

ATTACHMENT 1 – TECHNICAL SPECIFICATIONS

GENERAL DESCRIPTION OF THE PROJECT

The following are the main characteristics of the work to be executed at the Colombian Navy Coast Guard Pier located at Bahía Solano, Chocó.

The work includes, but is not limited to, the supply, transportation, assembly and installation of four (4) modular containers completely finished and stacked one on top of the other for a total of a pair of two containers high each, including the concrete slab, metallic stairs, external and internal hydraulic, sanitary and electrical system, as well as the voice/data wiring.

The work includes the execution of the work and all activities necessary for the lighting protection and grounding system for the containers, as well as the air conditioning units.

It is understood that the Contractor shall verify the measurements and become familiar with the terrain and the existing conditions before sending his quotation. In this statement of work, guide measures are given for the Contractor to check the drawings and the construction quantities chart and to check the physical conditions on site. In no way do these figures commit the US Embassy to pay additional amounts if the resulting measurements on site vary from the information given by the US Embassy.

For the containers; hydraulic, sanitary, and electrical systems; and finishing, the Contractor shall supply maintenance and inspection manuals for routine activities with recommendations for inspection and maintenance.

DETAILED DESCRIPTION OF THE PROJECT

1) PRELIMINARY ACTIVITIES

The Contractor shall make the applicable verifications in order to certify the designs given to them are adequate for this installation and shall guarantee the correct execution of the work, fulfilling the standards of the applicable codes before the start of the construction process.

All works are to be constructed pursuant to the ICONTEC, EIA, AISC and NSR-10 and each shall be applied as necessary and appropriate. The Contractor shall guarantee that the project fulfills all the rules of the Ministerio del Medio Ambiente.

1.01) Provisional installations

The Contractor shall submit a drawing with location of the camp, fencing of the construction site and temporary services (water, energy, telephone, etc.), before starting its installation, for the approval of the US Government Representative. All the installations shall be removed by the Contractor with the approval of the US Government Representative when the work is finished. The site shall be left as it was found before the start of the construction, with grass, sidewalks, etc. The installation of removal of the provisional camp shall be quoted at a global price and shall be included in the total cost of the project.

Provisional services: the eventual supply of any service by the final user to the Contractor shall not be a conditioned help and its eventual suspension shall not give place to any claim by the Contractor. The Contractor shall provide alternative services for these situations.

1.02) Security of the construction site

The Contractor shall supply security services for the construction site and the camps. The US Government Representative and the final user shall not be responsible for the payment of the security services nor for any elements left at the construction site.

1.03) Provisional fencing

The work site shall be completely isolated from zones or roads surrounding the same. Similarly, if a materials storage area is built, this shall be fenced off in the same manner. The Contractor shall build a fence for this purpose, consisting of synthetic canvas with wooden posts every two meters, kept taut by means of wires at the top, middle and bottom. The Contractor shall fit props at either side of the access door or whenever there is a change of direction. This fence shall have one access point only: a double door through which machinery, vehicles and personnel shall enter. While the work is in progress, the Contractor shall ensure that the fence is maintained and repaired, so that it is always in suitable condition.

1.04) Location and layout

The Contractor shall use precision topographical instruments, following the architectural and structural distribution. The Contractor shall draw up the ground plan for each of the elements to be constructed. The area to be constructed is that indicated in the plans, plus the extra widths and the utilities' connections. This work shall be done by a qualified professional, who shall determine the levels in addition to the ground plan. Everything shall be bench-marked on securely anchored wooden bridges.

The Contractor shall supply all materials required to establish the planimetric and altimetric benchmarks, such as stakes and field books, etc. The US Government Representative shall review the location of the axes, but this does not exonerate the Contractor from his responsibility for errors in locating or leveling any portion of the work. Prior to locating and laying out the work, the necessary datum or tie points, both horizontal and vertical, as well as the boundaries of the terrain to be occupied shall be defined and approved.

The temporary BM and reference axes shall be placed at sites where they do not interfere with the execution of the work and do not need to be moved, in order to allow their subsequent control at any point during the course of the work. No marks made with paint of any type, scratches, nails, centering, etc. shall be permitted on any current building or structure. Once the layout is complete, the Contractor shall submit a scheme for approval, including the location of existing structures and vegetation.

1.05) Demolition and Removal of material

The Contractor shall demolish and remove the existing concrete slab and the support granular material located in the area where the construction of the new concrete slab shall take place in order to allow the installation of the containers. This shall include the cutting and demolition of any existing element along this area.

The Contractor shall be responsible for damages caused to any element on site while the demolition work is performed and the leftover materials are being withdrawn. The Contractor shall include in this item the demolition tools and transportation of the demolished material in trucks to authorized sites.

2.01) Concrete Structures

2.01.01) Excavation

The Contractor shall excavate and remove the remnant material until the adequate depth is reached for the location of the concrete slab for the containers according to project drawings (See structural drawing C-01).

The Contractor shall do the excavations needed to execute the work and shall be prepared to excavate in any type of material, using the appropriate methods, equipment and tools. Prior to starting the excavation, the Contractor shall perform a survey of all aerial, surface or underground interference, in order to not damage pipes, boxes, wiring, posts, hoses, wells or other elements or structures existing in the work area or adjacent to it. Should the excavation interfere with sewers or pipes, the Contractor shall build adequate support or protection for these installations.

The depth of the excavations and fills shall vary according to the work to be executed and the studies done by the Contractor. The excavated material shall not be stored in the top of the excavation. It will be lifted immediately to the trucks and transported to an authorized dump located outside the base if it is required.

The Contractor shall post signs (warning signals) and provisional fencing at all excavation sites. The fencing shall consist of three pieces of yellow plastic tape, eight (8) centimeters wide and supported by temporary sleepers fastened securely to the ground, placed in order to avoid accidents. To prevent their obstruction or damage, the Contractor shall keep clear all drains, caps and catch pits in public utility networks near excavation sites.

The Contractor shall be responsible for any over-excavation caused by a cave-in, deficiency of the material existing in the zone or other reasons, and shall fill at his cost the over-excavation with granular material previously approved, until the excavation has the required size.

The material removed from the excavation shall be removed as indicated in the general cleaning items. The Contractor shall be responsible for the conduction of surface water and the evacuation of underground water and any other type of water, as well as the supply and maintenance of drainage or pumping systems required to stabilize the slopes and avoid water getting into the excavations.

2.01.02) Compacting of the foundation level

The Contractor shall compact the bottom level of the foundation for the construction of the foundation and structural elements of the tower.

The Contractor shall compact the bottom of the excavation in all the areas to build before initiating the filling activities, using mechanical and/or manual equipment. The selection of the compacting equipment shall be approved by the US Government Representative and the Contractor shall adjust to the plasticity characteristics of the material to be compacted.

If, during the compaction process, the bearing layers show faults or bland zones, they shall be replaced in a timely manner with excavations and fillings by the Contractor at its own cost.

2.01.03) Filling in compacted granular material

The Contractor shall supply, install and compact the base in selected granular material that shall be the support for the foundation elements for the tower according to the project drawings.

