Statement of Work

Submitted by: Norman Clark
Department of State

Front Gate (1) Port-of-Spain JOB # 7584A

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1.0 OBJECTIVE.

1.1 Remove existing Delta model TT210 vehicle arrest system and replace with a new Delta model DSC720 vehicle arrest system.

2.0 BACKGROUND.

2.1 Ten plus years of service and environmental conditions have proven a degradation toll lending to costly mechanical failures thereby creating a need for replacement.

3.0 REQUIREMENTS.

3.1 Scope. The general scope of the project will be as follows;

Removal. (Old Barrier System)

3.1.1 The barrier system removal process shall consist of the following paragraphs as shown from 3.1.1 through 3.1.17. One (1) Delta model TT210 vehicle arrest system located at the front gate. Customer Number: 3915

3.1.2 Four (4) Delta model TT210 vehicle arrest bollards located at the front gate. Customer Number: 3915

3.1.3 Concrete foundation removal and disposal of all waste concrete, bollards(s), reinforcing steel rebar(s), PVC conduit piping, electrical wiring, and waste materials associated with the Delta model TT210 vehicle arrest system. Customer Number: 3915

3.1.4 All hydraulic lines, electrical wiring, and PVC conduit piping as connected underground from the Delta model TT210 vehicle arrest bollards and back to the hydraulic pumping unit. Customer Number: 3915

3.1.5 Hydraulic pumping unit, associated concrete foundation, and all hydraulic lines, electrical wiring, and PVC conduit piping

as connected underground and back to the Delta model TT210 vehicle arrest bollards. Customer Number: 3915

3.1.6 Enclosure that houses the hydraulic pumping unit. Customer Number: 3915

3.1.7 Vehicle Stop/Go signal light assemblies, associated concrete foundation, all electrical wiring, and PVC conduit piping as connected underground and back to the control circuits for the Delta model TT210 vehicle arrest system. Customer Number: 3915

3.1.8 Vehicle detector circuits, associated concrete foundation, all electrical wiring, and PVC conduit piping as connected underground and back to the control circuits for the Delta model TT210 vehicle arrest system. Customer Number: 3915

3.1.9 Vehicle barrier drainage water sump-pump system (See 3.2.16) including all associated electrical wiring and PVC conduit piping as connected underground from the Delta model TT210 vehicle arrest bollards and back to the sump-pump unit. Customer Number: 3915

3.1.10 Existing water drainage piping as required for the rerouting flow of water drainage through and/or around the vehicle barrier construction site. Customer Number: 3915

3.1.11 Existing fresh water piping as required for the rerouting of fresh water and piping through and/or around the vehicle barrier construction site. Customer Number: 3915

3.1.12 Existing gas piping (See 3.1.13) as required for the rerouting of gas and piping through and/or around the vehicle barrier construction site. Customer Number: 3915

3.1.13 Notice of Construction and/or Repair (See 6.1.21) for any gas line must be submitted to the local oil and gas commission before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local oil and gas commission. Customer Number: 3915

3.1.14 Electrical lines or wiring (See 3.1.15) as required for the rerouting of electrical lines or wiring through and/or around

the vehicle barrier construction site. Customer Number: 3915

3.1.15 Notice of Construction and/or Repair (See 6.1.22) for any electrical line must be submitted to the local electric co-op before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local electric co-op. Customer Number: 3915

3.1.16 The contractor shall provide for damage restoration improvements as associated with the vehicle arrest system removal process. Customer Number: 3915

3.1.17 The contractor shall identify and address any anomalies of concern. Customer Number: 3915

3.2 **Excavation. (New Barrier System)**

3.2.1 The barrier system excavation process shall consist of the following paragraphs as shown from 3.2.1 through 3.2.18. One (1) Delta model DSC720 vehicle arrest system located at the front gate. JOB # 7584A

