .2 Where the Agreement requires the Contractor to supply a Product, the Contractor may apply to the Contract Administrator to propose a substitution for such Product (“**Substitution**”) that equals or exceeds the quality, suitability, reliability, durability and performance of the Product designated in the Agreement. The application by the Contractor to the Contract Administrator for a Substitution shall be:
  - (1) in writing and include complete data as to the quality, suitability, reliability, durability, performance and projected cost or cost savings of the Substitution, impact on the Construction Schedule and such other information as the Contract Administrator may require; and
  - (2) made in such time as to ensure that the review and approval process by the Contract Administrator and the Owner shall not adversely impact the Construction Schedule.

The burden of proving the quality, suitability, reliability, durability and performance of a Substitution shall be upon the Contractor.

- .3 The approval or rejection of a Substitution shall be made at the sole and absolute discretion of the Contract Administrator and the Owner. Notwithstanding the foregoing, the Contractor shall not be entitled to any increase in Contract Price or extension of the Contract Time as a result of the review, approval or rejection of a Substitution by the Contract Administrator or the Owner.
- .4 Approval of a Substitution will only be for the specific circumstances set out in the application and shall not change or modify any other requirement contained in the Agreement or establish approval for the Substitution to be used in any other portion of the Work that is unrelated to the subject approval.

3.9.5 All surplus Products which have not been used in the performance of the Work shall be removed from the Site when notified in writing to do so by the Contract Administrator. The cost for such surplus Products shall be credited to the Fixed Price or Total Price of Unit Price Work under the Proper Invoice submitted pursuant to GC 4.12.1.1, to the extent the Owner has paid for such surplus Products.

3.9.6 The cost of overtime Work (including overtime rates):

- .1 required beyond the normal working day at the Site (as may be described in the Specifications) to complete individual construction operations of a continuous nature in respect of Fixed Price Work or Unit Price Work, such as pouring or finishing of concrete or similar Work; or

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- .2 in respect of Fixed Price Work or Unit Price Work that the Contractor elects to perform without the Owner or the Contract Administrator requesting such overtime Work; or
- .3 except as expressly provided for in the Specifications as a part of the Contract Price,

shall not be chargeable to the Owner and shall be at the cost of the Contractor and without adjustment in the Fixed Price or Unit Prices.

- 3.9.7 The Contractor shall maintain good order and discipline among the Contractor Parties engaged on the Work and shall not employ on the Work anyone not skilled in the tasks assigned.

### 3.10 DOCUMENTS AT THE SITE

- 3.10.1 The Contractor shall control, store and retain copies (one of which must be in hardcopy) of the Agreement, Submittals, reports, and records of meetings at the Site, in good order and readily available to the Owner and the Contract Administrator. Upon the request of the Owner, the Contractor shall provide hard copies and electronic copies of all the foregoing documents to the Owner, at the Owner's cost, except to the extent the delivery of such document already forms part of the Fixed Price Work.

- 3.10.2 The Contractor shall accurately and continuously note on the Drawings and Specifications kept by the Contractor at the Site, (1) all approved changes and deviations made during the Work which differ from that shown or specified in the Agreement and reviewed Shop Drawings indicating, in a neat, accurate and legible manner the Work as actually installed; (2) the exact location and detail of buried, embedded or concealed as-built conditions and all other as-built conditions of the Work (including the location of all asbestos abatement Work dealing with such matters as floor tiles and pipe insulation); and (3) the exact location and detail of Work installed on a "field run" basis (collectively, the "**As-Built Drawings**"). If any Work is performed otherwise than as shown in the Agreement, the Contractor shall note on such As-Built Drawings the Work as installed, including with respect to the mechanical, electrical and fire protection Work. The As-Built Drawings shall be made available for review by the Owner and the Contract Administrator at all times. The Contractor shall deliver the As-Built Drawings to the Owner on or before Substantial Performance of the Work, in the following format: (A) one complete set of reproducible final versions; and (B) one complete set stored on the latest edition of AutoCAD or such other format required by the Owner.

### 3.11 SHOP DRAWINGS

- 3.11.1 The Contractor shall provide Shop Drawings if required by the Agreement or as the Contract Administrator may reasonably request. The Shop Drawings shall meet the requirements of the Agreement (including this 3.11, unless otherwise stipulated elsewhere in the Agreement or agreed to by the Contract Administrator) and the Contractor shall carry out the Work in accordance with Shop Drawings which meet such requirements. The Contractor shall not perform any portion of the Work covered

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- by or affected by Shop Drawings until the Contract Administrator has completed its review of such Shop Drawings for construction in accordance with the procedure referred to in the Agreement.
- 3.11.2 The Contractor shall provide Shop Drawings to the Contract Administrator to review in orderly sequence and sufficiently in advance so as to cause no delay in the Work or in the work of other contractors.
- 3.11.3 Upon request of the Contractor or the Contract Administrator, they shall jointly prepare a schedule of the dates for provision, review and return of Shop Drawings.
- 3.11.4 The Contractor shall provide Shop Drawings in the form specified, or if not specified, as directed by the Contract Administrator.
- 3.11.5 Shop Drawings provided by the Contractor to the Contract Administrator shall indicate by stamp, date and signature of the Person responsible for the review that the Contractor has reviewed each one of them.
- 3.11.6 The Contract Administrator's review is for conformity to the design concept and for general arrangement only and shall not relieve the Contractor of responsibility for errors or omissions in the Shop Drawings or for meeting all requirements of the Agreement.
- 3.11.7 Shop Drawings which require approval of any legally constituted authority having jurisdiction shall be provided to such authority by the Contractor for approval.
- 3.11.8 The Contractor shall review all Shop Drawings before providing them to the Contract Administrator. The Contractor represents by this review that:
- .1 the Contractor has determined and verified all applicable field measurements, field construction conditions, Product and Owner Supplied Material requirements, catalogue numbers and similar data, or will do so, and
  - .2 the Contractor has checked and co-ordinated each Shop Drawing with the requirements of the Work and of the Agreement.
- 3.11.9 At the time of providing Shop Drawings, the Contractor shall expressly advise the Contract Administrator in writing of any deviations in a Shop Drawing from the requirements of the Agreement. The Contract Administrator shall indicate the acceptance or rejection of such deviation expressly in writing.
- 3.11.10 The Contractor shall provide revised Shop Drawings to correct those which the Contract Administrator rejects as inconsistent with the Agreement, unless otherwise directed by the Contract Administrator. The Contractor shall notify the Contract Administrator in writing of any revisions to the Shop Drawings other than those requested by the Contract Administrator.
- 3.11.11 The Contract Administrator shall review and return Shop Drawings in accordance with the schedule agreed upon, or, in the absence of such schedule, with reasonable promptness so as to cause no delay in the performance of the Work.



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3.11.12 The Contractor shall provide the Owner with a "specification compliance report" from the manufacture or Supplier of each item of equipment forming part of the Products. The specification compliance report shall provide details which demonstrate that all applicable requirements of the Drawings and Specifications have been satisfied. Any deviations from such requirements must be addressed in the specification compliance report to the satisfaction of the Owner, as confirmed by the Owner. For clarity, any deviation set out in the specification compliance report is not accepted by the Owner, except to the extent such acceptance has been confirmed in writing by the Owner.

### **3.12 USE OF THE WORK**

3.12.1 The Contractor shall confine Construction Equipment, Temporary Work, storage of Products, Owner Supplied Material, waste products and debris, and operations of Contractor Parties to limits indicated by Laws or the Agreement and shall not unreasonably encumber the Site. All Products and Owner Supplied Equipment shall be stored under suitable conditions to prevent damage, deterioration, and contamination.

3.12.2 The Contractor shall not load or permit to be loaded any part of the Work or any part of the Site with a weight or force that shall or could be considered to endanger the safety or integrity of the Work or any part of the Site, individuals and the area adjacent to the Site.

### **3.13 STANDARD OF CARE, QUALITY ASSURANCE AND QUALITY CONTROL**

3.13.1 In performing the Work, the Contractor shall exercise a standard of care, skill and diligence that would normally be provided by an experienced, qualified and prudent contractor supplying similar work for similar projects ("**Standard of Care**"). The Contractor acknowledges and agrees that throughout the term of the Agreement, the Contractor's obligations, duties and responsibilities shall be interpreted in accordance with the Standard of Care. The Contractor shall exercise the Standard of Care in respect of any Products and Personnel which it may recommend to the Owner.

3.13.2 If required by the Specifications, the Contractor shall develop and maintain a quality assurance and quality control plan ("**QA/QC Plan**"), in accordance with the Specifications, to ensure that the Work, including the performance of the Work is in accordance with the Agreement.

3.13.3 As of the Effective Date, the Contractor represents and warrants that there are no pending, threatened or anticipated Claims that would have a material effect on the financial ability of the Contractor to perform the Work. The Contractor shall immediately notify the Owner of any such Claims that arise after the Effective Date and shall take all necessary and prudent steps to remedy or resolve such Claims to ensure that the performance of the Work is unaffected.

### **3.14 USE AND OCCUPANCY OF THE WORK PRIOR TO SUBSTANTIAL PERFORMANCE OF THE WORK**

3.14.1 Without limitation to any other right of the Owner in the Agreement, the Owner shall, at any and all times, have the right to enter, occupy and use the Work or any part

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thereof prior to Substantial Performance of the Work if such entry and occupancy does not materially interfere with the Contractor's performance and the completion of the Work within the Contract Time. Should the Owner wish to use or occupy part or all of the Work prior to Substantial Performance of the Work, the Owner shall give thirty (30) Calendar Days' Notice in Writing to the Contractor of the intended purpose and extent of such use or occupancy.

3.14.2 If the Owner exercises the right of occupancy and/or use of the Work in accordance with GC 3.14.1, it agrees to do so in a manner that does not materially interfere with the Contractor's performance and the completion of the Work within the Contract Time and with the understanding that the Owner will be occupying premises within a construction site which will require compliance with all normal construction site requirements including health and safety requirements.

3.14.3 The use or occupancy of the Work or any part thereof by the Owner prior to Substantial Performance of the Work shall not constitute an acceptance of the Work or parts so occupied. Such use or occupancy of the Work shall not:

- .1 relieve or limit the Contractor or its surety from any responsibilities under the Agreement or liability that has arisen, or may arise, from the performance of the Work;
- .2 waive the Owner's right to charge the Contractor liquidated damages (including Delay Liquidated Damages) in accordance with the terms of the Agreement; or
- .3 affect the Warranty Period or the warranties set out in the Agreement.

3.14.4 Within five (5) Working Days of receiving the Notice in Writing referred to in GC 3.14.1, the Contractor shall notify the Owner in writing of the additional premium cost, if any, to maintain all risk property insurance coverage (including boiler coverage). The cost of such additional premium shall be paid by the Owner (but without any markup by the Contractor) through the issuance of a Change Order, provided that the Owner's need to use or occupy the space did not arise as a result of the Work being behind schedule for a reason other than as described in GC 6.5.1 , 6.5.2 or 6.5.3. If because of such use or occupancy the Contractor is unable to provide such additional coverage, the Owner shall provide, maintain and pay for all risk property insurance coverage (including boiler coverage) insuring the full value of the used or occupied portion of the Work, including coverage for such use or occupancy, and shall provide the Contractor with proof of such insurance. The Contractor shall refund to the Owner the unearned premiums applicable to the Contractor's policies upon termination of coverage.

### 3.15 ACCESS TO PROPERTIES ADJOINING THE WORK AND INTERRUPTION OF OPERATIONS

3.15.1 The Contractor shall provide, at all times and at no extra cost to the Owner and without extension of the Contract Time, access to fire hydrants, water and gas valves, and all other Utilities and Structures and access to any existing equipment located at the Site which remains in operation by the Owner over the duration of the Project.

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The operation of any such Utilities and Structures and equipment shall take precedence over the Work in the case of conflicts.

- 3.15.2 The Contractor acknowledges that during the term of the Contract, the Place of the Work and the area in the vicinity of the Place of the Work may be occupied by the Owner and other Persons and that, if so occupied, such Persons will continue to carry out their normal operation and use of Place of the Work and shall be allowed to maintain their services and business continuity. The Contractor shall perform the Work in the least intrusive manner possible so as to avoid interfering with any such operations in the vicinity of the Work. The Contractor shall not disrupt the use or enjoyment of the Place of the Work and the vicinity by the Owner and other Persons.

**4. PROTECTION OF PERSONS, WORK AND PROPERTY**

**4.1 PROTECTION OF WORK AND PROPERTY**

- 4.1.1 The Contractor shall protect the Work, Persons and the Owner's property and property adjacent to, in the vicinity of or proximate to the Site from damage which may arise as the result of the Work (including from settlement of ground, flow of water, vibration or shock), and the Contractor shall, and shall cause the other Contractor Parties to, take all precautions to avoid such damage. The Contractor shall be responsible for making good any such damage, at its cost, except damage which occurs as the result of:

- .1 subject to 3.6 – DOCUMENT REVIEW, errors, inconsistencies or omissions in the Agreement; and
- .2 negligent acts or omissions by the Owner, the Owner Representative, the Contract Administrator, any other contractors (other than the Contractor Parties), and their respective Personnel.

- 4.1.2 Should damage occur to the Work or Owner's property for which the Contractor is not responsible for pursuant to the Agreement, the Contractor shall make good such damage to the Work and, if the Owner so directs, to the Owner's property. The Contract Price and Contract Time shall be adjusted as provided in 6.1 - OWNER'S RIGHT TO MAKE CHANGES, 6.2 - CHANGE ORDER and 6.3 - CHANGE DIRECTIVE.

4.1.3 Construction Affecting Railway Property or Third Party Operations

- .1 The Contractor shall be required to conduct the Work in such a manner as to avoid the possibility of damaging or interfering with any railway property in the vicinity of the Work. Every reasonable precaution shall be taken by the Contractor to ensure the safety and protection of all Contractor Parties and Construction Equipment and railway property (at track crossings or otherwise) and users thereof throughout the performance of the Work.
- .2 The Owner shall pay the costs of all flagging and other traffic control measures required and provided by a railway company unless such costs are solely a function of the Contractor's chosen method of completing the Work.

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#### 4.1.4 Operational Risk

- .1 The position of all pole lines, conduits, pipes, watermains, sewers and other covered, underground and overground utilities and structures in, on, adjacent to under or over the Site (collectively, the “**Utilities and Structures**”) are not necessarily provided in the Agreement, and where provided, the accuracy of the position of such Utilities and Structures is not guaranteed and the Owner disclaims all liability with respect to same except to the extent explicitly stated otherwise in row E.3 of the Information Sheet. The Contractor shall be liable for damages to the Utilities and Structures as a result of any act or omission, whether or not the result of negligence, by the Contractor Parties and the Losses relating to such damage shall not be chargeable to the Owner and shall be at the cost of the Contractor.
- .2 Without limiting the generality of GC 4.1.4.1, before commencing any Work, the Contractor shall inform itself of the existence and exact condition, size, depth and location of all Utilities and Structures in accordance with the Standard of Care and the Specifications, if applicable, and such process shall occur in conjunction with the Contractor’s review of the Agreement pursuant to GC 3.6.1. For clarity, to the extent the Owner is required to provide such information to the Contractor as a part of its obligation under Laws, including the *Ontario Underground Infrastructure Notification System Act, 2012*, any work required to obtain such information shall be performed by the Contractor as a part of the Work without any increase to the Contract Price or extension of the Contract Time.
- .3 As a part of, and in co-ordination with, the Work, the Contractor shall provide for the removal, protection, support, temporary and permanent relocation and restoration of the Utilities and Structures to the satisfaction of the owners of the Utilities and Structures, and in performing such Work, the Contractor shall comply with the requirements of the owners of the Utilities and Structures. The Contractor shall arrange with the appropriate owners for the stake out of all Utility and Structure connections that may be affected by the Work. The Contractor shall maintain records of such stake outs and make such records available to the Owner upon request. The Contractor shall observe the location of such stake outs, prior to commencing the Work, and in the event that there is a discrepancy between the location of such stake outs and the locations provided in the Agreement, that may affect the Work, the Contractor shall, prior to performing the affected portion of the Work, immediately notify the Contract Administrator and the affected owners of the Utilities and Structures, in order to resolve the discrepancy.
- .4 Where any interruptions in the supply of utility services are required and are authorized by the Contract Administrator, the Contractor shall, in consultation with the Owner, give the affected property owners notice in accordance with the Specifications, and shall arrange such interruptions so as to create a minimum of interference to those affected.

4.1.5 Without in any way limiting the Contractor’s obligations under 4.1, should the Contractor or any Subcontractor, Supplier or Sub-subcontractor cause Losses to trees or other plantings, whether owned by the Owner or third parties, the Contractor

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shall be liable for the replacement cost of the trees or other plantings damaged, including the cost of any arborist or other consultant, and such Losses may be set-off in accordance with 4.15 – OWNER’S SET-OFF.

4.1.6 The Contractor shall immediately inform the Contract Administrator of all damage that occurs during the term of the Agreement. The Contractor shall then investigate and report back to the Contract Administrator and Owner within fifteen (15) Calendar Days of the occurrence of such damage. Such reports shall include all details as the Owner and Contract Administrator require. The Contractor shall neither undertake to repair and/or replace any damage whatsoever to the Work of other contractors, or to adjoining property, nor acknowledge the same was caused or occasioned by the Contractor, without first consulting the Owner and receiving written instructions as to the course of action to be followed from either the Owner or the Contract Administrator. However, where there is imminent danger to life or public safety, the Contractor shall take such emergency action as it deems necessary to remove the danger. The Contractor shall notify the Owner of such imminent danger as promptly as is practicable under the circumstances. The Contract Administrator may conduct its own investigation and the Contractor shall provide all assistance to the Contract Administrator and Owner as may be necessary for that purpose.

4.1.7 The Contractor shall immediately upon becoming aware of a complaint or Claim made by a resident or property owner, inform the Contract Administrator and the Owner.

#### 4.2 HEALTH AND SAFETY

4.2.1 The Contractor shall, until Total Performance of the Work, be solely responsible for:

- .1 construction health and safety at the Site;
- .2 compliance with the Laws and practices which relate to construction health and safety, including OHSA; and
- .3 initiating, maintaining, and supervising all safety precautions and programs in connection with the performance of the Work and the other work performed by the Owner’s Personnel and other contractors at the Site (collectively, the “**Other Work**”).

4.2.2 Without restricting the generality of any other provision in the Agreement, the Contractor shall, for the purposes of the OHSA, be deemed, construed and designated as the "constructor" for the Work (including the Work of the Subcontractors, Suppliers and Sub-subcontractors and the Other Work of the Owner’s Personnel and other contractors at the Site) and shall assume and fulfill all of the responsibilities of constructor as set out in OHSA in respect of the Work and the Other Work and the Site from the Commencement Date until Total Performance of the Work. Unless explicitly stated otherwise in the Agreement, nothing in the Agreement shall be deemed or construed as making the Owner the “employer” (as defined in OHSA) or the "constructor" (as defined in OHSA), either instead of or jointly with the Contractor.

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- 4.2.3 The Contractor shall establish and administer a health and safety plan for the performance of the Work at the Site, which shall comply with the requirements of all Governmental Authorities having jurisdiction and all Laws. The Contractor shall provide the Owner with a copy of the health and safety plan prior to the Commencement Date. The Contractor shall ensure the Contractor Parties, Owner's Personnel and other contractors at the Site comply with the health and safety plan. As part of its reporting obligations on the progress of the Work described in the Specifications, the Contractor shall provide information on the ongoing implementation of its health and safety plan.
- 4.2.4 Prior to the Commencement Date, the Contractor shall submit to the Owner:
- .1 a current WSIB clearance certificate;
  - .2 a tax statutory declaration in the form attached as Form 3 of Schedule G – Forms;
  - .3 documentation of the Contractor's in-house corporate level health and safety program;
  - .4 a copy of the Notice of Project filed with the Ministry of Labour naming itself as "constructor" under OHSA; and
- 4.2.5 The Contractor shall possess and maintain a valid Certificate of Recognition (COR™) or an Equivalent OHS Certification for the duration of performance of the Agreement. The Contractor shall provide the Contract Administrator with a new Certificate of Recognition (COR™) or Equivalent OHS Certification immediately upon the expiry of the previous Certificate of Recognition or Equivalent OHS Certification or otherwise upon demand by the Contract Administrator.
- 4.2.6 The Contractor shall report to the Owner all health and safety incidents at the Site including the Contractor's response. Without limiting the foregoing, the Contractor shall report any such incident occurring on or off the Site that relates to its Work or Other Work immediately, and shall, in addition, in no event later than forty-eight (48) hours give written notice of such incident
- 4.2.7 During the course of the Work, the Contractor shall furnish forthwith to the Contract Administrator a copy of all correspondence, reports, orders or charges respecting health and safety, including under OHSA, the *Technical Standards and Safety Act, 2000*, the *Highway Traffic Act*, the *Environmental Protection Act*, the *Workplace Safety and Insurance Act, 1997*, the *Employment Standards Act, 2000* and the *Criminal Code*, which are received by, or which come to the notice of, the Contractor that apply or are relevant to any of the Work or activities conducted under the terms of the Agreement. The Contractor shall immediately take all corrective measures necessary to address the issues identified or arising out of any such correspondence, report, order or charges.
- 4.2.8 Without limiting the obligations of the Contractor described in 3.3 – CONSTRUCTION BY OWNER OR OTHER CONTRACTORS and this 4.2 – HEALTH AND SAFETY, the Owner or Contract Administrator may, by written notice, direct the Contractor to

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stop the Work where the Owner or Contract Administrator determines that there is an imminent risk to the safety of individuals or property at the Site. In the event that the Contractor receives such written notice, it shall immediately stop the Work and secure the Site. The Contractor shall not be entitled to an extension of the Contract Time or to an increase in the Contract Price unless, and only to the extent, the event which caused such imminent risk would entitle the Contractor to an extension of the Contract Time or the reimbursement of the Contractor's Losses as provided in GC 6.5.1, 6.5.2 or 6.5.3.

4.2.9 Nothing in the Agreement shall be construed as requiring the Contract Administrator or Owner to monitor or approve the health and safety practices of the Contractor.

**4.3 HAZARDOUS MATERIALS**

4.3.1 Unless expressly permitted in the Agreement, the Contractor shall, and shall cause the other Contractor Parties to, not bring onto the Site any Hazardous Materials without the prior written authorization of the Contract Administrator. No later than five (5) Working Days following execution of the Agreement and prior to the Contractor mobilizing to the Site, the Contractor shall provide to the Owner, a list of all Hazardous Materials, including safety data sheets, which the Contractor expects to use for the Work, for the Owner's review, and update the Owner with any changes made to the list. The Contractor shall also comply with all other provisions under OSHA related to Hazardous Materials.

4.3.2 The Contractor shall use all reasonable care to avoid spilling or disturbing any Hazardous Materials during the performance of the Work. In the case of a "spill" as defined in the *Environmental Protection Act*, the Contractor shall immediately notify the Owner and the Contract Administrator of the location and details of such spill and report the spill to the relevant Governmental Authority. Reporting a spill to the Owner shall not relieve the Contractor of its legislated responsibilities regarding spills or discharges.

4.3.3 If the Contractor or the Owner encounters Hazardous Materials at the Site or has reasonable grounds to believe that Hazardous Materials are present at the Site, which were not:

- .1 brought to the Site by the Contractor Parties;
- .2 disclosed by the Owner or in the Agreement; or
- .3 discovered by the Contractor through the fulfillment of its responsibilities pursuant to 3.6 - EXAMINATION OF SITE,

the Contractor shall:

- .4 take all necessary steps, in accordance with Laws, including stopping the Work, to
  - (1) manage, remove, dispose of, store or otherwise render harmless such Hazardous Materials;

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- (2) ensure that no individual's exposure to any Hazardous Materials exceeds any applicable time weighted levels prescribed by Laws (including O Reg 833 under OHSA); and
- (3) ensure that no property is damaged or destroyed as a result of exposure to, or the presence of, such Hazardous Materials; and
- .5 immediately report the circumstances to the Contract Administrator and the other party in writing.

4.3.4 If the Owner and Contractor do not agree on:

- .1 the existence and significance of the Hazardous Materials described in GC 4.3.3;
- .2 if such Hazardous Materials were brought onto the Site by a Contractor Party;
- .3 if such Hazardous Materials were disclosed by the Owner or in the Agreement; or
- .4 if such Hazardous Materials should have been discovered by the Contractor through the fulfillment of its responsibilities pursuant to 3.6 - EXAMINATION OF SITE,

the Owner shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the Owner and the Contractor.

4.3.5 If the Owner and Contractor agree or if the expert referred to in GC 4.3.4 determines that the Hazardous Materials were not brought onto the Site by a Contractor Party and were not disclosed by the Owner or in the Agreement and would not have been discovered by the Contractor through the fulfillment of its responsibilities pursuant to 3.6 - EXAMINATION OF SITE, the Owner shall immediately at the Owner's own cost:

- .1 reimburse the Contractor for the costs of all steps taken pursuant to GC 4.3.3; and
- .2 extend the Contract Time for such reasonable time as the Contract Administrator may recommend in consultation with the Contractor and the expert referred to in 4.3.4 and reimburse the Contractor for reasonable Losses incurred as a result of the delay, but excluding any consequential, indirect or special damages and loss of profit, loss of opportunity or loss of productivity resulting from such delay.

4.3.6 If the Owner and Contractor agree or if the expert referred to in GC 4.3.4 determines that the Hazardous Materials were brought onto the Site by a Contractor Party and were not disclosed by the Owner or in the Agreement and would not have been discovered by the Contractor through the fulfillment of its responsibilities pursuant to 3.6 - EXAMINATION OF SITE, the Contractor shall immediately at the Contractor's own cost and without extension of the Contract Time:

- .1 make good any damage to the Work, the Owner's property or property adjacent to the Site as provided in GC 4.1.1; and



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- .2 reimburse the Owner for reasonable Losses incurred under GC 4.3.4 but excluding any consequential, indirect or special damages and loss of profit, loss of opportunity or loss of productivity.
- 4.3.7 If either party does not accept the expert's findings under GC 4.3.4, the disagreement shall be settled in accordance with 11. DISPUTE RESOLUTION. If such disagreement is not resolved within thirty (30) Calendar Days, the parties shall act immediately in accordance with the expert's determination and take the steps required by GC 4.3.5 or GC 4.3.6 it being understood that by so doing, neither party will jeopardize any claim that party may have to be reimbursed as provided by 4.3 - HAZARDOUS MATERIALS.
- 4.4 MOULD**
- 4.4.1 If the Contractor or Owner observes or reasonably suspects the presence of mould at the Site, the remediation of which is not expressly part of the Work:
- .1 the observing party shall immediately report the circumstances to the other party in writing;
  - .2 the Contractor shall immediately take all reasonable steps, including stopping the Work if necessary, to ensure that no individual suffers injury, sickness or death and that no property is damaged as a result of exposure to or the presence of the mould; and
  - .3 if the Owner and Contractor do not agree on the existence, significance or cause of the mould or as to what steps need be taken to deal with it, the Owner shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the Owner and Contractor.
- 4.4.2 If the Owner and Contractor agree, or if the expert referred to in GC 4.4.1.3 determines that the presence of mould was caused by the Contractor's operations under the Agreement, the Contractor shall promptly, and in no event later than within ten (10) Working Days after such agreement or determination, as applicable, at the Contractor's own cost:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould;
  - .2 make good any damage to the Work, the Owner's property or property adjacent to the Site as provided in GC 4.1.1; and
  - .3 reimburse the Owner for reasonable Losses incurred under GC 4.4.1.3.
- 4.4.3 If the Owner and Contractor agree, or if the expert referred to in GC 4.4.1.3 determines that the presence of mould was not caused by the Contractor's operations under the Agreement, the Owner shall promptly, and in no event later than within ten (10) Working Days after such agreement or determination, as applicable, at the Owner's own cost:

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- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould;
- .2 reimburse the Contractor for the cost of taking the steps under GC 4.4.1.2 and making good any damage to the Work as provided in GC 4.1.2; and
- .3 extend the Contract Time for such reasonable time as the Contract Administrator may recommend in consultation with the Contractor and the expert referred to in GC 4.4.1.3 and reimburse the Contractor for reasonable Losses incurred as a result of the delay but excluding any consequential, indirect or special damages and loss of profit, loss of opportunity or loss of productivity.

4.4.4 If either party does not accept the expert's finding under GC 4.4.1.3, the disagreement may be settled in accordance with 11. DISPUTE RESOLUTION. If such disagreement is not resolved within thirty (30) Calendar Days, the parties shall act immediately in accordance with the expert's determination and take the steps required by GC 4.4.2 or 4.4.3, it being understood that by so doing neither party will jeopardize any Claim the party may have to be reimbursed as provided by 4.4 - MOULD.

#### **4.5 ARTIFACTS AND FOSSILS**

4.5.1 Fossils, coins, articles of value or antiquity, structures and other remains or things of scientific or historic interest discovered at the Place or Work shall, as between the Owner and the Contractor, be deemed to be the absolute property of the Owner.

4.5.2 The Contractor shall take all reasonable precautions to prevent removal or damage to discoveries as identified in GC 4.5.1, and shall immediately notify the Contract Administrator upon discovery of such items and shall suspend the Work within any area identified by the Contract Administrator. Initial notification may be verbal provided that such notice is confirmed in writing by the Contractor within two (2) Calendar Days of discovery.

4.5.3 The Contract Administrator will investigate the impact on the Work of the discoveries identified in GC 4.5.1. If conditions are found that would cause an increase or decrease in the Contractor's cost or time to perform the Work, the Contract Administrator, with the Owner's approval, will issue appropriate instructions for a change in the Work as provided in 6.2 - CHANGE ORDER or 6.3 - CHANGE DIRECTIVE.

#### **4.6 CONTRACT PRICE AND PAYMENT**

4.6.1 The Contract Price, which excludes Value Added Taxes, is described in paragraph 2.1 of Section 2 of the Agreement – CONTRACT PRICE.

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**4.7 OWNER’S OBLIGATION TO PAY**

- 4.7.1 Subject to the provisions of the Agreement, and in accordance with the Construction Act, the Owner shall:
- .1 in respect of Fixed Price Work, make progress payments and, if any, milestone payments to the Contractor for amounts undisputed by the Owner on account of the Fixed Price when due, together with such Value Added Taxes as may be applicable to such payments;
  - .2 in respect of Unit Price Work, make progress payments to the Contractor for amounts undisputed by the Owner on account of the Total Price of Unit Price Work when due, together with such Value Added Taxes as may be applicable to such payments;
  - .3 upon Substantial Performance of the Work, pay to the Contractor the unpaid balance of the ten percent (10%) portion of the Lien Holdback when due together with such Value Added Taxes as may be applicable to such payment; and
  - .4 upon Total Performance of the Work, pay to the Contractor the unpaid amount of the Contract Price and the finishing portion of the Lien Holdback when due together with such Value Added Taxes as may be applicable to such payments.
- 4.7.2 Payment of the Contract Price shall be full compensation for all labour, services, Contractor Parties, Construction Equipment and Products required in the performance of the Unit Price Work, including, hand tools, supplies and other incidentals.
- 4.7.3 The Unit Prices shall not be adjusted during the term of the Agreement other than as provided for in Schedule B – Pricing Form.
- 4.7.4 Payment for any Unit Price Work not specifically detailed as part of any one item of Unit Price Work and without specified details of payment shall be deemed to be included in the items of Unit Price Work with which it is associated.
- 4.7.5 Advance payments for Products not yet incorporated into the Work (whether or not delivered to the Site) shall not be made by the Owner without the prior written consent of the Owner, in its sole and absolute discretion. Any such advance payment shall be made on terms as agreed to by the Owner and Contractor (such terms may include transfer of title, the Contractor’s responsibility for risk of Loss and off-site storage requirements).
- 4.7.6 In the event of Losses occurring where payment becomes due under the all risk property insurance policies, payments shall be made to the Contractor in accordance with the provisions of 7.1 – INSURANCE.
- 4.8 PROPER INVOICES**
- 4.8.1 After the Commencement Date, Proper Invoices shall be given to the Owner monthly for each Invoice Period as the Work progresses, unless otherwise specified in row

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B.9 of the Information Sheet. Proper Invoices shall be given to the Owner by giving it to the Owner Representative in accordance with row B.10 of the Information Sheet.

4.8.2 If the Contractor is performing Unit Price Work, the Contract Administrator or Owner Representative shall make an Estimate of Units once an Invoice Period, in writing. The first Estimate of Units shall be in respect of the Unit Price Work performed since the Contractor commenced the Unit Price Work, and every subsequent Estimate of Units, except the final one, shall be in respect of the Unit Price Work performed since the preceding Estimate of Units was made. The Contract Administrator or Owner Representative, as applicable, shall provide a copy of each such Estimate of Units to the Contractor on or before the 5<sup>th</sup> Calendar Day after the end of the Invoice Period (or the next Working Day following such date if such date is not a Working Day).

4.8.3 For all Work, the Contractor shall submit a draft invoice to the Contract Administrator:

- .1 at the invoice meeting held on or before the 7<sup>th</sup> Calendar Day after the end of the Invoice Period (or the next Working Day following such date if such date is not a Working Day) to which the Proper Invoice relates; or
- .2 on or before the 7<sup>th</sup> Calendar Day after the end of the Invoice Period (or the next Working Day following such date if such date is not a Working Day) to which the Proper Invoice relates, in such form of written or electronic communication as agreed to by the parties.

If the Contractor submits the draft invoice in accordance with GC 4.8.3.1, then the Contract Administrator, the Owner and the Contractor shall review such draft invoice at such meeting or, if the Contractor submits the draft invoice in accordance with GC 4.8.3.2, then the Contractor Administrator and the Owner shall review such draft invoice and, prior to the 14<sup>th</sup> Calendar Day after the end of such Invoice Period, the Owner and the Contract Administrator may provide the Contractor with suggested revisions to the draft invoice based upon the progress of the Work, the Contract Administrator's or Owner Representative's, as applicable, Estimate of Units and other relevant considerations. The draft invoice shall be submitted in the same format (and with the same content) as the Proper Invoice.

4.8.4 On the 14<sup>th</sup> Calendar Day after the end of the Invoice Period to which the Proper Invoice relates, the Contractor shall give a Proper Invoice to the Owner. In preparing the Proper Invoice, the Contractor should take into consideration revisions proposed by the Contract Administrator and the Owner from the draft invoice process including any reconciliations with the Contract Administrator's or Owner Representative's, as applicable, Estimate of Units. Incorporating such revisions will reduce the likelihood of the Owner issuing a notice of non-payment pursuant to GC 4.9.1.3 but is without prejudice to any rights or remedies of the Owner under the Agreement or otherwise. For clarity:

- .1 a Proper Invoice shall not be rendered incompliant with the requirements of the Agreement solely by reason of a failure to incorporate any such proposed revisions including any reconciliation with the Contract Administrator's or Owner Representative's, as applicable, Estimate of Units; and

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.2 the Contractor may only give to the Owner a Proper Invoice on the 14<sup>th</sup> Calendar Day after the end of the Invoice Period to which the Proper Invoice relates, and the Contractor shall not give to the Owner a Proper Invoice on any other Calendar Day. Any Proper Invoice received by the Owner on any Calendar Day:

- (1) earlier than the 14<sup>th</sup> Calendar Day after the end of such Invoice Period shall be deemed to have been received by the Owner on the 14<sup>th</sup> Calendar Day after the end of such Invoice Period; or
- (2) later than the 14<sup>th</sup> Calendar Day after the end of such Invoice Period shall be deemed to have been received by the Owner on the Calendar Day of such delivery,

and if the date on which the Proper Invoice is received under GC 5.3.4.2, or is deemed to have been received under GC 5.3.4.2(1) or (2), is not a Working Day, then it shall be deemed to be received on the next Working Day.

4.8.5 The amount applied for in each Proper Invoice shall be:

.1 for Fixed Price Work:

- (1) relating to milestones set out in the Agreement, the portion of the Fixed Price attributable to the milestones which the Owner has agreed have been completed on or before the last Calendar Day of the Invoice Period to which the Proper Invoice relates except for milestones dealt with in prior Proper Invoices;
- (2) not relating to milestones set out in the Agreement, the value, proportionate to the Fixed Price not attributable to the milestones, of such Fixed Price Work performed to the last Calendar Day of the Invoice Period to which the Proper Invoice relates less the value of such Fixed Price Work previously invoiced in prior Proper Invoices;

.2 for Unit Price Work, the aggregate of the total units for each item of the Unit Price Work performed to the last Calendar Day of the Invoice Period to which the Proper Invoice relates multiplied by the applicable Unit Price of each such item, less the value of all Unit Price Work previously invoiced in prior Proper Invoices; and

.3 for T&M Changes in the Work, an amount equal to:

- (1) the total T&M Price of all T&M Changes in the Work performed to the last Calendar Day of the month to which the Proper Invoice relates; less
- (2) the total T&M Price of all T&M Changes in the Work in respect of all prior Proper Invoices,

calculated in accordance with Section 3 of Schedule E – Valuing Changes in the Work.

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For clarity, the amount applied for in each Proper Invoice shall not include any amounts included in any Claim Notice unless and until the Owner or the Contract Administrator, as the case may be, has issued a determination to the Contractor regarding the validity of such Claim Notice pursuant to GC 6.7.6.

#### 4.8.6 Schedule of Values

- .1 The Contractor shall submit to the Contract Administrator, within fourteen (14) Calendar Days of the Effective Date and prior to the first Proper Invoice, a schedule of values with a detailed breakdown of the Fixed Price Work not relating to milestones, aggregating the total amount of the Fixed Price not attributable to the milestones, so as to facilitate evaluation of Proper Invoices.
- .2 The schedule of values shall:
  - (1) be made out in such form and supported by such evidence as the Contract Administrator may reasonably direct;
  - (2) include a fair and reasonable value for the preparation and completion of the As-Built Drawings; and
  - (3) include the fixed price for the bonds and insurance to be maintained by the Contractor in compliance with the requirements of the Agreement and provide for the payment of such fixed price for the bonds and insurance in amounts proportionate to the payment of the Fixed Price not attributable to the milestones unless otherwise agreed to by the Contract Administrator.
- .3 When accepted by the Contract Administrator, the schedule of values shall be used as the basis for evaluating Fixed Price Work not relating to the milestones in Proper Invoices, unless both parties agree the schedule of values is in error.
- .4 The Owner, acting reasonably, reserves the right to modify costs allocated to the various breakdown items in the schedule of values during the performance of the Work to prevent front loading.

#### 4.8.7 The Proper Invoice shall be in a form similar to Form 1 of Schedule G – Sample Proper Invoice and shall, to the extent applicable:

- .1 include the following information, to the extent such information is not included in any schedule of values:
  - (1) the Contractor's name, telephone number and mailing address, and contact information of the Contractor Project Manager;
  - (2) remittance payment information;
  - (3) Proper Invoice number;
  - (4) the date of the Proper Invoice and the Invoice Period during which the Work was performed;

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- (5) the Contract number;
  - (6) purchase order number
  - (7) contact information of the Owner's Representative and Contract Administrator;
  - (8) a description of the Project;
  - (9) percentage of Work completed to date;
  - (10) a description of the Work performed during the Invoice Period and a specific itemization of the Work with quantities where appropriate including:
    - (A) the Contract Administrator's or Owner Representative's, as applicable, Estimate of Units; and
    - (B) the Contractor's Estimate of Units;
  - (11) the total Contract Price and the amount of the Contract Price previously paid;
  - (12) the value of Work and changes in the Work performed to date itemized by Change Order; and
  - (13) the amount payable for the Work and changes in the Work performed during the Invoice Period;
- .2 include the schedule of values;
  - .3 include a detailed description of expenditures under the Cash Allowance and Provisional Allowance;
  - .4 include Daily Contractor Work Records;
  - .5 include evidence of compliance with worker's compensation legislation including a WSIB clearance certificate;
  - .6 include a statutory declaration using the latest form CCDC 9A - 2018 Statutory Declaration of Progress Payment Distribution by Contractor, confirming that all accounts of the Contractor have been paid in full up to and including the latest progress payment received;
  - .7 for advance payment, if applicable, for Products not yet incorporated into the Work:
    - (1) list such Products (and the advance payment calculations in respect thereof) as a separate line item; and

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- (2) be supported by invoices and such other evidence as the Contract Administrator may reasonably request to establish the value and delivery of such Products;
  - .8 list the Lien Holdback, Contractual Holdback and any other holdbacks provided for under this Contract as a separate line item;
  - .9 include the Contractor's registration number for Value Added Taxes and list the total amount of Value Added Taxes separate from the total Contract Price;
  - .10 include a copy of the latest Current Schedule delivered in compliance with the applicable requirements of 3.5 – CONSTRUCTION SCHEDULE; and
  - .11 include such other information and documents: (1) identified elsewhere in the Agreement; or (2) as required under the Construction Act.
- 4.8.8 A Proper Invoice may be revised by the Contractor after it has submitted the Proper Invoice to the Owner, if:
- .1 the Owner agrees in advance to the revision;
  - .2 the date of the Proper Invoice is not changed; and
  - .3 the Proper Invoice continues to be in compliance with the requirements of GC 4.8.7.
- 4.9 PROGRESS PAYMENT**
- 4.9.1 After receipt by the Contract Administrator of a Proper Invoice submitted by the Contractor in accordance with 4.8 – PROPER INVOICES:
- .1 the Contract Administrator shall promptly inform the Owner of the date of receipt of the Proper Invoice;
  - .2 the Contract Administrator shall, no later than the number of Calendar Days or Working Days, as applicable, after the receipt of the Proper Invoice identified in row C.8 of the Information Sheet, issue to the Owner and copy to the Contractor, a certificate for payment in the amount applied for, or in such other undisputed amount as the Contract Administrator determines to be properly due; and
  - .3 if the Contract Administrator, or the Owner independent of the Contract Administrator, disputes all or any portion of the amount applied for in such Proper Invoice, the Owner shall promptly, but no later than fourteen (14) Calendar Days after the Contract Administrator's receipt of the Proper Invoice from the Contractor, provide the Contractor a notice of non-payment in the form and manner prescribed by the Construction Act specifying the amount that is not being paid and detailing all of the reasons for such non-payment.
- 4.9.2 The Owner shall, no later than twenty-eight (28) Calendar Days after the receipt of the Proper Invoice, make payment to the Contractor of the amount set out in the



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Proper Invoice less the amount disputed by the Contract Administrator or the Owner independent of the Contract Administrator, as applicable, that is set out in the notice of non-payment issued pursuant to GC 4.9.1.3. For clarity, progress payments for Unit Price Work shall be based on Estimates and as such shall be construed and held to be approximate. Subject to section 1.1 of Schedule E – Valuing Changes in the Work, the final quantities of total units for each item of the Unit Price Work performed for the Proper Invoice submitted pursuant to GC 4.12.1.1 shall be based on actual field measurements of the Unit Price Work completed. The Owner shall retain the Contractual Holdback, Lien Holdback and any other holdbacks provided for under this Contract as a separate line item from such payment and may retain any other amount pursuant to 4.15 - OWNER'S SET-OFF. Unless otherwise specified in the Agreement, no letter of credit or demand-worded holdback shall be accepted or used to retain any part of the Lien Holdback.

- 4.9.3 For clarity, if the Contractor fails to submit a Proper Invoice to the Contract Administrator which is in compliance with the requirements of GC 4.8.7, the Owner shall not be required to make payment to the Contractor within the twenty-eight (28) Calendar Day period set out in GC 4.9.2. Such twenty-eight (28) Calendar Day period shall not commence until such time as the Contract Administrator has received from the Contractor a Proper Invoice in compliance with the requirements of GC 4.8.7.

**4.10 SUBSTANTIAL PERFORMANCE OF THE WORK**

- 4.10.1 When the Contractor considers that Substantial Performance of the Work has been attained the Contractor shall, within one (1) Working Day, deliver to the Contract Administrator and to the Owner a comprehensive list of items to be completed or corrected, together with a written application for a review by the Contract Administrator to establish Substantial Performance of the Work. Failure to include an item on the list does not alter the responsibility of the Contractor to complete the Agreement. Such written application shall include the proof required by the Agreement including the Specifications to demonstrate that the Work has been substantially performed in conformance with the requirements of the Construction Act.
- 4.10.2 The Contract Administrator shall review the Work to verify the validity of the written application for Substantial Performance of the Work and shall promptly, and in any event, no later than twenty (20) Calendar Days after receipt of the Contractor's list and application:
- .1 advise the Contractor in writing that the Work is not substantially performed and give reasons why, or
  - .2 set out the date of Substantial Performance of the Work in the certificate of Substantial Performance of the Work and issue a copy of such certificate to each of the Owner and the Contractor within seven (7) Calendar Days after signing such certificate. The certificate of Substantial Performance of the Work shall be in the form prescribed by the Construction Act.
- 4.10.3 Immediately following the issuance of the certificate of Substantial Performance of the Work, the Contractor shall prepare and submit to the Owner and the Contract Administrator a schedule for completing the Work and correcting all Deficiencies,

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which establishes the date for the Total Performance of the Work. Upon the Owner and the Contract Administrator's approval of such schedule, the Construction Schedule shall be deemed to be amended to include such schedule. The date for Total Performance of the Work identified in such schedule shall not be later than the Scheduled Date for Total Performance of the Work.

- 4.10.4 Upon receipt of a copy of the certificate of Substantial Performance of the Work, the Contractor shall forthwith, as required by section 32(1) of the Construction Act, publish a copy of the certificate in the manner set out in the regulations. If the Contractor fails to publish a copy of the certificate of Substantial Performance of the Work within seven (7) Calendar Days after receiving a copy of such certificate, the Owner may publish a copy of such certificate at the Contractor's cost.

**4.11 PAYMENT OF LIEN HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK**

- 4.11.1 After the date on which all liens that may be claimed against the Lien Holdback have expired or been satisfied, discharged or otherwise provided for under the Construction Act and provided the certificate of Substantial Performance of the Work has been published in accordance with 4.10, the Contractor shall submit a Proper Invoice for the Lien Holdback, which shall, in addition to complying with the requirements of GC 4.8.7, include the following items in order to be considered a "Proper Invoice" for the purposes of GC 4.11.2:

- .1 the list of Claims required by GC 8.2.1;
- .2 the value of outstanding or incomplete Work; and
- .3 a representation and warranty from the Contractor that, as of the date of the Proper Invoice, the only Adjudications in respect of disputes as described in GC 11.2.16 are Adjudications which the Contractor has provided Notice in Writing of to the Owner in accordance with GC 11.2.16.

- 4.11.2 After the receipt of a Proper Invoice from the Contractor in compliance with the requirements of GC 4.11.1, the Contract Administrator shall issue a certificate for payment of the Lien Holdback.

- 4.11.3 Subject to GC 4.11.4 and the Construction Act, the Owner shall, no later than fifteen (15) Working Days after the receipt of the Proper Invoice, make payment to the Contractor of the amount of the Lien Holdback set out in the Proper Invoice. Subject to the Construction Act, the Owner may retain out of the Lien Holdback any sums required by law to satisfy any liens against the Work and any other amount pursuant to 4.15 - OWNER'S SET-OFF.

- 4.11.4 The Owner may refuse to pay some or all of the Lien Holdback the Owner is required to pay to the Contractor pursuant to GC 4.11.3 if:

- .1 no later than forty (40) Calendar Days after publication of the certificate of Substantial Performance of the Work in accordance with GC 4.10.4, the Owner publishes, in the manner set out in the Construction Act, a notice in the form

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prescribed by the Construction Act, specifying the amount of the Lien Holdback that the Owner refuses to pay; and

- .2 the Owner notifies the Contractor, in accordance with the Construction Act, of the publication of such notice.

4.11.5 For clarity, if the Contractor fails to submit a Proper Invoice to the Contract Administrator which is in compliance with the requirements of GC 4.11.1, the Owner shall not be required to make payment to the Contractor within the fifteen (15) Working Day period set out in GC 4.11.3. Such fifteen (15) Working Day period shall not commence until such time as the Contract Administrator has received from the Contractor a Proper Invoice in compliance with the requirements of GC 4.11.1.

**4.12 PAYMENTS UPON TOTAL PERFORMANCE OF THE WORK**

4.12.1 Payment Upon Total Performance of the Work

- .1 When the Contractor considers that the Work is Totally Performed, the Contractor shall submit a Proper Invoice for payment of the unpaid amount of the Contract Price other than the finishing portion of the Lien Holdback.
- .2 The Contractor's Proper Invoice submitted in accordance with GC 4.12.1.1 shall, in addition to complying with the applicable requirements of GC 4.8.7, include the list of Claims required by GC 8.2.2 in order to be considered a "Proper Invoice" for the purposes of GC 4.12.1.5.
- .3 The Contract Administrator shall, no later than ten (10) Calendar Days after the receipt of a Proper Invoice from the Contractor submitted in accordance with GC 4.12.1.1, review the Work to verify the validity of such Proper Invoice. If the Contract Administrator, or the Owner independent of the Contract Administrator, disputes the validity of such Proper Invoice, the Owner shall promptly, but no later than fourteen (14) Calendar Days after the Contract Administrator's receipt of such Proper Invoice from the Contractor, provide the Contractor a notice of non-payment in the form and manner prescribed by the Construction Act specifying the amount that is not being paid and detailing all of the reasons why such Proper Invoice is invalid. No later than twenty-eight (28) Calendar Days after the receipt by the Contract Administrator of such Proper Invoice, the Owner shall make payment to the Contractor of the amount set out in such Proper Invoice less the amount disputed by the Contract Administrator or the Owner independent of the Contract Administrator, as applicable, that is set out in a notice of non-payment. If such Proper Invoice is invalid, then the Contractor shall then submit another Proper Invoice when it considers that the Work is Totally Performed and the process described in this GC 4.12.1 shall repeat.
- .4 When the Contract Administrator finds the Proper Invoice submitted in accordance with GC 4.12.1.1 is valid and in compliance with the requirements of GC 4.12.1.2, the Contract Administrator shall promptly issue a certificate for payment which shall set out the date of Total Performance of the Work.

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- .5 The Owner shall, no later than twenty-eight (28) Calendar Days after the receipt by the Contract Administrator of a Proper Invoice submitted in accordance with GC 4.12.1.1 pay the Contractor as provided in 4.7 - OWNER'S OBLIGATION TO PAY less any amount disputed by the Contract Administrator or the Owner independent of the Contract Administrator, as applicable, that is set out in a notice of non-payment issued pursuant to GC 4.9.1.3 (including amounts in respect of Deficiencies identified after the receipt of the Proper Invoice).
- .6 For clarity, if the Contractor fails to submit a Proper Invoice to the Contract Administrator which is in compliance with the requirements of GC 4.12.1.1, the Owner shall not be required to make payment to the Contractor within the twenty-eight (28) Calendar Day period set out in GC 4.11.3. Such twenty-eight (28) Calendar Day period shall not commence until such time as the Contract Administrator has received from the Contractor a Proper Invoice in compliance with the requirements of GC 4.12.1.1.

4.12.2 Payment of the Finishing Portion of the Lien Holdback

- .1 After the date on which all liens that may be claimed against the finishing portion of the Lien Holdback have expired or been satisfied, discharged or otherwise provided for under the Construction Act and provided the Contract Administrator has certified that the Work is Totally Performed in accordance with GC 4.12.1, the Contractor shall submit a Proper Invoice for the finishing portion of the Lien Holdback.
- .2 When the Contract Administrator finds the Proper Invoice submitted in accordance with GC 4.12.2.1 is valid and in compliance with the requirements of GC 4.12.2.1, the Contract Administrator shall promptly issue a certificate of payment for the finishing portion of the Lien Holdback.
- .3 Subject to GC 4.12.2.4 and the Construction Act, the Owner shall, no later than fifteen (15) Working Days after the receipt of the Proper Invoice, make payment to the Contractor of the amount of the finishing portion of the Lien Holdback set out in the Proper Invoice. Subject to the Construction Act, the Owner may retain out of the finishing portion of the Lien Holdback any sums required by law to satisfy any liens against the Work and any other amount pursuant to 4.15 - OWNER'S SET-OFF.
- .4 The Owner may refuse to pay some or all of the finishing portion of the Lien Holdback the Owner is required to pay to the Contractor pursuant to GC 4.12.2.3 if:
  - (1) no later than forty (40) Calendar Days after the date of Total Performance of the Work, the Owner publishes, in the manner set out in the Construction Act, a notice in the form prescribed by the Construction Act, specifying the amount of the finishing portion of the Lien Holdback that the Owner refuses to pay; and
  - (2) the Owner notifies the Contractor, in accordance with the Construction Act, of the publication of such notice.

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- .5 For clarity, if the Contractor fails to submit a Proper Invoice to the Contract Administrator which is in compliance with the requirements of GC 4.12.2.1, the Owner shall not be required to make payment to the Contractor within the fifteen (15) Working Day period set out in GC 4.11.3. Such fifteen (15) Working Day period shall not commence until such time as the Contract Administrator has received from the Contractor a Proper Invoice in compliance with the requirements of GC 4.12.2.1.

#### 4.13 FINAL ACCEPTANCE CERTIFICATE

4.13.1 The Contract Administrator shall issue the final acceptance certificate (“**Final Acceptance Certificate**”) after the later of the:

- .1 date on which the Contract Administrator determines that the Work has passed all inspection and testing requirements and is satisfied that the Contractor has corrected all Deficiencies and has discharged all of the Contractor’s obligations under the Agreement; and
- .2 expiry of the Warranty Period.

The Contract Administrator shall have no obligation to issue the Final Acceptance Certificate until all known Deficiencies have been corrected and the Contractor has discharged all obligations under the Agreement.

#### 4.14 CONTRACTOR DISCHARGE OF LIABILITIES

4.14.1 In addition to the obligations assumed by the Contractor pursuant to 3.8 – SUBCONTRACTORS AND SUPPLIERS, the Contractor agrees to discharge all liabilities and obligations for the Work including in respect of labour, services, Contractor Parties, Construction Equipment and Products, except for amounts withheld by reason of legitimate dispute and which have been identified to the party or parties, from whom payment has been withheld.

#### 4.15 OWNER’S SET-OFF

4.15.1 In addition to and without limiting any other rights the Owner may have under the Agreement and at law or otherwise, the Owner may set-off and deduct from any amount owing to the Contractor under the Agreement (including any payments by the Owner pursuant to GC 4.9.2, GC 4.11.3, GC 4.12.1.5, GC 4.12.2.3 and determinations pursuant to an Adjudication) an amount sufficient to cover:

- .1 any outstanding or disputed liabilities or obligations of the Contractor to the Owner (including unpaid liquidated damages), or to the Indemnities pursuant to 8.1 – INDEMNIFICATION;
- .2 any Losses or amounts for which the Owner is expressly entitled in the Agreement to set-off or retain including GC 2.5.5, GC 4.9.2, GC 4.11.3, GC 4.12.2.3, GC 10.1.5.1, GC 10.1.5.2, GC 4.1.5, GC 9.2.5, GC 7.1.11.3, GC 8.1.3 GC 8.1.6, GC 12.2.1.2 and GC 12.2.2;

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- .3 any of the following:
  - (1) any assessment due to the Workplace Safety and Insurance Board relating to the Work; and
  - (2) any amount necessary to satisfy Contractor's obligations under 4.14 – CONTRACTOR DISCHARGE OF LIABILITIES;
- .4 any other amounts owed by the Contractor to the Owner under the Agreement; and
- .5 if the Contractor becomes insolvent, all outstanding Claims and Losses of the Owner whether or not related to the Agreement.

If there is an insufficient amount owing by the Owner to the Contractor, then the Contractor shall reimburse the Owner for all of the aforementioned Claims and Losses.

**5. ALLOWANCES**

**5.1 ALLOWANCES**

- 5.1.1 The Fixed Price or Total Price of Unit Price Work includes the Allowances, if any. The Allowances include all taxes and duties (except only Value Added Taxes).
- 5.1.2 The Contractor's overhead and profit for the Cash Allowance is included in the Fixed Price or Total Price of Unit Price Work, and not in the Cash Allowance itself. Each Provisional Allowance item includes the Contractor's overhead and profit in connection with such Provisional Allowance. The Contractor shall not be paid any additional overhead and profit in connection with the Allowances other than as provided for in this 5.1 - ALLOWANCES.
- 5.1.3 Expenditures under Allowances shall be pre-authorized by the Owner in writing through the Contract Administrator.
- 5.1.4 Where the actual cost of the Work under any individual Cash Allowance exceeds the amount of such Cash Allowance, any unexpended amounts from other Cash Allowances may be reallocated, at the Owner's direction, to cover the shortfall, and, in that case, there shall be no additional amount added to the Fixed Price for overhead and profit. Only where the actual cost of the Work under all Cash Allowances exceeds the total amount of all Cash Allowances shall the Contractor be compensated for the excess incurred and substantiated, plus an amount for overhead and profit on such excess, as set out in row B.5 of the Information Sheet, and the Fixed Price shall be adjusted accordingly by Change Order.
- 5.1.5 The total amount of any unexpended Allowances shall be deducted from the Fixed Price or Total Price of Unit Price Work by Change Order, after providing for any reallocation contemplated in GC 5.1.4. For Provisional Allowances, such deduction includes the Contractor's overhead and profit included in such total amount. For clarity, no adjustment shall be made for the Contractor's overhead and profit included

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in the Fixed Price or Total Price of Unit Price Work on such total amount deducted in respect of Cash Allowances.

- 5.1.6 The value of the Work performed under an Allowance is eligible to be included in Proper Invoices.
- 5.1.7 The Contractor and the Contract Administrator shall jointly prepare a schedule that shows when the Contract Administrator and Owner must authorize ordering of items called for under Allowances to avoid delaying the progress of the Work.
- 5.1.8 The Contractor shall extend to the Owner all refunds and trade, quantity and cash discounts, rebates and refunds which may be received in purchasing under Allowances.
- 5.1.9 The Owner reserves the right to call, or to have the Contractor call, competitive bids or other types of procurements for portions of the Work to be paid for from Allowances. If the Owner determines to proceed with competitive bids, the Contractor shall comply with the directions of the Owner.
- 5.1.10 The Contractor shall include copies of Contractor Records substantiating purchases under Allowances.

**6. CHANGES IN THE WORK**

**6.1 OWNER'S RIGHT TO MAKE CHANGES**

- 6.1.1 The Owner, through the Contract Administrator, without invalidating the Agreement, may make:
  - .1 changes in the Work consisting of additions, deletions or other revisions to the Work by Change Order or Change Directive; and
  - .2 changes to the Contract Time for the Work, or any part thereof, by Change Order or Change Directive.
- 6.1.2 The Contractor shall not perform a change in the Work without a Change Order or a Change Directive. To the extent the Contractor performs any such change in the Work, the Contractor does so at its own risk and without any liability or obligation on the part of the Owner. There shall be no change in the Contract Price (including delay prolongation costs, remobilization costs or other compensation), extension of the Contract Time or other amendment to the Agreement on account of any change in the Work unless specified in, and initiated through, a Change Order or a Change Directive.
- 6.1.3 There shall be no extension of the Contract Time or increase in the Contract Price or payment of any kind whatsoever (including for loss of productivity) based on the aggregate quantity, scope or value of changes in the Work whether resulting from Change Order or Change Directive. The Contractor agrees that in connection with any Change Order or Change Directive it shall co-operate with the Owner and the Contract Administrator and shall carry out such Change Order or Change Directive in

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such a manner as to avoid incurring or to minimize any additional Losses to be incurred as a result of such Change Order or Change Directive or delay in the performance of the Work.

- 6.1.4 The value of a change shall be determined as follows, at the sole discretion of the Owner, as indicated in the Contemplated Change Order or Change Directive, as applicable:
- .1 if the change relates to items for which the Unit Prices set out in the Agreement are applicable, in accordance with Section 1 of Schedule E – Valuing Changes in the Work; or
  - .2 in the absence of applicable Unit Prices set out in the Agreement:
    - (1) on either a negotiated fixed price or unit price basis, in accordance with the provisions in Section 2 of Schedule E – Valuing Changes in the Work; or
    - (2) if the Parties are unable to agree on a fixed price or unit price pursuant to GC 6.1.4.2(1), on a time and material basis, in accordance with the provisions in Section 3 of Schedule E – Valuing Changes in the Work.
- 6.1.5 Without limiting the entitlement of the Contractor pursuant to GC 10.1.9.2 when there is a termination for convenience pursuant to GC 10.1.9.1, if any change in the Work is made by which the amount of Work to be done is decreased, or any portion of the Work is dispensed with, the Owner shall not be liable to the Contractor for any consequential, indirect or special damages and loss of profit, loss of opportunity or loss of productivity.
- 6.1.6 Subject to any entitlement of the Contractor expressly provided for under the Agreement, no course of conduct or dealing between the parties, no express or implied acceptance of additions, deletions or other revisions to the Work, and no Claims that the Owner has been unjustly enriched by any addition, deletion or other revision to the Work, whether in fact there is any such unjust enrichment or not, shall be the basis of a Claim Notice or any other Claim for additional payment under the Agreement or a Claim Notice for any extension of the Contract Time or any other Claim.
- 6.2 CHANGE ORDER**
- 6.2.1 When a change in the Work is proposed or required by the Owner, the Contract Administrator will provide the Contractor with a written description of the proposed change in the Work (a “**Contemplated Change Order**”). The Contractor shall promptly but in no event later than ten (10) Working Days (or such other period set out in row C.9 of the Information Sheet) after receipt of a Contemplated Change Order submit, in a form acceptable to the Contract Administrator, a method of adjustment or an amount of adjustment for the Contract Price, if any, and the adjustment in the Contract Time, if any, for the proposed change in the Work.
- 6.2.2 Subject to GC 6.1.4, when the Owner and Contractor agree to the adjustments in the Contract Price and Contract Time or to the method to be used to determine the



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adjustments, such agreement shall be reflected in a Change Order. The value of the Work performed as the result of a Change Order shall be included in the Proper Invoice.

- 6.2.3 A Change Order shall be a final determination or adjustment in the Contract Time, Contract Price and any other amendment to the Agreement as a result of the change in the Work and shall constitute a full and final settlement and satisfaction of all consequences to the Contractor of such change in the Work and shall be deemed to compensate Contractor fully for all effects of such change in the Work. For clarity, if a Change Order does not address an adjustment in the Contract Time, Contract Price or any other amendment to the Agreement, as the case may be, there shall be no adjustment in the Contract Time, Contract Price or any other amendment to the Agreement, as the case may be as a result of the change in the Work provided for in such Change Order.

**6.3 CHANGE DIRECTIVE**

- 6.3.1 If the Owner requires the Contractor to proceed with a change in the Work prior to the Owner and the Contractor agreeing upon the corresponding adjustment in Contract Price and/or Contract Time the Owner, through the Contract Administrator, shall issue a Change Directive.
- 6.3.2 Without limiting GC 6.3.1, a Change Directive may be used to direct a change in the Work that is only a change in the Construction Schedule or Contract Time.
- 6.3.3 Upon receipt of a Change Directive, the Contractor shall proceed immediately with the change in the Work.
- 6.3.4 The adjustment in the Contract Price, if any, for a change carried out by way of a Change Directive shall be determined in accordance with GC 6.1.4.
- 6.3.5 Without limitation to GC 6.3.3, upon receipt of a Change Directive, the Contractor shall promptly provide the Owner with an estimate of the cost of the performance of the change in the Work contemplated in the Change Directive and the impact on the Construction Schedule, if applicable, but in no event later than ten (10) Working Days (or such other period set out in row C.10 of the Information Sheet) after receipt of the Change Directive. If the Contractor, acting reasonably, requires more time to provide an estimate, it may notify the Owner of the date when the estimate will be provided.
- 6.3.6 Without limitation to GC 6.3.3, when the Owner and the Contractor reach agreement in respect of a Change Directive on the adjustment to the Contract Price and to the Contract Time, if any, such agreement shall be reflected in a Change Order. The Contractor shall not be entitled to include the value of the change in the Work performed as the result of such Change Directive in its Proper Invoices until, and unless, such Change Order has been executed.

**6.4 CONCEALED OR UNKNOWN CONDITIONS**

- 6.4.1 If the Owner or the Contractor discover conditions at the Site which are:

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- .1 subsurface or otherwise concealed physical conditions which existed before the commencement of the Work which differ materially from those indicated in, or inferable from, the Agreement; or
- .2 physical conditions, other than conditions due to weather, that are of a nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the Agreement,

then the observing party shall give Notice in Writing to the other party of such conditions before they are disturbed and in no event later than five (5) Working Days after first observance of the conditions.

6.4.2 The Contract Administrator will promptly, and in no event later than within twenty (20) Working Days after discovery thereof by the Owner or the Contractor, investigate such conditions and make a finding having regard to and subject to the liabilities and responsibilities assumed by the Contractor pursuant to 3.6 - EXAMINATION OF SITE and GC 4.1.4. If the finding is that the conditions differ materially and, having regard to and subject to the liabilities and responsibilities assumed by the Contractor pursuant to 3.6 - EXAMINATION OF SITE and GC 4.1.4, this would cause an increase or decrease in the Contract Time or Contract Price, the Contract Administrator, with the Owner's approval, will issue appropriate instructions for a change in the Work as provided in 6.2 - CHANGE ORDER or 6.3 - CHANGE DIRECTIVE. For clarity, the Contractor's entitlement to such change in the Work shall be determined by the Contract Administrator taking into account the respective liabilities assumed by the Owner and Contractor pursuant to 3.6 - EXAMINATION OF SITE and GC 4.1.4.

6.4.3 If the Contract Administrator finds that the conditions at the Site are not materially different or that no change in the Contract Price or extension of the Contract Time is justified, the Contract Administrator will report the reasons for this finding to the Owner and the Contractor in writing.

6.4.4 If such concealed or unknown conditions relate to Hazardous Materials, artifacts and fossils, or mould, the parties will be governed by the provisions of 4.3 - HAZARDOUS MATERIALS, 4.5 - ARTIFACTS AND FOSSILS and 4.4 – MOULD, as applicable.

**6.5 DELAYS**

6.5.1 If the Contractor is delayed in the completion of a critical path Work activity by:

- .1 subject to GC 6.5.3, an act or omission of the Owner, the Owner Representative, the Contract Administrator or anyone employed or engaged by them directly or indirectly, which is contrary to the provisions of the Agreement; or
- .2 by a stop work order issued by a court or other public authority,

then, except to the extent such event results from the negligent act or omission of the Contractor Parties or the default or breach of the Contractor's obligations under the Agreement or any other act or fault of the Contractor Parties, the Contract Time shall

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be extended for such reasonable time as agreed to by the Parties, taking into account such time period as recommended by the Contract Administrator and the Contract Price shall be adjusted to account for reasonable Losses incurred by the Contractor as the result of such delay including the Losses referred to in GC 6.5.8, as applicable, but excluding any consequential, indirect or special damages and loss of profit, loss of opportunity or loss of productivity resulting from such delay.

6.5.2 If the Contractor is delayed in the completion of a critical path Work activity by any cause beyond the Contractor's control, including:

- .1 war, blockades, and civil commotions;
- .2 labour disputes, strikes and lock-outs (other than lock-outs described in GC 6.5.3);
- .3 fire, unusual delay by common carriers or unavoidable casualties; or
- .4 abnormally adverse weather conditions at the Site which are different from those normally and customarily experienced at the Site (as documented by weather data from Environment Canada) over the past ten (10) years taking into consideration severity, duration and time of year conditions,

except to the extent such event results from the negligent act or omission of the Contractor Parties or the default or breach of the Contractor's obligations under the Agreement, then the Contract Time shall be extended for such reasonable time as agreed to by the Parties, taking into account such time period as recommended by the Contract Administrator. The extension of time shall not be less than the time lost as the result of the event causing the delay, unless the Contractor agrees to a shorter extension. The Contractor shall not be entitled to payment for Losses incurred by such delays except to the extent the Contractor would be entitled to reasonable Losses in accordance with GC 6.5.1 or if such delay is the cause of the stop work order in connection with the Contractor's termination of the Agreement pursuant to GC 10.2.1.

