

2020-02-28

**Request for Tender for
INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS****TZC T 04-2020-02****ADDENDUM 2**

This addendum shall be incorporated into, and form part of TZC T 04-2020-02 and take precedence over all requirements of the previously issued bid documents including plans. This addendum must be signed by the bidder (signing officer) in the appropriate space and must be attached to the form for submission by the bidder. This addendum consists of **FIVE (5)** page(s) and the documents listed below.

1. REVISED CLOSING DATE:Tuesday, March 10th, 2020 at 12:00 noon.**2. ADD DRAWING:**

A0.00 – Site Servicing Plan

3. DELETE DRAWINGS:

ST-802 – Site Fencing Details

ST-803 – Site Details

SK-02 – Charger Locations

REPLACE WITH:

SK-02 – REV1 – Charger Locations

4. QUESTION:

As per the scope of work, Contractor is to change the fusing if required. On the Site visit we did not look at the High Voltage Room. Please advise if this fuse is to be changed? Please provide Manufacturer & size?

ANSWER:

The Toronto Zoo has provided a cash allowance for this work. Please see revised pricing forms attached to the addendum.

The existing fuse is an S&C switch, model SM-5, fuse # 134025R1, size 15E, 38KV rated.

5. QUESTION:

The 650' of cable to be installed from the 100KVA 16KV (zoo supplied) transformer to the 250KVA transformer is to be of what type of cable?

ANSWER:

The successful bidder is required to determine the type of cable required to meet code. Note that this feed will be 16,000V.

6. QUESTION:

Is the existing transformer vault capable of holding the new (zoo supplied) 100KVA 16KV transformer once an engineered concrete lid is put in place?

ANSWER:

The Toronto Zoo has replaced several transformers on site using this method. For this reason, we expect that the existing transformer vault is capable of holding the new transformer.

7. QUESTION:

What size Distribution panel is required for the 21 Charging stations? Also the size of the sub-panel?

ANSWER:

The distribution panel is to be sized according to available capacity as determined by the successful contractor.

8. QUESTION:

Is there an Arborist on site to remove any trees if needed?

ANSWER:

The Zoo would like to avoid tree removal for any trees >10cm DBH. If tree removal is required, this would be the responsibility of the successful bidder.

9. QUESTION:

A sample for the mud bank finish is required. What is the mud bank finish?

ANSWER:

Delete: Part 3 – Scope Item 2.0.2 *“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.”*

Replace With: Part 3 – Scope Item 2.0.2 *“Provide samples, mock-ups, etc. as required to the Project Team.”*

10. QUESTION:

Has the Toronto Zoo scanned the hill north of the charging locations to show where the existing water service & fire hydrant pipes are exactly located?

ANSWER:

The Toronto Zoo will complete locates for the project before work begins. Please see the attached A0.00 - Site Services Plan.

11. QUESTION:

At the site meeting Ben advised a site services plan was to be included in an addendum? Please provide.

ANSWER:

Please see the attached A0.00 - Site Services Plan.

12. QUESTION:

Can the Zoo road be closed to complete this work?

ANSWER:

The contractor may close half of the road at a time, but shall not close the road completely. If construction is occurring on the road, the contractor will be responsible to provide signage, barriers etc. as required for safety.

13. QUESTION:

Will there be enough length of existing cables in the existing transformer vault to connect to new transformer once it has been placed on the engineered lid?

ANSWER:

Yes, for the purpose of this tender, assume that there is sufficient cable available.

14. QUESTION:

Please confirm if electrical drawings and specifications will be issued.

ANSWER:

No, the Zoo is not issuing electrical drawings and specifications. The contractor is responsible to complete all work to code and is responsible to obtain an ESA permit and inspection.

15. QUESTION:

Please confirm where the fencing is to be installed.

ANSWER:

See revised Part 3 – Scope attached. The fencing has been deleted from the scope of work.

16. QUESTION:

Please confirm fusing at main switch in admin building high voltage room.

ANSWER:

See response to question #4.

17. QUESTION:

Please confirm the primary and secondary size of the transformer (100KVA loop fed transformer on existing transformer).

