EULEX KOSOVO

VOLUME 3
TECHNICAL SPECIFICATIONS

EULEX Kosovo
January 2013, Pristina

GENERAL INFORMATION

For the needs of its Management Support Units EULEX has planned construction of new premises and refurbishment of an existing building within its Compound located in Industrial Zone of Prishtina.

1 SECURITY CONDITIONS

Security Conditions – that have to be considered - for the performing companies:

- Initially a list of workers and their tools that they will use during their work will be asked from the contractor. Before every entry/exit to the compound they will be asked about their ID Cards.
- The appointed supervisor will meet the contractor's representative before they start with works and they will consider the security procedures.
- Contractor's tools which are not going to be used during the weekend will be asked to be taken away (except if they have no request to work during the weekends).
- Only tools which are presented in the inventory list (mentioned above) will be allowed in the facility. Procedures can be applied in occasions of adding or removing a tool.
- All the tools shall be locked in tool boxes when not in use (during weekdays).
- The supervisor will check all the working places before the works start and after the works are finished for that particular day (every day).
- No items shall be transported in or out of the site without the express prior approval of the designated EULEX supervisor. The approval, preceded by an inspection of the items to be transported, shall be in writing and will be accompanied by the list of the items approved for transportation to the specific location.

2 SCOPE OF WORKS

This project contains:

- Construction of New Office Blocks (1&2)
- Storage Building Refurbishment (ex Car Wash)
- Assembling of three Rub Hall Structures
- Assembling of two Hard Wall Structures
- Infrastructure works and other

The following assets/items will be provided by EULEX for the aforementioned construction works:

1. All Office Containers - 60EA
2. Ablution Units 20 feet – 4EA

3. AC Units window type 12000 BTU - 60EA
4. Rub Hall Structure set – 3EA
5. Hard wall Structure set – 2EA
6. Containerized Heating Plant, complete.
7. All radiator panels required for office blocks.
8. Circulation pumps for the heating system.
9. Water tanks and pumps for backup system.
10. Transformer of 400KVA capacity.
11. Other minor items as specified within BOQ for each building and below provided specifications.

Most of the assets/items are second hand items which require refurbishments and improvements foreseen with this contract.

2.1 CONTRACTOR'S RESPONSIBILITIES

Tenderers will be given the opportunity to visit the site and familiarize themselves with existing conditions. All tenders will assume to have satisfied themselves concerning all relevant details pertaining to the contract. Site visit is mandatory. Tenders that have not attended site visit will not be taken into consideration for application.

2.2 TECHNICAL SUBMISSION AND TIME SCALE

Tenders are obliged to include sufficient technical information to allow EULEX to assess the quality of proposal. Tenders are obliged to state the contract period and the warranty period in their submission and submit a schedule of works in the form of bar chart with regard to the work that needs to be carried out on the site. This information will be taken in to account when proposals are assessed and evaluated.

2.3 PRIOR TO COMMENCING OF ANY WORK

The contractor shall provide the samples of all materials with the manufacturer specifications that he intends to use, for approval by EULEX designated Representative.

The contractor shall submit a complete program which specifies his intended procedure for executing the work in compliance with the above-mentioned requirements.

The contractor shall take his own measurements in accordance with the physical status on the ground before starting of any productions.

2.4 FINAL CLEARANCE

Upon completion of each section of the Works, the Contractor shall clean up the site; remove all temporary buildings, plant if any, and remove debris. He shall level off and fine grade all excavated materials which is surplus to requirements. The

whole of the site shall be left in a clean and Workmanlike condition to the satisfaction of the Supervisor.

2.5 WHEN THE CONTRACTOR HAS OBTAINED APPROVAL FROM EULEX

All work has to be carried out to the complete satisfaction of the delegated representative in accordance with relevant standards and good working practices.
The Contractor shall notify the designated representative, prior to covering any part of the work, which will then be inaccessible for subsequent inspection. Failure to do so will result in exposure of the afore-said works and subsequently reinstatement at the contractor's expense.
It is essential to have an English speaking supervisor with direct authority over the workforce on site during all working hours. In the absence of an English-speaking supervisor, a translator will be required to presence at all times.

2.6 GENERAL WORK REQUIREMENTS

i) Security and Fire Fighting

The Contractor shall provide and maintain adequate fire extinguishers on the Site and areas of high fire risk shall be fenced and signs posted and supplied with specialized fire extinguishers, if necessary. Generators and their batteries and water pumps shall be adequately protected against vandalism and theft. Unless otherwise provided by the Supervisor, the Contractor shall not by his operations obstruct any road or access to other buildings nor break down any fence nor obstruct any drains or water courses, but if such blockages occur he shall at once remove the blockages and repair the breakages.

ii) Construction Equipment & Machinery

The Contractor shall provide all necessary sound and adequate equipment, heavy machinery and vehicles machinery vehicles and equipment required for the works that include but are not limited to (cranes, forklifts, trucks etc). The contractor shall be solely responsible for the employment of skilled and qualified machinery and equipment operators as well as the sufficient and proper maintenance of all machinery and equipment employed on the site

The contractor shall be solely responsible for the adequate lighting where work is being executed at night and shall provide and install any additional lighting which the Supervisor may require in order to watch and supervise the works and carry any testing and examination of materials. Materials available on the Site or materials made available or supplied by the Contractor shall be used solely for the execution of the Works. The Contractor shall minimize the pollution of and disturbance to roads and other places on and around the Site. No trees or other vegetation shall be removed except with the express permission of the Supervisor. The Contractor shall ensure that access is provided to all buildings and properties adjacent to the Site for the duration of the Contract.