3.2.2 Four (4) Delta model DSC720 vehicle arrest bollards located at the front gate. JOB # 7584A

3.2.3 All hydraulic lines, electrical wiring, and PVC conduit piping as required underground connecting from the Delta model DSC720 vehicle arrest bollards and back to the hydraulic pumping unit. JOB # 7584A

3.2.4 Hydraulic pumping unit. JOB # 7584A

3.2.5 All hydraulic lines, electrical wiring, and PVC conduit piping as required underground connecting from the hydraulic pumping unit and back to the DSC720 vehicle arrest bollards. JOB # 7584A

3.2.6 Enclosure that houses the hydraulic pumping unit. JOB # 7584A

3.2.7 Vehicle Stop/Go signal light assemblies, associated concrete foundation, all electrical wiring, and PVC conduit piping as connected underground and back to the control circuits for the Delta model DSC720 vehicle arrest system. JOB # 7584A

3.2.8 Vehicle detector circuits, associated concrete foundation, all electrical wiring, and PVC conduit piping as connected underground and back to the control circuits for the Delta model DSC720 vehicle arrest system. JOB # 7584A

3.2.9 Vehicle barrier water drainage sump-pump system to include the appropriate disposal of water to the nearest water drainage or sewer including all associated electrical wiring and PVC conduit piping as required underground and connecting from the Delta model DSC720 vehicle arrest bollards and back to the sump-pump and water drainage or sewer system. JOB # 7584A

3.2.10 Water drainage piping as required for the rerouting flow of water drainage through and/or around the vehicle barrier construction site. JOB # 7584A

3.2.11 Fresh water piping as required for the rerouting of fresh water and piping through and/or around the vehicle barrier construction site. JOB # 7584A

3.2.12 Gas piping (See 3.2.13) as required for the rerouting of gas and piping through and/or around the vehicle barrier construction site. JOB # 7584A

3.2.13 Notice of Construction and/or Repair (See 6.1.21) for any gas line must be submitted to the local oil and gas commission before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local oil and gas commission. JOB # 7584A

3.2.14 Electrical lines (See 3.2.15) or wiring as required for the rerouting of electrical lines or wiring through and/or around the vehicle barrier construction site. JOB # 7584A

3.2.15 Notice of Construction and/or Repair (See 6.1.22) for any electrical line must be submitted to the local electric co-op before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local electric co-op. JOB # 7584A

3.2.16 Sump-pump well as required for the installation of a sump-pump system. JOB # 7584A

3.2.17 The contractor shall provide for damage restoration improvements as associated with the vehicle arrest system excavation process. JOB # 7584A

3.2.18 The contractor shall identify and address any anomalies of concern. JOB # 7584A

3.3 **Installation. (New Barrier System)**

3.3.1 The barrier system installation process shall consist of the following paragraphs as shown from 3.3.1 through 3.3.19. One (1) Delta model DSC720 vehicle arrest system located at the front gate per manufacture instructions. JOB # 7584A

3.3.2 Four (4) Delta model DSC720 vehicle arrest bollards located at the front gate per manufacture instructions. JOB # 7584A

3.3.3 Delta model DSC720 installation to include the concrete foundation, reinforcing steel rebar, and aggregate materials, as required per manufacture instructions. JOB # 7584A

3.3.4 All new hydraulic lines, electrical wiring, and PVC conduit piping as required underground and connecting from the Delta model DSC720 vehicle arrest bollards and back to the hydraulic pumping unit per manufacture instructions. JOB # 7584A

3.3.5 Hydraulic pumping unit per manufacture instructions. JOB # 7584A

3.3.6 All hydraulic lines, electrical wiring, and PVC conduit piping as required underground connecting from the hydraulic pumping unit and back to the DSC720 vehicle arrest bollards per manufacture instructions. JOB # 7584A

3.3.7 Enclosure that houses the hydraulic pumping unit per manufacture instructions. JOB # 7584A

3.3.8 Vehicle Stop/Go signal light assemblies, associated concrete foundation, all electrical wiring, and PVC conduit piping as connected underground and back to the control circuits for the Delta model DSC720 vehicle arrest system per manufacture instructions. JOB # 7584A