The Contractor shall supply all the labor, materials, equipment and the execution of all the necessary work for the installation of the compacted filling material required by the project. The thickness of the fill shall vary according to the area of the concrete slab, for each of the works. The final level of fill shall be 20-30 cm above the existing road level. Before initiating the filling work, the Contractor shall verify that the base material is totally clean of any vegetation, organic material and residual material from the construction and that the surfaces shall not have any inundation or zones with stagnant water.

The filling materials shall be obtained from sources authorized by current applicable environmental standards and by the Law, selected by the Contractor and approved by the US Government Representative. At least 7 days before initiating the filling materials work, the Contractor shall submit to the Embassy the information on the sources of materials and shall submit all the working permits, the representative samples and the results of laboratory tests. The supply of the samples and the laboratory tests by the Contractor shall not represent additional cost to the US Government.

The filling material shall be constituted of sandy granular material without organic lime, vegetal material, residues, waste or debris. The maximum size of the material shall not exceed five (5) centimeters. The fines content (percentage passing sieve No. 200) shall be inferior to 20% and the plasticity index of the material passing sieve # 40 shall be lower than 6%. The filling material shall be compacted in symmetric layers of ten (10) centimeters and 95% of the density shall be obtained with the compaction test of the Modified Proctor. The methods and equipment of compaction shall have the approval of the US Government Representative.

2.01.05) Concrete Slab (T= 20 cm)

The Contractor shall supply the manual labor, materials and equipment, and the execution of all the work necessary for the construction of the concrete slab for the containers support with a minimum thickness of 0.20 m. Before initiating the construction of the foundation, the Contractor shall verify that the construction site is free from vegetation and construction materials and that the surfaces do not have inundated zones or zones with stagnant water. The bases shall be leveled before pouring the concrete.

The Contractor shall build the concrete structures in accordance with the NSR-10 and the recommendations of the soils study. The concrete shall have a strength $f'c$ of minimum 3000 psi (210 kg/cm²), which shall be certified by the Contractor using test cylinders that he will take following the applicable standards. The re-bar for the foundation shall be $F_y = 60,000$ psi (4,200 Kg/cm²) for $\varnothing > 3/8$ -inch and $F_y = 34,000$ psi (2,400 Kg/cm²) for $\varnothing 1/4$ -inch. The Contractor shall follow the parameters of the design supplied by the US Embassy.

The Contractor shall supply the formwork, transportation and installation of the concrete for the concrete slab, including the reinforcement steel specified in the structural design.

The Contractor shall include the execution of the corresponding laboratory tests as required. The Contractor shall take 6 sample cylinders for concrete resistance tests per pouring or per each 5 m³, in order to test 2 cylinders at 7 days, 2 cylinders at 28 days and leave 2 cylinders as proof samples. The results of the laboratory tests shall be given at the right time to the US Government Representative.

2.02) Metallic Stairs

The Contractor shall supply and install all the metallic elements in accordance with the drawings and to standard parameters, including all the elements and accessories necessary for fabrication, assembly and installation. The metallic elements refer to the metallic stairs as described in the attached drawings. Before the construction of the metallic stairs, the Contractor shall verify the description of all the fabrication and assembly system, characteristics of bolts and welding, steel qualities, painting, etc. If it is found that in the design some changes shall be done in order to fulfill the standards, these changes shall be taken into account in the proposal so that project execution shall be done in total compliance with the current standards.

The main design standard is the NSR-10 title F. The fabrication and assembly shall fulfill chapter F.3.9 of the NSR-10 standard.

Before beginning with the fabrication of the stairs, the Contractor shall deliver the quality certificates of the elements in order to guarantee compliance with the specifications; otherwise the Contractor shall perform mechanical and chemical tests as described on the ASTM A370 and the A-6 designation of the ASTM.

The Contractor shall fabricate the metallic stairs following the actual edition of the AISC and the NSR-10, and shall verify the conditions on site to confirm details.

The US Government Representative shall inspect the fabrication and assembly at the workshop, before approving the material to be transported to the project site. Any defect or correction to the steel structure or the welding works detected during the inspection shall be corrected by the Contractor at no additional cost to the US Government.

A sample of all the metallic elements for the metallic stairs shall be assembled at the workshop before being transported to the project site. These elements shall be chosen randomly and the adjustment of the parts shall be verified by the US Government Representative along with the Contractor's Representative. Any defect or correction to the metallic elements detected during the inspection shall be corrected by the Contractor with no additional cost to the US Government.

For the metallic stairs and handrails, the Contractor shall make sure that each stair is supported by its specified metallic element. The Contractor shall fabricate and assemble the metallic steps in 3-mm cold roll material as specified in the attached drawings.

The Contractor shall perform the application of the protection coating and paint for the structural elements following the procedures described on the design supplied by the US Government. The metallic coating and finishing paint shall comply with severe maritime conditions. The Contractor shall supply and install Sika Cor Epoxy Primer or equivalent based on quality standards, applying two (2) layers of 80 microns each. These paintings shall be applied with compressor, for aggressive atmospheric conditions, or as recommended by the manufacturer.

The metallic structure shall have enough resistance to support the daily operations required by the Coast Guard at Bahia Solano. All safety measures shall be considered for the installation.

After the metallic elements are assembled, the surface will be cleaned with tow cloth, in order to eliminate residues of grease, dust or humidity.

2.03) External Hydraulic system and Tank

The Contractor shall complete all facilities inside the bathrooms of the lodging and dining containers plus the outside connectivity of each building to the main existing water system plus the supply and installation of the control valves located approximately 70 m from the project site (see attached hydro-sanitary drawings). The Contractor shall include the PVC RDE 21 piping, excavation, backfilling, covers, hydraulic tests, etc.

For this project the Contractor shall quote the connection using PVC 1 ½ -inch pipe from the pressure water line from the town to each of the proposed containers.

The Contractor shall also include the supply and installation of a 1000 Lts storage tank made in plastic material as part of the hydraulic system for the containers. The Contractor shall include as well the supply and installation of a hydro-pneumatic system consisting of a 130 Lts storage tank ref. EAJ050-130VE or similar and a jet pump Ref. JX2ME075E or similar with 1-inch suction and ¾ HP, in order to guarantee an optimum pressure for the bathrooms and the kitchen.

The Contractor shall also supply and install a roof cover along the storage tank and the hydro-pneumatic system, enclosed by a galvanized chain link fences for the areas assigned in the attached architectural drawings. The Contractor shall install the fence in 1½” x 1 ½” hollow caliber 10 chain link. The fence shall be approximately 2.60 m high or the height of the storage tank around which this shall be installed. The Contractor shall supply and install a frame for the chain link fence in a 2” x 1/8” angle, secured by a 1 ½” x 1/8” steel plate on all four sides, in order to avoid it coming loose. The Contractor shall protect the angles with anticorrosive paint and with finishing paint.

The chain link support poles shall be 2” diameter, 2.60 m. long, galvanized pipe with a steel plate at both ends of the pipe. The poles shall be anchored to the concrete tie beam through the steel plate, at a distance of 1.50 m. The Contractor shall take into account that the materials and paint needs be done for a highly saline area. The Contractor shall include a 1.00 m width door for the fence with the same characteristics and with a lock support.