All temporary buildings erected by the Contractor upon the Sites and the layout of the buildings and the site, shall comply with Laws and all local by-laws in so far as they are applicable. The Contractor shall be absolutely and solely responsible for the safety and security of Temporary Works and for the equipment in connection therewith which may be erected or provided for the carrying out of the Contract and for the execution of the Works. This provision shall be applicable to all temporary works and equipment whenever provided and erected by the Contractors for the purpose of or in connection with the Works. Examination and acceptance by the Supervisor of the Contractor's Temporary Works or of the drawings connected therewith shall not absolve the Contractor from his responsibility for those works and his liability for the consequences of any failure.

iii) Water Supply

The Contractor shall provide a clean and sufficient supply of fresh water, both for construction of the Works and for all facilities. He shall undertake all arrangements including pipe lines and meters for connecting to local water mains and the provision of pumps, storage tanks and water conveyance where necessary, payment for all fees and water charges and the satisfactory removal of all such arrangements and provisions on completion of the Works. The Contractor shall provide temporary water supply if required for his work.

iv) Electric Power Supply

The Contractor shall provide all temporary power, light, and telephone service required for his work. The Contractor shall make all necessary applications, obtain required permits and pay all fees and charges for such services and their use. The Contractor shall provide all wiring, lamps, switches" fuses, receptacles, etc., as may be required for his work. Temporary power and light circuits shall be thoroughly insulated and waterproof. The temporary power and light system shall be subject to the inspection and approval of the appropriate Authority. The Contractor shall be solely responsible for the provision of Electricity from whatever source for all his requirements under the Contract. The cost of provision of electricity is deemed to be included in the contract rates. The Contractor shall provide temporary electrical supply if required for his work.

v) Use of the Site

The Contractor shall restrict his activities to within the Sites and shall avoid entry on to any other lands except where the Contractor has made his own arrangements for such entry or the owner has arranged for this entry. Any trespass, damage or claims arising from such entry shall be the sole responsibility of the Contractor, who shall hold the Contracting Authority indemnified against all claims arising from such trespass or damage.

Weather Conditions

Without limiting his liabilities, the Contractor shall make suitable arrangements to protect the works and the temporary works, against the effects of the weather.

vi) Protection of Existing Works and Services

The Contractor shall explain himself with the position of all existing services such as sewers, surface water drains, cables for electricity and telephone, telephone and lighting, poles, water mains, heating supply pipes and the like, before commencing any excavation or other works likely to affect the existing services. The Contractor will be held liable for all damages to road, main pipes, electrical cables, lines or services of any kind caused by him or his Sub-Contractors in the execution of the works. The Contractor shall make good any damage without delay and, if necessary, carry out any further work ordered by the Supervisor. The Contractor shall indemnify the Contracting Authority against any claims in this respect. In all case where such works or services are exposed, they shall be properly shored, hung up or otherwise protected. Special care shall be exercised in filling and compacting the ground under mains, cables, etc., and not to cover up any water meters, stopcock boxes and similar items. Installations adjacent to the Works shall be kept securely in place until the work is completed and shall then be made as safe and permanent as before.

vii) Temporary Buildings for Use by the Contractor

The Contractor shall provide and maintain in a perfectly usable and watertight condition on land in possession of the Beneficiary, or such lands as he may acquire for the purposes of the Works with the approval of the Supervisor, such temporary buildings of timber, galvanized iron, or other suitable material as may be necessary for his general use in connection with the Works as well as buildings for the temporary accommodation of any labor, and for the use of the persons employed by him and before constructing such buildings he shall supply to the Supervisor a plan or plans showing their positions and nature which shall be in all respects to the approval of the Supervisor. Prior to preparing his Tender, the Contractor shall satisfy himself as to what will be required especially with regard to labor accommodation. The cost of providing temporary buildings for use by the Contractor shall be spread over the works and included in the Breakdown of Prices for those works.

viii) Health, Safety and Accidents

The Contractor is also obliged to observe all the stipulated measures pertaining to fire protection, protection at work as well as hygienic and technical conditions such as Fire Protection Regulations Rule Book on general Measures and Normative of Protection at work concerning building facilities intended for the work and other subsidiary premises. The Contractor shall ensure, so far as is reasonably practicable and to the satisfaction of the Contracting Authority, the health, safety and welfare at work of his employees including those of his sub-Contractors and of all other persons on the Site.

His responsibilities shall include: the provision and maintenance of equipment and systems of work must be safe and without risks to health; the execution of suitable arrangements for ensuring safety and absence of risks to health in connection with the use, handling, storage and transport of articles and substances; the provision of

protective clothing and equipment, first aid stations with such personnel and equipment as are necessary and such information, instruction, training and supervision as are necessary to ensure the health and safety at work of all persons employed on the Works all in accordance with Laws and all local By- Laws; designation as safety Officer of one of his senior staff who shall have specific knowledge of safety regulations, and experience of safety precautions on similar works and who shall advise on all matters affecting the safety of workman and on measures to be taken to promote such safety; the provision and maintenance of access to all places one the Site in a condition that is safe and without risk of injury; the provision of adequate water-borne sanitation, refuse collection and disposal, complying with the Laws and all local By-Laws and to the satisfaction of the Supervisor, for all site offices, workshops erected on the camp site; the provision of suitable latrines and other sanitary arrangements at the site where work is in progress to the satisfaction of the Medical Officer in the area and of the Supervisor; the execution of appropriate measures in consultation with the appropriate Public Health Authority to control within the site; reporting details of any accident to the Supervisor as soon as possible after its occurrence; the provision and maintenance of adequately equipped first aid station on the site of the works.

Maintenance

Make sure equipment is:

• well looked after and properly stored when it is not being used, for example in a dry, clean cupboard, or in the case of smaller items, such as eye protection, in a box or case;

• kept clean and in good repair - follow the manufacturer's maintenance schedule (including recommended replacement periods and shelf lives). Simple maintenance can be carried out by the trained wearer, but more intricate repairs should only be done by specialists. Make sure suitable replacement PPE is always readily available.

Standards Directory

This document is designed as a simple reference to the European Harmonized Standards [EN's] applicable to Safety Equipment.