ANSWER:

Primary size: 16,000V
Secondary size: 120/240V

18. QUESTION:

Please confirm primary and secondary size of the transformer (250KVA transformer on new concrete pad).

ANSWER:

Primary size: 16,000V
Secondary size: 120/240V

19. QUESTION:

Is this tender open to *union* electrical trades, or is available for *non-union* as well?

ANSWER:

It is open to union and non-union electrical trades however it would be applicable to the City of Toronto's fair wage policy.

20. QUESTION:

Could you please advise the transformer voltages supplied by the Zoo?

ANSWER:

See response to questions 17 & 18.

21. QUESTION:

For the new HV feed, is this to be O/H or U/G?

ANSWER:

The new HV feed is to be U/G.

22. QUESTION:

It should be noted that as the Tesla chargers exceed 60A, there is a requirement for local disconnect within sight, as you plan to install all the distribution behind a fence I doubt the inspector would accept this as "within sight".

ANSWER:

The fence has been deleted from the scope of work. Please install local disconnects within line of sight as required by code.

23. QUESTION:

Please confirm dimension of existing submersible transformer vault so we can price new custom lid, as well please advise if collar should be utilized to lift the pad mount up as existing sits in low area.

ANSWER:

Yes, the Toronto Zoo would like a 12" collar to lift the pad mount up higher.
The existing vault lid is 96" x 89".

24. QUESTION:

Clarification that contractor is responsible to extend from shed building communication cable.

ANSWER:

See revised Part 3 – Scope, Item 1.2.7.3 and revised SK-02 REV1.

25. QUESTION:

Clarification that each parking stall will require post sign, not one between each stall.

ANSWER:

See Part 3 – Scope item 1.2.8, and 1.16 "*Install signs (Zoo supplied) at all parking spaces to indicate EV charging only.*"

To clarify, the Zoo requires one sign to be installed per EV parking space.

26. QUESTION:

Which chargers will be power sharing with each other?

ANSWER:

Any chargers sharing one post to be set up to load share with each other. Chargers mounted on their own post will not load share.

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.

If you have any queries regarding this matter, please contact Mr. Peter Vasilopoulos, Supervisor, Purchasing & Supply, at 416-392-5916.

Yours truly,

Peter Vasilopoulos
Supervisor, Purchasing & Supply

I/we hereby acknowledge receipt of this addendum and make allowance in my bid.

Signed (Must be Signing Officer of Firm)

Name of Firm

Date

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. See cash allowance on pricing forms
 - 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. Feed 21 charging stations from this distribution panel.
 - 2.7. Install 21 charging stations (Zoo supplied) according to the attached installation instructions (13 Tesla specific, and 8 J1772 Universal):
 - 2.7.1. 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.
 - 2.7.2. 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.

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Part 3 – Scope – Addendum #2

2.7.3. One J1772 charger to be connected to existing internet network located in shed immediately to the west of the proposed EV parking spaces.

- 2.8. 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.

SEPARATE AND ADDITIONAL PRICING SCOPE:

13. Feed and install new sub-panel (panel to be Siemens or Square D Nema - 3R) from the distribution panel for nine additional charging stations.
14. Feed nine charging stations from this sub panel.
15. Install nine charging stations (Zoo supplied) according to the attached installation instructions (7 Tesla specific, and 2 J1772 Universal):
 - 15.1. 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.

15.2. 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.

16. 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.
10. Submit close out documents as requested. Include warranties and "As built" drawings.

3.0 SAFETY SPECIFICATIONS

1. It is the responsibility of the Contractor to protect the site as required during construction.

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Part 3 – Scope – Addendum #2

2. Ensure that awareness of public safety is considered and protect visitors in the 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.

