

Terms of Reference
Preparation of design documentation for
Restoration and Adaptation of Borjomi Cavalry Building as a Museum

Introduction

The Municipal Development Fund of Georgia (hereinafter the Employer) is a legal entity of public law whose purpose is to mobilize financial resources from donors including international and Georgian financial institutions, in order to make them available for investments in local infrastructure and services, while simultaneously helping local self-governments in strengthening their institutional and financial capacity.

MDF programs envisage implementation of various projects including the Third Regional Development Project (RDP-3) financed by the World Bank Group and the Government of Georgia (GoG). The aim of the Project is to promote tourism development in Mtskheta-Mtianeti and Samtskhe-Javakheti Regions, including the arrangement of tourist infrastructure at the cultural heritage monuments' adjacent areas.

One of the investments planned under RDP-3 is the reconstruction of premises of the Cavalry Building in Borjomi for the purpose of converting it into a museum. Employer seeks consultant services for the development of the detailed design for reconstruction of Borjomi Cavalry Building into a museum. Present TOR is for this consultant assignment.

Objective and Conditions

The sub-SP (SP) aims at restoring the historical Cavalry Building (Cultural Heritage Site) and immediate public space, as a part of the public park and turning it into a modern museum building.

The SP site is located in the center of Borjomi, across from the railway station, in the historical park, currently named after Kostava. The building was constructed in 1880 in pseudo Gothic style. With the adjacent park, this was the emperor's summer residence and before construction of Likani Palace served as a residential building for Nikolas II. Later building was called "New building of Cavalry".

Constructed with natural stone, brick and wood, facades were purely made with squares of hewn stone, framed with masonry apertures, cornices and balconies decorated with wood. Building was rebuilt several times – there is late annex arranged on one side of the building with the imitation of existing façade. Small scale repairing can be observed in few places.

Currently, the building is severely damaged, retaining walls are eroded, weakened, back part of the building is partially collapsed, interfloor roofing, roof and interior is entirely destroyed.

After reconstruction and adaption, part of the reach collection of artifacts preserved in Borjomi Regional Museum (formerly known as Romanov's Chancellery) will be moved to this museum building. Towards this end, the collection currently stored at the Regional Museum will be thematically divided. One part will stay on the spot and the other part will be placed in the newly provided premises. Thus, there will be two valuable museums and cultural-educational center in Borjomi.

The detailed design must be developed with full respect of the cultural heritage requirements of this type of outstanding area. Any visual impact of new works and any obstruction of the heritage landscape should be minimized and managed through appropriate design of features. All design

documents must be in accordance with the relevant requirements of the Georgian legislation in force and statutory normative documents. The final package must be cleared by the MDF and the Supervision Consultant of the RDP-3.

Scope of Services

This assignment includes the delivery of the services with no limitation and in relation to the following detailed design works:

- Former Cavalry Building with its monumental shapes is adjusted well to the existing landscape, making some kind of architectural accent in the center of the town and representing an outstanding sample of architecture of its time. It is the cultural heritage monument and this needs to be taken into consideration while developing the future design.
- The museum should be equipped with modern engineering utilities including electrical, water supply, sewage, heating, ventilation and air-conditioning (in exposition spaces and in storeroom temperature should be kept at 18 Celsius and relative air humidity at 50-55%), as well as fire and security alarm systems such as: Intrusion detection systems; Locks and keys selection and management; Video surveillance systems; Access control for employees and visitors; Storage area protection; Showcases protection; HVAC systems; Lighting systems; Fire protection; Evacuation plan and tools, such as emergency exits and collection areas;
- It is desired innovative technical capabilities to be applied with regard to autonomous power system to be consumed by future Museum by using elements of bio-climate architecture, if it does not have negative impact on visual integrity of the building;
- To ensure the accessibility for the people with various disabilities, the museum design shall satisfy the universal design standards
- It is preferred, if the design group during the designing process takes into account the basic requirements regarding museum management plan and Museographic vision that is processed by the National Agency of Cultural Heritage and Preservation of Georgia.
- The proposed plan of the new museum building, and the pedestrian and transport connections of its area should be made according to a full urban landscape preliminary study and analysis of the main components and existing assets. The area for parking (cars, buses) arranging should be chosen in such a way that its location does not impede the visitors. Safe crossing points and navigation signs should be considered as well.
- The rehabilitated public area should maintain existing attributes and function of public recreation space, greenery and benches.