General PPE Standards

EN 348				

Clothing [Protective] Standards

EN 340	EN 373	EN 381-1	EN 381-2	EN 381-3
EN 381-5	EN 381-8	EN 381-9	EN 412	EN 463
EN 464	EN 465	EN 465/A1	EN 466	EN 466/A1
EN 467	EN 467/A1	EN 468	EN 469	EN 470-1

EN 470-1/A1	EN 471	EN510	EN 530	EN 351
EN 531/A1	EN 532	EN 533	EN 863	EN 1073-1
EN 1049-1	EN 1049-2	EN 1050	EN 1082-1	EN 1421-1
EN 1486	EN 60895	EN 60984	EN 60984/A11	

Ergonomic Standards for PPE

EN 13921-1	EN 13921-3	EN 13921-4	EN 13921-6	

Eyewear [Protective] and Face Protection Standards

EN 165	EN 166	EN 153-1	EN 168	EN 169
EN 170	EN 171	EN 172	EN 174	EN 175
EN 207	EN 208	EN379	EN 379/A1	EN 1731
EN 1731/A1	EN 1836	EN 1868	EN 1938	EN 13178

Fall Arrest Standards

EN 341	EN 341/A1	EN 381-1	EN 353-2	EN 354
EN 355	EN 358	EN 360	EN 361	EN 362
EN 363	EN 364	EN 365	EN 568	EN 795
EN 813	EN 892	EN 958	EN 1095	EN 1891
EN 12277	EN 12278			

Floatation Devices Standards

EN ISO 12402-4	EN ISO 12402-9			

Footwear [Protective] Standards

EN 344	EN 344/A1	EN 344-2	EN 345	EN 345A
EN 345-2	EN 346	EN 346/A1	EN 346-2	EN 347
EN 347/A1	EN 347-2	EN 341	EN 12568	

Gloves [Protective] Standards

EN 374-1	EN 374-2	EN 374-3	EN 388	EN 407
EN 420	EN 659	EN ISO 10819	EN 50237	EN 60903
EN 60903/A11				

Head Protection Standards

EN 397	EN 433	EN 812	EN 960	EN 960/A1

EN 966	EN 967	EN 1077	EN 1078	EN 1080
EN 1384	EN 1385			

Hearing Protection Standards

EN 352-1	EN 352-2	EN 352-3	EN 458	EN ISO 4869-2
EN 24869-1	EN 24869-3			

Heat and Flam Protection Standards

EN 366	EN 367			

Life Jackets [Protective] Standards

EN 393	EN 393/A1	EN 394	EN 395	EN 395/A1
EN 396	EN 396/A1	EN 399	EN 399/A1	

Liquid Chemical Protection Standards

EN 368	EN 369			

Respiratory Protection Standards

EN 132	EN 133	EN 134	EN 135	EN 136
EN 137	EN 138	EN 139	EN 140	EN 141
EN 142	EN 143	EN 144-1	EN 144-2	EN 145
EN 146	EN 147	EN 148-1	EN 148-2	EN 148-3
EN 149	EN 250	EN 269	EN 270	EN 271
EN 371	EN 372	EN 400	EN 401	EN 402
EN 403	EN 404	EN 405	EN 1061	EN 1146
EN 1146/A1	EN 12941	EN 12942		

3 DESCRIPTION OF MATERIALS AND WORKS

3.1 Office Blocks

Office blocks 1& 2 consists of office containers and ablution units and are to be constructed as per below provided specifications, designs and BOQ.

The selected contractor shall provide the required material and manpower, for installation/construction of buildings.

3.1.1 Construction/Installation Works – all office blocks:

Office containers are 20' second hand containers (outside dim. 604x244cm) and as specified will be provided by EULEX.

Building setup/arrangement of containers is to be done as per designs provided.

Works include installation of additional wall panels, available on site, in order to divide space, removal of wall panels in order to increase space.

If wall panels are removed the ceiling/ wall should be sealed.

Ceiling and walls sealing/closure of gaps is to be done with prepainted metal sheet 0.6 mm thick, previously filling the gaps with foam/mineral wool as required.

The containers are second-hand office containers which require further improvements to meet the required standard for office space:

- Demolition of the existing flooring layers and sub layers (linoleum/plywood/steam blockade/mineral wool). All the debris is to be transported outside the Compound to the designated city dump sites.
- Installation of new flooring:
  - Insulation filling: mineral wool thickness 100 mm (Fire classification: DIN EN 13 501-1; A1) among steel transverse supports.
  - Plastic sheet 0.2mm
  - Plywood th =20mm for the offices.
  - Final coat: Linoleum 2.0mm thick, commercial use, EN 649, classification as per EN 685 Class 33, areas with heavy traffic.
    Installation to be done using proper linoleum adhesive. Adhesive should be applied all over the surface.
    Appropriate smoothing tools should be used to make the surface free of bubbles.

Joints between the sheets should be welded by using appropriate tools and equipment. Proper skirting should be applied around the perimeter of the offices.
Colour to be chosen by EULEX Representative.
In the areas where two different flooring materials join proper aluminium skirting is to be provided and installed.

- Installation of Window type AC Units 12000BTU.
  AC Units will be provided by EULEX and shall be installed by the contractor.
  The contractor shall mount and install the provided AC Window Type units, sealing also the gaps between wall panel and AC units.
  Due to difference between the dimensions of the existing AC Window on the container panels and the provided AC Units sealing/closure of gaps around had to be foreseen. The sealing/closure of gaps is to be done with pre-painted metal sheet 0.6mm thick, RAL 9001 or similar to interior paint, fixed from both sides, with extruded rigid polystyrene foam in between as insulation.

- Installation of venetian blinds:
  All office windows are to be equipped with aluminum venetian blinds - of 16mm wide strips, with single flexible wand mechanism for blind lift and tilt. Color to be chosen by EULEX BMU Representatives.

- Interior painting of all office/ablution units, including corridor 2x, color white.
  Characteristics of the paint to be used: semi-gloss coating, eco-friendly, without unpleasant odor, thinning with water. Paint is to be applied by spraying.
  Previously the surface is to be cleaned of dust and any debris.
  The panels should be cleaned of foreign objects and small holes should be sealed with silicone. Attention should be paid in covering/masking of the floor surfaces, walls, windows, switches, sockets and others. Plastic sheets and masking tape should be used.
- Exterior Painting/façade: Exterior painting with oil paint spraying 2x, color white. The surface is to be made free of any dust or debris prior to painting.

Office Block 1 & 2:

Corridor of the ground floor:

Ground floor corridor structure consists of metal profiles 60x40x3mm each 60cm crosswise, and those of 40x2.6mm lengthwise, including L profiles 50x4mm lengthwise on both sides of the corridor, as per designs provided.

All profiles are to be made rust free, primed with two layers of an appropriate anticorrosive paint.
The surface preparation of the construction must start with cleaning of the metal elements.