PART 3 – DRAWINGS AND SPECIFICATIONS – ADDENDUM #2

TZC T 04-2020-01 – INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS

DRAWING LIST

A0.00 – SITE SERVICING PLAN (NEW)

SK-01 – SITE PLAN

SK-02 REV1 – CHARGER LOCATIONS

~~ST-802 – SITE FENCING DETAILS (DELETE)~~

~~ST-803 – SITE DETAILS (DELETE)~~

SPECIFICATIONS/SCOPE

- **SCOPE (REV FOR ADDENDUM #2)**
- INSTALLATION INSTRUCTIONS FOR TESLA GEN 2 CHARGERS
- INSTALLATION INSTRUCTIONS FOR GENERIC GEN 2 CHARGERS

LEGEND:

- COMMUNICATION
- IRRIGATION
- HIGH VOLTAGE
- HYDRO
- WATER
- GAS
- STORM
- SANITARY
- FIBRE OPTICS
- DUCT BANK ROUTING
- ▬ ROAD CROSSING/
CONCRETE ENCASED DUCTS
- ▬ DIRECTIONAL BORING
- POWER MANHOLE
- COMMUNICATIONS MANHOLE

N.V. EL



**361A OLD FINCH AVE.
TORONTO, ON
M1B 5K7**

| NO. | DESCRIPTION | DATE |
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SITE PLAN

APPROVED BY
NAME:

DATE:

**SITE SERVICES
ELECTRIC VEHICLE
CHARGING STATIONS**

PROJECT #: SITE PLAN

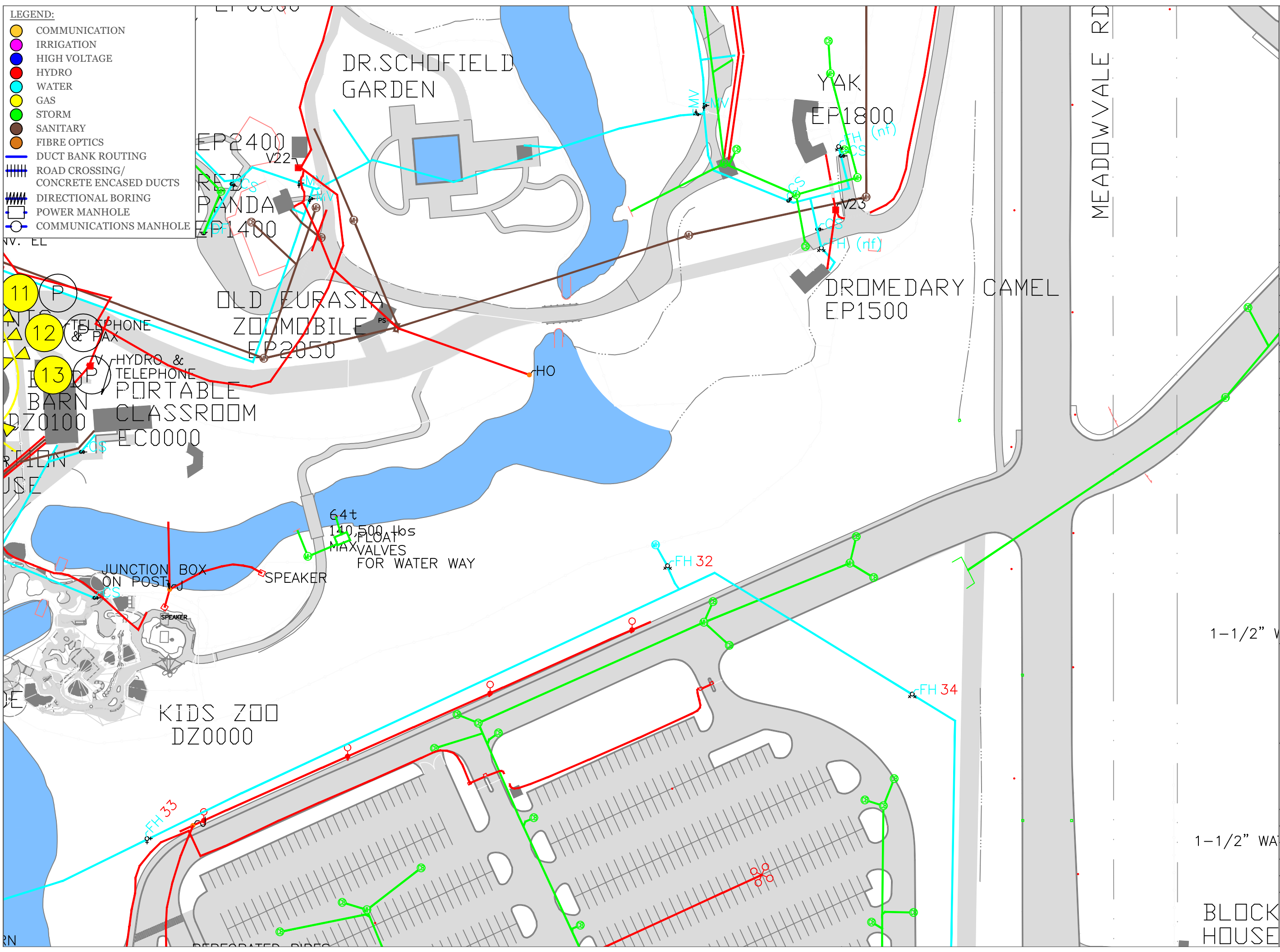
DRAWN BY: D.G.