3.3.9 Vehicle detector circuits, associated concrete foundation, all electrical wiring, and PVC conduit piping as connected

underground and back to the control circuits for the Delta model DSC720 vehicle arrest system per manufacture instructions. JOB # 7584A

3.3.10 Vehicle barrier drainage water sump-pump system to include the appropriate disposal of water to the nearest water drainage or sewer including all associated electrical wiring and PVC conduit piping as required underground and connecting from the Delta model DSC720 vehicle arrest bollards and back to the sump-pump and water drainage or sewer system. JOB # 7584A

3.3.11 Water drainage piping as required for the rerouting flow of drainage water through and/or around the vehicle barrier construction site. JOB # 7584A

3.3.12 Fresh water piping as required for the rerouting of fresh water and piping through and/or around the vehicle barrier construction site. JOB # 7584A

3.3.13 Gas piping (See 3.3.14) as required for the rerouting of gas and piping through and/or around the vehicle barrier construction site. JOB # 7584A

3.3.14 Notice of Construction and/or Repair (See 6.1.21) for any gas line must be submitted to the local oil and gas commission before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local oil and gas commission. JOB # 7584A

3.3.15 Electrical lines (See 3.3.16) or wiring as required for the rerouting of electrical lines or wiring through and/or around the vehicle barrier construction site. JOB # 7584A

3.3.16 Notice of Construction and/or Repair (See 6.1.22) for any electrical line must be submitted to the local electric co-op before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local electric co-op. JOB # 7584A

3.3.17 Sump-pump well as required for the installation of a sump-pump system. JOB # 7584A

3.3.18 The contractor shall provide for damage restoration improvements as associated with the vehicle arrest system installation process. JOB # 7584A

3.3.19 The contractor shall identify and address any anomalies of concern. JOB # 7584A

3.4 **Trucking & Equipment.**

3.4.1 The trucking and equipment process shall consist of the following paragraphs as shown from 3.4.1 through 3.4.9. The contractor shall provide for concrete mixer trucking and delivery of concrete as required for the installation of one (1) Delta model DSC720 vehicle arrest system to include the concrete foundation for the vehicle arrest bollards, hydraulic pumping unit and enclosure, vehicle detector circuits, the Stop/Go signal light assemblies, and the water sump-pump system as required for the installation project per manufacture instructions. JOB # 7584A

3.4.2 The contractor shall provide for the trucking and delivery of reinforcing steel rebar(s) as required for the installation of one (1) Delta model DSC720 vehicle arrest system to include the concrete foundation for the vehicle arrest bollards, hydraulic pumping unit, vehicle Stop/Go signal light assemblies, and water sump-pump system as required for the installation project per manufacture instructions. JOB # 7584A

3.4.3 The contractor shall provide for the trucking and delivery of aggregate materials as required for the installation of one (1) Delta model DSC720 vehicle arrest system to include the concrete foundation for the vehicle arrest bollards, hydraulic pumping unit, vehicle detector circuits, the Stop/Go signal light assemblies, and the water sump-pump system as required for the installation project per manufacture instructions. JOB # 7584A

3.4.4 The contractor shall provide for the rental and/or use of all heavy duty equipment (i.e., forklift, front loader, excavator with hoe ram and bucket attachments) and/or other equipment as required for the removal and installation process to include the concrete foundation, reinforcing steel rebar and excavation necessary to the installation project per manufacture instructions. JOB # 7584A

3.4.5 The contractor shall provide as required for the rental and/or use, pickup and delivery of a dumpster(s) as necessary to the project cleanup and waste removal. JOB # 7584A

3.4.6 The contractor shall provide for a vehicle arrest barrier(s) as required to ensure construction site security. The arrest barrier(s) must be approved by the Post RSO or PSO. JOB # 7584A

3.4.7 The contractor shall provide for pedestrian fencing and/or netting as required for pedestrian safety and access control. JOB # 7584A

