



Ref No: PPR-6950-11/ČJ-2015-990656

## **Appendix No.1**

### **Technical specification - part A**

### **„Borek – training simulator“**

Project Reg. No: 7F-07905.01/CH-031  
SMVS: 114V112002090

#### **Subject of Performance**

- construction of a training simulator as per project documentation and BoQ,
- supply and fit of the ballistic solution, including a detailed description of the ballistic solution
- supply and fit of the training simulator technology, see Annex 1B.

**The subject of performance will be implemented as a single public contract, which consists of two parts. They will follow / mingling with each other.**

#### **Extent of Performance:**

#### **Construction of a training simulator as per project documentation and BoQ**

The Contractor shall:

- perform, at its own cost, geodetic survey of the site;
- provide, at its own cost, site equipment, including welfare facilities. The site equipment shall be connected to the Contracting Authority's utility networks. (Power consumption shall be measured and invoiced to the Contractor.) The Contractor shall provide, at its own cost, a water tanker to be used for the site;
- secure, at its own cost, the site equipment – Note: the site is within a Ministry of Interior's facility which is not accessible to public and has a secure access;
- provide, at its own cost, shop documentation for all steel structures and prefabricated concrete elements in keeping with the structural analysis and calculations of the supplier of the project's documentation. Draft shop documentation shall be submitted to the Contracting Authority within a reasonable period prior to commencement of manufacturing of steel structures and



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prefabricated concrete elements. The Contractor shall update the shop documentation to reflect the Contracting Authority's comments and prepare as-built shop documentation;

- fully respect comments, conditions and requirements of the relevant public authorities and Ministry of Interior, Police Presidium and Fire Brigade;

- implement all changes and requests made by the Contracting Authority;

- maintain relevant documentation, site logbook and project records for the entire duration of the project;

- maintain all written documents in the Czech language. Upon Contracting Authority's request, the Contractor shall provide the English equivalents of professional construction terminology so that the Contracting Authority may inform the Donor;

- submit to the Contracting Authority, prior to commencement of work, list of products and suppliers, plus product sheets, for all products to be used in the implementation of works. The Contracting Authority shall be entitled to disqualify the use of unsuitable materials, products and suppliers;

- perform, for the entire duration of the project, tests and inspection plan for the concrete structures. The extent of the plan shall be detailed prior to commencement of the project;

- submit for approval to the Contracting Authority samples of materials including colour schemes prior to commencement of work. Based on these samples, the Contracting Authority shall define the colours to be used, as well as surface and types of materials (paints, plaster, wooden and steel structures and concrete elements);

- prepare a detailed Schedule of works and submit it to the Contracting Authority for approval within a reasonable period prior to commencement of work;

- be responsible for full compliance with health and safety, fire safety and internal rules of the Ministry of Interior facility. Prior to commencement of work and during hand-over and acceptance of the site, the Contractor shall submit to the Contracting Authority a list of all trained personnel to participate in implementation of the project;

- at its own cost, remove all waste originated as part of implementation of the project as per Section 12 of Act no. 185/2001 Coll., on waste, as amended, as well as other related acts;



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- perform, at its own cost, a geodetic survey of the site, secure its approval by the relevant land registry office and submit it to the Contracting Authority during hand-over of the work;

- submit to the Contracting Authority, during hand-over of the work, complete as-built documentation for the occupancy permit proceedings, including all certificates, test protocols, inspection protocols, etc.;

- supply all concrete structures in architectural concrete quality, i.e. to be painted as directed by the Contracting Authority;

The Contractor shall use formwork of relevant quality (system) formwork to achieve this. Prior to commencement of work, the Contractor shall submit for approval to the Contracting Authority formwork layout drawings (position of gaps etc.)

Architectural concrete requirements:

- smooth and compact, uniform concrete surface;
- no colouration (i.e. spots from reinforcement, formwork, etc.);
- granularity: max 1,440 sq. mm (the area of 1-15 mm pores on a test surface of 400 x 400 mm);
- surface level difference between individual formwork panels max 3 mm;
- surface level difference between individual ceiling formwork panels (plywood) max 2 mm;
- tolerances as per ČSN P ENV 13670-1 ad ČSN 731201;
- surface level difference between two neighbouring concreting sections max 10 mm;
- all corners shall be rounded by insertion of triangular PVC profiles into the formwork.