2.04) Sanitary and septic system

The attached sanitary drawing - System of Sanitary Networks – shows the location of the main sewer network for the containers. The Contractor shall include the sanitary points from the washbasins, showers and toilets, and sanitary pipe lines leading to an exterior septic system (the necessary handholes shall be included). The handholes and covers shall be located as close as possible in the exterior area, and the connection shall be made from these handholes to the exterior septic system. Each of the handholes shall be made of concrete with its respective handle and cover.

The Contractor shall build the sewer network from the containers to the inspection box located in the sanitary network that is included as part of the scope which then leads to the septic system. The sewer connection shall be done in Novafort pipe type or equivalent with a diameter of 6 to 8- inches, and it shall include piping, excavation, backfill, covers, hydraulic tests, etc. The main connection distance shall be 20 meters (see attached hydro-sanitary drawings).

The Contractor shall build sanitary handholes in masonry or concrete block, using waterproof plaster along the walls and floor, with cover in reinforced concrete with retractable handle. The boxes that are not confined in sidewalks or concrete slabs shall include a border in reinforced concrete of minimum 0.10 m, to prevent damages along the cover. Internal measures of this handhole shall be 1.00 m x 1.00 m (see attached hydro-sanitary drawings).

The Contractor shall supply and install the prefabricated septic system in accordance with the attached drawings and specifications. This item includes the supply and installation of pipelines and accessories, and excavating and covering trenches for the respective sanitary connection from the selected sites in the drawings.

This work shall include a training course on site for the persons that the COLNAV assigns for maintenance and calibration of the septic system once the septic system is fully operational.

The septic system shall be composed of the components listed below:

1. Distribution Box
2. Imhoff Tank
3. Anaerobic Filter
4. Aerobic Filter
5. Distribution Box
5. Final Discharge

3.01) Modular Containers

The Contractor shall supply, transport, assemble and install four (4) new 20-ft. modular containers to be used as lodging facilities, living/dining area and communication and storage area with the following characteristics:

Characteristics:

- * The containers shall be 2.435 m wide x 2.59 m high x 6.055 m long.
- * The roof, walls and floor of the containers shall be fully waterproofed, in order to avoid water leaking through, and flanges shall be fitted to windows and doors.
- * The containers shall have a system incorporated into their structure which enables them to be lifted by a crane or forklift.

Transportation

- * The containers shall be transported from the production site to the project site (Coast Guard Pier at Bahia Solano). The modular containers shall be transported unassembled in flat boxes of 0.56 m high.
- * The cost of this item includes transportation and insurance coverage for the containers and the load or interior fittings. The work includes loading and unloading the containers, renting or otherwise obtaining the crane or forklift, and positioning and leveling the containers on the site indicated by the US Government Representative. If the containers or nearby structures suffer any damage during transportation and/or movement to the site indicated, the Contractor will bear all expenses involved in any repairs which might be necessary, at no cost whatsoever to the US Government.

Installing the Containers

- * **Supports.** The Contractor shall place the container on top of the concrete slab described in paragraph 2.01.05 and located according to the attached drawings. The Contractor shall guarantee that the containers are perfectly level.
- * **Staircase.** The Contractor shall supply an extruded-mesh, metal staircase, painted with anti-corrosive paint and topcoat, for each container access on the first level. The staircase should be the same width as the doors.

Floors:

The floor shall have the following characteristics:

- * Steel frame constructed in 4 mm cold rolled steel profiles, 4 corners casting, steel C-channels and shall have cross members of 3 mm. thickness.
- * Forklift pockets at 2080 mm at centers.
- * 50 mm EPS insulation.
- * Galvanized steel sheet 0.5 mm subfloor.
- * 24 mm laminated cement fiberboard floor.
- * 1.5 mm PVC Floor covering.

Roof:

The roof shall have the following characteristics:

- * Steel frame constructed in 4 mm cold rolled steel profiles, 4 corners casting, steel box cross members of 1.5 mm thickness.
- * Roof cover from 1.6 mm corrugated steel sheet, fully welded.
- * 50 mm EPS insulation.
- * Ceiling of powder coated aluminum profiles fitted to galvanize steel brackets.
- * External electrical connection recessed in frame end.

Corner Posts:

- * Shall be constructed from 4 mm cold rolled steel profiles, bolted to floor and roof frame.

Wall Panels:

The wall panels shall have the following characteristics:

- * 60 mm EPS insulated panels, metal faced 0.5 mm steel Colorbond sheet, tongue and grooved.

Insulation:

- * EPS (Expanded Polystyrene) 12 – 14 Kg/m³. Heat transmission coefficient for 50 mm thickness: 0.79 W/m²K.

Doors:

The doors shall have the following characteristics:

- * Core of 50 mm EPS insulation, metal faced both sides with 0.5 mm Colorbond sheet steel with aluminum frame.
- * Double rubber gasket seal.
- * Dimension 890 x 2030 mm.
- * Secure internal/external lock: High security locks, against drill against hook wrench, with three points lock and five codified keys.

Windows:

- * Upvc double-glazed. Colour: white. Tilt & turn mechanism. Integrated rolled shutter. Dimensions 800 x 1100 mm.

Finishing Paint:

The finishing paint shall have the following characteristics:

- * Mechanical buffed.
- * Acid etched to all raw steel work.
- * Primed externally with anti-corrosive zinc phosphate metal primer.
- * External surface top coated with commercial quality paint.
- * RAL color choice.

3.01.01) Lodging Modular Containers**3.01.01.01) Window grill plus pre-ondulated mesh and A/C units supports**

The Contractor shall supply and install a metal bank-type safety grille on the outside of the existing windows, holes not larger than 0.10 m. x 0.20m. painted with anti-corrosive paint and topcoat; and a pre-ondulated mesh hole ½” in all windows with an additional frame. Additionally a mosquito screen shall be incorporated into the existing windows.

3.01.01.02) Dividing Panel Supply and Installation and Internal door

This item includes the supply and installation of two dividing panels or wall 10cm thick, in Superboard or similar material, with the same characteristics as the outer container panel and with the same type of thermal and acoustic insulation. (See drawings.)

The Contractor shall supply and install a metallic door 0.90m x 2.0m sheet minimum cal. 20 and frame minimum cal. 18. along one of the dividing panels. (See drawings.)

This item includes noncorrosive paint and two coats of finish paint; a lock of metallic knob, type entrance key, chrome and a simple bolt with exterior key and interior wing nut.

3.01.01.03) Over roof

The Contractor shall supply and install a metal structure supported over the container. The Contractor shall also supply and install the roof tiles of architectural type, trapezoidal shape, covering all container and wings as shown on the plan. Roof shall be installed according to the manufacturer’s instruction. The color will be selected by the US Government Representative.

The roof tile shall be in galvanized steel sheets covered on both sides with treated asphalt and modified with polymers to avoid crystallization, and shall have a final finish with a covering of aluminum foil with zero porosity and covered with a coat of monopigmented paint protected by anti-stain lacquer.

The Contractor shall install the roof tiles over the metallic structure. The Contractor shall fix the roof tiles in the lower part of the structure with galvanized screws with hexagonal head, conic metallic washer and a neoprene sealant washer. The Contractor shall use roof tiles Ajover brand or equivalent. The Contractor

shall take special care not to damage the roof tiles during the transportation and installation processes. Repairs or replacement shall be foreseen.