Zoning of Museum building and tentative list of premises:

The building total area, excluding the basement is 761.326 sq.m. Ground floor proposed layout sample is available in Annex 4. Note that the data below as well as the provided sample layout is for guiding purposes only.

Ground/First Floor – 282.82 sq.m.

1. Cloakroom;
2. Information corner, ticket office, showroom type shop for selling books, souvenirs and precious work pieces;
3. Recreational zone - Bar-pub-cafe (ice-cream, refreshing or hot beverages (seasonally), sweets);
4. Museum Administration – two offices (I office for the manager) II office (for guide, guard, curator);

5. Security office;
6. Toilets (including the ones for disabled);
7. Storage room for utility-technical stock and associated toilet (janitor);
8. Exposition space for temporary exhibitions (49,79 sq.m)
9. Within the time periods between temporary exhibitions the space will accommodate an exposition of archival photo and graphic materials themed “Romanovs in Borjomi”, “Borjomi Resort”; Conceptually the named exhibition will be a kind of “Introduction” to the expositions displayed on the II and III floors;
10. Space for film flashback (Screen);

Second Floor – 298.506 sq. m

11. Exposition Hall (Permanent Exhibition) - 198 sq. m – Exposition of Imperial Collection of the Romanovs. At the left wing of the building - 63 sq. m – may be placed:
12. Museum Depository;
13. Administration (two employees of the Museum - custodian of Funds or specialist of attribution, exposition supervisor).

Third Floor (Attic) – 174.966 sq. m

14. Exposition Space – potential space for the Romanovs Library (180 units), graphics and paintings, furniture and accessories of that period of time, against background of reconstructed surrounding of XIX-XX centuries; Multimedia Library (providing researchers and interested people with possibility to work on electronic archive); Presentation Space for educational-cognitive programs.
15. Exposition Space - (Over 200 exhibits) of the Imperial Collection of the Romanovs, i.e. collection of utility art (candlesticks, clocks, jewel-boxes; Porcelain dishware: vases, small sculptures, plates etc.) will be exposed at modern shop-windows, made out of combined and individual glasses. The emphasis will be made on lighting.

As an option, offered by NACHP, Interfloor staircases (circular) can be arranged in the tower and can become one of the most interesting architectural element of the building interior.

All design works must be carried out in close coordination with the relevant experts from the Cultural Heritage Protection Agency and with full consideration of the future museum concept requirements.

Stages and specific Tasks

Services to be carried out is three phased.

- Phase 1 – survey works and design concept development
- Phase 2 – sketch design preparation
- Phase 2 – detail design and cost estimations

Stage I – Documentation works, survey of the design area and SP Concept

- Cadastral documents (topographic plan for design and existing situation should reflect the plan of registered land plot (s) showing cadastral borders and a code);
- Topographic surveying of the site;
- General geological survey of the site;
- Heritage Structures and Site Report, as described in Annex 5 of this assignment

Stage II – Sketch Design

Upon completion of the first stage and with the Employer's approval, Consultant will prepare the **Sketch Design** for restoration of the existing building and its adaptation as the Museum Space with consideration of remarks issued by the Employer and National Agency for Cultural Preservation of Georgia.

Stage III – Detailed Design

Following the approved sketch design, the Consultant shall prepare **detailed working design documentation** for adapting the building for the museum space and upgrading the adjacent area. At this stage, all the remarks and recommendations, which were recorded with respect to the stage II design documentation must be taken into consideration.