3.4.8 The contractor shall provide for a construction site portable restroom as required for contractor personnel. JOB # 7584A

3.4.9 The contractor shall identify and address any anomalies of concern. JOB # 7584A

3.5 **Tasks. (Remove)**

3.5.1 The contractor shall remove one (1) Delta model TT210 vehicle arrest system located at the front gate. Customer Number: 3915

3.5.2 The contractor shall remove four (4) Delta model TT210 vehicle arrest bollards located at the front gate. Customer Number: 3915

3.5.3 The contractor shall remove the concrete foundation, reinforcing steel rebar(s), aggregate material, all hydraulic lines, electrical wiring, and conduit piping as required underground connecting from the Delta model TT210 vehicle arrest bollards and back to the hydraulic pumping unit. Customer Number: 3915

3.5.4 The contractor shall remove the hydraulic pumping unit, associated concrete foundation, reinforcing steel rebar(s), all hydraulic lines, electrical wiring, and conduit piping as required underground and connecting back to the Delta model TT210 vehicle arrest bollards. Customer Number: 3915

3.5.5 The contractor shall remove the enclosure that houses the hydraulic pumping unit. Customer Number: 3915

3.5.6 The contractor shall remove the vehicle Stop/Go signal light assemblies, associated concrete foundation, all electrical wiring, and PVC conduit piping as connected underground and back to the control circuits for the Delta model TT210 vehicle arrest system. Customer Number: 3915

3.5.7 The contractor shall remove the vehicle detector circuits, associated concrete foundation, all electrical wiring, and PVC conduit piping as connected underground and back to the control circuits for the Delta model TT210 vehicle arrest system. Customer Number: 3915

3.5.8 The contractor shall remove the vehicle barrier water drainage sump-pump system including all associated electrical wiring and PVC conduit piping as connected underground and back to the Delta model TT210 vehicle arrest bollards. Customer Number: 3915

3.5.9 The contractor shall remove water drainage piping as required for the rerouting flow of drainage water through and/or around the vehicle barrier construction site. Customer Number: 3915

3.5.10 The contractor shall remove fresh water piping as required for the rerouting of fresh water and piping through and/or around the vehicle barrier construction site. Customer Number: 3915

3.5.11 The contractor shall remove gas piping (See 3.5.12) as required for the rerouting of gas and piping through and/or around the vehicle barrier construction site. Customer Number: 3915

3.5.12 Notice of Construction and/or Repair (See 6.1.21) for any gas line must be submitted to the local oil and gas commission before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local oil and gas commission. Customer Number: 3915

3.5.13 The contractor shall remove electrical lines (See 3.5.14) or wiring as required for the rerouting of electrical lines or wiring through and/or around the vehicle barrier construction site. Customer Number: 3915

3.5.14 Notice of Construction and/or Repair (See 6.1.22) for any electrical line must be submitted to the local electric co-op before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local electric co-op. Customer Number: 3915

3.5.15 The contractor shall identify and address any anomalies of concern. Customer Number: 3915

3.6 **Tasks. (Install)**

3.6.1 The contractor shall install one (1) Delta model DSC720 vehicle arrest system located at the front gate as required per manufacture instructions. JOB # 7584A

3.6.2 The contractor shall install four (4) Delta model DSC720 vehicle arrest bollards located at the front gate as required per manufacture instructions. JOB # 7584A

3.6.3 The contractor shall install as required for the Delta model DSC720 installation a concrete foundation, reinforcing steel rebar(s), and aggregate materials, as required per manufacture instructions. JOB # 7584A

3.6.4 The contractor shall install all hydraulic lines, electrical wiring, and PVC conduit piping as required underground connecting from the Delta model DSC720 vehicle arrest bollards and back to the hydraulic pumping unit per manufacture instructions. JOB # 7584A