3.01.01.04) External paint

External paint shall be epoxy. First, a noncorrosive coat shall be applied, then two coats of epoxy or any other type of paint that is abrasion- and weather-resistant; minimum thickness of 5mils; same or similar color to the existing containers located in the area or a color selected by the US Government Representative. Area to be painted is roof and all walls and bottom part of the container to avoid corrosion.

3.01.01.05) Hydro-Sanitary Facilities

3.01.01.05.01) Hydraulic installations

The Contractor shall complete all facilities inside the bathrooms of the lodging containers plus the outside connectivity of each container to the main water system that shall also be installed by the Contractor (Refer to paragraph 2.02 – 2.03). In the bathroom area, one control valve shall be installed for each washbasin section, another one for the toilets, another for the urinals, and a final one for the showers. These hydraulic installations shall be quoted by hydraulic points to toilets, washbasin, urinals and showers.

3.01.01.05.02) Sanitary facilities

The Contractor shall include the sanitary points from the washbasins, showers and toilets, and sanitary pipe lines leading to an exterior collection handhole and then to the septic system (the necessary handholes are included).

The Contractor shall install 3-inch pipes for washbasins and floor drains, and 4-inch pipe for the toilets. Floor drains shall include grilles (with fitting) and they shall be fitted in the center of each bathroom area container. Pipelines shall be installed appropriately inside the walls of the containers. The outputs for reventilation pipes shall have a 0.20 x 0.20 m PVC grid.

The Contractor shall include the sanitary points from the washbasins, showers and toilets, and sanitary pipe lines leading to an exterior collection handhole and then to the septic system (the necessary handholes are included).

3.01.01.05.03) Sanitary Apparatus

The Contractor shall include the sanitary apparatus that are shown on the attached hydro-sanitary drawings:

- Reinforced one piece washbasins made of synthetic marble or similar, with pedestal for the washbasin and institutional faucets. Washbasin units required per lodging container: 1 unit.
- Institutional-type toilets (with cover): 1 unit required per lodging container.
- Shower wall faucets and a shower curtain and accessories for installation: 1 unit required per lodging container.
- One ceramic soap dish in each shower: 1 unit required per lodging container.
- Small ceramic soap dish for each washbasin: 1 unit required per lodging container.
- Metal towel hooks for each shower: 1 unit required per lodging container.
- Metal hooks on toilet door for hanging objects on: 1 unit required per lodging container.

3.01.02) Communication and Arms Modular Containers

3.01.02.01) Window grill plus pre-ondulated mesh and A/C units supports

The Contractor shall supply and install a metal bank-type safety grille on the outside of the existing windows, holes not larger than 0.10 m. x 0.20m. painted with anti-corrosive paint and topcoat; and a pre-ondulated mesh hole ½” in all windows with an additional frame. Additionally a mosquito screen shall be incorporated into the existing windows.

3.01.02.02) Dividing Panel Supply and Installation and Internal sliding door

This item includes the supply and installation of a dividing panel or wall 10cm thick, in Superboard or similar material, with the same characteristics as the outer container panel and with the same type of thermal and acoustic insulation. (See drawings)

The Contractor shall also supply and install a sliding door 0.90m x 2.0m metal sheet minimum cal. 20 and frame minimum cal. 18.

This item includes noncorrosive paint and two coats of finish paint; a lock of metallic knob, type entrance key, chrome and a simple bolt with exterior key and interior wing nut.

3.01.02.03) External paint

External paint shall be epoxy. First, a noncorrosive coat will be applied, then two coats of epoxy or any other type of paint that is abrasion- and weather-resistant; minimum thickness of 5mils; same or similar color to the existing containers located in the area or a color selected by the US Government Representative. Area to be painted is roof and all walls and bottom part of the container to avoid corrosion.

3.01.02.04) Furniture

This item includes the supply and installation of furniture with high quality and durability standards. The furniture must have a warranty of a minimum three (3) years against manufacturing defects.

NOTE: This chapter only applies to the Communication and Arms Container

3.01.02.04.01) Workstations and benches.

The system shall be made up of freestanding panels or legs without requiring anchors to the walls and floor.

All working surfaces including tables and independent elements shall be included in the proposal and made of white Formica-lined ‘Tablex’ at least 3 cm thick (unless otherwise stated on the plans or elsewhere in the description) with flat thermo-fused edges, and will include “balance” and one covered cable run for each surface supplied.

Surface supports shall be made of metal coated with electrostatic paint, and levelers will be supplied, the bottoms of which will be of plastic and/or rubber. These supports include bases, anchoring and any other item which might be necessary for joining or fixing them.

L shape workstations

There are workstations in L shape, 1.45m x 1.20m according to the drawing.

3.01.02.04.02) Storage items

These shall be to standard, top-quality and ergonomic designs, and shall be made for heavy duty and long life. The dimensions that are given are the minimum required.

2x1 Filing Cabinets

Filing cabinet consisting of three conventional drawers and a fully opening, legal-sized hanging-folder file with American-type runners. This filing cabinet shall be made of metal and, with structure, base, front part and drawers in Caliber 20 minimum sheet and shall be coated with electrostatic paint. It includes a folding key and injection-molded pencil tray, and shall be strong and long lasting. Minimum dimensions are 40 cm. wide by 50 cm. deep, extending upwards in height to the surface (variations of +/- 3 cm). Letter-size hanging folders shall be able to be filed in the front line and legal size folders in the other direction. In the case of filing cabinets that are not under work surfaces, a top cover should be supplied. The filing cabinets shall have enough room to allow folder tabs to pass without problem (at least 2.5 cm from the edge of the hanging folder).

The base shall be a minimum of 1cm from the floor, including levelers and plastic or rubber terminals to absorb irregularities of the floor up to 2.5 cm. The cabinets shall also include an overturning prevention system. There shall be three (3) 2x1 filing cabinets.

Hanging cabinets

These are hanging overhead cabinets that can be easily fixed to paneling or walls. The cabinets should be made of metal, open with 0.30m width, 0.60m high; with electrostatic paint in white color. There shall be three (3) hanging cabinets of 0.60m.

High Filing Cabinet

Filing cabinet consisting of four (4) conventional drawers and a fully opening, legal-sized hanging-folder file with American-type runners. This filing cabinet shall be made of metal and, with structure, base, front part and drawers in Caliber 20 minimum sheet and shall be coated with electrostatic paint. It includes lock and key. Minimum dimensions are 0.60m wide x 0.50 m deep x 1.25m high. The filing cabinets should have enough room to allow folder tabs to pass without problem (at least 2.5 cm from the edge of the hanging folder).

The base shall be a minimum of 1cm from the floor, including levelers and plastic or rubber terminals to absorb irregularities of the floor up to 2.5 cm. It shall also include an overturning prevention system. There is one (1) high filing cabinet.

3.01.02.04.03) Chairs

The Contractor shall send the catalog and description for each one of the chairs offered with technical characteristics. The models will be made available to the US Government Representative for considerations before supplying the chairs.

The chairs shall be designed and built for heavy duty use, be highly durable and must take into account ergonomic factors so as to guarantee the user's comfort. All of the chairs shall have a minimum three (3) year warranty.