Deliverables

Stage I

Report, without being limited to the following:

1. Explanatory Note (including detailed description of problematic issues);
2. Topographic survey of the site in the vicinity of the construction site (Topographic plan through UTM System of Coordinates: Scale 1: 200);
3. Cadastral documentation (including SP and actual situation on topographic plan, layout of registered land plot(s) with indication of cadastral borders and a code);
4. Layout plan for location of the SP site - Scale: 1:2000 or 1:1000;
5. Heritage Structure and Site Report, per Annex 5
6. Concept of the SP, based on the findings and recommendation from the Heritage Structure and Site Report, including recommendations on the preferred and most appropriate partial reconstruction/restoration approaches and methodology in line with international best practices and trends, planning solutions involving review of two or more alternative options – with consideration of specifics of existing urban environment, existing building and museum; technical supplies of the building - heating cooling and ventilation-conditioning, devices and estimated locations.
7. Feasibility study of the future SP to cover all possible options, analysis of problems and risks, parameters and scales of the SP (including financial scales along with estimated budget), estimated method and schedule of implementation.

Following completion of exploration-survey works and upon submission of the respective reports, restoration methods and concept, the employer will specify SP scope and parameters, and likely solutions, which will be followed by decision on commencement of the next stage works. After initial survey, the employer may come up with a decision to suspend works services on any of the components, based on the findings and recommendations.

Stage II

Report, without being limited to the following:

1. Explanatory Note (providing description of existing situation and arrangements stipulated by the SP);
2. Topographic plan including cadastral borders and a code;

3. Layout plan for location of the SP site - Scale 1:2000 or 1:1000;
4. General layout, providing accomplishment of the vicinity site, presumable pedestrian routes, accesses, connections and parking;
5. Architectural-archeological measuring with provision of local damages (Plots; drawings reflected in scales with indication of primary sizes and elevations – Scale 1:25, 1:20, 1:10; Samples- Scale 1:1; textual description);
6. Dug pits and sounding (as per requirement);
7. Art historical survey (archive-bibliographic, survey of the monument at the construction site, analysis and recommendations);
8. Design proposal for restoration of the SP site and adjustment to the Museum Space, with consideration of available urban environment, existing building and specifics of the Museum. Schemes of functional zoning of technological parts of the Museum, groups of the facilities of the museum and connection schemes – graphical material along with respective justification;
9. Architectural and structural decisions for restoration: graphical and textual material – layouts, sections, facades;
10. Visual graphical material of architectural solutions – architectural plan – plans, sections, facades, renders, photo material;
11. Selection and schemes for location of engineering systems (heating-cooling, ventilation-conditioning);
12. Cadastral information on the land plot under the Cavalry Building and information on any type of formal or informal private use of land/premises;
13. Information on the closest formal solid waste landfill where waste generated from SP implementation may be disposed.

Stage III

Report, without being limited to the following:

1. Executive summary (description of status quo and SP activities)
2. General location plan of the SP site - scale:1:1000; 1:2000;
3. Master plan, with topographic mapping of the design area, with showing red lines scale - 1:500; 1:1000; including the building, design of pedestrian, and vehicle routes, accesses, communications, and parking lots;
4. Architectural shop drawings (layouts, sections, elevations, details, units (scale: 1:100, 1:50, 1:25);
5. Structural shop drawings (diagrams, details, units, specifications (scale. 1:100, 1:50, 1:25);
6. Engineering part: external and internal power network, wastewater, water supply networks. Heating-conditioning-ventilation of the building, weak current – Fire and museum alarm power systems (diagrams, details, units, specifications);
7. Work organization SP with time schedule, and tentative financial schedule list of requisite machinery and equipment, etc;
8. BoQ for works to be implemented; Cost estimations (unit rate breakdown by resources and a summarized);
9. Detailed drawings of small architectural forms – bench, shed, decorative lamp pole etc. as required;
10. Detailed and general specifications of bidding documentation. For contractor (bidder), technical specifications should include general instructions and recommendations. Also

detailed specifications (indicating all necessary standards) for proposed material, works performance methods and quality control. Graphical part of the design (both as constructive as tender drawings) should be prepared in compliance with required norms and standards for engineering documentation in appropriate scale with breakdowns.