3.6.5 The contractor shall install all hydraulic lines, electrical wiring, and PVC conduit piping as required underground connecting from the hydraulic pumping unit and back to the DSC720 vehicle arrest bollards per manufacture instructions. JOB # 7584A

3.6.6 The contractor shall install the hydraulic pumping unit and all associated wiring and PVC conduit piping per manufacture instructions. JOB # 7584A

3.6.7 The contractor shall install the enclosure that houses the hydraulic pumping unit per manufacture instructions. JOB # 7584A

3.6.8 The contractor shall install the vehicle Stop/Go signal light assemblies, associated concrete foundation, all electrical

wiring, and PVC conduit piping as connected underground and back to the control circuits for the Delta model DSC720 vehicle arrest system per manufacture instructions. JOB # 7584A

3.6.9 The contractor shall install the vehicle detector circuits, associated concrete foundation, all electrical wiring, and PVC conduit piping as connected underground and back to the control circuits for the Delta model DSC720 vehicle arrest system per manufacture instructions. JOB # 7584A

3.6.10 The contractor shall install the vehicle barrier water drainage sump-pump system to include the appropriate disposal of water to the nearest water drainage or sewer including all associated electrical wiring and PVC conduit piping as required underground and connecting from the Delta model DSC720 vehicle arrest bollards and back to the sump-pump and water drainage or sewer system. JOB # 7584A

3.6.11 The contractor shall install water drainage piping as required for the rerouting flow of water drainage through and/or around the vehicle barrier construction site. JOB # 7584A

3.6.12 The contractor shall install fresh water piping as required for the rerouting of fresh water and piping through and/or around the vehicle barrier construction site. JOB # 7584A

3.6.13 The contractor shall install gas piping (See 3.6.14) as required for the rerouting of gas and piping through and/or around the vehicle barrier construction site. JOB # 7584A

3.6.14 Notice of Construction and/or Repair (See 6.1.21) for any gas line must be submitted to the local oil and gas commission before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local oil and gas commission. JOB # 7584A

3.6.15 The contractor shall install electrical lines (See 3.6.16) or wiring as required for the rerouting of electrical lines or wiring through and/or around the vehicle barrier construction site. JOB # 7584A

3.6.16 Notice of Construction and/or Repair (See 6.1.22) for any electrical line must be submitted to the local electric co-op before the start of any construction or repairs. Construction

and/or repairs must be under the authority and supervision of the local electric co-op. JOB # 7584A

3.6.17 The contractor shall install a sump-pump well as required for the installation of a sump-pump system. JOB # 7584A

3.6.18 The contractor shall identify and address any anomalies of concern. JOB # 7584A

3.7 **Tasks. (Waste Disposal)**

3.7.1 The contractor shall remove and dispose of all waste materials including concrete, aggregate materials, reinforcing steel rebar(s), bollard(s), conduit piping, and all electrical wiring associated with the removal and installation process pertaining to the Delta model TT210, and the Delta model DSC720 vehicle arrest bollards to include associated system parts. JOB # 7584A

3.7.2 The contractor shall identify and address any anomalies of concern. JOB # 7584A

4.0 GOVERNMENT FURNISHED EQUIPMENT AND MATERIALS.

4.1 The government will provide the following;

4.1.1 The government will provide the Delta model DSC720 vehicle arrest barricade(s). JOB # 7584A

4.1.2 The government will provide the Delta control panel(s). JOB # 7584A

4.1.3 The government will provide the Delta hydraulic power unit(s). (HPU) JOB # 7584A

4.1.4 The government will provide the Delta enclosure(s), (for the hydraulic pumping unit(s)). JOB # 7584A

4.1.5 The government will provide the Delta Stop/Go signal assemblies. JOB # 7584A

4.1.6 The government will provide the vehicle detector circuit(s). JOB # 7584A

4.1.7 The government will provide the sump-pump unit(s). JOB # 7584A

4.1.8 The government will provide the hydraulic oil. 46 Grade JOB # 7584A

4.1.9 The government will provide the dry nitrogen, 2000 PSI JOB # 7584A

4.1.10 The government will provide the spray paint, safety yellow JOB # 7584A

4.1.11 The government will provide the spray paint, gloss black JOB # 7584A

4.1.12 The government will provide all of the hydraulic hoses, hose fittings, PVC/EMT conduit, conduit fittings, water drainage piping, fresh water piping, gas piping, HPU electrical wiring, control wiring, biodegradable grease cleaner, and miscellaneous parts associated with the installation. JOB # 7584A