Professional Type:

Install a permanent contact ergonomic reclining chair with adjustable back piece and blocking device, using high resilience foam, with a minimum density of 40 kg/m³ for the sitting part and 30 kg/m³ for the back part, with a lifetime pneumatic mechanism to graduate the height for a range of 10 cm. The back shall be minimum **40 cm** high measured on the plastic structure. This chair shall be upholstered in Hilat type fabric with Scotch guard. Chairs shall include armrests that may be installed and removed on self-lubricating rollers coated in nylon. There shall be three (3) professional chairs with arms.

3.01.02.04.04) Accessories**Office Bin**

These shall be made of metal and be round, with minimum dimensions of 0.20m diameter and 0.30m high, with rubber and/or plastic packing around the bottom. Or they may be the standard shape used by each company, but with the minimum dimensions stated. There shall be three (3) bins.

Blackout: This is a roll-up blackout-type screen to cover the windows in the office and arms area, as well as the windows in the lodging and living/dining containers. It shall include a frame to guarantee total blackout coverage in the room.

Erasable Marker Board

Contractor shall supply and install an erasable board made of acrylic or Formica called Pizarron without grid (material that offers more durability and does not stain), white color, for erasable marker pens, Includes a pen holder running the whole length of the board of minimum 8cm, two marker pens, and the board itself. Includes lacquered chipboard frame or metallic frame painted in same color of the furniture profiles 0.06m wide in the front part. The board shall have a note at the bottom stating that only erasable marker pens shall be used. The bottom part shall be at 0.90m height from the finished floor of each space. There shall be three (3) boards 1.0m x 0.70m located in the communication area.

3.01.03) Living and Dining Modular Containers**3.01.03.01) Window grill plus pre-ondulated mesh and A/C units supports**

The Contractor shall supply and install a metal bank-type safety grille on the outside of the existing windows, holes not larger than 0.10 m. x 0.20m. painted with anti-corrosive paint and topcoat; and a pre-ondulated mesh hole ½” in all windows with an additional frame. Additionally a mosquito screen shall be incorporated into the existing windows.

3.01.03.02) External paint

External paint shall be epoxy. First, a noncorrosive coat will be applied, then two coats of epoxy or any other type of paint that is abrasion- and weather-resistant; minimum thickness of 5mils; same or similar color to the existing containers located at the area or a color selected by the US Government Representative. Area to be painted is roof and all walls and bottom part of the container to avoid corrosion.

3.01.03.03) Furniture

This item includes the supply and installation of furniture with high quality and durability standards. The furniture must have a warranty of minimum three (3) years against manufacturing defects.

NOTE: This chapter only applies to the Living/Dining Container.

3.01.03.03.01) Stainless steel handwashing basins (including big table) and furniture

The Contractor shall supply and install a stainless steel handwashing basin, gauge 14, embedding system, perfectly finished on the kitchen table which measures 4.9 x 0.60 m.

The Contractor shall supply and install post-formed Formica fitted kitchen furniture, white color, with stainless steel worktop. This worktop shall include the corresponding holes for the one sink, with high cold water mixer taps, and water drainage area at the side.

The furniture shall have doors and the corresponding upper drawers with interior shelf.

The doors and drawers of the fitted kitchen furniture shall have a stainless steel handle, to make them easier to open.

The fitted kitchen furniture shall have its base in formica.

3.01.03.03.02) Supply and installation of a gas stove.

The Contractor shall supply and install a stove gas type domestic overlap with two (2) burners for propane in stainless steel. The stove shall be type HACEB - CUB AREZZO CG 60 stainless EE or equivalent.

3.01.03.03.03) Supply and installation of an extractor hood.

The Contractor shall supply and install an extractor hood in stainless steel, with an electric motor and three speeds for extraction of smells. The extractor includes the necessary bindings and electrical installations and switches so that the extractor hood operates correctly. Also shall include the corresponding greaseproof filter with activated carbon and its lamp. The extractor hood shall be of the type HACEB - ASSENTO CR 60 stainless steel or equivalent.

4.01) General Electric Installations

The work to be done consists of the electrical and data installation of four (4) 20-foot modular containers, to be used as office (one connex), lodging (two connex) and living/dining room (one connex), as well as to provide the main power circuit branch, which will connect the containers to the electrical distribution panel.

For the structural, electrical and communications installations, the Contractor shall supply a maintenance and inspection manual for routine activities, with recommendations for the inspection and maintenance after storms or severe load conditions.

The Contractor shall include in his bid the catalog and technical sheets of the proposed materials and devices.

Any electrical installation which is done by the Contractor shall comply with the following electrical standards: NTC 2050 last upgrade and chapters 645, 210,215; NEC 250 last upgrade, NTC 3471/UL 67, EIA/TIA 607, EIA/TIA 568-569 last upgrade, ANSI/IEEE C62.41-C62.45, NEPA 780, NTC 4552, IEEE-80, IEEE-77 and RETIE last upgrade. The Contractor shall include in his proposal catalogs and technical sheets of materials, parts and elements to be used in the project. The awarded Contractor shall also employ an electrical/electronics engineer to manage and control the execution of the electrical and communication work. The proposed electrical/electronics engineer shall also sign the installation conformity and material conformity acts requested on RETIE. The Contractor shall include in his proposal the curriculum vitae of the proposed engineer.

IMPORTANT

The required civil work for the underground raceway system and electrical installation in general, shall include the costs for repairing the affected areas during the project execution (e.g. Sidewalks, pavement, green areas and concrete, painting, sleeves, among others). The awarded Contractor shall comply with civil and electrical Colombian Construction standards even if the affected areas do not meet them. The Contractor shall submit catalogs and technical spread sheets for all the materials to be used during the construction project. Lack of information and omission of such data shall render the proposal invalid and shall remove it from further consideration in the award process.

4.01.01) Low voltage works (LV)

The Contractor shall supply and install an electrical main circuit, which shall feed the containers. This new circuit shall be connected from the electrical distribution panel (TG). The new main circuit branch shall have a capacity of 20 KVA. The requested circuit branch shall be a three-phase system, neutral and ground, THHN/THNW 4X#4 + 1X#6. The approximately distance between both circuit boards is 50 meters; however the Contractor shall verify the distance. The Contractor shall quote two (2) main breakers, 3X75A each one (with thermal adjustment of the 70% of the nominal current. LEGRAND DPX125 or similar), placing one unit in the container's circuit board (TC) and the other one in the electrical distribution panel (TG - This panel will be installed by the Military Group).

4.01.02) Main circuit branch canalization

This item includes piping and junction boxes as described: The Contractor shall supply and install a couple of tubes, PVC DB Electric type, gauge 2", for connecting the electrical distribution panel (TG) with the containers circuit board (TC). The pipe shall be underground at a depth of 60 cm from soil level. An underground warning tape shall be placed 30 cm from soil level according to the CODENSA CS- 273 regulation.

The Contractor shall include in his proposal all the civil work required for this item, such as material removal, refilling, channel construction, repainting, CS-274 junction boxes and any additional work required for leaving the affected areas as originally found. The Contractor shall use qualities and quantities in order to comply with CODENSA regulations.

4.01.03) Containers circuit board (TC)

The Contractor shall supply and install an electrical circuit board with capacity for 18 circuits, which allow for the electrical distribution for the proposed services of the new facilities. This panel is located outside of the Communications Container, at a height of approx 1.40m above the level of the container floor. The new panel board shall have space for the main breaker (as requested before, 3X75A), barrages for phases, neutral and ground (copper).