11. Determining load on engineering communication network for obtaining technical conditions from relevant institutions, as required;
12. Economic analysis (should include capital expenditures required for SP implementation as well as average annual operation and maintenance costs. The named data should be provided for each possible alternative solution of SP design (based on technical specifics of the SP, at least two alternative technological solutions should be presented). The deliverables should also include methodology of each alternative of cost calculation with respective clarification and reference to the data sources;

Note

- Applied construction norms and regulations, calculation methods and justification of proposed technical solution should be indicated.

Reporting and Schedule

- (a) Within a 4 (four)-week period following contract execution, the consultant shall submit for approval to the employer, 3 copies of ***the Heritage Structure and Site report, opinions and future design concept***. The deliverables shall be accompanied with their electronic versions (textual part in Word and Excel file form and drawings in - AutoCAD/ArchiCAD and PDF format). **At the present stage, the contractor shall agree design concept with the NACHP.**
- (b) Within a 6 (six)-week period following endorsement by all stakeholders, the consultant shall submit for approval to the Employer 3 copies of ***sketch concept design*** (one copy of demonstrational material). The deliverables shall be accompanied with their electronic versions (textual part in Word and Excel file A4 format and drawings in - AutoCAD/ArchiCAD and PDF, A3 format). **At the present stage, the contractor shall agree draft design with the NACHP.**
- (c) Within a 4 (four)-week period following endorsement by all stakeholders, the consultant shall submit for approval to the employer an ***interim version I of the detailed design***;
- (d) Within a 1 (one) week period, the employer or its assignee under the contract will furnish the consultant with its remarks relating to the submitted documentation in writing or through email.
- (e) Within a 3 (three)-week period following endorsement of the interim version I of the detailed design documentation, the consultant shall furnish the employer with the ***interim version II of the detailed design***, for approval.
- (f) Within a 1 (one) week period following submission of the documentation, the employer or its assignee under the contract will furnish the consultant with its remarks relating to the submitted documentation in writing or through email.
- (g) Within a 4 (four)-week period following endorsement of the detailed design documentation interim version II, the consultant shall submit for approval to the employer a ***detailed design documentation***. **The contractor shall agree the final design with the NACHP.**

Finally, the consultant shall submit to the Employer four copies of the detailed design documentation and bidding documents in A3 and A4 format printed albums, in Georgian and English languages. The submitted materials shall be accompanied with their electronic versions (textual part

in Word and Excel file form and drawings in - AutoCAD/ArchiCAD and PDF format) recorded on compact discs (CD or DVD).

Additional conditions

Technical review: Upon MDFs request, the Design Consultant can be invited to the selection committee for the support of technical review during tendering stage of civil works.

Design supervision: During the construction period, once a month or upon MDF's request, based on a program agreed with MDF, the Consultant will visit and monitor the construction progress on site. The core team to be deployed to perform the Design Supervision functions shall be approved by MDF and will include as a minimum the Architect Deputy Team Leader, the Architecture/Art Historian and Civil Engineer from the core team (unless otherwise agreed with MDF). Additional expertise might be added on a need basis as agreed with MDF. Following the visit, the Consultant will prepare and submit a report to the Employer, which will cover the situational analysis on site, progress of restoration works, confirmation of adherence to the original design/agreed methodology for restoration, and list of any deviations observed and its causes. If during works new and unforeseen situations materialize in relation to the historic nature of the building and site, the Consultant will promptly alert MDF and propose relevant mitigation measures to adapt the design to the new evidence on the ground. Any proposed variation will have to be supported by strong argumentation and technical argumentation.