6.5.3 If the Contractor is delayed in the completion of a critical path Work activity by a lock-out of the Owner or the City of Toronto, except to the extent such event results from the negligent act or omission of the Contractor Parties or the default or breach of the Contractor's obligations under the Agreement:

- .1 the Contract Time shall be extended for the duration of such lock-out, provided that if the duration of such lock-out exceeds five (5) Working Days, the Contract Time shall be extended by the duration of such lock-out plus an additional (5) Working Days; and
- .2 the Contract Price shall only be adjusted to account for direct reasonable costs the Contractor incurs for leased Construction Equipment as a result of such lock-out, but excluding any consequential, indirect or special damages and loss of profit, loss of opportunity or loss of productivity resulting from such delay.

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6.5.4 No extension of the Contract Time shall be made for delay unless Notice in Writing of the cause of delay is given to the Contract Administrator and Owner in accordance with 6.7.1.

6.5.5 If no:

- .1 schedule is made under GC 2.2.12 for the Contract Administrator to provide Supplemental Instruction; or
- .2 time period is provided elsewhere in the Agreement where the Contract Administrator is to provide instructions to the Contractor,

then no request for an extension of the Contract Time shall be made by the Contractor because of failure of the Contract Administrator to provide such Supplemental Instructions or other instructions, as applicable, until fifteen (15) Working Days after demand for such Supplemental Instructions or other instructions, as applicable, has been made or such longer period of time reasonably required under the circumstances.

6.5.6 If the Work is behind schedule for a reason other than as described in GC 6.5.1, 6.5.2 or 6.5.3, the Contractor, at its expense and subject to GC 6.5.7, shall:

- .1 prepare and present to the Contract Administrator and Owner, for review and approval, a recovery plan (“**Recovery Plan**”) as soon as practical, but not later than three (3) Working Days after the earlier of the Contractor becoming aware of the Work being behind schedule or the Owner notifying the Contractor that the Work is behind schedule. Such Recovery Plan shall include information and details required by the Contract Administrator and Owner, acting reasonably, and shall demonstrate how the Contractor shall achieve the recovery of the schedule and bring the Work back on schedule. Any costs incurred by the Owner for the services of the Contract Administrator in reviewing multiple submissions of the Recovery Plan shall be borne by the Contractor; and
- .2 commence the implementation of the Recovery Plan approved by the Contract Administrator and Owner as soon as practical, but not later than within two (2) Working Days of the Contract Administrator and Owner providing approval of the Recovery Plan; and
- .3 otherwise take all measures necessary to bring the Work back on schedule (including expediting, increasing the labour force, supervisors and equipment, and working overtime).

For clarity, this GC 6.5.6 shall not limit the other provisions of 6.5.

6.5.7 For greater certainty and without limiting any other provision in the Agreement, there shall be no extension of the Contract Time or increase in the Fixed Price or Unit Prices to the extent a delay was caused by the negligent act or omission of the Contractor Parties or by the Contractor’s default or breach of the Agreement. Without limiting any other provision in the Agreement, the Owner shall be reimbursed by the Contractor for all Losses incurred by the Owner as the result of such delay, including

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all services required by the Owner from the Contract Administrator and Owner Representative as a result of such delay by the Contractor and, in particular, the costs of the Contract Administrator's and Owner Representative's services during the period between the Scheduled Date for Substantial Performance of the Work as the same may be extended through the provisions of the GC and the actual date of Substantial Performance of the Work achieved by the Contractor. For clarity, such costs shall be in addition to any Delay Liquidated Damages payable by the Contractor.

- 6.5.8 The Contractor shall be responsible for the care, maintenance and protection of the Work in the event of any suspension of construction as a result of the delay described in GC 6.5.1, 6.5.2 or 6.5.3. In the event of such suspension, the Contractor shall be reimbursed by the Owner for the reasonable Losses incurred by the Contractor for such care, maintenance and protection, but excluding the costs of the Contractor's head office Personnel and any consequential, indirect or special damages and loss of profit, loss of opportunity or loss of productivity.
- 6.5.9 Without limiting the generality of any other provision in the Agreement, the Contractor shall use best efforts to mitigate the impact of any delay events dealt with by GC 6.5.1, 6.5.2 or 6.5.3 and any other matters dealt with in a Claim Notice upon the performance of the Work, the Contract Time and the Contract Price. If the Contractor does not exercise such best efforts, the Contractor's entitlements under any applicable Claim Notice will be reduced or invalidated to reflect impacts that would have been avoided by such mitigation.
- 6.5.10 Any extension of the Contract Time or adjustment in the Contract Price provided for in this 6.5 – DELAYS shall be authorized in accordance with 6.2 - CHANGE ORDER.

## 6.6 DELAY LIQUIDATED DAMAGES

- 6.6.1 The Contractor acknowledges and agrees that the Owner will suffer financial Loss if the Work is not completed within the time specified in the Agreement. The Contractor also recognizes the delays, costs and difficulties involved in proving the actual Loss suffered by the Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, the Contractor agrees that if the date of Substantial Performance of the Work is delayed past the Scheduled Date for Substantial Performance of the Work, subject to any adjustment in Contract Time as provided for in the Agreement, the Contractor shall pay Owner liquidated damages in the amount designated in row B.6 of the Information Sheet ("**Delay Liquidated Damages**") for each and every Calendar Day or Working Day, as applicable, of delay until the Contractor has attained Substantial Performance of the Work. The Contractor further expressly acknowledges and agrees that Delay Liquidated Damages payable by the Contractor are:
- .1 not intended to be a penalty and are a reasonable and genuine pre-estimate of the actual damage that will be incurred by the Owner if the Contractor fails to achieve Substantial Performance of the Work in accordance with the requirements of the Agreement (including paragraph 1.3 of Section 1 of the Agreement);

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- .2 in addition to, and without prejudice to, any other right or remedy available to the Owner under the Agreement or otherwise and does not limit or reduce any obligation or liability of the Contractor under the Agreement or otherwise; and
- .3 not a cap on the damages payable by, or liability of, the Contractor, if the Contractor fails to achieve Substantial Performance of the Work in accordance with the requirements of the Agreement (including paragraph 1.3 of Section 1 of the Agreement).

6.6.2 If there is a delay in attaining Substantial Performance of the Work, in spite of the payment of Delay Liquidated Damages in accordance with GC 6.6.1, the Contractor shall continue to perform and expedite the Work in accordance with the Agreement.

6.6.3 The Contractor shall pay Delay Liquidated Damages pursuant to 6.6.1 on a monthly basis as they accrue.

**6.7 CLAIMS PROCEDURE**

6.7.1 The Contractor shall provide a Notice in Writing to the Owner and the Contract Administrator of any claim for a change in the Contract Price, extension of the Contract Time or other changes to the Work or amendments to the Agreement (“**Claim Notice**”) within ten (10) Working Days after the Contractor knows, or should know applying the Standard of Care, of the event or circumstance giving rise to such claim. Any Claims by the Contractor in respect of such claim or Claim Notice shall be irrevocably barred, and waived and released by the Contractor unless the Contractor has strictly complied with the applicable requirements of 6.CHANGES IN THE WORK and the Contractor has provided such Claim Notice within the prescribed time period.

6.7.2 Without limiting the generality of any other provision in the Agreement, the Contractor shall immediately upon commencing Work that may result in a Claim Notice, keep such Contractor Records that relate to such Work (including any T&M Change in the Work) and the Claim Notice arising therefrom (including Daily Contractor Work Records) as may be necessary to support and substantiate such Claim Notice. The Contractor shall attempt, on a daily basis, to reconcile its Daily Contractor Work Records with the records of the Contract Administrator or Owner Representative, as applicable and have the Daily Contractor Work Records signed by the Contract Administrator or Owner Representative, as applicable. For clarity, the reconciling of the Contractor’s Daily Work Records with the records of the Contract Administrator or Owner Representative, as applicable, shall not be construed to be acceptance of a Claim Notice. If it is not possible to reconcile the Daily Contractor Work Records, then the Contractor shall submit the un-reconciled Daily Contractor Work Records with its Claim Notice, whereby the resolution of the dispute about the Daily Contractor Work Records shall not be resolved until there is a resolution of the applicable Claim Notice.

6.7.3 Subject to GC 6.7.4, the Claim Notice shall:

- .1 identify the item or items in respect of which the Claim Notice arises;

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- .2 include the date the Contractor first became aware of the event or circumstance giving rise to the Claim Notice;
- .3 state the grounds, contractual or otherwise, upon which the Claim Notice is made;
- .4 provide sufficient and detailed information and documentation to allow the Contract Administrator and the Owner to properly consider the Claim Notice of the Contractor including:
  - (1) a description of the portions of the Work affected thereby;
  - (2) the cause of the change in the Contract Time, a description of such change, an assessment of the impact such change will have on the Construction Schedule (including an explanation as to how the critical path will be affected) and a reasonable estimate of the number of Calendar Days by which the Work will be delayed and date and time when the delay was experienced;
  - (3) a detailed account of the amount claimed and a breakdown of the change in the Contract Price;
  - (4) details of mitigation strategies applied; and
  - (5) all other pertinent details and backup information and documents; and
- .5 include the Contractor Records (including Daily Contractor Work Records) maintained by the Contractor supporting such Claim Notice.

The Contractor shall submit further updates on the Claim Notice to the Owner and the Contract Administrator as they become available, but in no event shall the Contractor submit any further updates within the fourteen (14) Calendar Days prior to the deadline for the Contract Administrator to issue its determination pursuant to GC 6.7.6.

- 6.7.4 Where the event giving rise to the Claim Notice has a continuing effect, the Claim Notice submitted under GC 6.7.2 shall be considered to be an interim Claim Notice and the Contractor shall, submit further updates on the Claim Notice at such intervals as the Owner or Contract Administrator may reasonably require. Such updates shall give the accumulated amount of the Claim Notice and any further grounds upon which it is based, as a part of the information and documents which the Contractor is required to provide in accordance with GC 6.7.2. The Contractor shall submit a final Claim Notice after the end of the effects resulting from the event as a part of the information and documents which the Contractor is required to provide in accordance with GC 6.7.2.
- 6.7.5 The Contract Administrator may, from time to time, request the Contractor to submit any further and other particulars as the Contract Administrator considers necessary to assess the Claim Notice. The Contractor shall submit the requested information within

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thirty (30) Calendar Days of receipt of such request or such shorter time as required by the Contract Administrator.

6.7.6 Within ninety (90) Calendar Days of initial receipt of the Claim Notice pursuant to GC 6.7.1, or such longer period of time required by Owner, the Owner, or if authorized by the Owner, the Contract Administrator, shall prepare and issue a determination to the Contractor regarding the validity of the Claim Notice. Such determination may be reflected in a Change Order or Change Directive to the extent required pursuant to GC 6.1.2. The Contractor shall be conclusively deemed to have accepted such determination of the Owner, or the Contract Administrator, as the case may be, and to have expressly waived and released the Owner from all Claims in respect of the Claim Notice including the particular matter dealt with in that determination unless, within fifteen (15) Working Days after receipt of that determination, the Contractor provides a revised Claim Notice or disputes that determination in accordance with 11.DISPUTE RESOLUTION.

**6.8 SERVICE STANDARDS FOR CONTRACTOR IN RESPONDING TO THIRD PARTY CLAIMANTS**

6.8.1 For the purposes of this 6.8 - SERVICE STANDARDS FOR CONTRACTOR IN RESPONDING TO THIRD PARTY CLAIMANTS, "Third Party Claimant" means any Person asserting a Claim that is not a party to the Agreement other than a Subcontractor, Supplier or Sub-subcontractor asserting a Claim in respect of the Work or the Project:

- .1 for which such Subcontractor, Supplier or Sub-subcontractor is entitled to assert rights (including lien rights) under the Construction Act against the Owner; or
- .2 which relate to a Claim the Contractor is asserting against the Indemnitees.

6.8.2 Without limiting the obligations of the Contractor under 6.7 – CLAIMS PROCEDURE and GC 6.8.3 or elsewhere in the Agreement, the Contractor shall, or shall cause the Contractor's insurer to, in the manner and extent requested by the Owner:

- .1 respond to all Third Party Claimants in a timely manner;
- .2 ensure that Third Party Claimants are provided with accurate information about the status of their Claim, and
- .3 where appropriate, notify Third Party Claimants of the relevant activity on their Claims and provide them with information.

6.8.3 If the Contractor receives notice of a Claim of a Third Party Claimant relating to or arising out of the Agreement, the Contractor shall immediately forward the notice of Claim to the City of Toronto Clerk's office at [claims@toronto.ca](mailto:claims@toronto.ca).

6.8.4 Once the Contractor receives notice of a Claim of a Third Party Claimant relating to or arising out of the Agreement (including any notice from the City of Toronto's adjuster), the Contractor shall, or shall cause the Contractor's insurer to, in the manner and extent requested by the Owner:



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- .1 within five (5) Working Days of receiving notice of such Claim, send a letter to the Third Party Claimant acknowledging receipt of such Claim and provide the Third Party Claimant with the contact information of the Contractor Project Manager, or another Person representing the Contractor, to whom the Third Party Claimant can refer questions regarding such Claim;
  - .2 conduct an investigation of such Claim and make a decision regarding such Claim that is based on a proper consideration of the facts; and
  - .3 within twenty-five (25) Working Days of receiving notice of such Claim, provide the Third Party Claimant with a letter advising of the results of the investigation and clearly explaining the Contractor's decision regarding such Claim or should the Contractor require the involvement of their insurance company to resolve such Claim, this shall be forwarded to the insurance company and the Third Party Claimant shall be notified within the allotted period of time above.
- 6.8.5 The Owner may, in writing, provide an extension of time for responding to the Claim of a Third Party Claimant pursuant to this 6.8- SERVICE STANDARDS FOR CONTRACTOR IN RESPONDING TO THIRD PARTY CLAIMANTS if the Contractor or the Contractor's insurer, in writing, provides the Owner with a request for an extension as well as the reasons for the extension. In considering whether to provide such an extension, the Owner shall consider the Contractor's, or the Contractor's insurer's, reasons for the request and all of the surrounding circumstances including good customer service standards. Once the Contractor forwards such Claim to its insurer, the resolution of such Claim shall follow the insurance industry standards for claim investigation.
- 6.8.6 If an extension of time is provided under GC 6.8.5, the Contractor, or the Contractor's insurer, shall write to the Third Party Claimant advising that the investigation is on-going, advise of the date by which the Contractor or its insurer will report the results of the investigation to the Third Party Claimant, and explain the reasons why additional time is required to make a decision on the Claim.
- 6.8.7 A copy of all letters sent to a Third Party Claimant by or on behalf of the Contractor, including letters sent by the Contractor's insurer, pursuant to this 6.8- SERVICE STANDARDS FOR CONTRACTOR IN RESPONDING TO THIRD PARTY CLAIMANTS, shall be copied to the Owner, and the City of Toronto's adjuster.
- 6.8.8 Where appropriate, the Contractor shall ensure its insurer takes all of the appropriate steps to meet the obligations under GC 6.8.1 to 6.8.7.
- 6.8.9 The Contractor shall provide to the Owner monthly updates on the status of all Claims received from Third Party Claimants until resolution of such Claims.
- 6.8.10 If the Contractor fails to meet any of its obligations under this 6.8 - SERVICE STANDARDS FOR CONTRACTOR IN RESPONDING TO THIRD PARTY CLAIMANTS, the Owner may provide the Contractor with Notice in Writing that the relevant obligations have not been fulfilled. If the Contractor does not fulfil such obligations within five (5) Working Days from receipt of such Notice in Writing, the Owner, without prejudice to any other right or remedy, may hold back an amount of

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\$10,000.00 from monies payable to the Contractor under the Agreement. The Owner may exercise its right of holdback under this section for each Claims of a Third Party Claimant for which the Contractor fails to meet its obligations under 6.8 - SERVICE STANDARDS FOR CONTRACTOR IN RESPONDING TO THIRD PARTY CLAIMANTS. Without limiting any of the Owner's other rights of holdback or set-off, the Owner will release the monies held back pursuant to this GC 6.8.10 once it has received evidence that the Contractor has sent the Third Party Claimant a letter(s) in accordance with GC 6.8.4.1 and 6.8.4.3.

**7. INSURANCE, CONTRACT SECURITY, BONDS AND CONTRACTUAL HOLDBACK**

**7.1 INSURANCE**

7.1.1 Without restricting the generality of 8.1 – INDEMNIFICATION or any other provision of the Agreement, the Contractor shall provide, maintain and pay:

- .1 for the insurance coverages listed in this 7.1 - INSURANCE under GCs 7.1.2, 7.1.4, 7.1.5, 7.1.6, 7.1.7, 7.1.8 and 7.1.9 as such coverages may be modified by Row D.1 of the Information Sheet;
- .2 if required by row D.1 of the Information Sheet, coverage under GC 7.1.3; and
- .3 such additional insurance coverages as required by Row D.1 of the Information Sheet.

7.1.2 Commercial General Liability Insurance:

- (1) in the amount of five million dollars (\$5,000,000) per occurrence;
- (2) that includes the Indemnitees and such other Persons identified by the Owner from time to time as additional insureds with respect to liability arising out of the operation of the Contractor with regard to the Agreement; and
- (3) that provides for a cross liability and/or severability of interest, contractual liability, Owner's and Contractor's protective liability, broad form property damage, contingent/and or employer's liability, products and completed operations, non-owned automobile liability and, if applicable to the insured operations as detailed in the Agreement, coverage for blasting, explosion, shoring, underpinning, underground works, pile driving and collapse; and
- (4) which includes completed operations coverage for a period of six (6) years from the date of Substantial Performance of the Work, unless otherwise indicated in the Agreement. If the Contractor fails to comply with the requirements of this GC 7.1.2(4) or to maintain such coverage any contractual period for claiming indemnity described in the Agreement will not be binding on the Owner.

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7.1.3 Contractor's Pollution Liability Insurance

- .1 If specified in row D.1 of the Information Sheet, pollution liability insurance. The policy shall have a limit of not less than Two Million Dollars (\$2,000,000) per claim limit. The policy shall cover third-party injury and property damage claims, including clean-up costs, as a result of pollution conditions arising from the Contractor's, Subcontractor's, Sub-subcontractor's or Supplier's operations and completed operations (i.e. Work performed). If written as a single project policy, the policy shall include an extended reporting period of 24 months. If written as an annual policy, the policy should be kept in force for 24 months from the date of the later of the: issuance of the Final Acceptance Certificate or termination of the Agreement, as the case may be. The Owner shall be included as an additional insured on this policy.

7.1.4 All Risk Property Insurance

- .1 All risk property insurance shall be written on a replacement cost basis based on the Contract Price, on the building or structure while in the course of construction, and on all Products, Construction Equipment, supplies and/or systems, including boiler and machinery, and pressure vessels if applicable, that form part of the Work or are used in the performance of the Work. The policy may be written separately in the form of a Builder's Risk or Installation Floater; and Boiler and Machinery policy and/or Contractor's Equipment policy, as appropriate to the Project. The Owner shall be included as an additional insured and a joint loss payee on these policies, except for the Contractor's Equipment policy. This GC 7.1.4 is subject to GC 3.14.4.
- .2 The all risk property insurance shall provide that, in the event of a loss or damage:
  - (1) unless directed otherwise by the Owner in its sole and absolute discretion, the Contractor shall act on behalf of both the Owner and the Contractor for the purpose of adjusting the amount of such loss or damage payment with the insurers and payment shall be made to the Owner and the Contractor as their respective interests may appear;
  - (2) when the extent of the loss or damage is determined the Contractor shall proceed to restore the Work. Loss or damage shall not affect the rights and obligations of either party under the Agreement except that the Contract Time may be extended relative to the extent of the loss or damage in accordance with 6.5 – DELAYS; and
  - (3) the Contractor shall be entitled to receive from the Owner, in addition to the amount due under the Agreement, the amount at which the Owner's interest in restoration of the Work has been appraised, such amount to be paid as the restoration of the Work proceeds and in accordance with the requirements of 4.5.3. CONTRACT PRICE AND PAYMENT. In addition, the Contractor shall be entitled to receive from the payments made by the insurers the amount of the Contractor's interest in the restoration of the Work.

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### 7.1.5 Automobile Liability Insurance

- .1 Automobile liability insurance in respect of all licensed owned/leased vehicles that will be utilized in the performance of the Work, unless otherwise required by the Agreement. Such automobile liability insurance shall have limits of not less than five million dollars (\$5,000,000).

### 7.1.6 Professional Liability Insurance

- .1 If providing specialized consulting services including architectural, design, mechanical engineering, or other engineering professional services as a part of the Work, the Contractor shall provide and/or cause any Subcontractor or Sub-subcontractor, where such Subcontractor or Sub-subcontractor is under a professional obligation to maintain the same, Professional Liability Insurance or Errors and Omissions Insurance in the amount of not less than five million dollars (\$5,000,000) and shall continue for twenty-four (24) months following the date of the earlier of the issuance of the Final Acceptance Certificate or termination of the Agreement, as the case may be.

### 7.1.7 Aviation Liability Insurance

- .1 If used directly or indirectly in performance of the Work by the Contractor, Subcontractor, Sub-subcontractor or Supplier, aviation liability insurance with respect to owned or non-owned aircraft, remotely piloted aircraft, unmanned aerial vehicles or drones including the use of additional premises, and shall include, if applicable, coverage for bodily injury, death, aircraft passenger hazard, and damage to property including loss of use thereof. Such insurance shall have limits of not less than five million dollars (\$5,000,000).

### 7.1.8 Watercraft Liability Insurance

- .1 If used directly or indirectly in performance of the Work by the Contractor, Subcontractor, Sub-subcontractor or Supplier, watercraft liability insurance with respect to owned or non-owned watercraft including the use of additional premises, and shall include coverage for bodily injury, death, and damage to property including loss of use thereof. Such insurance shall have limits of not less than five million dollars (\$5,000,000).

### 7.1.9 Marine Insurance

- .1 If carrying out any ocean, coastal and inland waterway shipments, the Contractor shall ensure a marine insurance policy is in place to fully insure the full replacement value of the shipment, insurance, and freight plus 10% and should cover the cargo on an "All Risks" basis from the point of origin of shipment until delivery in Toronto, Ontario, including the risk of unloading at the delivery point.
- .2 The Contractor shall maintain or cause to be maintained, if applicable, hull and machinery insurance covering the full replacement cost of all barges, scows and

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other watercraft owned, rented or leased by the Contractor or any Subcontractor or Sub-subcontractor.

7.1.10 The Contractor shall be responsible for all deductible and self-insured retention amounts under the policies required by this 7.1 - INSURANCE.

7.1.11 Insurance Requirements and Duration

- .1 Unless specified otherwise in this 7.1 - INSURANCE, the duration of each insurance policy shall be from on or before Commencement Date until the date of the earlier of the issuance of the Final Acceptance Certificate or termination of the Agreement, as the case may be.
- .2 Prior to the execution of the Agreement, and upon placement and at amendment or extension of all or any part of the insurance, the Contractor shall within five (5) Working Days provide the Owner with confirmation of coverage on the Owner's certificate of insurance form as attached as Form 2 of Schedule G – Forms or on a form acceptable to the Owner, without notice or demand by the Owner. Prior to the expiration date of all or any part of the insurance the Contractor shall submit to the Owner such confirmation of coverage or a replacement policy without notice or demand by the Owner. The insurance documents required by this GC 7.1.11.2 shall be signed by the insurer or an authorized representative of the insurer.
- .3 If the Owner receives notice of cancellation for nonpayment of the insurance premium, the Owner may, but is not obliged to, pay the premium of any policy of insurance required to be maintained herein and make a formal demand for reimbursement of such costs from the Contractor. If the Contractor fails to pay the cost of the insurance placed by the Owner within fifteen (15) Calendar Days of the date on which the Owner made a formal demand for reimbursement of such costs, the Owner may set-off the costs thereof in accordance with 4.15 – OWNER'S SET-OFF.
- .4 The Contractor shall, on request, within five (5) Working Days provide the Owner with a certified true copy of each insurance policy exclusive of information pertaining to premium or premium bases used by the insurer to determine the cost of the insurance. The certified true copy shall include a signature of the insurer or the underwriter or the broker.
- .5 All insurance policies taken out by the Contractor shall be placed with insurers satisfactory to the Owner in its sole and absolute discretion. Without limiting the generality of the foregoing, all insurers must be licensed to underwrite insurance in the Province of Ontario, except to the extent the Owner waives such requirement in writing.
- .6 The insurance policies required pursuant to this GC shall:
  - (1) be primary and shall not call into contribution any insurance available to the Owner; and

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- (2) contain a waiver of subrogation rights which the insurers may have against the Owner or any other additional insured, except for the Automobile Liability and Professional Liability policies.
  - .7 The amount of the deductible for the purpose of the Agreement shall not be more than \$25,000.00. Following the award of the Agreement, the Owner reserves the right to negotiate a higher or lower deductible, as appropriate.
  - .8 In addition to the insurance required by 7.1 – INSURANCE, the Contractor shall, at its cost, maintain such other forms of insurance as the Owner, acting reasonably, may require from time to time, in amounts and for risks against which a prudent contractor would insure.
  - .9 Each policy (except for the policy of automobile liability insurance required under GC 7.1.5) shall contain an endorsement requiring the insurer(s) to notify the Owner in writing, by registered mail, at least thirty (30) Calendar Days (fifteen (15) Calendar Days if cancellation is due to non-payment of premium), prior to any cancellation of the Contractor’s insurance.
  - .10 “Claims made” insurance policies shall not be permitted, except for the Professional Liability and Contractor’s Pollution Liability policy.
  - .11 The insurance coverages required by 7.1 – INSURANCE shall allow for partial or total use and occupancy by the Owner prior to Substantial Performance of the Work in accordance with 3.14.
- 7.1.12 The Contractor shall cause the Subcontractors and Suppliers to provide and maintain, at the expense of the Subcontractors and Suppliers, the insurance set out in GC 7.1.3 and 7.1.5.

**7.2 CONTRACT SECURITY**

- 7.2.1 The Contractor shall, prior to the Commencement Date or within the specified time, provide to the Owner any contract security specified in row D.2 of the Information Sheet.

**7.3 SURETY BONDS**

- 7.3.1 Unless expressly indicated otherwise in row D.5 of the Information Sheet, the Contractor shall provide surety bonds, which shall be:
  - .1 a performance bond with a coverage limit of fifty percent (50%) of the aggregate amount of the Fixed Price and the estimated Total Price of Unit Price Work (calculated using the Estimate of Units for Completion), plus Value Added Taxes; and a labour and material payment bond with a coverage limit of fifty percent (50%) of such aggregate amount;
  - .2 in compliance with the requirements of the Construction Act and in the form prescribed by the Construction Act; and

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.3 delivered to the Owner prior to the execution of the Agreement by both the Owner and the Contractor.

7.3.2 The premiums for the bonds required by the Agreement are included in the Fixed Price and Unit Prices.

7.3.3 If the Contract Price increases during the Performance of the Work, the Owner shall have the right, in its sole discretion and at any time, to require riders be provided to the existing bonds, to increase the value of the bonds to fifty percent (50%) of the total of the Contract Price plus Value Added Taxes.

**7.4 CONTRACTUAL HOLDBACK**

7.4.1 The Owner shall retain a contractual holdback equal to the amount(s) identified in row D.3 of the Information Sheet (the aggregate of such amounts retained by the Owner being the “**Contractual Holdback**”). For clarity, the Owner shall not retain Contractual Holdback in respect of the payment of Lien Holdback pursuant to 4.11 - PAYMENT OF LIEN HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK or the payments pursuant to 4.12 – PAYMENTS UPON TOTAL PERFORMANCE OF THE WORK.

7.4.2 The Owner, without prejudice to any other right or remedy, shall be entitled to apply the Contractual Holdback towards Losses the Owner may suffer, sustain or incur in connection with the:

- .1 exercise of its rights in respect of the Contractor’s failure to correct a default pursuant to GC 10.1.5;
- .2 failure of Contractor to complete the Work and correct deficient Work after the issuance of the certificate of Substantial Performance of the Work in accordance with the completion schedule established pursuant to GC 4.10.3; and
- .3 exercise of its right to correct Deficiencies or make good damaged work or property pursuant to GC 2.5.4 and 8.3.5.

7.4.3 Upon the Total Performance of the Work, the portion of the Contractual Holdback which remains after the Owner has exercised its rights pursuant to 7.4.2, if any, shall be reduced by the percentage amount identified in row D.4 of the Information Sheet. The reduced amount of the Contractual Holdback (without any interest owed by the Owner) shall be eligible to be included in the Proper Invoice submitted pursuant to GC 4.12.1.1.

7.4.4 After the issuance of the Final Acceptance Certificate, the Contractor may submit a Proper Invoice to the Owner in accordance with the applicable requirements of 4.8 – PROPER INVOICES requesting release of the portion of the Contractual Holdback which remains after the Owner has exercised its rights pursuant to GC 7.4.2, if any. The Owner shall make payment to the Contractor of such remaining portion of the Contractual Holdback (without any interest owed by the Owner) in accordance with the applicable requirements of 4.9 – PROGRESS PAYMENT.

**8. INDEMNIFICATION, WAIVER OF CLAIMS AND WARRANTY**

**8.1 INDEMNIFICATION**

8.1.1 The Contractor shall indemnify, defend and hold harmless the Owner, the mayor of the City of Toronto and each of the City of Toronto’s agencies, boards, commissions, Personnel, elected officials, servants, volunteers and advisers (including the Contract Administrator and the Owner Representative), and their respective successors and assigns (collectively as the “**Indemnitees**”) from and against all Claims brought against, or Losses suffered, sustained, or incurred by, the Indemnitees which may be directly or indirectly attributable to, or arising or alleged to arise out of:

- .1 the negligent acts or omissions of the Contractor Parties;
- .2 any deliberate act of wrongdoing or wilful misconduct or fraud of a Contractor Party including intentional misrepresentation; or
- .3 the performance of or the failure to perform any of the Contractor’s obligations under the Agreement

(collectively, the “**Subject Matter of Indemnity**”). The Subject Matter of Indemnity includes:

- .4 all Losses that any of the Indemnitees may suffer, sustain or incur arising in respect of bodily injury, illness or death of any individual or physical loss of or damage to tangible property (including all or any part of the Site or any other tangible property related thereto); and
- .5 all Claims arising in respect of bodily injury, illness or death of any individual or physical loss of or damage to tangible property.

8.1.2 Without limiting the generality of any other provision in the Agreement, the Contractor shall indemnify, defend and hold harmless the Indemnitees from and against all Claims brought against, or Losses suffered, sustained, or incurred by the Indemnitees which may be directly or indirectly attributable to, or arising or alleged to arise out of:

- .1 a lien or subsequent lawsuit brought in connection with any lien by a Subcontractor, Sub-subcontractor or Supplier;
- .2 the infringement or an alleged infringement of any patented invention or copyright by the Contractor Parties in connection with the Work including the Products;
- .3 the Contractor’s failure to comply with the requirements of 4.3 – HAZARDOUS MATERIALS;
- .4 the Contractor’s failure to comply with the requirements of OHSA and the duties, responsibilities and obligations of the constructor under OHSA;
- .5 the Contractor’s failure to comply with the requirements of GC 11.2.16 or 3.8.2.3(3);



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- .6 a Subcontractor, Supplier or Sub-subcontractor's failure to comply with the requirements of GC 3.8.2.3(3);
  - .7 the presence of mould caused by the Contractor's operations under the Agreement as determined in accordance with GC 4.4.2; or
  - .8 the Contractor's failure to comply with the requirements of GC 9.1.6.
- 8.1.3 The Contractor shall pay to the Indemnitees, or any of them, on demand the amount of all Losses and Claims for which the Contractor is obligated to indemnify the Indemnitees and any moneys paid or payable by the Indemnitees in settlement or in discharge or on account thereof. If the Contractor fails to make such payments within ten (10) Working Days after such demand, the Owner may set-off such payments in accordance with 4.15 – OWNER'S SET-OFF.
- 8.1.4 The Owner shall indemnify, defend and hold harmless the Contractor from and against all Claims brought against the Contractor by third parties, or Losses suffered, sustained, or incurred by the Contractor in respect of such third party Claims, that are attributable to, or arise out of, the Contractor's direct involvement in the Agreement, provided such third party Claims are directly caused by the negligent act or omission of the Owner in the performance of the Owner's obligations under the Agreement, and then only to the extent the Losses was caused by the Owner.
- 8.1.5 The Owner shall indemnify, defend and hold harmless the Contractor from and against all Claims brought against the Contractor, or Losses suffered, sustained, or incurred by the Contractor arising out of the Contractor's performance of its obligations under the Agreement which are attributable to, or arise out of
- .1 a lack of or defect in title or an alleged lack of or defect in title to the Site; or
  - .2 an infringement of a patent of invention directly resulting from the use of a model, plan or design that was supplied to the Contractor by the Owner as part of the Agreement,
- but excluding any consequential, indirect or special damages and loss of profit, loss of opportunity or loss of productivity. The Contractor expressly waives the right to indemnity for Claims other than those stated above.
- 8.1.6 The Contractor hereby authorizes and empowers the Owner or its solicitor to defend, settle or compromise any of the Claims described in GC 8.1.1 and 8.1.2 as the Owner or its solicitor may deem expedient. The Contractor shall ratify and confirm all the acts of the Owner and its solicitor undertaken pursuant to this GC 8.1.6 and shall pay to such solicitor on demand his or her reasonable costs of any such defense, settlement and/or compromise. If the Contractor fails to make such payments to the solicitor, the Owner may set-off such payments in accordance with 4.15 – OWNER'S SET-OFF.
- 8.1.7 The Contractor shall not settle or compromise any of the Claims described in GC 8.1.1 or 8.1.2, for which it is liable to indemnify, defend and hold harmless the Owner without first obtaining the consent of the Owner with such consent not to be unreasonably withheld or delayed.

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8.1.8 The Contractor acknowledges that the Owner holds the benefit of any covenant, release or indemnity in the Agreement, including the covenants of the Contractor in GC 8.1.1, 8.1.2 and 8.1.3, that is expressly intended to extend to include the Indemnitees (other than the Owner) as third party beneficiaries as trustee and agent for such Indemnitees. The Owner shall be entitled to enforce the rights of such Indemnitees as third party beneficiaries under such covenant and indemnities.

8.1.9 8.1 - INDEMNIFICATION in no way limits any other liability or obligation of the parties in respect of the Agreement.

**8.2 WAIVER OF CLAIMS**

8.2.1 With its Proper Invoice for the Lien Holdback submitted in accordance with 4.11 - PAYMENT OF LIEN HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK, the Contractor shall include a list setting out the status of all outstanding Claim Notices which have been submitted in strict compliance with 6.7 – CLAIMS PROCEDURE. For clarity, notwithstanding any other provision of the Agreement to the contrary:

- .1 any Claim Notices submitted prior to such Proper Invoice, but which are not set out in such list shall be deemed to be irrevocably barred, and waived and released by Contractor; and
- .2 any Claims not included in such list shall be deemed to be irrevocably and unconditionally barred, and waived and released by Contractor, except for payment of the Lien Holdback which is the subject matter of such Proper Invoice, payment of the Contractual Holdback and any Claims in respect of Work to be performed sixty (60) Days prior to the date of Substantial Performance and on and after the date of Substantial Performance of the Work.

8.2.2 With its Proper Invoice submitted pursuant to GC 4.12.1.1 the Contractor shall include a list setting out the status of all outstanding Claim Notices which have been submitted in strict compliance with 6.7 – CLAIMS PROCEDURE. For clarity, notwithstanding any other provision of the Agreement to the contrary:

- .1 any Claim Notices submitted prior to such Proper Invoice, but which are not set out in such list shall be deemed to be irrevocably barred, and waived and released by Contractor; and
- .2 any Claims not included in such list shall be deemed to be irrevocably and unconditionally barred, and waived and released by Contractor, except for payment of any remaining Lien Holdback and the payment which is the subject matter of such Proper Invoice.

**8.3 WARRANTY**

8.3.1 The Contractor warrants that all Work shall be free of Deficiencies including in materials and workmanship and conform to the requirements of the Agreement during the Warranty Period. Except as expressly provided elsewhere in the Agreement, the Contractor does not warrant that the Owner Supplied Materials are free of

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Deficiencies. For clarity, this does not limit any warranty obligations of the Contractor for Work in respect of, or in connection with, the Owner Supplied Materials.

- 8.3.2 The Owner or Contract Administrator shall promptly give the Contractor Notice in Writing of observed Deficiencies which occur during the Warranty Period.
- 8.3.3 The Contractor shall, at the Contractor's cost, commence correction of Deficiencies in the Work which appear prior to and during the Warranty Period promptly, and in no event later than within ten (10) Working Days after receipt of Notice in Writing from the Owner or Contract Administrator of observed Deficiencies, and promptly complete the correction of such Deficiencies. The obligation of the Contractor to perform the corrective Work in accordance with this 8.3 – WARRANTY shall include the provision of all necessary labour and materials and the removal and replacement of covering materials. The carrying out of the correction of Deficiencies shall be executed at times convenient with the Owner which may entail overtime Work on the part of, and at the cost of, the Contractor. For greater certainty, if the Contractor is notified of Deficiencies prior to the end of the Warranty Period, then the Contractor shall make good the Deficiencies, notwithstanding that the warranty Work may commence or extend beyond the end of the Warranty Period.
- 8.3.4 The Contractor shall, at its cost, make good or pay for damage or destruction to other parts of the Work, the Owner's or other contractors' property or any other property caused by the Deficiencies during the Warranty Period or the correction of such Deficiencies.
- 8.3.5 If after receipt of the Owner's or Contract Administrator's Notice in Writing, the Contractor fails to, within the required period, commence and complete the correction of Deficiencies or make good damage or destruction to other parts of the Work, the Owner's or other contractors' property or any other property as required by this 8.3 – WARRANTY, the Owner may correct the Deficiencies or make good such damage and destruction and hold the Contractor responsible for all costs thereof.
- 8.3.6 Any extension of the warranty beyond the Warranty Period shall be as specified in the Agreement ("**Extended Warranty Periods**"). Without limiting the Contractor's warranty under 8.3 – WARRANTY, the Extended Warranty Periods shall be issued by the warrantor to the benefit of the Owner. The Contractor's responsibility with respect to the Extended Warranty Periods shall be limited to obtaining any of the Extended Warranty Periods from the warrantor and assisting the Owner in the administration of the Extended Warranty Periods to the extent reasonably required by the Owner. The obligations under the Extended Warranty Periods are solely the responsibilities of the warrantor. For clarity, this GC 8.3.6 does not limit any responsibility or liability of the Contractor in respect of Deficiencies which appear prior to and during the Warranty Period.
- 8.3.7 Any Product or equipment requiring excessive servicing during the Warranty Period (or free maintenance period, if applicable) shall be considered Deficient and the warranty (or free maintenance period) shall be deemed to take effect from the time that the Deficiency has been corrected so as to cause excessive servicing to terminate.

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- 8.3.8 Within thirty (30) Calendar Days after Substantial Performance of the Work, and without limiting the Contractor's warranty under this 8.3 – WARRANTY, the Contractor shall assign to the Owner, to the extent assignable, the benefit of all warranties and guarantees relating to the Work. The assignment shall:
- .1 expressly reserve the right of the Contractor to make any claims under such warranties and guarantees;
  - .2 in no way prejudice any rights of or benefits accruing to the Contractor pursuant to such warranties and guarantees; and
  - .3 be in a form acceptable to the Owner.
- 8.3.9 The provisions of 8.3 – WARRANTY shall not deprive the Owner of any action, right or remedy otherwise available to the Owner for the Contractor's failure to fulfill its obligations or responsibilities under the Agreement and shall not be construed as a waiver of Claims in favour of the Contractor or as a limitation on the time in which the Owner may pursue such other action, right or remedy. The warranties set out in the Agreement are not supplemental to and do not limit or preclude the application of any other conditions and warranties, express or implied, by law, trade usage or otherwise.
- 9. GOVERNING REGULATIONS**
- 9.1 LAWS, NOTICES, PERMITS, AND FEES**
- 9.1.1 The Owner shall obtain and pay for development approvals, building permit, easements, rights of servitude, and all other necessary approvals and permits, except for the permits and fees referred to in GC 9.1.2 or for which the Agreement specify as the responsibility of the Contractor.
- 9.1.2 The Contractor shall be responsible for the procurement of permits, licences, inspections, and certificates, which are necessary for the performance of the Work (including dewatering permits/agreements) and customarily obtained by contractors in the jurisdiction of the Site after the issuance of the building permit. The Contract Price includes the cost of these permits, licences, inspections, certificates and agreements, and their procurement.
- 9.1.3 The Contractor shall, and shall cause all Subcontractors, Suppliers and Sub-subcontractors to give the notices required by, and comply with, the Laws which are or come into force during the performance of the Work and which relate to the Work, to the preservation of health and safety.
- 9.1.4 Without limiting GC 9.1.3, the Contractor shall notify the Chief Building Official or the registered code agency where applicable, of the readiness, substantial completion, and completion of the stages of construction set out in the Ontario Building Code. The Contractor shall be present at each site inspection by an inspector or registered code agency as applicable under the Ontario Building Code.
- 9.1.5 Subject to 3.6 – DOCUMENT REVIEW AND EXAMINATION OF SITE, the Contractor shall not be responsible for verifying that the Agreement is in compliance with the

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Laws relating to the Work. If the Agreement is at variance therewith, or if, subsequent to the Effective Date, changes are made to the applicable Laws which require modification to the Agreement, the Contractor shall advise the Contract Administrator in writing requesting direction immediately upon such variance or change becoming known. The Contract Administrator will make the changes required to the Agreement as provided in 6.1 - OWNER'S RIGHT TO MAKE CHANGES, 6.2 - CHANGE ORDER and 6.3 - CHANGE DIRECTIVE.

9.1.6 If the Contractor:

- .1 fails to notify the Owner and the Contract Administrator in writing of changes made to the applicable Laws (other than Owner's Policies, Procedures and By-laws) in accordance with GC 9.1.5;
- .2 fails to obtain direction as required in GC 9.1.5; or
- .3 performs Work that it knows or should have known, applying the Standard of Care, contravenes any Laws,

the Contractor shall be responsible for and shall correct the violations of such Laws, and shall be responsible for the Losses and delay attributable to the failure to comply with the provisions of such Laws, and, notwithstanding any limitations described in GC 8.1.1.

9.1.7 Notwithstanding GC 6.5.2, if subsequent to the Effective Date, changes are made to Laws (other than Owner's Policies, Procedures and By-laws) which increase or decrease the cost of the performance of the Work or Contract Time then:

- .1 any claim by the Contractor must be submitted in accordance with the requirements of 6.7 - CLAIMS PROCEDURE; and
- .2 the Owner may submit a change in accordance with the requirements of 6.1 – OWNER'S RIGHT TO MAKE CHANGES.

9.1.8 Without limiting the generality of any other provision in the Agreement, the Contractor shall cause all certificates to be furnished that are required or given by the appropriate Governmental Authorities or quasi-governmental authorities as evidence that the Work as installed conforms with the Laws, including certificates of compliance for the Owner's occupancy or partial occupancy. The certificates are to be final certificates giving complete clearance of the Work, in the event that such Governmental Authorities or quasi-governmental authorities furnish such certificates.

**9.2 TAXES AND DUTIES**

9.2.1 Subject to GC 9.2.3, the Fixed Prices and Unit Prices shall include all taxes and customs duties except for Value Added Taxes payable by the Owner to the

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Contractor. For clarity, there shall be no adjustment in the Fixed Price or Unit Prices as a result of inflation or currency fluctuation.

- 9.2.2 The Contractor shall provide a detailed breakdown of additional taxes and duties if requested by the Owner in a form satisfactory to the Owner.
- 9.2.3 Any increase or decrease in costs to the Contractor due to changes in Canadian federal and provincial taxes and custom duties after the Effective Date shall increase or decrease the Fixed Prices and Unit Prices accordingly. For greater certainty, the Contractor shall not be entitled to any markup for overhead or profit on any increase in such taxes and duties.
- 9.2.4 The Contractor represents and warrants that it is:
- .1 not a non-resident Canadian; or
  - .2 has notified the Owner in writing, prior to execution of the Agreement that it is a non-resident Canadian,
- for the purposes of the *Income Tax Act* (Canada). Notwithstanding anything to the contrary, all amounts payable by the Owner shall be subject to the *Income Tax Act* (Canada) (including applicable deductions from payments by the Owner on account of withholding against tax). Without limiting the generality of the foregoing, if any Laws requires that any taxes or other amounts be deducted or withheld from any payments to be made by the Owner under the Agreement, the Owner shall deduct such taxes or other amounts and remit such taxes or other amounts directly to the applicable Governmental Authority, including the Canada Revenue Agency, on or before the applicable due date and the Owner shall not be required to compensate or otherwise indemnify the Contractor with respect to such taxes or other amount.
- 9.2.5 Any taxes or customs duties applicable to the Agreement, including any sales taxes, excise taxes or Value Added Taxes, whether or not paid, which are found to be inapplicable or for which refund, exemption or recovery may be obtained, are the sole and exclusive property of the Owner. The Contractor agrees to, and to cause all Subcontractors, Suppliers and Sub-subcontractors to, cooperate with the Owner in the application for any refund, exemption or recovery of any taxes or customs duties, which cooperation shall include, making or concurring in the making of an application for any such refund, exemption or recovery, and providing to the Owner copies, or where required, originals of Contractor Records or other documents necessary to support such applications for refunds, exemptions or recoveries. All such refunds, exemptions or recoveries shall either be paid to the Owner, or shall be a credit to the Owner against the Contract Price in accordance with 4.15 – OWNER'S SET-OFF, in the Owner's discretion. The Contractor agrees to endorse over to the Owner any cheques received from the federal or provincial governments, or any other taxing authority, as may be required to give effect to this GC. The Contractor agrees to enable, assist with and submit to any reasonable audit requested by the Owner with respect to the potential refunds, exemptions or recoveries under this GC.

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9.2.6 Customs duties penalties, or any other penalty, fine or assessment levied against the Contractor, shall not be treated as a tax or customs duty for the purpose of this 9.2 – TAXES AND DUTIES.

#### **9.3 PATENT FEES**

9.3.1 The Contractor shall pay the royalties and patent licence fees required for the performance of the Agreement.

#### **9.4 WORKERS' COMPENSATION**

9.4.1 Prior to commencing the Work, and again with the Proper Invoice for the Lien Holdback following Substantial Performance of the Work and the Contractor's Proper Invoice submitted pursuant to GC 4.12.1.1, the Contractor shall provide evidence of compliance with workers' compensation Laws, including payments due thereunder by the Contractor.

9.4.2 At any time during the term of the Agreement, when requested by the Owner, the Contractor shall provide evidence of compliance with workers' compensation Laws by the Contractor and Subcontractors.

### **10. DEFAULT, TERMINATION AND SUSPENSION**

#### **10.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, TERMINATE THE AGREEMENT OR SUSPEND THE WORK**

10.1.1 If the Contractor is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the Contractor's insolvency, or if a receiver is appointed because of the Contractor's insolvency, the Owner may, without prejudice to any other right or remedy the Owner may have, immediately terminate the Contractor's right to continue with the Work or immediately terminate the Agreement, by giving the Contractor or receiver or trustee in bankruptcy Notice in Writing to that effect specifying the date upon which such termination becomes effective.

10.1.2 If the Contractor:

- .1 fails to comply with the requirements of 1.7 – CONFLICTS OF INTEREST or if the parties are unable to resolve a Conflict of Interest of the Contractor to the satisfaction of the Owner;
- .2 fails to provide a Recovery Plan in accordance with GC 6.5.6.1 or comply with the requirements in respect of a Recovery Plan under GC 6.5.6.2 and 6.5.6.3; or
- .3 is found or determined to have committed any offence that qualifies as an "indictable offence" under the *Criminal Code* (Canada) or any offence of a similar nature with substantially similar penalties under any quasi-criminal provisions of another Law or any fraudulent act in any way related to the Work or the Agreement,

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the Owner may, without prejudice to any other right or remedy the Owner may have, immediately terminate the Contractor's right to continue with the Work or immediately terminate the Agreement, by giving the Contractor Notice in Writing to that effect specifying the date upon which such termination becomes effective.

10.1.3 Subject to GC 10.1.1 and GC 10.1.2, if the Contractor:

- .1 fails to commence the Work by the Commencement Date;
- .2 neglects to prosecute the Work properly or fails or neglects to maintain the latest Construction Schedule; or
- .3 otherwise fails to comply with the requirements of the Agreement,

the Owner may, without prejudice to any other right or remedy the Owner may have, give the Contractor Notice in Writing that the Contractor is in default of the Contractor's contractual obligations and instruct the Contractor to correct the default in the five (5) Working Days immediately following the receipt of such Notice in Writing. Failure by the Owner to provide such Notice in Writing in a timely manner after the default has occurred shall not constitute condonation of the default.

10.1.4 If the Owner determines that the default referred to in GC 10.1.3 cannot be corrected in the five (5) Working Days specified or in such other time period as may be subsequently agreed in writing by the parties, the Contractor shall be in compliance with the Owner's instructions if the Contractor:

- .1 commences the correction of the default within the specified time;
- .2 provides the Owner with an acceptable schedule for such correction; and
- .3 corrects the default in accordance with the Agreement terms and with such schedule.

10.1.5 If the Contractor fails to correct the default referred to in GC 10.1.3 in the time specified or in such other time period as may be subsequently agreed in writing by the parties, without prejudice to any other right or remedy the Owner may have, the Owner may:

- .1 correct such default and set-off the cost thereof in accordance with 4.15 – OWNER'S SET-OFF provided the Contract Administrator has certified such cost to the Owner and the Contractor;
- .2 charge the Contractor for any Losses suffered, sustained or incurred by the Owner as a result of such default and/or set-off such Losses in accordance with 4.15 – OWNER'S SET-OFF; or
- .3 immediately terminate the Contractor's right to continue with the Work in whole or in part or immediately terminate the Agreement by giving the Contractor Notice in Writing to that effect specifying the date upon which such termination becomes effective.



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- 10.1.6 If the Owner terminates the Contractor's right to continue with the Work or terminates the Agreement as provided in GC 10.1.1, 10.1.2 and 10.1.5, without prejudice to any other right or remedy which the Owner may have, the Owner may, at its sole option:
- .1 take possession of the Work, Products and Owner Supplied Material at the Site;
  - .2 subject to the rights of third parties, utilize the Construction Equipment at the Site;
  - .3 finish the Work by whatever method the Owner may consider expedient, but without undue delay or cost;
  - .4 require Contractor to provide such reasonable assistance as required to properly and safely transition the Work to the Owner or its other contractors;
  - .5 withhold further payment to the Contractor until a final certificate for payment is issued;
  - .6 charge the Contractor the amount by which the full cost of finishing:
    - (1) any Fixed Price Work as certified by the Contract Administrator exceeds the unpaid balance of the Fixed Price; and
    - (2) any Unit Price Work as certified by the Contract Administrator exceeds the portion of the Total Price of Unit Price Work that would have been paid to the Contractor on the completion of such Unit Price Work (calculated based on the number of units required to complete the Unit Price Work after the effective date of termination).plus compensation to the Contract Administrator for the Contract Administrator's additional services and a reasonable allowance as determined by the Contract Administrator to cover the cost of corrections to Work performed by the Contractor that may be required under 8.3 - WARRANTY;
  - .7 on expiry of the Warranty Period, charge the Contractor the amount by which the cost of corrections to the Contractor's Work under 8.3 - WARRANTY exceeds the allowance provided for such corrections, or if the cost of such corrections is less than the allowance, pay the Contractor the difference; and
  - .8 charge the Contractor for any Losses suffered, sustained or incurred by the Owner as a result of such termination and/or set-off such Losses in accordance with 4.15 – OWNER'S SET-OFF.
- For clarity, any one or more of the Owner's rights in GC 10.1.6 shall also apply to the portions of the Work that the Owner has terminated the Contractor's right to continue pursuant to GC 10.1.5.3, *mutatis mutandis*.
- 10.1.7 Upon receipt of Notice in Writing from the Owner terminating the Agreement, the Contractor shall:

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- .1 subject to GC 10.1.6.4, cease Work on the effective date of the termination;
- .2 place no additional orders (and if requested by the Owner, the Contractor shall cancel existing orders and subcontracts specified by the Owner upon terms satisfactory to the Owner); and
- .3 preserve and protect the Products (at the Site or in transit), Owner Supplied Material and Work completed and in progress pending the Owner's instructions, and the Contractor shall dispose of same in accordance with the Owner's instructions.

10.1.8 The Contractor's obligation under the Agreement as to quality, correction and warranty of the Work performed by the Contractor up to the time of termination shall continue after such termination of the Agreement.

10.1.9 Termination for Convenience

- .1 Notwithstanding any other term or condition in the Agreement, the Owner may (at any time) terminate the Contractor's right to continue with the Work or terminate the Agreement without cause and in its sole and absolute discretion by giving a Notice in Writing to the Contractor, specifying the date upon which such termination becomes effective, provided that such termination date may not be less than seven (7) Calendar Days from the date on which the Contractor is deemed to have received such Notice in Writing.
- .2 In the event of termination pursuant to GC 10.1.9.1, the Owner shall be entitled to take possession of the Site, the Work, the Products and the Owner Supplied Material, and the Contractor shall be entitled to be paid for the following, without duplication, but subject to the other requirements in the Agreement to be satisfied by the Contractor prior to payment:
  - (1) the value proportionate to the Contract Price, of the Work performed up to the effective date of termination;
  - (2) reasonable demobilization costs paid by the Contractor which have been pre-approved by the Owner in writing;
  - (3) reasonable costs incurred in connection with the preservation or protection of the Work; and
  - (4) Subcontractor and Supplier cancellation costs reasonably paid by the Contractor as a result of such termination which have been pre-approved by the Owner in writing and could not have been reasonably mitigated by the Contractor.

For greater certainty, the amounts payable pursuant to GC 10.1.9.2(1) are less any previous amounts paid or properly withheld on account of the Contract Price and except for the amounts referred to in this GC 10.1.9.2, the Contractor shall not be entitled to any additional Losses resulting from the termination in

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accordance with GC 10.1.9.1 including any consequential, indirect or special damages and loss of profit, loss of opportunity or loss of productivity.

10.1.10 Notwithstanding any other provision in the Agreement, the Contractor shall accept, and not dispute, the termination of the Agreement or the Contractor's right to continue with the Work in whole or in part by the Owner under GC 10.1.1, 10.1.2 or 10.1.5.3, provided that the Contractor is entitled to dispute the existence of the underlying default or event giving the Owner the right to terminate the Agreement, or the Contractor's right to continue with the Work in whole or in part, in accordance with 11. DISPUTE RESOLUTION. However, if the Agreement is terminated under GC 10.1.1, 10.1.2 or 10.1.5.3 and it is later determined that there was no default or other event giving the Owner the right to terminate the Agreement or the Contractor's right to continue with the Work in whole or in part, as applicable, such termination shall be deemed to have been a termination for convenience and the rights and obligations of GC 10.1.9 shall apply to such termination.

#### 10.1.11 Suspension

- .1 The Owner, from time to time, may suspend any portion or the whole of the Work for any reason for such time as the Owner may notify the Contractor in a Notice in Writing. In addition to suspending any portion or the whole of the Work, the Owner shall be entitled to instruct the Contractor in the Notice in Writing to take such other action as may be reasonably required in respect of the suspension.
- .2 The Contractor shall, upon receipt of such Notice in Writing, suspend the Work referred to in such Notice in Writing (except for Work which, in the reasonable opinion of the Contractor is necessary for the safety and security of people or property) and such suspended Work shall not be resumed until the Owner so directs in writing.
- .3 Subject to GC 2.2.19, upon resumption of the suspended Work and provided the suspension of the Work was not as a result of the negligent act or omission of the Contractor Parties or the default or breach of the Contractor's obligations under the Agreement or any other act or fault of the Contractor Parties, the Contract Time shall be extended for such reasonable time as agreed to by the Parties, taking into account such time period as recommended by the Contract Administrator and the Contract Price shall be adjusted to account for reasonable Losses incurred by the Contractor as the result of such suspension but excluding any consequential, indirect or special damages and loss of profit, loss of opportunity or loss of productivity resulting from such suspension.

10.1.12 The Contractor acknowledges that remedies at law may be inadequate to provide the Owner with full compensation if the Contractor breaches its obligations under this 10.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, TERMINATE THE CONTRACT OR SUSPEND THE WORK and that any such breach of such obligations by the Contractor may cause the Owner irreparable harm. As a result, the Owner will be entitled, without prejudice to any other right or remedy it may have at law or in equity, to seek injunctive relief, specific performance, or any other equitable

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remedy if the Contractor breaches such obligations or takes steps that reasonably will result in a breach of such obligations.

**10.2 CONTRACTOR'S RIGHT TO TERMINATE THE AGREEMENT**

10.2.1 If the Work is suspended or otherwise delayed for a period of sixty (60) Working Days (or such alternate period under row C.11 of the Information Sheet) or more, by a stop work order issued by a court or other public authority (other than the City of Toronto) and providing that such order was not issued as the result of an act or fault of a Contractor Party, the Contractor may terminate the Agreement by giving the Owner Notice in Writing to that effect specifying the date upon which such termination becomes effective.

10.2.2 The Contractor may give Notice in Writing to the Owner, with a copy to the Contract Administrator, that the Owner is in default of the Owner's contractual obligations if:

- .1 the Contract Administrator fails to issue a certificate for payment as provided in 4.9 - PROGRESS PAYMENT; or
- .2 the Owner fails to pay the Contractor an amount: (1) which is due and payable under the Agreement, subject to the Owner's right to set-off pursuant to 4.15 – OWNER'S SET-OFF; or (2) awarded by arbitration or court; or
- .3 the Owner fails to comply with a material requirement of the Agreement,

and instruct the Owner to correct the default in the fifteen (15) Working Days immediately following the receipt of such Notice in Writing.

10.2.3 If the default cannot be corrected within the fifteen (15) Working Days specified in GC 11.2.2, the Owner shall be in compliance with the Contractor's instructions if the Owner:

- .1 commences the correction of the default within the specified time;
- .2 provides the Contractor with an acceptable schedule for such correction; and
- .3 completes the correction in accordance with such schedule.

10.2.4 If the Owner fails to correct the default in the time specified or subsequently agreed upon, the Contractor may, without prejudice to any other right or remedy the Contractor may have, terminate the Agreement by giving the Owner Notice in Writing to that effect specifying the date upon which such termination becomes effective.

10.2.5 If the Contractor terminates the Agreement under the conditions described in this 10.2 - CONTRACTOR'S RIGHT TO TERMINATE THE AGREEMENT, the Contractor shall be entitled to be paid for all Work performed to the date of termination. The Contractor shall also be entitled to recover the reasonable Losses associated with termination, including the costs of demobilization, but excluding any consequential, indirect or special damages and loss of profit, loss of opportunity or loss of productivity resulting from such termination.

**10.3 OTHER TERMINATION OBLIGATIONS**

- 10.3.1 If the Agreement is terminated, by the Owner or Contractor, as the case may be:
- .1 the party terminating the Agreement shall publish, in the manner set out in the Construction Act, a notice of the termination in the form prescribed by the Construction Act and, for the purposes of this section, the date on which the Agreement is terminated is the termination date specified in the Notice in Writing delivered by such party to the other party pursuant to the Agreement; and
  - .2 the Contractor shall:
    - (1) comply with the requirements in GC 12.5.7 in respect of Confidential Information;
    - (2) stop, and cause all Subcontractors, Suppliers and Sub-subcontractors to stop, all Work in progress and refrain from undertaking any further commitments;
    - (3) except for subcontracts to be assigned to the Owner pursuant to GC 3.8.2.3(4), terminate any subcontracts related to the Work;
    - (4) minimize all costs resulting from the termination of the Agreement; and
    - (5) at the Owner's option, deliver, or cause to be delivered, to the Owner all Work-in-process obtained or performed by the Contractor and the Subcontractors, Suppliers and Sub-subcontractors up to the effective date of termination (including all Work-in-process situate at locations other than the Site and Contractor Prepared Documents).

**11. DISPUTE RESOLUTION**

**11.1 DISPUTE RESOLUTION**

- 11.1.1 Unless the Agreement has been terminated or completed, the Contractor shall in every case, notwithstanding any Claim Notice or the occurrence of a Dispute, continue to proceed with the Work with due diligence and expedition. Such continuance shall not jeopardize the Contractor's entitlement in respect of such Claim Notice or Dispute, provided the Contractor has complied with all other requirements of the Agreement.
- 11.1.2 The parties acknowledge and agree that, for the purposes of Part II.1 of the Construction Act, there shall be no dispute with respect to an Adjudicable Matter that is also the subject matter of a Claim Notice, unless and until a Claim Notice in accordance with GC 6.7 – CLAIMS PROCEDURE has been received by the Owner and the Contract Administrator, and the Owner or the Contract Administrator, as the case may be, has issued a determination to the Contractor regarding the validity of the Claim Notice pursuant to GC 6.7.6.

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11.1.3 The parties acknowledge that no arbitration, action, suit or other proceeding shall be brought, nor any mediation undertaken, with respect to the subject matter of a Claim Notice unless and until a Claim Notice in accordance with GC 6.7 has been received by the Owner and the Contract Administrator, and the Owner or the Contract Administrator, as the case may be, has issued a determination to the Contractor regarding the validity of the Claim Notice pursuant to GC 6.7.6.

**11.2 ADJUDICATION**

11.2.1 The parties acknowledge and agree that, for the purposes of paragraph 7 of s. 13.5(1) of the Construction Act:

- .1 neither the Agreement nor any Schedule sets out “any other matter” that the parties agree may be referred to an Adjudication; and
- .2 the parties may agree after the commencement of the Agreement to “any other matter” that may be referred to an Adjudication provided such agreement is in writing and explicitly identifies and refers to the other matter to refer to an Adjudication.

11.2.2 All Adjudications shall proceed in accordance with the provisions of the Construction Act and the additional procedures set out in this 11.2 - ADJUDICATION, subject to the exercise of the powers provided to the Adjudicator under section 13.12 of the Construction Act.

11.2.3 Subject to GC 6.7 – CLAIMS PROCEDURE and GC 12.1.2, at any time prior to the completion of the Agreement, either party may refer an Adjudicable Dispute to Adjudication, by giving a Notice of Adjudication to the other party.

11.2.4 If the party issuing the Notice of Adjudication is the:

- .1 Contractor, the Notice of Adjudication shall be given to:

City of Toronto  
Adjudication Unit  
C/O City Solicitor's Office  
Metro Hall, 26th Floor  
55 John Street  
Toronto, Ontario M5V 3C6

- .2 Owner, the Notice of Adjudication shall be given to the person at the address set out in row A.3 of the Information Sheet.

The Notice of Adjudication shall be given to the other party by registered mail, courier or hand delivery.

11.2.5 Delivery of the Notice of Adjudication by registered mail is deemed given on the fifth day after the Notice of Adjudication is mailed.

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- 11.2.6 Delivery of the Notice of Adjudication by courier is deemed given on the second day following the day the courier was given the document, unless the second day is a holiday, in which case the Notice of Adjudication is deemed given on the next day that is not a holiday.
- 11.2.7 The seat of the Adjudication shall be in Toronto, Ontario.
- 11.2.8 In addition to the requirements of section 13.8 of the Construction Act, if an Adjudication between the Owner and the Contractor is with respect to an Adjudicable Matter that is the same or includes the subject matter of disputes that can be referred to adjudication between:
- .1 the Contractor and Subcontractors and/or Suppliers that are to be adjudicated in separate Adjudications, if a Subcontractor and/or Supplier does not agree to a consolidated Adjudication, the Owner shall be entitled, in its sole and absolute discretion, to direct the Contractor to, and the Contractor shall, require the consolidation of the Adjudication through the exercise of the Contractor's right pursuant to section 13.8(2) of the Construction Act; or
  - .2 the Owner and other contractors engaged by the Owner to perform work on the improvement that are to be adjudicated in separate Adjudications, the Contractor hereby acknowledges and agrees to the consolidation of the separate Adjudications if the Owner requires the consolidation of the separate Adjudications and such other contractors have also agreed to the consolidation of the separate Adjudications.
- 11.2.9 The Adjudicator nominated by the party issuing the Notice of Adjudication shall:
- .1 have relevant qualifications and experience with respect to the Project or projects of a similar nature and magnitude, to the Project;
  - .2 be independent of and at arm's length to Contractor, Owner and any other person having an interest in the Project or any of the documents comprising the Agreement; and
  - .3 have no conflict of interest relating to the parties or the Dispute.
- 11.2.10 In addition to the requirements of section 13.11 of the Construction Act, the copy of the contract and any other documents delivered to the party that received the Notice of Adjudication pursuant to section 13.11 of the Construction Act shall:
- .1 be delivered to such party by the other party in the manner as required by the Adjudicator;
  - .2 if the contract and such documents have an aggregate file size in excess of twenty (20) MB, be delivered to such party by the other party on a USB flash drive or using a secure electronic document exchange service in a searchable format; and

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- .3 include an index of documents with identifying information (for example, date, document description, author/recipient).

11.2.11 The Contractor and Owner hereby acknowledge and agree that:

- .1 they shall, immediately after the appointment of the Adjudicator, either through the agreement of the parties or by the Authorized Nominating Authority ("**ANA**"), deliver a written agreement requesting that the Adjudicator provide the party that received the Notice of Adjudication no less than fourteen (14) Calendar Days from the date of receipt of the documents pursuant to section 13.11 of the Construction Act to respond;
- .2 if the documents delivered pursuant to section 13.11 of the Construction Act:
  - (1) exceed 100 documents or 1000 pages in the aggregate, excluding the Agreement and all Schedules; or
  - (2) seek monetary relief in excess of one million dollars (\$1,000,000) exclusive of Value Added Taxes,

they shall, immediately after the receipt of such documents, deliver to the Adjudicator a written agreement requesting that the Adjudicator provide the party that received the Notice of Adjudication no less than sixty (60) Calendar Days from the date of receipt of such documents to respond and extend the deadline for the Adjudicator to make its determination to no less than thirty (30) Calendar Days after the deadline for the delivery of the response by such party; and

- .3 if the documents delivered pursuant to section 13.11 of the Construction Act are delivered at any time between the Friday prior to December 25<sup>th</sup> in a given year and the first Monday of January of the following year, they shall, immediately after the receipt of such documents, deliver to the Adjudicator a written agreement requesting that the Adjudicator exclude the period between the date of delivery of such documents and that first Monday of January from the counting of Calendar Days for the purposes of the Adjudication and, as necessary to give effect to such exclusion, extend the deadline for the party that received the Notice of Adjudication to respond and the deadline for the Adjudicator to make its determination.

11.2.12 The Adjudicator shall be entitled to grant any remedy or relief which is consistent with the intentions of the parties expressed under the Agreement but shall not be entitled to exercise the power of prerogative writs.

11.2.13 In addition to the requirements of section 13.19(1) of the Construction Act, a requirement to pay an amount in accordance with section 13.19 of the Construction Act is subject to GC 12.2.1.2.

11.2.14 Other than in accordance with the Construction Act, any determination and reasons of an Adjudicator on the Project shall not be relied upon by either party on any other projects. The determination and reasons of any adjudicators on any other projects shall not be relied upon by the parties in any Adjudication on the Project.



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11.2.15 If an Adjudicable Dispute is referred to Adjudication and such Adjudicable Dispute is already the subject of a mediation pursuant to GC 11.4 - MEDIATION, an arbitration pursuant to GC 12.5 - ARBITRATION or a court proceeding, which has not been finally determined, the party responding to the Notice of Adjudication shall be entitled, in its sole and absolute discretion, to choose to:

- .1 terminate, suspend or proceed with such mediation or arbitration, as applicable, and if the responding party elects to terminate such mediation or arbitration, as applicable, the party referring the Adjudicable Dispute to Adjudication shall be responsible for all costs of the mediator or arbitrator, as applicable, up to the date of receipt of the Notice of Adjudication; or
- .2 stay or proceed with such court proceeding, and if the responding party elects to stay such court proceeding, the party referring the Adjudicable Dispute to Adjudication shall execute all further documents and do all other lawful things necessary to give full effect to such stay, and after the Adjudicator makes its determination, either party may move to lift such stay, which the other party shall consent to.

11.2.16 The Contractor shall, in respect of any dispute between:

- .1 the Contractor and a Subcontractor or Supplier;
- .2 a Sub-subcontractor and a Subcontractor or Supplier; or
- .3 a Sub-subcontractor and another Sub-subcontractor,

no later than two (2) Working Days after the receipt by the Adjudicator of the documents under section 13.11 of the Construction Act in respect of such dispute, deliver a Notice in Writing to the Contract Administrator and Owner setting out the date which such Adjudicator received such documents.