The Contractor shall supply and install the new main breaker and the secondary circuit protections for each container (one 2x30 A breaker per container).

This panel shall have an independent TVSS class B device, which shall comply with US standard ANSI/IEEE C62.41-C62.45, interruption capacity up to 100KA, protection modes L-L-L-N, L-G, reject filtering rated > -30dB, led indicator of status, operational voltage 208VAC/120VAC, response time < 100nSeg and support to three pole system. The unit shall be installed internally or externally. The Contractor shall annex in his proposal the NEMA LS-1 format, specifying the equipment's technical sheet to be supplied and installed.

4.01.04) Containers connectors

For each container, the Contractor shall supply and install an electrical connection from the containers circuit board (TC) using an insulated cable 4x10 AWG ST-C, 90° C, 600 V, with a safety industrial plug 3P+G, weather proof NEMA (IP 67), 32 Amp, 220 V, twist lock type. The Contractor shall supply and install a receptacle in the external side of each container, using the same type of the industrial plug: 3P+G, IP 67, 32 Amp, 220 V, twist lock type, which shall be placed 50cm from soil level.

The segment between the containers circuit board (TC) and the industrial receptacles shall be canalized with a metallic ladder of 10 cm width x 5 cm height, including fixing accessories and coupling as suggested by the manufacturer. The metallic ladder shall be installed above the container or in the external wall of the container. This ladder shall be used for the electrical cables of the four (4) containers and shall be installed near the electrical receptacle located in each container.

4.01.05) Electrical circuit boards (T1, T2, T3 and T4)

For each container the Contractor shall install a by-phase electrical circuit board with capacity of 8 circuits per circuit board. These panels are located inside the container, at a height of approx 1.40m above the level of the container floor, on the opposite side of the industrial receptacle. The Contractor shall supply and install the secondary circuit protections.

Electrical board characteristics:

All the new electrical boards shall have frontal door, lock and external signaling according to RETIE. The phases' barrages shall be protected by an acrylic sheet or any other RETIE-certified mechanism, in order to avoid direct manipulation (Dead front). The new panel board units to be supplied and installed shall be in metal and shall comply with Colombian standard NTC 3475 or US standard UL67. The new panel board units shall have a current capacity up to 200A (See capacity accordingly in NTC 3475, table 11.2), voltage isolation rate 600VAC and interruptive current capacity up to 10KA. The new Panel Boards shall be made in CR BWG No 16-18 and shall be painted using a special treatment in order to support current conditions such as oxidation, water and salinity, which are currently present in the area. The internal spaces shall comply with the US standard IEEE-142. The Colombian standard NTC 2050 and RETIE shall be observed during installation and hardware deployment. The Contractor shall guarantee that the circuit board is grounded to a grounding master bus.

Circuit breakers:

Each breaker shall have these characteristics: 6,000 cycles of operation, 10 kA capacity interrupting, 600V insulation voltage and compliance UL 489. The power capacity list for the new breakers is available in the annex "Electrical calculations.pdf". The circuit breakers to be used during the project shall be brand new, RETIE-certified and of a well-known brand such as ABB, Legrand or Merlin Gerin.

4.01.06) 120V Electric receptacle Points

For each container, the Contractor shall supply and install four (4) receptacles for 15A/120V, double jack, grounding pin, duly labeled with a non-removable countersunk (low or high relief) plastic or metal label. The sockets should be connected throughout the circuit, and shall be uniformly distributed (or as shown in the plans). These sockets shall be fitted 0.30m above floor level, unless otherwise stated in the plans.

Electrical cabling shall follow the color code for low tension connections (black for phase, white for neutral and green for grounding).

4.01.07) 220V Double-Phase Electrical receptacles

For each container, the Contractor shall supply and install one (1) receptacle 220V NEMA 6-20R, with grounding pin, which shall be used for air conditioning unit and distributed as shown in the plan, placing the receptacle at a height of 2.00 m above floor level. These receptacles should be duly marked with a non-removable countersunk (low relief) plastic or metal label, indicating the output voltage.

It shall be installed as follows: phase "A" in yellow, phase "B" in red, and grounding in green. Every circuit connected to the new circuit board shall preserve the color of each phase.

4.01.08) Fluorescent Lamps

For each container, the Contractor shall supply and install three (3) lamps 2 x 32W fluorescent type, Each lamp shall comply with these characteristics: IP 65 waterproof fluorescent lamp, 120 V electronic ballast with harmonic distortion < 10%, power factor \geq 98%, two T8 32W fluorescent tubes white 8000 hours of life, Casing polycarbonate, Clips closure, 2-years warranty. These lamps shall be fitted inside the container. The item includes the lamps themselves, single receptacles 120V, wiring with jack and rubber conduit for low smoke emission, switches and fluorescent tubes (See plan). The switches shall be placed 120cm above the floor.



The Contractor shall include in his/her offer the piping system required for the lamps and receptacles wiring, which shall be type PVC ½” or ¾”, embedded in walls. The price shall also include accessories such as unions, connectors, and miscellaneous elements which are required for the canalization work.

4.01.09) Grounding system

The Contractor shall supply and install a grounding system, which shall be composed of four electrodes, copper 99%, 5/8”, 240cms each one. These electrodes shall be connected through a bare wire type AWG caliber No.2. The electrodes shall be installed forming a square section of 4 mX4 m. The grounding system shall have inspection cavities with physical dimensions of 0.3m x 0.3m x 0.5m deep, and covers. The covers shall be made of concrete and metallic frame for heavy traffic. The expected impedance value according to this configuration shall be 5Ω or lower; in case of a larger value, the Contractor shall include in his/her proposal the pricing for achieving a soil analysis, in order to adjust the current conditions for getting the expected impedance value.

The grounding electrodes and the grounding line (AWG No2) shall be exothermic welded. The grounding line shall be connected to a grounding master bus, which shall have the following dimensions: 10 mm thick, 50mm width and 200 mm length. The master bus shall be a copper bar, tin-plated, with a number of holes and separation from each other according to NEMA standards. All the grounding lines shall have terminals in order to be screwed in the new master bus. The master bus shall be provided and installed by the awarded vendor; this device shall be placed inside of a crib. The crib shall have door and electrical insulators. The crib shall be fixed in one of the external walls of the shelter. The grounding crib shall be for outdoor application, type NEMA 2-3, special painting with treatment anti-corrosion. The grounding master bus shall receive the grounding line of the new electrical board, the existing electrical board and the shelter. The new grounding system shall be certified by fulfilling the follow standards:

- Official resistance value according to Standard IEEE 142-4.1.2
- Electrode Material according to Standard NEC 250-52-c (2)
- Pipe type Electrode Size according to Standard NEC 250-52-c (3)
- Distance between placed electrodes NEC 250-56
- Connections Quality NEC 250-70
- Grid Conductors Gauge NEC 250-50-(d)
- Ground Connector Gauge NEC 250-66
- Wires Quality NEC 250-50

- PT NEC Interconnection NEC 250-68
- Accessibility to Electrode NEC 250-68
- Main grounding bus bar EIA/ TIA 607-5.4
- Flowing current IEEE 1100 Table 4.3

4.01.10) Air Conditioning Units

For three containers, the Contractor shall supply and install one (1) air conditioning (AC) unit, mini-split type, with cooling capacity of 18000 BTU. The units shall contain their respective supports and anchor elements. The air conditioning units will be fitted at a height of 2.00m above floor level (measured from the top edge of the air conditioning unit).