Insulation filling mineral wool thickness 100 mm (Fire classification: DIN EN 13 501-1; A1) among steel supports.

External: galvanized corrugated metal sheet in a thickness of 0.55 mm.

Internal: Plywood th =20mm, over which laminate flooring is installed.

Laminate flooring suitable for commercial use, resistant to scratches and water, with 5mm sponge underlayer, th =10mm.
Appropriate skirting profiles throughout the building are to be applied and also aluminum skirting at offices entrance/building entrance.

Samples to be provided for approval prior to installation.

Corridor of the first floor:

First floor corridor structure same as of the ground floor consists of metal profiles 60x40x3mm each 60cm crosswise, and those of 40x2.6mm lengthwise, including L profiles 50x4mm lengthwise on both sides of the corridor, as per designs provided.
All metal profiles are to be made rust free, primed with two layers of an appropriate anticorrosive paint.
The surface preparation of the construction must start with cleaning the elements.

Internal: Plywood th =20mm, over which laminate flooring is installed. Laminate flooring suitable for commercial use, resistant to scratches and water, with 5mm sponge underlayer, th =10mm.
Appropriate skirting profiles throughout the building are to be applied and also aluminum skirting at offices entrance/building entrance.

Samples to be provided for approval prior to installation.

Ceiling ground floor:
Mineral fiber suspended ceiling panels, first class quality, complete with all the necessary fixtures.

Ceiling first floor:

- Mineral fiber suspended ceiling panels, first class quality, complete with all the necessary fixtures.
- 100mm mineral wool, Fire classification: DIN EN 13 501-1; A1 within the build timber structure supported in the roof trusses.
- Plastic sheet 0.2mm with all the necessary fixtures, overlapped.

Roof:

Two slope roofs shall be constructed over the blocks #1 &2 as per the designs provided.
The roof structure is to be formed by wooden trusses.
The maximum moisture content of wood structure allowed is 12 %. All joint metal elements shall be galvanized. Nails, screws, bolts and nuts shall be of stainless steel.
Roof timber structure shall be of solid rafters and beams of first-class quality wood.
Roof covering shall be done with pre-painted corrugated metal sheet, 0.55mm thick.
Roof delivered with horizontal and vertical gutters installed, of pre painted galvanized metal sheet, including also snow guards
Roof eaves and edges: Pre painted galvanized corrugated metal sheet 0.50mm.

Exterior Doors and Windows:

Main Entrance Doors:
PVC profiles doors in accordance to BoQ and as per design provided.
Glass: double, fully insulated, with noise reduction and thermal protection,
6+16+6mm.

Emergency Exit Doors:
Metal solid door, equipped with emergency exit hardware (panic push bar) and door closure mechanism.
The door should have the possibility to open from outside with a key and handle. Minimum 3 keys.
Extreme emergency,
Outward-opening (EN 1125).

PVC Corridor /staircase windows:
The new windows shall be of white PVC- Plastic, double glazed
Glass: double, fully insulated, with noise reduction and thermal protection,
6+16+6mm, according to standards, in dimensions as specified in the BoQ and relevant drawings. Windows open in horizontal and vertical axis.

3.1.2 Refurbishment of Ablution Units

EULEX will be providing all 4 Ablution Units, out of which 2 of them require detail refurbishment works as per BOQ, designs and specification below:

(Dimensions: 605x244)

- Demolition of the flooring and subflooring components including mineral wool insulation, waterproof plywood, steam blockade.
  The debris is to be collected and disposed of by the contractor in the municipal city dump site.

- Supply and installation of new flooring:
  - Insulation filling: mineral wool thickness 100 mm (Fire classification: DIN EN 13 501-1; A1) among steel transverse supports.
  - Plastic sheet 0.2mm.
  - Installation of new waterproof plywood panels of thickness 20 mm.
  - Wall-to-wall flat linoleum cover, minimum 15 centimeters rise up to the walls, 2.0mm thick, commercial use, EN 649, classification as per EN 685 Class 33, areas with heavy traffic.
- Provision and installation of new partitions/ doors as per the new arranged layout.

Toilet Doors / Partitions:

- WC/ toilet partition walls, as full panels, in which the doors in width of 70cm /195cm door are built-in, furnished with a toilet lock (free/occupied).
- Toilet walls are lifted from the floor by 150 mm, fixed on galvanized or rust free bearers.
  Color of the walls and doors white
  Remark: Number and arrangement according to the enclosed drawings.

- WATER/SANITARY INSTALLATIONS: as per below provided requirements (Plumbing works).

3.1.3 Transportation / Placement of Assets

All container units are available on site. The contractor shall provide appropriate mechanical and lift equipment for the safe relocation and placement of the units according to the designs. The contractor shall provide appropriate transportation means, trained staff and lift equipment for the safe collection and relocation of the units as specified. The conditions of the units prior to their relocation shall be recorded and any and all damages that may be caused during relocation and placement shall be rectified immediately by the contractor at no expense to the Contracting Authority.

3.1.4 Electrical Works:

Office buildings:
The existing electrical fixtures/ fittings shall be removed, and replaced with new in accordance to BOQ and as specified in the drawings provided.

All cables to run on the surface of the walls/ceiling covered with proper trunking, except in the corridor where the cabling will run under the suspended ceiling structure.

Main electrical distribution panels shall be installed for each building as per BoQs complete with box and lockable door.

Note: All the building main electrical panels will be provided by EULEX, and installed by contractor.

The main panels shall be connected to the generator and KEK lines.

Light fixtures, sockets and switches shall be provided and installed as per drawings and BOQ provided, including supply cable installation for the Emergency/Exit lights. Note: Emergency and Exit lights will be provided by EULEX.

External Street lights of 125W are to be fixed on the corners of the building; Lights are to be installed on galvanized metal poles fixed on the structure of the containers.

All the works are to be carried out in accordance to applicable regulations and standards of practice.

3.1.5 Heating

Refer to Point 4. 7 of Specifications.

3.1.6 Plumbing

Refer to Point 4.8 of Specifications

3.2 Refurbishment of storage building

The existing building on site known as “Car Wash” is to be refurbished as per below specifications, designs and BoQ to fulfill the conditions for use as storage building.