**11.3 NEGOTIATIONS**

11.3.1 Either party may initiate negotiations of any Dispute by giving written notice to the other party ("**Notice of Negotiations**") with reasonable particulars of the Dispute. After the receipt of a Notice of Negotiations the parties shall make all reasonable efforts to resolve the Dispute by amicable negotiations and the parties agree to provide, without prejudice, open and timely disclosure of relevant facts, information, and documents to facilitate such negotiations.

11.3.2 Any applicable negotiations shall be completed as soon as possible and shall be limited to a period of no more than ninety (90) Calendar Days following the delivery of a Notice of Negotiations, or such other period of time as the Parties agree in writing.

**11.4 MEDIATION**

11.4.1 Subject to GC 12.1.3, the parties, by mutual written agreement, may submit any Dispute to mediation. Such mediation shall proceed in accordance with this 11.4 – Mediation and such other terms and conditions agreed to by the parties.

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- 11.4.2 The mediator shall be mutually agreed upon by the Owner and Contractor.
- 11.4.3 Subject to GC 11.2.15.1, each party is responsible for its own costs related to the mediation. The costs of the mediator shall be equally shared by the Owner and Contractor.

**11.5 ARBITRATION**

- 11.5.1 Subject to GC 12.1.3, the parties, by mutual written agreement, may submit any Dispute to be finally determined by arbitration before a sole arbitrator, who shall also be agreed to as a part of such mutual agreement. The provisions of the *Arbitration Act, 1991* (ON) shall apply to such arbitration, including the provisions for appeal therein except as otherwise provided in this 11.5 - ARBITRATION and such arbitration shall be subject to such other terms and conditions agreed to by the parties.
- 11.5.2 If the parties agree to arbitration to resolve a Dispute, the Owner shall notify the Contract Administrator in writing within fifteen (15) Calendar Days of the written agreement to arbitrate.
- 11.5.3 Subject to GC 11.2.15.1, unless otherwise agreed to in the written agreement to arbitrate, each party is responsible for its own costs related to the arbitration and the arbitrator shall not have the discretion to award costs related to the arbitration. The costs of the arbitrator and any other Persons appointed to assist the arbitrator (including independent experts) shall be equally shared by the Owner and Contractor.
- 11.5.4 The arbitrator's reasoned decision shall be made in writing within ninety (90) Calendar Days of the conclusion of the hearing. An extension of time to make a decision may be granted with consent of both parties.
- 11.5.5 The resolution of Disputes pursuant to this 11.5 - ARBITRATION shall be final and binding upon the parties, and there shall be no appeal therefrom, including any appeal to a court of law on a question of law, a question of fact, or a question of mixed fact and law.

**11.6 RIGHTS OF BOTH PARTIES**

- 11.6.1 Unless the parties agree otherwise, no action taken under GC 11.1 to GC 12.5 by either party shall be construed as a renunciation or waiver of any of the rights or recourse available to the parties.

**12. OTHER PROVISIONS**

**12.1 OWNERSHIP OF EXISTING MATERIALS AND EQUIPMENT**

- 12.1.1 Unless otherwise specified, all materials, equipment and other property existing at the Site at the time of execution of the Agreement shall remain the property of the Owner or any other Person identified by the Owner.

## **12.2 CONSTRUCTION LIENS**

- 12.2.1 Upon the receipt of a written notice of lien, claim for lien or a certificate of action under the Construction Act, arising from the performance of the Work by any Subcontractor, Supplier or Sub-subcontractor:
- .1 the Contractor at its sole cost, shall take whatever steps are necessary to discharge, release or vacate such claim for lien or certificate of action, or withdraw the written notice of a lien within ten (10) Calendar Days of it coming to the notice of the Contractor. If the claim for lien or certificate of action is merely vacated, the Contractor shall, if requested, undertake the Owner's defence of any subsequent lawsuit commenced in respect of the claim for lien or certificate of action at the Contractor's sole cost; and
  - .2 the Owner may retain an amount sufficient to satisfy such claim for lien, certificate of action or written notice of a lien, including an amount sufficient to cover potential costs, in accordance with GC 5.10 – OWNER'S SET-OFF.
- 12.2.2 If the Contractor fails or refuses to vacate or discharge the claim for lien or certificate of action, or cause the withdrawal of the written notice of a lien, within the time period required by 12.2.1, the Owner shall at its option, be entitled (but not obliged) to take whatever steps are necessary to vacate and/or discharge the claim for lien or certificate of action, or cause the withdrawal of the written notice of a lien and all Losses incurred by the Owner in so doing (including all legal fees and disbursements) may be set-off by the Owner in accordance with 4.15 – OWNER'S SET-OFF.
- 12.2.3 After the Contractor or the Owner, as the case may be, has vacated and/or discharged the claim for lien or certificate of action, or caused the withdrawal of the written notice of a lien, then any amount retained by the Owner pursuant to GC 12.2.1.2 in respect of such claim for lien, certificate of action or written notice of lien shall be eligible to be included in the next Proper Invoice submitted by the Contractor.
- 12.2.4 The Contractor acknowledges that all claims for lien shall be given to the Clerk of the City of Toronto through its web portal at [www.toronto.ca/liens](http://www.toronto.ca/liens).
- 12.2.5 This 12.2 – CONSTRUCTION LIENS does not apply to any claim for lien or certificate of action to the extent arising from a payment default of the Owner under the Agreement.

## **12.3 OWNERSHIP OF CONTRACTOR DOCUMENTS**

- 12.3.1 Subject to GC, 1.1.11, all correspondence, data, plans, drawings, specifications, reports, estimates, summaries, photographs, models, mockups, Contractor Records and all other information and documentation in any form (an whether in draft or final format) prepared by or for the Contractor in connection with, or arising out of the Work or the Agreement (collectively, the "**Contractor Prepared Documents**") shall be the exclusive property of the Owner, provided the Contractor shall retain the copyright in the Contractor Prepared Documents prepared by the Contractor. The Contractor grants the Owner an irrevocable, perpetual, royalty free and cost free license to use, amend and copy the Contractor Prepared Documents in any manner it chooses

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including the construction, design, testing, refurbishment, use, modification, expansion, occupancy, operation, maintenance, renovation, management, sale, extension, alteration and repair of the Work, the Site, the Project or any part thereof or any other project or any work including providing the Contractor Prepared Documents to consultants, design-builders, construction managers, contractors, suppliers and others for such purposes. Such license shall survive the termination of the Agreement.

- 12.3.2 In the event of any termination of the Agreement or as requested by the Owner, from time to time, the Contractor agrees to promptly, and in no event later than within ten (10) Working Days after such termination, deliver the Contractor Prepared Documents to the Owner.

#### **12.4 OWNER SUPPLIED MATERIAL**

- 12.4.1 The Contractor shall, in advance of receipt of shipments of Owner Supplied Material, provide adequate and proper storage facilities acceptable to the Contract Administrator and on the receipt of the Owner Supplied Material shall immediately place it in storage except where it is to be incorporated forthwith into the Work.
- 12.4.2 The Contractor shall be responsible for acceptance of Owner Supplied Material, at the specified delivery point. All Owner Supplied Material in each shipment shall be accounted for by the Contractor. Immediately upon receipt of each shipment, the Contractor shall provide the Contract Administrator with copies of bills of lading, or such other documentation the Contract Administrator may require to substantiate and reconcile the quantities of Owner Supplied Material received. Where Owner Supplied Material arrives at the delivery point in a damaged condition or where there are discrepancies between the quantities received and the quantities shown on the bills of lading, the Contractor shall immediately report such damage or discrepancies to the Contract Administrator who shall arrange for an immediate inspection of the shipment. Where damage or deficiencies are not so reported, it shall be assumed that the shipment arrived in good condition and order, and any damage or deficiencies reported thereafter shall be made good by the Contractor at no extra cost to the Owner and without any extension of the Contract Time.
- 12.4.3 Once accepted by the Contractor, notwithstanding that title to the Owner Supplied Equipment shall be held by the Owner, the risk of Loss to the Owner Supplied Material shall be borne by the Contractor. If after accepting delivery, such Owner Supplied Material is damaged or lost while under the control of the Contractor, it shall be replaced or repaired by the Contractor at no cost to the Owner, and to the satisfaction of the Contract Administrator. If such Owner Supplied Material is rejected by the Contract Administrator for reasons that are not the fault of the Contractor, it shall remain in the care and at the risk of the Contractor until its disposition has been determined by the Contract Administrator.
- 12.4.4 Owner Supplied Material shall not, except with the written permission of the Contract Administrator, be used by the Contractor for purposes other than the performance of the Work under the Agreement. Contractor shall store, operate, maintain, repair and otherwise deal with the Owner Supplied Material in the same manner as would a prudent owner of such material and equipment, and in accordance with the

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Agreement and the applicable operating and maintenance manuals, and using suitably qualified and experienced Personnel, until returned to the Owner.

- 12.4.5 Empty reels, crates, containers and other types of packaging from Owner Supplied Material shall become the property of the Contractor when they are no longer required for their original purpose and shall be disposed of by the Contractor at the Contractor's cost unless otherwise specified in the Agreement or directed by the Owner.
- 12.4.6 Where Owner Supplied Material supplied by the Owner is ordered and stockpiled prior to the award of the Agreement, the Contractor shall, at no extra cost to the Owner, immediately upon commencement of operations, check the Owner Supplied Material, report any damage or deficiencies to the Contract Administrator and take charge of the Owner Supplied Material at the stockpile site. Where damage or deficiencies are not so recorded by the Contractor, it shall be assumed that the stockpile was in good condition and order when the Contractor took charge of it, and any damage or deficiencies reported thereafter shall be made good by the Contractor at no extra cost to the Owner and without any extension of the Contract Time.

**12.5 CONFIDENTIAL INFORMATION AND PERSONAL INFORMATION**

- 12.5.1 The parties acknowledge and agree that MFIPPA applies to the Owner and the Owner Documents and that the Owner is required to fully comply with MFIPPA. The Contractor shall retain and preserve Owner Documents in a secure and accessible manner to enable the Owner to fulfill its obligations under MFIPPA and the Owner's Policies, Procedures and By-laws.
- 12.5.2 Notwithstanding anything else in the Agreement to the contrary, the Contractor acknowledges and agrees that the Owner has a right to disclose or publish the Agreement (including any or all terms hereof), any or all Owner Documents and any information derived from the Owner Documents as the Owner, in its sole discretion, may consider appropriate.
- 12.5.3 Each party acknowledges the importance of maintaining the confidentiality and privacy of Confidential Information. Except as authorized hereunder, each receiving party shall, with respect to Confidential Information it receives from or on behalf of any disclosing party at all times:
- .1 hold such Confidential Information in strict confidence, under and in accordance with all applicable requirements of the Agreement including the Specifications, if any;
  - .2 implement and use, appropriate technical, organizational and physical security measures to protect and secure such Confidential Information, whether in storage or in use, with no less than the same degree of care as the receiving party uses to protect its own Confidential Information against loss, theft and unauthorized access, use, copying, modification, disclosure, publication or dissemination or disposal, but in no case with less than a reasonable degree of care. Further, the Contractor shall comply, if requested by the Owner, with a document control and security protocol approved by the Owner, which protocol

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shall prescribe limitations on the use, disclosure and storage of such Confidential Information;

- .3 comply with all applicable requirements of Laws, including MFIPPA, the *Personal Information Protection and Electronic Documents Act (Canada)*, and any other Laws now in force or that may in the future come into force governing the collection, use, disclosure and protection of Personal Information applicable to the Contractor;
- .4 not disclose to a third party and not permit any third party any manner of access to, whether directly or indirectly, such Confidential Information without the prior written approval of the disclosing party in each instance, except as provided for in this 12.5 – CONFIDENTIAL INFORMATION AND PERSONAL INFORMATION; and
- .5 not to use such Confidential Information for any purpose whatsoever other than in connection with the rights conferred under the Agreement as permitted by the Agreement.

#### 12.5.4 The parties agree that:

- .1 the receiving party may disclose Confidential Information of the disclosing party received by it pursuant to the Agreement:
  - (1) to its Personnel if and when such Personnel have a need to know such Confidential Information so that such receiving party may exercise its rights and/or meet its obligations under the Agreement or comply with Laws, provided that such Personnel are advised of the confidential nature of the Confidential Information and, by virtue of the terms of their employment, engagement or retainer or as a result of an agreement in writing, are bound by confidentiality obligations substantially no less restrictive than those imposed on the receiving party pursuant to the Agreement;
  - (2) to the extent such disclosure is required pursuant to Laws or any Governmental Authority, provided that, where circumstances permit, prior to such disclosure the receiving party shall to the extent it is legally permitted to do so give the disclosing party a notice of the potential disclosure and allow the disclosing party the opportunity to contest the requirement for disclosure or seek a protective order or ruling in connection with such potential disclosure;
  - (3) as necessary in connection with any dispute resolution commenced pursuant to the Agreement; and
  - (4) as may be permitted or required under the *City of Toronto Act, 2006*;
- .2 the Contractor may disclose Confidential Information of the Owner to its professional advisors, Subcontractors, Suppliers or Sub-subcontractors, to the extent necessary, to enable that party to perform, to cause to be performed the Work, or to enforce, its rights or obligations under the Agreement, provided that

## Construction Agreement

### Schedule D – General Conditions

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such parties are advised of the confidential nature of the Confidential Information and bound in writing to confidentiality obligations in favour of both the Owner and Contractor substantially no less restrictive than those imposed on Contractor by the Agreement;

.3 the Owner may disclose Confidential Information of the Contractor to its professional advisors, consultants, other contractors, Personnel and any other party providing or potentially providing services to the Owner to enable the Owner to perform any of its obligations or exercise any of its rights under the Agreement, provided that such parties are advised of the confidential nature of the Confidential Information and bound in writing to confidentiality obligations substantially no less restrictive than those imposed on the Owner by the Agreement; and

.4 any disclosure of Confidential Information allowed pursuant to this 12.5 - CONFIDENTIAL INFORMATION AND PERSONAL INFORMATION shall be limited to that which is necessary to satisfy the need for such disclosure.

12.5.5 The Contractor acknowledges that the Owner may use the Confidential Information of Contractor for purposes not specific to the Project, but for other general governmental purposes.

12.5.6 Each receiving party shall immediately provide Notice in Writing to a disclosing party in the event that it becomes aware of any actual or suspected loss, theft or accidental or unauthorized access, disclosure, copying, use, modification or destruction of Confidential Information by a receiving party or any party to which a receiving party has disclosed any Confidential Information.

12.5.7 The Contractor shall allow the Owner on reasonable Notice in Writing to inspect any Confidential Information in the custody or possession of a Contractor Party and to audit compliance with this GC including the measures used to protect Confidential Information, and otherwise properly respond to all reasonable inquiries of the Owner with respect to handling of Confidential Information within five (5) Working Days.

12.5.8 The Contractor shall provide, and shall cause each of its professional advisors, Subcontractors, Suppliers or Sub-subcontractors to provide, in a timely manner, all necessary and reasonable information and co-operation to the Owner and to any Governmental Authorities with jurisdiction or oversight over Laws governing the collection, use, disclosure and protection of Personal Information in connection with any investigations, audits or inquiries made by any such bodies or authorities under such legislation.

12.5.9 Subject to any applicable requirement of Laws, the Contractor shall on the earliest of the date of Total Performance of the Work, termination or expiry of the Agreement or upon the written request of the Owner, immediately cease all use of and return to the Owner or, at the direction of the Owner, dispose of, destroy, or render permanently anonymous, all Confidential Information, in each case using appropriate technical, organizational and physical security measures to protect Confidential Information against loss, theft and unauthorized access, disclosure, copying, use or modification.

**Construction Agreement**  
**Schedule D – General Conditions**

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- 12.5.10 This 12.5 – CONFIDENTIAL INFORMATION AND PERSONAL INFORMATION shall not apply in respect of information (except for Personal Information), if such information:
- .1 was lawfully acquired by the receiving party prior to the Effective Date without any restrictions as to use or disclosure or any obligation of confidentiality;
  - .2 is lawfully, and without any restrictions as to use or disclosure or any obligation of confidentiality, provided to a receiving party by a third party, except where the third party is known or should reasonably have been suspected of being subject to an obligation to the disclosing party to maintain such information in confidence;
  - .3 is independently created, developed or acquired by or for the receiving party without reference to the Confidential Information provided by the disclosing party or through third parties to whom the Confidential Information had not been disclosed; or
  - .4 is released from the confidentiality provisions of the Agreement by the written authorization of the disclosing party.
- 12.5.11 The obligations in this 12.5 – CONFIDENTIAL INFORMATION AND PERSONAL INFORMATION shall survive the termination of the Agreement. To the extent of any conflict or inconsistency between this GC and any other provision of the Agreement, this GC shall prevail.



**SCHEDULE E**

**VALUING CHANGES IN THE WORK**

**1. CHANGES IN THE WORK BASED ON UNIT PRICES SET OUT IN THE AGREEMENT**

- 1.1** Notwithstanding that the number of units of an item of Unit Price Work to be performed shall exceed or be less than the Estimate of Units for Completion, subject to section 1.2 of this Schedule E, the Contractor shall proceed to perform the applicable Unit Price Work and payment shall be made for the final quantities of total units for such item in accordance with GC 5.3.5.2.
- 1.2** When the number of units of a Major Item of Unit Price Work exceeds the Estimate of Units for Completion for such item by more than 30%, the Contractor shall not proceed with the portion of such Major Item of Unit Price Work in excess of 130%, but the Owner shall have the right, in its sole discretion, to require that the portion of the applicable Unit Price Work for such Major Item which exceeds 130% of the Estimate of Units be performed and paid for as a T&M Change in the Work, in accordance with Section 3 of this Schedule E and if the Owner so elects, the Contract Administrator shall issue a Change Directive pursuant to GC 7.3 – CHANGE DIRECTIVE, or the parties shall sign a Change Order pursuant to GC 7.2 – CHANGE ORDER, reflecting the change for this portion of the Unit Price Work. For clarity:
- 1.2.1 where the number of units of a Major Item exceeds 100% of the applicable Estimate of Units for Completion for such Major Item, the units of such Major Item which are less than 130% of the Estimate of Units for Completion of such Major Item shall be paid for at the Unit Prices in accordance with GC 5.3.5.2;
- 1.2.2 where the number of units of an item of Unit Price Work (other than Major Items) exceeds 100% of the Estimate of Units for Completion for such item, all units of such item (including any units in excess of 130% of the applicable Estimate of Units for Completion) shall be paid for at the Unit Prices in accordance with GC 5.3.5.2; and
- 1.2.3 the Unit Prices under "Schedule A Schedule of Prices for Changes in the Work", if attached to Schedule B - Pricing Form, shall apply to an item of Unit Price Work if there is no corresponding Unit Price set out elsewhere in Schedule B – Pricing Form for such item.

**2. CHANGES IN THE WORK ON A NEGOTIATED FIXED PRICE OR NEGOTIATED UNIT PRICE BASIS**

- 2.1** The negotiated fixed price for a change in the Work or negotiated unit price(s) for the components of a change in the Work, as the case may be, whether performed by the Contractor or a Subcontractor, Supplier or Sub-subcontractor, shall be inclusive of all costs, charges, expenses, fees and taxes whatsoever required or related to the performance of such change in the Work and markup as provided for in section 2.2.3 of this Schedule E, with the exception of Value Added Taxes.

## **Construction Agreement**

### **Schedule E – Valuing Changes in the Work**

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- 2.2** The negotiated fixed price for a change in the Work or negotiated unit price(s) for the components of a change in the Work, as the case may be, shall be the sum of the following:
- 2.2.1 the negotiated fixed price or negotiated unit price(s), as applicable, for the portions of the change in the Work to be carried out by the Contractor's Personnel, without markup by the Contractor;
  - 2.2.2 the negotiated fixed price or negotiated unit price(s), as applicable for the portions of the change in the Work to be carried out by the Subcontractors, Suppliers or Sub-subcontractors, without markup by the Contractor, Subcontractor, Supplier or Sub-subcontractor; and
  - 2.2.3 markup calculated as follows:
    - .1 multiplying the negotiated amount set out in section 2.2.1 of this Schedule E by the percentage amount described in row B.1 of the Information Sheet; and
    - .2 multiplying the negotiated amount set out in section 2.2.2 of this Schedule E by the percentage amount described in row B.2 of the Information Sheet.
- Such markup percentages shall not be adjusted during the term of the Agreement. Notwithstanding any other provision in the Agreement, the cumulative total percentage markup charged by the Contractor, Subcontractors, Suppliers and Sub-subcontractors pursuant to section 2.2.3.2 of this Schedule E shall not exceed the percentage amount set out in row B.2 of the Information Sheet, regardless of the extent to which the change in the Work is performed by a Subcontractor, Supplier or Sub-subcontractor. For greater certainty, such markup percentage shall not apply to Value Added Taxes. Any change in Work performed by a Subcontractor, Supplier and Sub-subcontractor that is an "associate" (as defined by the Securities Act) of the Contractor shall be treated as if such change in the Work was performed by the Contractor for the purposes of calculating the markup and, in such an instance, the markup in section 2.2.3.1 of this Schedule E is applicable, not the markup in section 2.2.3.2 of this Schedule E.
- 2.3** The Contractor shall provide written quotes identifying each amount to be charged by the Contractor and each Subcontractor, Supplier and Sub-subcontractor, including for each of the foregoing, a detailed breakdown of amounts for transportation, labour, Product, Construction Equipment, services. The Value Added Taxes, as applicable, shall be identified separately in a manner satisfactory to the Owner. The Contractor shall also provide any other detail reasonably required by the Owner to evaluate the proposed fixed price of the change in the Work.
- 2.4** Where such change in the Work requires the rental of Construction Equipment, any rental charges for the actual operation time required for the performance of the change in the Work must be agreed upon by the parties before the Contractor commences the change in the Work.

## Construction Agreement

### Schedule E – Valuing Changes in the Work

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- 2.5** The markups provided for in section 2.2.3 of this Schedule E shall constitute the only compensation the Contractor shall be entitled to for any and all overhead, profit, incidental and administrative costs whatsoever related to the change, including, costs relating to superintendence and supervision, shop drawing production, estimating, site office and home office expenses, tools of Personnel, temporary facilities and controls, and coordination of any and all Work-related activities.
- 2.6** If such change in the Work results in a net decrease in the Fixed Price, the Fixed Price shall be decreased by an amount proportionate to the reduction in the Fixed Price Work, provided that such reduction shall not include any amounts for portions of the Fixed Price relating to the fixed overhead costs incurred by the Contractor as reasonably substantiated by the Contractor.

### **3. CHANGES IN THE WORK ON A TIME AND MATERIAL BASIS – VERTICAL APPROACH**

- 3.1** For the purposes of this Section 3 of this Schedule E, the following definitions apply:
- 3.1.1 **“T&M Costs”** has the meaning set out in section 3.2.1 of this Schedule E;
  - 3.1.2 **“T&M Markup”** has the meaning set out in section 3.4.2 of this Schedule E;
  - 3.1.3 **“T&M Percentage Markup”** has the meaning set out in section 3.2.2 of this Schedule E;
  - 3.1.4 **“T&M Price”** means, in respect of a T&M Change in the Work, the total T&M Costs plus the T&M Markup.
- 3.2** For T&M Changes in the Work, the following shall apply:
- 3.2.1 the cost of performing the T&M Change in the Work shall be calculated using the provisions of section 3.5 of this Schedule E, subject to all applicable credits being deducted and section 3.11 of this Schedule E (**“T&M Costs”**); and
  - 3.2.2 the percentage markup shall be determined in accordance with section 3.3 of this Schedule E (**“T&M Percentage Markup”**).
- 3.3** The T&M Percentage Markup applicable to T&M Change in the Work shall be determined as follows:
- 3.3.1 on T&M Changes in the Work performed by Contractor: the percentage amount set out in row B.3 of the Information Sheet; and
  - 3.3.2 on T&M Changes in the Work performed by the Subcontractor or Supplier or Sub-subcontractors: the percentage amount set out in row B.4 of the Information Sheet.

The T&M Percentage Markup shall not be adjusted during the term of the Agreement. Notwithstanding any other provision in the Agreement, the cumulative total percentage markup charged by the Contractor, Subcontractors, Suppliers and all Sub-

## Construction Agreement

### Schedule E – Valuing Changes in the Work

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subcontractors pursuant to section 3.3.2 of this Schedule E shall not exceed the amount set out in row B.4 of the Information Sheet, regardless of the extent to which the change in the Work is performed by a Subcontractor, Supplier or Sub-subcontractor. For greater certainty, the percentage markup shall not apply to Value Added Taxes. Any change in Work performed by a Subcontractor, Supplier and Sub-subcontractor that is an “associate” (as defined by the Securities Act) of the Contractor shall be treated as if such change in the Work was performed by the Contractor for the purposes of calculating the T&M Percentage Markup and, in such an instance, the T&M Percentage Markup in section 3.3.1 of this Schedule E is applicable, not the markup in section 3.3.2 of this Schedule E.

**3.4** If the T&M Change in the Work results in a net increase in the Contractor’s cost, the Contract Price shall be increased by:

3.4.1 the T&M Costs; plus

3.4.2 the T&M Percentage Markup multiplied by the T&M Costs (“**T&M Markup**”),

**3.5** The T&M Costs shall be the actual reasonable costs to the extent directly paid by the Contractor in performing such T&M Change in the Work in accordance with the Agreement (without any markup) and, subject to section 3.11 of this Schedule E, is limited to the actual reasonable costs of the following:

3.5.1 salaries, wages and benefits paid to Personnel in the direct employ of the Contractor applying the labour rates as agreed in writing between the Owner and Contractor for Personnel:

- .1 carrying out the T&M Change in the Work, including, to the extent the T&M Change in the Work results in an extension of the Contract Time, project managers, superintendents, assistants, watch persons and administrative Personnel;
- .2 engaged in expediting the production or transportation of material or equipment, at shops or on the road; or
- .3 engaged in the preparation of Shop Drawings, fabrication drawings, coordination drawings and As-Built Drawings.

The Contractor acknowledges that the agreed upon labour rates (including the underlying salaries, wages and benefits on which the labour rates were calculated) shall be subject to audit and verification by the Owner in accordance with GC 2.6 and adjustment as appropriate.

3.5.2 contributions, assessments or taxes incurred for such items as employment insurance, provincial or territorial health insurance, workers’ compensation, and Canada or Quebec Pension Plan, insofar as such cost is based on wages, salaries or other remuneration paid to Personnel of the Contractor and included in the cost of the Work as provided in section 3.5.1 of this Schedule E;

3.5.3 all Products including cost of transportation thereof;

## **Construction Agreement**

### **Schedule E – Valuing Changes in the Work**

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- 3.5.4 materials and supplies, including transportation and maintenance thereof, which are consumed in the performance of the Work; and cost less salvage value on such materials and supplies used but not consumed, which remain the property of the Contractor;
- 3.5.5 all Construction Equipment, exclusive of hand tools, and Temporary Work, used in the performance of the Work, whether rented from or provided by the Contractor or others, including installation, minor repairs and replacements, dismantling, removal, transportation, and delivery cost thereof, which for clarity, excludes the labour costs for directly operating such items included in section 3.5.1 of this Schedule E;
- 3.5.6 all equipment and services required for the Contractor's field office;
- 3.5.7 deposits lost provided that they were not lost by acts or omissions of the Contractor's Personnel;
- 3.5.8 subject to the Owner's prior written approval for amounts in excess of \$10,000, the value of subcontracts with Subcontractors and Suppliers, provided however that any time and material costs included in such amounts shall be limited to the actual costs of the items described in this section 3.5 of this Schedule E changing "Contractor" to "Subcontractor" or "Supplier" as necessary";
- 3.5.9 quality assurance required by the Agreement such as inspection and testing services, charges levied by authorities, provided such costs are pre-approved in writing by the Owner;
- 3.5.10 legal costs, incurred by the Contractor, in relation to the performance of the T&M Change in the Work provided that they are not related to or arising from a dispute between the Owner and the Contractor unless such costs are part of a settlement or awarded by adjudication, arbitration or court;
- 3.5.11 charges levied by authorities having jurisdiction at the Site;
- 3.5.12 royalties, patent licence fees and Losses for infringement of patents and cost of defending suits therefor subject always to the Contractor's obligations to indemnify the Owner as provided in GC 9.1.2.2;
- 3.5.13 any adjustment, attributable to the T&M Change in the Work, in premiums for all bonds and insurance which the Contractor is required, by the Agreement, to purchase and maintain;
- 3.5.14 any adjustment in taxes, other than Value Added Taxes and those relating to the Contractor's income or real or personal property;
- 3.5.15 duties for which the Contractor is liable;
- 3.5.16 charges for long distance telephone and facsimile communications, courier services, expressage, and petty cash items incurred in relation to the performance of the Work;

## **Construction Agreement**

### **Schedule E – Valuing Changes in the Work**

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3.5.17 removal and disposal of waste products and debris; and

3.5.18 safety measures and requirements.

All other costs attributable to the T&M Change in the Work are included in the percentage markup calculated in accordance with the provisions of section 3.3 of this Schedule E.

- 3.6** Notwithstanding any other provisions contained in the Agreement (other than section 3.11 of this Schedule E), it is the intention of the parties that the cost of any item under any cost element referred to in section 3.5 of this Schedule E shall cover and include any and all costs or liabilities attributable to the T&M Change in the Work other than those which are the result of or occasioned by any failure on the part of the Contractor to perform the change in the Work in accordance with the Standard of Care. Any cost due to failure on the part of the Contractor to perform the change in the Work in accordance with the Standard of Care shall be borne by the Contractor.
- 3.7** The Contractor shall prepare and maintain complete and accurate Daily Contractor Work Records for T&M Changes in the Work.
- 3.8** All trade, quantity and cash discounts and rebates and refunds accrue to the Owner, including all returns from sale of surplus materials and equipment applicable to the T&M Change in the Work, and the Contractor shall make provisions for them to be secured without delay.
- 3.9** Pending determination of the final amount of a T&M Change in the Work, the undisputed value of the T&M Change in the Work performed:
- 3.9.1 as the result of a Change Order, is eligible to be included in Proper Invoices; and
  - 3.9.2 as the result of a Change Directive, is not eligible to be included in Proper Invoices except to the extent that it is dealt with in a Change Order.
- 3.10** If the Owner and the Contractor do not agree on the proposed adjustment in the Contract Time attributable to the T&M Change in the Work, or the method of determining it, the adjustment shall be referred to the Contract Administrator for determination.
- 3.11** Notwithstanding any other provisions contained in the Agreement, the T&M Costs shall not include, and no payment shall be made by the Owner for:
- 3.11.1 head office salaries, wages and benefits and all other overhead or general expenses;
  - 3.11.2 capital expenses and interest on capital;
  - 3.11.3 general clean-up, except where the performance of the T&M Change in the Work causes specific additional clean-up requirements;
  - 3.11.4 salaries, wages and benefits paid for project managers, superintendents, assistants, watch persons and administrative Personnel except only for the

**Construction Agreement**  
**Schedule E – Valuing Changes in the Work**

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salaries, wages and benefits of Personnel described in section 3.5.1 of this Schedule E and the related contributions, assessments or taxes referred to in section 3.5.2 of this Schedule E;

- 3.11.5 salaries, wages, benefits, rentals, or other expenses that exceed the rates that are standard in the locality of the Site that are otherwise deemed unreasonable by the Contract Administrator;
- 3.11.6 any Losses attributable to Deficiencies, the negligent acts or omissions of the Contractor Parties or the Contractor's failure to perform any of its obligations under the Agreement;
- 3.11.7 any costs noted in the Agreement as non-reimbursable by the Owner; or
- 3.11.8 any costs noted in the Agreement as paid or incurred at the Contractor's expense.

**SCHEDULE F**

**OWNER'S POLICIES, PROCEDURES, BY-LAWS AND OTHER REQUIREMENTS**

The following Toronto Zoo Official Policy Statements and procedures are included in this RFT, are applicable for this project.

SAFE-001	Occupational Health & Safety
SAFE-002	Health & Safety Hazard Reporting
SAFE-005	Hazardous Materials
SAFE-007	Confined Space
SAFE-013	Lock Out / Tag Out Procedure
SAFE-017	Contractor Safety
SAFE-018	Vehicles on Site
SAFE-025	Hot Work
SAFE-026	Scaffold & Ladder Safety

City of Toronto Fair Wage Policy: <https://www.toronto.ca/business-economy/doing-business-with-the-city/understanding-the-procurement-process/fair-wage-office-policy/fair-wage-policy/>

Toronto Zoo's Commitment to the City of Toronto's Corporate Smog Alert Response Plan.

Toronto Zoo's Accessible Customer Service Training Requirements: Contractors, Consultants and other Service Providers



**SCHEDULE G**

**FORMS**

Schedule G is comprised of the following forms:

Form 1: Sample Proper Invoice

Form 2: Certificate of Insurance

Form 3: Tax Statutory Declaration

Form 4: Notice of Adjudication

**Construction Agreement  
Schedule G – Forms**

**FORM 1: SAMPLE PROPER INVOICE**

**Contractor Company Logo**

**INVOICE**

**BILL TO:**

Owner: *City of Toronto*  
 Street Address: *55 John Street, 20th Floor*  
 City: *Toronto, Ontario*  
 Postal Code: *M5V 3C6*  
 Division: *Engineering & Construction Services*

**REMIT TO:**

Vendor Name: *Vendor*  
 Vendor Number: *123456789*  
 Street Address: *123 Toronto Street, Unit 12*  
 City: *Toronto, Ontario*  
 Postal Code: *XXX XXX*

Owner Representative: *John Doe*

Contractor Project Manager: *John Doe*

Tel. #: *416-39X-XXXX*  
 Email: [\*John.Doe@toronto.ca\*](mailto:John.Doe@toronto.ca)

Tel. #: *416-39X-XXXX*  
 Email: [\*John.Doe@Vendor.ca\*](mailto:John.Doe@Vendor.ca)

Contract #: *Contract Number*  
 Blanket Contract #: (if any) *XXXXXXXX*  
 PO #/ CRO#/ DPO#: *XXXXXXXX*  
 Project Description: *Project Description*  
 Invoice Period: *(Start) to (End)*  
 Progress Payment Certificate#: *PR-XX*

**INVOICE DATE:** *September 19, 2019*  
**INVOICE #** *12548*

HST Registration No. \_\_\_\_\_  
 Currency \_\_\_\_\_

Item	Contract Price	Progress To Date		Previous Billing	Current Billing
		%	\$		
A	B	C = (D / B)	D	E	F = (D - E)
Base Contract	\$0.00	0.00%	\$0.00	\$0.00	\$0.00
Allowances	\$0.00	0.00%	\$0.00	\$0.00	\$0.00
Approved Change Orders (non-Allowance)	\$0.00	0.00%	\$0.00	\$0.00	\$0.00
<b>Gross Amount</b>	<b>\$0.00</b>	<b>0.00%</b>	<b>\$0.00</b>	<b>\$0.00</b>	<b>\$0.00</b>
Less: Statutory Lien Holdback			\$(0.00)	\$(0.00)	\$(0.00)
Less: Contractual Holdbacks			\$(0.00)	\$(0.00)	\$(0.00)
Net Amount			\$0.00	\$0.00	\$0.00
HST 13%			\$0.00	\$0.00	\$0.00
Less: Other Taxes			\$(0.00)	\$(0.00)	\$(0.00)
<b>Total Amount Due</b>					<b>\$0.00</b>

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Additional information to be included/attached

**FORM 2: CERTIFICATE OF INSURANCE**

To be completed only by the insurer or by its representative.

<b>Name of Insured:</b>	City of Toronto Contact Name, Address, and Telephone Number:
<b>Address and Telephone Number of Insured:</b>	

**Operations of Named Insured for which certificate is issued:**

(NOTE: Provide specific project information including the Toronto Zoo contract number)

**1. Commercial General Liability: Deductible \$ \_\_\_\_\_**

Insuring Company	Policy Number	Policy Limit(s) \$ (per occurrence)	Effective Date (yyyy-mm-dd)	Expiry Date (yyyy-mm-dd)
<b>Primary Insurer:</b>				
<b>Umbrella/Excess Insurer:</b>				
<input type="checkbox"/> <b>Applicable to Auto Coverage</b>				
<b>Contractor's Pollution Liability, Sudden and Accidental and Gradual, if applicable</b>				

Commercial General Liability policy provisions:

- a) The CITY OF TORONTO, ITS BOARDS, AGENCIES, COMMISSIONS OR SUBSIDIARY OPERATIONS, AS APPLICABLE, the TORONTO AND REGION CONSERVATION AUTHORITY, and the CONSULTANT are included as Additional Insureds but only with respect to liability arising out of the operations of the Insured for which a contract or proposal is issued by the Toronto Zoo.
- b) The policy includes a Cross-Liability and Severability of Interest, Blanket Form Contractual Liability, Owner's and Contractor's Protective Liability, Broad Form Property Damage, Contingent and/or Employer's Liability, Non-Owned Automobile Liability, Products/Completed Operations and any other provision relevant to the contract work. If applicable to the insured operations, coverage for Blasting, Pile Driving and Collapse.
- c) The Commercial General Liability Policy(ies) identified above shall apply as primary insurance and not excess to any other insurance available to the City.

**2. Automobile Liability, if applicable: Deductible \$ \_\_\_\_\_**

Insuring Company	Policy Number	Policy Limit(s) (\$)	Effective Date (yyyy-mm-dd)	Expiry Date (yyyy-mm-dd)

**3. Contractor's Equipment Property Insurance: Deductible \$ \_\_\_\_\_**

 Contractor's tools & equipment , materials & supplies in an amount to reflect the replacement cost.  
 Policy includes a Waiver of Subrogation Clause in favour of the City.

Insuring Company	Policy Number	All-Risk Property Limit(s) (\$)	Effective Date (yyyy-mm-dd)	Expiry Date (yyyy-mm-dd)

4. Builder's Risk or Installation Floater - Products, supplies and equipment and/or systems, including boiler and machinery, if applicable, that forms part of the Work. Deductible \$ \_\_\_\_\_

Identify Policy Type:

Builder's Risk

Installation Floater

The Owner shall be included as an additional insured and a joint loss payee.

Insuring Company	Policy Number	Limit of Coverage (\$)	Effective Date (yyyy-mm-dd)	Expiry Date (yyyy-mm-dd)

5. Other (Specify) \_\_\_\_\_. Deductible \$ \_\_\_\_\_

Insuring Company	Policy Number	Policy Limit(s) (\$)	Effective Date (yyyy-mm-dd)	Expiry Date (yyyy-mm-dd)

6. Other (Specify) \_\_\_\_\_. Deductible \$ \_\_\_\_\_

Insuring Company	Policy Number	Policy Limit(s) (\$)	Effective Date (yyyy-mm-dd)	Expiry Date (yyyy-mm-dd)

All of the above policies (with the exception of the Automobile Insurance, Section 2 above) must include a clause that states that if the policy is cancelled during the period of coverage, as stated herein, thirty (30) days, (fifteen (15) days if cancellation is due to non-payment of premium), prior written notice by registered mail will be given by the Insurer(s) to the Toronto Zoo.

**CERTIFICATION**

I certify that the insurance is in effect as stated in this Certificate and that I have authorization to issue this Certificate for and on behalf of the Insurer(s). This Certificate is valid until the expiration date(s) stated in the "Expiry Date" provision, unless notice is given in writing in accordance with the provision of this Certificate.

Date	Broker's or Insurer's Name and Address	Signature and Stamp of Certifying Official



**FORM 4: NOTICE OF ADJUDICATION**

**IN THE MATTER OF AN ADJUDICATION PURSUANT TO PART II.1 OF THE  
*CONSTRUCTION ACT*, R.S.O. 1990, c. C.30, as amended**

**Notice of Adjudication**

Date

**Agreement Information**

Contract Number

Project

**Information of Party Initiating the Adjudication**

Corporate Name

Corporate Address

City/Town

Province

Corporate Phone No.

Postal Code

Email (if applicable)

Corporate Fax No.

**Information of Party Receiving the Notice of Adjudication**

Corporate Name

Corporate Address

City/Town

Province

Corporate Phone No.

Postal Code

Email (if applicable)

Corporate Fax No.

**Contractor Information**

Contractor Project Manager, if applicable

Contractor Site Supervisor, if applicable

**Owner Information**

Owner Representative

Contract Administrator

**Adjudication Claim Information**

Claimed Amount, exclusive H.S.T.

**Construction Agreement  
Schedule G – Forms**

Please indicate which Adjudicable Matter the Adjudication is in respect of:

<input type="checkbox"/> Valuation of services or materials provided under the Agreement
<input type="checkbox"/> Payment under the Agreement
<input type="checkbox"/> Dispute regarding a Notice of Non-Payment
<input type="checkbox"/> Amounts Set-off by Owner
<input type="checkbox"/> Non-payment of Lien Holdback

If applicable, please identify relevant:

<input type="checkbox"/> Change Directive Number: _____
<input type="checkbox"/> Change Order Number: _____
<input type="checkbox"/> Proper Invoice Number: _____
<input type="checkbox"/> Claim Notice reference number and date: _____

*Please provide the nature and a brief description of the dispute, including details respecting how and when the dispute arose and the nature of the redress sought (attach a separate sheet if necessary):*

**Requested Adjudicator**

First and Last Name		
Address		
City/Town	Province	Phone No.
Postal Code	Website (if applicable)	Email

**Consolidation**

- The dispute which is the subject matter of this Notice of Adjudication is proposed to be consolidated with the disputes which are the subject matter of the notices of adjudication attached as "**Attachment 1**"

**Delivery**

See GC 12.2.4 for method of delivery of the Notice of Adjudication and address for delivery.

**Attachments**

Please attach a copy of any notices of adjudication for adjudications proposed to be consolidated to this Notice of Adjudication as "**Attachment 1**".

Please attach a copy of SCHEDULE A – INFORMATION SHEET to this Notice of Adjudication as "**Attachment 2**".

**SCHEDULE H**

**DRAWINGS AND SPECIFICATIONS**

**[Note to Finalization before Execution: Attach or list the Drawings and Specifications (which includes, for clarity, the Standard Drawings, the Standard Specifications and Special Specifications and material and finishing schedules).]**



## **PART 3 – DRAWINGS AND SPECIFICATIONS**

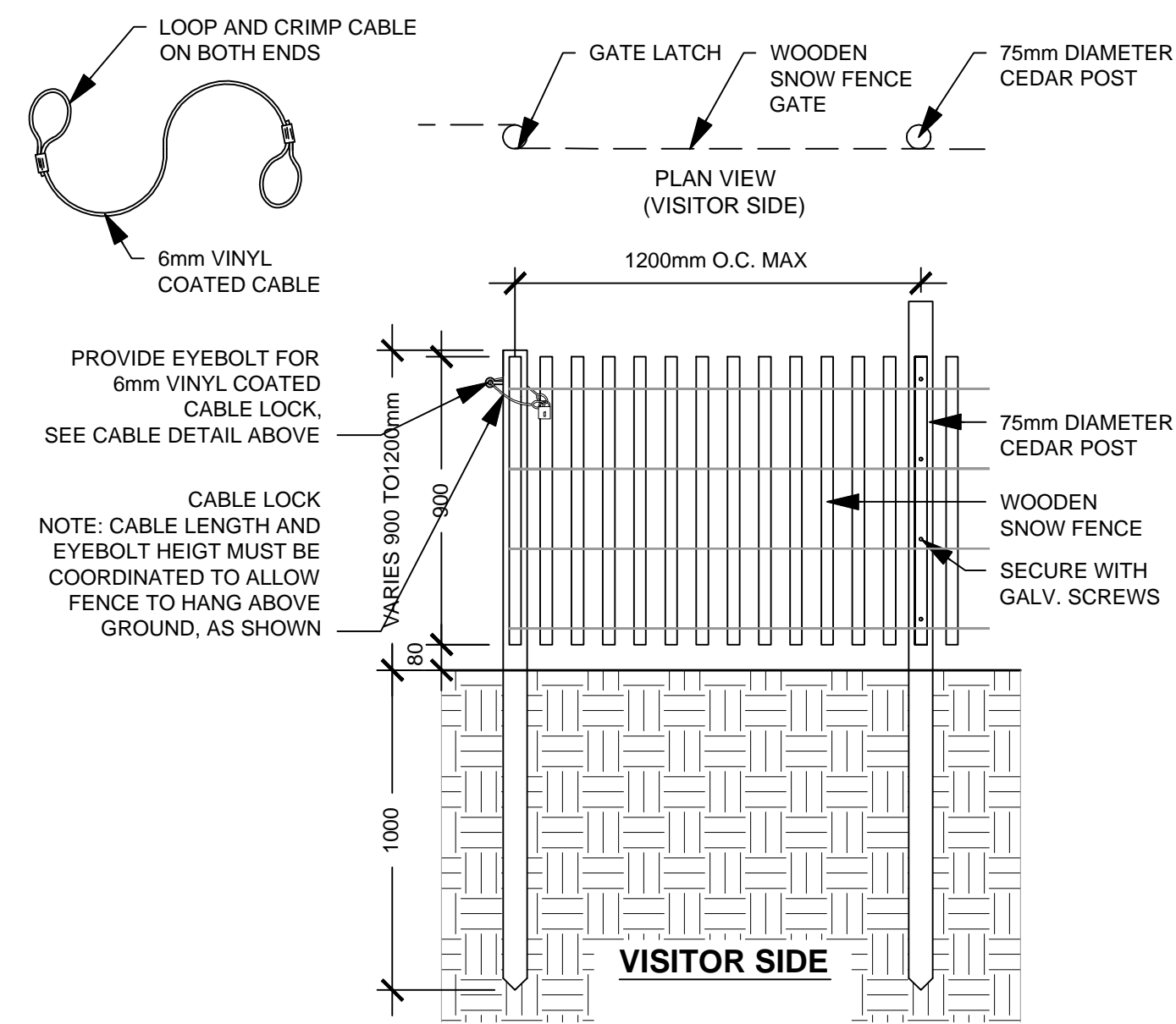
### **TZC T 04-2020-02 – INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS**

#### **DRAWING LIST**

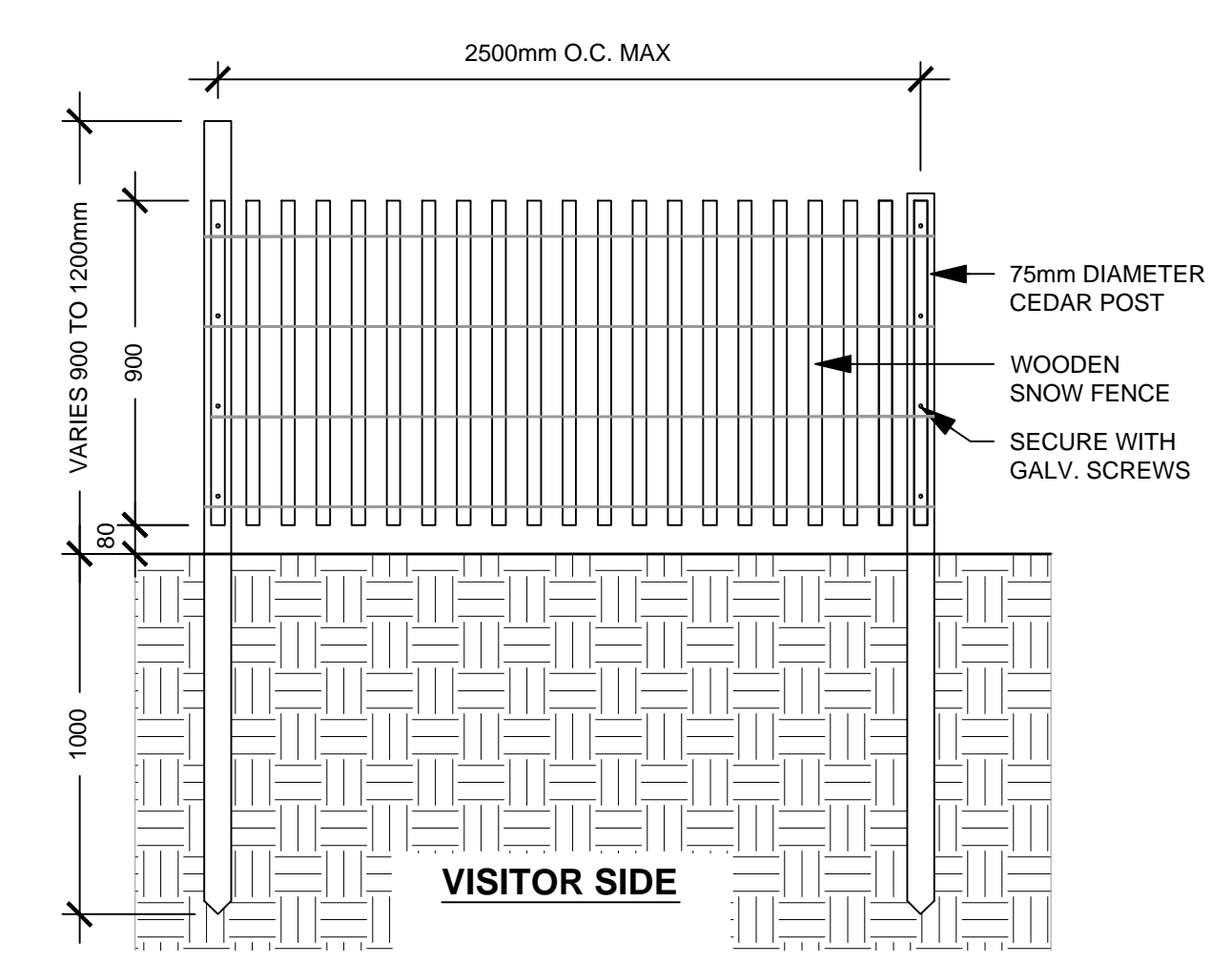
SK-01 – SITE PLAN  
SK-02 – CHARGER LOCATIONS  
ST-802 – SITE FENCING DETAILS  
ST-803 – SITE DETAILS

#### **SPECIFICATIONS/SCOPE**

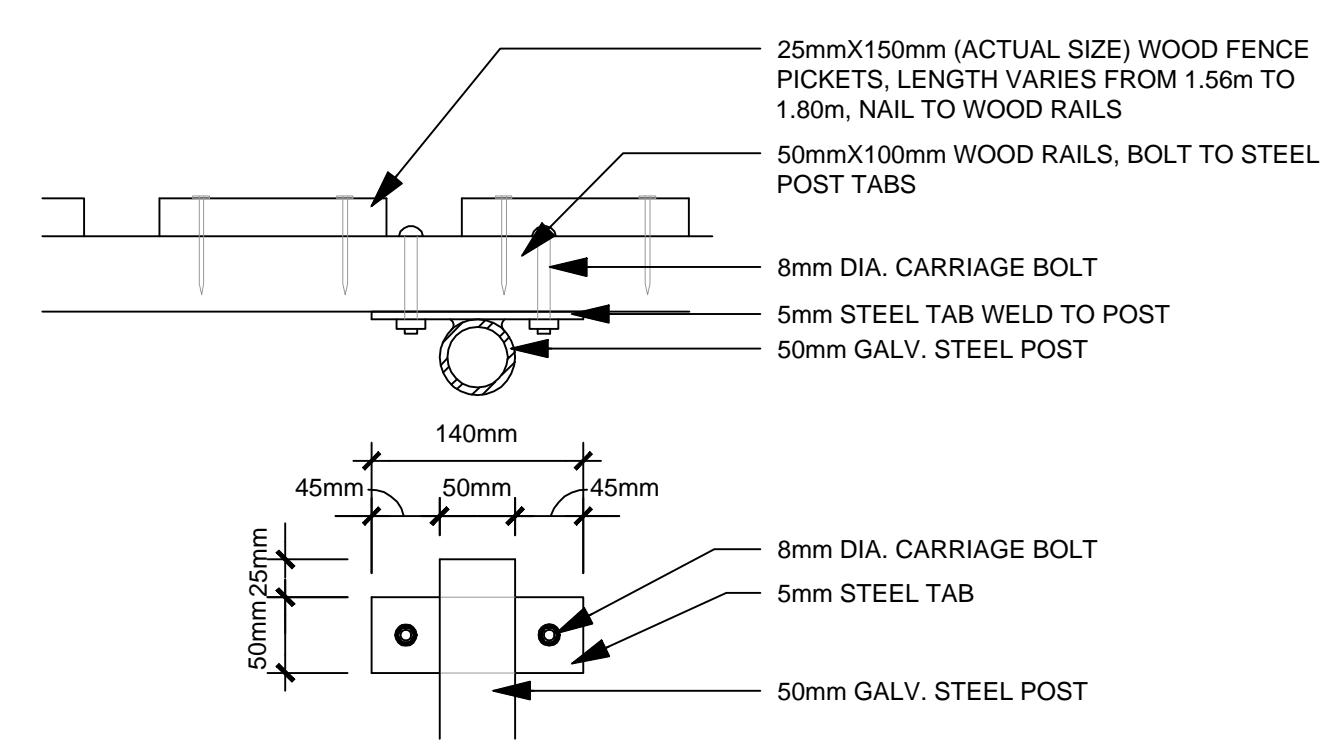
- SCOPE
- INSTALLATION INSTRUCTIONS FOR TESLA GEN 2 CHARGERS
- INSTALLATION INSTRUCTIONS FOR GENERIC GEN 2 CHARGERS



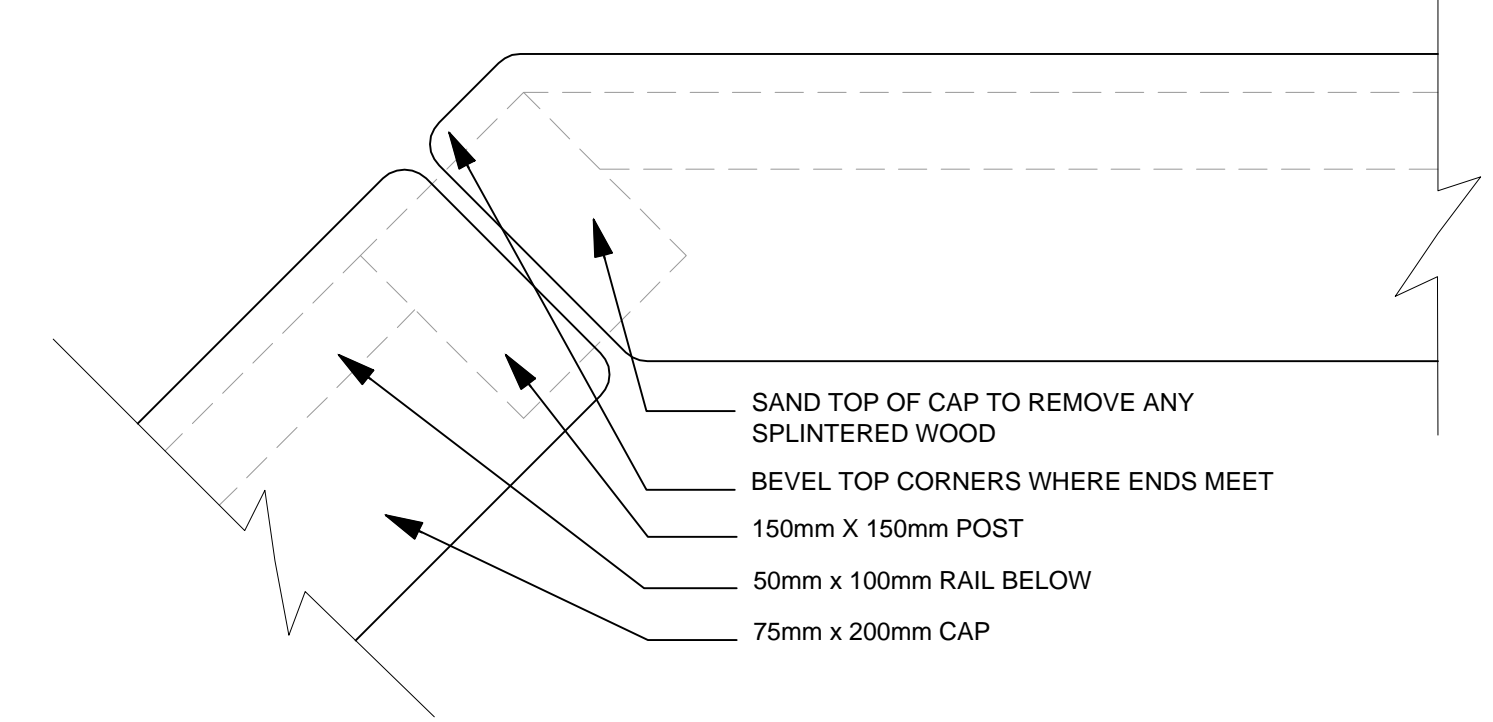
**11** Exclusion Gate - B (Alternate)  
ST802 SCALE: 1:20 ELEVATION



**10** Exclusion Fence - B (Alternate)  
ST802 SCALE: 1:20 ELEVATION

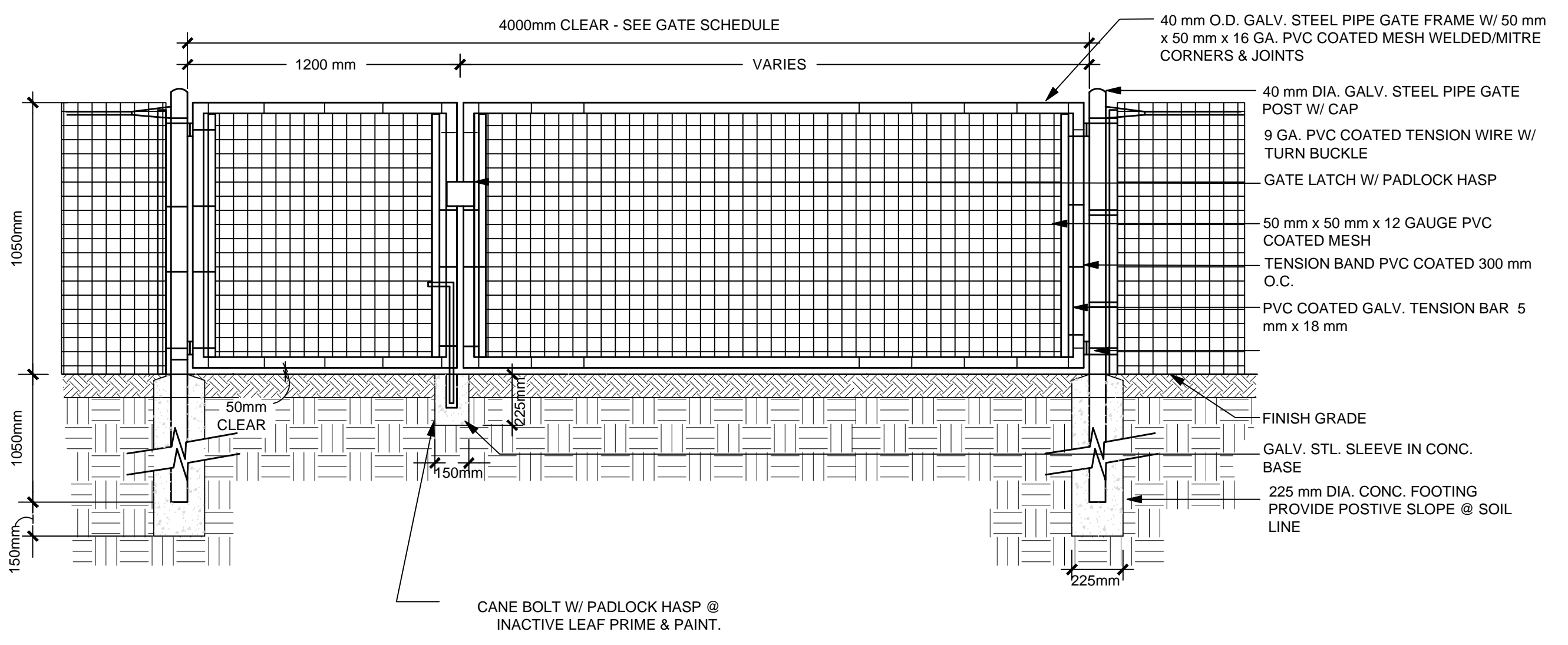


**6** Stockade Fence Enlargement  
ST802 SCALE: 1:5

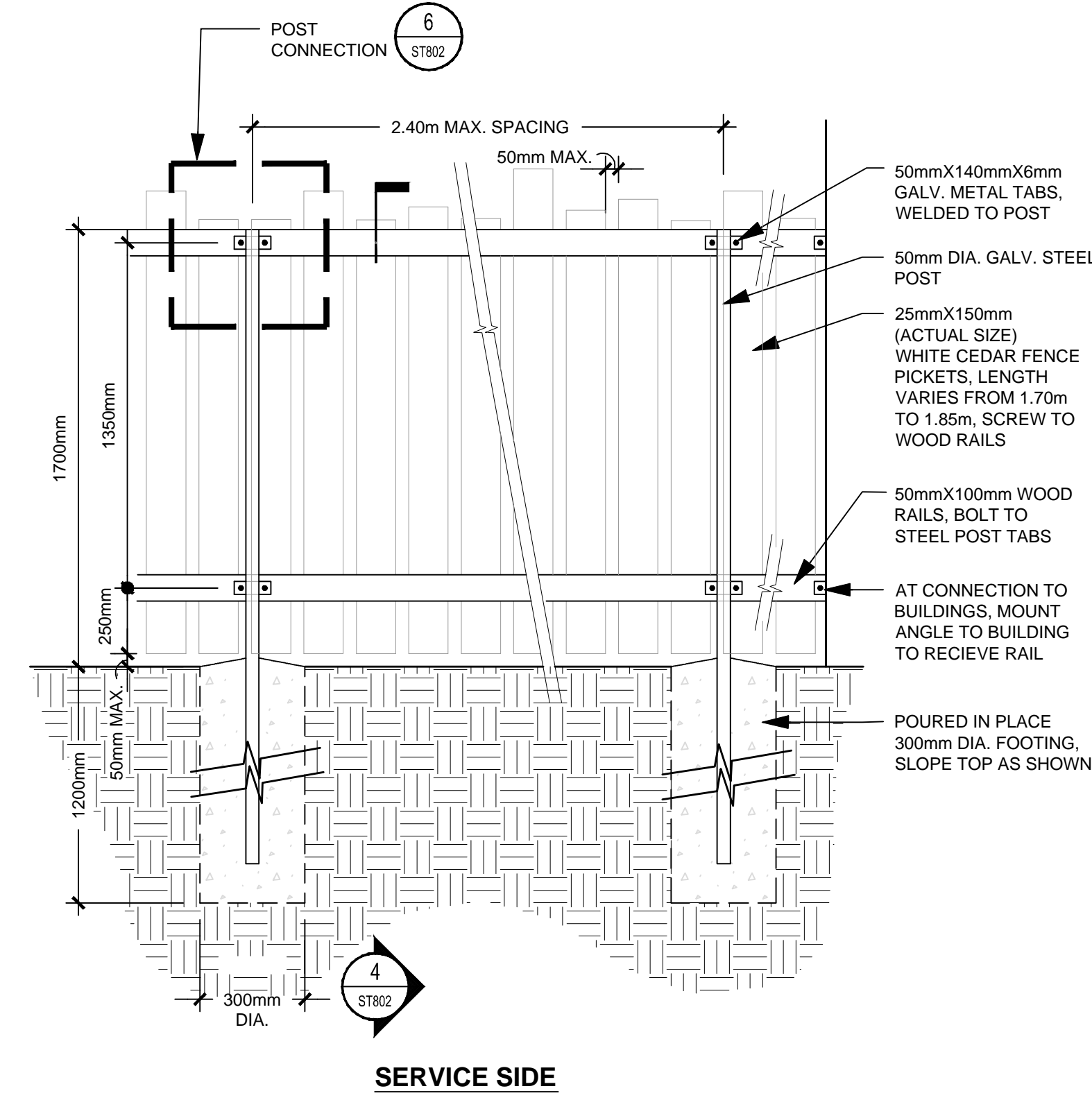


**3** Viewrail Plan  
ST802 SCALE: 1:5

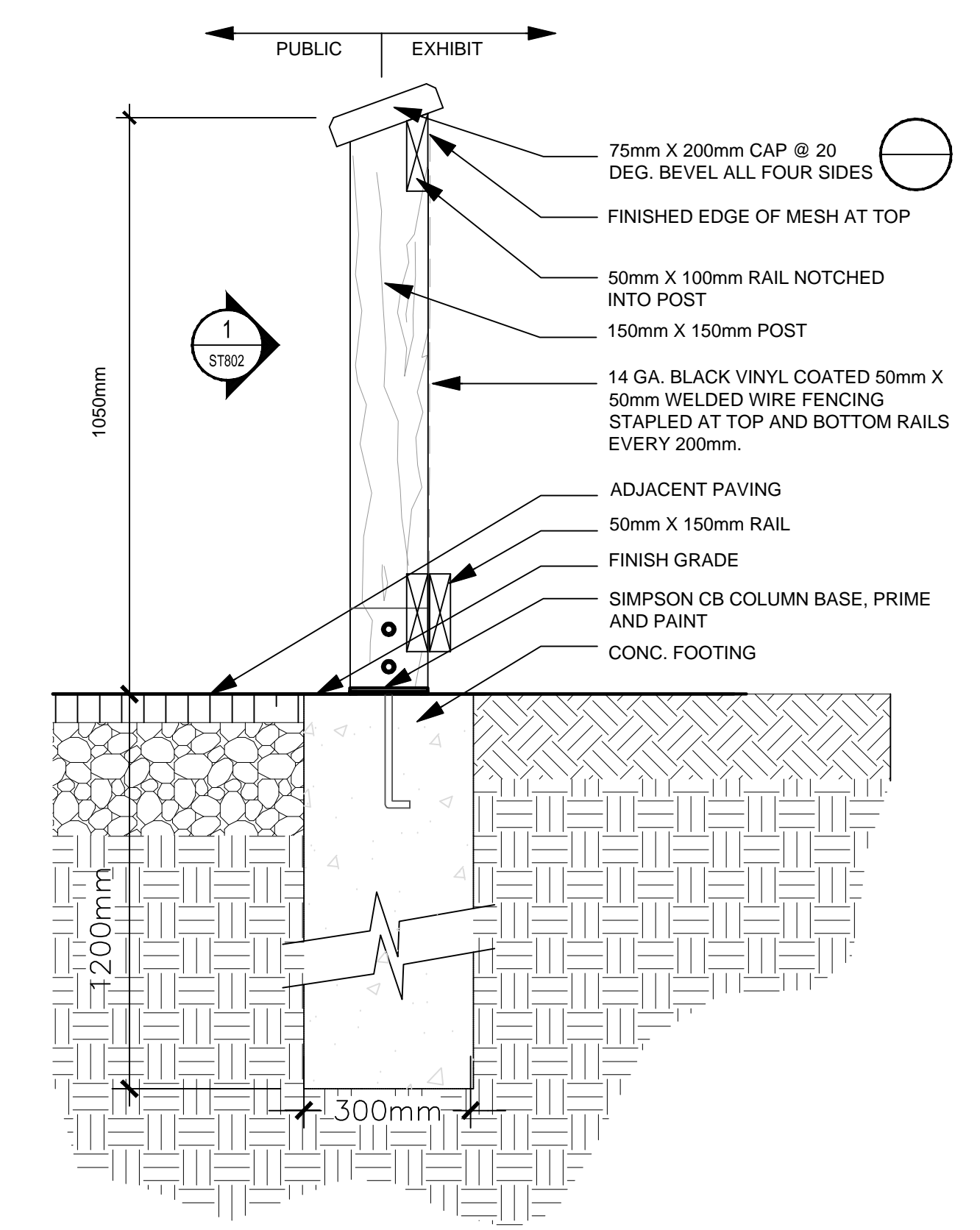
ALTERNATE NOTE:  
WHERE ALTERNATE EXCLUSION FENCE IS USED  
WOODEN SNOW FENCE SHALL BE USED IN LIEU  
OF MESH