4.1.13 The contractor shall identify and address any anomalies of concern. JOB # 7584A

5.0 CONTRACTOR FURNISHED EQUIPMENT AND MATERIALS.

5.1 The contractor shall provide the following;

5.1.1 The contractor shall provide all concrete required for the foundation installation of the Delta model DSC720 vehicle bollard(s) per manufacture instructions. JOB # 7584A

5.1.2 The contractor shall provide all concrete required for the foundation installation of the hydraulic pumping unit to include the enclosure that houses the hydraulic pumping unit per manufacture instructions. JOB # 7584A

5.1.3 The contractor shall provide all concrete and aggregate materials required for the foundation installation of the vehicle detector circuits, and the Stop/Go signal light assemblies per manufacture instructions. JOB # 7584A

5.1.4 The contractor shall provide all concrete required for the foundation installation of the sump-pump system per manufacture instructions. JOB # 7584A

5.1.5 The contractor shall provide all concrete required for the foundation installation of the water drainage piping. JOB # 7584A

5.1.6 The contractor shall provide all concrete required for the foundation installation of the fresh water piping. JOB # 7584A

5.1.7 The contractor shall provide all concrete required for the foundation installation of the gas piping (See 5.1.8). JOB # 7584A

5.1.8 Notice of Construction and/or Repair (See 6.1.21) for any gas line must be submitted to the local oil and gas Commission before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local oil and gas commission. JOB # 7584A

5.1.9 The contractor shall provide all concrete required for the foundation installation of the electrical lines or wiring (See 5.1.10. JOB # 7584A

5.1.10 Notice of Construction and/or Repair (See 6.1.22) for any electrical line must be submitted to the local electric co-op before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local electric co-op. JOB # 7584A

5.1.11 The contractor shall provide all aggregate materials required for the foundation installation of the DSC720 vehicle bollard(s) per manufacture instructions. JOB # 7584A

5.1.12 The contractor shall provide all aggregate materials required for the foundation installation of the hydraulic pumping unit and enclosure that houses the hydraulic pumping unit per manufacture instructions. JOB # 7584A

5.1.13 The contractor shall provide all aggregate materials required for the foundation installation of the sump-pump unit per manufacture instructions. JOB # 7584A

5.1.14 The contractor shall provide all aggregate materials required for the foundation installation of the water drainage piping. JOB # 7584A

5.1.15 The contractor shall provide all aggregate materials required for the foundation installation of the fresh water piping. JOB # 7584A

5.1.16 The contractor shall provide all aggregate materials required for the foundation installation of the gas piping (See 5.1.17). JOB # 7584A

5.1.17 Notice of Construction and/or Repair (See 6.1.21) for any gas line must be submitted to the local oil and gas Commission before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local oil and gas commission. JOB # 7584A

5.1.18 The contractor shall provide all aggregate materials required for the foundation installation of the electrical lines or wiring (See 5.1.19). JOB # 7584A

5.1.19 Notice of Construction and/or Repair (See 6.1.22) for any electrical line must be submitted to the local electric co-op before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local electric co-op. JOB # 7584A

5.1.20 The contractor shall provide all reinforcing steel rebar(s) required for the foundation installation of the DSC720 vehicle bollard(s) per manufacture instructions. JOB # 7584A

5.1.21 The contractor shall provide all reinforcing steel rebar(s) required for the foundation installation of the hydraulic pumping unit and enclosure that houses the hydraulic pumping unit per manufacture instructions. JOB # 7584A