3.2.1 Demolition Works

- All 8 rolling doors need to be dismantled.
- Water drainage metal grills need to be dismantled.
- Metal door on the middle interior wall needs to be dismantled.

Contractor shall carry the demolition/dismantling works carefully not to damage the structure of the building.
Any caused damages due to negligence of the contractor shall be repaired at the expense of the contractor.

The area should be cleaned and made free of any debris. Debris is to be removed and transported outside the compound to a designated area/city dump site

3.2.2 Construction Works

Walls:

- 20cm thick Siporex walls are to be constructed on both sides of the building as perimeter walls, where previously the rolling doors were dismantled with the required reinforced concrete beams. The walls need to be plastered from both sides in two layers and finally painted.

- Exterior walls: Lower part brick walls h=60cm need to be plastered with decorative weather resistant coating, natural granulate product, while the upper part of the facade is to be painted with facade paint, color to be chosen by EULEX Representative on site.

Doors:

- 2 new industrial rolling doors dim 370x400+60cm are to be provided and installed on the west façade wall of the building, which shall function automatically through the motor but also have the possibility to operate them manually.
- In East facade wall (new constructed wall) two emergency exit solid metal doors are to be provided and installed equipped with anti panic hardware (push bar).

Flooring:

- New reinforced concrete slab th =8cm, mesh Q335 - Ø 8mm (sq.15x15cm) to be used, previously filling the existing drainage line with gravel 0-30mm and compacting it.
- Two component epoxy flooring, including the skirting h=12cm up to the walls.

Other:

- Existing horizontal gutters need to be cleaned from the debris, while 6 existing vertical gutters needs to be repaired by adding/installing the curved galvanized Ø100mm pipes.

3.3 Rubb Halls

3.3.1 Erection of Rubb Halls

Three Rubb Halls are to be assembled: Rubb Hall 1, 2&3, as indicated in the designs, to be used as storage.

Foundation:

The Rub Halls are to be assembled over reinforced concrete strip foundations, concrete class C-30 (characteristic compressive cylinder strength of concrete after 28 days), as per designs provided.
The Contractor shall supply mix details and certificates of cube crushing in an approved laboratory.

Rubb Hall 1&2 (second hand units):

- Dimensions of one unit: 10x24m.
- Hot-dipped galvanized steel structure.
- PVC impregnated polyester cladding.
- Two access doors at the gable ends.

Two Rub Hall Units are to be combined as per design provided creating a storage area dim 10x48m.

Rubb Hall 3 (New unit):

- Unit dimensions: 10x24m.
- Aluminum Structure in a width of 10 meters and is built up in four-meter-long modules (in total six modules).
- Cover: PVC-coated polyester.
- Doors: One lace-up fabric door 4.5 x 4 meters (w x h) and one fabric folding door 4.5 x 4 meters (w x h).

Installation to be done as per provided Assembly Guide, which is to be studied carefully before the installation on site begins.

Note: The contractor is to verify the dimensions of the Rub Hall Structures and check the elements prior to beginning the construction of the foundation on site.

Flooring:

Reinforced concrete slab 15cm (mesh Q335Ø 8mm (sq.15x15cm) over the compacted gravel sub base and plastic foil 0.2 mm, with Fer-concrete (Ferobeton) as a final layer.
Fer-Concrete is added on concrete which only started to bond.
It is to be applied by machine. The finishing is to be performed by rotating floats (helicopters) up to complete smoothing of surface.
Edge parts are finalized manually by float.

The joints are about 0.3 cm wide. The joints depth 25% of the slab thickness, filled with polyurethane masses after drying of concrete.

3.3.2 Electrical Works

All the cables to run on the surface of the walls/cladding placed within PVC conduits/covered.

Note: Main electrical panels will be provided by EULEX, and installed by contractor (one panel for Rub Hall 1&2, one Panel for Rub Hall 3). All the required materials and manpower to be provided by Contractor, works include grounding of the panel.

Light fixtures, sockets and switches shall be provided and installed as per drawings and BOQ provided, including supply cable installation for the Emergency/Exit lights, suitable for use in warehouse buildings.

Note: Emergency and Exit lights will be provided by EULEX, installed by contractor.

External Street lights of 125W are to be fixed on the corners of the building; Lights are to be installed on galvanized metal poles, corners of front facade.

All the works are to be carried out in accordance to applicable regulations and standards of practice.

3.3.3 Heating

Refer to point 4.7 of Specifications

3.4 Hard walls (Prefabricated Structure)

3.4.1 Erection of Hard Walls

Two Hard walls are to be assembled: Hard wall 1&2 as indicated in the designs to be used as storage.

Foundation:

The Hard Walls are to be assembles over reinforced concrete strip foundations, concrete class C-30 (characteristic compressive cylinder strength of concrete after 28 days) as per designs provided.

The Contractor shall supply mix details and certificates of cube crushing in an approved laboratory.

Hard Wall Units:

Hard Walls are modular insulated units, prefabricated, made of steel frame to which are fixed the walls and roof panels.

Unit 1: Build up in 2.5m modules, 8 modules.
Dim 10x20m
Pitched roof and walls are of corrugated metal sheets on both sides, (sandwich panel) with mineral insulation in between, fixed on the steel structure.

Unit 2: Build up in 4.62 – 4.65m modules, 5 modules.
Dim 11x23m
Pitches roof and walls are of corrugated metal sheets, with insulation layers to be installed/fixed on the structure.

The prefabricated hard wall units parts/components will be provided by EULEX, as a whole.

Note: Both units are second hand units; contractor should review all the provided parts prior to beginning the installation on site and preparing the foundation.

Most of the elements are fixed through bolting; however taking into consideration that the units are second hand units welding is also required in a number of positions.

After installation of the hard wall units, metal profiles shall be properly cleaned and treated with anticorrosive paint and oil paint 2x.

Flooring:

Reinforced concrete slab 15cm (Q335 mesh Ø 8mm (sq.15x15cm) over the compacted gravel sub base and plastic foil 0.2 mm, with two components epoxy paint as a final layer, including epoxy flooring skirting 12cm high to the wall.

3.4.2 Electrical Works

All the cables to run on the surface of the walls placed within PVC conduits/covered.

Note: Main electrical panels will be provided by EULEX, and installed by contractor (one panel for both units). All the required materials and manpower to be provided by Contractor, works include grounding of the panel.