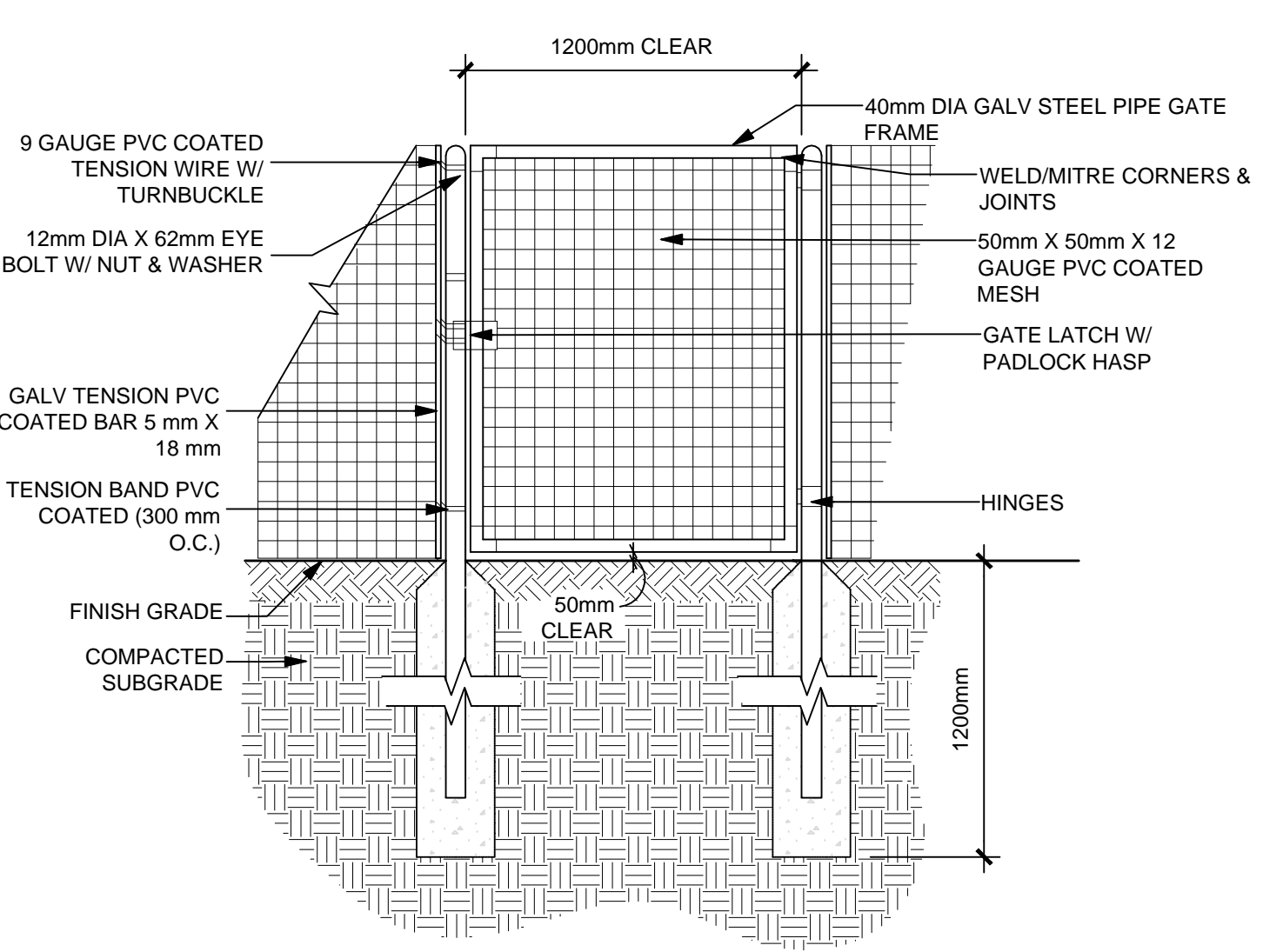
**9** Double Exclusion Gate - A/B  
ST802 SCALE: 1:20 ELEVATION



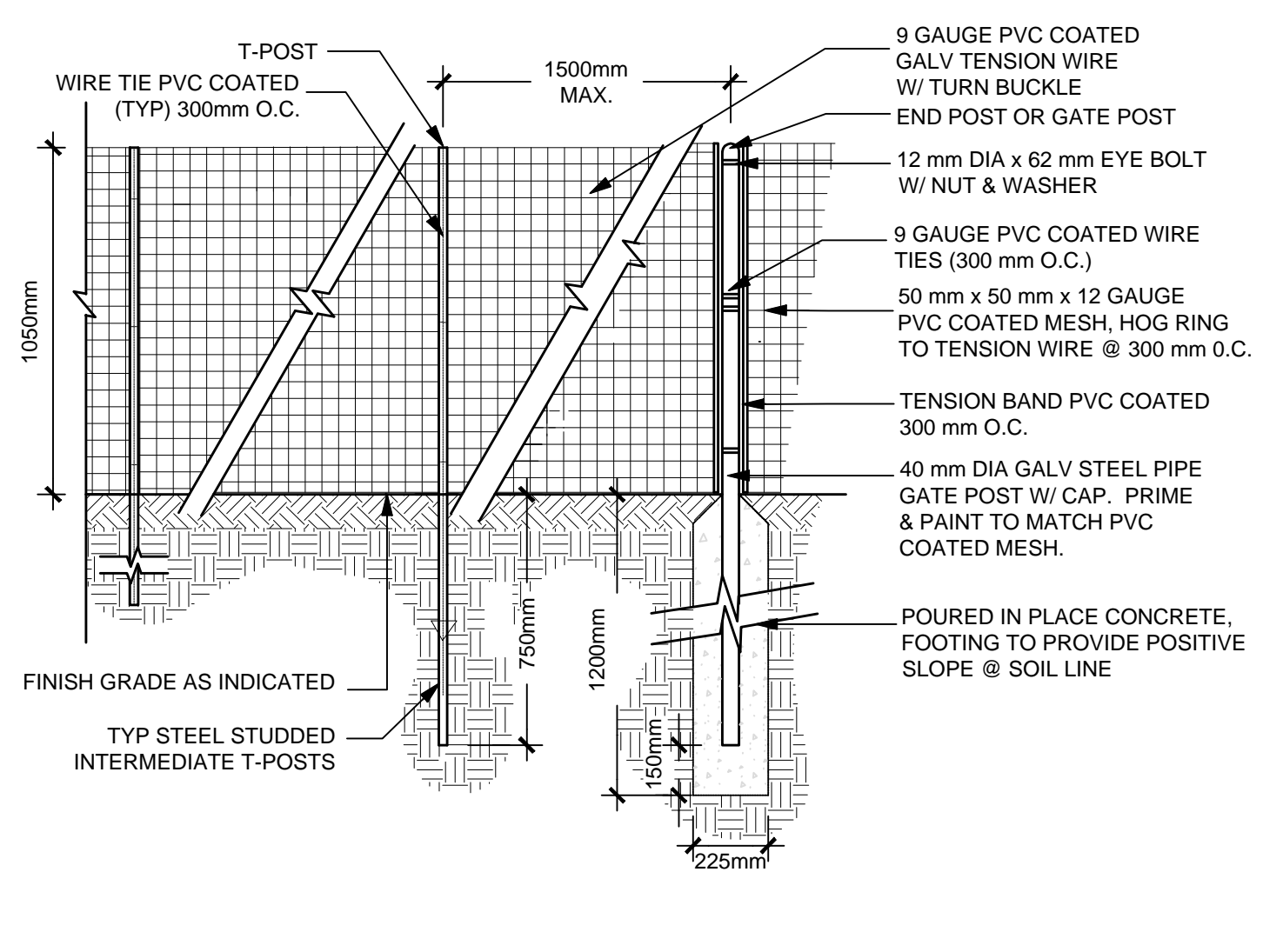
**5** Stockade Fence  
ST802 SCALE: 1:20 ELEVATION



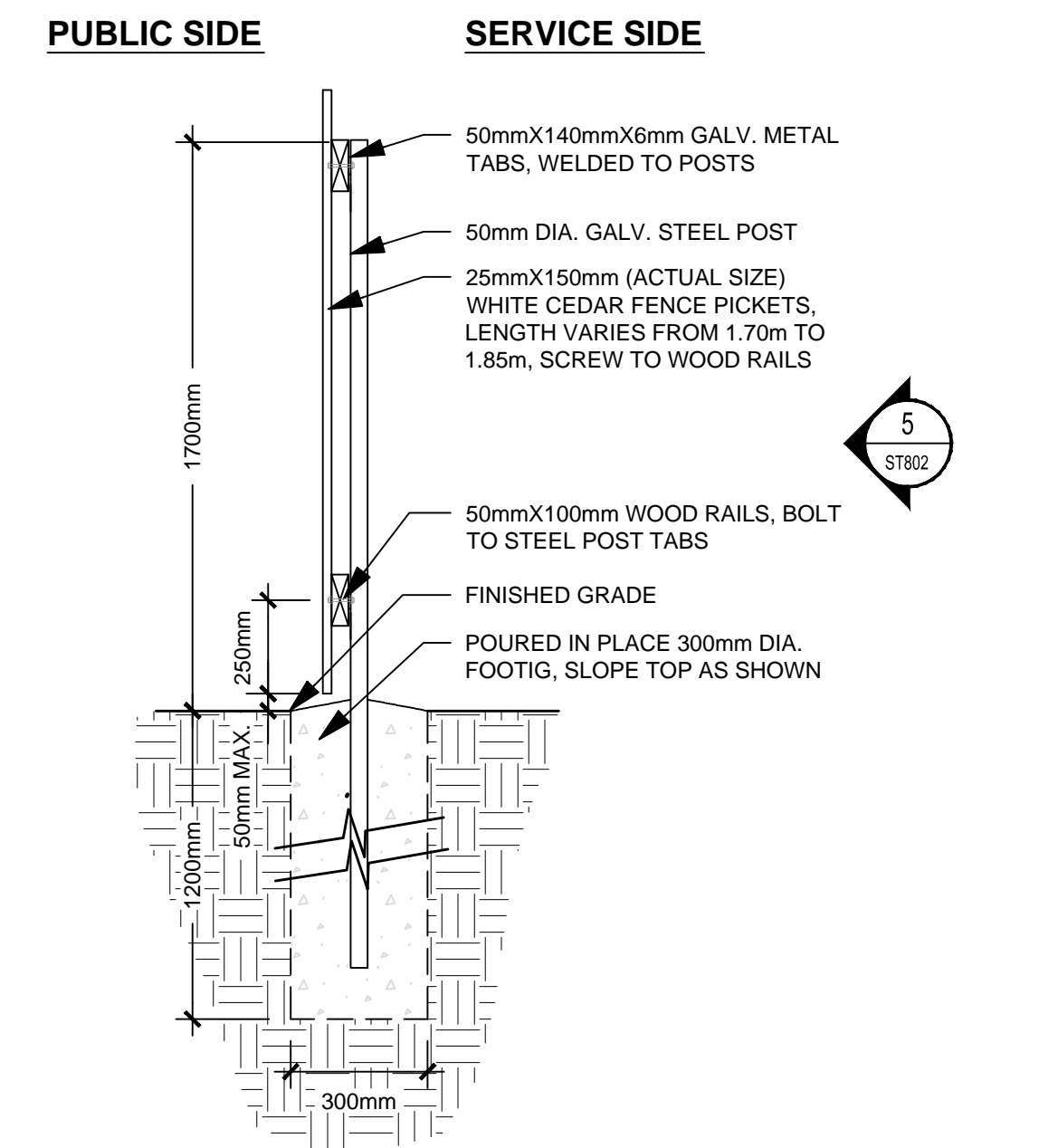
**2** Viewrail  
ST802 SCALE: 1:20 SECTION



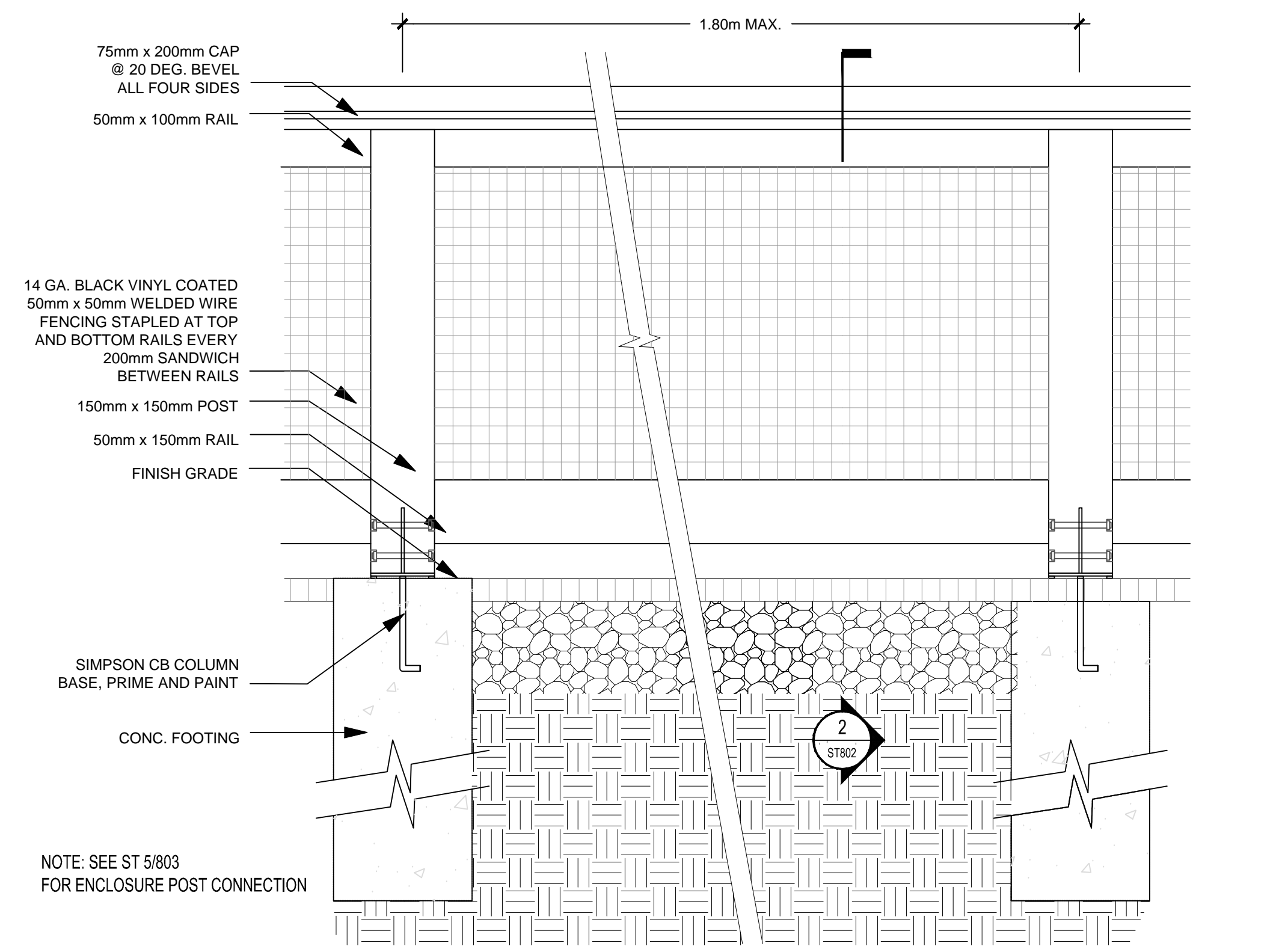
**8** Exclusion Gate - A  
ST802 SCALE: 1:20 ELEVATION



**7** Exclusion Fence - A  
ST802 SCALE: 1:20 ELEVATION



**4** Stockade Fence  
ST802 SCALE: 1:20 SECTION



**1** Viewrail  
ST802 SCALE: 1:20 ELEVATION



Eurasia



Submission:  
**FOR PERMIT & TENDER**

Revision:

Issued for Permit and Tender	May 07, 2012

General Notes:

Stamp:

**clr** ARCHITECTURE  
LANDSCAPE ARCHITECTURE  
EXHIBIT DESIGN  
DESIGN  
833 Chestnut Street, Suite 1000  
Philadelphia, PA 19107  
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401 Wellington Street West, Suite 100  
Toronto, Ontario M5V 1E7  
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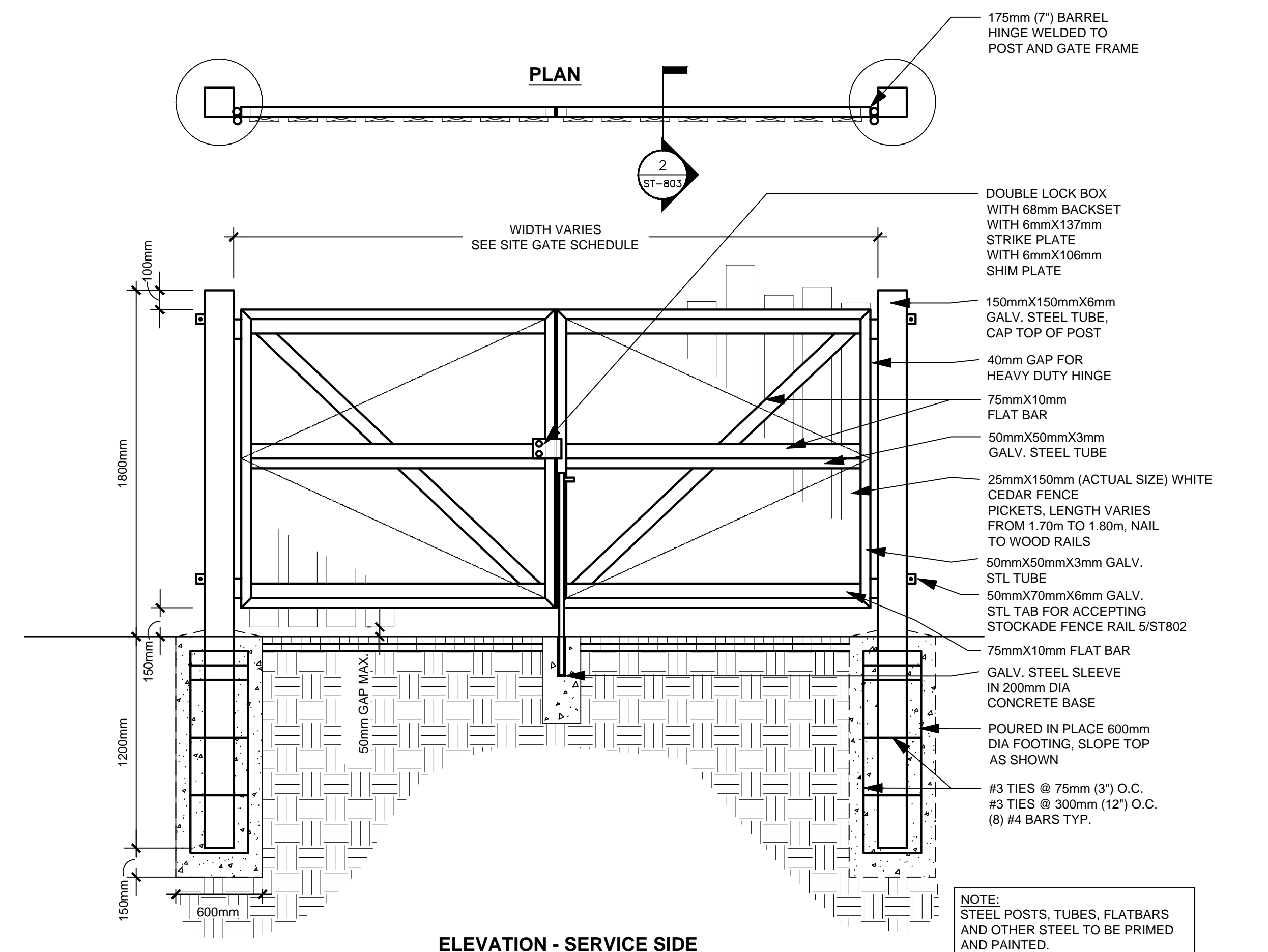
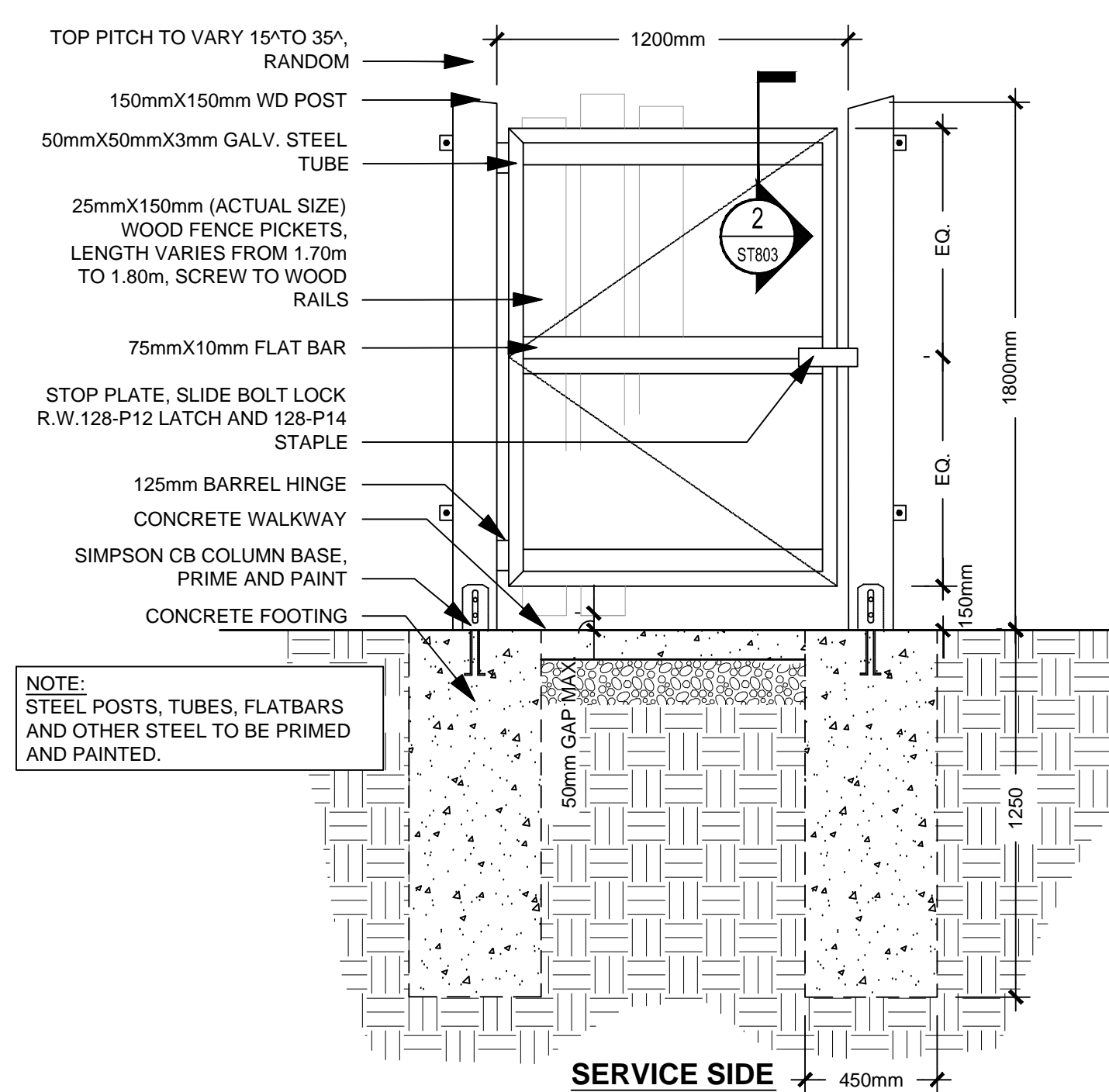
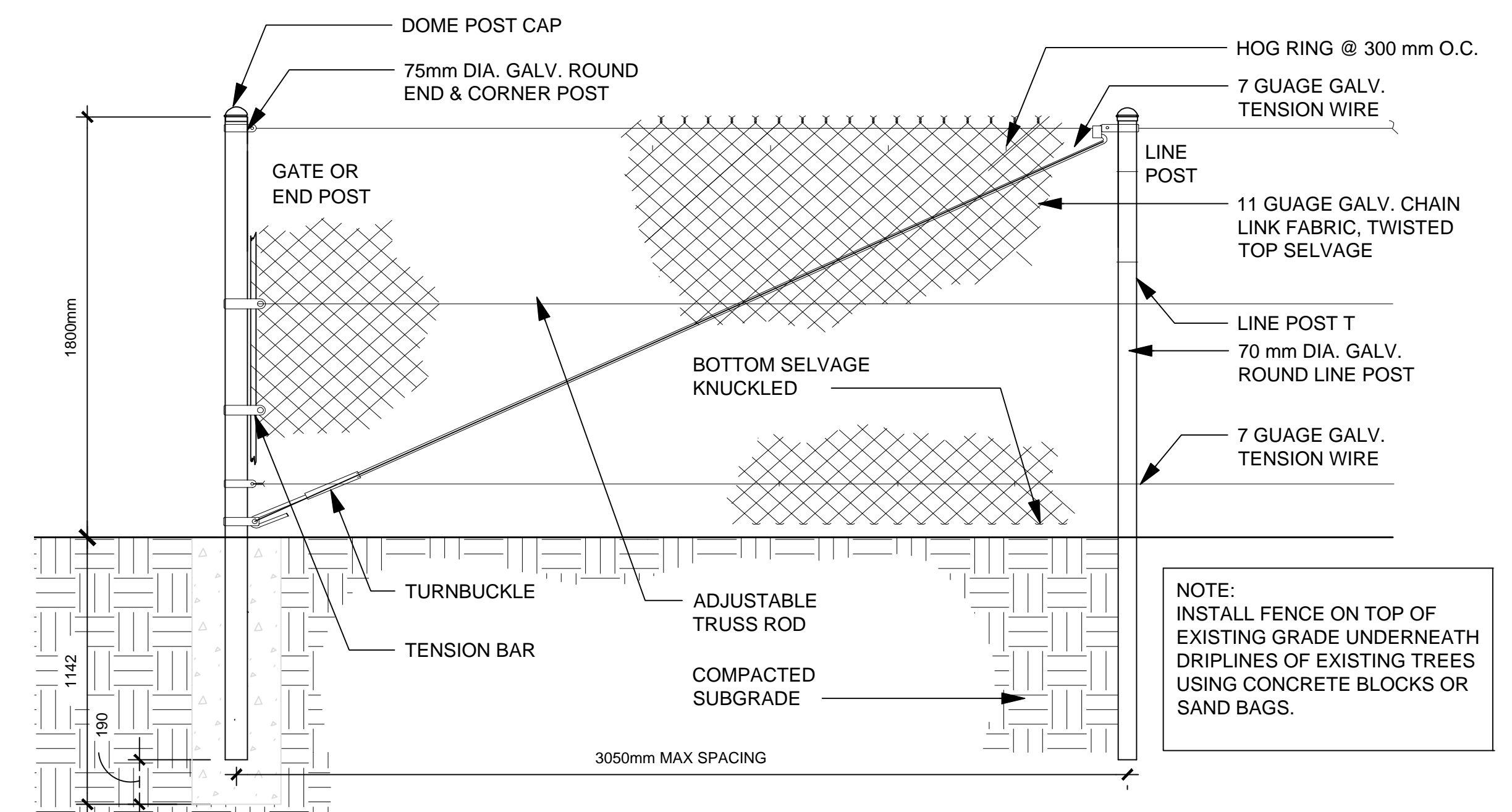
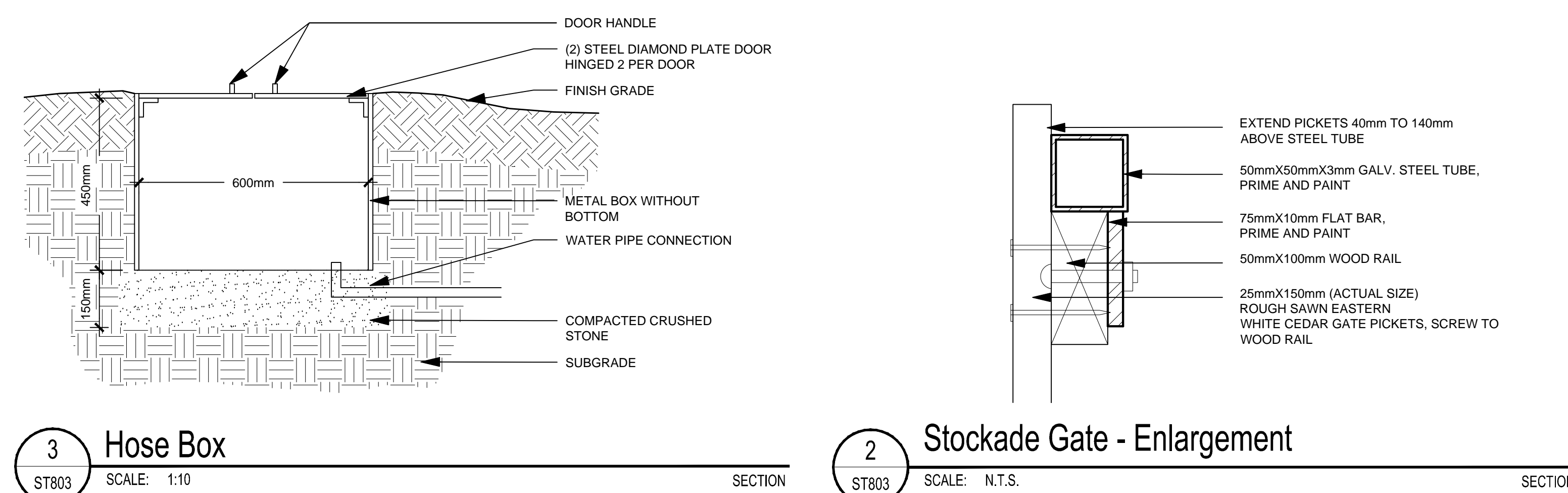
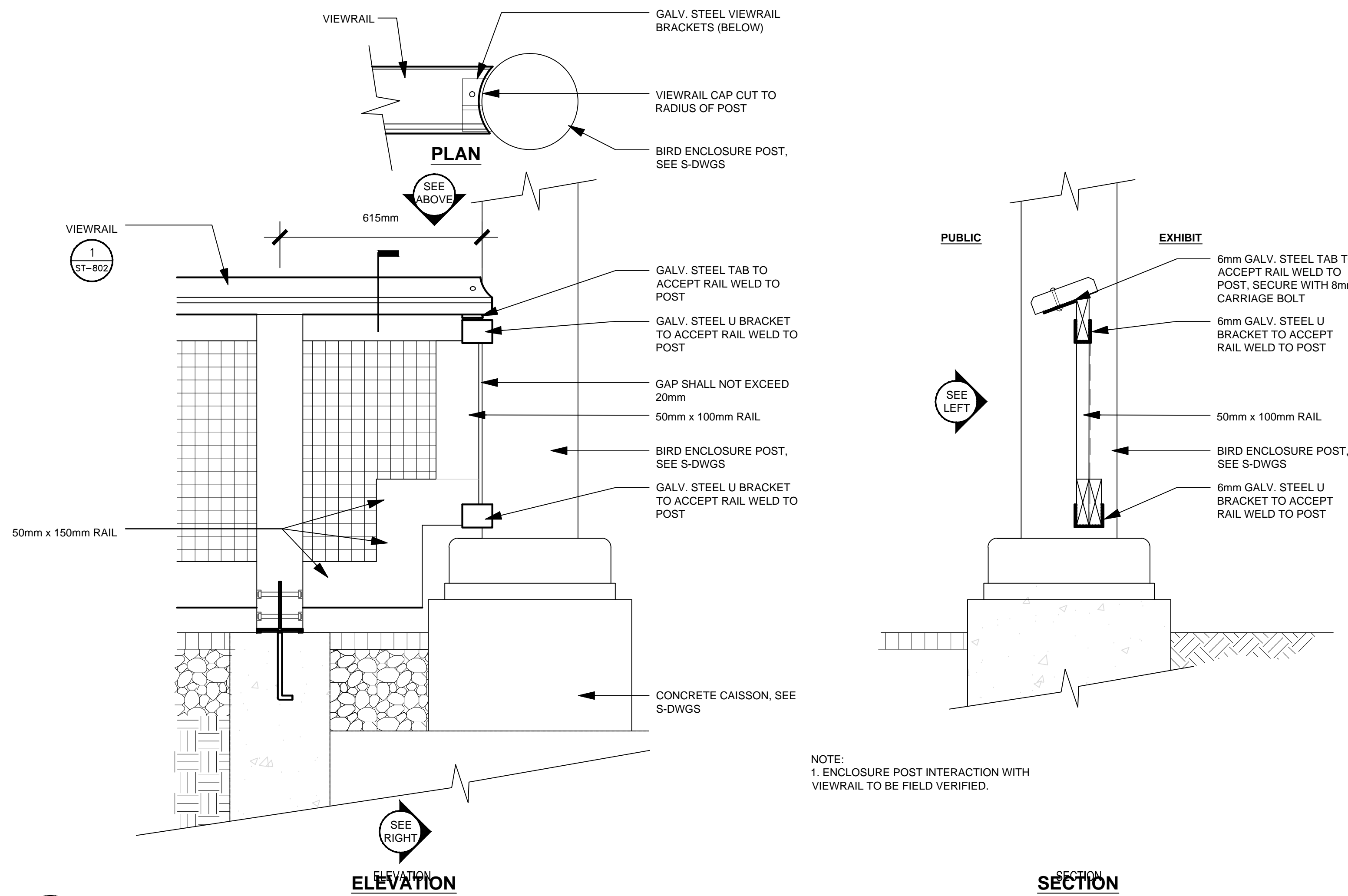
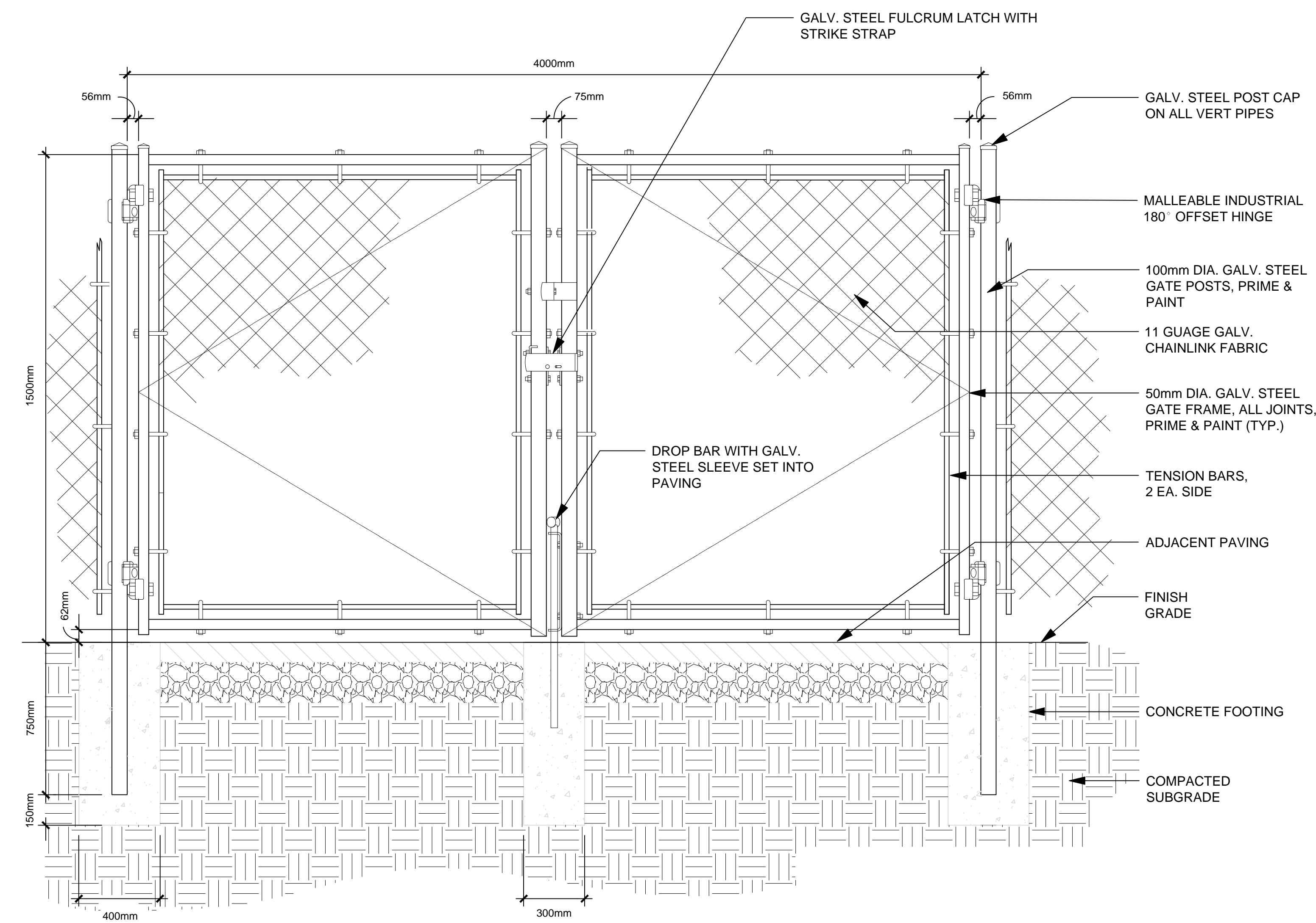
BaAM Productions  
Interpretive Design  
662 King Street West, Suite 101  
Toronto, Ontario M5V 1M7  
(800) 703-0740

NOTE: ALL DIMENSIONS ARE MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

Sheet Title  
**SITE FENCING DETAILS**

Project No.	11042	Drawing No.	<b>ST-802</b>	
Project Manager	MR/JS			
Drawn	MR	Scale		AS NOTED
Checked	JS	Date		05/07/2012





*Eurasia*



Submission:  
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Revision:

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General Notes:

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 MAY 7, 2012

**clr** ARCHITECTURE  
LANDSCAPE ARCHITECTURE  
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833 chestnut street, suite 1000  
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**BaAM Productions**  
Interpretive Design  
662 King Street West, Suite 101  
Toronto, Ontario M5V 1M7  
(800) 703-0740

NOTE: ALL DIMENSIONS ARE MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

Sheet Title  
**SITE DETAILS**

Project No.	11042	Drawing No.	<b>ST-803</b>	
Project Manager	MR/JS			
Drawn	MR	Scale		AS NOTED
Checked	JS	Date		05/07/2012

## **1.0 SCOPE OF WORK**

### **BASE PRICING SCOPE:**

1. Supply all labour, tools, materials and equipment to complete the work as outlined in the quotation documents, drawings and specifications.
2. Install new charging stations:
  - 2.1. Check fusing at main switch in admin building high voltage room – contractor is responsible to determine if this needs to be changed & change if required.
  - 2.2. Install 100KVA loop fed transformer on existing transformer vault (Zoo supplied transformer):
    - 2.2.1. Existing transformer to be removed and disposed. Although this particular transformer is not on any of our lists for containing PCB. The oil of the transformer will likely require testing for PCB as per environmental regulations before it can be removed off site. PCB testing shall be the responsibility of the contractor.
    - 2.2.2. Install an engineered concrete lid on the existing transformer vault and install the new transformer on top of this lid.
  - 2.3. Install 650 feet of cabling to new charging station location.
  - 2.4. Install new 250KVA transformer (Zoo supplied) on new concrete pad and connect.
  - 2.5. Feed new distribution panel (panel to be Siemens or Square D Nema 3R) from new 250KVA transformer. Distribution panel to be sized for maximum amperage possible according to the feed from the transformer.
  - 2.6. Install stockade fence around distribution panel and 250KVA transformer. Include one 4' wide gate. See Det 4 & 5 ST-802 for stockade fence, and Det 5 ST-803 for gate. Note: drawings show stockade fence is 5.5 feet tall. The fence for this project is to be minimum 7 feet tall. Include for one additional horizontal rail to accommodate the added height.
  - 2.7. Feed 21 charging stations from this distribution panel.
  - 2.8. Install 21 charging stations (Zoo supplied) according to the attached installation instructions.
    - 2.8.1. Charging stations are to be installed on 6" x 6" square hollow aluminum posts with post caps. Posts to be powder coated gloss black. Posts to be installed on 14-18" diameter 5' deep concrete footings and to be fastened through a baseplate by stainless steel chemical, expansion, or cast in place anchors. Chargers are to be mounted two per post and 55" from the ground to the bottom of the charger.

**Request for Tender**  
**TZC T 04-2020-02 Installation of Electric Vehicle Charging Stations**  
**Part 3 – Scope**

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2.8.2. Install a 4' tall, 6" diameter schedule 40 bollard in front of each post (as shown on SK-02). Bollards to have a yellow bollard cover installed. Bollard to be filled with concrete and installed 5' deep in an 18" concrete footing.

2.9. Install signs (Zoo supplied) at all parking spaces to indicate EV charging only.

3. The contractor is responsible to provide Arc Flash Analysis of all new electrical equipment.
4. Contractor is responsible for any required permits or engineering.
5. All work to be completed in accordance with applicable codes (e.g. Building Code, Electrical Code, Fire Code, etc.)
6. Any work must be carefully coordinated with the Zoo to ensure the safety of visitors, staff and the animals.
7. Overhead work shall be performed using appropriate barricades to prevent people from inadvertently walking below the work.
8. Any equipment parked on service roads or public pathways shall be completely surrounded by appropriate barricades to prevent unauthorized personnel from entering the area.
9. Any required barricades shall be supplied and installed by the successful bidder.
10. The contractor shall supply the Zoo with copies of relevant certificates and licences for all workers prior to commencement of work.
11. All measurements to be site verified.
12. The contractor is required to provide closeout documents including but not limited to as built drawings, warranty, and inspection certificates.
- 13.

**SEPARATE AND ADDITIONAL PRICING SCOPE:**

13.1. Feed and install new sub-panel (panel to be Siemens or Square D Nema - 3R) from the distribution panel for nine additional charging stations.

13.2. Feed nine charging stations from this sub panel.

13.3. Install nine charging stations (Zoo supplied) according to the attached installation instructions.

13.3.1. Charging stations are to be installed on 6" x 6" square hollow aluminum posts with post caps. Posts to be powder coated gloss black. Posts to be installed on 14-18" diameter 5' deep concrete footings and to be fastened through a baseplate by stainless steel chemical, expansion, or cast in place anchors. Chargers are to be mounted two per post and 55" from the ground to the bottom of the charger.

13.3.2. Install a 4' tall, 6" diameter schedule 40 bollard in front of each post (as shown on SK-02). Bollards to have a yellow bollard cover installed. Bollard to be filled with concrete and installed 5' deep in an 18" concrete footing.

13.4. Install signs (Zoo supplied) at all parking spaces to indicate EV charging only.

## **2.0 CONTRACTOR RESPONSIBILITIES**

1. Regular meetings/communication with the Toronto Zoo Project Team to review project status and to discuss issues that may arise during the project.
2. Provide samples, mock-ups, etc. as required to the Project Team. A sample for the mud bank finish is required, prior to complete application. Sample is to be approved by the Toronto Zoo.
3. Provide product information, SDS sheets and colour samples to the Project Team prior to start of the work where applicable.
4. Protect adjacent areas not included in the project. Any damage caused will be the responsibility of the contractor to rectify at no additional cost to the Zoo.
5. Clean the work area and remove all debris from site on a daily basis and make good any damage caused as a result of the work.
6. Secure the work site and provide construction signs and barriers to prevent injury to Zoo personnel and the public who will require access to the surrounding space during the work.
7. All electric current required for the work shall be provided or furnished by the Contractor. All temporary connections for electricity shall be subject to the approval of the Owner. All temporary lines will be furnished, installed, connected, and maintained by the Contractor in a professional manner satisfactory to the Owner and shall be removed by the Contractor in like manner upon completion of the work.
8. Upon award of contract, Contractor is to finish all work, including clean up and de-mobilization by the completion date specified.
9. Submit all shop drawings for review and approval prior to start of fabrication. Review of shop drawings shall not mean that the Toronto Zoo approves detail design inherent in shop drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of his responsibility for errors or omissions in shop drawings or of his responsibility for meeting all requirements of the subcontract documents.

## **3.0 SAFETY SPECIFICATIONS**

1. It is the responsibility of the Contractor to protect the site as required during construction.
2. Ensure that awareness of public safety is considered and protect visitors in the

**Request for Tender**  
**TZC T 04-2020-02 Installation of Electric Vehicle Charging Stations**  
**Part 3 – Scope**

---

vicinity during the construction period.

3. All necessary personal protective equipment must be worn at all times and SDS sheets must be available on site as required.
4. It is the responsibility of the Contractor to ensure that the work site is properly protected at all times. All work sites must be marked and hoarded adequately with construction signs posted to secure and isolate the work site from the public or other personnel that have access to the area.



## WALL CONNECTOR, 80A SINGLE PHASE INSTALLATION MANUAL

Approved Markets: North America, Japan, Taiwan

For additional languages, please visit: [www.tesla.com/wallconnector](http://www.tesla.com/wallconnector)







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## Product Specifications

All specifications and descriptions contained in this document are verified to be accurate at the time of printing. However, because continuous improvement is a goal at Tesla, we reserve the right to make product modifications at any time.

## Communications Regulations

This device complies with Part 15 of the FCC rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

**⚠ Important:** Changes or modifications to this product not authorized by Tesla could void the FCC compliance.

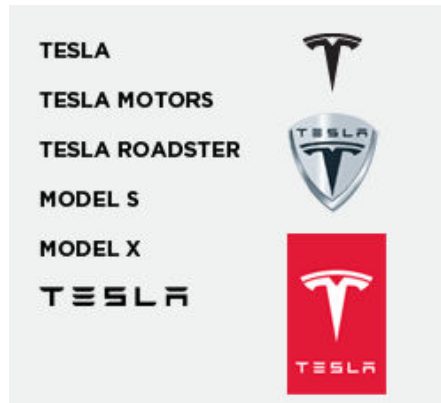
## Errors or Inaccuracies

To communicate any inaccuracies or omissions, or to provide general feedback or suggestions regarding the quality of this manual, send an email to:

[ownersmanualfeedback@tesla.com](mailto:ownersmanualfeedback@tesla.com)

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## Important Safety Instructions




This document contains important instructions and warnings that must be followed when installing and maintaining the Wall Connector.

### Warnings

-  **Warning:** Read all the instructions before using this product.
-  **Warning:** This device should be supervised when used around children.
-  **Warning:** The Wall Connector must be grounded through a permanent wiring system or an equipment grounding conductor.
-  **Warning:** Do not install or use the Wall Connector near flammable, explosive, harsh, or combustible materials, chemicals, or vapors.
-  **Warning:** Turn off input power at the circuit breaker before installing or cleaning the Wall Connector.
-  **Warning:** Use the Wall Connector only within the specified operating parameters.
-  **Warning:** Never spray water or any other liquid directly at the wall mounted control box. Never spray any liquid onto the charge handle or submerge the charge handle in liquid. Store the charge handle in the dock to prevent unnecessary exposure to contamination or moisture.
-  **Warning:** Stop using and do not use the Wall Connector if it is defective, appears cracked, frayed, broken, or otherwise damaged, or fails to operate.
-  **Warning:** Do not attempt to disassemble, repair, tamper with, or modify the Wall Connector. The Wall Connector is not user serviceable. Contact Tesla for any repairs or modification.
-  **Warning:** When transporting the Wall Connector, handle with care. Do not subject it to strong force or impact or pull, twist, tangle, drag, or step on the Wall Connector, to prevent damage to it or any components.

-  **Warning:** Do not touch the Wall Connector's end terminals with fingers or sharp metallic objects, such as wire, tools, or needles.
-  **Warning:** Do not forcefully fold or apply pressure to any part of the Wall Connector or damage it with sharp objects.
-  **Warning:** Do not insert foreign objects into any part of the Wall Connector.
-  **Warning:** Use of the Wall Connector may affect or impair the operation of any medical or implantable electronic devices, such as an implantable cardiac pacemaker or an implantable cardioverter defibrillator. Check with your electronic device manufacturer concerning the effects that charging may have on such electronic devices before using the Wall Connector.

### Cautions

-  **Caution:** Do not use private power generators as a power source for charging.
-  **Caution:** Incorrect installation and testing of the Wall Connector could potentially damage either the vehicle's Battery and/or the Wall Connector itself. Any resulting damage is excluded from the New Vehicle Limited Warranty and the Charging Equipment Limited Warranty.
-  **Caution:** Do not operate the Wall Connector in temperatures outside its operating range of -22°F to 122°F (-30°C to +50°C).



## Notes

**Note:** Ensure that the Wall Connector's charging cable is positioned so it will not be stepped on, driven over, tripped on, or subjected to damage or stress.

**Note:** Do not use cleaning solvents to clean any of the Wall Connector's components. The outside of the Wall Connector, the charging cable, and the connector end of the charging cable should be periodically wiped with a clean, dry cloth to remove accumulation of dirt and dust.

**Note:** Be careful not to damage the circuit boards or components during installation.

**Note:** Use a cable sheath or similar containment to cover the supply cables. The color black is recommended.



The maximum power rating for the Wall Connector is 20 kW or 80A at 250V AC single-phase power.

Description	Specifications
Voltage and Wiring	208V or 240V AC single-phase: L1, L2, and earth
Current	Maximum output: 80A, 72A, 64A, 56A, 48A, 40A, 36A, 32A, 28A, 24A, 20A, 16A, 12A
Frequency	50 to 60 Hz
Cable Length	8.5' (2.6 m) and 24' (7.4 m)
Wall Connector Dimensions	Height: 15.0" (380 mm) Width: 6.3" (160 mm) Depth: 5.5" (140 mm)
Top Entry Bracket Dimensions	Height: 10.8" (275 mm) Width: 5.1" (130 mm) Depth: 2.0" (50 mm)
Weight (including bracket)	20 lb (9 kg)
Operating Temperature	-22°F to 122°F (-30°C to 50°C)
Storage Temperature	-40°F to 185°F (-40°C to 85°C)
Enclosure Rating	Type 3R
Agency Approvals	cULus listed for United States and Canada under file number E354307, FCC Part 15.
Ventilation	Not Required



## Circuit Ratings

Use a single-phase circuit breaker rated for 100A single phase to obtain the fastest charging.

In certain installation locations, this level of power isn't readily available. Therefore, you can adjust the circuit breaker rating on the Wall Connector from 15A to 100A (refer to Set the Operating Current on page 21).

**Note:** Actual amperage draw will depend on the on-board charger of the vehicle. Contact Tesla if you have questions about the on-board charger of a specific vehicle.

## Self-Monitoring and Recovery

The Wall Connector has a ground monitoring circuit that continuously checks for the presence of a safe ground connection and automatically recovers from faults. Manual testing and resetting is not required.

Temporary problems such as ground faults or utility power surges are overcome automatically. If a residual current fault occurs that interrupts charging, the Wall Connector automatically tries to clear the fault and re-attempt charging.

If the problem is immediately sensed a second time, the Wall Connector waits 15 minutes before trying to charge. This process repeats 4 times and if all attempts are unsuccessful, power is removed and no further attempts are made. In this case, you will see a red error light on the front panel (refer to Troubleshooting on page 24). It is recommended that when you see a red error light, you power off the Wall Connector by switching off the upstream circuit breaker, and then power it back on again.

The Wall Connector can alternatively be reset when a red error light is encountered using the RESET button (refer to Reset on page 27).

## Power Outages

If a power outage occurs, the Wall Connector automatically resumes charging when power is restored. If the charging cable is plugged into the vehicle when power is restored, the lights blink and the unit does not energize the charging cable for approximately 15 seconds to three minutes. This prevents the utility grid from experiencing a large surge when power is restored and allows vehicles to begin drawing current at random times, rather than all at once.

## Load Sharing

The Wall Connector provides the capability to wire 4 Wall Connectors to a single circuit with automatic load management, giving vehicle owners reassurance that they can charge multiple vehicles at home (refer to Appendix B: Optional Connection for Load Sharing on page 30).



## Minimum Requirements

Installation of the Wall Connector requires that you:

- Calculate the existing electrical load to determine the maximum operating current.
- Calculate the distance to ensure minimal voltage drop.
- Obtain any necessary permits from the local authority that has jurisdiction and confirm that the follow-up inspection has been scheduled by an electrician after the installation is complete.
- Use only copper conductors.
- Use conductors that are sized in accordance with local wiring regulations. The selected cable must be able to sustain periods of constant load of up to the maximum amperage selected by the electrician.
- Use protective devices. The circuit protection device chosen must incorporate overcurrent protection in relation to the electrical load selected.

**Note:** Consult with an electrician to ensure that the installation meets local regulations.

## Service Wiring

**Warning:** The Wall Connector is a single-phase device. Do not connect all three phases of a three-phase feed.

**Warning:** Before installing the Wall Connector, identify the type of utility service connection available on site.

**Caution:** If a 240V three-phase feed is from a Delta-connected secondary, the leg used must have a center tap. This center tap must be grounded. Only the two phases on either side of the centertapped leg can be used.

Only three wires are connected, but care must be taken that the service transformer secondary connection is definitely known, and that the three wires from the main circuit breaker panel are correctly connected and labeled.

**Caution:** The two phases used must each measure 120V to neutral. Earth ground should be connected to neutral at only one point, usually at the breaker panel.

## Single-Phase With Neutral

For single-phase use of a Wye-connected secondary, only a single-phase (L1) and neutral should be connected. The phase to neutral voltage measurement are shown in the illustration below.

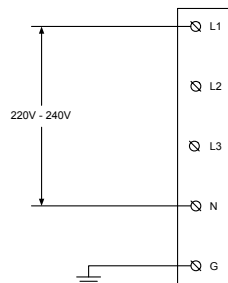
**Warning:** The Wall Connector in this configuration operates only from a single-phase (L1). Do not connect the remaining phases (L2 and L3).

**Warning:** Before installing the Wall Connector, identify the type of utility service connection available on site. If you are unsure about the type of connection available at the service panel, consult an electrician, or contact Tesla for assistance.

**Note:** Consult with your local electrician or refer to your local code for proper wire sizing appropriate for the currents in your Wall Connector.

## Single-Phase Without Neutral

For installations without a neutral and 220-240V from phase to phase, connect any two phases (L1, L2, or L3 in the illustration) to the L1 and N positions on the Wall Connector terminal block.







## 120V Above Ground

- ⚠ Warning:** The Wall Connector is a single-phase device. Do not connect all three phases of a three-phase feed.
- ⚠ Warning:** Before installing the Wall Connector, identify the type of utility service connection available on site. If you are unsure about the type of connection available at the service panel, consult an electrician, or contact Tesla for assistance.
- ⚠ Caution:** The two phases used must each measure 120V to neutral. Earth ground must be connected to neutral at only one point, usually at the breaker panel.
- ⚠ Caution:** If a 240V three-phase feed is from a Delta-connected secondary, the leg used must have a center tap. This center tap must be grounded. Only the two phases on either side of the center-tapped leg can be used.

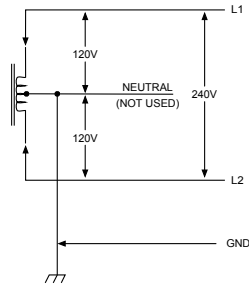
Only three wires are connected, but care must be taken that the service transformer secondary connection is definitely known, and that the three wires from the main circuit breaker panel are correctly connected and labeled.

**Note:** The L1, L2, and ground outputs labeled on the illustrations correspond to the inputs on the Wall Connector.

## Ground Connection

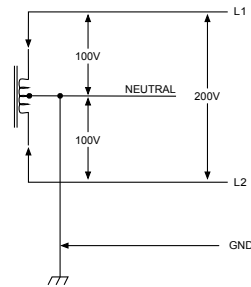
Always connect the Neutral at the service to Earth Ground. Ground fault protection is not possible unless the Neutral (center tap on the service transformer) is connected to an Earth Ground. If ground is not provided by the electrical service, you must install a grounding stake nearby. The grounding stake must be connected to the ground bar in the main breaker panel, and Neutral connected to Ground at that point.

## 240V Single-Phase



**Note:** Illustrations in this document are for demonstration purposes only.

## 200V Single-Phase



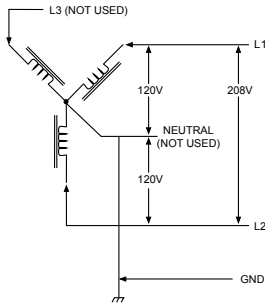
**Note:** Illustrations in this document are for demonstration purposes only.



## 208V 3-Phase Wye-Connected

With a Wye-connected secondary, any two of the legs can be used to provide 208V to the Wall Connector. For example, L1 and L2, or L1 and L3, or L2 and L3. The two used phases must each measure 120V to neutral.

**Note:** A current-carrying neutral is not required.



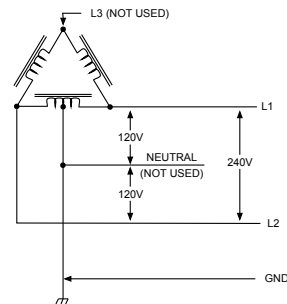
- ⚠ Caution:** The unused leg (L3 in the illustration) must remain open. Do not connect to a neutral bar, or to earth ground.
- ⚠ Caution:** The center point of the three phases (normally used as neutral) must be grounded to earth at only one point. This is usually at the breaker panel.

## 240V Three-Phase Delta-Connected

With the delta connection, one leg must be center tapped, and only the two phases on either side of the center tap can be used. The two used phases must each measure 120V to neutral.

Consult the transformer manufacturer's literature to verify that the single leg can supply the required power.

**Note:** The Wall Connector's contactor closes only if it detects the presence of an earth ground wire connected to a neutral point on the transformer secondary.



- ⚠ Caution:** The third line (L3 in the illustration) of the delta is 208V, with respect to neutral, and is sometimes referred to as a "stinger." Do not use this third line.
- ⚠ Caution:** Do not use a three-phase delta-connected transformer secondary without a center tap on one leg. No neutral point is available for the required earth ground connection.

## Determine the Circuit Breaker Requirements

To determine the type of upstream circuit breaker you need, examine the distribution panel or circuit breaker box to identify the amperage available at the installation site.



The Wall Connector has an internal rotary switch that allows you to adjust its operating current (refer to Set the Operating Current on page 21). The circuit breaker should be rated for the continuous current of: 12, 16, 20, 24, 28, 32, 36, 40, 48, 56, 64, 72, or 80A.

**Note:** Refer to the circuit breaker current ratings specified on IEC 60898 when installing the Wall Connector. If in doubt, check with your local building electrical inspector.

## Choose the Best Location for the Wall Connector

Determine the parking location of the vehicle to ensure that the charge cable reaches the charge port. The Wall Connector should be located:

- In an enclosed garage, typically on the vehicle's charge port side.
- In a well-ventilated area. Avoid installation in an enclosed box, or adjacent to hot appliances.
- 4 ft (1.2 m) above the floor.
- 8 in (190 mm) from any obstructions to allow for cable looping.

**Note:** The Wall Connector is approved for outdoor use, but it is not designed for complete immersion in liquid. Protection from rain is recommended but not required.



## Installation Considerations

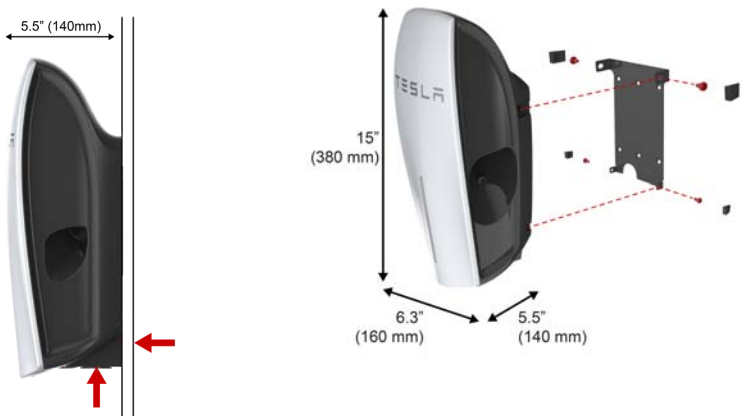
Three methods are available to install the Wall Connector. The location of the conduit determines which installation method to follow. If the conduit runs along the floor or low on the wall, use the bottom entry configuration. If the conduit comes from inside the wall, use the rear entry configuration. If the available conduit comes from the ceiling, use the top entry installation.

**Note:** Throughout the manual, “conduit” is used as the standard term for the protective tubing that houses the service wiring. In regions where conduit is not used (Europe for example), a cable comprised of service wiring enclosed in a protective jacket may be substituted for conduit if allowed by local regulations.

Here are some additional guidelines:

- Conduit openings are sized for 1" (25 mm) conduit.
- Conduit needs to meet all local regulations.
- Use an appropriate circuit breaker.
- To keep the housing weatherproof, use cable glands.
- Use a UL approved conduit connector to ensure proper seal.

### Bottom or Rear Entry





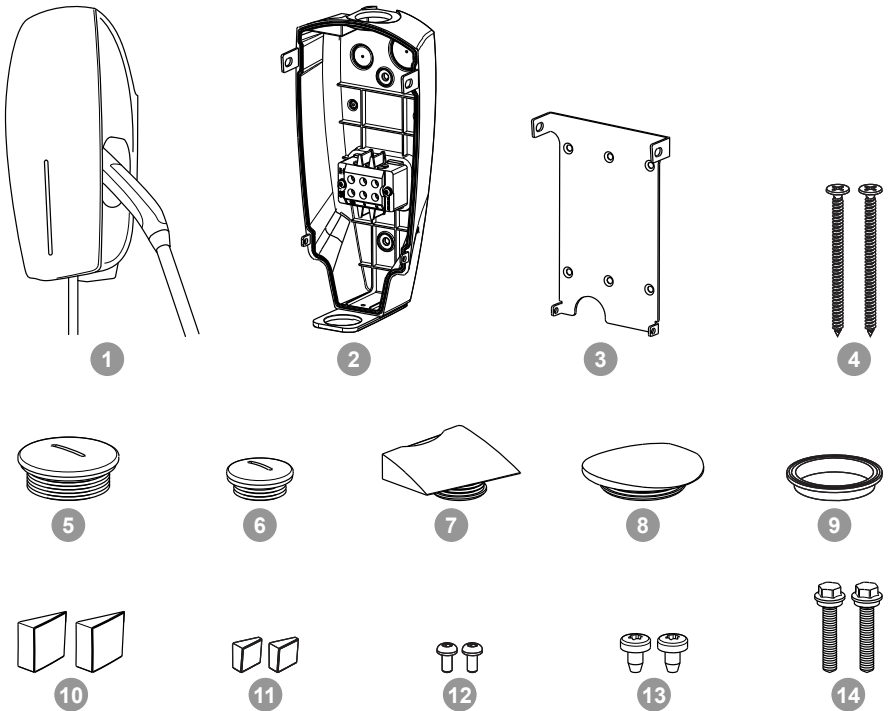
## Top Entry





The shipping box contains parts for all installation methods, as well as this manual. If any parts are damaged or missing, contact Tesla (refer to Questions? on page 28).

**Note:** Not shown is the supplied cardboard template.



Item	Description (Quantity)
1	Wall Connector
2	Top entry bracket*
3	Low profile bracket **
4	Low profile bracket screws (2) **
5	Bottom or rear entry power conduit plug
6	Bottom or rear entry signal conduit plug
7	Top entry signal conduit plug*
8	Top entry power conduit plug*
9	Bottom conduit sealing gasket*
10	Top bracket-to-housing screw covers (2)
11	Bottom bracket-to-housing screw covers (2)



## Check the Box Contents

Item	Description (Quantity)
12	Bottom bracket-to-housing screws (2)
13	Top bracket-to-housing screws (2)
14	Top entry bracket mounting screws (2)*
* Items used in only top entry installations.	
** Items used in only bottom or rear entry installations.	



## Tools and Materials Required

Before installing the Wall Connector, gather the following tools and materials:

- Pencil or marker
- Hole punch (optional, to push through cardboard template)
- Wire stripper
- Voltmeter or digital multimeter (to measure AC voltage at the installation site)
- Phillips screwdriver
- Small flathead screwdriver
- Large flathead screwdriver (optional, to remove plastic knock-outs)
- T20 security pin Torx driver
- T10 Torx driver
- M20 and M32 cable glands (also known as sealing hubs)
- Ferrules (the diameter of the ferrule depends on the diameter of the power wiring and the construction)
- Wiring (use twisted pair communication cable 18AWG (Max diameter: 0.04 in (1.02 mm); Max cross-sectional area: 0.03 in<sup>2</sup> (0.82 mm<sup>2</sup>) for a maximum of 49 ft (15 m) between Wall Connectors)
- Level
- Machine drill
- Torque driver (for terminal block connections)

## Overview of Installation Steps

**⚠ Warning:** After you run service wiring to the installation site using metal flame retardant conduit, install the appropriate upstream circuit breaker, **TURN OFF AND VERIFY POWER IS OFF BEFORE CONTINUING.**

Then follow these steps to install the Wall Connector:

- Install the Low Profile Bracket for Rear or Bottom Entry Wiring on page 16
- Install the Top Entry Bracket for Rear or Top Entry Wiring on page 17
- Prepare for Installation on page 18
- Connect the Wiring on page 19
- Set the Operating Current on page 21
- Secure the Cover and Power Up on page 22





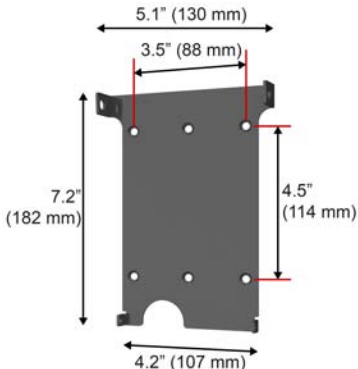
## Install the Low Profile Bracket for Rear or Bottom Entry Wiring

Use the low profile bracket, shown below, to wire the Wall Connector from the rear or bottom.



1. Use the low profile bracket as a guide to mark the location on the wall for the mounting screws.

- Use a level to ensure that the marks are perfectly vertical.
- Space the holes 4.5" (114 mm) apart.



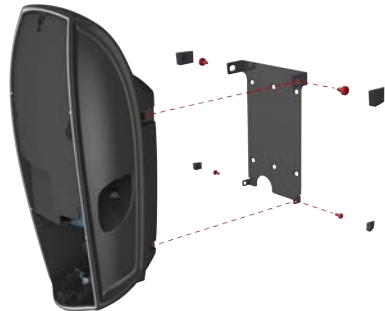
- For U.S.A. installations, position the bracket so that the Wall Connector is located at a maximum of 60" (150 cm) from floor level. The minimum height is 18" (45 cm) if mounting indoors,

and 48" (122 cm) if mounting outdoors.

- If using the rear entry conduit, use at least one set of the edge mounting holes so that the conduit does not interfere with the wall stud.
- If using the bottom entry conduit, use the two center mounting holes.

**Note:** Ensure that the minimum and maximum height of the bracket is carefully selected. It should be installed out of the way of any reasonably foreseeable impacts.

2. Attach the bracket using fasteners that are appropriate for the type of wall material, drilling pilot holes if necessary. Use the supplied screws only if mounting the bracket directly to a wooden stud. If mounting to another type of wall (hollow, masonry, etc.), use fasteners that are long enough to securely anchor the Wall Connector and can hold at least 80 lb (36 kg).



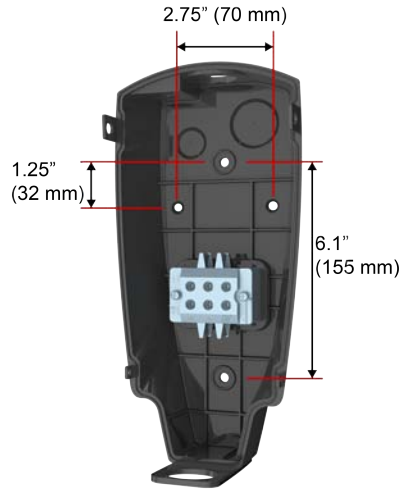


## Install the Top Entry Bracket for Rear or Top Entry Wiring

The top entry bracket enables you to route the service wiring into the Wall Connector enclosure from the top of the enclosure, as shown below.