5.1.22 The contractor shall provide all reinforcing steel rebar(s) required for the foundation installation of the sump-pump unit per manufacture instructions. JOB # 7584A

5.1.23 The contractor shall provide all reinforcing steel rebar(s) required for the foundation installation of the water drainage piping. JOB # 7584A

5.1.24 The contractor shall provide all reinforcing steel rebar(s) required for the foundation installation of the fresh water piping. JOB # 7584A

5.1.25 The contractor shall provide all reinforcing steel rebar(s) required for the foundation installation of the gas piping (See 5.1.26). JOB # 7584A

5.1.26 Notice of Construction and/or Repair (See 6.1.21) for any gas line must be submitted to the local oil and gas Commission before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local oil and gas commission. JOB # 7584A

5.1.27 The contractor shall provide all reinforcing steel rebar(s) required for the foundation installation of the electrical lines or wiring (See 5.1.28). JOB # 7584A

5.1.28 Notice of Construction and/or Repair (See 6.1.22) for any electrical line must be submitted to the local electric co-op before the start of any construction or repairs. Construction and/or repairs must be under the authority and supervision of the local electric co-op. JOB # 7584A

5.1.29 The contractor shall provide a dumpster(s) as required for the cleanup and disposal of all waste materials. JOB # 7584A

5.1.30 The contractor shall provide all excavation and installation equipment required (i.e. forklift, front loader, excavator with hoe ram and bucket attachments, handheld breaker hammer, arc welding equipment, cutting torch, ground tamper, wheel barrow(s), powered saw for concrete cutting, steel rake(s), pick axe(s), flat head shovel(s), spade shovel(s), push broom(s), water hose w/spray attachments, pressure washer, large handheld grinder with cutoff and masonry wheels, electrical extension cord(s), concrete vibrator(s), chain slings, etc. JOB # 7584A

5.1.31 The contractor shall provide all excavation materials (i.e. masonry blocks, lumber for formwork, concrete to concrete expansion joints, plastic sheeting for concrete curing, string line, nails, expandable spray foam, etc.). JOB # 7584A

5.1.32 The contractor shall provide all small handheld tools, drills, drill bits, wrenches, screwdrivers, knockout hole punch set, hole saw kit, fish tape, handheld hydraulic oil fluid pump, large funnel spout, etc. as required for the installation project. JOB # 7584A

5.1.33 The contractor shall provide manhole covers as required for the project installation. The manhole covers shall meet or exceed a 25 ton load test capacity. JOB # 7584A

5.1.34 The contractor shall provide vehicle arrest barrier(s) as required to ensure construction site security. The arrest barrier(s) must be approved by the Post RSO or PSO. JOB # 7584A

5.1.35 The contractor shall provide pedestrian fencing and/or netting as required for pedestrian safety and access control. JOB # 7584A

5.1.36 The contractor shall provide a construction site Portable Restroom as required for contractor personnel. JOB # 7584A

5.1.37 The contractor shall identify and address any anomalies of concern. JOB # 7584A

6.0 CONTRACTOR RESPONSIBILITIES.

6.1 The contractor shall conform to the following;

6.1.1 The contractor shall conform to the manufacture guidelines and installation specifications. JOB # 7584A

6.1.2 The contractor shall verify and be responsible for all dimensions and conditions at the job site. JOB # 7584A

6.1.3 The contractor shall verify that the foundation concrete will be placed directly into neat excavations. And where sides of the excavation are not stable the contractor shall provide shoring. Type and method of shoring shall be at the contractor's option. JOB # 7584A

6.1.4 The contractor shall ensure the excavation is kept dry at all times. JOB # 7584A

6.1.5 The contractor shall ensure the concrete is laboratory designed, machine mixed, producing 3,000 PSI (20,68 MPA) at 28 days. JOB # 7584A

6.1.6 The contractor shall ensure the cement is tested Portland cement conforming to ASTM C150, Type II Only. JOB # 7584A