Light fixtures, sockets and switches shall be provided and installed as per drawings and BOQ provided, including supply cable installation for the Emergency/Exit lights, suitable for use in warehouse buildings.

Note: Emergency and Exit lights will be provided by EULEX, installed by contractor.

External Street lights of 125W are to be fixed on the corners of the building; Lights are to be installed in galvanized metal poles, corners of front facade.

All the works are to be carried out in accordance to applicable regulations and standards of practice.

3.4.3 Heating

Refer to point 4.7 of Specifications.

3.5 Roads and Parking

The following infrastructure works are to be done on site:

- Conduct site survey.
- Machine excavation of top layer of soil in thickness average ~50cm, including leveling the surface, spraying the sub grade with water spraying and compacting the same with power roller maintaining the slope.
  Surplus soil shall be removed from the site and transported outside the compound to a designated city dump site.
- Geotextile (300g/m²) shall be installed on the compacted soil surface with an overlap of 50mm at junction and between sheets.
- Gravel 0-60 to be spread to form the 30cm thick sub-base course.
  Spread and compact the gravel in 10cm thick layers to a finished requested thickness. Compacting to be done with power roller.
- Spread gravel 0-30 mm on previously compacted gravel sub-base as described above and compacting to form a final base course of 20cm thickness. Compacting to be done with power roller.
- Spread layer of bitumen emulsion (hot coat) above base course, average 0,8kg/m2 for better connection between road base course and layer of asphalt.
- Asphalt layer thickness 80mm, mixture 0-16mm including compaction is to be used.

  Asphalts: list of applicable standards
  DIN EN 933-5; DIN EN 1425; DIN EN 1426; DIN EN 1427; DIN EN 11251: Bitumen
  DIN 1996: Asphalt testing
  DIN 52098; DIN 52099; DIN 52114: Sieve Granular for asphalt
  DIN 1996-14: Size of granulate
  DIN 1996-6: Amount of binder
  DIN 1996-7: Marshall Test
  DIN 1996-8: Marshall Test water content
  DIN 1996-5: Water content

- Sidewalk and parking areas shall be of pavement blocks 20x10x8cm over the compacted 5cm sand layer, filling also the joints with sand.

- Marking/painting of all the signs/lines/pedestrian crossings on the newly laid pavements, as shown in the drawing, by using thermoplastic paint that contains sufficient pellicle-spraying high- quality glass micro beads with stable reflection.

- Spread river washed stones around the two office blocks strip surrounding area th=20cm.

- And arrangement of green areas as per layouts provided.

3.6 Electrical Installations

Electrical installations have to be provided and installed as per drawings, BoQ and conditions of this technical documentation, if eventually there is a need for any changes, the change have to be done only with the permission of the design engineer, or project manager.

Electrical installations and materials used have to fulfill the conditions conform EU standards/recommendations.

Main Supply: The connecting point for the facilities will be through the Distribution Panels/ the Transformer Station 400KVA, which will be installed for the Compound by EULEX, foundation is to be prepared by contractor.

All buildings main electrical panels will be provided by EULEX, and are to be installed by contractor.

- ATS Electrical Panel
- Main Electrical Panel #1
- Main Electrical Panel #2
- Electrical Panel for Office Block #1
- Electrical Panel for Office Block #2
- Electrical Panel for Rub Halls 1&2
- Electrical Panel for Rub Hall 3
- Electrical Panel for Hard Walls 1&2

Size and type of the connection cables, as specified with the designs, BoQ.

Underground cabling shall run through the trenches which will consist of 4 conduits pipes Ø with 11 manholes throughout the compounds, marked with warning tap throughout the length.

Conduit pipes Ø100mm will be provided by EULEX and installed by contractor, which will be used as routes for all the installations EULEX intends to install, accessing each building.

During the Contract the Contractor shall furnish, free of charge, and without delay, samples of materials or equipment which he proposes to use or as may be required by the Supervisor.
In general this would apply to all equipment and materials, which are offered as luminaries, switch/socket accessories and other items.

3.7 New Central Heating System - Design and Build

Provision of the design for a new central heating system & installation of the same in accordance with: DIN-EN 12831, DIN-14336 and EN 12828.

The heating system should cover: Office blocks 1&2, Hard Walls 1&2 and Rub Halls 1, 2 &3.

Note: EULEX will provide the following assets/items for the project:

- Containerized heating plant complete equipped as below:
  Boiler Thermostahl type EN500
  Burner Ecoflame 415V-670 50Hz 4
  Circulation Pumps Grundfos 3 X400-415 V 50Hz
  (Power 1100 -1550W)
  Expansion tank for pressure control volume 500ltr
  Ionic water softener
  Command panel
- All radiator panels for office spaces for Office Block no.1&2.
- Other circulation pumps if foreseen with the design.

All other heating bodies required, equipments, materials for the installations of a functional heating system are to be provided by the contractor.

Requirements for the system:

Fuel: Oil. Fuel tank along with feeding lines should be included in the installations with a capacity adequate to cover 70% of maximum consumption for 2 weeks.

Fuel tank is to be provided and installed underground.

Heating Plant: Containerized provided by EULEX.
Heating process through: water circulating system (sealed). Distribution pipes from plant to blocks/buildings to run underground and be sufficiently insulated.

Heating bodies:
Heating panels (radiators) – for Office blocks
Heating bodies (calorifers) - for Hard walls and Rubb Halls

Heating bodies shall be selected based on the calculations of the amount of heat needed for each space, and the destination of the offices/buildings.

Internal Temperature Office Space: the internal temperature in all office areas should be kept at an average of 22℃, (+-2 degrees) at all times.
Temperature regulation in individual rooms: Required.

Internal Temperature Storage Areas: 15℃, at all times.

Materials and Equipment installed: All CE marked according to the common technical and EU rules.

Maintenance requirements: as low as possible

Spare Parts & Technology: Should be possible to outsource locally.

3.8 Plumbing and Sanitary Works

Scope of Works

The work covered for this section shall consist of furnishing all labor, tools, equipment, materials and incidentals necessary for the complete installation, testing and operation of the plumbing, sanitary system, storm water drainage and firefighting water sprinkler system within the buildings and premises in accordance with these Specifications and as shown on the drawings or as directed by the Engineer.