- Use the cardboard template and a level as a guide to mark the location on the wall for the mounting screws.
    - Use a level to ensure that the marks are perfectly vertical.
    - Space the holes 6.1" (155 mm) apart.
    - Position the bracket so that the Wall Connector is located at a maximum of 60" (150 cm) from floor level. The minimum height is 18" (45 cm) if mounting indoors, and 48" (122 cm) if mounting outdoors.
- Note:** Ensure that the minimum and maximum height of the bracket is carefully selected. It should be installed out of the way of any reasonably foreseeable impacts.
- (Optional) There are two additional mounting holes. To use these holes, use a flat-head screwdriver to knock-out the plastic that is closing the holes. These holes are spaced 2.75" (70 mm) apart.



- Attach the bracket using fasteners that are appropriate for the type of wall material, drilling pilot holes if necessary. Use the supplied screws only if mounting the bracket directly to a wooden stud. If mounting to another type of wall (hollow, masonry, etc.), use fasteners that are long enough to securely anchor the Wall Connector and can hold at least 80 lb (36 kg).





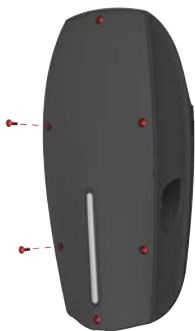
## Prepare for Installation

Follow these instructions to remove the cover and route the service wiring into the Wall Connector.

1. Use a T10 Torx driver to remove the screw at the bottom of the outer cover. Carefully disengage the snaps on the sides and top using a flathead screwdriver and completely remove the cover. Save the screw and cover for reassembly.



2. Use a T20 security pin Torx driver to remove the six screws on the sealing cover. Carefully remove the sealing cover and disconnect the ribbon cable. Save the screws and cover for reassembly.



**⚠ Caution:** Do not allow the sealing cover to hang from the ribbon cable. Doing so can damage the ribbon cable or its connectors.

3. For top entry configuration, install the wiring to the terminal block in the top entry bracket as shown in Connect the Wiring on page 19, then return to this section and proceed to the next step. For back or bottom entry configurations, skip to the next step.
4. Place and hold the Wall Connector on the bracket, ensuring that all four mounting tabs are properly aligned.
5. Use a T20 Torx driver to install the two top housing mounting screws. Push the cosmetic screw covers into place.
6. Use a T20 Torx driver to install the two bottom housing mounting screws. Push the cosmetic screw covers into place.



## Connect the Wiring

**Note:** Consult with your local electrician or refer to your local code for proper wire sizing appropriate for the currents in your Wall Connector.

**Note:** It is the installer's responsibility to identify whether additional grounding is required to ensure that local regulations are met. Grounding must be installed at the power source and not at the cable entry to the Wall Connector.

**⚠ Warning:** Do not connect service wiring until you have read and fully understand the concepts described in this section. If you are uncertain about the type of power available at the service panel, consult an electrician, or contact Tesla for assistance.

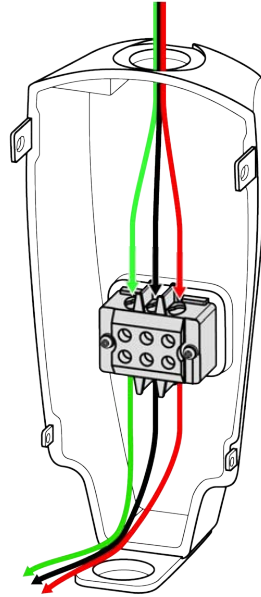
1. Turn off the power.

**⚠ Warning: RISK OF ELECTRIC SHOCK!** Before continuing, use a voltmeter to ensure the power is off by confirming that **NO VOLTAGE** is present at the service wiring or terminals.

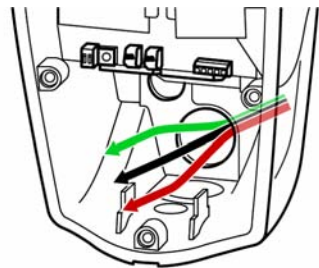
2. For top entry installation, pull the service wiring into the top entry bracket or the Wall Connector. Use a 1" (25 mm) cable gland to seal the power conduit or cable. For 80A operation, use 3AWG 167°F (75°C) rated copper wire or follow local regulations.

**Note:** The meaning of wiring colors might vary from country to country. Follow all applicable national and local regulations concerning wiring color codes.

The following illustration shows an example of the wiring for the top entry bracket.



The following illustration shows an example of the wiring for the low profile bracket.

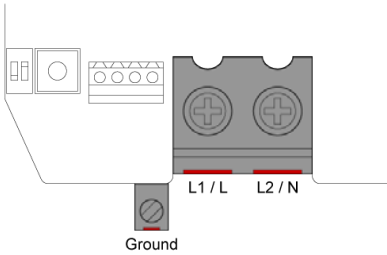


3. Strip the service wires going to the terminal block on the top entry bracket 3/4" (18 mm). Ferrules are recommended.

**Note:** For top entry installation, the flexible pre-installed wires that go from the top entry bracket to the housing are already terminated and do not need to be stripped.



4. Lead the preconnected service wires in the main housing and connect the preconnected service wires to the main terminal block with L1 (or line), L2 (or neutral), and ground wires going to the locations shown in the following illustration.



**⚠ Caution:** Cut each of the wire strands and insert them fully into each the terminal block.

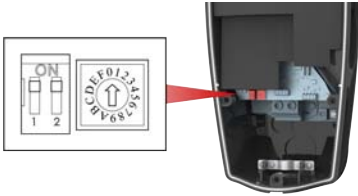
**Note:** To ensure proper operation, verify that neutral is connected to the neutral line inside the circuit breaker box or the main electrical panel.

5. Tighten the terminal block to the recommended torque:
  - 35 in-lb (4.0 N-m) for the terminal block on the top entry bracket.
  - 33 in-lb (3.8 N-m) for the terminal block in the main housing.
  - 18 in-lb (2.0 N-m) for the ground terminal block in the main housing.
6. Check for miswiring using a multimeter and verify that there are no shorts before turning the upstream circuit breaker ON.



## Set the Operating Current

Follow these instructions to configure the DIP switch. The following illustration shows an enlarged view of the DIP and rotary switches.



- ⚠ Warning:** Power **MUST** remain OFF before setting or changing the DIP or rotary switches. Changing these switches with the power ON will not be recognized by the system and is dangerous due to the risk of electric shock.

1. Turn OFF power.
2. Use a non-conductive object to adjust the DIP switch settings:

- Switch Position 1:
  - For a Line to Line connection (240V or less) set the DIP switch DOWN.
  - For a Line to Neutral connection (greater than 240V) set the DIP switch to UP (the ON position).

- ⚠ Warning:** Before you set the DIP switches, confirm which type of input service the utility provides.

- Switch Position 2:
  - DIP Switch Position 2 should always be set to UP.

Wiring/Connection	DIP Switch Position
Line to Neutral (greater than 250V)	
Line to Line (240V or less)	

3. Set the rotary switch for the appropriate current setting supported by your circuit breaker. Typical circuit breaker ratings are: 15A, 20A, 25A, 30A, 35A, 40A, 45A, 50A, 60A, 70A, 80A, 90A, and 100A.

Use a small flathead screwdriver to adjust the rotary switch to the appropriate circuit breaker capability setting. The corresponding rotary switch settings for the typical circuit breakers are shown in the following table:



Rotary Switch Position	Maximum Output Current	Circuit Breaker
0	Test mode	N/A
1	12A	15A
2	16A	20A
3	20A	25A
4	24A	30A
5	28A	35A
6	32A	40A
7	36A	45A
8	40A	50A
9	48A	60A
A	56A	70A
B	64A	80A
C	72A	90A
D	80A	100A
E	Not a valid selection	N/A
F	Slave mode	N/A

4. Reattach the ribbon cable to the sealing cover.
5. Reinstall the sealing cover. Use a T20 security pin Torx driver to lightly secure the sealing cover by installing only the top screw.
6. Turn ON power.
7. If the installation is successful, the LEDs briefly sequentially illuminate green with a pattern that ends with the top green LED staying solid ON. If there is a solid or flashing red LED, refer to Troubleshooting on page 24 and resolve the error before you continue.  
**Note:** To review the pattern of blinking lights, press and hold the RESET button for 5 seconds.
8. Turn OFF power.
9. Write the contact information of the installer on the label on the inside of the Wall Connector.

## Secure the Cover and Power Up

1. Use a T20 security pin Torx driver to install the remaining screws on the sealing cover. Ensure that the cover is properly aligned before tightening the screws to 8.8 in-lb (1.0 N-m).
2. Attach the outer cover to the sealing cover starting with the latch at the top. Engage the snaps on the sides and align the mounting tab with the housing at the bottom.



3. Use a T10 Torx driver to install the screw that secures the bottom of the outer cover to the housing. Tighten the screw to 4.4 in-lb (0.5 N-m).
4. Close any unused openings with power and signal conduit plugs.  
**Note:** There should not be any visible openings to the inside of the Wall Connector, and the Wall Connector should be completely sealed from the environment.
5. Turn ON the power. The installation is correct if the LEDs go through a sequence of flashing, ending with the top Green LEDs staying solidly ON. If there is a solid or flashing Red LED, resolve the error before you continue (refer to Troubleshooting on page 24).  
**Note:** To review the pattern of blinking lights, press and hold the Reset button for 5 seconds.
6. Attempt to charge the vehicle to ensure the Wall Connector is operating correctly and charging at the selected operating current. For instructions on how to charge,



refer to the owner information provided with the vehicle.





Green Lights	Yellow Light	Red Light	Auto-Retry	What it Means	What to Do
Top light on	Off	Off	Not applicable	Power on. The Wall Connector is powered and in standby but not charging the vehicle.	Not applicable.
Streaming lights	Off	Off	Not applicable	The Wall Connector is charging the vehicle.	Not applicable.
Streaming lights	1 flash	Off	Not applicable	Charging current is reduced due to high temperature detected in the Vehicle Connector.	Make sure the connector is fully inserted into the charge inlet in the vehicle's charging port, is not covered by anything, and there is no heat source is nearby. If the problem persists in normal ambient temperatures (under 100°F or 38°C), contact Tesla.
Streaming lights	2 flashes	Off	Not applicable	Charging current is reduced due to high temperature detected in the wall plug or on the input terminals to the Wall Connector.	If the Wall Connector is hard-wired, make sure it is not covered by anything, and there is no heat source nearby. If the problem persists in normal ambient temperatures (under 100°F or 38°C), contact Tesla.
Streaming lights	3 flashes	Off	Not applicable	Charging current is reduced due to high temperature detected inside the Wall Connector.	Make sure the Wall Connector is not covered by anything and there is no heat source nearby. If the problem persists in normal ambient temperatures (under 100°F or 38°C), contact Tesla.



Green Lights	Yellow Light	Red Light	Auto-Retry	What it Means	What to Do
Off	Off	1 flash	After 15 minutes and up to 4 times	Ground fault. Current is leaking through an unsafe path. Possible Line to ground or Neutral to ground fault.	Try again by disconnecting the Wall Connector from the vehicle and reconnecting. If the problem persists, turn OFF the circuit breaker servicing the Wall Connector, wait 10 seconds, turn the circuit breaker ON again, then try reconnecting the Wall Connector to the vehicle. If the problem persists, contact Tesla.
Off	Off	2 flashes	After 1 minute and up to 4 times	No ground connection detected in the Wall Connector.	Make sure the Wall Connector is properly grounded. If uncertain, consult your electrician to ensure proper grounding at your circuit breaker or power distribution box and that appropriate connections are made to the Wall Connector.
Off	Off	3 flashes	No	Input miswired: possibly Line and Neutral are swapped.	The wiring between the wall power and the Wall Connector has been incorrectly installed. Consult your electrician.
Off	Off	4 flashes	After 1 minute and up to 4 times	Over or under voltage protection.	Consult your electrician to ensure appropriate voltage on the circuit breaker that services the Wall Connector.



Green Lights	Yellow Light	Red Light	Auto-Retry	What it Means	What to Do
Off	Off	5 flashes	After 1 minute retry (no limit on retries)	Over current protection.	Reduce the vehicle's charge current setting. If the problem persists and the attached vehicle is manufactured by Tesla, contact Tesla. If the problem persists and If the attached vehicle is not manufactured by Tesla, contact the original manufacturer.
Off	Off	6 flashes	After 1 minute retry (no limit on retries)	A communication error occurred between the Wall Connector and the vehicle.	Try again by disconnecting the Wall Connector from the vehicle and reconnecting. If possible, plug the vehicle into another Wall Connector or a Mobile Connector to determine if the vehicle is able to communicate with other charging equipment. If the problem persists, contact Tesla.
Top light on	Off	1 flash	No	Over temperature protection (latch-off)	Make sure the Wall Connector, vehicle connectors, and wall plug (if used) are not covered by anything and there is no heat source nearby. If the problem persists in normal ambient temperatures (under 100°F or 38°C), contact Tesla.
Top light on	Off	2 flashes	No	Non-Tesla vehicle attempting connection to non-compatible input distribution.	Compatible input distributions are: single-phase distribution or 400V, three-phase distribution.
Top light on	Off	3 flashes	No	Incorrect rotary switch setting.	Consult your electrician.



Green Lights	Yellow Light	Red Light	Auto-Retry	What it Means	What to Do
Top light on	Off	4 flashes	Not Applicable	Circuit Breaker Sharing Network: More than one Wall Connector is set to Master.	Only one Wall Connector can be set to a master configuration. All other linked Wall Connectors must be set to slave (position F). Set one of the Wall Connectors to Slave.
Top light on	Off	5 flashes	Not Applicable	Circuit Breaker Sharing Network: More than three Wall Connectors are set to Slave.	Move one or more Wall Connectors to a different circuit and disconnect it from this Circuit Breaker Sharing Network.
Top light on	Off	6 flashes	Not Applicable	Circuit Breaker Sharing Network: The networked Wall Connectors have different maximum current capabilities.	Contact Tesla.
Off	Off	Solid red	No	Wall Connector hardware failure. Possible failures include the following: <ul style="list-style-type: none"> <li>• Contactor failed</li> <li>• Self test failed in CCID circuitry</li> <li>• Other possible hardware failures might be MCU, 3V3output, or the thermal sensor.</li> </ul>	Contact Tesla.

## Reset

If a fault causes a RED error light to illuminate or flash and the fault condition is corrected, you use RESET the Wall Connector to resume normal operation. There are two ways to REST the Wall Connector:



- Press the RESET button for two to three seconds until the top lights changes from RED to GREEN. This clears the fault message but does not reboot the Wall Connector.
- In a rare situation, you might need to force the Wall Connector to reboot without recycling the input power. Hold the RESET button for five seconds. When the top light changes from RED to GREEN, release the RESET button. The top light should continue to illuminate GREEN. If the light returns to flashing RED, the fault state has not been corrected.




## Questions?

- United States and Canada:
  - [charginginstallation@tesla.com](mailto:charginginstallation@tesla.com)
  - +1-650-681-6133



1. Turn OFF power.
  -  **Warning:** RISK OF ELECTRIC SHOCK! Before continuing, use a voltmeter to ensure the power is off by confirming that NO VOLTAGE is present at the service wiring or terminals.
2. Use a non-conductive object to adjust the DIP switches to the appropriate grid setting and circuit breaker sharing setting (refer to Set the Operating Current on page 21).
3. Use a small flathead screwdriver to set the rotary switch to position "0" to put the Wall Connector into Test Mode.
  -  **Warning:** Power MUST remain OFF before setting or changing the DIP or rotary switches. Changing these switches with the power ON will not be recognized by the system and is dangerous due to the risk of electric shock.
4. Reattach the ribbon cable to the sealing cover.
5. Use a T20 security pin Torx driver to lightly secure the sealing cover by installing only the top screw.
6. Turn ON the circuit breaker.
7. Watch for any Red LEDs to be ON after a sequence of LED display; if so, there is a fault in the installation.
8. Listen for the click of a contactor or relay closing and opening.
9. Watch for Green streaming LEDs (for 5 seconds).

LEDs will revert to top Green LED ON and Red LEDs flashing (3 times).

**Note:** To review the pattern of blinking lights, press and hold the Reset button for 5 seconds.
10. Turn OFF the circuit breaker.
11. Remove the sealing cover screw, sealing cover. Disconnect the ribbon cable.
  -  **Caution:** Do not allow the sealing cover to hang from the ribbon cable. Doing so can damage the ribbon cable or its connectors.
12. Reposition the rotary switch to the appropriate setting (refer to Set the Operating Current on page 21).
13. Reattach the ribbon cable to the sealing cover.
14. Replace all the screws and reinstall the outer cover (refer to Secure the Cover and Power Up on page 22).



## Appendix B: Optional Connection for Load Sharing

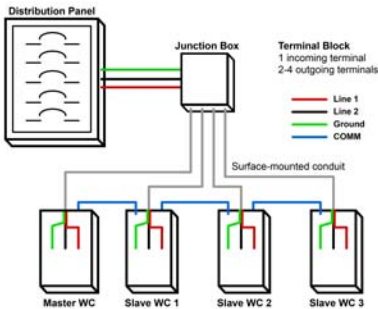
The Wall Connector includes an automatic load management feature whereby Wall Connector to Wall Connector communication allows you to split the maximum available load over a maximum of 4 Wall Connectors. The wire used for this local network must:

- Share the main power cable conduit or be housed in a separate conduit. In other words, the high voltage wires must be branched to a junction box from each individual unit.
- Be at least 18 AWG, 2 conductor, shielded, twisted-pair wire.

**Warning:** When load sharing, high voltage (L1, L2, Neutral, Earth) cabling must be spliced in a separate NEMA rated enclosure.

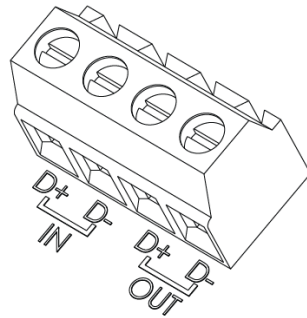
**Note:** Take additional precautions into consideration to prevent water ingress at the Wall Connectors when installing them outdoors.

**Note:** Consult with an electrician to ensure that the installation meets local regulations.



### Daisy Chaining Multiple Wall Connectors

Each Wall Connector has one terminal block dedicated for the communication wiring as shown below. The left hand side of the terminal block is the input terminal and the right hand side the output terminal.



1. Form a daisy-chained network by connecting the cables from OUT to IN and always from positive to positive and negative to negative between each of the participating Wall Connectors (refer to Example of the Communication Wiring on page 31).

- The signal wires between each Wall Connector should run in signal conduit. Use a 1/2" (13 mm) UL approved conduit hub to seal the signal conduit opening.
- If the signal wire is routed in the power conduit with the power wires, the insulation rating of the signal wire should be equal to or greater than that of the power wires.
- The maximum distance between Wall Connectors is 49 ft (15 m).

2. Set one Wall Connector as the master by setting the Rotary Switch Position from 1 through D, depending on the maximum available output current. Set up to 3 Wall Connectors as slaves by setting the Rotary Switch Positions to F. In the load sharing network, only one unit can be designated

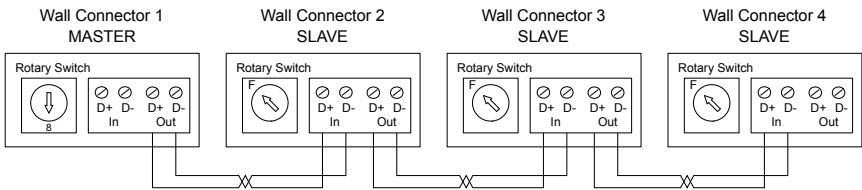


as the master (refer to Set the Operating Current on page 21).

3. Confirm that the load sharing network is properly installed by observing the LED indicators in the Wall Connector. When starting up the circuit breaker for the first time, green lights turning ON for 5 seconds indicate a proper installation. The final display is:

Green Lights	Yellow Light	Red Light	What it Means...
On (top and bottom)	Off	Off	Master unit
On (bottom)	Off	Off	Slave unit

## Example of the Communication Wiring



## Other Load Sharing Behaviors

- Available current is redistributed equally among all connected vehicles whenever a new vehicle is plugged or unplugged from the network.
- During steady-state operation, the load sharing network toggles available current to each vehicle in 2A increments, every minute, to assess vehicle need. When a battery approaches full charge, the power consumption will taper until charging is complete. If the master unit detects that a vehicle is no longer using all of its available current, it will reduce the current allocated to that vehicle
- A slave Wall Connector will not charge if communication is lost with the master Wall Connector.
- In rare cases, firmware updates on a master Wall Connector will interrupt charging on the slave Wall Connector(s). This is normal behavior, and charging should resume once the firmware update is complete (15 minutes).





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# TESLA

P/N: 1069742-00-D

MNL, USER GUIDE, NA, 1PH 80A HW, WC GEN2



(P) PN:1069742-00-D

(T) TLN:TT80AMP1NA



## WALL CONNECTOR, J1772, 40A SINGLE PHASE INSTALLATION MANUAL

Approved Markets: North America, Japan, Taiwan

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## CONECTOR DE PARED, J1772, 40A MONOFÁSICO MANUAL DE INSTALACIÓN

Mercados Autorizados: Norteamérica, Japón, Taiwan

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## CONNECTEUR MURAL, J1772, 40 A MONOPHASÉ MANUEL D'INSTALLATION

Marchés approuvés : Amérique du Nord, Japon, Taïwan

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## ウォール コネクタ、J1772、40 A 単相 取り付けマニュアル

承認済のマーケット：北米、日本、台湾

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## 壁掛式充電座，J1772，40A 単相 安裝手冊

核准銷售地區：北美地區、日本、台灣



# WALL CONNECTOR, J1772, 40A SINGLE PHASE INSTALLATION MANUAL

Approved Markets: North America, Japan, Taiwan







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## Product Specifications

All specifications and descriptions contained in this document are verified to be accurate at the time of printing. However, because continuous improvement is a goal at Tesla, we reserve the right to make product modifications at any time.

## Communications Regulations

This device complies with Part 15 of the FCC rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) This device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

**⚠ Important:** Changes or modifications to this product not authorized by Tesla could void the FCC compliance.

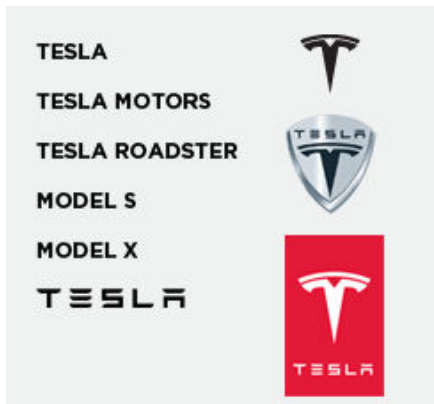
## Errors or Inaccuracies

To communicate any inaccuracies or omissions, or to provide general feedback or suggestions regarding the quality of this manual, send an email to:

[ownersmanualfeedback@tesla.com](mailto:ownersmanualfeedback@tesla.com)

## Copyrights and Trademarks

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## Important Safety Instructions




This document contains important instructions and warnings that must be followed when installing and maintaining the Wall Connector.

### Warnings

-  **Warning:** Read all the instructions before using this product.
-  **Warning:** This device should be supervised when used around children.
-  **Warning:** The Wall Connector must be grounded .
-  **Warning:** Do not install or use the Wall Connector near flammable, explosive, harsh, or combustible materials, chemicals, or vapors.
-  **Warning:** Use the Wall Connector only within the specified operating parameters.
-  **Warning:** Stop using and do not use the Wall Connector if it is defective, appears cracked, frayed, broken, or otherwise damaged, or fails to operate.
-  **Warning:** Do not attempt to disassemble, repair, tamper with, or modify the Wall Connector. The Wall Connector is not user serviceable. Contact Tesla for any repairs or modification.
-  **Warning:** When transporting the Wall Connector, handle with care. Do not subject it to strong force or impact or pull, twist, tangle, drag, or step on the Wall Connector, to prevent damage to it or any components.
-  **Warning:** Do not touch the Wall Connector's end terminals with fingers or sharp metallic objects, such as wire, tools, or needles.
-  **Warning:** Do not forcefully fold or apply pressure to any part of the Wall Connector or damage it with sharp objects.
-  **Warning:** Do not insert foreign objects into any part of the Wall Connector.

-  **Warning:** Use of the Wall Connector may affect or impair the operation of any medical or implantable electronic devices, such as an implantable cardiac pacemaker or an implantable cardioverter defibrillator. Check with your electronic device manufacturer concerning the effects that charging may have on such electronic devices before using the Wall Connector.

### Cautions

-  **Caution:** Do not use private power generators as a power source for charging.
-  **Caution:** Incorrect installation and testing of the Wall Connector could potentially damage either the vehicle's Battery and/or the Wall Connector itself. Any resulting damage is excluded from the New Vehicle Limited Warranty and the Charging Equipment Limited Warranty.
-  **Caution:** Do not operate the Wall Connector in temperatures outside its operating range of -22°F to 122°F (-30°C to +50°C).



## Notes

**Note:** Ensure that the Wall Connector's charging cable is positioned so it will not be stepped on, driven over, tripped on, or subjected to damage or stress.

**Note:** Do not use cleaning solvents to clean any of the Wall Connector's components. The outside of the Wall Connector, the charging cable, and the connector end of the charging cable should be periodically wiped with a clean, dry cloth to remove accumulation of dirt and dust.

**Note:** Be careful not to damage the circuit boards or components during installation.



The maximum power rating for the Wall Connector is 11 kW or 40A at 240V AC single-phase power.

Description	Specifications
Voltage and Wiring	208V or 240V AC single-phase: L1, L2, and earth
Current	Maximum output: 40A
Frequency	50 to 60 Hz
Cable Length	24' (7.4 m)
Wall Connector Dimensions	Height: 15.0" (380 mm) Width: 6.3" (160 mm) Depth: 5.5" (140 mm)
Top Entry Bracket Dimensions	Height: 10.8" (275 mm) Width: 5.1" (130 mm) Depth: 2.0" (50 mm)
Weight (including bracket)	17 lb (7.5 kg)
Operating Temperature	-22°F to 122°F (-30°C to 50°C)
Storage Temperature	-40°F to 185°F (-40°C to 85°C)
Enclosure Rating	Type 3R
Agency Approvals	cULus listed for United States and Canada under file number E354307, FCC Part 15.
Ventilation	Not Required



## Circuit Ratings

Use a single-phase circuit breaker rated for 50A single phase to obtain the highest power output.

In certain installation locations, this level of power isn't readily available. Therefore, the Wall Connector has an automatic load management feature that allows the output current to be adjusted to any circuit breaker ranging from 15A to 50A (refer to Set the Operating Current on page 18).

**Note:** Actual amperage draw will depend on the on-board charger of the vehicle. Contact Tesla if you have questions about the on-board charger of a specific vehicle.

## Self-Monitoring and Recovery

The Wall Connector has a ground monitoring circuit that continuously checks for the presence of a safe ground connection and automatically recovers from faults. Manual testing and resetting is not required.

Temporary problems such as ground faults or utility power surges are overcome automatically. If a residual current fault occurs that interrupts charging, the Wall Connector automatically tries to clear the fault and re-attempt charging.

If the problem is immediately sensed a second time, the Wall Connector waits 15 minutes before trying to charge. This process repeats 4 times and if all attempts are unsuccessful, power is removed and no further attempts are made. In this case, you will see a red error light on the front panel (refer to Troubleshooting on page 21). It is recommended that when you see a red error light, you power off the Wall Connector by switching off the upstream circuit breaker, and then power it back on again.

The Wall Connector can alternatively be reset when a red error light is encountered using the RESET button (refer to Reset on page 24).

## Power Outages

If a power outage occurs, the Wall Connector automatically resumes charging when power is restored. If the charging cable is plugged into the vehicle when power is restored, the lights blink and the unit does not energize the charging cable for approximately 15 seconds to three minutes. This prevents the utility grid from experiencing a large surge when power is restored and allows vehicles to begin drawing current at random times, rather than all at once.

## Load Sharing

Up to 4 Wall Connectors can be wired to a single circuit, and with built-in automatic load management, vehicle owners can easily charge multiple vehicles at home (refer to Appendix B: Optional Connection for Load Sharing on page 27).



## Minimum Requirements

Installation of the Wall Connector requires that you:

- Calculate the existing electrical load to determine the maximum operating current.
- Calculate the distance to ensure minimal voltage drop.
- Obtain any necessary permits from the local authority that has jurisdiction and confirm that the follow-up inspection has been scheduled by an electrician after the installation is complete.
- Use only copper conductors.
- Use conductors that are sized in accordance with local wiring regulations. The selected cable must be able to sustain periods of constant load of up to the maximum amperage selected by the electrician.
- Use a circuit breaker.

**Note:** Consult with an electrician to ensure that the installation meets local regulations.

## 120V Above Ground

- Warning:** The Wall Connector is a single-phase device. Do not connect all three phases of a three-phase feed.
- Warning:** Before installing the Wall Connector, identify the type of utility service connection available on site. If you are unsure about the type of connection available at the service panel, consult an electrician, or contact Tesla for assistance.
- Caution:** The two phases used must each measure 120V to neutral. Earth ground must be connected to neutral at only one point, usually at the breaker panel.
- Caution:** If a 240V three-phase feed is from a Delta-connected secondary, the leg used must have a center tap. This center tap must be grounded. Only the two phases on either side of the center-tapped leg can be used.

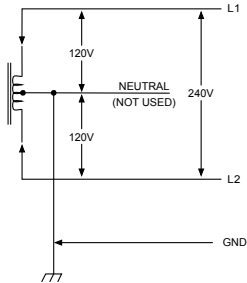
Only three wires are connected, but care must be taken that the service transformer secondary connection is definitely known, and that the three wires from the main circuit breaker panel are correctly connected and labeled.

**Note:** The L1, L2, and ground outputs labeled on the illustrations correspond to the inputs on the Wall Connector.

## Ground Connection

Always connect the Neutral at the service to Earth Ground. Ground fault protection is not possible unless the Neutral (center tap on the service transformer) is connected to an Earth Ground. If ground is not provided by the electrical service, you must install a grounding stake nearby. The grounding stake must be connected to the ground bar in the main breaker panel, and Neutral connected to Ground at that point.

## 240V Single-Phase



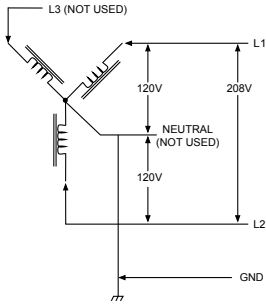
**Note:** Illustrations in this document are for demonstration purposes only.



## 208V 3-Phase Wye-Connected

With a Wye-connected secondary, any two of the legs can be used to provide 208V to the Wall Connector. For example, L1 and L2, or L1 and L3, or L2 and L3. The two used phases must each measure 120V to neutral.

**Note:** A current-carrying neutral is not required.



**Caution:** The unused leg (L3 in the illustration) must remain open. Do not connect to a neutral bar, or to earth ground.

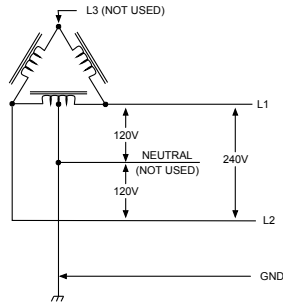
**Caution:** The center point of the three phases (normally used as neutral) must be grounded to earth at only one point. This is usually at the breaker panel.

## 240V Three-Phase Delta-Connected

With the delta connection, one leg must be center tapped, and only the two phases on either side of the center tap can be used. The two used phases must each measure 120V to neutral.

Consult the transformer manufacturer's literature to verify that the single leg can supply the required power.

**Note:** The Wall Connector's contactor closes only if it detects the presence of an earth ground wire connected to a neutral point on the transformer secondary.



**Caution:** The third line (L3 in the illustration) of the delta is 208V, with respect to neutral, and is sometimes referred to as a "stinger." Do not use this third line.

**Caution:** Do not use a three-phase delta-connected transformer secondary without a center tap on one leg. No neutral point is available for the required earth ground connection.

## Determine the Circuit Breaker Requirements

To determine the type of upstream circuit breaker you need, examine the distribution panel or circuit breaker box to identify the amperage available at the installation site.





The Wall Connector has an internal rotary switch that allows you to adjust its operating current (refer to Set the Operating Current on page 18). The circuit breaker should be rated for the continuous current of 40A.

## Choose the Best Location for the Wall Connector

Determine the parking location of the vehicle to ensure that the charge cable reaches the charge port. The Wall Connector should be located:

- In an enclosed garage, typically on the vehicle's charge port side.
- In a well-ventilated area. Avoid installation in an enclosed box, or adjacent to hot appliances.
- 4 ft (1.2 m) above the floor.
- 8 in (190 mm) from any obstructions to allow for cable looping.

**Note:** The Wall Connector is approved for outdoor use, but it is not designed for complete immersion in liquid. Protection from rain is recommended but not required.

## Installation Considerations

Three methods are available to install the Wall Connector. The location of the conduit and type of wiring determine which installation method to follow:

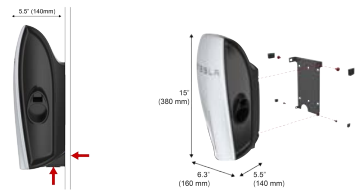
- If the conduit runs along the floor or low on the wall, use the bottom entry configuration.
- If the conduit comes from inside the wall, use the rear entry configuration.
- If the conduit comes from the ceiling, or if the service wiring is thicker than 6 AWG, use the top entry configuration. The top entry bracket has an optional rear-facing knockout that allows thicker service wiring to enter from the top or rear.

**Note:** Throughout the manual, “conduit” is used as the standard term for the protective tubing that houses the service wiring. In regions where conduit is not used (Europe for example), a cable comprised of service wiring enclosed in a protective jacket may be substituted for conduit if allowed by local regulations.

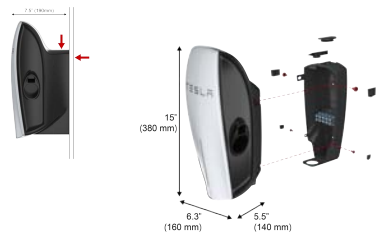
Here are some additional guidelines:

- Conduit openings are sized for 1" (25 mm) conduit.
- Conduit needs to meet all local regulations.
- Use an appropriate circuit breaker.
- Use a UL approved conduit connector to ensure proper seal.
- When installing wire thicker than 6 AWG, use the top entry installation.

### Bottom or Rear Entry



### Top Entry or Optional Rear Entry

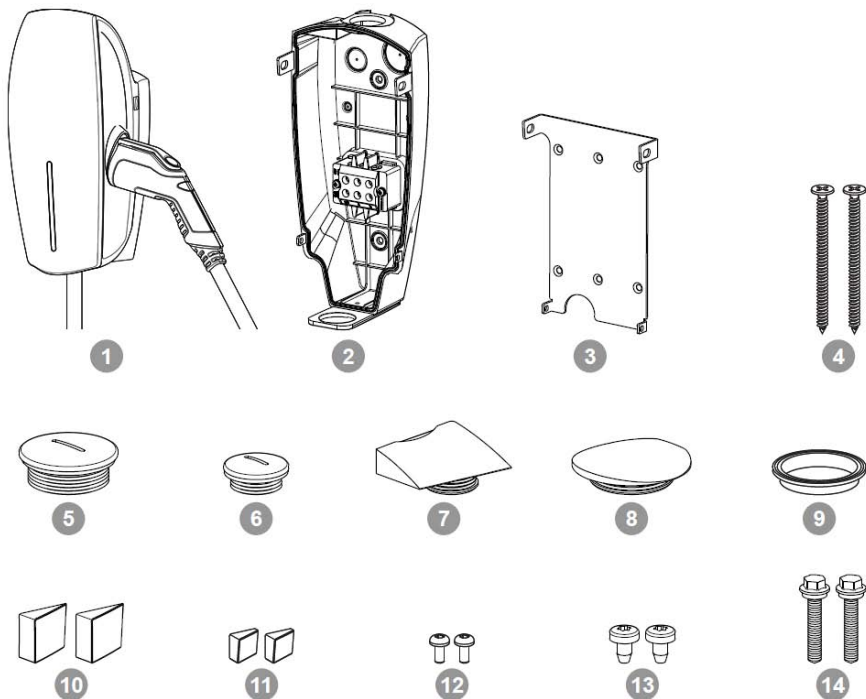




## Check the Box Contents

The shipping box contains parts for all installation methods, as well as this manual. If any parts are damaged or missing, contact Tesla (refer to Questions? on page 25).

**Note:** Not shown is the supplied cardboard template.



Item	Description (Quantity)
1	Wall Connector
2	Top entry bracket*
3	Low profile bracket **
4	Low profile bracket screws (2) **
5	Bottom or rear entry power conduit plug
6	Bottom or rear entry signal conduit plug
7	Top entry signal conduit plug* (pre-installed on the top entry bracket)
8	Top entry power conduit plug* (pre-installed on the top entry bracket)
9	Bottom conduit sealing gasket*
10	Top bracket-to-housing screw covers (2)
11	Bottom bracket-to-housing screw covers (2)



Item	Description (Quantity)
12	Bottom bracket-to-housing screws (2)
13	Top bracket-to-housing screws (2)
14	Top entry bracket mounting screws (2)*
* Items used in only top entry installations.	
** Items used in only bottom or rear entry installations.	



## Tools and Materials Required

Before installing the Wall Connector, gather the following tools and materials:

- Pencil or marker
- Hole punch (optional, to push through cardboard template)
- Wire stripper
- Voltmeter or digital multimeter (to measure AC voltage at the installation site)
- Phillips screwdriver
- Small flathead screwdriver
- Large flathead screwdriver (optional, to remove plastic knock-outs)
- T20 security pin Torx driver (included)
- T10 Torx driver (included)
- M20 and M32 cable glands (also known as sealing hubs)
- Wiring (use 18 AWG twisted pair communication cable at a maximum of 49 ft (15 m) between Wall Connectors)
- Level
- Machine drill
- Torque driver (for terminal block connections)

Then follow these steps to install the Wall Connector:

- Install the Low Profile Bracket for Rear or Bottom Entry Wiring on page 13
- Install the Top Entry Bracket for Rear or Top Entry Wiring on page 14
- Prepare for Installation on page 15
- Connect the Wiring on page 16
- Set the Operating Current on page 18
- Secure the Cover and Power Up on page 19

## Overview of Installation Steps

- ⚠ Warning:** After you run service wiring to the installation site, install the appropriate upstream circuit breaker, **TURN OFF AND VERIFY POWER IS OFF BEFORE CONTINUING.**

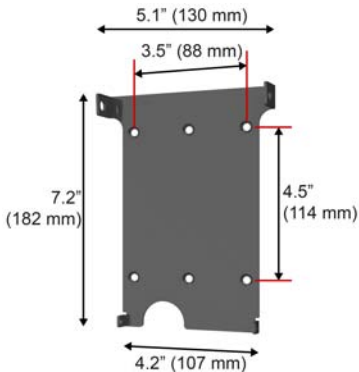


## Install the Low Profile Bracket for Rear or Bottom Entry Wiring

Use the low profile bracket, shown below, to wire the Wall Connector from the rear or bottom.



1. Use the low profile bracket as a guide to mark the location on the wall for the mounting screws.
  - Use a level to ensure that the marks are perfectly vertical.
  - Space the holes 4.5" (114 mm) apart.



- For U.S.A. installations, position the bracket so that the Wall Connector is located at a maximum of 60" (150 cm) from floor level. The minimum height is 18" (45 cm) if mounting indoors,

and 48" (122 cm) if mounting outdoors.

- If using the rear entry conduit, use at least one set of the edge mounting holes so that the conduit does not interfere with the wall stud.
- If using the bottom entry conduit, use the two center mounting holes.

**Note:** Ensure that the minimum and maximum height of the bracket is carefully selected. It should be installed out of the way of any reasonably foreseeable impacts.

2. Attach the bracket using fasteners that are appropriate for the type of wall material, drilling pilot holes if necessary. Use the supplied screws only if mounting the bracket directly to a wooden stud. If mounting to another type of wall (hollow, masonry, etc.), use fasteners that are long enough to securely anchor the Wall Connector and can hold at least 80 lb (36 kg).





## Install the Top Entry Bracket for Rear or Top Entry Wiring

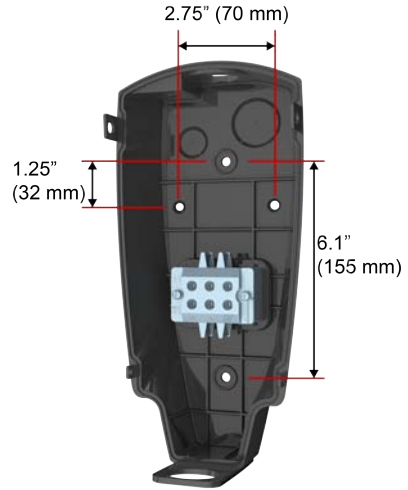
The top entry bracket enables you to route the service wiring into the Wall Connector enclosure from the top of the enclosure, as shown below.



1. Use the cardboard template and a level as a guide to mark the location on the wall for the mounting screws.
  - Use a level to ensure that the marks are perfectly vertical.
  - Space the holes 6.1" (155 mm) apart.
  - Position the bracket so that the Wall Connector is located at a maximum of 60" (150 cm) from floor level. The minimum height is 18" (45 cm) if mounting indoors, and 48" (122 cm) if mounting outdoors.

**Note:** Ensure that the minimum and maximum height of the bracket is carefully selected. It should be installed out of the way of any reasonably foreseeable impacts.

2. (Optional) There are two additional mounting holes. To use these holes, use a flat-head screwdriver to knock-out the plastic that is closing the holes. These holes are spaced 2.75" (70 mm) apart.



3. Attach the bracket using fasteners that are appropriate for the type of wall material, drilling pilot holes if necessary. Use the supplied screws only if mounting the bracket directly to a wooden stud. If mounting to another type of wall (hollow, masonry, etc.), use fasteners that are long enough to securely anchor the Wall Connector and can hold at least 80 lb (36 kg).





## Prepare for Installation

Follow these instructions to remove the cover and route the service wiring into the Wall Connector.

1. Use a T10 Torx driver to remove the screw at the bottom of the outer cover. Carefully disengage the snaps on the sides and top using a flathead screwdriver and completely remove the cover. Save the screw and cover for reassembly.



2. Use a T20 security pin Torx driver to remove the six screws on the sealing cover. Carefully remove the sealing cover and disconnect the ribbon cable. Save the screws and cover for reassembly.



**⚠ Caution:** Do not allow the sealing cover to hang from the ribbon cable. Doing so can damage the ribbon cable or its connectors.

3. For top entry configuration, install the wiring to the terminal block in the top entry bracket as shown in Connect the Wiring on page 16, then return to this section and proceed to the next step. For back or bottom entry configurations, skip to the next step.
4. Place and hold the Wall Connector on the bracket, ensuring that all four mounting tabs are properly aligned.
5. Use a T20 Torx driver to install the two top housing mounting screws. Push the cosmetic screw covers into place.
6. Use a T20 Torx driver to install the two bottom housing mounting screws. Push the cosmetic screw covers into place.



## Connect the Wiring

**Note:** Consult with your local electrician or refer to your local code for proper wire sizing appropriate for the currents in your Wall Connector.

**Note:** It is the installer's responsibility to identify whether additional grounding is required to ensure that local regulations are met. Grounding must be installed at the power source and not at the cable entry to the Wall Connector.

**⚠ Warning:** Do not connect service wiring until you have read and fully understand the concepts described in this section. If you are uncertain about the type of power available at the service panel, consult an electrician, or contact Tesla for assistance.

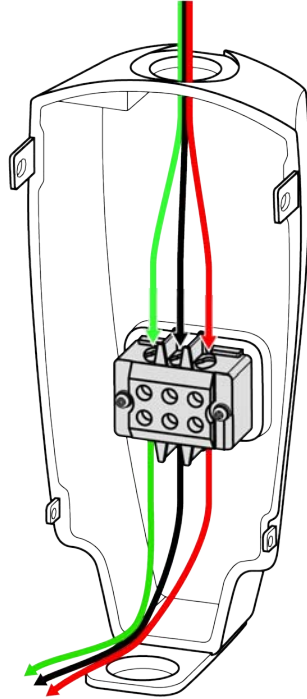
1. Turn off the power.

**⚠ Warning: RISK OF ELECTRIC SHOCK!** Before continuing, use a voltmeter to ensure the power is off by confirming that **NO VOLTAGE** is present at the service wiring or terminals.

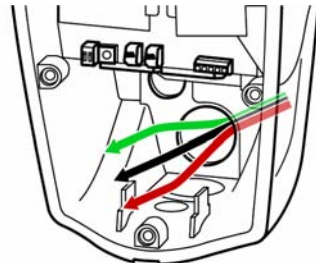
2. For top entry installation, pull the service wiring into the top entry bracket or the Wall Connector. Use a 1" (25 mm) cable gland to seal the power conduit or cable.

**Note:** The meaning of wiring colors might vary from country to country. Follow all applicable national and local regulations concerning wiring color codes.

The following illustration shows an example of the wiring for the top entry bracket.



The following illustration shows an example of the wiring for the low profile bracket.



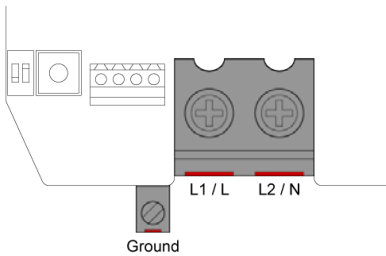
3. Strip the service wires going to the terminal block on the top entry bracket 3/4" (18 mm). Ferrules are recommended.





**Note:** For top entry installation, the flexible pre-installed wires that go from the top entry bracket to the housing are already terminated and do not need to be stripped.

4. Lead the preconnected service wires in the main housing and connect the preconnected service wires to the main terminal block with L1 (or line), L2 (or neutral), and ground wires going to the locations shown in the following illustration.



**⚠ Caution:** Cut each of the wire strands and insert them fully into each the terminal block.

**Note:** To ensure proper operation, neutral must be connected to the ground bar inside the circuit breaker box or the main electrical panel.

5. Tighten the terminal block to the recommended torque:
  - 35 in-lb (4.0 N-m) for the terminal block on the top entry bracket.
  - 33 in-lb (3.8 N-m) for the terminal block in the main housing.
  - 18 in-lb (2.0 N-m) for the ground terminal block in the main housing.
6. Check for miswiring using a multimeter and verify that there are no shorts before turning the upstream circuit breaker ON.



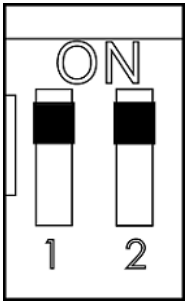
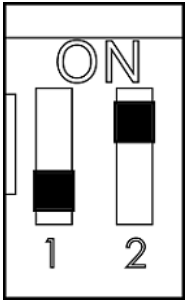
## Set the Operating Current

Follow these instructions to configure the DIP switch. The following illustration shows an enlarged view of the DIP and rotary switches.



**⚠ Warning:** Power MUST remain OFF before setting or changing the DIP or rotary switches. Changing these switches with the power ON will not be recognized by the system and is dangerous due to the risk of electric shock.

1. Turn OFF power.
2. Use a non-conductive object to adjust the DIP switch settings:
  - Switch Position 1:
    - For a Line to Line connection (200-250V), set the DIP switch to DOWN.
    - For a Line to Neutral connection (greater than 250V), set the DIP switch to UP.
  - Switch Position 2:
    - DIP Switch Position 2 should always be set to UP.

Wiring/ Connection	DIP Switch Position
Line to Neutral (greater than 250V)	
Line to Line (200-250V)	

3. Set the rotary switch for the appropriate current setting supported by your circuit breaker. Typical circuit breaker ratings are: 15A, 20A, 25A, 30A, 35A, 40A, 45A, and 50A.

Use a small flathead screwdriver to adjust the rotary switch to the appropriate circuit breaker capability setting. The corresponding rotary switch settings for the typical circuit breakers are shown in the following table:



Rotary Switch Position	Maximum Output Current	Circuit Breaker
0	Test mode	N/A
1	12A	15A
2	16A	20A
3	20A	25A
4	24A	30A
5	28A	35A
6	32A	40A
7	36A	45A
8	40A	50A
9	N/A	N/A
A	N/A	N/A
B	N/A	N/A
C	N/A	N/A
D	N/A	N/A
E	Not a valid selection	N/A
F	Slave mode	N/A

## Secure the Cover and Power Up

1. Use a T20 security pin Torx driver to install the remaining screws on the sealing cover. Ensure that the cover is properly aligned before tightening the screws to 8.8 in-lb (1.0 N-m).
2. Attach the outer cover to the sealing cover starting with the latch at the top. Engage the snaps on the sides and align the mounting tab with the housing at the bottom.



4. Reattach the ribbon cable to the sealing cover.
5. Reinstall the sealing cover. Use a T20 security pin Torx driver to lightly secure the sealing cover by installing only the top screw.
6. Turn ON power.
7. If the installation is successful, the LEDs briefly sequentially illuminate green with a pattern that ends with the top green LED staying solid ON. If there is a solid or flashing red LED, refer to Troubleshooting on page 21 and resolve the error before you continue.

**Note:** To review the pattern of blinking lights, press and hold the RESET button for 5 seconds.

8. Turn OFF power.
9. Write the contact information of the installer on the label on the inside of the Wall Connector.

3. Use a T10 Torx driver to install the screw that secures the bottom of the outer cover to the housing. Tighten the screw to 4.4 in-lb (0.5 N-m).
4. Close any unused openings with power and signal conduit plugs.

**Note:** There should not be any visible openings to the inside of the Wall Connector, and the Wall Connector should be completely sealed from the environment.

5. Turn ON the power. The installation is correct if the LEDs go through a sequence of flashing, ending with the top Green LEDs staying solidly ON. If there is a solid or flashing Red LED, resolve the error before you continue (refer to Troubleshooting on page 21).

**Note:** To review the pattern of blinking lights, press and hold the Reset button for 5 seconds.

6. Attempt to charge the vehicle to ensure the Wall Connector is operating correctly and charging at the selected operating current. For instructions on how to charge,



## Step-by-Step Installation Instructions

refer to the owner information provided with the vehicle.



Green Lights	Yellow Light	Red Light	Auto-Retry	What it Means	What to Do
Top light on	Off	Off	Not applicable	Power on. The Wall Connector is powered and in standby but not charging the vehicle.	Not applicable.
Streaming lights	Off	Off	Not applicable	The Wall Connector is charging the vehicle.	Not applicable.
Streaming lights	1 flash	Off	Not applicable	Charging current is reduced due to high temperature detected in the Vehicle Connector.	Make sure the connector is fully inserted into the charge inlet in the vehicle's charging port, is not covered by anything, and there is no heat source nearby. If the problem persists in normal ambient temperatures (under 100°F or 38°C), contact Tesla.
Streaming lights	2 flashes	Off	Not applicable	Charging current is reduced due to high temperature detected in the wall plug or on the input terminals to the Wall Connector.	If the Wall Connector is plugged into a wall outlet, make sure that it is fully inserted into the receptacle, it is not covered by anything, and there is no heat source nearby. If the Wall Connector is hard-wired, make sure it is not covered by anything, and there is no heat source nearby. If the problem persists in normal ambient temperatures (under 100°F or 38°C), contact Tesla.
Streaming lights	3 flashes	Off	Not applicable	Charging current is reduced due to high temperature detected inside the Wall Connector.	Make sure the Wall Connector is not covered by anything and there is no heat source nearby. If the problem persists in normal ambient temperatures (under 100°F or 38°C), contact Tesla.



Green Lights	Yellow Light	Red Light	Auto-Retry	What it Means	What to Do
Off	4 flashes	Off	Not applicable	The ribbon cable is not fully connected.	Open the faceplate and check if the ribbon cable is firmly connected.
Off	Off	1 flash	After 15 minutes and up to 4 times	Ground fault. Current is leaking through an unsafe path. Possible Line to ground or Neutral to ground fault.	Try again by disconnecting the Wall Connector from the vehicle and reconnecting. If the problem persists, turn OFF the circuit breaker servicing the Wall Connector, wait 10 seconds, turn the circuit breaker ON again, then try reconnecting the Wall Connector to the vehicle. If the problem persists, contact Tesla.
Off	Off	2 flashes	After 1 minute and up to 4 times	No ground connection detected in the Wall Connector.	Make sure the Wall Connector is properly grounded. If uncertain, consult your electrician to ensure proper grounding at your circuit breaker or power distribution box and that appropriate connections are made to the Wall Connector.
Off	Off	3 flashes	No	Input miswired: possibly Line and Neutral are swapped.	Check that DIP Switch Position 1 is in the correct position. If the problem persists, the wiring between the wall power and the Wall Connector may have been incorrectly installed. Consult your electrician.
Off	Off	4 flashes	After 1 minute and up to 4 times	Over or under voltage protection.	Consult your electrician to ensure appropriate voltage on the circuit breaker that services the Wall Connector.



Green Lights	Yellow Light	Red Light	Auto-Retry	What it Means	What to Do
Off	Off	5 flashes	After 1 minute retry (no limit on retries)	Over current protection.	Reduce the vehicle's charge current setting. If the problem persists and the attached vehicle is manufactured by Tesla, contact Tesla. If the problem persists and If the attached vehicle is not manufactured by Tesla, contact the original manufacturer.
Off	Off	6 flashes	After 1 minute retry (no limit on retries)	A communication error occurred between the Wall Connector and the vehicle.	If possible, plug the vehicle into another Wall Connector or a Mobile Connector to determine if the vehicle is able to communicate with other charging equipment. Then contact Tesla Service.
Top light on	Off	1 flash	No	Over temperature protection (latch-off)	Make sure the Wall Connector, vehicle connectors, and wall plug (if used) are not covered by anything and there is no heat source nearby. If the problem persists in normal ambient temperatures (under 100°F or 38°C), contact Tesla.
Top light on	Off	3 flashes	No	Incorrect rotary switch setting.	Consult your electrician or adjust the rotary switch.
Top light on	Off	4 flashes	Not Applicable	Circuit Breaker Sharing Network: More than one Wall Connector is set to Master.	Only one Wall Connector can be set to a master configuration. All other linked Wall Connectors must be set to slave (position F). Set one of the Wall Connectors to Slave.



Green Lights	Yellow Light	Red Light	Auto-Retry	What it Means	What to Do
Top light on	Off	5 flashes	Not Applicable	Circuit Breaker Sharing Network: More than three Wall Connectors are set to Slave.	Move one or more Wall Connectors to a different circuit and disconnect it from this Circuit Breaker Sharing Network.
Top light on	Off	6 flashes	Not Applicable	Circuit Breaker Sharing Network: The networked Wall Connectors have different maximum current capabilities.	Contact Tesla.
Off	Off	Solid red	No	Wall Connector hardware failure. Possible failures include the following: <ul style="list-style-type: none"><li>• Contactor failed.</li><li>• Self test failed.</li><li>• Other possible hardware failures.</li></ul>	Contact Tesla.

## Reset

If a fault causes a RED error light to illuminate or flash and the fault condition is corrected, you use RESET the Wall Connector to resume normal operation. There are two ways to REST the Wall Connector:

- Press the RESET button for two to three seconds until the top lights changes from RED to GREEN. This clears the fault message but does not reboot the Wall Connector.
- In a rare situation, you might need to force the Wall Connector to reboot without recycling the input power. Hold the RESET button for five seconds. When the top light changes from RED to GREEN, release the RESET button. The top light should continue to illuminate GREEN. If the light returns to flashing RED, the fault state has not been corrected.








## Questions?

- United States and Canada:
  - [charginginstallation@tesla.com](mailto:charginginstallation@tesla.com)
  - +1-650-681-6133
- Mexico:
  - [charging\\_mx@tesla.com](mailto:charging_mx@tesla.com)
  - +1-877-798-3752



1. Turn OFF power.
  -  **Warning:** RISK OF ELECTRIC SHOCK! Before continuing, use a voltmeter to ensure the power is off by confirming that NO VOLTAGE is present at the service wiring or terminals.
2. Use a non-conductive object to adjust the DIP switches to the appropriate grid setting and circuit breaker sharing setting (refer to Set the Operating Current on page 18).
3. Use a small flathead screwdriver to set the rotary switch to position "O" to put the Wall Connector into Test Mode.
  -  **Warning:** Power MUST remain OFF before setting or changing the DIP or rotary switches. Changing these switches with the power ON will not be recognized by the system and is dangerous due to the risk of electric shock.
4. Reattach the ribbon cable to the sealing cover.
5. Use a T20 security pin Torx driver to lightly secure the sealing cover by installing only the top screw.
6. Turn ON the circuit breaker.
7. Watch for any Red LEDs to be ON after a sequence of LED display; if so, there is a fault in the installation.
8. Listen for the click of a contactor or relay closing and opening.
9. Watch for Green streaming LEDs (for 5 seconds).

LEDs will revert to top Green LED ON and Red LEDs flashing (3 times).

**Note:** To review the pattern of blinking lights, press and hold the Reset button for 5 seconds.
10. Turn OFF the circuit breaker.
11. Remove the sealing cover screw, sealing cover. Disconnect the ribbon cable.
  -  **Caution:** Do not allow the sealing cover to hang from the ribbon cable. Doing so can damage the ribbon cable or its connectors.
12. Reposition the rotary switch to the appropriate setting (refer to Set the Operating Current on page 18).
13. Reattach the ribbon cable to the sealing cover.
14. Replace all the screws and reinstall the outer cover (refer to Secure the Cover and Power Up on page 19).



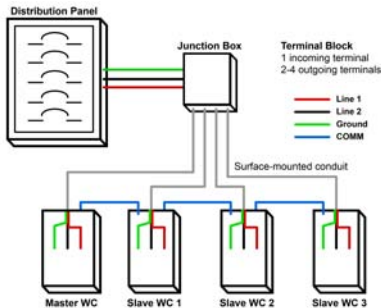
The Wall Connector includes an automatic load management feature whereby Wall Connector to Wall Connector communication allows you to split the maximum available load over a maximum of 4 Wall Connectors. The wire used for this local network must:

- Share the main power cable conduit or be housed in a separate conduit. In other words, the high voltage wires must be branched to a junction box or subpanel from each individual unit.
- Be at least 18 AWG, 2 conductor, shielded, twisted-pair wire.

**Warning:** When load sharing, high voltage (L1, L2, Neutral, Earth) cabling must be spliced in a separate NEMA rated enclosure.

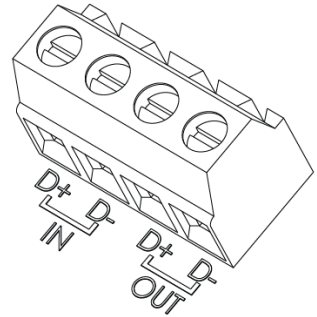
**Note:** Take additional precautions into consideration to prevent water ingress at the Wall Connectors when installing them outdoors

**Note:** Consult with an electrician to ensure that the installation meets local regulations.



## Daisy Chaining Multiple Wall Connectors

Each Wall Connector has one terminal block dedicated for the communication wiring as shown below. The left hand side of the terminal block is the input terminal and the right hand side the output terminal.



1. Form a daisy-chained network by connecting the cables from OUT to IN and always from positive to positive and negative to negative between each of the participating Wall Connectors (refer to Example of the Communication Wiring on page 28).
  - The signal wires between each Wall Connector should run in signal conduit. Use a 1/2" (13 mm) UL approved conduit hub to seal the signal conduit opening.
  - If the signal wire is routed in the power conduit with the power wires, the insulation rating of the signal wire should be equal to or greater than that of the power wires.
  - The maximum distance between Wall Connectors is 49 ft (15 m).
2. Set one Wall Connector as the master by setting the Rotary Switch Position from 1 through 8, depending on the maximum available output current. Set up to 3 Wall Connectors as slaves by setting the Rotary Switch Positions to F. In the load sharing network, only one unit can be designated



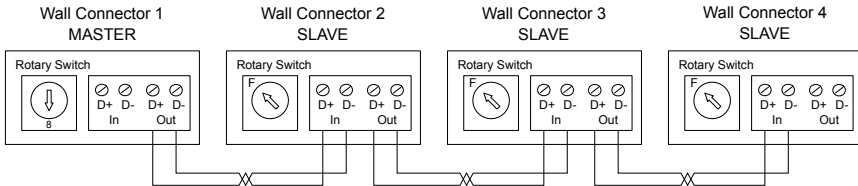
## Appendix B: Optional Connection for Load Sharing

as the master (refer to Set the Operating Current on page 18).

3. Confirm that the load sharing network is properly installed by observing the LED indicators in the Wall Connector. When starting up the circuit breaker for the first time, green lights turning ON for 5 seconds indicate a proper installation. The final display is:

Green Lights	Yellow Light	Red Light	What it Means...
On (top and bottom)	Off	Off	Master unit
On (bottom)	Off	Off	Slave unit

### Example of the Communication Wiring



### Other Load Sharing Behaviors

- Available current is redistributed equally among all connected vehicles whenever a new vehicle is plugged or unplugged from the network.
- During steady-state operation, the load sharing network toggles available current to each vehicle in 2A increments, every minute, to assess vehicle need. When a battery approaches full charge, the power consumption will taper until charging is complete. If the master unit detects that a vehicle is no longer using all of its available current, it will reduce the current allocated to that vehicle.
- A slave Wall Connector will not charge if communication is lost with the master Wall Connector.
- In rare cases, firmware updates on a master Wall Connector will interrupt charging on the slave Wall Connector(s). This is normal behavior, and charging should resume once the firmware update is complete (15 minutes).



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# CONECTOR DE PARED, J1772, 40A MONOFÁSICO MANUAL DE INSTALACIÓN

Mercados Autorizados: Norteamérica, Japón, Taiwan







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## Especificaciones del producto

Se ha comprobado que todas las especificaciones y descripciones contenidas en este documento eran exactas en la fecha de impresión. Sin embargo, y ya que la mejora constante es uno de los objetivos de Tesla, nos reservamos el derecho de efectuar modificaciones en cualquier momento.

## Normativas de comunicaciones

Este dispositivo cumple con la Parte 15 de las reglas FCC y las normas RSS exentas de licencia de Industry Canada. El funcionamiento está sujeto a las dos condiciones siguientes: (1) Este dispositivo no causará interferencias perjudiciales y (2) este dispositivo debe aceptar cualquier interferencia recibida, incluidas las que puedan causar un funcionamiento no deseado.

 **Importante:** Cualquier cambio o modificación que se realice en este producto sin la autorización de Tesla podría invalidar la conformidad con FCC.

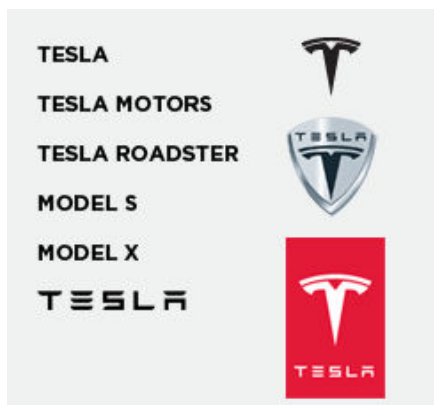
## Errores o imprecisiones

Si desea comunicar cualquier imprecisión u omisión, o enviar sus comentarios o sugerencias con respecto a la calidad de este manual, envíe un correo electrónico a:

[ownersmanualfeedback@tesla.com](mailto:ownersmanualfeedback@tesla.com)

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## Instrucciones importantes de seguridad




Este documento contiene advertencias e instrucciones importantes que deben seguirse para las operaciones de instalación y mantenimiento del conector de pared.

### Advertencias

-  **Aviso:** Lea todas las instrucciones antes de utilizar este producto.
-  **Aviso:** Vigile el dispositivo en todo momento si hay niños cerca.
-  **Aviso:** El conector de pared se debe conectar a tierra .
-  **Aviso:** No instale ni utilice el conector de pared cerca de materiales inflamables, sustancias químicas o vapores inflamables, explosivos, abrasivos o combustibles.
-  **Aviso:** Utilice el conector de pared únicamente dentro de los parámetros de funcionamiento especificados.
-  **Aviso:** No utilice el conector de pared si presenta algún defecto o está agrietado, desgastado, roto o dañado de alguna otra manera, o si no funciona correctamente.
-  **Aviso:** No intente desensamblar, reparar, alterar o modificar el conector de pared. El conector de pared no es un dispositivo que el usuario pueda reparar. Póngase en contacto con Tesla si necesita alguna reparación o modificación.
-  **Aviso:** Cuando transporte el conector de pared, trátelo con cuidado. No lo someta a un impacto o una presión fuerte ni tampoco lo retuerza, enrede, arrastre, pise ni tire de él para proteger tanto el conector como los componentes de todo daño.
-  **Aviso:** No toque los terminales del conector de pared con los dedos ni con objetos metálicos puntiagudos, como alambres, herramientas o agujas.
-  **Aviso:** No doble a la fuerza ni aplique presión en ninguna parte del conector de pared ni lo dañe con objetos puntiagudos.
-  **Aviso:** No introduzca objetos extraños en ninguna parte del conector de pared.

-  **Aviso:** El uso del conector de pared puede afectar o perjudicar el funcionamiento de los dispositivos electrónicos médicos o implantados, como marcapasos cardíacos o desfibriladores cardioversores. Consulte al fabricante del dispositivo electrónico para conocer los efectos que la carga puede tener en dichos dispositivos antes de utilizar el conector de pared.

### Precauciones

-  **Precaución:** No utilice generadores eléctricos privados como fuente de alimentación para la carga.
-  **Precaución:** Una instalación y comprobación incorrecta del conector de pared puede dañar potencialmente tanto la batería del vehículo como el propio conector de pared. Los daños resultantes están excluidos de la Garantía limitada de vehículo nuevo y de la Garantía limitada del equipo de carga.
-  **Precaución:** No utilice el conector de pared en temperaturas que estén fuera del rango de funcionamiento de -30 a +50 °C.



## Notas

**Nota:** Asegúrese de que el cable de carga del conector de pared está colocado de forma que no se pueda pisar, pasar por encima, ni provocar tropiezos; asegúrese también de que no está sujeto a daños o tensiones.

**Nota:** No utilice solventes de limpieza para limpiar ningún componente del conector de pared. El exterior del conector de pared, el cable de carga y el extremo del conector del cable de carga se deben limpiar de forma periódica con un paño seco para eliminar la acumulación de polvo y suciedad.

**Nota:** Tenga cuidado de no dañar las placas de circuitos ni los componentes durante la instalación.



La potencia máxima para el conector de pared es de 11 kW ó 40A con una alimentación monofásica de 240V CA.

Descripción	Especificaciones
Tensión y cableado	Monofásica de 208 V o 240 V CA: L1, L2 y masa
Corriente	Salida máxima: 40 A
Frecuencia	De 50 a 60 Hz
Longitud del cable	24' (7.4 m)
Dimensiones del conector de pared	Altura: 380 mm Anchura: 160 mm Profundidad: 140 mm
Dimensiones del soporte de la entrada superior	Altura: 275 mm Anchura: 130 mm Profundidad: 50 mm
Peso (soporte incluido)	17 lb (7.5 kg)
Temperatura de funcionamiento	De -30 °C a 50 °C
Temperatura de almacenamiento	De -40 °C a 85 °C
Capacidad de alojamiento	Tipo 3R
Homologaciones	Conformidad cULus para Estados Unidos y Canadá bajo número de archivo E351001, FCC Parte 15.
Ventilación	No necesaria



## Capacidades de los circuitos

Use un disyuntor monofásico de 50A de una sola fase para obtener la mayor potencia de salida.

En ciertas ubicaciones de instalación, este nivel de potencia no estará fácilmente disponible. Es por eso que el conector de pared cuenta con una función de gestión automática de carga que permite que la corriente de salida se ajuste a cualquier disyuntor desde 15A hasta 50A (consulte Ajuste de la corriente de funcionamiento en la página 18).

**Nota:** El consumo real de amperaje dependerá del cargador integrado del vehículo. Póngase en contacto con Tesla si tiene dudas sobre el cargador integrado de un vehículo específico.

## Recuperación y supervisión automática

El conector de pared cuenta con un circuito de supervisión de tierra que comprueba continuamente la presencia de una conexión a tierra segura y se recupera automáticamente en caso de fallos. No se requiere la comprobación o el restablecimiento manual.

