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Ljiljana Milić Marković

*University of Banja Luka, Faculty of Architecture, Civil Engineering and Geodesy,
Bosnia and Herzegovina, ljiljana.milic-markovic@aggf.unibl.org*

Ljubo Marković

*University of Pristina, Faculty of Technical Science Kosovska Mitrovica, Serbia,
ljubo.markovic@pr.ac.rs*

LEGAL REGULATIONS DEFINING THE ROLE AND TASKS OF EXPERT SUPERVISION DURING CONSTRUCTION WORKS

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* corresponding author

Ljiljana Milić Marković *

University of Banja Luka, Faculty of Architecture, Civil Engineering and Geodesy, Bosnia and Herzegovina, ljiljana.milic-markovic@aggf.unibl.org

Ljubo Marković

University of Pristina, Faculty of Technical Science Kosovska Mitrovica, Serbia, ljubo.markovic@pr.ac.rs

LEGAL REGULATIONS DEFINING THE ROLE AND TASKS OF EXPERT SUPERVISION DURING CONSTRUCTION WORKS

ABSTRACT

The paper discusses the roles and tasks of expert supervision of construction works according to national and international legal regulations. It presents the role and tasks of expert supervision during construction works. There is a summarized review of supervision according to the current legal regulations in the Republic of Serbia (Law on Planning and Construction, the Rulebook on the content and method of conducting the site supervision) and the Specific Customs on Construction. The role of the 'Engineer' according to the FIDIC General Conditions has been presented. It has been pointed to the differences between national legislation and the FIDIC General Conditions.

Keywords: *expert supervision, law on planning and construction, rulebook on the content and method of conducting the site supervision, specific customs on construction, FIDIC*

1. INTRODUCTION

Construction of buildings is rather a complex, long-lasting and arduous work consisting of a large number of stages, activities and procedures that a large number of organizations and individuals participate in. Investing into a construction process is very risky, since during the project realization there are numerous factors of uncertainty (work in the open in varying weather conditions, social and economic system and business customs of the hosting country, legal system, changes of laws and customs regulations, delays in providing funding, impossibility to purchase material and necessary equipment, and so on). Some solutions in the domain of these rights, opportunities and systems reflect largely on a construction project and therefore on the investor and other participants in its realization.

In order for this specific process to be carried out efficiently and be realized in a desired scope, within the planned schedule, required quality and within the limits of planned financial assets, it is necessary to manage it, in other words, it is necessary to establish an organizational model which would provide the best manner to apply and use contemporary methods of planning and control, with the application of the state-of-the-art organizational assets and well-conceived and well-made organizational documents.

The greatest responsibility and risk are borne by the investor, or the owner of the assets invested into the realization of a construction project. The investor manages the entire project, and all other participants only within the domain of their activities and responsibilities.

2. ROLE AND TASKS OF EXPERT SUPERVISION

When a facility is being constructed, or the works performed for which construction license has been issued, the investor must provide for the expert supervision. Expert supervision can be performed by the investor himself (if he fulfils legal conditions) or the supervision can be entrusted to a professional organization or institution. Expert supervision can be done by a company which fulfils conditions for designing or construction of that type of facility. Investor or company which are entrusted with the supervision by the investor would appoint the persons who will carry out expert supervision (a supervising entity), who must fulfil the conditions for designing or managing the construction of that type of facility. The supervising entity must be appointed for all types of works (building, finishing works, installation works, equipment and so on).

The investor or the company entrusted with expert supervision by the investor would appoint the supervisory manager who would be responsible for the entire facility and authorised to:

- Coordinate the work of all supervising entities;
- Control the work of supervising entities;
- Sign all external documents;
- Cooperate with the representatives of local authorities, investor, design company;
- Manage the entire supervisory process [1].

The supervisory manager and supervising entities are appointed by a decision. The decision must contain specific rights, authorizations and responsibilities of all participants in supervision. Supervising manager must have such rights and authorizations, and therefore

responsibility, which will provide him to successfully manage the process of facility construction.

Supervising entity as the investor's representative, from his own aspect and in the course of construction carries out control of quality, timing, costs and application of regulations.

In the domain of quality control, the supervising entity controls certain elements he considers important to determine and evaluate quality. Supervising entity regularly attends sampling, examination of works and installations and other activities related to control. He checks if the attests and certificates correspond to the material and equipment delivered and if the testing is done in accordance with technical regulations. He makes the corresponding documents related to the controls together with the representative of the contractor which they both sign. The supervising entity will require the material of low quality to be taken away from the construction site and for non-quality work to be suspended. This is why the control by the supervising entity should be permanent and on a daily basis [1].