The Contractor shall provide professional assistance to the Contracting Authority during the occupancy approval proceedings.

Additional requirements:

The entry door (entrance to the apartment on the ground floor) and one interior door shall be converted so that they enable repeated training of forced entry (i.e. using rams, crowbars and hydraulic jacks, without damage to the door itself). The opening force shall be selectable. These special doors shall not provide ballistic resistance. See Technical Report.

Other doors within the apartment shall be easily replaceable and shall be constructed to enable opening towards the inside, the outside and to left or right. Both the door frames and the doors shall enable repeated training of shooting off of door hinges and



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locks with a 12 bore shotgun without sustaining damage. The doors shall be equipped with a sliding ballistic shield. See Technical Report.

### **Supply and fit of the ballistic solution, including a detailed description of the ballistic solution**

- The interior of the training simulator shall be ballistically resistant. The following types and calibre of ammunition shall be used in training:

- 9 mm Luger (FMJ)
- 38 Spec/357 Magnum (FMJ)
- 5.7 x 28 (FMJ)
- 5.56 x 45 (FMJ)
- 4.6 x 30 (FMJ)

The Contracting Authority specifies the resistance of the ballistic solution as per EN 1522 to FB 5 (BR 5 for glass) and requires a ballistic solution test certificate for the simulator's walls and partitions.

- Tenderers shall include description of ballistic solution for the use of live ammunition within the building, including tests.

- The ballistic solution used shall enable concurrent live ammunition training on both floors. The floors, ceilings, walls and partitions shall be bullet-resistant for the specified ammunition used in training.

- The ballistic solution used for the walls shall consist of two or more layers. The first of these layers shall be easily replaceable and shall lower the impact energy of the projectile up to the lowest safe angle of 72°, the second, long service life layer shall stop the projectile.

- Other areas shall be protected against deflection of random projectiles (walls, ceilings, floors).

- Windows shall be protected by interior sliding shutters providing the same ballistic protection as the walls.

- Windows in rooms 2.01 and 2.02 (see project documentation in the Annex 5) shall have ballistic resistance of at least BR 5, or at least FB 5 for ammunition used in training.

- The entrance door to the firing range on the second floor shall include ballistic protection on the interior side and a bullet-proof window of at least 200x200 mm, with ballistic resistance to the ammunition used in training.



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- The ballistic solution shall enable the lowest safe angle of deflection of 72°. (Note: angle of deflection is the angle between the trajectory of the projectile and a line perpendicular to the impact area.)
- The ballistic solution shall not reduce the interior area of the rooms excessively. Its thickness shall be less than 10 cm, or 15 cm for partitions on the ground floor with double-side protection. This thickness does not include construction itself, i.e. reinforcement partitions.
- The solution shall enable partial insulation of firing noise.
- Expensive technology placed within possible firing trajectories shall be protected against ballistic damage.
- The ballistic solution shall not endanger training personnel by fragments of projectiles or ballistic material, i.e. chippings, splinters, etc.
- No metal or other elements which could limit the safety of the simulator may protrude from the ballistic solution.
- Tenderers shall provide installation instructions for removal and installation of replaceable ballistic elements. The Contracting Authority is aiming to understand basic information about the ballistic solution offered and its service life and replacement possibilities.

The Contracting Authority requires the Tenderer who presents the lowest bid complying with all requirements of this public procurement project to submit, after the bid has been evaluated, a test certificate from a certified state testing facility on the resistance and anti-deflection properties of the ballistic solution offered for the specified ammunition. The test shall be carried out at the Czech arms and ammunition testing facility [Český ústav pro zkoušení zbraní a střeliva], Jilmová 759/12 Prague 3, or at VTÚ, s.p., odštěpný závod VTÚVM, Small calibre arms and protective devices testing facility [Zkušebna malorážových zbraní a ochranných prostředků], Dlouhá 300, 763 21 Slavičín no later than one month after notice. The Contractor shall notify the Contracting Authority of the dates and locations of the tests at least 5 days before each test. The Contracting Authority shall be able to participate at the tests.