Los problemas temporales como los fallos de conexión a tierra o las subidas de tensión se resuelven automáticamente. Si ocurre un fallo de corriente residual que interrumpe la carga, el conector de pared intenta resolver el fallo automáticamente y vuelve a intentar realizar la carga.

Si el problema se detecta de nuevo de forma inmediata, el conector de pared espera 15 minutos antes de volver a intentar realizar la carga. Este proceso se repite 4 veces y si todos los intentos son infructuosos, se desconecta la alimentación y no se realizan más intentos. En este caso, verá una luz roja de error en el panel frontal (consulte Resolución de problemas en la página 21). Se recomienda que si ve una luz roja de error, desconecte la alimentación del conector de pared desconectando el disyuntor aguas arriba y conectándolo de nuevo.

Alternativamente, el conector de pared se puede restablecer cuando se enciende una luz roja mediante el botón RESET (consulte Restablecimiento en la página 25).

## Corte en la red eléctrica

Si se produce un corte en la red eléctrica, el conector de pared reanuda la carga automáticamente cuando se restablece el suministro. Si el cable de carga está enchufado al vehículo cuando se restablece dicho suministro, las luces parpadean y la unidad no activa el cable de carga hasta que transcurre un plazo de aproximadamente 15 segundos a 3 minutos. Así se evita que la red eléctrica sufra un pico de demanda cuando se restablece la alimentación y se permite que los vehículos comiencen a recibir alimentación en un plazo aleatorio, en lugar de todos al mismo tiempo.

## Carga compartida

Se pueden cablear hasta 4 conectores de pared en un solo disyuntor, y con la gestión automática de carga integrada, los propietarios pueden cargar múltiples vehículos en casa fácilmente (consulte Apéndice B: Conexión opcional para compartir carga en la página 29).

## Requisitos mínimos

Para instalar el conector de pared:

- Calcule la carga eléctrica existente para determinar la corriente de funcionamiento máxima.
- Calcule la distancia para asegurar una caída mínima de tensión.
- Obtenga todos los permisos necesarios de las autoridades locales competentes y asegúrese de que un electricista cualificado revisa la instalación una vez completada.
- Utilice conductores de cobre únicamente.
- Utilice conductores del tamaño adecuado según las normativas locales. El cable elegido debe tener la capacidad para resistir cargas constantes del amperaje máximo seleccionado por el electricista.
- Use un disyuntor.

**Nota:** Consulte con un electricista para garantizar que la instalación cumple las normativas locales.

## 120 V por encima de la masa

**⚠️ Aviso:** El conector de pared es un dispositivo monofásico. No conecte las 3 fases de una toma trifásica.

**⚠️ Aviso:** Antes de instalar el conector de pared, identifique el tipo de conexión de servicio público disponible en el sitio. Si no está seguro del tipo de conexión disponible en el panel de servicio, consulte a un electricista o póngase en contacto con Tesla para obtener ayuda.

**⚠️ Precaución:** Las dos fases utilizadas deben medir 120 V cada una al neutro. Cada masa debe conectarse al neutro en un único punto, normalmente en el panel del disyuntor.

**⚠️ Precaución:** Si se recibe una alimentación trifásica de 240 V de un conector delta secundario, la patilla empleada debe tener una toma central. Esta toma central debe estar conectada a masa. Sólo se pueden utilizar las dos fases de cada lado de la toma central.

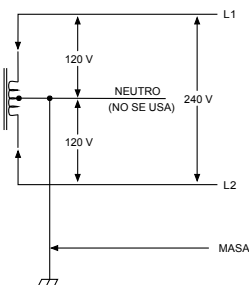
Sólo hay tres cables conectados, pero es absolutamente necesario poder diferenciar la conexión del transformador de servicio secundario y que los tres cables del panel del disyuntor principal están correctamente conectados y etiquetados.

**Nota:** Las salidas de L1, L2 y masa marcadas en las ilustraciones corresponden a las entradas del conector de pared.

## Conexión a masa

Conecte siempre el neutro a la masa de servicio. No es posible establecer una protección de fallo de masa a menos que se conecte el neutro (toma central del transformador de servicio) a tierra. Si el servicio eléctrico no incluye masa, debe instalar una estaca de masa de tierra cerca. La estaca de masa de tierra debe conectarse a la barra de tierra del panel del disyuntor principal, y el neutro debe conectarse a tierra en ese punto.

## 240 V monofásica



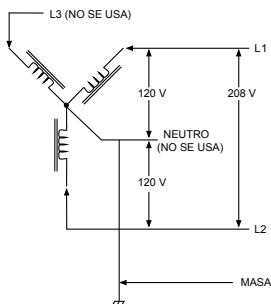
**Nota:** Las ilustraciones en este documento son solamente para fines demostrativos.



## Conector en Y trifásico de 208 V

En un conector en Y secundario, se puede usar cualquiera de las dos patillas para proporcionar 208 V al conector de pared. Por ejemplo, L1 y L2; L1 y L3; o L2 y L3. Las dos fases utilizadas deben tener una medición de 120 V al neutro.

**Nota:** No se necesita un neutro con corriente.



**⚠ Precaución:** La patilla que no se utiliza (L3 en la ilustración) debe permanecer abierta. No debe conectarse a una barra de neutro ni a masa de tierra.

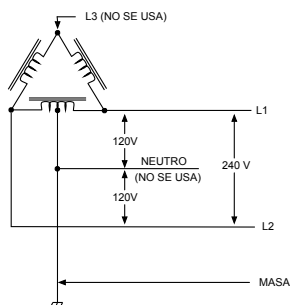
**⚠ Precaución:** El punto central de las tres fases (normalmente utilizado como neutro) se debe conectar a masa en un sólo punto. Suele ser en el panel del disyuntor.

## Conexión delta trifásica de 240 V

La conexión delta debe tener una patilla conectada a la toma central, y sólo se pueden utilizar las dos fases de cada lado de la toma central. Las dos fases utilizadas deben tener una medición de 120 V al neutro.

Consulte la documentación del fabricante del transformador para verificar que la patilla puede proporcionar la energía necesaria.

**Nota:** El contactor del conector de pared solo se cierra si detecta la presencia de un cable de masa de tierra conectado a un punto neutro del transformador secundario.



**⚠ Precaución:** La tercera línea (L3 en la ilustración) del conector delta mide 208 V, con respecto al neutro. Se le suele denominar "prolongador". No utilice esta tercera línea.

**⚠ Precaución:** No utilice un transformador secundario conectado a un conector delta trifásico sin una toma central en una de las patillas. En la conexión a masa de tierra necesaria no hay ningún punto neutro disponible.

## Determinación de los requisitos del disyuntor

Para determinar el tipo de disyuntor en sentido aguas arriba que necesita, examine la caja del panel de distribución o del disyuntor para identificar el amperaje disponible en el sitio de la instalación.

El conector de pared tiene un interruptor giratorio interno que le permite ajustar la corriente de funcionamiento (consulte Ajuste de la corriente de funcionamiento en la página 18). El disyuntor debe tener capacidad nominal para corriente continua de 40A.

### Elección de la mejor ubicación del conector de pared

Determine la ubicación de aparcamiento del vehículo para asegurarse de que el cable de carga alcanza el puerto de carga. El conector de pared debe estar instalado:

- En un garaje cerrado, normalmente en el lado del puerto de carga del vehículo.
- En una zona bien ventilada. Evite instalarlo en un entorno cerrado o cerca de electrodomésticos calientes.
- 1,2 m sobre el suelo.
- 190 mm de cualquier obstáculo para permitir que el cable se curve sin problemas.

**Nota:** El conector de pared está homologado para su uso en exteriores, pero no está homologado para una inmersión completa en líquido. Es recomendable protegerlo de la lluvia, aunque no es estrictamente necesario.

### Consideraciones de la instalación

Existen tres métodos para instalar el conector de pared. La ubicación del conducto y el tipo de cableado determinan el método de instalación a seguir:

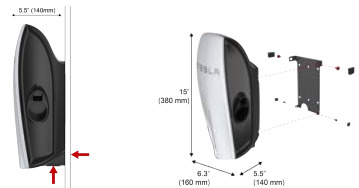
- Si el conducto va por el suelo o por la parte inferior de la pared, utilice la configuración con entrada inferior.
- Si el conducto viene del interior de la pared, puede elegir la configuración con entrada trasera.
- Si el conducto viene del techo, o si el cableado de servicio es más grueso que 6 AWG, use la configuración de la entrada superior. El soporte de la entrada superior tiene un troquelado trasero opcional que permite que cableado de servicio más grueso entre desde la parte superior o la parte trasera.

**Nota:** En todo el manual, el término "conducto" se utiliza como término estándar para el tubo protector que alberga el cable de servicio. En las regiones en las que no se utilizan conductos (Europa, por ejemplo), el conducto puede ser sustituido por un cable de servicio protegido por una funda, según lo establezcan las normativas locales.

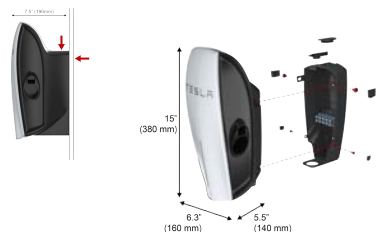
A continuación se indican algunas directrices:

- Las aperturas para conductos tienen un tamaño para conductos de 1" (25 mm).
- El conducto debe cumplir todas las normativas locales.
- Utilice un disyuntor adecuado.
- Use un conector para conducto con homologación UL para garantizar un correcto sellado.
- Al instalar cable más grueso que 6AWG, use la instalación de la entrada superior.

#### Entrada trasera o inferior



#### Entrada superior o entrada trasera opcional

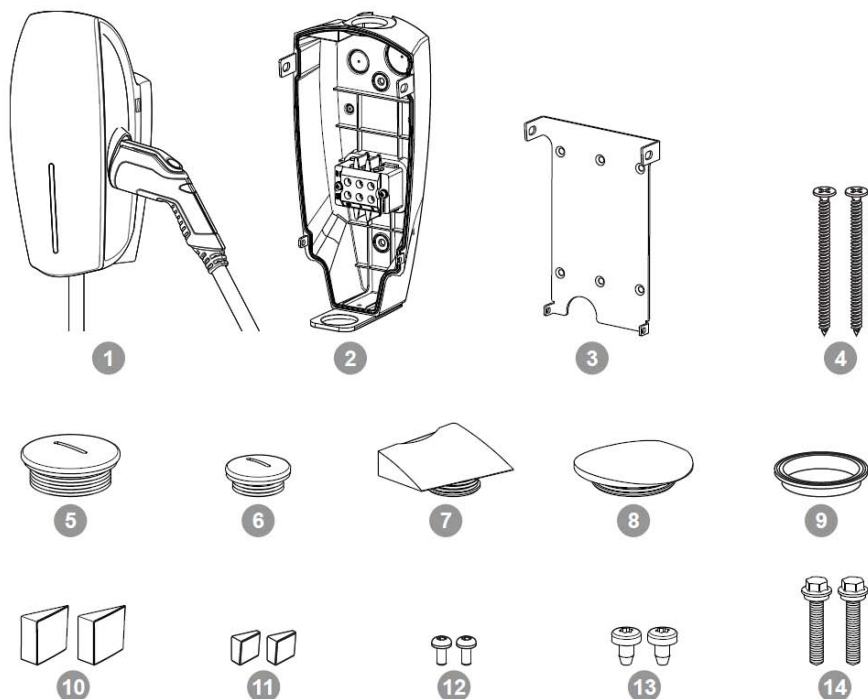




## | Compruebe el contenido de la caja |

La caja contiene las piezas necesarias para todos los tipos de instalación, además del presente manual. Si hay cualquier pieza dañada o faltante, póngase en contacto con Tesla (consulte ¿Tiene alguna pregunta? en la página 27).

**Nota:** No se muestra la plantilla de cartón proporcionada.



Pieza	Descripción (cantidad)
1	Conector de pared
2	Soporte para la entrada superior*
3	Soporte de perfil inferior **
4	Tornillos del soporte del perfil inferior (2) **
5	Tapón de conducto de alimentación de entrada inferior o trasero
6	Tapón de conducto de señal de entrada inferior o trasero
7	Tapón de conducto de señal de entrada superior* (preinstalado en el soporte de entrada superior)
8	Tapón de conducto de alimentación* (preinstalado en el soporte de entrada superior)
9	Junta de sellado del conducto inferior*
10	Tapones para los tornillos del soporte superior a la cubierta (2)



Pieza	Descripción (cantidad)
11	Tapones para los tornillos del soporte inferior a la cubierta (2)
12	Tornillos del soporte inferior a la cubierta (2)
13	Tornillos del soporte superior a la cubierta (2)
14	Tornillos de montaje del soporte de la entrada superior (2)*

\* Piezas para utilizar únicamente en instalaciones de entrada superior.

\*\* Piezas para utilizar únicamente en instalaciones de entrada inferior o trasera.



## Herramientas y materiales necesarios

Antes de instalar el conector de pared, reúna las siguientes herramientas y materiales:

- Lápiz o marcador
- Punzón (opcional, para perforar la plantilla de cartón)
- Pelacables
- Voltímetro o multímetro digital (para medir la tensión de CA en la ubicación de instalación)
- Destornillador Phillips
- Destornillador pequeño de cabeza plana
- Destornillador grande de cabeza plana (opcional, para desmontar los tapones de plástico)
- Destornillador Torx T20 de seguridad (incluido)
- Destornillador Torx T10 (incluido)
- Pasamuros M20 y M32 (también conocidos como juntas estancas)
- Cableado (use cable 18 AWG de red trenzado de dos hilos a un máximo de 15m entre conectores de pared.
- Nivel
- Taladro
- Destornillador dinamométrico (para conexiones del bloque de terminales)

Después, realice estos pasos para instalar el conector de pared:

- Instale el soporte del perfil inferior para el cableado a través de la entrada trasera o inferior en la página 13
- Instale el soporte de entrada superior del soporte de la entrada superior o el cableado de entrada superior. en la página 14
- Preparación de la instalación en la página 15
- Conexión del cableado en la página 16
- Ajuste de la corriente de funcionamiento en la página 18
- Fijación de la cubierta de sellado y encendido en la página 19

## Resumen de los pasos de instalación

- ⚠ Aviso:** Una vez que tienda los cables de servicio hasta la ubicación de instalación, instale el disyuntor apropiado en sentido aguas arriba, APAGUE Y COMPRUEBE QUE NO HAY ALIMENTACIÓN ANTES DE CONTINUAR.



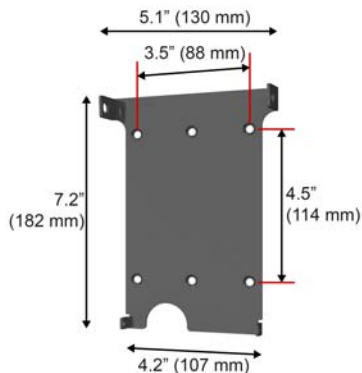
## Instale el soporte del perfil inferior para el cableado a través de la entrada trasera o inferior

Utilice el soporte del perfil inferior, que se muestra a continuación, para cablear el conector de pared desde la parte trasera o inferior.



1. Utilice el soporte del perfil inferior como guía para marcar la ubicación en la pared de los tornillos de fijación.

- Use un nivel para garantizar que las marcas están perfectamente en vertical.
- Deje una separación entre los orificios de 114 mm.



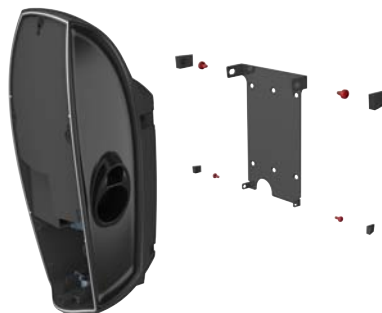
- Para las instalaciones en EE. UU., coloque el soporte de modo que el

conector de pared quede a una distancia máxima de 150 cm del suelo. La altura mínima es de 45 cm si se monta en interior y de 122 cm si se monta en exterior.

- Si está usando el conducto de entrada trasero, use al menos uno de los conjuntos de orificios de montaje laterales para que el conducto no interfiera con el perno para la pared.
- Si está usando el conducto de entrada inferior, use los dos orificios de montaje del centro.

**Nota:** Asegúrese de seleccionar cuidadosamente la altura máxima y mínima del soporte. Debe instalarse fuera del alcance de cualquier impacto razonablemente previsible.

2. Monte el soporte con fijadores que sean adecuados para el material de la pared en que se va a instalar, taladrando orificios guía si es necesario. Utilice los tornillos que se suministran sólo si instala el soporte sobre una superficie de madera. Si el montaje se hace en otro tipo de pared (hueca, mampostería, etc.), use fijadores que sean lo suficientemente largos para anclar firmemente el conector de pared y que puedan soportar por lo menos 80 lb (36 kg).





## Instale el soporte de entrada superior del soporte de la entrada superior o el cableado de entrada superior.

El soporte de la entrada superior permite pasar el cable de servicio al alojamiento del conector de pared desde la parte superior, tal y como se muestra a continuación.



1. Utilice la plantilla de cartón y un nivel como guía para marcar la ubicación en la pared de los tornillos de fijación.
  - Use un nivel para garantizar que las marcas están perfectamente en vertical.
  - Deje una separación entre los orificios de 155 mm.
  - Coloque el soporte de modo que el conector de pared quede a una distancia máxima de 150 cm del suelo. La altura mínima es de 45 cm si se monta en interior y de 122 cm si se monta en exterior.

**Nota:** Asegúrese de seleccionar cuidadosamente la altura máxima y mínima del soporte. Debe instalarse fuera del alcance de cualquier impacto razonablemente previsible.

2. (Opcional) Hay dos orificios de instalación adicionales. Para usar estos orificios, utilice un destornillador de cabeza plana para retirar el plástico que los cubre. Estos orificios están separados 70 mm.



3. Monte el soporte con fijadores que sean adecuados para el material de la pared en que se va a instalar, taladrando orificios guía si es necesario. Utilice los tornillos que se suministran sólo si instala el soporte sobre una superficie de madera. Si el montaje se hace en otro tipo de pared (hueca, mampostería, etc.), use fijadores que sean lo suficientemente largos para anclar firmemente el conector de pared y que puedan soportar por lo menos 80 lb (36 kg).





## Preparación de la instalación

Siga estas instrucciones para retirar la cubierta y pasar el cable de servicio por el conector de pared.

1. Use un destornillador Torx T10 para retirar el tornillo de la parte inferior de la cubierta exterior. Retire con cuidado las grapas de los lados y de la parte superior. Utilice para ello un destornillador de cabeza plana y retire la cubierta por completo. Guarde el tornillo y la cubierta para el reensamblaje.



2. Use un destornillador Torx T20 de seguridad para retirar los seis tornillos de la cubierta de sellado. Retire con cuidado la cubierta de sellado y desconecte el cable plano. Guarde los tornillos y la cubierta para el reensamblaje.



**⚠ Precaución:** No deje la cubierta de sellado colgando del cable plano. Si lo hace, se puede dañar el cable plano o los conectores.

3. Para la configuración de entrada superior, instale el cableado en el bloque de terminales en el soporte de entrada superior como se muestra en Conexión del cableado en la página 16, luego regrese a esta sección para proceder al paso siguiente. Para la configuración de entrada trasera o inferior, proceda con el paso siguiente.
4. Coloque el conector de pared en el soporte y asegúrese de que las cuatro lengüetas de montaje están alineadas correctamente.
5. Utilice un destornillador Torx T20 para instalar los dos tornillos de montaje superiores de la cubierta. Coloque los tapones cosméticos de los tornillos.
6. Utilice un destornillador Torx T20 para instalar los dos tornillos de montaje inferiores de la cubierta. Coloque los tapones cosméticos de los tornillos en su sitio.





## Conexión del cableado

**Nota:** Consulte con un electricista o las normativas locales para determinar el tamaño del cable adecuado para las corrientes de su conector de pared.

**Nota:** Es responsabilidad del instalador identificar si se necesita una masa adicional para garantizar el cumplimiento de la normativa local. La masa debe estar instalada en la fuente de alimentación y no en la entrada del cable hacia el conector de pared.

**⚠️ Aviso:** No conecte los cables de servicio hasta que haya leído y comprendido completamente los conceptos descritos en esta sección. Si no conoce con seguridad el tipo de conexión disponible en el panel de servicio, consulte a un electricista o póngase en contacto con Tesla para obtener ayuda.

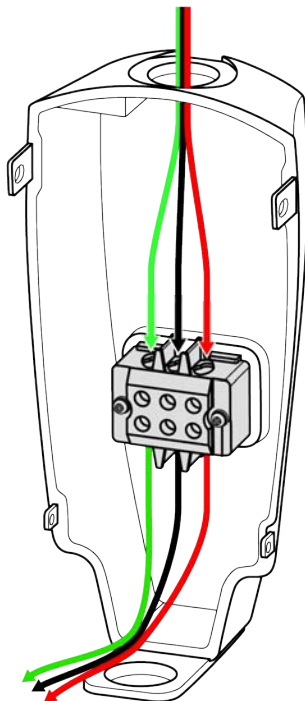
1. Desconecte la alimentación.

**⚠️ Aviso:** RIESGO DE DESCARGA ELÉCTRICA! Antes de continuar, use un voltímetro para comprobar que la alimentación está desconectada confirmando que **NO HAY TENSION** en los cables o terminales bajo servicio.

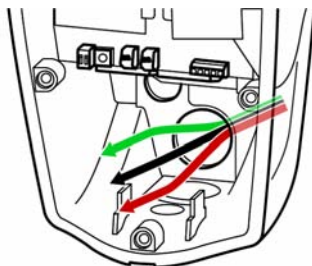
2. En una instalación con entrada superior, pase el cable de servicio a través del soporte de la entrada superior o del conector de pared. Use un pasamuros de 25 mm para sellar la abertura del conducto o cable de alimentación.

**Nota:** El significado de los colores puede variar en función del país. Siga toda la normativa nacional y local aplicable respecto a los códigos de colores del cableado.

La siguiente ilustración muestra un ejemplo del cableado para el soporte de la entrada superior.



La siguiente ilustración muestra un ejemplo del cableado para el soporte de la entrada inferior.

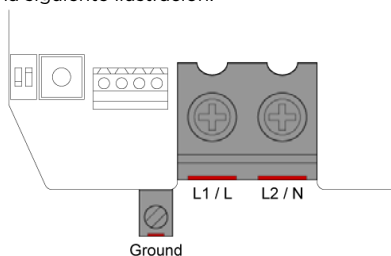


3. Pele los cables de servicio que van al bloque de terminales en el soporte de entrada superior 3/4" (18 mm). Se recomienda usar terminales.



**Nota:** En una instalación con entrada superior, los cables flexibles preinstalados que van del soporte de la entrada superior a la cubierta ya tienen terminales y no es necesario pelarlos.

- Introduzca los cables de servicio preconectados en la cubierta principal y enchufe dichos cables en el bloque de terminales principal con los cables L1 (or línea), L2 (or neutro), y tierra dirigidos hacia las ubicaciones que se muestran en la siguiente ilustración.



**⚠ Precaución:** Corte todos los hilos e insértelos completamente en el bloque de terminales.

**Nota:** Para garantizar un correcto funcionamiento, el neutral debe estar conectado a la barra de tierra dentro de la caja de disyuntores o en el panel eléctrico principal.

- Apriete el bloque de terminales al par de torsión recomendado:
  - 35 in-lb (4.0 N-m) para el bloque de terminales del soporte de la entrada superior.
  - 33 in-lb (3.8 N-m) para el bloque de terminales en la cubierta principal.
  - 18 in-lb (2.0 N-m) para el bloque de terminales de tierra en la cubierta principal.
- Compruebe que el cableado es correcto con un multímetro y verifique que no hay cortos antes de ACTIVAR el disyuntor en sentido aguas arriba.



## Ajuste de la corriente de funcionamiento

Siga estas instrucciones para configurar el interruptor DIP. La siguiente ilustración muestra una vista ampliada de los interruptores DIP y giratorios.



**⚠ Aviso:** La alimentación DEBE estar DESCONECTADA antes de ajustar o cambiar los interruptores DIP o giratorios. El sistema no reconocerá el cambio de estos interruptores con la alimentación CONECTADA y será peligroso debido a la posibilidad de descargas eléctricas.

1. DESCONECTE la alimentación.
2. Use un objeto no conductor para ajustar el interruptor DIP:
  - Posición 1 del interruptor:
    - Para realizar una conexión de línea a línea (200-250V), ajuste el interruptor DIP hacia ABAJO.
    - Para realizar una conexión de línea a neutro (mayor a 250V), coloque el interruptor DIP hacia ARRIBA.
  - Posición 2 del interruptor:
    - La posición 2 del interruptor DIP siempre debe estar colocada hacia ARRIBA.

Cableado/ conexión	Posición del interruptor DIP
línea a neutro (mayor a 250V)	
de línea a línea (200-250V)	

3. Ajuste el interruptor giratorio según el ajuste apropiado de corriente compatible con su disyuntor. Las capacidades de los disyuntores típicos son: 15A, 20A, 25A, 30A, 35A, 40A, 45A, y 50A.

Use un destornillador pequeño de cabeza plana para ajustar el interruptor giratorio de acuerdo con el ajuste correcto del disyuntor. Los ajustes correspondientes del interruptor giratorio para los disyuntores típicos aparecen en la tabla siguiente:



Posición del interruptor giratorio	Corriente máxima de salida	Disyuntor
0	Modo de prueba	N/D
1	12 A	15 A
2	16 A	20 A
3	20 A	25 A
4	24 A	30 A
5	28 A	35 A
6	32 A	40 A
7	36 A	45 A
8	40 A	50 A
9	N/D	N/D
A	N/D	N/D
B	N/D	N/D
C	N/D	N/D
D	N/D	N/D
E	No es una selección válida	N/D
F	Modo esclavo	N/D

- Vuelva a conectar el cable plano a la cubierta de sellado.
- Vuelva a instalar la cubierta de sellado. Use un destornillador Torx T20 de seguridad para fijar ligeramente la cubierta de sellado instalando solo el tornillo superior.
- CONECTE la alimentación.
- Si la instalación es correcta, los LED parpadearán brevemente de forma secuencial en verde con un patrón que finaliza con el LED verde superior iluminado permanentemente. Si hay una luz LED roja parpadeando o iluminado permanentemente, consulte Resolución de problemas en la página 21 y solucione el error antes de continuar.

**Nota:** Para revisar el patrón de las luces parpadeantes, mantenga presionado el botón RESET durante 5 segundos.

- DESCONECTE la alimentación.
- Escriba la información de contacto del instalador en la etiqueta del interior del conector de pared.

## Fijación de la cubierta de sellado y encendido

- Use un destornillador Torx T20 de seguridad para instalar los tornillos restantes en la cubierta de sellado. Asegure que la cubierta esté alineada adecuadamente antes de apretar los tornillos a 8.8 in-lb (1.0 N-m).
- Coloque la cubierta exterior sobre la cubierta de sellado comenzando por la lengüeta de la parte superior. Acople las fijaciones de los laterales y alinee la lengüeta de montaje con la cubierta en la parte inferior.



- Use un destornillador Torx T10 para instalar el tornillo que fija la parte inferior de la cubierta exterior a la cubierta. Apriete el tornillo a 4.4 in-lb (0.5 N-m).
- Cierre las aberturas sin usar con tapones para los conductos de señal y alimentación.

**Nota:** No deben quedar aberturas visibles hacia el interior del conector de pared, y el conector debe estar completamente sellado del exterior.

- CONECTE la alimentación. La instalación es correcta si los LED pasan por una secuencia de parpadeo que finaliza con los LED verdes superiores ENCENDIDOS continuamente. Si hay una luz LED de



color rojo parpadeando o iluminando permanentemente, resuelva el error antes de continuar (consulte Resolución de problemas en la página 21).

**Nota:** Para revisar el patrón de luces parpadeantes, mantenga presionado el botón Reset durante 5 segundos.

6. Intente cargar el vehículo para asegurarse de que el conector de pared funciona correctamente y de que carga a la corriente de funcionamiento seleccionada. Para obtener instrucciones sobre cómo realizar la carga, consulte la información de usuario suministrada junto con el vehículo.



Luces verdes	Luz amarilla	Luz roja	Volver a intentar automáticamente	Significado	Qué hacer
Luz superior encendida	Apagado	Apagado	No aplicable	Alimentación encendida. El conector de pared está encendido y en espera, pero no está cargando el vehículo.	No aplicable.
Luces secuenciales	Apagado	Apagado	No aplicable	El conector de pared está cargando el vehículo.	No aplicable.
Luces secuenciales	1 parpadeo	Apagado	No aplicable	La corriente de carga es reducida debido a la alta temperatura detectada en el conector del vehículo.	Asegúrese de que el conector está insertado completamente en la entrada de carga del vehículo, de que no está cubierto por nada y de que no tiene cerca ninguna fuente de calor. Si el problema persiste con una temperatura ambiente normal (por debajo de 38 °C), póngase en contacto con Tesla.



Luces verdes	Luz amarilla	Luz roja	Volver a intentar automáticamente	Significado	Qué hacer
Luces secuenciales	2 parpadeos	Apagado	No aplicable	La corriente de carga es reducida debido a la alta temperatura detectada en el enchufe de pared o en los terminales de entrada del conector de pared.	Si se enchufa el conector de pared a una toma de corriente, asegúrese de que queda completamente introducido en el receptáculo, de que no está cubierto por nada y de que no está cerca de ninguna fuente de calor. Si el conector de pared está conectado directamente a la red eléctrica, asegúrese de que no está cubierto por nada y de que no está cerca de ninguna fuente de calor. Si el problema persiste con una temperatura ambiente normal (por debajo de 38 °C), póngase en contacto con Tesla.
Luces secuenciales	3 parpadeos	Apagado	No aplicable	Corriente de carga reducida debido a la alta temperatura detectada en el conector de pared.	Asegúrese de que el conector de pared no está cubierto por nada y de que no está cerca de ninguna fuente de calor. Si el problema persiste con una temperatura ambiente normal (por debajo de 38 °C), póngase en contacto con Tesla.
Apagado	4 parpadeos	Apagado	No aplicable	El cable plano no está bien conectado.	Retire la placa frontal y verifique que si el cable plano está conectado firmemente.



Luces verdes	Luz amarilla	Luz roja	Volver a intentar automáticamente	Significado	Qué hacer
Apagado	Apagado	1 parpadeo	Después de 15 minutos y hasta 4 veces	Fallo de masa. Hay una fuga de corriente eléctrica por un lugar peligroso. Posible fallo de línea a masa o de neutro a masa.	Vuelva a intentarlo desconectando el conector de pared del vehículo y volviéndolo a conectar. Si el problema continúa, DESCONECTE el disyuntor que alimenta el conector de pared y espere 10 segundos. Después, CONECTE el disyuntor y vuelva a conectar el conector de pared al vehículo. Si el problema persiste, póngase en contacto con Tesla.
Apagado	Apagado	2 parpadeos	Después de 1 minuto y hasta 4 veces	No se ha detectado una conexión de masa en el conector de pared.	Asegúrese de que el conector de pared está correctamente conectado a tierra. En caso de duda, consulte a un electricista para asegurarse de cómo realizar una correcta conexión a masa en el disyuntor o caja de distribución de energía y para comprobar que las conexiones son correctas en el conector de pared.
Apagado	Apagado	3 parpadeos	No	Error de cableado en la entrada: es posible que se haya intercambiado la conexión de línea y neutro.	Verifique que el interruptor DIP de posición 1 esté en la posición correcta. Si el problema persiste, el cableado entre la toma de pared y el Conector de pared puede haber sido instalado incorrectamente. Consulte a su electricista.





Luces verdes	Luz amarilla	Luz roja	Volver a intentar automáticamente	Significado	Qué hacer
Apagado	Apagado	4 parpadeos	Después de 1 minuto y hasta 4 veces	Protección de sobretensión o bajatensión.	Consulte a su electricista para asegurarse de la tensión apropiada para el disyuntor que alimenta el conector de pared.
Apagado	Apagado	5 parpadeos	Nuevo intento tras 1 minuto (sin límite de nuevos intentos)	Protección de sobretensión.	Reduzca el ajuste de corriente de carga del vehículo. Si el problema persiste y el vehículo conectado es fabricado por Tesla, póngase en contacto con Tesla. Si el problema persiste y el vehículo conectado no es fabricado por Tesla, póngase en contacto con el fabricante del vehículo.
Apagado	Apagado	6 parpadeos	Nuevo intento tras 1 minuto (sin límite de nuevos intentos)	Se ha producido un error de comunicación entre el conector de pared y el vehículo.	Si es posible, enchufe el vehículo en otro conector de pared o conector móvil para asegurarse de que el vehículo se puede comunicar con otros equipos de carga. Después, póngase en contacto con el Servicio de Tesla.
Luz superior encendida	Apagado	1 parpadeo	No	Protección de exceso de temperatura (desconexión)	Asegúrese de que el conector de pared, los conectores del vehículo y el enchufe de pared (si corresponde) no están cubiertos por nada y que no tienen cerca ninguna fuente de calor. Si el problema persiste con una temperatura ambiente normal (por debajo de 38 °C), póngase en contacto con Tesla.



Luces verdes	Luz amarilla	Luz roja	Volver a intentar automáticamente	Significado	Qué hacer
Luz superior encendida	Apagado	3 parpadeos	No	Ajuste incorrecto del interruptor giratorio.	Consulte a su electricista o ajuste el interruptor giratorio.
Luz superior encendida	Apagado	4 parpadeos	No aplicable	El disyuntor comparte la red: Hay más de un conector de pared definido como maestro.	Solo se puede ajustar un conector de pared con configuración de maestro. El resto de conectores de pared se deben configurar como esclavos (posición F). Defina uno de los conectores de pared como esclavo.
Luz superior encendida	Apagado	5 parpadeos	No aplicable	El disyuntor comparte la red: Hay más de tres conectores de pared definidos como maestro.	Pase uno o varios conectores de pared a un circuito diferente y desconéctelo de esta red de compartición de disyuntor.
Luz superior encendida	Apagado	6 parpadeos	No aplicable	El disyuntor comparte la red: Los conectores de pared en red tienen diferentes capacidades máximas de corriente.	Póngase en contacto con Tesla.
Apagado	Apagado	Rojo permanente	No	Fallo de hardware del conector de pared. Los fallos posibles incluyen los siguientes: <ul style="list-style-type: none"> <li>• Error del contactor.</li> <li>• Error de comprobación automática.</li> <li>• Otros posibles fallos de hardware.</li> </ul>	Póngase en contacto con Tesla.

## Restablecimiento

Si un fallo provoca que se ilumine o parpadee una luz ROJA de error y la condición de fallo se corrige, haga un RESET para que el conector de pared vuelva a su funcionamiento normal. Hay dos maneras de hacer un RESET en el conector de pared:



- Presione el botón RESET de dos a tres segundos hasta que las luces cambien de ROJO a VERDE. Así se borran los mensajes de error pero no se reinicia el conector de pared.
- En una situación rara, es posible que necesite forzar el reinicio del conector de pared sin tener que volver a hacer el ciclo de la alimentación. Presione el botón RESET durante cinco segundos. Si la luz superior cambia de ROJA a VERDE, suelte el botón RESET. La luz superior debería permanecer iluminada en VERDE. Si la luz vuelve a parpadear en ROJO, no se ha corregido el estado de fallo.



## ¿Tiene alguna pregunta?

- Estados Unidos y Canadá:
  - [charginginstallation@tesla.com](mailto:charginginstallation@tesla.com)
  - +1-650-681-6133
- México:
  - [charging\\_mx@tesla.com](mailto:charging_mx@tesla.com)
  - +1-877-798-3752



1. DESCONECTE la alimentación.

**⚠ Aviso:** RIESGO DE DESCARGA ELÉCTRICA! Antes de continuar, use un voltímetro para comprobar que la alimentación está desconectada confirmando que **NO HAY TENSION** en los cables o terminales bajo servicio.

2. Use un objeto no conductor para ajustar los interruptores DIP de acuerdo con el ajuste de la red eléctrica y el uso compartido del disyuntor (consulte Ajuste de la corriente de funcionamiento en la página 18).
3. Use un destornillador pequeño de cabeza plana para ajustar el interruptor giratorio en la posición "0" y hacer que el conector de pared entre en el modo de prueba.

**⚠ Aviso:** La alimentación DEBE estar DESCONECTADA antes de ajustar o cambiar los interruptores DIP o giratorios. El sistema no reconocerá el cambio de estos interruptores con la alimentación CONECTADA y será peligroso debido a la posibilidad de descargas eléctricas.

4. Vuelva a conectar el cable plano a la cubierta de sellado.
5. Use un destornillador Torx T20 de seguridad para fijar ligeramente la cubierta de sellado instalando solo el tornillo superior.
6. CONECTE el disyuntor.
7. Compruebe si se ENCIENDE algún LED rojo después de una secuencia de LED; si es así, hay un fallo en la instalación.
8. Escuche si el contactor o relé emite un clic de apertura o cierre.
9. Compruebe si hay una secuencia de LED verdes (durante 5 segundos).

Los LED volverán a iluminarse con el LED superior verde ENCENDIDO y los LED rojos parpadeando (3 veces).

**Nota:** Para revisar el patrón de luces parpadeantes, mantenga presionado el botón Reset durante 5 segundos.

10. DESCONECTE el disyuntor.
11. Extraiga el tornillo de la cubierta de sellado y la cubierta de sellado. Desconecte el cable plano.

**⚠ Precaución:** No deje la cubierta de sellado colgando del cable plano. Si lo hace, se puede dañar el cable plano o los conectores.

12. Vuelva a colocar el interruptor giratorio en el ajuste apropiado (consulte Ajuste de la corriente de funcionamiento en la página 18).
13. Vuelva a conectar el cable plano a la cubierta de sellado.
14. Vuelva a montar todos los tornillos e instale la cubierta exterior (consulte Fijación de la cubierta de sellado y encendido en la página 19).



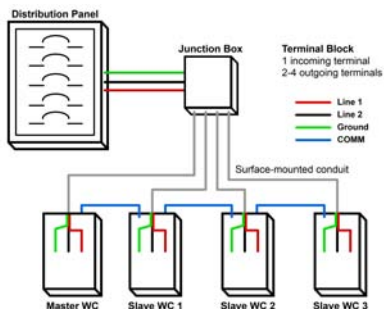
El conector de pared incluye una función de gestión automática de carga por medio de la cual la comunicación de un conector de pared a otro le permite dividir la carga máxima disponible entre un máximo de 4 conectores de pared. El cable utilizado para esta red local debe:

- Compartir el conducto de alimentación principal o estar alojado en un conducto independiente. En otras palabras, los cables de alta tensión deben dirigirse a una caja de conexiones o subpanel desde cada unidad individual.
- ser cable de al menos 18 AWG, aislado, trenzado de dos hilos.

**⚠️ Aviso:** Si se comparte la carga, los cables de alta tensión (L1, L2, neutro, masa) deben dirigirse a un armario independiente con homologación NEMA.

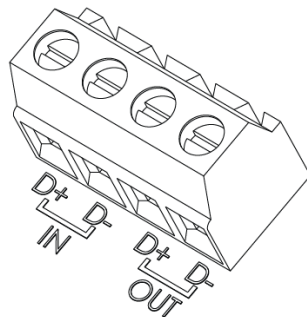
**Nota:** Considere tomar precauciones adicionales para evitar que se introduzca agua en los conectores de pared al instalarlos en el exterior.

**Nota:** Consulte con un electricista para garantizar que la instalación cumple las normativas locales.



## Conexión en serie con secuencia de diferentes conectores de pared

Cada conector de pared tiene un bloque de terminales dedicado al cableado de comunicación, como se muestra a continuación. El terminal de la izquierda del bloque es el terminal de entrada y el de la derecha el de salida.



1. Forme una red conectada en margarita conectando los cables de OUT a IN y siempre de positivo a positivo y de negativo a negativo entre los diferentes conectores de pared del conjunto (consulte Ejemplo del cableado de comunicación en la página 30).
  - Los cables de señal entre todos los conectores de pared deben pasar por un conducto de señal. Use un pasamuros con homologación UL de 1/2" (13 mm) para sellar la abertura del conducto de señal.
  - Si el cable de señal se conduce dentro del conducto que contiene los cables de alimentación, la clasificación de aislamiento del cable de señal debe ser igual o mayor que la de los cables de alimentación.
  - La distancia máxima entre los conectores de pared es de 15 m.
2. Defina un conector de pared como maestra colocando la posición del interruptor giratorio de 1 a 8, dependiendo de la corriente máxima de salida



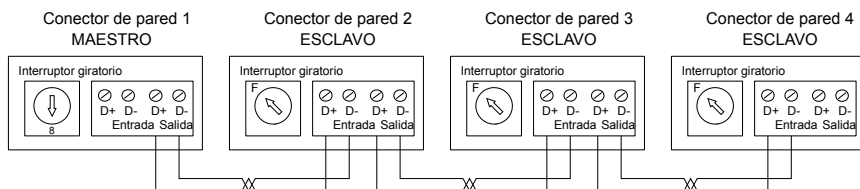
disponible. Defina hasta 3 conectores de pared como esclavos colocando las posiciones del interruptor giratorio en F. En una red con carga compartida, sólo una unidad puede designarse como maestra, (consulte Ajuste de la corriente de funcionamiento en la página 18).

3. Confirme que la red con carga compartida está correctamente instalada mediante la observación de los indicadores LED del conector de pared. Cuando accione el disyuntor por primera vez, las luces verdes se ENCENDERÁN 5 segundos para indicar

que la instalación es correcta. La visualización final es:

Luces verdes	Luz amarilla	Luz roja	Significado
Encendida (superior e inferior)	Apagado	Apagado	Unidad maestra
Encendida (inferior)	Apagado	Apagado	Unidad esclava

## Ejemplo del cableado de comunicación



## Otros comportamientos de carga compartida

- La corriente disponible se distribuye equitativamente entre todos los vehículos conectados siempre que un nuevo vehículo se conecta o desconecta de la red.
- Durante una operación estable, la red de carga compartida alterna la corriente disponible a cada vehículo en incrementos de 2A, cada minuto, para evaluar la necesidad del vehículo. Cuando la batería se aproxime a la carga completa, el consumo de energía disminuirá hasta que la carga se haya completado. Si la unidad maestra detecta que un vehículo ya no está utilizando toda su corriente disponible, reducirá la corriente asignada a ese vehículo.
- Un conector de pared esclavo no cargará si se pierde la comunicación con el conector de pared maestro.
- En raras ocasiones, las actualizaciones de firmware en el conector maestro interrumpirán la carga de los conectores de pared esclavos. Este es un comportamiento normal, y la carga debe continuar una vez que se haya

completado la actualización de firmware (15 minutos).



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# CONNECTEUR MURAL, J1772, 40 A MONOPHASÉ MANUEL D'INSTALLATION

Marchés approuvés : Amérique du Nord, Japon, Taïwan





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### Caractéristiques techniques du produit

Après vérification, toutes les caractéristiques et descriptions contenues dans ce document ont été jugées exactes au moment de leur impression. Comme Tesla poursuit un objectif d'amélioration continue, elle se réserve le droit d'apporter des modifications à ses produits à tout moment.

### Règlements sur les communications

Cet appareil est conforme à la partie 15 des règlements de la FCC et est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée dans les deux conditions suivantes : (1) cet appareil ne peut pas causer de brouillage préjudiciable, et (2) cet appareil doit accepter tout brouillage reçu, y compris le brouillage susceptible d'en compromettre le fonctionnement.

**⚠ Important :** Les modifications apportées à ce produit sans l'autorisation de Tesla pourraient entraîner l'annulation de la conformité de la FCC.

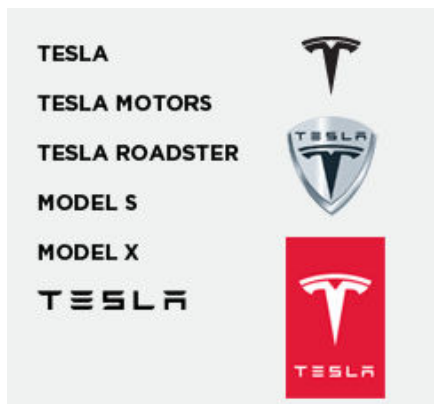
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[ownersmanualfeedback@tesla.com](mailto:ownersmanualfeedback@tesla.com)

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## Directives importantes sur la sécurité




Le présent document contient des instructions et avertissements importants à respecter lors de l'utilisation et de l'entretien du connecteur mural.

### Avertissements

-  **Avertissement** : Lisez toutes les instructions avant d'utiliser ce produit.
-  **Avertissement** : Ne pas laisser d'enfants sans surveillance près de l'appareil.
-  **Avertissement** : Le connecteur mural doit être mis à la terre .
-  **Avertissement** : N'installez pas ou n'utilisez pas le connecteur mural à proximité de matériaux, de produits chimiques ou de vapeurs combustibles, corrosifs, explosifs ou inflammables.
-  **Avertissement** : Utilisez le connecteur mural en conformité avec les paramètres de fonctionnement prescrits.
-  **Avertissement** : N'utilisez pas, ou cessez d'utiliser, le connecteur mural s'il est défectueux, fissuré, effiloché, brisé ou endommagé de quelque manière que ce soit, ou s'il ne fonctionne pas.
-  **Avertissement** : Ne tentez pas de démonter, de réparer, de trafiquer ou de modifier le connecteur mural. Le connecteur mural n'est pas réparable par l'utilisateur. Communiquez avec Tesla pour toute réparation ou modification.
-  **Avertissement** : Lorsque vous transportez le connecteur mural, manipulez-le avec soin. Ne le soumettez pas à une force, à une traction ou à un choc intense, puis évitez de le tordre, de l'emmêler, de le traîner sur le sol ou de marcher dessus afin de ne pas l'endommager ou d'en abîmer les composants.
-  **Avertissement** : Ne touchez pas les bornes du connecteur mural avec les doigts ou des objets métalliques coupants, tels que des fils, des outils ou des aiguilles.

-  **Avertissement** : Ne pliez pas de force ou n'exercez pas de force sur aucune partie du connecteur mural et ne l'endommagez pas avec des objets coupants.
-  **Avertissement** : N'insérez pas de corps étrangers dans aucune partie du connecteur mural.
-  **Avertissement** : L'utilisation du connecteur mural peut nuire ou entraver le fonctionnement de certains appareils électroniques médicaux ou implantables, tels que des stimulateurs cardiaques implantables ou des défibrillateurs automatiques implantables. Renseignez-vous auprès du fabricant de l'appareil électronique sur les effets que la charge peut avoir sur l'appareil électronique avant d'utiliser le connecteur mural.

### Mises en garde

-  **Avertissement** : N'utilisez pas de groupe électrogène personnel comme source d'alimentation aux fins de chargement.
-  **Avertissement** : L'installation ou la mise à l'essai inadéquate du connecteur mural risque de l'endommager ou d'abîmer la batterie du véhicule. Les dommages qui en résultent sont exclus de la Garantie limitée de véhicules neufs et de la Garantie limitée sur l'équipement de charge.
-  **Avertissement** : N'utilisez pas le connecteur mural à des températures hors de sa plage de fonctionnement de -30 °C à +50 °C.



### Remarques

**Remarque :** Veillez à ce que le câble de recharge du connecteur mural soit disposé de manière à éviter qu'on marche dessus, qu'on roule dessus, qu'on y trébuche ou qu'on l'expose à des dommages ou à des contraintes.

**Remarque :** Ne vous servez pas de solvants de nettoyage pour nettoyer les composants du connecteur mural. Pour éliminer les saletés et la poussière accumulées, essuyez régulièrement les parties extérieures du connecteur mural, le câble de charge et l'extrémité de raccordement de ce dernier au moyen d'un chiffon sec et propre.

**Remarque :** Veillez à ne pas endommager les circuits imprimés ou les composants pendant l'installation.





La puissance maximale du connecteur mural est de 11 kW ou de 40 A à 240 V c.a. en monophasé.

Description	Caractéristiques techniques
Tension et câblage	208 V c.a. ou 240 V c.a. en monophasé : L1, L2, neutre et terre
Courant	Puissance maximale : 40A
Fréquence	50 à 60 Hz
Longueur de câble	7,4 m (24 pi)
Dimensions du connecteur mural	Hauteur : 380 mm Largeur : 160 mm Profondeur : 140 mm
Dimensions du support pour entrée par le haut	Hauteur : 275 mm Largeur : 130 mm Profondeur : 50 mm
Poids (support compris)	17 lb (7,5 kg)
Température de fonctionnement	-30 °C à 50 °C
Température d'entreposage	-40 °C à 85 °C
Classe du boîtier	Type 3R
Organismes d'approbation	Homologué cULus pour les États-Unis et le Canada sous le nom de fichier E354307, FCC Partie 15.
Ventilation	Non requise



### Valeurs nominales des circuits

Utilisez un disjoncteur monophasé adapté à une seule phase de 50 A afin d'obtenir la sortie de puissance la plus élevée.

Dans certains emplacements d'installation, ce niveau de puissance n'est pas facilement disponible. Par conséquent, le connecteur mural est doté d'un système de gestion automatique de la charge qui permet au courant de sortie d'être ajusté à n'importe quel disjoncteur entre 15 A et 50 A (reportez-vous à Réglage du courant de fonctionnement à la page 19).

**Remarque :** L'attraction actuel du courant dépendra du chargeur embarqué dans le véhicule. Communiquez avec Tesla pour toutes questions concernant le chargeur embarqué d'un véhicule spécifique.

### Auto-surveillance et rétablissement

Le connecteur mural est doté d'un circuit de surveillance capable de déceler en continu la présence d'un conducteur de terre sécuritaire et d'assurer le rétablissement automatique du courant après une panne. Les essais ou les réinitialisations manuels ne sont pas obligatoires.

Les problèmes temporaires, comme les défauts de mise à la terre ou les surtensions de courant électrique sont corrigés automatiquement. Dans le cas d'un défaut de courant résiduel donnant lieu à l'interruption de la recharge en cours, le connecteur mural essaie automatiquement de corriger la panne et de relancer la recharge.

Si le problème est détecté immédiatement une seconde fois, le connecteur mural attend 15 minutes avant de tenter une nouvelle recharge. Ce processus se répète à quatre reprises et, si toutes les tentatives demeurent infructueuses, l'alimentation est coupée et aucune autre tentative n'est effectuée. Dans ce cas, un voyant d'erreur rouge s'allume sur le panneau avant (reportez-vous à Dépannage à la page 22). En présence de ce voyant, il est recommandé de couper le courant du connecteur mural en désactivant le disjoncteur en amont, puis de le remettre sous tension.

Le connecteur mural peut aussi être réinitialisé à l'aide du bouton RESET lorsqu'un voyant d'erreur rouge s'allume (reportez-vous à Réinitialisation à la page 26).

### Pannes de courant

Si une panne de courant se produit, le connecteur mural reprend automatiquement la recharge après rétablissement du courant. Si le câble de recharge est branché au véhicule lors du rétablissement du courant, les voyants clignotent et l'appareil reste environ 15 secondes à 3 minutes sans alimenter le câble de recharge. Cet intervalle empêche le réseau électrique de subir une forte surtension lors du rétablissement du courant, ce qui permet au véhicule de commencer à tirer du courant à intervalles aléatoires, plutôt que d'un seul coup.

### Répartition de la charge

Jusqu'à quatre connecteurs muraux peuvent être raccordés à un circuit unique et, avec la gestion automatique de la charge intégrée, les propriétaires de véhicules peuvent charger plusieurs véhicules à leur domicile (reportez-vous à Annexe B : Connexion facultative pour la répartition de la charge à la page 29).

## Exigences minimales

L'installation du connecteur vous demande d'effectuer ce qui suit :

- Calculer la charge électrique existante pour déterminer le courant de fonctionnement maximum.
- Calculer la distance requise pour assurer une chute de tension minimale.
- Obtenir toutes les autorisations nécessaires auprès des autorités locales compétentes et confirmer que l'inspection de suivi est prévue par un électricien une fois l'installation terminée.
- Utiliser uniquement des conducteurs en cuivre.
- Utiliser des conducteurs de dimension conforme à la réglementation locale en matière de câblage. Le câble sélectionné doit être capable de supporter des périodes de charge constante allant jusqu'à l'intensité de courant maximale réglée par l'électricien.
- Utilisez un disjoncteur.

**Remarque :** Consultez un électricien afin de vous assurer que votre installation est conforme à la réglementation en vigueur.

## 120 V au-dessus du sol

**⚠ Avertissement :** Le connecteur mural est un appareil monophasé. Ne branchez pas les trois phases d'un circuit d'alimentation triphasé.

**⚠ Avertissement :** Avant d'installer le connecteur mural, identifiez le type de connexion au réseau électrique disponible sur place. En cas de doute sur le type de connexion disponible dans le panneau de branchement, consultez un électricien ou communiquez avec Tesla aux fins d'assistance.

**⚠ Avertissement :** La tension de chacune des deux phases doit mesurer 120 V au neutre. La terre doit être raccordée au neutre en un seul point, habituellement dans le panneau de branchement des disjoncteurs.

**⚠ Avertissement :** Si le circuit d'alimentation triphasé de 240 V provient d'un secondaire monté en triangle, la colonne doit comporter une prise médiane. Cette dernière doit faire l'objet d'une mise à la terre. Seules les deux phases situées des deux côtés de la colonne à prise médiane peuvent être utilisées.

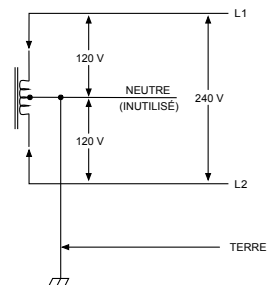
Seuls trois fils sont raccordés, mais il faut prendre soin d'identifier parfaitement le conducteur de branchement secondaire du transformateur et veiller à ce que les trois fils en provenance du panneau principal des disjoncteurs soient correctement identifiés et raccordés.

**Remarque :** Les sorties L1, L2 et terre identifiées sur les illustrations correspondent aux entrées sur le connecteur mural.

## Conducteur de terre

Raccordez toujours le neutre à la terre reliée au panneau de branchement. La protection contre les défauts de mise à la terre est impossible, à moins que le neutre (prise médiane sur le transformateur de branchement) soit raccordé à la terre. Si la mise à la terre n'est pas assurée par le service de branchement électrique, vous devez installer un piquet de mise à la terre à proximité. Ce dernier doit être raccordé à la barre de mise à la terre du panneau principal des disjoncteurs, alors que le neutre doit être branché à la terre.

## Installation monophasée de 240 V

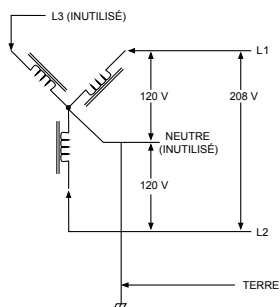


**Remarque :** Les illustrations du présent document sont fournies à titre indicatif uniquement.

## Installation triphasée de 208 V montée en étoile

Sur un secondaire monté en étoile, l'une ou l'autre des deux colonnes peut être utilisée pour fournir 208 V au connecteur mural. L1 et L2, L1 et L3 ou L2 et L3 par exemple. La tension de chacune des deux phases utilisées doit mesurer 120 V au neutre.

**Remarque :** Un neutre porteur de courant n'est pas obligatoire.



**⚠ Avertissement :** La colonne inutilisée (L3 sur l'illustration) doit rester ouverte. Ne la raccordez pas à la barre neutre ou à la mise à la terre.

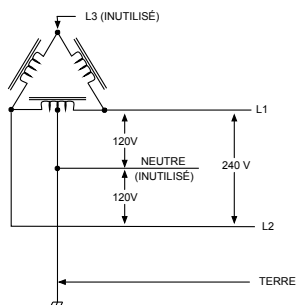
**⚠ Avertissement :** Le point central des trois phases (qui sert habituellement de neutre) doit faire l'objet d'une mise à la terre en un seul point. Ce point se trouve généralement dans le panneau de branchement des disjoncteurs.

## Installation triphasée de 240 V montée en triangle

Sur un montage en triangle, une colonne doit comporter une prise médiane, alors que seules les deux phases situées de part et d'autre de la prise médiane peuvent servir. La tension de chacune des deux phases utilisées doit mesurer 120 V au neutre.

Consultez la documentation du fabricant du transformateur pour vérifier si l'unique colonne peut transmettre la tension nécessaire.

**Remarque :** Le contacteur du connecteur mural ne se ferme que s'il détecte la présence d'un conducteur de terre raccordé à un point neutre sur le secondaire du transformateur.



**⚠ Avertissement :** Le troisième conducteur (L3 sur l'illustration) du montage en triangle, qui est de 208 V par rapport au neutre, est parfois appelé « stinger ». Ne vous servez pas de ce troisième conducteur.

**⚠ Avertissement :** N'utilisez pas le secondaire d'un transformateur en triphasé monté en triangle sans une prise médiane sur une colonne. Aucun point « neutre » n'est disponible sur le conducteur de terre nécessaire.

## Détermination des exigences liées au disjoncteur

Pour déterminer le type de disjoncteur en amont dont vous avez besoin, examinez le tableau de distribution ou le boîtier du disjoncteur pour identifier l'intensité de courant disponible sur le site de l'installation.

Le connecteur mural comporte un commutateur rotatif interne qui vous permet de régler son courant de fonctionnement (reportez-vous à Réglage du courant de fonctionnement à la page 19). Le disjoncteur doit être adapté à un courant continu de 40 A.

## Choix du meilleur emplacement pour le connecteur mural

Déterminez l'emplacement de stationnement du véhicule pour vous assurer que le câble de recharge se rend jusqu'à la prise de recharge. Points à respecter pour l'emplacement du connecteur mural :

- Dans un garage fermé, normalement du côté où se trouve la prise de recharge du véhicule.
- Dans un endroit bien ventilé. Évitez de l'installer dans un boîtier fermé ou à proximité d'appareils dégageant de la chaleur.
- 1,2 m au-dessus du sol.
- 190 mm de toute obstruction pour l'enroulement du câble.

**Remarque :** Le connecteur mural est homologué pour une utilisation à l'extérieur, mais il n'est toutefois pas conçu pour être plongé dans un liquide. Quoique ce ne soit pas obligatoire, il est recommandé de le protéger des intempéries.

## Considérations à prendre en compte pour l'installation

Il existe trois méthodes pour installer le connecteur mural. L'emplacement du conduit et le type de câblage déterminent la méthode d'installation à suivre :

- Si le conduit court le long du sol ou au bas du mur, utilisez la configuration d'entrée par le bas.

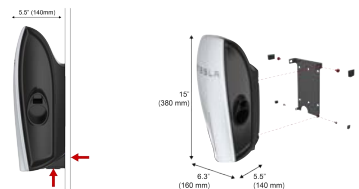
- Si le conduit arrive de l'intérieur du mur, utilisez la configuration d'entrée par l'arrière.
- Si le conduit arrive du plafond ou si le câble de branchement est de calibre supérieur à 6 AWG, utilisez la configuration d'entrée par le haut. Le support pour entrée par la haut est doté d'une plaquette amovible en option orientée vers l'arrière permettant au câble de branchement plus épais d'entrer par le haut ou par l'arrière.

**Remarque :** Tout au long du manuel, le mot « conduit » est utilisé comme terme standard pour signifier le tube de protection qui abrite le câble de branchement. Dans les régions où les conduits ne sont pas utilisés (en Europe, par exemple), un câble renfermant un câble de branchement recouvert d'une gaine protectrice peut remplacer le conduit, si la réglementation locale le permet.

Voici quelques directives supplémentaires :

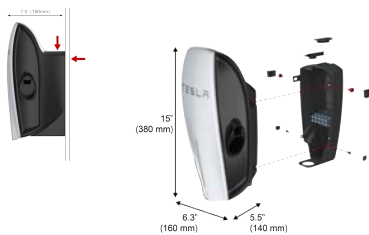
- Les ouvertures de conduit sont prévues pour un conduit de 25 mm (1 po).
- Le conduit doit satisfaire à la réglementation en vigueur.
- Utilisez un disjoncteur approprié.
- Utilisez un raccord de conduit homologué par UL pour garantir l'étanchéité.
- Lors de l'installation d'un câble de calibre supérieur à 6 AWG, utilisez la configuration d'entrée par le haut.

### Entrée par le bas ou par l'arrière



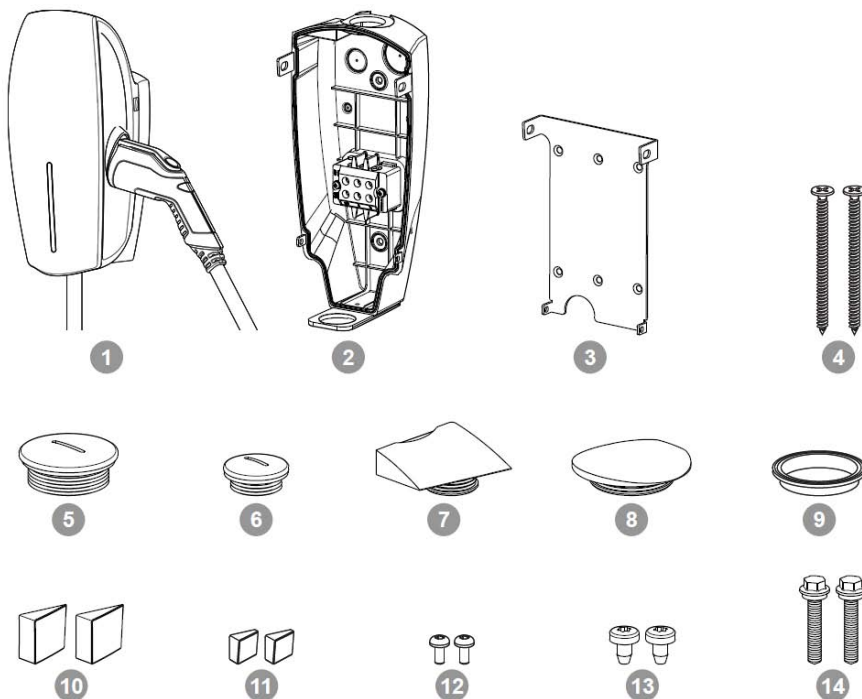


## Entrée par le haut ou, en option, par l'arrière



La boîte d'expédition contient des pièces pour toutes les méthodes d'installation, ainsi que le présent manuel. Si des pièces sont endommagées ou manquantes, communiquez avec Tesla (reportez-vous à Vous avez des questions? à la page 27).

**Remarque :** Le gabarit en carton fourni n'est pas illustré ci-dessous.



Article	Description (quantité)
1	Connecteur mural
2	Support pour entrée par le haut*
3	Support plat**
4	Vis pour le support plat (2) **
5	Bouchon de conduit d'alimentation pour entrée par le bas ou l'arrière
6	Bouchon de conduit de signalisation pour entrée par le bas ou l'arrière
7	Bouchon de conduit de signalisation pour entrée par le haut* (préinstallé sur le support pour entrée par le haut)
8	Bouchon de conduit d'alimentation pour entrée par le haut* (préinstallé sur le support pour entrée par le haut)



## Vérification du contenu de l'emballage

Article	Description (quantité)
9	Joint d'étanchéité du conduit inférieur*
10	Caches des vis supérieures fixant le support au boîtier (2)
11	Caches des vis inférieures fixant le support au boîtier (2)
12	Vis inférieures fixant le support au boîtier (2)
13	Vis supérieures fixant le support au boîtier (2)
14	Vis de montage du support pour entrée par le haut (2)*

\* Articles utilisés dans les installations pour entrée par le haut uniquement.

\* Articles utilisés dans les installations pour entrée par le bas ou l'arrière uniquement.





## Outils et matériel requis

Avant d'installer le connecteur mural, rassemblez les outils et le matériel suivants :

- Crayon ou marqueur
- Poinçon (facultatif, pour percer au travers du gabarit en carton)
- Outil à dénuder
- Voltmètre ou multimètre numérique (aux fins de mesure du courant c.a. sur place)
- Tournevis cruciforme
- Petit tournevis plat
- Grand tournevis plat (facultatif, pour retirer les rondelles défonçables)
- Douille Torx inviolable T20 (fournie)
- Douille Torx T10 (fournie)
- Presse-étoupes M20 et M32 (joint qui assure l'étanchéité)
- Câblage (utilisez un câble de communication à paire torsadée de calibre 18 AWG d'un diamètre maximal de 15 m entre les connecteurs muraux interconnectés)
- Niveau
- Perceuse
- Tournevis dynamométrique (pour connexions de plaques à bornes)

## Vue d'ensemble des étapes d'installation

**⚠ Avertissement :** Une fois le câble de branchement acheminé jusqu'au site d'installation, installez le disjoncteur en amont approprié, **METTES-LE HORS TENSION ET VÉRIFIEZ QUE L'ALIMENTATION EST COUPÉE AVANT DE POURSUIVRE.**

Suivez ensuite les étapes ci-dessous pour installer le connecteur mural :

- Installation d'un support plat pour un câblage d'entrée par l'arrière ou par le bas à la page 14
- Installation du support pour entrée par le haut pour un câblage d'entrée par l'arrière ou par le haut à la page 15
- Préparation en vue de l'installation à la page 16
- Raccordement du câblage à la page 17
- Réglage du courant de fonctionnement à la page 19
- Fixation du couvercle et mise sous tension à la page 20



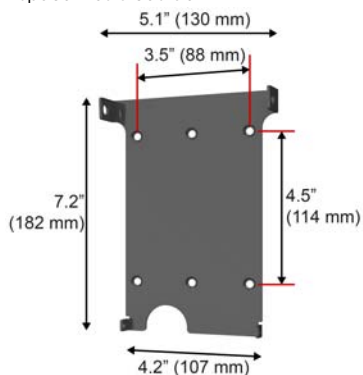
## Installation d'un support plat pour un câblage d'entrée par l'arrière ou par le bas

Utilisez le support plat, illustré ci-dessous, pour raccorder le câble au connecteur mural depuis l'arrière ou le bas.



1. Servez-vous du support plat comme guide pour marquer l'emplacement des vis de montage sur le mur.

- Utilisez un niveau pour veiller à ce que les marques soient parfaitement verticales.
- Espacez les trous de 114 mm.



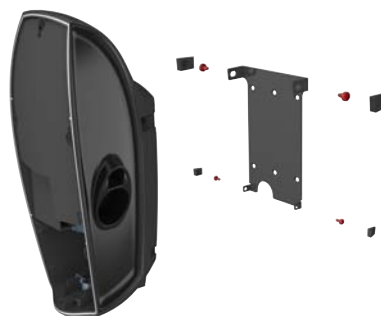
- Pour les installations aux États-Unis, positionnez le support de sorte que le connecteur mural se trouve à au plus 150 cm du sol. En cas de montage à

l'intérieur, la hauteur minimum est de 45 cm, et de 122 cm si le montage est à l'extérieur.

- Si vous utilisez le conduit d'entrée par l'arrière, utilisez au moins un ensemble de trous de montage sur le bord de façon à ce que le conduit ne soit pas dérangé par le montant du mur.
- Si vous utilisez le conduit d'entrée par le bas, utilisez les deux trous de montage au centre.

**Remarque :** Choisissez avec soin la hauteur minimum et maximum du support. Ce dernier doit être installé à un endroit qui le protège des chocs raisonnablement prévisibles.

2. Fixez le support à l'aide de fixations appropriées pour le type de matériau du mur, effectuez un pré-perçage le cas échéant. Servez-vous des vis fournies uniquement si vous montez le support directement sur un montant en bois. Si le montage s'effectue sur un autre type de mur (creux, maçonnerie, etc.), des fixations suffisamment longues pour maintenir solidement le connecteur mural et ayant la capacité de supporter un poids de 36 kg.





## Installation du support pour entrée par le haut pour un câblage d'entrée par l'arrière ou par le haut

Le support pour entrée par le haut vous permet d'acheminer le câble de branchement dans le boîtier du connecteur mural depuis le haut du boîtier, comme illustré ci-dessous.



1. Servez-vous du gabarit en carton et d'un niveau comme guide pour marquer l'emplacement des deux vis de montage sur le mur.
  - Utilisez un niveau pour veiller à ce que les marques soient parfaitement verticales.
  - Espacez les trous de 155 mm.
  - Positionnez le support de sorte que le connecteur mural se trouve au plus à 150 cm du sol. En cas de montage à l'intérieur, la hauteur minimum est de 45 cm, et de 122 cm si le montage est à l'extérieur.