PLUMBING, WATER, SEWERAGE MAINS STORM DRAINAGE MATERIAL REQUIREMENTS AND SPRINKLER SYSTEM SUBMITTAL

1. The Contractor shall submit his work method statement with works time schedule to Engineer for approval before the start of the works dated and shall contain the name of the project and location of the subject item in the drawing which is to be installed.

   The Engineer will review and approve or return for correction work method statement, works time schedule with reasonable promptness. The Contractor shall make any corrections required and file with the Engineer corrected copies.

2. The drawings shall indicate the general arrangement of all piping's, however, where actual conditions necessitate re-arrangement in opinion of the Contractor and/or the Engineer, the Contractor shall prepare and submit to the Engineer for approval before placing the order for materials, shop drawings of the proposed re-arrangement. Because of the small scale of the drawings, shop drawings to indicate all offsets, fittings and accessories shall be prepared. The Contractor shall carefully examine the drawings and shall carefully investigate actual structural and finish conditions affecting all his work.

3. The Contractor shall be responsible for the proper fitting of materials, equipment and accessories without substantial alteration and at no cost to the Employer.

4. The Contractor shall be responsible for the proper coordination of the work and shall provide all necessary clearance where necessary.

STANDARDS

Use of materials shall further be governed by other requirement imposed on other sections of these Specifications. Materials shall be subject to tests necessary to ascertain their fitness if the Engineer so requires. All works shall comply with the pertinent provisions of the DIN Standards DIN 1988, DIN 8078, DIN1689, DIN EN12168, DIN EN12164, 12165, 12166.

MATERIALS PLUMBING

1. Identification of Materials

Each length of pipe, fittings, traps, fixtures and devices used in the plumbing work shall have cast, stamped or indelibly marked on it, the approved manufacturer's trademark or name, the weight, type and class of product when so required by the standards mentioned above.

2. Alternative Materials

Use of any material not specified in this Specification may be allowed provided such alternate has been approved by the Engineer and provided further that a test, if required, shall be done by an approved agency in accordance with generally accepted standards.

3. Water Supply Pipes

Water supply pipes shall be polyethylene (PE-100) pipes PN 6 bar conforming to DIN Standards DIN 1988/DIN 8078. Jointing shall be press connection or screwed connection. The new water supply network shall be connected to existing PE OD63 pipe. The hot water will be supplied by water heaters respective capacity (10 lit; 50 lit; 100 lit) as per BoQ and shown in drawings. All hot water pipes should be pre-insulated multilayer pipe.

4. Drain, Vent, Soil, Waste Pipes and Fittings

Drain, soil, waste and vent pipes shall be unplasticized Polyvinyl Chloride (PVC) or polypropylene PP pipes. Diameter shall be as indicated on the Drawings. Cleanouts shall be of the same material as the pipe to be fitted. It shall conform to standards EN-1451, DIN EN 12164, 12164,12165,12166.

5. Pipe Sleeves

Pipe sleeves shall be installed and properly secured in place at all points where pipes passes through masonry or concrete. Pipe sleeves shall be PVC or PP pipe.

6. Shower, Floor and Urinal Drain

Shower and floor drains shall be made of stainless steel non-tilting grate, perforated or slotted. Urinal drains shall be cast iron dome type.

7 . Pipe hangers, Inserts and Support

a. Pipe hangers shall be wrought iron, malleable iron pipe hangers spaced not over 1.5 meters apart for PVC, PP or PE pipes and 3.0 meters apart for iron pipes. Chain straps, perforated bars or wire hangers will not be permitted.

Hangers shall have short turnbuckles or other approved means of adjustment turnbuckles may be omitted on hangers where space does not permit their use.
Trapeze hangers may be used in lieu of separate hangers for pipes running parallel to each other and close together. See also attached drawing details.

b. Inserts shall be of cast iron or cast steel and shall be of a type to receive a machine bolt head or nut after installation.

c. Wrought iron clamps or collars shall be used to support vertical runs of pipes.

8. Valves

Valves shall be cast bronze of brass body. Chrome plated finish for all fixture taps and faucets and natural finish for all others, like hose bibs, gate valves and which are not tapped directly to a plumbing fixture. Concrete valve boxes shall be installed where required and will be sufficient size for operating the valve.

9. Fixtures

a. Water Closets

All water closets for toilets as shown on the drawings shall be dual function flush tank and anal wash., white with complete fittings and mounting accessories.

b. Lavatories

Shall be vitreous china, wall hung lavatory with rear overflow holes, fitting ledge suitable for single faucets holes on centers complete with faucet, standard fittings, trap and lavatory brackets and other accessories.

c. Urinals

Urinals shall be vitreous china, wall-hung washout urinal, flushing rim, integral trap and shall be provided complete with manual flusher .

d. Faucet for lavatory

Faucet for lavatory shall be manual operated lavatory faucet in chrome-finish.

e. Bath and shower fitting

Bath and shower fittings shall be chrome-finish. Curtain rod shall be tubular stainless steel, Ø19mm.

EXECUTION

All installation works shall be in conformity with the standards DIN or

EN. ASSEMBLY, INSTALLATION AND CONNECTION OF FIXTURES

Fixtures shall be supported and fastened in a satisfactory manner. Where secured to concrete or masonry work walls, fixtures and equipment shall be fastened with brass bolts or machine screws in lead-sleeve type anchorage units or with brass expansion bolts. Expansion bolts shall enter 7.5 cm into solid concrete or masonry works and shall be fitted with loose tubing or sleeves of proper length to bring expansion sleeves into the solid concrete masonry walls.
Where wood screws are used, screws shall go into solid pieces set between studs. Where through-bolts are used, bolts shall be provided with plates or washers at back set, so that they will be concealed by plaster. Bolts and nuts shall be hexagonal and exposed nuts, cap nuts, and screw heads shall be provided with chromium plated brass washers.

PROTECTION OF FIXTURES

Pipe openings shall be closed with caps or plugs during installation. Fixtures shall be tightly covered and protected against dirt, water and chemical injury. At the completion of all works, all fixtures shall be thoroughly cleaned and delivered in a condition satisfactory to the Engineer.