Employer's Contribution

The employer should grant access to all available materials, which may be required for the Consultant to perform their services.

Duration of Services

Expected duration of the design services is 147 days, excluding the days required for the approvals from the Employer, and excluding the design supervision.

Annex 1: Consultant's Personnel and Schedule of Rates

In order to provide for the top-level performance of the assigned task, the Consultant shall mobilize the qualified staff (key personnel as well as the support staff). All the specialists shall be well-recognized professionals in their respective fields with at least 5-year experience in the similar work environment.

The consultant should mobilize the following personnel:

N	Consultants	Number	Month	Input, person/month
Key Experts				
1	Team Leader/ Architect	1	5	5
2	Deputy Team leader - Architect-restorer	1	5	5
3	Museographer	1	5	5
4	Architecture/Art Historian	1	3	3
5	Civil engineer	1	5	5
Non-Key Experts				
1	Architect	2	5	10
2	Architect-restorer	2	2,5	7,5
3	Cultural heritage Expert	1	2	2
4	Structural Engineer	2	4	8
5	Geologist	1	1	1
6	Engineer Surveyor	1	1	1
7	Heating/Conditioning Engineer	2	2,5	5
8	Water Supply/Sewer Engineer	1	3	3
9	Mechanical/Electrical Engineer	1	3	3
10	Translator	1	2	2
11	Economist	1	1	1
12	Cost Estimator	1	2	2

Annex 2: Narrative Qualification Requirements for Key Experts

Title	Specific experience (Years)	Area of Specialization, Qualification	Main Responsibilities, but not limited to
Team Leader/ Architect	12	<p>Proved design Management experience of implementation of similar size and type SPs, with particular focus on restoration and adaptive reuse of Cultural Heritage buildings;</p> <p>Minimum Master's degree in architecture and/or relevant technical master degree with further advanced training;</p> <p>Knowledge of international and local practices for restoration technology and techniques for heritage buildings, adaptive reuse and related design and construction codes/regulations/standards;</p> <p>Proved experience in rehabilitation and restoration works on cultural heritage sites (both buildings and surrounding territories).</p> <p>In-depth overall knowledge in detailed design supervision for large, and medium sized civil works SPs</p>	<ul style="list-style-type: none"> • Overall responsibility for implementing the SP and managing the team of designers • Review and certify subcontracting parts of the works; • Monitor performance, deadlines, SP progress, and conduct a risk management plan to avoid any unexpected incidence that may have a negative impact on the SP development. • Review the procedures set up by the contractor
Deputy Team Leader/ Architect Restorer	12	<p>Proved design Management experience of implementation of similar size and type SPs.</p> <p>Minimum Master's degree in Architecture and/or civil engineering with further advanced training.</p> <p>Knowledge of international and local practices for restoration of heritage buildings, adaptive reuse and related design and construction codes/regulations/standards.</p> <p>In-depth overall knowledge in detailed design supervision for large, and medium sized civil works involving restoration of heritage buildings SPs.</p>	<ul style="list-style-type: none"> • Overall responsibility for implementing the SP and managing the team of designers • Review and certify subcontracting parts of the works; • Monitor performance, deadlines, SP progress, and conduct a risk management plan to avoid any unexpected incidence that may have a negative impact on the SP development. • Review the procedures set up by the contractor,
Museographer	12	<p>Experience in determination of the functionality of museum areas and spaces, classification and display creation and organization.</p>	<ul style="list-style-type: none"> • Assist in and suggest methods and techniques related to the functionality of museum.