**Remarque :** Choisissez avec soin la hauteur minimum et maximum du support. Ce dernier doit être installé à un endroit qui le protège des chocs raisonnablement prévisibles.

2. (Optionnel) Il y a deux trous de montages supplémentaires. Pour les utiliser, prenez un tournevis plat pour retirer les rondelles défonçables qui ferment les trous. Ces trous sont espacés de 70 mm.



3. Fixez le support à l'aide de fixations appropriées pour le type de matériau du mur, effectuez un pré-perçage le cas échéant. Servez-vous des vis fournies uniquement si vous montez le support directement sur un montant en bois. Si le montage s'effectue sur un autre type de mur (creux, maçonnerie, etc.), des fixations suffisamment longues pour maintenir solidement le connecteur mural et ayant la capacité de supporter un poids de 36 kg.





## Préparation en vue de l'installation

Suivez ces instructions pour retirer le couvercle et acheminer le câble de branchement dans le connecteur mural.

1. Utilisez une douille Torx T10 pour retirer la vis qui fixe le bas du couvercle extérieur. Dégagez avec précaution les fermoirs sur les côtés et sur le dessus à l'aide d'un tournevis plat, et déposez complètement le couvercle. Gardez la vis et le couvercle pour le remontage.



2. Utilisez une douille Torx inviolable T20 pour retirer les six vis du couvercle d'étanchéité. Retirez avec soin le couvercle d'étanchéité et débranchez le câble plat. Gardez les vis et le couvercle pour le remontage.



**⚠ Avertissement :** Ne laissez pas le couvercle d'étanchéité pendre du câble plat. Cela pourrait endommager le câble plat ou ses connecteurs.

3. Pour une configuration de type entrée par le haut, raccordez le câblage à la plaque à bornes depuis le support pour entrée par le haut, comme illustré dans Raccordement du câblage à la page 17, revenez à la présente section, puis passez à l'étape suivante. Pour les configurations de type entrée par l'arrière ou par le bas, passez directement à l'étape suivante.
4. Placez le connecteur mural sur le support et maintenez-le ainsi en vous assurant que les quatre pattes de montage sont bien alignées.
5. Utilisez une douille Torx T20 pour installer les deux vis de montage supérieures sur le boîtier. Mettez en place les cache-vis du couvercle.
6. Utilisez une douille Torx T20 pour installer les deux vis de montage inférieures sur le boîtier. Mettez en place les cache-vis du couvercle.

## Raccordement du câblage

**Remarque :** Consultez votre électricien ou reportez-vous à la réglementation locale pour connaître les dimensions de câble appropriées selon les courants circulant dans votre connecteur mural.

**Remarque :** Il incombe à l'installateur d'identifier si une mise à la terre supplémentaire est nécessaire aux fins de conformité à la réglementation locale. La mise à la terre doit être effectuée au niveau de la source d'alimentation et non à l'entrée du câble dans le connecteur mural.

**⚠ Avertissement :** Ne raccordez pas le câble de branchement avant d'avoir lu et compris en totalité les concepts décrits dans cette rubrique. En cas de doute sur le type d'alimentation disponible dans le panneau de branchement, consultez un électricien ou communiquez avec Tesla aux fins d'assistance.

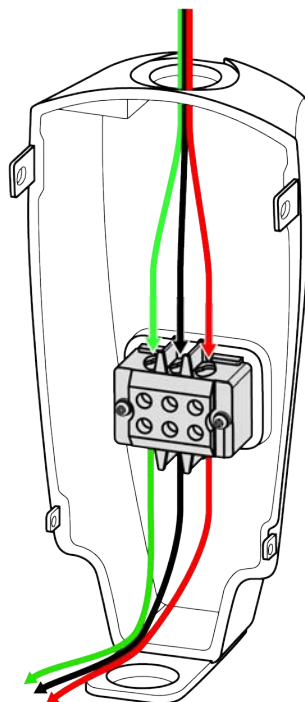
1. Coupez l'alimentation électrique.

**⚠ Avertissement :** RISQUE D'ÉLECTROCUTION! Avant de continuer, utilisez un voltmètre pour vérifier que l'alimentation est coupée en vous assurant de l'ABSENCE DE TENSION au câble de branchement ou aux bornes.

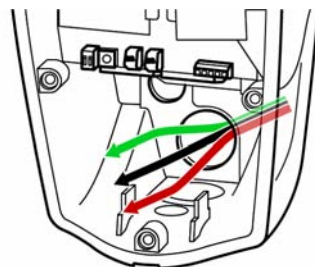
2. Pour une installation d'entrée par le haut, tirez le câble de branchement dans le support pour entrée par le haut ou dans le connecteur mural. Utilisez un presse-étoupe M32 de pour garantir l'étanchéité du conduit d'alimentation ou du câble.

**Remarque :** La signification des couleurs de câble peut varier d'un pays à l'autre. Respectez toutes les réglementations nationales et locales en vigueur concernant les codes de couleur de câble.

L'illustration suivante montre un exemple de câblage pour un support pour entrée par le haut.



L'illustration suivante montre un exemple de câblage pour un support plat.

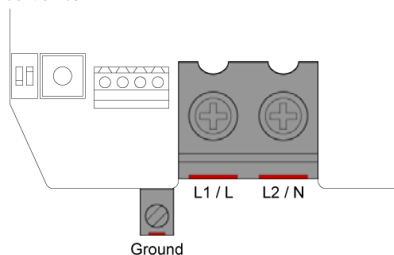


3. Dénudez les câbles de branchement allant vers la plaque à bornes sur le support pour entrée par le haut sur 18 mm (3/4 po). L'utilisation de bagues est recommandée.



**Remarque :** Pour une installation avec entrée par le haut, les câbles souples préinstallés qui vont du support pour entrée par le haut jusqu'au boîtier sont déjà dotés de bagues et il n'est donc pas nécessaire de les dénuder.

4. Acheminez les câbles de branchement préconnectés dans le boîtier principal et raccordez-les à la plaque à bornes principale à l'aide des fils L1 (ou ligne), L2 (ou neutre) et terre qui se rendent aux emplacements figurant dans l'illustration suivante.



**⚠ Avertissement :** Coupez chacun des brins du câble et insérez-les complètement dans chaque borne de la plaque à bornes.

**Remarque :** Pour assurer le bon fonctionnement, le fil neutre doit être raccordé à la barre de mise à la terre à l'intérieur du boîtier de disjoncteurs ou du tableau de distribution principal.

5. Serrez la plaque à bornes au couple recommandé :
  - 4,0 N-m (35 po-lb) pour la plaque à bornes sur le support pour entrée par le haut.
  - 3,8 N-m (33 po-lb) pour la plaque à bornes dans le boîtier principal.
  - 2,0 N-m (18 po-lb) pour la plaque à bornes de terre dans le boîtier principal.
6. À l'aide d'un multimètre, vérifiez la présence de câblage inapproprié et assurez-vous de l'absence de courts-circuits avant de mettre le disjoncteur en amont sous tension.



## Réglage du courant de fonctionnement

Suivez les instructions ci-dessous pour configurer le commutateur DIP. L'illustration suivante montre une vue agrandie des commutateurs DIP et rotatifs.



**⚠ Avertissement :** L'alimentation électrique DOIT demeurer COUPÉE avant d'effectuer le réglage ou la modification du réglage des commutateurs DIP ou rotatifs. La modification du réglage de ces commutateurs lorsque l'alimentation est sous tension n'est pas reconnue par le système et constitue un danger en raison du risque d'électrocution.

1. Coupez l'alimentation électrique.
2. Utilisez un objet diélectrique pour effectuer les réglages des commutateurs DIP :
  - Position 1 du commutateur :
    - Pour une connexion de ligne à ligne (200 V à 250 V), réglez le commutateur DIP vers le BAS.
    - Pour une connexion de ligne à neutre (supérieur à 250 V), réglez le commutateur DIP vers le HAUT.
  - Position 2 du commutateur :
    - La position 2 du commutateur DIP doit toujours être mise à la position HAUT.

Câblage/ connexion	Position du commutateur DIP
Ligne à neutre (supérieur à 250 V)	
Ligne à ligne (200 à 250 V)	

3. Réglez le commutateur rotatif au courant de réglage approprié selon la capacité de votre disjoncteur. Les capacités nominales d'un disjoncteur sont : 15 A, 20 A, 25 A, 30 A, 35 A, 40 A, 45 A et 50 A.

Utilisez un petit tournevis plat pour placer le commutateur rotatif au réglage approprié correspondant à la capacité du disjoncteur. Les réglages correspondants du commutateur rotatif pour les disjoncteurs normaux sont indiqués dans le tableau ci-dessous :



# Instructions d'installation étape par étape

Position du commutateur rotatif	Courant de sortie maximum	Disjoncteur
0	Mode d'essai	S.O.
1	12A	15A
2	16A	20A
3	20A	25A
4	24A	30A
5	28A	35A
6	32A	40A
7	36A	45A
8	40A	50A
9	S.O.	S.O.
A	S.O.	S.O.
B	S.O.	S.O.
C	S.O.	S.O.
D	S.O.	S.O.
E	Sélection non valide	S.O.
F	Mode esclave	S.O.

- Fixez à nouveau le câble plat au couvercle d'étanchéité.
- Réinstallez le couvercle d'étanchéité. Utilisez une douille Torx inviolable T20 pour maintenir le couvercle en place temporairement à l'aide de la vis supérieure seulement.
- Rétablissez le courant.
- Si l'installation est correcte, les voyants à DEL verts s'allument brièvement dans l'ordre en terminant par le voyant à DEL vert du haut qui demeure allumé en continu. Si un voyant à DEL rouge s'allume en continu ou clignote, reportez-vous à Dépannage à la page 22 et corrigez l'erreur avant de poursuivre.

**Remarque :** Pour revoir la séquence de voyants clignotants, appuyez sur le bouton RESET et maintenez-le enfoncé pendant 5 secondes.

- Coupez l'alimentation électrique.

- Consignez les coordonnées de l'installateur sur l'étiquette à l'intérieur du connecteur mural.

## Fixation du couvercle et mise sous tension

- Utilisez une douille Torx inviolable T20 pour installer les dernières vis du couvercle d'étanchéité. Assurez-vous que le couvercle est bien aligné avant de serrer les vis à 1,0 N-m (8,8 po-lb).
- Fixez le couvercle extérieur au couvercle d'étanchéité en commençant par le loquet du haut. Enclenchez les fermoirs sur les côtés et alignez la patte de fixation du bas avec le boîtier.



- Utilisez une douille Torx T10 pour installer la vis qui fixe le bas du couvercle extérieur au boîtier. Serrez la vis à 0,5 N-m (4,4 po-lb).
- Fermez toute ouverture inutilisée au moyen de bouchons de conduit d'alimentation et de signalisation.

**Remarque :** Il ne doit pas y avoir d'ouvertures visibles qui donnent vers l'intérieur du connecteur mural, et ce dernier doit être complètement étanche.

- Mettez le courant. L'installation est correcte si les voyants à DEL effectuent la séquence de clignotement qui se termine par l'illumination en continu du voyant du haut vert. Si un voyant à DEL rouge s'allume en continu ou clignote, corrigez l'erreur avant de poursuivre (reportez-vous à Dépannage à la page 22).





**Remarque :** Pour revoir la séquence de voyants clignotants, appuyez sur le bouton RESET et maintenez-le enfoncé pendant 5 secondes.

6. Essayez de recharger le véhicule pour vous assurer que le connecteur mural fonctionne normalement et effectue la recharge selon le courant de fonctionnement sélectionné. Pour obtenir des instructions concernant la recharge, consultez les renseignements pour le propriétaire fournis avec le véhicule.



Voyants verts	Voyant jaune	Voyant rouge	Nouvelle tentative automatique	Signification	Marche à suivre
Voyant du haut allumé	Désactivé	Désactivé	Sans objet	Sous tension. Le connecteur mural est sous tension et en veille, mais ne recharge pas le véhicule.	Sans objet.
Illumination séquentielle des voyants	Désactivé	Désactivé	Sans objet	Le connecteur mural effectue la recharge du véhicule.	Sans objet.
Illumination séquentielle des voyants	1 clignotement	Désactivé	Sans objet	Le courant de recharge est réduit en raison de la température élevée détectée dans le connecteur du véhicule.	Assurez-vous que le connecteur est bien inséré dans la prise de recharge du véhicule, que rien ne le recouvre et qu'il ne se trouve pas à proximité d'une source chaleur. Si le problème persiste sous des conditions de températures normales (inférieures à 38 °C), communiquez avec Tesla.
Illumination séquentielle des voyants	2 clignotements	Désactivé	Sans objet	Le courant de recharge est réduit en raison de la température élevée détectée dans la prise murale ou dans les bornes d'entrée du connecteur mural.	Si le connecteur mural est branché dans une prise murale, assurez-vous qu'il est bien inséré dans la prise, que rien ne le recouvre et qu'il n'est pas près d'une source de chaleur. Si le connecteur mural est raccordé par câble, assurez-vous que rien ne le recouvre et qu'il n'est pas près d'une source de chaleur. Si le problème persiste sous des conditions de températures normales (inférieures à 38 °C), communiquez avec Tesla.



Voyants verts	Voyant jaune	Voyant rouge	Nouvelle tentative automatique	Signification	Marche à suivre
Illumination séquentielle des voyants	3 clignotements	Désactivé	Sans objet	Le courant de recharge est réduit en raison de la température élevée détectée dans le connecteur du véhicule.	Assurez-vous que rien ne recouvre le connecteur mural et qu'il n'est pas près d'une source de chaleur. Si le problème persiste sous des conditions de températures normales (inférieures à 38 °C), communiquez avec Tesla.
Désactivé	4 clignotements	Désactivé	Sans objet	Le câble plat n'est pas complètement raccordé.	Ouvrez la plaque frontale et vérifiez si le câble plat est fermement connecté.
Désactivé	Désactivé	1 clignotement	Au bout de 15 minutes pour un maximum de 4 tentatives	Défaut de mise à la terre. Il y a fuite de courant électrique par un chemin d'accès non sécuritaire. Possible anomalie entre la ligne et la mise à la terre ou entre le neutre et la mise à la terre.	Réessayez en débranchant, puis en rebranchant le connecteur mural du véhicule. Si le problème persiste, coupez l'alimentation au disjoncteur qui alimente le connecteur, attendez 10 secondes, puis remettez la tension sur le disjoncteur, et essayez de rebrancher le connecteur mural au véhicule. Si le problème persiste, communiquez avec Tesla.



Voyants verts	Voyant jaune	Voyant rouge	Nouvelle tentative automatique	Signification	Marche à suivre
Désactivé	Désactivé	2 clignotements	Au bout de 1 minute pour un maximum de 4 tentatives	Aucune connexion à la terre détectée dans le connecteur mural.	Veillez à ce que le connecteur mural soit mis à la terre de façon adéquate. En cas de doute, consultez votre électricien pour vous assurer d'une mise à la terre appropriée au niveau de votre disjoncteur ou de votre boîtier de répartition de puissance, et de connexions appropriées au connecteur mural.
Désactivé	Désactivé	3 clignotements	Non	Entrée câblée de façon inappropriée : possible inversion des conducteurs ligne et neutre.	Vérifiez que la position 1 du commutateur DIP est à la bonne position. Si le problème persiste, cela signifie que le câblage entre l'alimentation au mur et le connecteur mural pourrait avoir été mal installé. Consultez votre électricien.
Désactivé	Désactivé	4 clignotements	Au bout de 1 minute pour un maximum de 4 tentatives	Protection contre la surtension ou la sous-tension.	Consultez votre électricien pour vous assurer de la tension appropriée sur le disjoncteur qui protège le connecteur mural.
Désactivé	Désactivé	5 clignotements	Au bout de 1 minute, réessayez (nombre d'essais illimités)	Protection contre la surtension.	Diminuez le courant de réglage de la recharge du véhicule. Si le problème persiste et le véhicule concerné a été fabriqué par Tesla, communiquez avec Tesla. Si le problème persiste et le véhicule concerné n'a pas été fabriqué par Tesla, communiquez avec le constructeur.



Voyants verts	Voyant jaune	Voyant rouge	Nouvelle tentative automatique	Signification	Marche à suivre
Désactivé	Désactivé	6 clignotements	Au bout de 1 minute, réessayez (nombre d'essais illimités)	Une erreur de communication est survenue entre le connecteur mural et le véhicule.	Si possible, branchez le véhicule à un autre connecteur mural ou à un connecteur mobile pour déterminer si le véhicule est capable de communiquer avec un autre équipement de recharge. Ensuite, communiquez avec le centre de service Tesla.
Voyant du haut allumé	Désactivé	1 clignotement	Non	Protection contre la surchauffe (loquet détaché)	Assurez-vous que rien ne recouvre le connecteur mural, les connecteurs du véhicule et la prise murale (le cas échéant) et qu'ils ne se trouvent pas à proximité d'une source de chaleur. Si le problème persiste sous des conditions de températures normales (inférieures à 38 °C), communiquez avec Tesla.
Voyant du haut allumé	DÉS.	3 clignotements	Non	Mauvais réglage du commutateur rotatif.	Consultez votre électricien ou ajustez le commutateur rotatif .
Voyant du haut allumé	Désactivé	4 clignotements	Sans objet	Réseau de partage du disjoncteur : Plusieurs connecteurs muraux sont configurés à la position de maître.	Un seul connecteur mural peut être configuré en tant que maître. Tous les autres connecteurs muraux doivent être des esclaves (position F). Réglez un des connecteurs muraux à la position d'esclave.
Voyant du haut allumé	Désactivé	5 clignotements	Sans objet	Réseau de partage du disjoncteur : Plus de trois connecteurs muraux sont configurés à la position d'esclave.	Déplacez un ou plusieurs connecteurs muraux vers un autre circuit et débranchez-le de ce réseau de partage de disjoncteur.



Voyants verts	Voyant jaune	Voyant rouge	Nouvelle tentative automatique	Signification	Marche à suivre
Voyant du haut allumé	Désactivé	6 clignotements	Sans objet	Réseau de partage du disjoncteur : Les connecteurs muraux en réseau ont des capacités électriques maximales différentes.	Communiquez avec Tesla.
Désactivé	Désactivé	Rouge fixe	Non	Défaillance matérielle du connecteur mural. Parmi les défaillances possibles, mentionnons : <ul style="list-style-type: none"><li>• Défaillance du contacteur.</li><li>• Échec de l'auto-test.</li><li>• Autres défaillances matérielles possibles.</li></ul>	Communiquez avec Tesla.

## Réinitialisation

Si un voyant d'erreur ROUGE s'allume ou clignote en raison d'une défaillance, puis que celle-ci est corrigée, vous pouvez utiliser le bouton RESET (réinitialiser) pour reprendre le fonctionnement normal. La réinitialisation du connecteur mural s'effectue de deux façons :

- Appuyez sur le bouton RESET pendant deux à trois secondes jusqu'à ce que les voyants du haut passent du ROUGE au VERT. Le message d'erreur est ainsi effacé, mais le connecteur mural n'est pas redémarré.
- Dans de rares cas, vous pourriez devoir forcer le redémarrage du connecteur mural sans réutiliser la puissance d'entrée. Maintenez le bouton RESET enfoncé pendant 5 secondes. Lorsque le voyant du haut passe du ROUGE au VERT, relâchez le bouton RESET. Le voyant du haut doit demeurer allumé en VERT. Si le voyant recommence à clignoter ROUGE, la défaillance n'a pas été corrigée.



## Vous avez des questions?

- États-Unis et Canada :
  - [charginginstallation@tesla.com](mailto:charginginstallation@tesla.com)
  - +1 650 681-6133
- Mexique :
  - [charging\\_mx@tesla.com](mailto:charging_mx@tesla.com)
  - 1 877 798-3752



1. Coupez l'alimentation électrique.

**⚠ Avertissement : RISQUE D'ÉLECTROCUTION!** Avant de continuer, utilisez un voltmètre pour vérifier que l'alimentation est coupée en vous assurant de l'ABSENCE DE TENSION au câble de branchement ou aux bornes.

2. Utilisez un objet diélectrique pour régler les commutateurs DIP au paramètre de réseau et au paramètre de partage du disjoncteur appropriés (reportez-vous à Réglage du courant de fonctionnement à la page 19).
3. Utilisez un petit tournevis plat pour régler le commutateur rotatif à la position « 0 » de manière à faire passer le connecteur mural en mode d'essai.

**⚠ Avertissement :** L'alimentation électrique DOIT demeurer COUPÉE avant d'effectuer le réglage ou la modification du réglage des commutateurs DIP ou rotatifs. La modification du réglage de ces commutateurs lorsque l'alimentation est sous tension n'est pas reconnue par le système et constitue un danger en raison du risque d'électrocution.

4. Fixez à nouveau le câble plat au couvercle d'étanchéité.
5. Utilisez une douille Torx inviolable T20 pour maintenir le couvercle en place temporairement à l'aide de la vis supérieure seulement.
6. Activez le disjoncteur.
7. Surveillez si un voyant à DEL rouge s'allume après une séquence d'allumage des voyants à DEL. Dans un tel cas, il y a une erreur dans l'installation.
8. Soyez attentif au son du dé clic d'un contacteur ou d'un relais qui se ferme et s'ouvre.
9. Surveillez l'illumination séquentielle de voyants à DEL verts (pendant 5 secondes).

Les voyants à DEL reviennent à l'illumination du voyant vert supérieur allumé et au voyant rouge clignotant (3 fois).

**Remarque :** Pour revoir la séquence de voyants clignotants, appuyez sur le bouton RESET et maintenez-le enfoncé pendant 5 secondes.

10. Coupez le disjoncteur.

11. Retirez la vis du couvercle d'étanchéité et déposez le couvercle. Débranchez le câble plat.

**⚠ Avertissement :** Ne laissez pas le couvercle d'étanchéité pendre du câble plat. Cela pourrait endommager le câble plat ou ses connecteurs.

12. Repositionnez le commutateur rotatif au réglage approprié (reportez-vous à Réglage du courant de fonctionnement à la page 19).
13. Fixez à nouveau le câble plat au couvercle d'étanchéité.
14. Remettez toutes les vis en place et réinstallez le couvercle extérieur (reportez-vous à Fixation du couvercle et mise sous tension à la page 20).





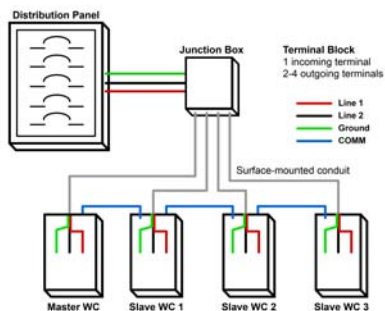
Le connecteur mural est doté d'une caractéristique de gestion automatique de la charge grâce à laquelle la communication entre deux connecteurs muraux vous permet de répartir la charge maximale disponible sur un maximum de quatre connecteurs. Le câble utilisé pour ce réseau local doit :

- partager le conduit du câble d'alimentation principale ou avoir son propre conduit. Autrement dit, les câbles de haute tension doivent être raccordés à une boîte de jonction ou à un tableau secondaire depuis chaque unité individuelle.
- Être au moins un câble à paires torsadées blindé de 2 conducteurs, calibre 18 AWG.

**⚠ Avertissement :** Dans le cas d'une répartition de la charge, le câblage haute tension (L1, L2, neutre, terre) doit être épissé et isolé dans une armoire NEMA.

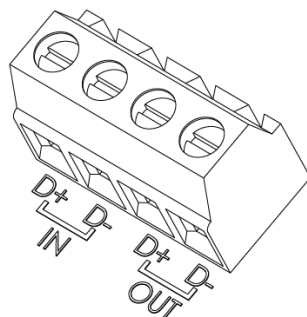
**Remarque :** Prenez des précautions supplémentaires pour éviter toute infiltration d'eau dans les connecteurs muraux lorsque vous les installez à l'extérieur.

**Remarque :** Consultez un électricien afin de vous assurer que votre installation est conforme à la réglementation en vigueur.



## Raccordement de plusieurs connecteurs muraux en guirlande

Chaque connecteur mural dispose d'une plaque à bornes exclusive pour le câblage de communication, comme illustré ci-dessous. Le côté gauche de la plaque à borne correspond à la borne d'entrée et le côté droit à la borne de sortie.



- Créez un réseau en guirlande en raccordant les câbles OUT (SORTIE) aux câbles IN (ENTRÉE) et toujours de positif à positif et de négatif à négatif entre chacun des connecteurs muraux (reportez-vous à Exemple de câblage de communication à la page 30).
  - Les câbles de signalisation entre chaque connecteur mural doivent être acheminés dans un conduit de signalisation. Utilisez un manchon de conduit M20 de homologué UL pour rendre l'ouverture du conduit de signalisation étanche.
  - Si le câble de signalisation est acheminé dans le conduit d'alimentation avec les câbles d'alimentation, le régime d'isolation du câble de signalisation doit être égal ou supérieur à celui des câbles d'alimentation.
  - La distance maximale entre les connecteurs muraux est de 15 m.
- Définissez un connecteur mural en tant que maître en réglant le commutateur

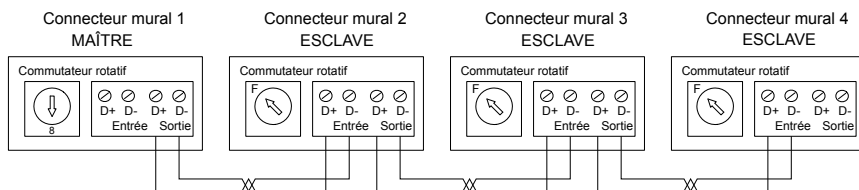
rotatif de la position 1 à 8, selon le courant de sortie maximum disponible. Définissez jusqu'à trois connecteurs muraux asservis en réglant le commutateur rotatif sur la position F. Dans le cas d'un réseau de répartition de la charge, seul un appareil peut être désigné en tant que maître (reportez-vous à Réglage du courant de fonctionnement à la page 19).

3. Vérifiez que le réseau de répartition de la charge est bien installé en observant les voyants à DEL du connecteur mural. À la première activation du disjoncteur, les voyants verts s'allument pendant

5 secondes pour indiquer que l'installation est correcte. L'affichage est comme suit :

Voyants verts	Voyant jaune	Voyant rouge	Signification
Allumés (haut et bas)	Désactivé	Désactivé	Appareil maître
Allumés (bas)	Désactivé	Désactivé	Appareil esclave

## Exemple de câblage de communication



## Autres situations de répartition de charge

- Le courant disponible est redistribué également entre tous les véhicules connectés chaque fois qu'un nouveau véhicule est branché ou débranché du réseau.
- Pendant un fonctionnement en régime continu, le réseau de répartition de la charge fait basculer à chaque véhicule le courant disponible par tranches de 2 ampères, à chaque minute, pour pourvoir au besoin du véhicule. Lorsqu'une batterie se rapproche de sa pleine charge, la consommation d'électricité diminue jusqu'à la fin de la charge. Si l'unité de commande détecte qu'un véhicule n'utilise plus tout le courant à sa disposition, elle réduira le courant alloué au véhicule en question.
- Un connecteur mural asservi ne se chargera pas en cas de perte de communication avec le connecteur mural principal.
- Dans de rares cas, les mises à jour de micrologiciel sur un connecteur mural principal interrompent la charge sur un ou plusieurs connecteurs muraux asservis.

Il s'agit d'un comportement normal, et la charge devrait reprendre dès que la mise à jour du micrologiciel est terminée (15 minutes).



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# ウォール コネクター、J1772、40 A 単相 取り付けマニュアル

承認済のマーケット：北米、日本、台湾





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## 製品仕様

本書に記載の仕様および説明は、印刷時に、すべて正確であることが確認されています。ただし、改良を続けることが Tesla の目標であるため、当社はいつでも製品変更を行う権利を留保します。

## コミュニケーション規定

本装置は、FCC 規定のパート 15 ならびにカナダ政府産業省のライセンス適用免除 RSS 標準に準拠しています。以下の 2 つの必要操作条件が適用されます。(1) 本装置は、有害な干渉を引き起こさないこと (2) 本装置が妨害を引き起こすものも含め、全ての干渉を受信すること。

**⚠ 重要:** テスラの承認によらない本装置へのいかなる変更および改造は FCC 準拠を無効にします。

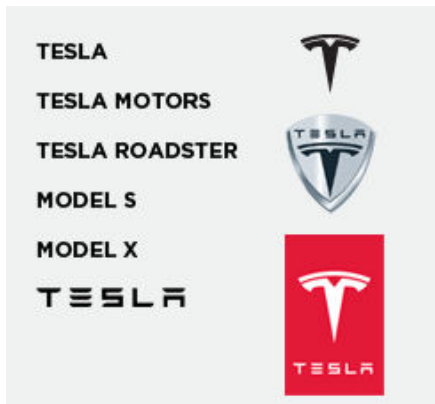
## 誤りまたは不正確な記述

不正確な記述や記載漏れを指摘したり、このマニュアルの質に関するご意見やご提案がございましたら、下記までご連絡ください。

[ownersmanualfeedback@tesla.com](mailto:ownersmanualfeedback@tesla.com)

## 著作権および商標

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## 重要な安全指示

この文書には、ウォールコネクターの設置とメンテナンスにあたり遵守していただきたい指示と警告が記されています。

### 警告

- ⚠ 警告:** この製品を使用する前に全ての説明をお読みください。
- ⚠ 警告:** この機器をお子様が使用する時は必ず監督者が必要です。
- ⚠ 警告:** ウォールコネクターは必ず使用して設置しなければなりません。
- ⚠ 警告:** ウォールコネクターは、引火性、爆発性、苛酷性、または可燃性のある物質、化学物質、あるいは蒸気の近くには設置しないでください。
- ⚠ 警告:** ウォールコネクターは、指定された操作パラメーターの範囲で使用してください。
- ⚠ 警告:** ウォールコネクターに欠陥やひび割れ、擦り切れ、故障または損傷が認められた場合は使用をすぐに中止してください。
- ⚠ 警告:** ウォールコネクターを開けようとしたり、分解、修理あるいは改造をしないでください。ウォールコネクターは、一般ユーザーの方が点検・修理できるものではありません。修理が必要な場合は、Tesla までご連絡ください。
- ⚠ 警告:** ウォールコネクターを移動する場合は、取扱いに注意してください。ウォールコネクターに無理な力や衝撃を与えたり、引っ張ったり、捻ったり、絡ませたり、引きずったり、踏みつけたりしないようにして、本体とコンポーネントに損傷を与えないようにしてください。
- ⚠ 警告:** ワイヤー、工具、針など鋭利な金属または指などでウォールコネクターの端子に触れないようにしてください。
- ⚠ 警告:** ウォールコネクターの各部に無理な力を与えたり、折り曲げたり、先の尖った物で破損したりしないでください。
- ⚠ 警告:** ウォールコネクターに異物を入れないでください。
- ⚠ 警告:** ウォールコネクターの使用が、植込み型心臓ペースメーカーや植込み型除細動器などの医療機器または植込み型医療機器の動作に影響を与えたり、動作の妨げになる場合があります。ウォールコネクターの使用前に、当該の各医療電気機器メーカーに問い合わせ、充電による電気機器への影響について確認してください。

## 注意事項

- ⚠ 注意:** 充電用の電源として自家発電機を使用しないでください。
- ⚠ 注意:** 誤った取り付け方でウォールコネクターを使用すると、車両のバッテリーまたはウォールコネクター本体を損傷する恐れがあります。その結果として発生した損傷は、新車限定保証と充電機器限定保証の対象外となります。
- ⚠ 注意:** ウォールコネクターは  $-22 \sim 122^{\circ} \text{F}$  ( $-30 \sim +50^{\circ} \text{C}$ ) の動作範囲外の温度では使用しないでください。



## 注記

**注：**ウォールコネクターの充電ケーブルは、踏まれたり、足に引っ掛けたり、車で乗りあげたり、または損傷や無理な力をかけることがないようにしてください。

**注：**ウォールコネクターのいかなるコンポーネントも溶剤を使って洗浄しないでください。ウォールコネクターの外面、充電ケーブル、充電ケーブルのコネクタ端子など、乾いた布を使用して定期的に拭いてホコリや汚れを落としてください。

**注：**取り付け作業中に誤って回路基板を損傷しないよう注意してください。



ウォールコネクターの最大定格は、単相 240V AC で 11 kW または 40 アンペアです。

詳細	仕様
電圧および配線	単相 208V または 240V AC: L1、L2、アース
電流	最大出力 : 40A
周波数	50 から 60 Hz
ケーブル長	7.4 m (24')
ウォールコネクタ寸法	高さ : 15.0" (380 mm) 幅 : 6.3" (160 mm) 奥行 : 5.5" (140 mm)
トップエントリー ブラケットの寸法	高さ : 10.8" (275 mm) 幅 : 5.1 インチ (130 ミリ) 奥行 : 2.0" (50 mm)
重量 (ブラケット含む)	17 lb (7.5 kg)
動作温度	-22° F ~ 122° F (-30° C ~ 50° C)
保管温度	-40° F ~ 185° F (-40° C ~ 85° C)
エンクロージャの保護等級	Type 3R
機関承認	アメリカ合衆国およびカナダに関して、ファイル番号 E354307、FCC パート 15 として、cULus に記載。
換気	必要ありません



## 遮断器規格

最高出力で充電を行うには、定格 50A の単相サーキットブレーカーを使用してください。

設置場所によっては、この電力レベルが利用できないことがあります。このため、ウォールコネクターには、自動負荷管理機能が設けられ、15A から 50A の間のサーキットブレーカーで出力電流を調節することが可能です（動作電流の設定 18 ページのを参照）。

**注：**実際の電流の流れは車両に付属される車載充電器に左右されます。特定の車両の車載充電について質問がある場合は Tesla までご連絡ください。

## 自己監視と復旧

ウォールコネクターには接地監視回路が備わっており、安全な接地接続の有無を常時チェックし、障害から自動で復旧します。手動でのテストやリセットは必要ありません。

地絡や電力サージなどの一時的な障害からは、自動で復旧します。残留電流障害が発生して充電が中断した場合、ウォールコネクターは自動で障害の解決および充電の再開を試みます。

ただちに 2 度目の障害を感知した場合、ウォールコネクターは充電を再試行する前に 15 分間待機します。このプロセスを 4 回繰り返し、すべてが失敗に終わった場合は電力を切断し、それ以上の充電を試行しません。この場合は、フロントパネルに赤色のエラーランプが点灯します（トラブルシューティング 20 ページのを参照）。赤色のエラーランプが点灯した場合は、ウォールコネクターのサーキットブレーカーで電源を一度切り、再投入することをお勧めします。

赤色のエラーランプが点灯した時には、RESET ボタンでウォールコネクターをリセットすることもできます（リセット 23 ページのを参照）。

## 停電

停電が発生した場合、ウォールコネクターは電力の復帰とともに自動的に充電を再開します。電力の復帰時に充電ケーブルが車両に接続されている場合は、ランプが点滅しウォールコネクターは約 15 秒から 3 分間、充電ケーブルに通電しません。これにより、異なるタイミングで複数の車両が充電を再開し、一度に大きなサージ電流が送電網に流れることを防ぎます。

## ロードシェアリング

最大 4 台のウォールコネクターを 1 台の自動負荷管理機能付きサーキットブレーカーに接続することができるので、自宅で複数の車両を一度に充電することができます（付録 B: ロードシェアリングの接続オプション 26 ページのを参照）。



## 必要最低条件

ウォールコネクタの設置に必要な作業:

- 既存の電気的負荷を計算して最大動作電流を決定します。
- 距離を計算して電圧降下を最小限に保ちます。
- 管轄の地方自治体の許可が必要な場合は、資格を持つ電気工事が設置後検査の予定を入れますのでご確認ください。
- 銅製の導体のみを使用してください。
- 使用する導体サイズは、地域の配線規則に従ってください。選択するケーブルは電気工事が選定した最大アンペアの一定負荷に対応している必要があります。
- サーキットブレーカーを使用します。

**注:** 設置作業が現地の規制に適合したものとなるよう電気技師に相談してください。

## 120V フローティング接地

- 警告:** ウォールコネクタは単相機器です。3相すべてを3相入力フィードに接続しないでください。
- 警告:** ウォールコネクタを取り付ける前に、設置現場で利用できる電源の種類を確認します。使用できる電源タイプが配電盤で判明しない場合は、電気工事に問い合わせるか、Tesla社にご相談ください。
- 注意:** 使用する2相は、中性に対してそれぞれ120V必要ですアース接地は中性へ一点のみ、通常ブレーカーパネルで接続されています。
- 注意:** 240V 3相入力フィードは、デルタ結線2次側からで、使用される足にはセンタータップが必ず必要です。センタータップは必ず接地してください。センタータップされた足のいずれか側の2相のみ使用することができます。

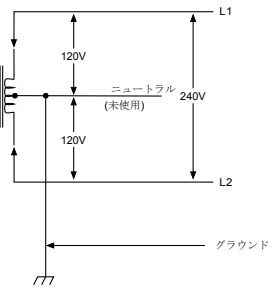
3本の配線のみが接続されていますが、変圧器の2次側コネクタは絶対既知となり、主サーキットブレーカーパネルからの3本の配線が正しく接続されラベル付けされていることを確認してください。

**注:** 図に示している L1、L2 と接地出力は、ウォールコネクタの入力に対応しています。

## アース接続

配電盤のニュートラルは必ずアースに接続してください。中性（変圧器にあるセンタータップ）がアースされていないと漏電保護は作動しません。電気設備が接地されていない場合は、接地棒を近くに設置しなければなりません。接地棒は主ブレーカーパネルの接地バーに接続し、その点で中性線を接地に接続します。

## 240V 単相

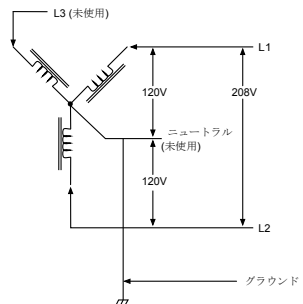


**注:** この図は例示のために描かれています。

## 208V 3相 Y結線

Y結線の2次側では、任意の足2本を使用して208Vをウォールコネクタに供給することができます。例えば、L1とL2、またはL1とL3、またはL2とL3など。使用する2相は、中性に対してそれぞれ120V必要です

**注:** 通電している中性は必要ありません。





**⚠ 注意:** 未使用の足 (図の L3) は、開放しておく必要があります。ニュートラルバーまたはアースに接続しないでください。

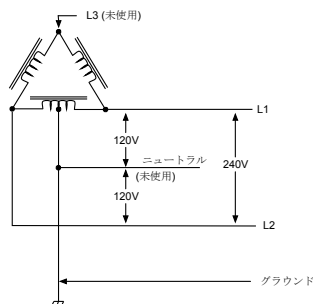
**⚠ 注意:** 3 相の中央極 (通常中性線に使用される) は一箇所でアース接続されます。通常はブレーカーパネルで接続されます。

## 240V 3 相 デルタ結線

デルタ結線では、1 つの足をセンタータップし、センタータップのいずれか片側の 2 相のみ使用します。使用する 2 相は、ニュートラルに対してそれぞれ 120V 必要です。

1 本の足で必要な電力を供給可能かどうかは、トランス メーカーの資料でご確認ください。

**注:** ウォールコネクターの接触器が閉じるのは、トランス 2 次側の中性点に接続した接地線をウォールコネクターが検出した場合のみです。



**⚠ 注意:** デルタ結線の第 3 線 (図の L3) は中性線に対して 208V であり、「スティンガー」と呼ばれることがありますこの第 3 線を使用しないでください。

**⚠ 注意:** 1 つの足をセンタータップすることなく、3 相デルタ結線のトランスの 2 次側を使用しないでください。必要な接地接続に使用できる中性点はありません

## サーキットブレーカーの選定

ウォールコネクターを接続するサーキットブレーカーの定格容量を決定するには、設置場所で使用可能なアンペア数を調べてください。

ウォールコネクターには内部ロータリースイッチが搭載されているので、動作電流を調整することができます (動作電流の設定 18 ページのを参照)。設定可能な動作電流は 40A です。

## ウォールコネクターの最適な設置場所

充電ケーブルが充電ポートに届くように、車両の駐車位置からウォールコネクターの設置位置を決定します。ウォールコネクターの設置場所:

- 屋内ガレージで、車両の充電ポートがある側。
- 風通しの良い場所。囲まれた箱の中や熱の出る機器の近くに取り付けることは避けてください。
- 床から 4 ft (1.2 m) の高さにします。
- ケーブルを丸められるよう障害物から 190 mm (8 in) 離してください。

**注:** ウォールコネクターは屋外で使用することができますが、完全に水没するような想定はしていません。防雨対策することが推奨されますが、必須ではありません。

## 設置作業における考慮事項

ウォールコネクターに配線を取り込む方法には 3 つの方法があります。コンジットの経路および配線タイプによりどの方法が最適が決まります。

- コンジットを床または壁に這わす場合は、ボトムエントリー方式を使用します。
- コンジットを壁内に這わす場合は、リアエントリー方式を使用します。
- コンジットが天井から来る場合、またはサービス配線が 6 AWG より太い場合は、トップエントリー方式を使用します。トップエントリーブラケットには背面に予備のノックアウトが設けられ、太いサービス配線をトップまたはリアから入れることができます。

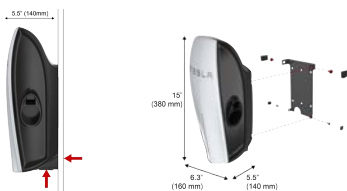
**注:** 本マニュアルにある「コンジット」とは配線管を示す名称として使用されています。コンジットを使用しない地域 (例えば欧州など) では、地域の規定で可能であれば、被覆された配線で構成されるケーブルをコンジットの代用として使用することができます。

付随するガイドライン:

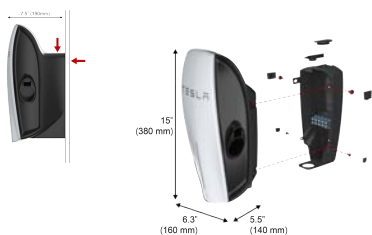
- 配線の開口部の大きさは、25 mmsq (1") です。
- コンジットは地域のすべての法令に適合する必要があります。
- 適切なサーキットブレーカーを使用します。
- しっかりと密閉するには UL 規格のコンジットコネクターを使用します。
- 6 AWG より太い配線を使用する場合は、トップエントリー方式を使用します。



ボトムエントリーまたはリアエントリー



トップエントリー方式またはオプションのリアエントリー方式



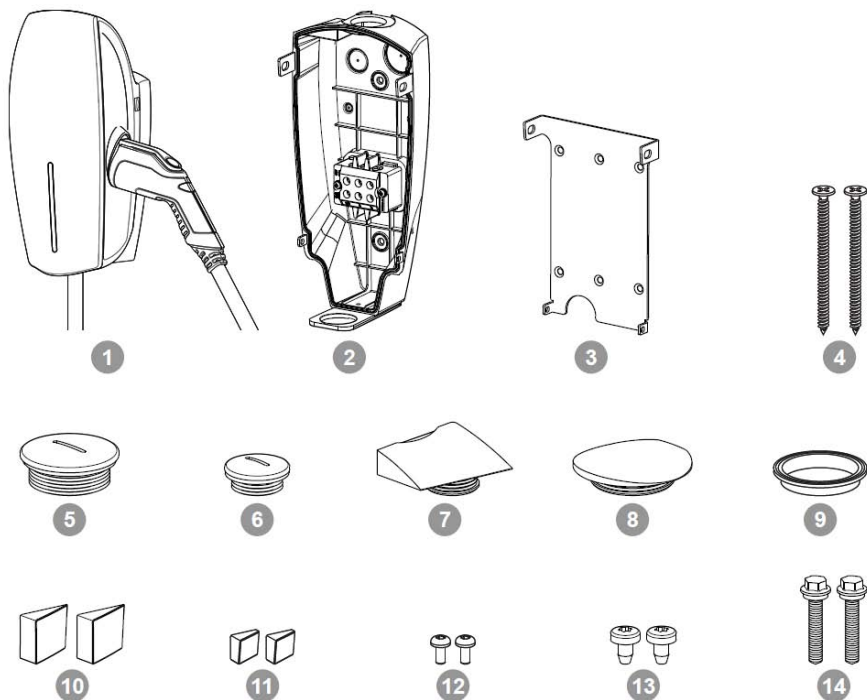




## 内容物の確認

商品梱包箱の中には全ての取り付け方法が行える部品と本マニュアルが含まれています。いずれかの部品に損傷があったり、見当たらない場合は Tesla にご連絡ください (お問い合わせ24 ページのを参照)。

注: 提供される段ボール製テンプレートは下記に含まれていません。



番号	名称 (数量)
1	ウォールコネクター
2	トップエントリーブラケット*
3	ロープロファイルブラケット**
4	ロープロファイルブラケットネジ (2)**
5	ボトムエントリー/リアエントリー電源コンジットプラグ
6	ボトムエントリー/リアエントリー信号コンジットプラグ
7	トップエントリー信号コンジット プラグ* (エントリー ブラケット上部に取り付け済み)
8	トップエントリー電源コンジット プラグ* (エントリー ブラケット上部に取り付け済み)
9	ボトムコンジットシールガスケット*
10	上部ハウジング取付ネジ化粧カバー (2)
11	下部ハウジング取付ネジ化粧カバー (2)



番号	名称 (数量)
12	下部ハウジング取付ネジ (2)
13	上部ハウジング取付ネジ (2)
14	トップエントリーブラケット取付ネジ (2)*

\* トップエントリー方式にのみ使用する部品です。

\*\* ボトムエントリーまたはリアエントリー方式にのみ使用する部品です。



## 必要な工具と材料

ウォールコネクタを設置する前に、以下の工具と材料を用意してください。

- 鉛筆またはマーカー
- 穴パンチ（オプション。段ボール製テンプレートに穴を開けるため）
- ワイヤーストリッパー
- 電圧計またはデジタルマルチメーター（設置場所で AC 電圧を計測するため）
- プラスドライバー
- 小さいマイナスドライバー
- 大きいマイナスドライバー
- T20 セキュリティ ピン付きトルクス ドライバー（付属）
- T10 トルクスドライバー（付属）
- M20 および M32 ケーブルグランド（別名シーリングハブ）
- 配線（ウォールコネクタ間で 18 AWG ツイストペア通信ケーブルは最大 49 ft (15 m) で使用してください）
- 水準器
- ドリル
- トルクドライバー（端子台接続用）

## 設置手順の概要

- ⚠ 警告：**を使用して取り付け現場に配線を敷設し、適切な上流サーキットブレーカーを設置した後、作業を続ける前に必ず電源を切り、電源が切断されていることを確認してください。

確認したら、以下の手順に従ってウォールコネクタを設置します。

- リアエントリー/ボトムエントリー方式のためのロープロファイルブラケットの取付け13ページの
- リアまたはトップエントリー配線用のトップエントリーブラケットの取付け14ページの
- 本体取付け前の準備15ページの
- 配線の接続16ページの
- 動作電流の設定18ページの
- カバーの取付けと電源投入19ページの



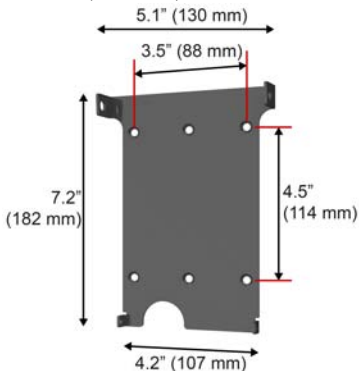
## リアエントリー／ボトムエントリー方式のためのロープロファイルブラケットの取付け

以下に示すように、ウォールコネクターをリアまたはボトムから配線するには、ロープロファイルブラケットを使用してください。



1. ロープロファイルブラケットを壁にあて、取付けネジの位置に印をつけます。

- 水準器で水平を確かめます。
- 穴は 4.5" (114 mm) の間隔を空けます。



- ウォールコネクターが床から最大でも 150 cm (60") 以下となるようにブラケットを取り付けてください。床からの高さが、室内設置の場合は 45 cm (18") 以上、屋外設置の場合は 122 cm (48") 以上になるように取り付けてください。

- リアエントリー方式の場合は左端または右端いずれかの 2 つの取付穴を使うとコンジットが間柱に干渉しません。
- ボトムエントリー方式の場合は、2 つの中央取付穴を使用します。

**注:** ブラケットを取り付ける高さを決める際はご注意ください。考える限りの影響を避けるように設置を行ってください。

2. 壁の材質に適した留め具を使用してブラケットを取り付けます。必要に応じて下穴をあけてください。木製の柱にブラケットを直接取り付ける場合にのみ、付属のネジを使用します。中空壁や石製の柱などに取り付ける場合は、中空壁や石製の柱などに取り付ける場合は、ウォールコネクターを確実に固定できる長さを備え、少なくとも 36 kg (80 lb) を支えられる留め具をしてください。





## リアまたはトップエントリー配線用のトップエントリーブラケットの取付け

トップエントリーブラケットを使うと、下図のように上部からウォールコネクタ内に配線することができます。



1. 段ボール製テンプレート壁にあて、取付けネジの位置に印をつけます。

- 水準器で水平を確認します。
- 穴は 155 mm (6.1")の間隔を空けてください。
- ウォールコネクタが床から 150 cm (60")以下になるようブラケットを取り付けます。床からの高さが、室内設置の場合は 45 cm (18") 以上、屋外設置の場合は 122 cm (48") 以上になるように取り付けてください。

**注:** ブラケットを取り付ける高さを決める際はご注意ください。考えうる限りの影響を避けるように設置を行ってください。

2. (オプション) 予備用に取付穴がもう 2 つあります。この取付穴を使用する場合は、穴を塞いでいるプラスチックをマイナスドライバーで押し出してください。取付穴は、2.75" (70 mm) の間隔が空いています。

3. 壁の材質に適した留め具を使用してブラケットを取り付けます。必要に応じて下穴をあけてください。木製の柱にブラケットを直接取り付ける場合にのみ、付属のネジを使用します。中空壁や石製の柱などに取り付ける場合は、中空壁や石製の柱などに取り付ける場合は、ウォールコネクタを確実に固定できる長さを備え、少なくとも 36 kg (80 lb)を支えられる留め具をしてください。





## 本体取付け前の準備

以下の手順に従い、カバーを外して、配線をウォールコネクターに通します。

1. T10 トルクスドライバーを使用して、前面カバー下部のネジを一つ取り外します。マイナスドライバーを使用して両端と最上部にあるスナップを注意しながら外し、カバーを完全に外します。再度取り付けるまでネジとカバーを大切に保管してください。



2. T20 セキュリティピン付きトルクスドライバーを使用して、シールカバーにあるネジ6個を取り外します。シールカバーを注意して外し、リボンケーブルを取り外します。再度取り付けるまでネジとカバーを大切に保管してください。



**⚠ 注意：**シールカバーがリボンケーブルからぶら下がらないようにしてください。リボンケーブルまたは端子を損傷する恐れがあります。

3. トップエントリー方式では、配線の接続16ページで示すようにトップエントリーブラケットの端子台に配線を接続してから、このページに戻り次のステップに進みます。リアエントリーまたはボトムエントリー方式は、次のステップに進んでください。
4. 4つのマウントタブの位置をしっかりと合わせてウォールコネクターをブラケットに押さえ込みます。
5. T20 トルクスドライバーを使用して、2つの上部ハウジング取付ネジを取り付けます。ネジ化粧カバーを押し込んで取り付けます。
6. T20 トルクスドライバーを使用して、2つの下部ハウジング取付ネジを取り付けます。ネジ化粧カバーを押し込んで取り付けます。



## 配線の接続

**注:** 地域の電気工事に相談するか、地域の電気規定に従い、ウォールコネクターに通電される電流に応じたサイズの導線を使用してください。

**注:** 地域の規制により追加の接地が必要になる場合があります。追加接地に関する確認は設置者の責任で行ってください。接地は、ウォールコネクターへの接続されるケーブルエントリー部ではなく、電源部で行う必要があります。

**⚠ 警告:** このセクションに記載されている内容を読んで十分に理解するまで、配電を接続しないでください。使用できる電源タイプが配電盤で判明しない場合は、電気工事に問い合わせるか、Teslaにご相談ください。

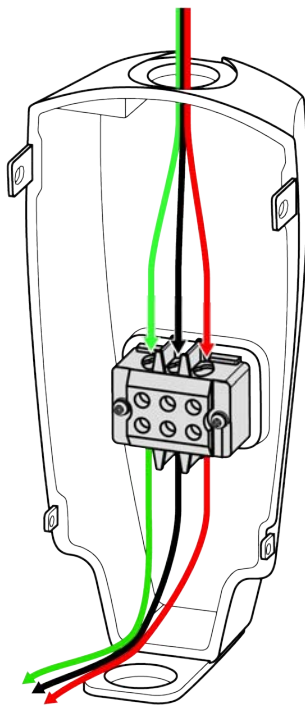
1. 電源を切断します。

**⚠ 警告:** 感電注意! 配線を接続する前に、配電線または端子に電気が流れていないことを電圧計で確認してください。

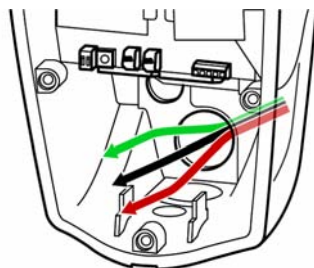
2. トップエントリー方式で設置する場合、配線をトップエントリーブラケットまたはウォールコネクターに接続します。電源コンジットの開口部を閉じるために、25 mm ケーブルグランドを使用してください。

**注:** 配線の色は、国ごとに異なりますのでご注意ください。配線のカラーコードに関しては、該当する国および地域の規定に従ってください。

次の図は、トップエントリーブラケットの設置用の配線例を示しています。



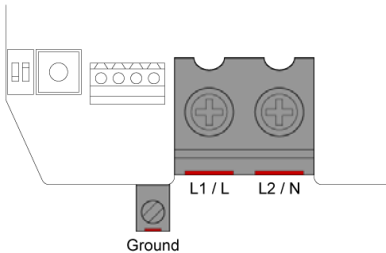
次の図は、ロープロファイルブラケットの設置用の配線例を示しています。



3. トップエントリーブラケット上の端子台に接続する配線の被覆を 3/4" (18 mm) 剥がしてください。フェール端子の使用を推奨します。

**注：**トップエントリー方式で設置する場合は、トップエントリーブラケットにすでに装着されている本体接続用の配線はすでに端子台にかしめてあるので、被覆を剥がす必要はありません。

4. 本体に予め配線されているサービスワイヤをたどり、予め配線されているサービスワイヤを主端子台の、中立、アースL1(ライン)、L2(中立)、アースに以下の図に示すように接続してください。



**⚠ 注意：**各ワイヤストランドを切断し、それぞれを各端子台に完全に差し込んでください。

**注：**作業を正しく実施するには、中立線をサーキットブレーカーボックス内または主配電盤内のアース棒に接続してください。

5. 各端子台を以下の推奨トルクで締め付けます。
- トップエントリーブラケット上の端子台の締め付けトルクは、35 in-lb (4.0 N-m)です。
  - 本体にある端子台の締め付けトルクは、33 in-lb (3.8 N-m)です。
  - 本体にある端子台の締め付けトルクは、18 in-lb (2.0 N-m)です。
6. マルチメーターを使用して配線ミスがないか点検して、ブレーカーを入れる前に短絡がないことを確認してください。



## 動作電流の設定

動作電流の設定は、以下の手順で行ってください。下の図は、動作電流とロータリースイッチの拡大図です。



**⚠ 警告：**ディップスイッチまたはロータリースイッチを設定または変更する前に、必ず電源をOFFにしてください。電源がONの状態では、システムはこれらのスイッチの設定変更を認識しません。また、感電の危険性もあります。

1. 電源をOFFにします。
2. ディップスイッチを設定する際には絶縁性の物を使用し、以下の通りに設定してください。
  - スイッチ1の位置：
    - ラインからラインへの接続 (200-250V) は、ディップスイッチを下にします。
    - ラインからニュートラルへの接続 (250V超) は、ディップスイッチを上 にします。
  - スイッチ2の位置：
    - ディップスイッチ2の位置は、常時「上」に設定してください。

配線/接続	ディップスイッチの位置
ラインからニュートラル (250V超)	
ラインからニュートラル (200-250V)	

3. ご使用のサーキットブレーカーに適した電流設定をするためにロータリースイッチを設定します。標準的なサーキットブレーカーの定格電流：15A、20A、25A、30A、35A、40A、45A、50A。

小型のマイナスインドライバーを使用して、適切なサーキットブレーカー定格設定にロータリースイッチを調整します。以下の表は、標準的なサーキットブレーカーに対応するロータリースイッチの設定です。



ロータリースイッチの位置	最大出力電流	サーキットブレーカー
0	テストモード	N/A
1	12A	15A
2	16A	20A
3	20A	25A
4	24A	30A
5	28A	35A
6	32A	40A
7	36A	45A
8	40A	50A
9	N/A	N/A
A	N/A	N/A
B	N/A	N/A
C	N/A	N/A
D	N/A	N/A
E	無効	N/A
F	スリープモード	N/A

- リボンケーブルをシールカバーに再度取り付けます。
- シールカバーを取り付けます。T20 セキュリティピン付きトルクスドライバーを使用して一番上のネジのみを取り付け、シールカバーを仮止めします。
- 電源を ON にします。
- 正しく設置できた場合には、LED が短く連続的なパターンで緑色に点滅した後、最終的に最上部の LED が緑色に点灯します。LED が赤色に点灯または点滅する場合は、トラブルシューティング20 ページの を参照しすぐにエラーを解決してください。  
**注:** ライトの点滅パターンを再確認する場合は、リセット ボタンを 5 秒間長押ししてください。
- 電源を OFF にします。
- ウォールコネクター内側にある設置者ラベルに連絡先を記入してください。

## カバーの取付けと電源投入

- T20 トルクスドライバー（セキュリティネジ対応）を使用して、シールカバーに残りのネジを取り付けます。カバーの位置を正しく合わせて、ネジを 8.8 in-lb (1.0 N-m) で締めてください。
- 前面カバーを上部のラッチ部分から順に取り付けます。両側のスナップを嵌め、取付けタブを本体の下部に合わせます。



- T10 トルクスドライバーを使用して、外側カバーの下部を本体にネジ止めします。ネジを 4.4 in-lb (0.5 N-m) で締めてください。
- 使用されない開口部は電源/信号コンジットプラグで塞いでください。

**注:** ウォールコネクター内部が見える隙間がない状態にし、外部環境から完全に密閉する必要があります。

- 電源を ON にします。正しく設置できると、LED が連続して点滅し、最後は一番上の LED が緑色に点灯します。LED が赤色に点灯または点滅する場合は、続行する前にエラーを解決してください（トラブルシューティング20 ページのを参照）。

**注:** ライトの点滅パターンを再確認する場合は、リセット ボタンを 5 秒間長押ししてください。

- ウォールコネクターが正しく作動し選択した動作電流で充電できるかを確認するために車両を充電します。充電方法については、車両に装備されているオーナーズマニュアルをご参照ください。



## トラブルシューティング

緑色ライト	黄色ライト	赤色ライト	自動再試行	説明	対応策
一番上のライトがオン	オフ	オフ	該当なし	電源オン。ウォールコネクターの電源は入っていますが、車両を充電していません。	該当なし
ライトが流れるように点灯	オフ	オフ	該当なし	ウォールコネクターが車両を充電していません。	該当なし
ライトが流れるように点灯	1 回点滅	オフ	該当なし	車両用コネクターで高温が検出されたので充電電流が減少されました。	コネクターが車両の充電ポートに完全に挿入されていることを確認し、何かで覆われていたり熱源が近くにいることを確認してください。通常の周囲温度 (100° F または 38° C 以下) で問題が解決されない場合は、Tesla までご連絡ください。
ライトが流れるように点灯	2 回点滅	オフ	該当なし	ウォールコネクターの入力ターミナルで高温が検出されたので充電電流が減少されました。	ウォールコネクターが壁コンセントに挿入されている場合、レセプタクルに完全に挿入されていること、何かで覆われていたり熱源が近くにいることを確認してください。ウォールコネクターが直接接続されている場合、何かで覆われていたり、熱源が近くにいることを確認してください。通常の周囲温度 (100° F または 38° C 以下) で問題が解決されない場合は、Tesla までご連絡ください。
ライトが流れるように点灯	3 回点滅	オフ	該当なし	ウォールコネクター内部で高温が検出されたので充電電流が減少されました。	ウォールコネクターが何かで覆われていたり、熱源が近くにいることを確認してください。通常の周囲温度 (100° F または 38° C 以下) で問題が解決されない場合は、Tesla までご連絡ください。
オフ	4 回点滅	オフ	該当なし	リボンケーブルが完全に接続されていません。	フェースプレートを開いて、リボンケーブルがしっかりと接続されているかチェックしてください。



緑色ライト	黄色ライト	赤色ライト	自動再試行	説明	対応策
オフ	オフ	1 回点滅	15 分後、4 回 まで	漏電。安全でない経路から漏電しています。ラインからアースまたは中性からアースで不良の恐れがあります。	ウォールコネクタを車両からいったん外してから再接続してやり直してください。問題が解決されない場合、ウォールコネクタのサーキットブレーカーをオフにして 10 秒間待ってからもう一度サーキットブレーカーをオンにした後、ウォールコネクタを車両に接続してください。不具合が解消しない場合は、Tesla にご連絡ください。
オフ	オフ	2 回点滅	1 分後、4 回 まで	ウォールコネクタで接地接続が検出されません。	ウォールコネクタが正しく接地されていることを確認してください。不明な場合、サーキットブレーカーまたは分電盤ボックスが正しく接地され、ウォールコネクタが正しく接続されていることを確認するよう電気工事に相談してください。
オフ	オフ	3 回点滅	なし	入力側配線ミス: ラインと中性が反対に接続されている可能性があります。	ディップスイッチ位置 1 が正しい位置にあるか確認してください。問題が解消されない場合は、壁側電源とウォールコネクタ間の入力配線が誤って接続されている可能性があります。電気工事士にご相談ください。
オフ	オフ	4 回点滅	1 分後、4 回 まで	過電圧または減電圧保護。	ウォールコネクタのサーキットブレーカーの正しい電圧について電気工事士にご相談ください。
オフ	オフ	5 回点滅	1 分後再試行 (回数に制限 無し)	過電流保護。	車両の充電電流設定を下げてください。問題が解消されない場合は、Tesla までご連絡ください。問題が解消されない場合は、その車両の製造元までご連絡ください。



緑色ライト	黄色ライト	赤色ライト	自動再試行	説明	対応策
オフ	オフ	6 回点滅	1 分後再試行 (回数に制限 無し)	ウォールコネクタと 車両の間で通信エラー があります。	可能な場合、他のウォールコネクタに接続する、またはモバイルコネクタで接続して、車両が他の充電設備と通信できるかどうか確認してください。Tesla サービスにお問い合わせください。
一番上のライトがオン	オフ	1 回点滅	なし	過熱保護 (ラッチオフ)	ウォールコネクタ、車両コネクタ、コンセント (使用されている場合) が、何かで覆われていたり、他の熱源が近くにないことを確認してください。通常の周囲温度 (100° F または 38° C 以下) で問題が解決されない場合は、Tesla までご連絡ください。
一番上のライトがオン	オフ	3 回点滅	なし	誤ったロータリースイッチ設定。	電気工事士に相談するか、ロータリースイッチを調整します。
一番上のライトがオン	オフ	4 回点滅	適用外	サーキットブレーカー共有ネットワーク: 1 台以上のウォールコネクタがマスターに設定されています。	1 台のウォールコネクタのみがマスターとして設定できます。リンク接続されたその他のウォールコネクタはすべてスレーブ (ポジション F) として設定しなければなりません。いずれかのウォールコネクタをスレーブに設定してください。
一番上のライトがオン	オフ	5 回点滅	適用外	サーキットブレーカー共有ネットワーク: 3 台以上のウォールコネクタがスレーブに設定されています。	1 台以上のウォールコネクタを異なるサーキットに移し、このサーキットブレーカー共有ネットワークから外してください。
一番上のライトがオン	オフ	6 回点滅	適用外	サーキットブレーカー共有ネットワーク: ネットワークに共有されているウォールコネクタの最大通電能力が異なります。	Tesla にご連絡ください。



緑色ライト	黄色ライト	赤色ライト	自動再試行	説明	対応策
オフ	オフ	赤色で点灯	なし	ウォールコネクターハードウェアの不良。以下を含む可能性のある不良： <ul style="list-style-type: none"> <li>接触器の障害。</li> <li>自己診断テストに失敗。</li> <li>その他起こりうるハードウェアの障害。</li> </ul>	Tesla にご連絡ください。

## リセット

エラーが原因で赤色エラーライトが点灯または点滅してからそのエラーを解決した場合、ウォールコネクターをリセットして正しく動作させるよう RESET ボタンを使用することができます。ウォールコネクターをリセットするには 2 つの方法があります。

- 一番上のライトが赤から緑になるまで 2 ~ 3 秒程度リセットボタンを押してください。これでエラーメッセージをクリアにすることができますが、ウォールコネクターの再起動はしません。
- まれにウォールコネクターを強制的に再起動する必要がある場合があります。RESET ボタンを 5 秒間押し続けてください。最上部のライトの色が赤色から緑色に変わったら RESET ボタンを離します。最上部のライトは緑色で点灯します。ライトが赤色の点滅に戻ったら、問題は解決されていません。



## お問い合わせ

- 米国およびカナダ
  - [charginginstallation@tesla.com](mailto:charginginstallation@tesla.com)
  - +1-650-681-6133
- メキシコ:
  - [charging\\_mx@tesla.com](mailto:charging_mx@tesla.com)
  - +1-877-798-3752



1. 電源を OFF にします。

**⚠ 警告:** 感電注意! 配線を接続する前に、配電線または端子に電気が流れていないことを電圧計で確認してください。

2. 絶縁性の物を使用して、ディップスイッチを適切な位置に設定してください（動作電流の設定 18 ページのを参照）。
3. 小さいマイナスドライバーを使用してロータリースイッチを "0" の位置に設定し、ウォールコネクタをテストモードにします。

**⚠ 警告:** ディップスイッチまたはロータリースイッチを設定または変更する前に、必ず電源を OFF にしてください。電源が ON の状態では、システムはこれらのスイッチの設定変更を認識しません。また、感電の危険性もあります。

4. リボンケーブルをシールカバーに再度取り付けます。
5. T20 セキュリティ ピン付きトルクス ドライバーを使用して一番上のネジのみを取り付け、シールカバーを仮止めします。
6. サーキットブレーカーをオンにします。
7. LED ディスプレイのシーケンスの後に赤色の LED が点灯するかどうか確認します。点灯する場合は取り付け状態に問題があります。
8. コンタクターまたはリレーの開閉するクリック音を確認します。
9. 緑色の LED を確認します（5 秒間）。

一番上の緑色の LED がオンになり、赤色の LED が点滅します（3 回）。

**注:** ライトの点滅パターンを再確認する場合は、リセットボタンを 5 秒間長押ししてください。

10. サーキットブレーカーをオフにします。
11. シールカバーネジとシールカバーを取り外します。リボンケーブルを外します。

**⚠ 注意:** シールカバーがリボンケーブルからぶら下がらないようにしてください。リボンケーブルまたは端子を損傷する恐れがあります。

12. ロータリースイッチの設定を適切な位置を変更します（動作電流の設定 18 ページのを参照）。
13. リボンケーブルをシールカバーに再度取り付けます。
14. 全てのネジを取り付け、前面カバーを再度取り付けます（カバーの取付けと電源投入 19 ページのを参照）。



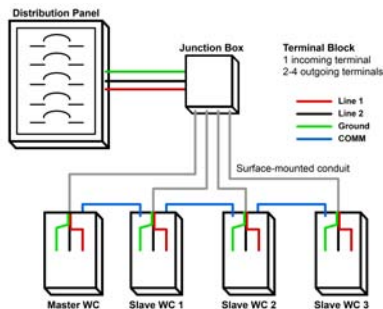
ウォールコネクタには複数のウォールコネクタ間で通信する自動負荷管理機能があり、最大 4 個のウォールコネクタに負荷を分散することができます。このローカルネットワークで使用される配線は以下を満たす必要があります。