In the domain of timing control the supervising entity controls if:

- The contractor makes the schedules of execution of works and supply of resources in a timely manner and of good quality;
- The works are completed in accordance with such schedules;
- The contractor meets other obligations within the set deadlines;
- The investor fulfils his obligations in accordance with the agreed terms and so on.

In the domain of cost control, the supervising entity controls if:

- The site log is run accurately and properly;
- The interim payment certificates are made in accordance with the site log and priced bill of quantities;
- The price differences are calculated correctly;
- The advance amount is deducted in the payment certificate.

The supervising entity controls calculations and bill of quantity for subsequent and unexpected works from the aspect of description, quantities, applied standards, prices and other elements used to form the price of works not included in the bill of quantity and suggests to investor's services whether to accept them or correct them.

In the domain of controlling the application of regulations, the supervising entity controls if the contractor adequately applies the regulations related to:

- The measures provided by the Law on Safety and Health at Work;
- The measures provided by the Law on Fire Protection;
- The measures provided by the Law on Environmental Protection, etc.

If the supervising manager cannot make it possible for the contractor to carry out works in accordance with the agreed obligations, he must notify the investor about it and in case of failure to respect the regulations, discrepancy from documentation or violation of regulations he must inform also the competent body which issued the building permit as well as the inspection.

Supervising manager must suspend further works in all cases in which further construction could:

- Endanger people or the environment;
- Influence stability and durability of the building;
- Have influence on the design concept of the building.

Supervising service must prevent the suspension of works through the system of planning and forecasting as well as due consideration of all oversights since this causes damage to everyone, especially the investor.

In addition to the investor's expert supervision, it is very important that designer is also involved in the supervising process as engineering supervision. The goal of such supervision is to help the investor's expert supervision to:

- Check if the works are performed according to the accepted and approved technical documentation;
- Make additions to technical documentation for some solutions;
- Change documentation in case the unforeseen conditions occur in the domain of foundation, impossibility to purchase the designed materials, improve technology, etc.;
- Make as-built documentation;
- Do other tasks related to technical documentation which occur during construction.

The costs of engineering supervision are borne by the investor and they can be determined when negotiating the preparation of technical documentation or afterwards, depending on the investor's wish.

3. THE ROLE AND TASKS OF EXPERT SUPERVISION ACCORDING TO THE CURRENT LEGAL REGULATIONS IN THE REPUBLIC OF SERBIA

3.1. LAW ON PLANNING AND CONSTRUCTION

Article 153 of the Law on planning and construction [2] defines the role and tasks of expert supervision. According to the provisions of this article "The investor provides professional supervision during construction of the facility and execution of the work for which the building permit was issued. The professional supervision comprises of:

- Checking whether the construction is carried out in accordance with the building permit, and the technical documentation based on which the building permit was issued;
- Control and check the quality of execution of all types of works and application of regulations, standards and technical norms, including standards of accessibility;
- Control and certification of the quantity of the work carried out;
- Control whether there is evidence about the quality of the materials, equipment and installations which are built in;
- Giving instructions to the contractor;
- Cooperation with the designer in order to provide technological details and organizational solutions for execution of work and the solutions of other matters which arise during execution of works. [2]

The professional supervision can be carried out by a person who fulfils the conditions prescribed by this Law for the responsible project designer or the responsible contractor.

The professional supervision can be performed by a person who meets the requirements prescribed by the Law, who should be employed with a company or other legal entity who obtained a decision on the fulfilment of the conditions for preparing technical documentation or carrying out construction work on this type of facilities.

The professional supervision on the facility cannot be carried out by persons employed with the company or other legal entity or the contactor company which is the executor of work on this facility, persons who carry out inspection supervision, as well as persons working on the tasks of issuing building permits in the agency authorized for issuing building permits.

3.2. THE RULEBOOK ON THE CONTENT AND METHOD OF CONDUCTING SITE SUPERVISION

The role and tasks of professional supervision based on the Law are in more details defined in the Rulebook on the content and method of conducting site supervision [3]. According to the Rulebook, professional supervision shall refer to the following:

- Preparatory works,
- Construction and construction-craft works,
- Fixing installations, plants and equipment, and
- Other works that are performed in construction of a structure.