For the Officers Lodging container, the Contractor shall supply and install two air conditioning (AC) units, mini-split type with capacities of 9000 BTUs and 12000 BTUs respectively.

Each AC shall include the water drainage system, designed to remove the water contained in the trays and prevent water from being blocked by dust and other elements.

4.01.11) Electric Extractor Fan

For each lodging container, the Contractor shall supply and install an electric extractor fan in the bathroom area, Ventilation fan Model 676 – 684 for 110 cubic feet, connected to the switch of the bathroom-s lamp. This fan shall include a frame with ½” waved mesh.

4.01.12) Data drops

The Contractor shall supply and install duplex data drop, ANSI/TIA/EIA-568-B.2-10 CAT 6A, which shall be certified according to stated standard. The data drops are located as shown in the plan. Each data access point shall have jack connector, wiring, faceplate and marking icon, marking rings to identify both ends of the data drop. The Contractor shall quote for the supply of three (3) seven-foot patch cords (for work place) and three (3) five-foot patch cords (for Telecommunication closet administration).

The Contractor shall include a well-known brand, such as AMP, Siemon or Panduit. The wiring certification shall be done using a cabling network analyzer, which shall have a calibration certificate issued within the last six months; this is **MANDATORY** for system acceptance. The data drops shall be installed into the raceway that runs over the level of the baseboard.

The Contractor shall supply and install one (1) patch panel, CAT 6A-certified. The patch panel shall support 12 UTP ports and shall be labeled according to instruction by the US Government Representative during the contract execution.

4.01.13) Telecommunication closet

The Contractor shall supply and install a 25 inch- high Telecommunication closet. The new Telecommunication closet shall be metallic, painted with electrostatic painting, built in cold rolled caliber BWG No. 16. The new Telecommunication closet shall have door with lock and ventilation mesh as well as one fan on top. The Telecommunication closet shall have a grounding barrage; taking into account that Telecommunication closet’s grounding bar is connected with master barrage by using an insulated conductor THHN/THWN AWG No. 8 and connecting both metallic raceways by using an insulated conductor THH/THWN AWG No. 10. The Telecommunication closet shall have a power strip, which

shall have the following features: TVSS class A, current interruption of 12KA, EMI/RFI filter, 5 duplex outputs 120VAC/15A, manufactured by well-known vendor and RETIE-certified.

The Telecommunication closet shall be divided in two parts: the first one shall be used for data purposes and the second section shall contain the UPS and battery set.

4.01.14) Internetworking device

The Contractor shall supply and install one (1) data switch unit with following features: 12 UTP port (10/100/100 Mbps), power over Ethernet, layer 2/3, manageable via Web. The suggested brand is Cisco Catalyst. The system configuration is done under US Government Representative instructions.

4.01.15) UPS 1KVA- Cubicle

The Contractor shall supply and install four (4) UPS 1KVA, true online system, double conversion, single-phase, 10 minutes autonomy and USB port. Three of the proposed UPSs shall be located in each cubicle and the remainder shall be located inside the Telecommunication closet. The unit shall be brand new, APC or Powerware (Eaton), time of manufacture shall not be more than six months (this time includes import process to Colombia).

4.01.16) Emergency lighting

For each container the Contractor shall supply and install above the door an emergency lighting, with 2 lights and 90-minutes of battery back-up. Sylvania E40L or similar.

4.01.17) MARKING

The Contractor will supply and install plastic plates with black bas-relief and printed white letters of no less than one centimeter in height, on all the main equipment for distribution such as measuring center, panels and telephonic or voice and data distributors. These plates shall indicate the use for each device or element according to the diagrams.

- All electrical panels must have the single line diagram and power distribution chart; each circuit shall be identified.
- The main distribution panel shall be identified with 10x5 cm labels, with white letters and black background. Secondary panels must have similar 5x3 cm labels.
- Each breaker in the main electric panel shall have a 5x3 cm label.
- Solid plastic safety signs (electric risk) shall be installed in every electric panel, in the electric room, emergency generator and electrical sub-station.
- 5x3 cm solid plastic labels shall be installed in the grounding lines coming out of the main distribution panel, with red letters and yellow background.
- 3x4 cm metallic labels shall be installed on the inspection boxes.
- 10x5 cm plastic labels with white letters and black background shall be installed on each end of the main circuit.
- 10x5 cm plastic labels with white letters and black background shall be installed for secondary circuits; the cables shall have plastic ties every 1.5 meters.
- Electric outlets shall indicate the respective panel and secondary circuit, as well as the corresponding voltage.
- Switches shall indicate the respective panel and secondary circuit.
- Each faceplate shall indicate the number of the corresponding port in the patch panel.

The plans listed below are attached.

1. Architectural (Drawings A-001 to A-006)
2. Structural (Drawings C-01 to C-03 and E-04 to E-07)
3. Electricals (E-001)

NOTE: The Contractor to whom the project is awarded shall have to present catalogues and test results of all materials to use for this project.

5.01) Other Requirements:

5.01.01) List of Personnel: Prior to initiation of the work, a list of personnel to be employed at the site shall be submitted for review to be able to obtain access to work area, including full names, identification card numbers, place and date of birth, home address and, in some cases, a valid government certificate of good conduct and photographs. The US Government and the Base shall reserve the right to admit or withdraw personnel from the work site for reasons of security and/or due to the quality of the work.

5.01.02) Vehicles and Machinery: All vehicles and machinery or equipment that would schedule to enter the work area shall be itemized on a list submitted well enough in advance to be verified and to obtain an entry permit. This list shall include type of vehicle; plates; complete name and ID number of driver; and a copy of the driver's license. The Contractor shall take into account the time used by vehicles and personnel in order to enter and exit the work area.

5.01.03) Industrial Safety Person: The Contractor shall have permanently on site a person specialized in industrial security who will ensure that workers are constantly complying with the security standards for personnel and equipment, scaffolds and other installations or structures.

5.01.04) Apparel: All personnel shall be equipped with an overall of the same design and color, or long pants and T-shirt with sleeves of the same type and color, boots, hardhats, gloves and any security elements required for their particular activity, such as face masks or shields, gloves, boots, ear plugs, etc. Use of these items at the work site is mandatory. Likewise, each employee shall wear a laminated recent photo identity card indicating his/her name and identification card number, position, and Contractor name.

5.01.05) Cleaning and Debris Removal: The Contractor shall have personnel responsible for cleaning the construction site and nearby zones daily. The unit prices for all items, without exception, include the costs of cleaning up, loading and removal of all materials resulting from the building work. The Contractor will take these materials to an authorized dump, where the interests of the base, third parties and the environment will not be affected (the Contractor shall follow the parameters established in Resolution 541/94 and any subsequent modifications). Material from excavations shall be deposited in such a way as to avoid blocking the entrance to the site at all times or occupying public roads while the material is being loaded into trucks for removal.

5.01.06) Materials and Finishes: The Contractor shall include new materials of first quality design for prolonged and heavy-duty use. The Contractor shall guarantee good materials and excellent finishes. All the colors and finishes shall be submitted to the US Government Representative for approval prior to purchase and installation.