CHECKED BY:

DATE: 2018.08.24

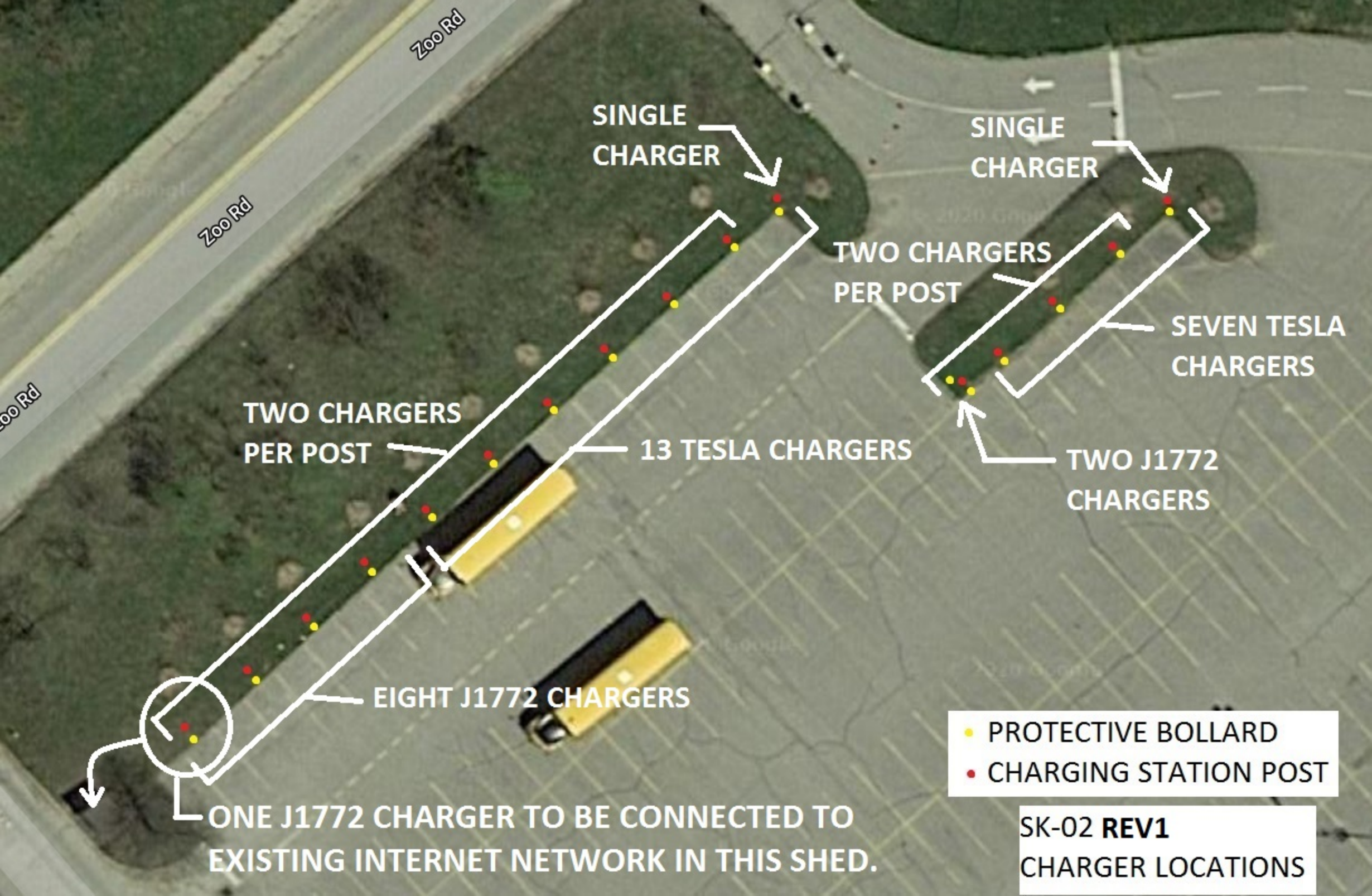
SCALE: NTS

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A0.00



1-1/2" V

1-1/2" WA



Zoo Rd

Zoo Rd

Zoo Rd

SINGLE CHARGER

SINGLE CHARGER

TWO CHARGERS PER POST

SEVEN TESLA CHARGERS

TWO CHARGERS PER POST

13 TESLA CHARGERS

TWO J1772 CHARGERS

EIGHT J1772 CHARGERS

ONE J1772 CHARGER TO BE CONNECTED TO EXISTING INTERNET NETWORK IN THIS SHED.

- PROTECTIVE BOLLARD
- CHARGING STATION POST

SK-02 REV1
CHARGER LOCATIONS

Tender Pricing Form Submission

Complete and return this section Part 4– *Form of Tender* including Appendices I to XII

Project/Contract: INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS

Project/Contract No.: TZC T 04-2020-01

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 04-2020-01 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS
PART 5- PRICING FORMS – ADDENDUM #2**

Name 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

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
DOLLARS**

_____ In lawful money of Canada. (State in writing)

\$ _____
(State in numbers)

**TOTAL TENDER PRICE, which includes the Tender (A) and HST (B) price is:
DOLLARS**

_____ 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. | % | |
| Charity Status: 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 04-2020-01 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS
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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.)

| | |
|---------------------|--|
| Appendix I | Schedule of Values |
| Appendix II | Unit Prices |
| Appendix III | Additional Prices |
| Appendix IV | Alternative Prices – Not Applicable |
| Appendix V | Unsolicited Prices |

**TZC T 04-2020-01 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS
PART 5- PRICING FORMS – ADDENDUM #2**

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 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 | \$ |
| 7. | Cash Allowance for fusing in Administration Building | \$ |
| | Total Bulk Tender Price* | \$ |

**TZC T 04-2020-01 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS
PART 5- PRICING FORMS – ADDENDUM #2**