- 主電源ケーブルのコンジット、または専用コンジットに収められている。言い換えると、高電圧配線は各ユニットからジャンクションボックスまたはサブパネルにそれぞれ分岐されている必要があります。
- 少なくとも、18 AWG 2 導体シールドより対線である必要があります。

**警告:** ロードシェアリングする時、高電圧 (L1、L2、アース) ケーブルは別の NEMA 適合エンクロージャ内で繋がなければなりません。

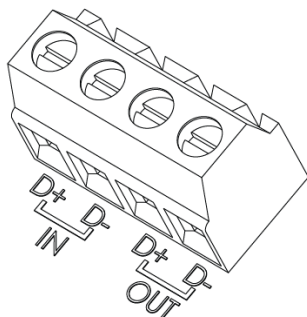
**注:** 屋外に設置する際は、ウォールコネクタへの浸水を防止するよう細心の注意を払ってください。

**注:** 取り付け作業が地域の規定に適合しているかについては、電気工事士にご相談ください。



### 複数のウォールコネクタをデジイチエーン接続する

以下に示すように、各ウォールコネクタには通信配線用の端子台が 1 個設けられています。端子台の左側が入力端子で、右側が出力端子です。



1. OUT から IN にケーブルを接続してデジイチエーンネットワークを構成します。各ウォールコネクタ間を接続する際は、必ずプラスとプラス、マイナスとマイナスを接続してください (通信ケーブルの配線例 27 ページのを参照)。
  - 各ウォールコネクタ間の信号配線は信号コンジットを使用して配線する必要があります。13 mmUL 規格のコンジットハブを使用して信号配線用コンジットの開部を密閉します。
  - 信号配線が電源用コンジット内に電源配線と共に配線される場合、信号配線の絶縁性能評価は、電源配線と同等もしくはそれ以上になる必要があります。
  - ウォールコネクタ間の距離は、最大 15 m (49 ft)15 m です。
2. 最大出力電流に応じてロータリースイッチの位置を 1 から 8 の間に設定して、ウォールコネクタの 1 台をマスターとして設定してください。ロータリースイッチの位置を F に設定し、最大 3 台のウォールコネクタをスレーブとして設定してください。ロードシェアリングネットワークでは、マスターに割り当てられるのは 1 台のみです (動作電流の設定 18 ページのを参照)。
3. ロードシェアリングネットワークが正しくインストールされたことをウォールコネクタ前面の LED ライトで確認します。サーキットブレ

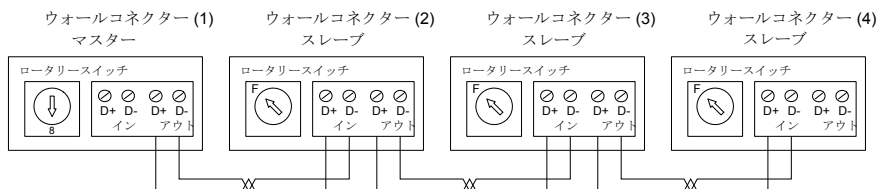


カーを初めて起動する際に緑色のライトが5秒間点灯し正常にインストールされたことを示します。最終的な表示は次のようになります。

緑色ライト	黄色ライト	赤色ライト	内容
オン (上と下)	オフ	オフ	マスターユニット

緑色ライト	黄色ライト	赤色ライト	内容
オン (下)	オフ	オフ	スレーブユニット

### 通信ケーブルの配線例



### その他のロードシェアリング動作

- 充電が終わって離れる車やこれから充電するためにプラグを挿した車両などの台数に合わせ、電流をネットワークに接続されているすべての車両に均等に配分します。
- 安定して稼働している間、ロードシェアリングは電流を 2 A /分毎にトグルを行い車両からの需要を評価します。バッテリーが満充電に近づくくと、充電が完了するまで消費電力が徐々に低下していきます。マスターユニットは、利用可能電流が 1 台の車両ですべてを使用されることがないことを検知すると、その車両に配分される電流を減少します。
- スレーブのウォールコネクタは、マスターウォールコネクタとの通信が途絶えると充電しなくなります。
- まれに、マスターウォールコネクタのファームウェアのアップデートが行われた時に、スレーブウォールコネクタが充電を中断することがあります。これは正常な動作で、ファームウェアのアップデート (15 分) が終了すると充電が再開されます。



# 壁掛式充電座, J1772, 40A 單相 安裝手冊

核准銷售地區：北美地區、日本、台灣





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## 產品規格

本文件包含的所有規格與說明已於列印之時驗證無誤。然而，持續改進是 Tesla 務必落實的核心目標，因此本公司保留對產品修改的一切權利。

## 通訊法規

本裝置符合 FCC 規則第 15 條規定以及加拿大工業部免授權 RSS 標準。本裝置操作需遵循以下兩個條件：(1) 本裝置不會產生有害干擾，而且 (2) 本裝置必然會承受所有接收到的干擾，包含可能造成運作不正常的干擾。

 **重要事項** 未經 Tesla 授權而更換或改裝本產品，可能導致 FCC 合規認證失效。

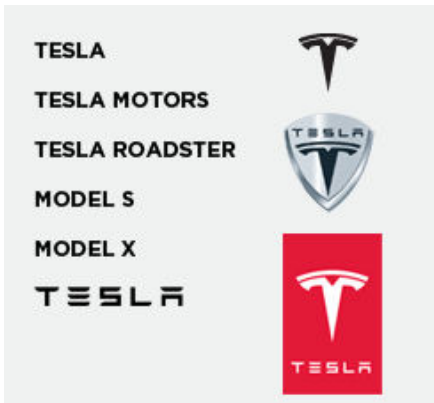
## 錯誤或疏漏

如需傳達本手冊任何不準確或疏漏、或品質相關的一般意見或建議，請傳送電子郵件至：

[ownersmanualfeedback@tesla.com](mailto:ownersmanualfeedback@tesla.com)

## 版權與商標

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## 重要安全指示


本文件包含安裝與維護壁掛式充電座時必須遵循的重要指示與警告。

### 警告

-  **警告** 使用本產品前，請先閱讀所有指示。
-  **警告** 本裝置在附近有兒童的情況下使用時需受監督。
-  **警告** 壁掛式充電座必須以接地。
-  **警告** 請勿在具易燃性、易爆性、刺激性或可燃性物質、化學物品或氣體附近安裝或使用壁掛式充電座。
-  **警告** 請嚴格遵循所指定的工作參數使用壁掛式充電座。
-  **警告** 如果壁掛式充電座存在缺陷、出現裂痕、磨損、破裂或損壞以致無法使用或操作，請停止使用或不要使用。
-  **警告** 請勿試圖拆卸、維修、不當調整或改裝壁掛式充電座。使用者切勿自行維修壁掛式充電座。如果需要任何維修或改裝，請聯絡 Tesla。
-  **警告** 運送壁掛式充電座時，請務必小心。請勿讓壁掛式充電座承受強大作用力或衝擊力，或拉動、扭曲、纏結、拖曳或踩踏壁掛式充電座，以防止機體或任何元件受損。
-  **警告** 請勿用手指或尖銳金屬物件 (例如電線、工具或針) 接觸壁掛式充電座的末端。
-  **警告** 請勿用力折疊壁掛式充電座的任何零件或對其施加壓力，或者使用尖銳的物件破壞。
-  **警告** 請勿將異物插入壁掛式充電座任何部位。
-  **警告** 使用壁掛式充電座會影響或損壞醫療或植入式電子設備的運作，例如植入式心臟起搏器或植入式心臟除顫器。使用壁掛式充電座之前，請就充電對此類電子設備的影響向電子設備製造商進行諮詢。

### 注意事項

-  **小心** 請勿將私人發電機作為充電電源。
-  **小心** 錯誤安裝及測試壁掛式充電座將對車輛電池及/或壁掛式充電座本身帶來潛在損壞。由此導致的任何損壞均不屬於《新車有限保固》與《充電設備有限保固》的保固範圍。

-  **小心** 請勿在壁掛式充電座工作範圍 -22° F 至 122° F (-30° C 至 +50° C) 以外的溫度下操作壁掛式充電座。





## 附註

**附註** 確定壁掛式充電座的充電電纜妥善放置，不會被踩踏、被車輪壓過、被絆住或受到損壞或擠壓。

**附註** 請勿使用清潔劑清潔壁掛式充電座的任何元件。定期使用乾淨的乾布擦拭壁掛式充電座的外部、充電電纜與充電座末端，以清除累積的污垢與灰塵。

**附註** 進行安裝時，請勿損壞電路板或元件。



壁掛式充電座的最大額定功率為 11 kW 或 40A (240V 單相交流電)。

說明	規格
電壓與電線	208V 或 240V 單相交流電：L1、L2 與地線
電流	最大輸出：40A
頻率	50 至 60 Hz
電纜長度	24 英尺 (7.4 公尺)
壁掛式充電座尺寸	高度：15.0 英寸 (380 公釐) 寬度：6.3 英寸 (160 公釐) 深度：5.5 英寸 (140 公釐)
上部進線底座尺寸	高度：10.8 英寸 (275 公釐) 寬度：5.1 英寸 (130 公釐) 深度：2.0 英寸 (50 公釐)
重量 (包括支架及底座)	17 磅 (7.5 公斤)
工作溫度	-22° F 至 122° F (-30° C 至 50° C)
存放溫度	-40° F 至 185° F (-40° C 至 85° C)
外殼防護等級	3R 型
機構認證	根據編號 E354307 文件 FCC 規則第 15 條列入 cULus 美國與加拿大認證。
通風	不需要



## 電路功率

使用單相額定功率為 50A 的單相斷路器以取得最高的電力輸出。

某些安裝場地並未供應此級別的電力。因此，壁掛式充電座具有自動負載管理功能，可配合任何斷路器調整輸出電流，範圍從 15A 至 50A (請參閱設定工作電流 頁碼 18)。

**附註** 實際消耗的安培數將視車輛的車載充電器而定。如對特定車輛的車載充電器有疑問，請聯絡 Tesla。

## 自我監控與恢復

牆掛式充電器設有接地監控電路，可持續檢查安全接地連接是否存在並從故障自動恢復。此功能不需要手動測試與重新設定。

接地故障或電網功率驟增等暫時問題均可自動解決。如果出現影響充電的漏電保護故障，壁掛式充電座會自動嘗試清除故障並重新試圖充電。

如果隨即感測到相同問題，壁掛式充電座會等待 15 分鐘然後再嘗試充電。此流程將重複 4 次。如果所有嘗試都未成功，則會切斷電流且不再進行嘗試。在此情況下，前面板上的紅色錯誤指示燈將會亮起 (請參閱疑難排解 頁碼 20)。建議您在看到紅色錯誤指示燈時，透過關閉上行斷路器來關閉壁掛式充電座，然後再重新打開。

當紅色錯誤指示燈亮起時，也可使用「重設」按鈕重新設定壁掛式充電座 (請參閱重設 頁碼 22)。

## 電力中斷

如果出現電力中斷的情況，牆掛式充電器會在電力回復後自動繼續充電。如果電力回復時充電電纜仍插在車輛上，則燈號會閃爍且裝置在約 15 秒至 3 分鐘內不會啟用充電電纜。這樣可以避免公共電網在電力回復後出現突波的情況，以確保車輛可隨時開始充電。

## 負載分配

最多 4 個壁掛式充電座可連至單一電路，透過內建的自動負載管理，車主可輕鬆在家為多部車輛充電 (請參閱附錄 B：負載分配的選用連接 頁碼 25)。

## 最低要求

安裝壁掛式充電座之前，您需要完成以下步驟：

- 計算目前電氣負荷，以決定最高工作電流。
- 計算距離，以確保最小電壓下降幅度。
- 取得當地相關機構所發出具有法律效力的必要許可，並確認電氣技術員已排在安裝完成後進行檢查。
- 僅可使用銅導體。
- 使用符合當地電線法規尺寸的導體。所選電纜必須可承受各時段最大電流（電氣技術員所選定）的恆定負載。
- 使用斷路器。

**附註** 請諮詢電氣技術員以確保安裝符合當地法規。

## 120V 高架

**⚠ 警告** 壁掛式充電座是單相設備。請勿連接三相電的所有三相。

**⚠ 警告** 安裝壁掛式充電座之前，請確定可用的現場電力設施供電連接類型。如果您不確定配電盤上的連接類型是否可用，請諮詢電氣技術員或聯絡 Tesla 以取得協助。

**⚠ 小心** 兩個已用相與中性線間電壓必須測量為 120V。接地必須與中性線的一個點相連，通常位於斷路器面板上。

**⚠ 小心** 如果有一 240V 三相饋電來自次三角形接法，則已使用的接腳必須有中心分接頭。中心分接頭必須接地。僅可使用中心分接頭接腳任一側的兩相。

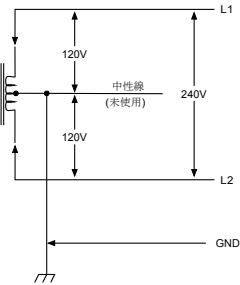
僅連接三條電線，但務必小心，供電變壓器二次連接必須完全已知，以及主斷路器面板上的三根電線已經正確連接與標示。

**附註** 圖示中標示的 L1、L2 與接地輸出與壁掛式充電座的輸出相符。

## 接地連接

配電盤上的中性線一律要連接至接地。如果中性線（供電變壓器上的中心分接頭）未與接地相連，則無法完成接地故障保護。如果供電服務未提供接地，則您必須在附近安裝接地樁。請務必將接地樁與主斷路器面板上的接地樁相連，中性線則在該點與接地相連。

## 240V 單相

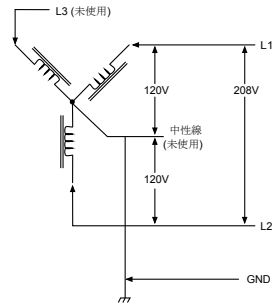


**附註** 本文件中的圖例僅供示範之用。

## 208V 三相星形接法

藉由次星形接法，即可使用任何兩接腳為壁掛式充電座提供 208V 電源。例如，L1 與 L2 連接，或 L1 與 L3 連接，或 L2 與 L3 連接。兩個已用相與中性線間電壓必須測量為 120V。

**附註** 不需要帶電流的中性線。



**⚠ 小心** 未使用的接腳（圖示中 L3）則必須保持開啟。不可連接中性線或接地。

**⚠ 小心** 三相的中心點（通常為中性點）僅可有一點可接地。該點通常位於斷路器面板上。

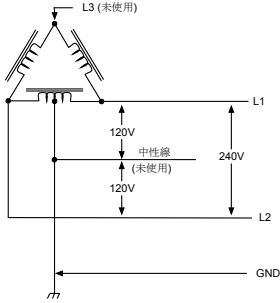


## 240V 三相三角形接法

使用三角形接法時，其中一接腳必須是中心分接頭，而且僅可使用中心分接頭任一側的兩相。兩個已用相與中性線間電壓必須測量為 120V。

請查閱變壓器製造商資料以確認單個接腳可供應所要求的電力。

**附註** 壁掛式充電座的接觸器僅在偵測到接地線連接至次級變壓器的中性點時關閉。



**⚠️ 小心** 三角形第三條線 (圖示中 L3) 電壓為 208V，由於與中性線相關，因此有時稱為「引線」(stinger)。不可使用此第三條線。

**⚠️ 小心** 不可在其中一接腳無中心分接頭的情況下使用次級三相三角形接法變壓器。要求的接地連接沒有可用的中性線連接點。

## 確定您的斷路器要求

為確定您所需要的上行斷路器類型，請檢查配電板或斷路器盒，以識別安裝場地的可用電流量。

牆掛式充電器有內置旋轉開關，供您調整其工作電流 (請參閱設定工作電流 頁碼 18)。斷路器應設定為 40A 的連續電流設定額定值：

## 為壁掛式充電座選擇最佳位置

確定停車位置以確保充電電纜可連到充電口。壁掛式充電座應該位於以下位置：

- 在封閉式車庫內，一般位於車輛充電口旁。
- 通風良好的地方。避免安裝在封閉式盒內或傳熱裝置附近。
- 離地 4 英尺 (1.2 公尺)。
- 離任何遮蔽物 8 英寸 (190 公釐)，以便電纜纏繞。

**附註** 壁掛式充電座已通過室外使用核准，但其設計並未考量可完全浸入液體。建議避免淋雨。

## 安裝的考量事項

安裝壁掛式充電座有三個方法。使用何種方法由導線管位置以及接線類型決定。

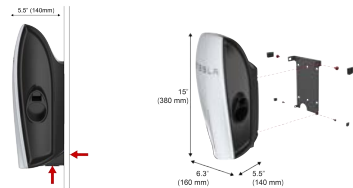
- 如果導管沿著地面或牆腳放置，請使用底部進線配置。
- 如果導管穿牆而出，請使用後部進線配置。
- 如果導線管來自天花板或供電配線的規格大於 6 AWG，請使用頂部進線的配置。頂部進線支架具有可選用的後向式開口，可讓較粗線規的供電配線從頂部或後方進線。

**附註** 在本手冊中，所有「導管」一詞是指包覆供電配線，提供保護作用之管道的標準術語。在沒有使用導管的地區 (例如歐洲)，如果當地法規允許，可使用具有保護外層的供電配線所組成的電纜代替導管。

以下是一些其他指引：

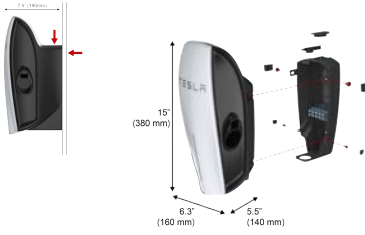
- 導線管開口尺寸為 1 英寸 (25 公釐)
- 導管必須符合當地所有法規。
- 使用適當的斷路器。
- 使用 UL 認證導線管充電器，確保適當密封。
- 安裝的配線粗於 6 AWG 時，請使用頂部進線安裝。

## 底部或後部進線





頂部進線或選用的後方進線

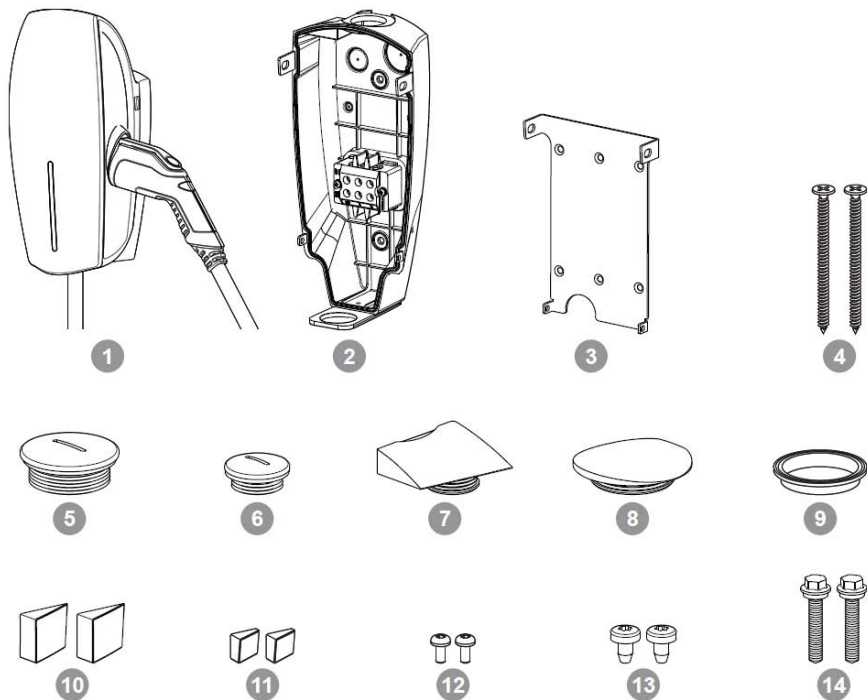




## 檢查箱內物品

包裝箱中含有安裝所需的所有零件以及本手冊。如果零件受損或遺漏，請聯絡 Tesla (請參閱疑難排解窗口 頁碼 23)。

**附註** 在此未顯示提供的硬紙模板。



項目	說明 (數目)
1	壁掛式充電座
2	上部進線底座*
3	支架 **
4	支架螺絲 (2 個) **
5	底部或後部引入電源導管塞
6	底部或後部引入訊號導管塞
7	頂部進線訊號導線管插頭* (已預先安裝在頂部進線支架中)
8	頂部進線電源導線管插頭* (已預先安裝在頂部進線支架中)
9	底部導管密封墊片*
10	上部進線底座外殼的螺帽 (2 個)
11	底部支架外殼的螺帽 (2 個)



項目	說明 (數目)
12	底部支架外殼的螺絲 (2 個)
13	上部進線底座外殼的螺絲 (2 個)
14	上部進線底座安裝支架螺絲 (2 個) *

\*這些物品僅用於上部進線安裝。

\*\*這些物品僅用於底部或後部引入安裝。





## 必備工具與材料

安裝牆掛式充電器之前，請準備以下工具：

- 鉛筆或馬克筆
- 穿孔器 (選用，用於刺穿硬紙模板)
- 剝線器
- 電壓計或數位萬用電表 (用於測量安裝場地的交流電壓)
- 十字螺絲起子
- 小型平頭螺絲起子
- 大型平頭螺絲起子 (選用，用於除去塑膠頂出部分)
- T20 附定位銷的梅花形螺絲起子 (隨附)
- T10 梅花形螺絲起子 (隨附)
- M20 及 M32 電纜固定接頭 (又稱為密封接頭)
- 配線 (使用 18 AWG 雙絞線通訊線，壁掛式充電座之間最大距離為 49 英尺 (15 公尺))
- 水平儀
- 電鑽
- 扭力起子 (用於端子台連接)

## 安裝步驟概覽

**⚠ 警告** 將供電電線送到安裝現場後，安裝適當的上行斷路器，在繼續安裝前，關閉電源並確認。

然後，請遵循下列步驟安裝壁掛式充電座：

- 安裝後部或底部進線的支架 頁碼 13
- 安裝頂部進線電線的後方或頂部進線支架 頁碼 14
- 準備安裝 頁碼 15
- 配線連接 頁碼 16
- 設定工作電流 頁碼 18
- 固定外殼然後通電 頁碼 19



## 安裝後部或底部進線的支架

使用以下所示的支架，從後部或底部進線壁掛式充電座的電線。

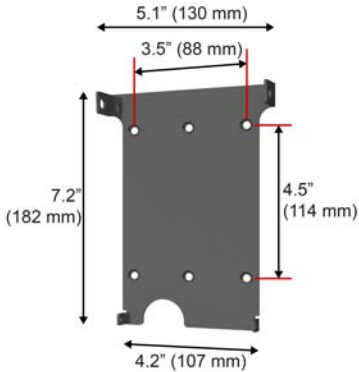


2. 使用適合牆身材料的固定元件固定支架，如有必要，請鑽一些定位孔。如果支架直接安裝在木柱上，則只要使用所提供的螺絲即可。如果要安裝到其他種類牆面（空心、砌石等），請使用足夠長度以安全固定壁掛式充電座而且至少可承受 80 英磅 (36 公斤) 重量的固定零件。



1. 使用支架作為指引，在牆上標記安裝螺絲位置。

- 使用水平儀確定標記完全垂直。
- 孔與孔之間的距離為 4.5 英寸 (114 公釐)。



- 在美國安裝時，請定位支架，使壁掛式充電座與地面的距離不超過 60 英寸 (150 公分)。室內安裝最小高度為 18 英寸 (45 公分)，室外安裝為 48 英寸 (122 公分)。
- 如果使用後部進線導線管，請至少使用一組邊緣安裝孔，以避免導線管干擾牆身支柱。
- 如果使用底部進線導線管，請使用中央的兩個安裝孔。

**附註** 確定小心選擇底座最小與最大高度。安裝必須避免任何可合理預見的影响。



## 安裝頂部進線電線的後方或頂部進線支架

如以下所示，上部進線底座供您將供電配線從外殼上部進線至壁掛式充電座內。



1. 使用硬紙模板及水平儀作為指引，在牆上標記安裝螺絲的位置。
  - 使用水平儀確定標記完全垂直。
  - 孔與孔之間的距離為 6.1 英寸 (155 公釐)。
  - 支架高度應確保壁掛式充電座與地面距離不超過 60 英寸 (150 公分)。室內安裝最小高度為 18 英寸 (45 公分)，室外安裝為 48 英寸 (122 公分)。

**附註** 確定小心選擇底座最小與最大高度。安裝必須避免任何可合理預見之影響。

2. (選用) 另有兩個安裝孔。使用平頭螺絲起子剔除封閉孔的塑膠，即可使用這些孔。這些孔之間的距離為 2.75 英寸 (70 公釐)。

3. 使用適合牆身材料的固定元件固定支架，如有必要，請鑽一些定位孔。如果支架直接安裝在木柱上，則只要使用所提供的螺絲即可。如果要安裝到其他種類牆面 (空心、砌石等)，請使用足夠長度以安全固定壁掛式充電座而且至少可承受 80 英磅 (36 公斤) 重量的固定零件。





## 準備安裝

請遵循這些說明卸下外殼，然後將供電配線連接至壁掛式充電座。

1. 使用 T10 梅花形螺絲起子卸下外層外殼底部螺絲。使用平頭螺絲起子小心鬆開側邊及上方鎖緊部位，然後卸下整個外殼。請保留螺絲及外殼供稍後重新組裝。



2. 使用 T20 附定位銷的梅花形螺絲起子卸下密封外殼上的 6 顆螺絲。小心卸下密封外殼並斷切斷帶狀電纜連接。請保留螺絲及外殼供稍後重新組裝。



**⚠️ 小心** 請勿讓密封外殼吊掛在帶狀電纜上。這樣做會損壞帶狀電纜及其充電座。

3. 對於頂部進線配置，請將電線連至頂部進線支架上的端子台，如配線連接 頁碼 16 所示，然後返回本節，繼續下一步驟。對於後部或底部進線配置，請跳至下一步驟。

4. 將壁掛式充電座放置並固定於支架上，並確定四塊安裝鎖片準確對齊。
5. 使用 T20 梅花形螺絲起子安裝上部兩顆固定外殼的螺絲。將裝飾螺帽推至適當位置。
6. 使用 T20 梅花形螺絲起子安裝底部的兩顆安裝外殼的螺絲。將裝飾螺帽推至適當位置。



## 配線連接

**附註** 有關適用於您的牆掛式充電器電流的正確電線尺寸，請諮詢當地電氣技術員或參考當地法規。

**附註** 安裝人員有責任判別是否需要連接地線以確保符合當地法規。地線必須安裝於電源處，而非安裝於壁掛式充電座的電纜進線口。

**警告** 請先閱讀並完全瞭解本章節說明的概念，然後再連接供電配線。如果您不確定配電盤上的電源類型是否可用，請諮詢電氣技術員或聯絡 Tesla 以取得協助。

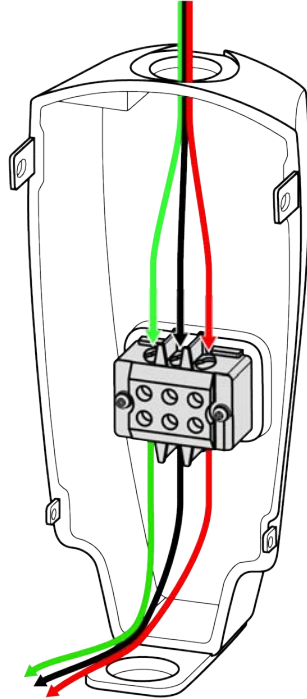
1. 關閉電源。

**警告** 小心觸電！繼續進行之前，請使用電壓計確定供電配線或終端設備無電壓，確認已關閉電源。

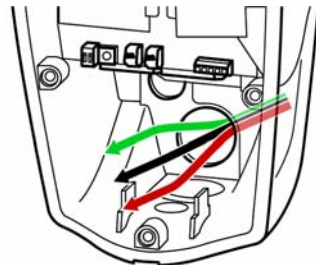
2. 對於上部進線安裝，請將供電配線拉進上部進線底座或壁掛式充電座。使用 1 英寸 (25 公釐) 電纜固定接頭密封電源導管或電纜。

**附註** 電線顏色會因國家/地區而有不同含義。請遵循國家/地區及所在地適用的所有電線顏色代碼法規。

下圖為上部進線底座的電線安裝範例：



下圖為支架的電線安裝範例：



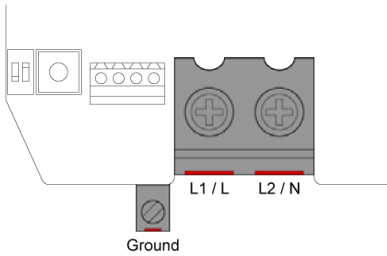
3. 剝除頂部進線支架上連線端子台的供電配線 3/4 英寸 (18 公釐)。建議使用套圈。

**附註** 對於上部進線安裝，預先安裝的軟式電線是由上部進線底座進入外殼並已附加堵頭，無需再剝線。

4. 將預先連接好的供電配線引入主外殼，並將預先連接好的供電配線連接至主端子台，L1 (或電



線)、L2 (或中性線) 及接地線應位於下圖所示位置。



**⚠ 小心** 切斷各電線束並將其完全插入各端子台。

**附註** 為確保正確運轉，請務必連線斷路器盒內部或主配電板上的中性線。

5. 將端子台控緊至建議的扭力：
  - 頂部進線支架上的端子台為 35 in-lb (4.0 N-m)。
  - 主外殼內的端子台為 33 in-lb (3.8 N-m)。
  - 主外殼內的接地端子台為 18 in-lb (2.0 N-m)。
6. 使用萬用電表檢查是否有接線錯誤，並先確定沒有短路然後，再開啟上行斷路器。



## 設定工作電流

請遵循以下指示配置指撥開關。下圖顯示放大後的指撥開關及旋轉開關。



**▲ 警告** 設定或更改指撥開關或旋轉開關之前，必須將電源保持為關閉狀態。在通電狀態下更改這些開關，系統將無法進行識別，而且可能存在觸電風險。

1. 關閉電源。
2. 使用非導電物體調整指撥開關設定：
  - 開關位置 1：
    - 對於電線間的連線 (200-250V)，請將指撥開關設成向下。
    - 對於電線與中性線的連線 (高於 250V)，請將指撥開關設成向上。
  - 開關位置 2：
    - 指撥開關位置 2 應該一律設成向上的位置。

電線/連接	指撥開關位置
電線至中性線 (高於 250V)	
線對線 (200-250V)	

3. 設定斷路器所支援的適當電流設定的旋轉開關。一般斷路器額定值為：15A、20A、25A、30A、35A、40A、45A 以及 50A。

使用小型平頭螺絲起子，將旋轉開關調整至適當斷路器效能設定。下表顯示一般斷路器的對應旋轉開關設定：



旋轉開關位置	最高輸出電流	斷路器
0	測試模式	不適用
1	12A	15A
2	16A	20A
3	20A	25A
4	24A	30A
5	28A	35A
6	32A	40A
7	36A	45A
8	40A	50A
9	不適用	不適用
A	不適用	不適用
B	不適用	不適用
C	不適用	不適用
D	不適用	不適用
E	無效選項	不適用
F	從屬模式	不適用

- 將帶狀電纜重新連接至密封外殼。
- 重新安裝密封外殼。僅使用 T20 附定位銷的梅花形螺絲起子安裝上部螺絲，以輕輕固定密封外殼。
- 開啟電源。
- 如果安裝成功，LED 會短暫連續顯示綠燈，而此模式最終為恆亮綠色 LED 燈。如果出現恆亮或閃爍的紅色 LED 燈，請先請參閱疑難排解 頁碼 20 並修復錯誤，然後再繼續。  
**附註** 若要查看燈閃爍樣式，請按住「重設」按鈕 5 秒鐘。
- 關閉電源。
- 在壁掛式充電座內側標籤寫上安裝人員的聯絡資訊。

## 固定外殼然後通電

- 使用 T20 附定位銷的梅花形螺絲起子將其餘螺絲安裝到密封外殼上。將螺絲鎖緊至扭力 8.8 in-lb (1.0 N-m) 前，請確保保護蓋已妥善對齊。
- 從頂部開始拴緊，將外層外殼安裝至密封外殼上。將兩側扣合，並將安裝鎖片與外殼底部對齊。



- 使用 T10 梅花形螺絲起子安裝螺絲，將外層外殼底部固定在外殼上。將螺絲鎖緊至 4.4 in-lb (0.5 N-m)。
- 關閉所有裝有電源及訊號導管塞的未使用開口。

**附註** 壁掛式充電座不應該有任何可通至內部的可見開口，而且應該完全密封，和外部環境隔絕。

- 開啟電源如果 LED 連續閃爍，最後綠色 LED 燈恆亮，則表示安裝正確。如果紅色 LED 燈恆亮或閃爍，請先解決錯誤再繼續操作 (請參閱疑難排解 頁碼 20)。  
**附註** 若要查看燈閃爍樣式，請按住「重設」按鈕 5 秒鐘。
- 嘗試為車輛充電，以確定壁掛式充電座正確運作並以選定的工作電流進行充電。如需充電方法的說明，請參閱隨同車輛提供的車主資訊。





綠燈	黃燈	紅燈	自動重試	意義	處理方法
頂燈亮起	關閉	關閉	不適用	通電。壁掛式充電座已接通電源並處於備用狀態，而非正在進行車輛充電。	不適用。
流動閃燈	關閉	關閉	不適用	壁掛式充電座正在進行車輛充電。	不適用。
流動閃燈	閃爍 1 次	關閉	不適用	在車輛充電時偵測到高溫，充電電流降低。	確定充電接頭已完全插入車輛充電口的充電入口同時未被遮蓋，而且附近沒有熱源。如果在正常環境溫度下 (100° F 或 38° C 以下) 問題仍然存在，請聯絡 Tesla。
流動閃燈	閃爍 2 次	關閉	不適用	由於在牆上插頭內或壁掛式充電座上的輸入終端偵測到高溫，因此充電電流已降低。	如果牆掛式充電器插入壁式插座，請確定已完全插入插座內同時未被遮蓋，而且附近沒有熱源。如果牆掛式充電器採用硬體接線，請確定未被遮蓋，而且附近沒有熱源。如果在正常環境溫度下 (100° F 或 38° C 以下) 問題仍然存在，請聯絡 Tesla。
流動閃燈	閃爍 3 次	關閉	不適用	由於在壁掛式充電座內側偵測到高溫，因此充電電流已降低。	確定壁掛式充電座未被遮蓋，而且附近沒有熱源。如果在正常環境溫度下 (100° F 或 38° C 以下) 問題仍然存在，請聯絡 Tesla。
關閉	閃爍 4 次	關閉	不適用	帶狀電纜未完全連線。	打開面板並檢查帶狀電纜是否妥善連線。
關閉	關閉	閃爍 1 次	15 分鐘後且高達 4 次	接地故障。正透過不安全路徑漏電。電線至地線或中性線至地線可能出現故障。	將壁掛式充電座與車輛中斷連接然後重新連接，以再試一次。如果問題仍然存在，請關閉壁掛式充電座的斷路器，等待 10 秒後重新開啟斷路器，然後嘗試將壁掛式充電座重新連接至車輛。如果問題仍然存在，請聯絡 Tesla。
關閉	關閉	閃爍 2 次	1 分鐘後且多達 4 次	壁掛式充電座內未偵測到已接地。	確定壁掛式充電座已正確接地。如果無法確定，請諮詢電氣技術員，確定斷路器或配電箱正確接地，以及壁掛式充電座正確連接。



綠燈	黃燈	紅燈	自動重試	意義	處理方法
關閉	關閉	閃爍 3 次	否	輸入電線錯誤：可能是電線與中性線被交換。	檢查指撥開關位置 1 是否位於正確位置。如果問題持續存在，即代表牆面電源與壁掛式充電座之間的接線安裝不正確。請諮詢電氣技術員。
關閉	關閉	閃爍 4 次	1 分鐘後且多達 4 次	電壓保護過高或不足。	請諮詢電氣技術員，確定斷路器為壁掛式充電座提供正確的電壓。
關閉	關閉	閃爍 5 次	1 分鐘後重試 (重試次數沒有上限)	過電流保護。	請降低車輛充電電流設定。如果問題仍然存在且連接的車輛由 Tesla 製造，請聯絡 Tesla。如果問題仍然存在且連接的車輛並非由 Tesla 製造，請聯絡原製造商。
關閉	關閉	閃爍 6 次	1 分鐘後重試 (重試次數沒有上限)	壁掛式充電座與車輛之間出現通訊錯誤。	可以的話，請將車輛插入另一個壁掛式充電座或 UMC 行動充電組，確定車輛是否可以和其他充電設備通訊。然後聯絡 Tesla 服務中心。
頂燈亮起	關閉	閃爍 1 次	否	過熱保護 (鎖定)	請確定壁掛式充電座、車輛充電器及牆掛式插頭 (如有使用) 未被遮蓋，而且附近沒有熱源。如果在正常環境溫度下 (100° F 或 38° C 以下) 問題仍然存在，請聯絡 Tesla。
頂燈亮起	關閉	閃爍 3 次	否	旋轉開關設定不正確。	請諮詢電氣技術員或調整旋鈕開關。
頂燈亮起	關閉	閃爍 4 次	不適用	斷路器共用網路：有多個壁掛式充電座設定為主要。	僅可將一個壁掛式充電座設為主要充電裝置。其他所有連結的壁掛式充電座必須設為從屬充電座 (位置 F)。將其中一個壁掛式充電座設為從屬充電座。
頂燈亮起	關閉	閃爍 5 次	不適用	斷路器共用網路：有三個以上的壁掛式充電座設定為從屬充電座。	將一個或多個壁掛式充電座移至另一電路並將其和此斷路器共用網路中斷連接。
頂燈亮起	關閉	閃爍 6 次	不適用	斷路器共用網路：各個連網壁掛式充電座具有不同的最大電流負荷。	請聯絡 Tesla。



綠燈	黃燈	紅燈	自動重試	意義	處理方法
關閉	關閉	恆亮紅燈	否	壁掛式充電座硬體故障。可能出現的故障包括下列： <ul style="list-style-type: none"><li>接觸器故障。</li><li>自行檢測失敗。</li><li>其他可能的硬體設備故障。</li></ul>	請聯絡 Tesla。

## 重設

如果故障導致紅色錯誤指示燈亮起或閃爍，而故障情況已修正，可使用「重設」按鈕使壁掛式充電座回復正常運作。重設壁掛式充電座有兩種方法：

- 按下「重設」按鈕 2 至 3 秒，直到指示燈由紅燈轉為綠燈。這樣做可以清除故障警示，但不會重新啟動壁掛式充電座。
- 在較罕見的情況，您可能需要在沒有循環使用輸入電源的前提下強制重新啟動壁掛式充電座。按住「重設」按鈕 5 秒鐘。頂燈由紅燈變為綠燈時，放開「重設」按鈕。頂燈應恆亮綠燈。如果燈光回復閃爍的紅燈，表示故障情況未獲修正。



## 疑難排解窗口

- 美國及加拿大：
  - [charginginstallation@tesla.com](mailto:charginginstallation@tesla.com)
  - +1-650-681-6133
- 墨西哥：
  - [charging\\_mx@tesla.com](mailto:charging_mx@tesla.com)
  - +1-877-798-3752



## 附錄 A：確保運作正常的測試

1. 關閉電源。
  - 警告** 小心觸電！繼續進行之前，請使用電壓計確定供電配線或終端設備無電壓，確認已關閉電源。
2. 請使用不導電物體將指撥開關調整至適當的配電設定以及斷路器共用設定 (請參閱設定工作電流頁碼 18)。
3. 請使用小型平頭螺絲起子將旋轉開關調至「0」，將壁掛式充電座設成「測試模式」。
  - 警告** 設定或更改指撥開關或旋轉開關之前，必須將電源保持為關閉狀態。在通電狀態下更改這些開關，系統將無法進行識別，而且可能存在觸電風險。
4. 將帶狀電纜重新連接至密封外殼。
5. 僅使用 T20 附定位銷的梅花形螺絲起子安裝上部螺絲，以輕輕固定密封外殼。
6. 開啟斷路器。
7. 注意接連亮起 LED 燈後是否恆亮任何紅色 LED 燈：如果是，表示安裝存在錯誤。
8. 注意開啟或關閉接觸器或繼電器時發出卡嗒聲。
9. 注意流動閃爍的綠色 LED 燈 (5 秒鐘)。

LED 指示燈將回復為頂端綠色 LED 燈亮起，紅色 LED 燈閃爍 (閃爍 3 次)。

**附註** 若要查看燈閃爍樣式，請按住「重設」按鈕 5 秒鐘。
10. 關閉斷路器。
11. 卸下密封外殼螺絲、密封外殼。中斷開帶狀電纜連接。
  - 小心** 請勿讓密封外殼吊掛在帶狀電纜上。這樣做會損壞帶狀電纜及其充電座。
12. 將旋轉開關重新設定至適當的設定 (請參閱設定工作電流 頁碼 18)。
13. 將帶狀電纜重新連接至密封外殼。
14. 重新裝上所有螺絲並重新安裝外層外殼 (請參閱固定外殼然後通電 頁碼 19)。



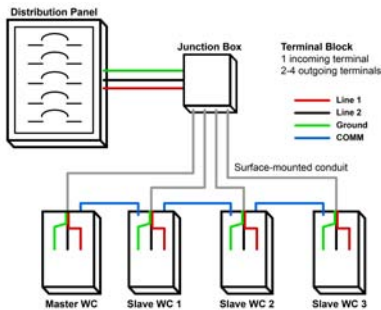
壁掛式充電座內建一項自動負載管理功能，即可透過壁掛式充電座之間的通訊，將可用的最大負載分流至最多 4 個此類充電座。適用於此區域網路的電線必須：

- 從主電源線的導線管中分接或位於不同導線管。換句話說，每個單獨的插頭必須以高壓電線分接至接線盒或輔助板。
- 必須為 18 AWG 且擁有 2 條導線的屏蔽雙絞電線。

**警告** 進行負載分配時，高壓 (L1、L2、中性線、接地線) 電纜需與單獨的 NEMA 等級外殼接合。

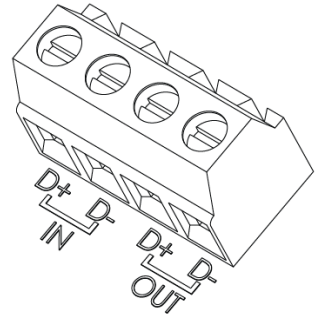
**附註** 在室外安裝壁掛式充電座時，必須考慮採取額外預防措施以防止滲水。

**附註** 請諮詢電氣技術員以確保安裝符合當地法規。



## 菊鍵連接多個壁掛式充電座

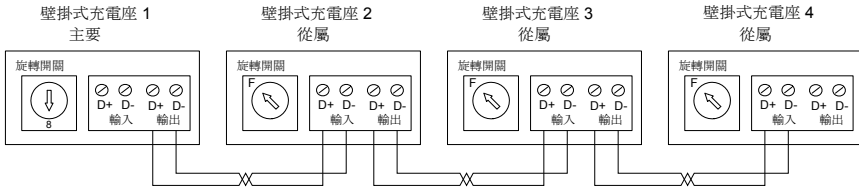
如以下所示，每個壁掛式充電座有一個通訊線專用的端子台。端子台左側為輸入端，右側為輸出端。



1. 使用電線連線每個相關壁掛式充電座之間的輸出與輸入、正極與正極、負極與負極，以組成菊鍊式網路 (請參閱通訊電線範例 頁碼 26)。
  - 每個壁掛式充電座之間的訊號線應置於訊號導管內。使用 1/2 英寸 (13 公釐) UL 認證導管接頭密封訊號導管開口。
  - 如果訊號線與電源線排佈在電源導管內，則訊號線的絕緣體額定值應等於或高於電源線的額定值。
  - 壁掛式充電座之間最大間距為 49 英尺 (15 公尺)。
2. 旋轉開關位置可從 1 設至 8，請根據最大可用的輸出電流而定，將一個壁掛式充電座設為主控充電座。將旋轉開關位置調至 F，可將最多 3 個壁掛式充電座設為從屬充電座。在負載分配網路中，只可指定一個充電座作為主控充電座 (請參閱設定工作電流 頁碼 18)。
3. 觀察壁掛式充電座上的 LED 指示燈，確認負載分配網路安裝妥當。首次啟動斷路器時，綠燈亮起 5 秒即表示安裝妥當。最終顯示為：

綠燈	黃燈	紅燈	代表涵義...
開啟 (頂部及底部)	關閉	關閉	主機
開啟 (底部)	關閉	關閉	從屬機

## 通訊電線範例



## 其他負載分配行為

- 每當有新的車輛連線此網路或從網路中斷連線時，可用的電流都會在所有車輛間重新平均分配。
- 在穩定狀態下的操作，負載分配網路會將可用電流以每分鐘 2A 的增量分配給每部車輛，以評估車輛所需的電力。當電池的充電量接近全滿時，耗電量將逐漸減少直到充電完成。如果主控充電座偵測到車輛不再使用所有可用電流，則會減少分配可車輛的電流。
- 如果與主壁掛式充電座的通訊遺失，則從屬壁掛式充電座將不會充電。
- 在極少數情況下，主壁掛式充電座的韌體更新會使從屬壁掛式充電座的充電作業中斷。這是正常情況，充電作業將在韌體更新完成後回覆正常 (15 分鐘)。

# TESLA

P/N: 1467603-00-A

MNL, USER GUIDE, NA, 1PH 40A HW, WC GEN2



(P) PN:1467603-00-A  
(T) TLN:TT40AMP1NA



**PART 4 Bid Submission Form****1. Supplier Information**

Please fill out the following information, naming one individual to be the Supplier's contact for the RFT process and for any clarifications or communication that might be necessary.	
Full Legal Name of Supplier:	
Any Other Relevant Name under which Supplier Carries on Business:	
Street Address:	
City, Province/State:	
Postal Code:	
Phone Number:	
Fax Number:	
Company Website (if any):	
Supplier Contact Name and Title:	
Supplier Contact Phone:	
Supplier Contact Fax:	
Supplier Contact Email:	

**2. Acknowledgment of Binding Procurement Process**

The Supplier:

- (a) acknowledges and agrees that the RFT process will be governed by the terms and conditions of the RFT and the Toronto Zoo's Policies and Legislation;
- (b) hereby confirms it has read and understand such terms and conditions;
- (c) hereby confirms its compliance with such terms and conditions; and
- (d) hereby confirms it has submitted a Bid Bond with your submission The Supplier further acknowledges and agrees that its Bid will remain legally binding for the Bid Validity Period, or if the Supplier is selected, as the Successful Supplier, until the Supplier executes a written Contract for the Work and furnishes all other documents required by Part 1 - Section 2.3.2 (Contract Execution).

**3. Ability to Provide Work**

The Supplier has carefully examined the RFT documents and has a clear and comprehensive knowledge of the Work required. The Supplier represents and warrants its ability to provide the

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**PART 4- SUBMISSION FORMS**

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Work in accordance with the requirements of the RFT for the pricing set out in the Pricing Form completed by the Supplier.

**4. Binding Pricing**

The Supplier has submitted its pricing in accordance with the instructions in the RFT and in the Pricing Form. The Supplier confirms that the pricing information provided is accurate and binding for the Bid Validity Period. The Supplier acknowledges that any inaccurate, misleading or incomplete information, including withdrawn or altered pricing, could adversely impact the acceptance of its Bid, the forfeiture of its Bid Bond, or its eligibility for future work.

**5. Addenda**

The Supplier acknowledges all Addenda issued by the Toronto Zoo prior to the Deadline for Issuing Addenda set out in the RFT timetable in Part 1 - Section 1.5 (RFT Timetable) in accordance with Part 1 – 1.7 (Addenda).

**6. The Toronto Zoo Policies**

The Supplier has read, understood and agrees to comply with the Toronto Zoo's Policies.

Without limiting the Supplier's acknowledgement of the Policies, the Supplier makes the following declarations and agrees to provide the Toronto Zoo with ongoing disclosure of any changes to the declarations and information provided below during the RFT process or the term of any contract. The Supplier shall provide the City with ongoing disclosure, should the Supplier be awarded the Contract and any of the information declared below changes.

(i) Collusion and Unethical Bidding

If the Supplier declares an affiliation or other relationship with other Suppliers that might be seen to compromise the principle of fair competition, the Supplier must set out the details below. If no details are provided, the Supplier is deemed to declare that it has no such affiliation or relationship.

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**PART 4– SUBMISSION FORMS**

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(ii) Illegality

If the Supplier declares any previous convictions of itself or its Affiliated Persons for collusion, Bid-rigging, price-fixing, bribery, fraud or other similar behaviours or practices prohibited under the *Criminal Code*, the *Competition Act* or other applicable law, for which they have not received a pardon, the Supplier must set out the details below. If no details are provided, the Supplier is deemed to declare that it or its Affiliated Persons have no such convictions.

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(iii) Conflicts of Interest or Unfair Advantage

Potential Conflicts of Interest and unfair advantages include:

- (A) engaging current or former Toronto Zoo employees or public office holders to take any part in the preparation of the Bid or the performance of the contract if awarded, any time within two (2) years of such individuals having left the employ or public office of the Toronto Zoo;
- (B) engaging any family members, friends or private business associates of any public office holder which may have, or appear to have, any influence on the procurement process, or subsequent performance of the contract;
- (C) prior involvement by the Supplier or Affiliated Persons in developing the technical specifications or other evaluation criteria for the RFT;
- (D) prior access to confidential Toronto Zoo information by the Supplier, or Affiliated Persons, that is materially related to the RFT and that was not readily accessible to other prospective Suppliers;  
or



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<b>IRREGULARITIES</b>	<b>ACTION</b>
Late Response	Automatic rejection and not read publicly.
Unsealed Envelopes	Automatic rejection.
Insufficient Financial Security (No deposit or bid bond or agreement to bond or insufficient deposit or bid bond or agreement to bond).	Automatic rejection.
Response not completed in non-erasable medium and signed in ink.	Automatic rejection.
Incomplete Response	Automatic rejection unless, in the opinion of the Purchasing Agent, the incomplete nature is trivial or insignificant.
Qualified Response (qualified or restricted by an attached statement, unless allowed for), the qualification or restriction is trivial or not significant.	Automatic rejection unless, in the opinion of the Purchasing Agent the incomplete nature is trivial or insignificant.
Response received on documents other than those provided by the Toronto Zoo.	Automatic rejection unless, in the opinion of the Purchasing Agent, the matter is trivial or insignificant.
<p>Execution of Bid Bond (Financial Security)</p> <ul style="list-style-type: none"> <li>- Corporate Seal or signature of bidder missing.</li> <li>- Both corporate seal and signature of the bidder missing.</li> <li>Corporate seal or signature of authorized agents of bonding company missing.</li> </ul>	<p>Two (2) business days to correct.</p> <p>Automatic rejection.</p> <p>Automatic rejection.</p>
Other Bid Security – Uncertified Cheque	Automatic rejection.
<p>Documents – Execution</p> <ul style="list-style-type: none"> <li>- Corporate seal or signature missing.</li> <li>- Corporate seal and signature missing.</li> </ul>	<p>Two (2) business days to correct.</p> <p>Automatic rejection.</p>
<p>Erasures, Overwriting or Strike-Outs which are not Initialed:</p> <p>Uninitialed changes to response which are minor (example: the respondent’s address is amended by over-writing but not initiated).</p>	<p>Two (2) business days to initial.</p> <p>Two (2) business days to initial.</p>

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**PART 4- SUBMISSION FORMS**

<p>Unit prices have been changed but not initialed and the contract totals are consistent with the price as amended.</p> <p>Unit prices have been changed but not initialed and the contract totals are not consistent with the price as amended.</p>	<p>Automatic rejection.</p>
<p>Minor Irregularities</p>	<p>The Purchasing Agent shall have the authority to waive irregularities deemed to be minor.</p>

(a) **Declaration of Compliance with the City’s Fair Wage** By completing this Bid Submission Form, the Supplier declares that the Supplier and its proposed Subcontractors agree to abide by the City’s as applicable.

(b) **Declaration of Compliance with Accessible Customer Service Training Requirements**

By completing this Bid Submission Form, the Supplier declares that the Supplier and its proposed Subcontractors agree to comply with the Toronto Zoo’s [Accessible Customer Service Training Requirements](#).

YES \_\_\_\_\_ NO \_\_\_\_\_

If yes, the Supplier confirms the following brief statement of the environmental benefit of the product/service:

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(c) **The Toronto Zoo Contractor Performance Evaluation**

The Toronto Zoo follows a Contractor Performance Evaluation procedure which provides guidance to Toronto Zoo staff on creating and maintaining an evaluative record of a Contractor’s performance on Toronto Zoo projects for the purpose of Contract management and future purchasing decisions.

(d) **Disclosure of Information**

The Supplier hereby agrees that any information provided in this Bid, even if it is identified as being supplied in confidence, may be disclosed in accordance with the terms or the RFT or where required by law or by order of a court or tribunal.

**APPENDIX I- PROJECT EXPERIENCE FORM**

The bid must include Project Experience Form(s). Please include details of a minimum of three (3) and no more than five (5) projects within the last five (5) years where the bidder was the lead contractor and the work was similar in scope and/or size as the project described in the Bid Documents. **Do not include the Toronto Zoo as a named reference.**

<b>Project/Contract:</b>	
<b>Start Date:</b>	<b>End Date:</b>
<b>Completed on Schedule: Yes or No</b>	
<b>Contract Value (CDN dollars)</b>	<b>\$</b>
<b>Owner:</b>	
<b>Address/Location:</b>	
<b>Names of Key Personnel assigned and Subcontractors</b>	
<b>PROJECT DETAILS:</b> Scope of the Work, Contingency Planning, Challenges Overcome, electrical, mechanical, structural, access to materials, e.g. project management, etc.:	
<b>REFERENCE:</b> Name, Title, Telephone, Email	

**TZC T 04 2020-02 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS**  
**PART 4- SUBMISSION FORMS**

**APPENDIX II – LIST OF SUBCONTRACTORS FORM**

Pursuant to Section 1.9.5 (List of Subcontractors Form), the Supplier shall provide each Subcontractor’s and the Work type the Subcontractor is expected to perform in the table below or indicate “OWN FORCES” in the “Subcontractor Name” column if a Subcontractor will not be used for the Work type indicated. The names of all Subcontractors to be used for each Work type indicated must be provided.

The Supplier submits that in proposing the under mentioned subcontractors, the Supplier has consulted each and have ascertained to our completed satisfaction that those names are fully acquainted with the extent and nature of the work and that they will execute their work with the requirements of the contract documents. The Toronto Zoo reserves the right to accept or reject any sub-contractor or persons named below.

Work or Services to be Performed	Name/Address	Company Contact & Tel #	Licence #	% of overall of Work to be performed by the Sub-Contractor



**TZC T 04 2020-02 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS**  
**PART 4- SUBMISSION FORMS**

**APPENDIX III - STATUTORY DECLARATION OF TENDERER**

*STATUTORY DECLARATION OF TENDERER*

\_\_\_\_\_  
CANADA ) IN THE MATTER of a Tender by\*  
PROVINCE OF ONTARIO )  
JUDICIAL DISTRICT OF YORK ) for  
)  
) INSTALLATION OF ELECTRIC VEHICLE  
TO WIT: ) CHARGING STATIONS  
) **TZC T 04-2020-02**  
)  
)  
\*\*I/We \_\_\_\_\_ the \_\_\_\_\_

\_\_\_\_\_ in the \_\_\_\_\_ of \_\_\_\_\_

DO SOLEMNLY DECLARE as follows:

If Tenderer is a corporation, **complete 1A** and strike out 1B and 1C.

If Tenderer is an individual carrying on business under firm name, **complete 1B** and strike out 1A and 1C.

If Tenderer is a partnership, **complete 1C** and strike out 1A and 1B

- ) 1A. I am (state "President", "Secretary", or  
) as the case may be)  
)  
) of the Tenderer above referred to.  
)  
\_\_\_\_\_
- ) 1B. I am the Tenderer above referred to,  
) and there is no other person  
) associated with me in partnership.  
)
- ) 1C. We are the Tenderers herein carrying on  
) business in Partnership, under the name of  
)  
) \_\_\_\_\_  
)  
) and we are the only members of such  
) partnership.  
)

---

**TZC T 04 2020-02 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS**  
**PART 4- SUBMISSION FORMS**

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**\*\*I/We** have carefully read through the attached Tender Form and to the best of my/our\*\* information, knowledge and belief the several matters stated in the said Form are in all respects correct and true.

---

\* Insert Tenderer's name

\*\* Delete inapplicable word

3. \*I AM/WE ARE, each of the full age of eighteen years or over.

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

\*(SEVERALLY) DECLARED before me        )  
  )  
at the    of        )  
in the    )  
  )  
this        day of                            , 2020.    )  
  )  
  )

A Commissioner, etc.

*NOTE:*

This Declaration must be sworn before a Notary Public or other Commissioner for Oaths.

---

\* Delete inapplicable word

**APPENDIX IV - BID BOND**

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Bond No. \_\_\_\_\_

Amount: 10% of net contract amount

KNOW ALL MEN BY THESE PRESENTS, that

as Principal, hereinafter called "the Principal", and

as Surety, hereinafter called the Surety, are held and firmly bound unto the Board of Management of the Toronto Zoo as Obligee, each in the amount of

Dollars (\$ \_\_\_\_\_) lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal submitted a written Tender (hereinafter called "the Tender") to the Obligee dated the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, for \_\_\_\_\_ at \_\_\_\_\_ in the \_\_\_\_\_ in the City of Toronto (hereinafter called "the Work"),

NOW THEREFORE THE CONDITION OF THIS OBLIGATION is such that if, on acceptance of the Tender in accordance with the terms and conditions of the Tender within 90 days from the closing date of the call for Tenders, the Principal shall, within the time required, enter into a formal contract and give good and sufficient bonds to secure the performance of the Work under the terms and conditions of the contract and the payment of its obligations thereunder for all labour, materials and services used or reasonably required for use in the performance of same, then this obligation shall be null and void; otherwise the Principal and Surety will pay unto the Obligee the difference in money between the amount of the price set out in the Tender and the amount for which the Obligee legally contracts with another party to perform the Work if the latter amount be in excess of the former.

The Surety shall not be liable for a greater sum than the specified penalty of this Bond. Any suit under this Bond must be instituted before the expiration of six months from the date of this Bond.

AND IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable as principal and that nothing of any kind or matter whatsoever that will not discharge the Principal, shall operate as a discharge or release of liability of the Surety, any law or usage relating to the liability of sureties to the contrary notwithstanding.

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**TZC T 04 2020-02 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS**  
**PART 4- SUBMISSION FORMS**

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IN TESTIMONY WHEREOF, the Principal has duly executed these presents under seal, and the Surety has caused these presents to be seated with its corporate seal duly attested by the signatures of its duly authorized officers, this \_\_\_\_ day of \_\_\_\_\_, A.D. 2020.

SIGNED, SEALED AND DELIVERED  
in the presence of:

) \*  
)  
)  
)  
)  
) \_\_\_\_\_  
)  
)  
)  
) \_\_\_\_\_  
) \*\*  
)  
)  
)  
) \_\_\_\_\_  
)  
)  
)  
)  
)  
)  
\_\_\_\_\_

**NOTE:**

The NOTE on the signing page of the Tender Form applies equally to execution of this Bond.

---

\* Type or print name of Principal here  
\*\* Type name of Surety here

---

**TZC T 04 2020-02 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS**  
**PART 4- SUBMISSION FORMS**

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**APPENDIX V - AGREEMENT TO BOND**

(to be attached to and to form part of Bid Bond)

\_\_\_\_\_

We, the undersigned, the Surety on the attached Bid Bond hereby undertake and agree with the Board of Management of the Toronto Zoo as Obligee if our Principal's Tender is accepted by you to become bound as Surety for our Principal

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

(Name of Tenderer)

of \_\_\_\_\_

(Place)

the Tenderer to you by Tender Form dated \_\_\_\_\_

for \_\_\_\_\_

(hereinafter \_\_\_\_\_

(Description of work)  
(called "the Work")

in an amount equal to Fifty Per Cent (50%) of the Contract Price for the due and proper performance of the Work as shown and described in the Contract between the Obligee and our Principal for the Work, including a period of maintenance of one (1) year after the final completion of the Work and, in addition, in an equal amount for the due and proper payment of those having direct contracts with our Principal for labour, material and/or services for the Contract Work, removal of registered lien claims and certificates of action from the title to the lands on which the Work is performed and full reimbursement of the Obligee for all liability and payments to such persons in connection with the Contract, such performance and payment bonds both to be in the forms indicated by the Obligee in the Tender documents.

It is a condition that this Agreement shall become null and void if the bonds mentioned above are not required from our Principal within ninety (90) days of the award of the Contract to our Principal.

**TZC T 04 2020-02 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS**  
**PART 4- SUBMISSION FORMS**

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In witness whereof we have hereunto affixed our Corporate Seal, testified by the hand(s) of the proper officer in that behalf.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2020.  
(name of Surety)  
(Address of Local Office)

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**TZC T 04-2020-02 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS  
PART 5- PRICING FORMS**

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**Tender Pricing Form Submission**

Complete and return this section Part 5- *Form of Tender* including Appendices I to XII

Project/Contract:           INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS

Project/Contract No.:      TZC T 04-2020-02

OWNER:                      TORONTO ZOO

I/We, the undersigned have received, allowed for and included as part of our submission all issued Addendum numbered \_\_\_\_\_.

This form must be completed, properly signed and received on or before the date and time specified or your submission will not be considered. Quoted prices shall remain in effect for a period of ninety (90) days from the stipulated closing date.

The Board of Management of the Toronto Zoo reserves the right to reject any or all Quotations or to accept any Quotation, should it deem such action to be in its interests.

By signing and submitting this FORM, you are agreeing to the release of your quotation information, as deemed necessary by the Board, in order to conduct business associated with this quotation or project.

I/We, the undersigned, **having the authority to bind the Company**, certify, that I/we have examined the Instruction to Bidders, Construction Agreement and General Conditions, Specifications, Scope of Work, Drawings and Form of Tender, do hereby offer and agree to enter into an agreement with The Toronto Zoo, to install electric vehicle charging stations as described herein for a Total Tender Price, including HST in Canadian funds, equal to the total of the amounts in the following clauses (A) to (B).

THIS TENDER is submitted by

PLEASE  
USE INK

\_\_\_\_\_  
Name of Firm

\_\_\_\_\_  
Address

\_\_\_\_\_  
Postal Code

\_\_\_\_\_  
Telephone Number

\_\_\_\_\_  
Fax Number



2020-02-14

**TZC T 04-2020-02 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS  
PART 5- PRICING FORMS**

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\_\_\_\_\_  
Name and Signature of Authorized Signing Officer for Firm

\_\_\_\_\_  
Title of Authorized Signing Officer for Firm

\_\_\_\_\_  
Name and Title of Project Contact Person

\_\_\_\_\_  
Email and fax # of Project Contact person



**TZC T 04-2020-02 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS  
PART 5- PRICING FORMS**

**FORM OF TOTAL TENDER PRICE**

**(A) PRICE of *TENDER*, which excludes HST is:**

\_\_\_\_\_   
 In lawful money of Canada. (State in writing)

\$ \_\_\_\_\_   
 (State in numbers)

**(B) PRICE of HST of (13 %) payable by the Owner to the Contractor**

\_\_\_\_\_   
 In lawful money of Canada. (State in writing)

\$ \_\_\_\_\_   
 (State in numbers)

**(C) TOTAL TENDER PRICE, which includes the Tender (A) and HST (B) price is:**

\_\_\_\_\_   
 In lawful money of Canada. (State in writing)

\$ \_\_\_\_\_   
 (State in numbers)

DISCOUNT	Discount and/or Other	Days
Discount allowed for prompt payment and period within which invoice must be paid to qualify.	%	
<b>Charity Status:</b> The Toronto Zoo is a registered charitable organization (registration #BN 119216398RR0001) and accordingly may be eligible for preferred pricing which should be reflected in the Quotation as submitted.		

**TZC T 04-2020-02 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS  
PART 5– PRICING FORMS**

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The following appendix(s) must be completed and returned with the tender submission. (“Not applicable” indicated where completion of a section is not required.)

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<b>Appendix I</b>	<b>Schedule of Values</b>
<b>Appendix II</b>	<b>Unit Prices</b>
<b>Appendix III</b>	<b>Additional Prices</b>
<b>Appendix IV</b>	<b>Alternative Prices – Not Applicable</b>
<b>Appendix V</b>	<b>Unsolicited Prices</b>

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**TZC T 04-2020-02 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS  
PART 5- PRICING FORMS**

**APPENDIX I- SCHEDULE OF VALUES** (Due 24 hours after stipulated closing date)

(**included** in Total Tender Price)

All prices are to include the supply and installation of all labour, material, taxes (excluding Harmonized Sales Tax), charges, payroll, burden, and profit, and would be deducted from the Tender Price should the specified work be excluded from the contract work.

ITEM	DESCRIPTION	PRICE
------	-------------	-------

1.	Mobilization	\$
2.	Removal and disposal of existing transformer.	\$
3.	Installation of base price 21 charging stations including associated wiring from panel, mounting post, bollard, signage, and footings.	\$
4.	Installation of base price transformers and distribution panel including concrete pad, transformer vault lid and fencing.	\$
5.	Supply & installation of 650' of cabling between transformers including final termination.	\$
6.	Demobilization	\$
	<b>Total Bulk Tender Price*</b>	<b>\$</b>

\*\*The sum of the amounts shown in the Schedule of Values above should equal the Total Tender Price stipulated in Item (A) provided in the Form of Total Tender Price.

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**TZC T 04-2020-02 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS  
PART 5- PRICING FORMS**

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**APPENDIX II - UNIT PRICES** (Due 24 hours after stipulated closing date)

All prices are to include the supply and installation of all labour, material, charges, taxes (excluding Harmonized Sales Tax), payroll, burden and profit.

<b>ITEM</b>	<b>UNIT</b>	<b>ADD</b>	<b>DEDUCT</b>
Installation of cabling between transformers	lm	\$	\$

**TZC T 04-2020-02 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS  
PART 5- PRICING FORMS**

**APPENDIX III - ADDITIONAL PRICES** (Due 24 hours after stipulated closing date)

(**not included** in Total Tender Price)

All prices are to include the supply and installation of all labour, material, taxes (excluding Harmonized Sales Tax), charges, payroll, burden and profit.

ITEM	DESCRIPTION	PRICE
1.	Supply & installation of <b>sub panel</b> for 9 additional charging stations including cabling to distribution panel, all required breakers for the sub-panel and for the charging stations.	\$ _____ Increase
2.	Installation of <b>two additional chargers</b> near the sub-panel location. <b>Chargers to be mounted on one post with one bollard.</b> Cost to include associated cabling, installation, termination, mounting post, and signage.	\$ _____ Increase
3.	Installation of <b>two additional chargers</b> near the sub-panel location. <b>Chargers to be mounted on one post with two bollards.</b> Cost to include associated cabling, installation, termination, mounting post, and signage.	\$ _____ Increase
4.	Installation of <b>one additional charger</b> near the sub-panel location. <b>Charger to be mounted on one post with one bollard.</b> Cost to include associated cabling, installation, termination, mounting post, and signage.	\$ _____ Increase

\* For each item, insert amount in the appropriate column to indicate whether the price change will result in an increase in, or a reduction of, the Total Tender Price.

**TZC T 04-2020-02 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS  
PART 5- PRICING FORMS**

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**APPENDIX IV- ALTERNATIVE PRICES – NOT APPLICABLE**

(**not included** in Total Tender Price)

All prices are to include the supply and installation of all labour, material, taxes (excluding Harmonized Sales Tax), charges, payroll, burden and profit.

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<b>Item</b>	<b>Description</b>	<b>Increase or Reduction From Total Tender Price</b>
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\* For each item, insert amount in the appropriate column to indicate whether the price change will result in an increase in, or a reduction of, the Total Tender Price.

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**APPENDIX V - \*UNSOLICITED ALTERNATIVES** (Due 24 hours after stipulated closing date IF APPLICABLE)  
(prices not used for Total Tender Price)

All alternatives must conform to the requirements of Section 01 25 00 – Product Substitution Procedures.

All prices are to include the supply and installation of all labour, material, taxes (including Harmonized Sales Tax), charges, payroll, burden and profit.

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Number of Item	Description of Item	Change in Total Tender Price Substituted in Work	
		Increase	Reduction

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