The Contractor shall submit the relevant test certificate(s) to the Contracting Authority. The Contracting Authority shall reserve the right to refuse signing the contract should the test results be unsatisfactory.

**Extent of Performance of the training simulator technology, supply and fit - see Annex no. 2 – Technology, part B**



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### **Performance period:**

The project shall be implemented and the work handed-over without faults and unfinished items within a maximum of 180 calendar days from the signature of the Contract. The Contractor shall vacate the site and return all areas used into their original condition within ten days of hand-over and acceptance of the work.

### **Additional provisions binding for the Contractor**

The Contractor shall be contractually bound to implement the Subject of the Contract using employees/experts as per Annex no.3, Draft Contract. Any change to the list of such personnel shall be approved in advance by the Contracting Authority. In case of changes, the Contractor shall delegate an employee/expert with at least the same qualification.



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## **Appendix No.2.1**

### **Tenderer's Bid**



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## Appendix No.2.2

### List of employees/experts

Name of the expert including academic title(s)	Education (Secondary /university)	Professional experience/ relevant capacity (years)	Current position at work	Proposed position at the project	Links to references, contacts (if requested)
				Construction manager	
				Assistant construction manager	
				Court sworn expert ballistics	
				Ballistics Engineer	
				Head of assembly for the ballistic solution	

IN .....ON.....

FOR THE CONTRACTOR:

NAME AND SURNAME:

SIGNATURE:





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## PROFESSIONAL CV

### Proposed position of an employee/expert at the project:

1. Surname:
2. Name:
3. Year of birth:
4. Education:

School [ from-to ]	Education completed (diploma(s))

5. Languages: please indicate level of knowledge at 1 to five scale (1- EXCELLENT, 5- BEGINNER)

Language	Reading	Speaking	Writing

6. Membership in professional organisations:
7. Other capacity (e.g. computers, etc.)
8. Current work position:
9. Number of years worked at the company:
10. Professional experience – relevant only:

From- to	Company/ institution	Work position	Job description

11. Qualifications in key areas: (relevant for the contract)
12. Links to references (if requested):



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## Appendix No.2.3 Contract price

TENDERER NAME: [.....]

<i>Item</i>	<b>Price</b> [Czk] EX VAT
<b>Construction of the training simulator as per project documentation and BoQ</b>	
<b>Other construction related costs beyond the scope of project documentation and BoQ (Note 2)</b>	
<b>Draft design of ballistic solution following the Contracting Authority's requirements and a detailed description of the ballistic solution including tests ( Note 3)</b>	
<b>Supply and assembly of ballistic solution of facility structures and technology equipment ( Note 4)</b>	
<b>Supply and assembly of technology</b>	
<b>Preparation of as-build project documentation</b>	
<b>Geodetic survey of the construction for the purpose of entry into the Land Registry</b>	
<b>Total price ex VAT</b>	
<b>Total price incl VAT (note 5)</b>	

*Note 1.* The total price will be the price based on the project documentation and the Bill of Quantities stipulated in the contract concluded with the winning bidder.

*Note 2.* The tenderer shall stipulate the price of supplies, assembly, and works which are included neither in the project documentation nor in the Bill of Quantities and which are necessary for the due completion of the public contract as required by the Contracting Authority.

*Note 3.* The tenderer shall stipulate the price of design and a detailed description of the complete ballistic solution, including the approval by a court sworn expert in ballistics.

*Note 4.* The tenderer shall stipulate the price of for supply and assembly of the ballistic solution (note 3.) as well as tested and accepted samples.

*Note 5.* **The bidding price shall be understood to be the total price of all works including the VAT, i.e. the price for complete implementation of the public contract.**

In:....., ./ . ./2015

Done by [.....]

Signature of Tenderer and company stamp



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## Appendix No. 2.4, Supplement B

# BILL OF QUANTITIES

In:....., ./ . ./2015

Made by [.....]

.....  
*Signature of the tenderer and  
company stamp*