*The sum of the amounts shown in the table above **should** equal the Total Tender Price stipulated in the space provided in the Form of Total Tender Price

**TZC T 04-2020-01 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS
PART 5- PRICING FORMS – ADDENDUM #2**

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.

| ITEM | UNIT | ADD | DEDUCT |
|--|-------------|------------|---------------|
| Installation of cabling between transformers | lm | \$ | \$ |
| | | | |

**TZC T 04-2020-01 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS
PART 5- PRICING FORMS – ADDENDUM #2**

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 sub panel 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 two additional chargers near the sub-panel location. Chargers to be mounted on one post with one bollard. Cost to include associated cabling, installation, termination, mounting post, and signage. | \$ _____ Increase |
| 3. | Installation of two additional chargers near the sub-panel location. Chargers to be mounted on one post with two bollards. Cost to include associated cabling, installation, termination, mounting post, and signage. | \$ _____ Increase |
| 4. | Installation of one additional charger near the sub-panel location. Charger to be mounted on one post with one bollard. 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 04-2020-01 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS
PART 5- PRICING FORMS – ADDENDUM #2**

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.

| Item | Description | Increase or Reduction From Total Tender Price |
|-------------|--------------------|--|
|-------------|--------------------|--|

* 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 04-2020-01 INSTALLATION OF ELECTRIC VEHICLE CHARGING STATIONS
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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.

| Number of Item | Description of Item | Change in Total Tender Price Substituted in Work | |
|----------------|---------------------|--|-----------|
| | | Increase | Reduction |