FIXTURES AND FASTENING

All fixtures shall be supported and fastened in a satisfactory manner as follows:

1. Where secured to concrete or concrete hollow block walls, they shall be fastened with one quarter inch brass bolts with twenty threads to the inch and of sufficient length to extend at least 7.5 cm into solid concrete or hollow block work, fitted with loose tubing or sleeve insert and shall be securely anchored and installed flush with the finished wall and shall be completely concealed when the fixtures are installed.

2. Where through-bolts are used, they shall be provided with plates or washers back set so that heads, nuts and washers will be concealed by plaster. Bolts and nuts shall be hexagonal. Exposed bolts, nuts, capnuts and screw heads shall be provided with chromium plated brass washers.

GUARANTEE

Upon completion and before final acceptance of the equipment installation, the Contractor shall furnish the Engineer a written guarantee stating that all equipment installed under this Section free from defects. The guarantee shall be for a period of one (1) year from the date of final acceptance of the work. Any part of the equipment that becomes defective during the term of the guarantee shall be replaced, renewed and/or made good by the Contractor, at his own expense and in a manner satisfactory to the Engineer.

Guarantees made by the approved manufacturers or suppliers beyond one year, shall be transferred to PPA without any expense on his part.

CLEANING UP

Upon completion of the work, all parts of the installation shall be thoroughly cleaned of grease, metal cuttings and sludge which may have accumulated during the testing operation.

PLUMBING, FIXTURES AND TOILET ACCESSORIES INSTALLATION

All installation works shall be as shown on the drawings and shall conform to the applicable standards set forth by the DIN and EN. All fixtures shall be fastened and/or supported in accordance with the given requirements.

3.8.1 Water Mains

Materials: Main supply by PE Pipes OD40. Pipe branches OD18 mm/ 16 mm PE as per specifications. All fittings included to be calculated by the contractor.

Trench Details & Laying Of Pipes
Trench Width
The trench should be kept as narrow as possible but must allow adequate room for pipe jointing and placing and compaction of backfill. The trench should be pipe diameter plus 100mm subject to a minimum of 300mm.

Trench base
The trench base should be free of hard objects such as stones, rock projections, and tree roots. Where the trench base is through rock or shows a recurrence of hard objects, allowance should be made for an additional thickness for under-bedding of at least 25mm.

Bedding and Backfilling
All pipes shall be laid on a 100mm bed of sand and hunched and covered to a depth of 100mm above the crown with similar material. The bedding directly underneath and directly over the pipe shall be lightly compacted while the side fill shall be well compacted. Pipes shall not be supported by stone or rock at any point. Rock shall be excavated to a depth of 150mm below the actual depth of trench required and backfilled.

Laying : All pipes shall be examined internally for dirt, stones, before laying in final position. To prevent foreign matter or vermin entering the main as it is being laid, all open ends of laid pipes shall be plugged until the next pipe is ready for insertion.

Mechanical compactors should not be used until the total depth of backfill over the pipe exceeds 450mm

***Heat tracing and Insulation*:** Heat tracing to be installed on all external pipes visible above ground ; pipes to be insulated(25 mm) and wrapped with self-contracting foil.

Testing: Systems to be delivered fully functional, tested, flushed and disinfected according to DIN 4279, Parts 1,2,4,9,10 & DIN 19630 as appropriate .

3.8.2 Sewerage and Rain Water Drainage

Includes materials and works for the connection of the new blocks to the camp sewage system. Connections as per detailed drawings and BoQ. Materials: PVC Pipes. All visible sections above ground to be heat traced and insulated. The rain water drainage pipes shall be PEHD drainage perforated pipe. The waterproof testing will be done between two sections under 0.5 bar water pressure: 24 hours there will be no water losses/leaks.

3.8.3 Fire Fighting Water Sprinkler System

This section of technical specifications describes supply, installation and testing of the complete fire sprinkler system with all controls and electrical works. All installation work shall comply with the VdS CEA 4001 and EN 12845 rules and regulations. The automatic sprinkler system is designed to detect a fire and extinguish it with water in its early stages or hold the fire in check so that extinguishment can be completed by other means.
In the first phase will be implemented only sprinkler station and pipes to the buildings which will be the sprinkler heads with pipes installed. The area of operation includes 3EA Rubhall's, 2EA Hardwalls different sizes and storage (ex-Carwash) total area 1506 M2. The hazard class is High Hazard Storage HHS the method of storing will be in racks

GENERAL

Equipment offered for supply and installation shall include the following:

All minor items and incidental work, equipment accessories and materials may not be specifically mentioned but are required for the proper completion of the installations in accordance with the true intent and meaning of this Specification**.**

All necessary safety devices for the protection of personnel against injury and the protection of plant and equipment against damage including relief valves, belt guards, fan inlet and/or discharge guards, safety railing, effective earthing of electrical components, electrical interlocks, warning lights and alarms.

Readily accessible, dust-proof lubricating facilities on all moving parts and equipment including provision for cleaning all lubricating lines and bearings and charging same with the correct lubricants after installation but prior to testing and commissioning.

Clearly visible and robust manufacturer's name-plates permanently fitted each and every item of equipment and showing the manufacturer's name, type and/or model number, serial number, and all essential operating data such as speed, capacity, voltage, current draw, etc.

Pipes

Connection from sprinkler station till the Rubhall's and Hardwalls shall be polyethylene OD90 (PE-100) pipes PN 16 bar conforming to DIN Standards DIN 1988/DIN 8078. Jointing shall be press connection or screwed connection. The weather

exposed pipes shall be heat traced as per BoQ. The sprinkler system will be supplied with water from existing pipe PE OD63 or in a manner satisfactory to the Engineer

Control valve set

Each building will have wet pipe valve set DN80 PN10 including all necessary wiring to control panel. In this phase there shall be placed only conduit pipes

Pump station and water storage

The water storage shall be of galvanized steel V=90 M3 and heat traced. The sprinkler station will be placed on 20' container. This works will be implemented at the next phase.

Testing: Systems to be delivered fully functional, tested, flushed and disinfected according to DIN 4279, Parts 1, 2, 4, 9, 10 & DIN 19630 as appropriate.

For all other works related to sprinkler system shall apply the technical specification for plumbing works specified above.