The professional supervision comprises of:

- Checking whether the construction is carried out in accordance with the construction permit, or the approval of works for reconstruction, i.e. according to the construction permit design or the preliminary design for reconstruction, as well as the construction design, and taking appropriate measures in case the execution of work deviates from these designs;
- Control and check the quality of execution of all types of work and application of regulations, standards and technical norms, including the standards of accessibility that define the mandatory technical measures and conditions to ensure unrestricted movement of persons with disabilities, children, and the elderly;
- Control and certification of the quantity of executed work (certification of engineering books, interim and final payment certificates, bills for executed works, etc.), or degree of completion of works, if provided for by the site supervision contract with the investor;
- Control whether there is evidence about the quality of the materials, equipment and installations which are built in or fitted in the facility, and whether the documents that prove the quality thereof are available (certificate, test report, etc.);
- Control and test the quality of executed work that due to nature and time schedule of the construction cannot be verified in later phases of the construction (execution of foundation, reinforcement, casing, insulation, etc.);
- Provide necessary instructions to contractor, especially in case of deviation of the construction from the construction permit design or the preliminary design for reconstruction, i.e. construction design, as well as in case of change in construction conditions (change of the soil type or other parameters set out in geo-mechanical study, etc.);
- Regular monitoring of the construction schedule and compliance with the agreed deadlines, if provided for by the site supervision contract with the investor;

- Cooperate with designer in order to ensure correct implementation of the design concept of the facility, as well as cooperate with the contractor in selecting technical and organizational solution details for execution of work;
- Cooperate with the contractor and designer in the preparation of as-built design;
- Resolving other issues that arise during the construction, i.e. execution of work. [3]

Site supervision may be carried out by a person appointed by the investor who fulfils the conditions prescribed by the Law for the responsible designer or responsible contractor's engineer, depending on the type of works that are subject to the site supervision (supervising entity).

Site supervision shall be provided from the beginning of construction, i.e. execution of works, pursuant to the Law and it shall last until the construction or execution of works is completed, and until the use permit is issued.

In every stage of construction, i.e. execution of works, the investor can provide engineering supervision by a company which fulfils the conditions for designing that kind of building.

Supervising entity monitors and controls the execution of work at the construction site, as well as on the places where other works are being executed for the purpose of facility construction.

All observations made during the site supervision are entered into the construction log, which is signed and stamped, in line with the by-laws regulating the content and method of keeping the construction log.

If during the site supervision it was established that the contractor departs from the issued construction permit, i.e. approval of works, the construction permit design, i.e. preliminary design, as well as the construction design, or departs from the stipulated quality of material and equipment installed in the facility, or departs from other elements that may influence the quality of works, determined value of the facility, or extension of the construction deadlines, the site supervisor is obliged to promptly enter all the remarks into the corresponding documentation kept at the construction site according to the law and to inform the investor and the contractor in writing, so that they could undertake the appropriate measures, and also to inform about the consequences that may arise unless such measures are undertaken.

If circumstances arise during the construction, due to which it is necessary to depart from the construction permit design, i.e. the preliminary design, as well as the construction design, the site supervision shall without delay enter all remarks into the corresponding documentation kept at the construction site in accordance with the law and inform the investor in writing so that the appropriate measures can be undertaken and about the consequences that may arise unless such measures are undertaken.

If circumstances arise during the construction that cannot be delayed, the site supervisor shall be obliged to promptly inform the competent construction inspector, in order to undertake the appropriate measures (issuing orders to the contractor for undertaking necessary measures to prevent and eliminate harmful consequences, suspension of works in all cases when it is concluded that the execution of works departs from the technical documentation, and when the specific deviations can affect the structural bearing, durability, and design conception of the facility, or may lead to material damages, i.e. endangering lives and health of the people, etc.)

During site supervision the supervising entity finds and enters into the construction log the following:

- The kind of works that are supervised;
- Defects found in the execution of works and deadlines for their removal;
- The measures that were undertaken or referred to the contractor or the responsible contractor to undertake;
- Remarks regarding quality and schedule of construction;
- Other information significant for monitoring the facility construction.

The construction log is signed and stamped by the supervising entity and the responsible contractor.

3.3. THE SPECIFIC CUSTOMS ON CONSTRUCTION

The Specific Customs on Construction [4] regulate the relationship between the employer and the contractor in execution of works on construction facilities. These regulations are still valid since they have not been revoked by any of the current legal acts. It is considered that the contracting parties have agreed to application of the Specific Customs during construction if the contract on construction and equipping of a facility has not excluded them completely or partially. Article 2.17 of the Customs defines the role and tasks of site supervision of the employer.

“The Employer is entitled to perform expert supervision of the works executed by the contractor in order to check and provide their proper execution, particularly regarding the type, quantity and quality of works, material and equipment as well as the set deadlines. The expert supervision is performed by a person appointed by the Employer. The contractor is obliged to make it possible for the Employer to perform expert supervision. The remarks regarding the manner of execution of works, the materials used or the schedule of execution of works shall be given by the Employer to the contractor without delay. All remarks and findings of the Employer are delivered in writing and are entered into the construction log.” [4]

4. THE ROLE AND TASKS OF EXPERT SUPERVISION ACCORDING TO FIDIC

FIDIC (*Fédération Internationale des Ingénieurs Conseils*) or the International Federation of Consulting Engineers represents one of the most important professional organizations in the field of building industry established with a view of connecting, cooperation, protection of professional interests and creation of unique standards and practice in the field of consulting and building industry.