Architecture/Art Historian	10	<p>Architecture and Art History</p> <p>Proved experience in assessment of heritage buildings and preparation of restoration plans for similar size and type of historic buildings.</p> <p>Minimum Master's degree in Architecture and/or History of architecture and/or similar field, with further advanced training.</p> <p>Knowledge of international and local practices for restoration of heritage buildings, adaptive reuse and related methodology and restoration codes/regulations/standards.</p> <p>In-depth overall knowledge in detailed design of large and medium sized civil works involving restoration of heritage buildings SPs.</p>	<ul style="list-style-type: none"> Assist, advise and suggest methods and techniques related to the restoration and adaptive reuse of the historic building and its surrounding territory Review and approve subcontracting parts of the restoration works; Review the procedures set up by the contractor in relation to the restoration works and monitor performance and adherence to approved methodologies for the restoration works.
Civil Engineer	12	<p>Civil Engineering – Design Management.</p> <p>experience of implementation of similar size and type SPs;</p> <p>Minimum Master's degree in civil engineering with further advanced training;</p> <p>knowledge of international and local design and construction codes/regulations/standards.</p>	<ul style="list-style-type: none"> Review and certify engineering orders, for subcontracting parts of the works Monitor and coordinate performance, deadlines, SP progress, and assist in the development of a risk management plan to avoid any unexpected incidence that may have a negative impact on the SP development.

Annex 3: Payment Schedule:

Deliverables	Submission Date	Language	Payment (% of the total contract cost)
Heritage Structure and Site/Territory Report (including the Site survey work)	Within 4-week from commencement of services	Georgian	15%
Concept Sketch design	Within 6-week from endorsement of Site Survey Work	Georgian/English	15%
Interim version I of the detailed design	Within 4-week from endorsement of Sketch design	Georgian	-
Interim version II of the detailed design	Within 3-week from endorsement of Interim version I of the detailed design	Georgian	15%
Final Detailed Design Documentation	Within 4-week from endorsement of Interim version II of the detailed design	Georgian/English	45%
Design supervision (with approved site-supervision plan with at least once a month during the construction phase)	Within 1-week after the site handover to the contractor	Georgian	10%

Annex 4: Ground Floor Layout Sample

For guiding purposes only



Annex 5: Heritage Structures and Site Report

The report should include as minimum the following information:

1. Short descriptive history of the building and its surrounding, with a focus on past look, interventions and restoration works, based on physical and documentary evidence, including a study of the artistic values and importance of the building.¹
2. Current conditions, describing the main heritage characteristics (e.g. type of tiles, type of mortar, stone-work, etc);
3. Outcomes of engineering-geological survey – technical report, conclusions and recommendations (e.g. assessment of physical-mechanical features of soil, laboratorial analysis of samples, assessment of overall structural stability of the building, elaboration and conclusion of results);
4. Detailed description and documentation of all missing/partially collapsed elements, with individual “passport” on current status, level of damage, level of stability and required intervention (e.g. full reconstruction, reinterpretation, restoration, etc).
5. Report on engineering-technical survey: conclusion on sustainability of the building, recommendations with regard to compliance of the material to be applied with the available ones. Information and schemes concerning connection to the utilities - water, sewage, electricity, gas; the result of the study on the initial color of the interior and façade details.
6. Recommended preservation and restoration plan and overall treatment approach;
7. Recommended specific treatments and methodology for individual features or areas (e.g. type of mortar to be used, composition, color; type of proposed tiles, where to procure them, etc), including prescription on what tools are acceptable to use in different conditions and for what kind of works.
8. Classified photo material: general views of the SP site, façades, interior, valuable elements from architectural-art standpoint, photos reflecting general and local damages (photos of high quality and resolution) – TIFF/JPEG expansion file).
9. Proposed prioritization of recommendations and cost estimates;
10. Any recommendation for additional/future essential complementary treatment work and justification

¹ It is expected that qualified architecture/art historian and restoration technology expert would carry out the study of the artistic values and importance of the building and all the works and restoration plan should be based on this evaluation. Since the interior of the building will undergo major changes, the evaluation should also specify if there is any artistic or architectural significance in the interior as well (e.g. special features like stairs, ornamentation, fireplace, doors, etc.). If such elements are to be identified, specific preservation plans shall be prepared and all the plans for adaptive reuse, interior design and works should take them into account as necessary.