The Contractor shall leave on site a stock of materials like bulbs, fuses, terminals or pipes that have been fitted, representing three (3) % of the total quantity, for future maintenance purposes. These items shall be handed over duly packed, identified and listed.

5.01.07) Food, Transportation and Lodging: The Contractor is responsible for food, transportation and off-Base lodging for personnel.

5.01.08) Information of Important Events: The Contractor shall inform the US Government Representative of special events or works, such as the pouring of concrete, tests and the like, giving the US Government Representative at least seventy-two (72) hours notice so he/she can be physically present.

5.01.09) Site Description: Before beginning any preliminary work, the Contractor shall complete a site description with photographs and an account of the actual conditions of roads, sidewalks, surrounding buildings, etc. This report shall be signed by the Base Commander and Contractor. This report is for the purpose of documenting the actual status of the area before the work is performed. This report will be used to compare the site after the work is finished. Three identical copies of the pre-construction site report must be furnished: one for the user (Colombian National Police), one for the Contractor, and the final one for the US Government. If the Contractor caused any damage to the work site or other private or public property, he/she shall do all the repairs prior to the contract closeout; these repairs are without cost to the US Government. At the end of the project, a closing review and memorandum should be done with the same participants, with a signed copy furnished in the final report.

5.01.10) Inventory of Removed Elements: The Contractor shall dismantle, list, and submit the reusable elements of the work site to the final user (Colombian National Police). A signed copy of this list shall be given to the end user and the US Government Representative.

5.01.11) Protection of Elements in the Work Area: Areas, equipment, and elements at the work site or in areas nearby shall be protected from damage or deterioration. The Contractor shall assume the cost of any repair or replacement required because of improper use or carelessness on his part or on the part of his workers.

5.01.12) Security of the Construction Site: The Contractor shall supply security services for the construction site and the camps. The US Government and the final user will not be responsible for the payment of the security services nor for the elements left at the construction site.

5.01.13) Nearby Zones: The nearby zones must be left in the same or better condition as prior to construction (with grass, gravel, sidewalk, floor finishes or whatever applies in each case). Furthermore, repairs shall be done to faults, scratches, damage and anything else which the Contractor and the US Government might note in the building and neighboring constructions for ensuring that the work is made ready and handed over correctly. The Contractor shall disassemble and remove all preliminary facilities, camps, sites, etc. before the final handover, eliminating all debris and extra materials.

5.01.14) Underground Interferences Study: The Contractor shall have on hand a study of all aerial, surface, underground or engaged interferences provided by the CNP, so as not to damage pipes, boxes, wiring, posts, hoses, wells or other elements or structures existing in the work area or adjacent to it. Should the excavation interfere with sewers or pipes, the Contractor shall build adequate support or protection for these installations and/or develop a new route, subject to prior approval by the US Government Representative. The Contractor shall keep all drains caps and catch pits clear in public utility networks near excavation sites to prevent their obstruction or damage.

"FIRM AND PROJECT INFORMATION "

Firm Information		NIT NUMBER:	
NAME	ADDRESS	TELEPHONE/FAX	E-MAIL ADDRESS

Owners, Partners and Principal Officer

NAME	POSITION	TELEPHONE	ENGLISH COMMUNICATION (Ability to understand, write and read)

Legal Representatives and backups

NAME	POSITION	TELEPHONE	ENGLISH COMMUNICATION (Ability to understand, write and read)

Project Director, Superintendent and key technical Personnel for this project

NAME	POSITION	TELEPHONE	ENGLISH COMMUNICATION (Ability to understand, write and read)

Subcontractors for this project (if it does not apply indicate it in the chart)

NAME	ACTIVITY TO PERFORM	% DEL PROJECT TOTAL	TELEPHONE	ADDRESS AND CITY

Suppliers for this project

NAME	MATERIALS TO SUPPLY	% DEL PROJECT TOTAL	TELEPHONE	ADDRESS AND CITY

Requirements of the Offeror and Owners/partners:

DESCRIPTION	YES	NO	NOTES
Has all licenses and permits required by local law to perform?(Chamber of Commerce, Merchandise Register, Professional Licenses, etc.)			
Meets local insurance requirements (Prestaciones Sociales, ICA, Sena, etc.)			
Has the ability to obtain a performance and guarantee bond and payment bond, or adequate performance security, such as irrevocable letters of credit or guarantees issued by a reputable financial institution. Include Information			
Has adverse criminal record?			
Has political or business affiliation which could be considered contrary to the interests of the United States.			

I certify that the information is accurate and verifiable

Signature of the Legal Representative _____
Name of the Legal Representative _____

Date _____
Id Number _____

Artículo 289 del Código Penal Colombiano: "El que falsifique documento privado que pueda servir de prueba, incurrirá, si lo usa, en prisión de uno (1) a seis (6) años."

"FIRM EXPERIENCE"

Indicate the experience of the firm in similar projects performed in the last ten (10) years. Include maximum 10 projects. **Do not include certifications or contract copies.** In the case we needed we will require it afterwards.

	1	2	3	4	5
NAME OF THE CLIENT (CONTRACTING PARTY)					
CLIENT ADDRESS					
CLIENT TELEPHONE NUMBER					
CLIENT POINT OF CONTACT					
CONTRACT NUMBER					
TYPE OF CONTRACT (* 1)					
NAME OF THE CONTRACT OR PROJECT					
PROJECT LOCATION					
PROJECT STARTING DATE					
PROJECT FINISH DATE					
WAS THE PROJECT FINISHED ON TIME (Explain if needed)					
SQUARE METERS OR UNITS (Indicate unit measurements)					
CONTRACT COST IN PESOS					
CONTRACT COST IN MONTHLY MINIMUM SALARIES					
INDICATE IF IN THIS PROJECT YOU WERE THE PRIME CONTRACTOR , SUBCONTRACTOR OR ASSOCIATE INDICATE THE PERCENTAGE OF PARTICIPATION OF YOUR FIRM IN THIS PROJECT					
BRIEF DESCRIPTION OF ACTIVITIES BEING PERFORMED					
COMPARISON OF THE WORK PERFORMED WITH THIS SOLICITATION (* 2)					
BRIEF DESCRIPTION OF TECHNICAL PROBLEMS ENCOUNTERED AND THE WAY THEY WERE SOLVED					
METHOD OF ACQUISITION (Public solicitation, private or non competed) award criteria					
COST/PRICE MANAGEMENT HISTORY (any cost overruns and under runs, and cost growth and changes)					
HAVE YOU HAD ANY CONTRACT TERMINATIONS IN THE LAST TEN (10) YEARS?					
REASONS FOR TERMINATIONS (for contractor convenience ó for default or other)					

(*1) Consulting, construction, design, work oversight, delegated administration If you are not a company explain if you were the superintendent, director or other.

(*2) En here you should indicate which activities performed are similar to the work being contracted.

I certify that the information is accurate and verifiable

Signature of the Legal Representative _____ Date _____
 Name of the Legal Representative _____ Id Number _____

Artículo 289 del Código Penal Colombiano: "El que falsifique documento privado que pueda servir de prueba, incurrirá, si lo usa, en prisión de uno (1) a seis (6) años."