6.1.7 The contractor shall ensure the aggregates conform to ASTM C33 & B GRADE per standard specifications. Maximum size of aggregate shall be 1-1/2 inches (38mm). JOB # 7584A

6.1.8 The contractor shall ensure the reinforcing steel to be deformed bars conforming to ASTM A615, grade 60 (60,000 PSI or 413.7MPA). JOB # 7584A

6.1.9 The contractor shall ensure that all hooks and bends conform to ACI STANDARD 318. Latest revision. Inside diameter of hooks and bends shall be at least six (6) bar diameters. JOB # 7584A

6.1.10 The contractor shall provide spacer bars, chairs, spreaders, blocks, etc. as required to positively hold the steel in place before concrete is poured. JOB # 7584A

6.1.11 The contractor shall ensure the concrete is conveyed from the mixer to final deposit by methods that will prevent separation or loss of materials. JOB # 7584A

6.1.12 The contractor shall ensure the concrete is thoroughly consolidated by suitable means during placement and shall be thoroughly worked around reinforcement and embedded fixtures and corners of forms. JOB # 7584A

6.1.13 The contractor shall ensure the concrete is maintained above 50°F (10°C) and in a moist condition for at least seven (7) days after placement. And that adequate equipment shall be provided for heating concrete materials and protecting concrete during freezing or near freezing weather. JOB # 7584A

6.1.14 The contractor shall ensure that where exterior wall face requires shoring and/or forming, the forms shall be substantial and sufficiently tight to prevent leakage, and that forms shall not be removed until the concrete is seven (7) days old. JOB # 7584A

6.1.15 The contractor shall ensure that backfilling will be done by depositing and tamping into place clean sand or pouring lean concrete to 95% percent compaction. Water jetting shall not be allowed. JOB # 7584A

6.1.16 The contractor shall ensure that conduit and pipes of aluminum are not allowed. JOB # 7584A

6.1.17 The contractor shall ensure that construction joints that are not indicated on the drawings shall not be allowed. And that where a construction joint is to be made, the surface of the concrete shall be thoroughly cleaned and all laitance and standing water removed. JOB # 7584A

6.1.18 The contractor shall be responsible for the protection of all adjacent areas against damage and shall repair all damaged areas to match existing improvements. JOB # 7584A

6.1.19 The contractor shall be responsible for the protection of all electrical lines and/or wiring located in the adjacent areas against damage and shall repair all damaged electrical lines and/or wiring. JOB # 7584A

6.1.20 The contractor shall be responsible for the protection of all water, gas, and sewage lines located in the adjacent area against damage and shall repair all damaged water, gas and/or sewage lines. JOB # 7584A

6.1.21 The contractor shall be responsible for notifying the local Oil and Gas Commission before the commencement of any construction and/or repairs of gas lines. JOB # 7584A

6.1.22 The contractor shall be responsible for determining the location of underground power lines, water, gas, and sewer mains to prevent damage during construction. This is very responsible work protecting City utilities from ‘dig-ins”, which could result in death, injury and considerable liability. JOB # 7584A

6.1.23 The contractor shall keep the construction area clean at all times and at completion of work remove all surplus materials, equipment and debris leaving the premises in a clean condition acceptable to the owner or owners representative. JOB # 7584A

6.1.24 The contractor shall perform damage restoration improvements as associated with the vehicle arrest system installation. JOB # 7584A

6.1.25 The contractor shall identify and address any anomalies of concern. JOB # 7584A

7.0 DELIVERY REQUIREMENTS.

7.1 The contractor shall provide the following;

7.1.1 The contractor shall provide daily written progress reports to the government project representative. JOB # 7584A

7.1.2 The contractor shall provide daily verbal progress reports as requested by the government project representative. JOB # 7584A

7.1.3 The contractor shall identify and address any anomalies of concern. JOB # 7584A

8.0 AMENDMENTS.

8.1 Additional Information.

8.1.1 _____
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_____