The FIDIC General Conditions of the Contract have been designed with the idea to globally define standard models of contract for various types of investment projects, whereas the project risks have been decreased and the interests of participants in the project protected. In this way transparency of the process is ensured as well as the investor’s trust. Project management has been made easier and the risks are possible to detect in early stages and easier to overcome to the satisfaction of all contracting parties.

When applying the General Conditions of the Contract on national projects, special attention should be paid to the relationship of imperative provisions of domestic legislation and the provisions of the FIDIC General Conditions, which should be harmonized mutually.

This primarily refers to the role of the “Engineer” which is set out by the FIDIC General Conditions and the professional supervision which is mandatory according to the provisions of the Law on Planning and Construction of the Republic of Serbia. There is no term “professional supervision” in the FIDIC General Conditions, only the term “Engineer”, who has a role of a supervising professional, monitoring the project realization and compliance of executed works with technical documentation. In addition to this, the “Engineer” represents the first instance (the second is “DAB” – Dispute Adjudication Board, and the third is arbitration) for solving all disputes between the parties to the contract (the employer and the contractor), which may be legal or technical. [5]

The role of the “Engineer” cannot be harmonized with the role of the expert supervision (supervising entity) which is provided by the domestic Law on Planning and Construction, primarily because of his authorizations to decide upon requests and claims of the contractor to the employer, and because of the nature of the role he has during the contract realization. When application of the FIDIC is negotiated in Serbia, it is not possible to make the “Engineer” equal to the institution of expert supervision without surpassing the authorizations of expert supervision he is entitled to according to the Law on Planning and Construction, or not to diminish those authorizations that the “Engineer” has according to the FIDIC General Conditions without which he would lose the role given to him by the FIDIC. [6]

This is why at domestic projects based on the FIDIC General Conditions there are usually parallel institutions of supervision, one of which is mandatory pursuant to the provisions of the Law on Planning and Construction, whereas the other one is the “Engineer” who is involved according to the contract and appears in the mutual relationship of the parties to the contract. In order to avoid situations which the contractor may face because the orders and authorizations of the “Engineer” and expert supervision may be contradictory, it is necessary to stipulate a contract provision according to which the employer and the contractor regulate their relationship regarding such orders in a way that the orders of expert supervision supersede the orders of the “Engineer”.

5. CONCLUSION

The main task of expert supervision is to supervise the facility construction based on the knowledge, expertise, personal responsibility and the need to protect his own profession, so that the execution of works would be in accordance with the building permit issued and the legislation regulating this area. In order to achieve this, the Law on Planning and Construction, the Rulebook on the content and method of conducting the site supervision as well as the Specific Customs on Construction all define the role and tasks of expert supervision.

It is of crucial interest for the contractors participating in realization of construction investment projects that based on well-conceived contractual concept, long-term application and good experiences in the application of the FIDIC General Conditions of Contract for the construction of investment projects worldwide, to harmonize the Law on Planning and Construction and the Rulebook on the content and method of conducting the site supervision with the international FIDIC conditions, which regulate expert supervision in a broader and more comprehensive manner. This would ensure that during construction

using foreign investments in Serbia there would be unique supervision instead of double supervision.

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AUTHORS' BIOGRAPHIES

Ljiljana Milić Marković

Associate professor at the Faculty of Architecture, Civil Engineering and Geodesy in Banja Luka at the Department of Geotechnics, Roads and Railways, Organization and Construction Technologies. Licensed civil engineer of traffic infrastructure and licensed urban planner in the field of traffic. Professional experience - more than 50 designed objects. Participant in 35 national and international professional and scientific conferences. Published 50 scientific and professional papers in international and domestic journals. He is the author of the book Traffic and Space, which is used as a textbook at faculties.

Ljubo Marković

Full Professor at the Faculty of Technical Sciences of the University of Prishtina with temporary headquarters in Kosovska Mitrovica, at the Department of Management and Construction Technologies. Head of specialist studies at the Faculty of Technical Sciences of the University of Prishtina with temporary headquarters in Kosovska Mitrovica. License of a Responsible Design Engineer. License of a Responsible Superintendent. Professional experience - more than 50 designed and constructed buildings. Supervision of over 30 facilities. Participant in 35 International scientific conferences. He has published 56 scientific and professional papers in relevant International scientific journals. He is the author of 3 monographs that are used as textbooks at faculties.

ПРАВНИ ПРОПИСИ КОЈИ РЕГУЛИШУ УЛОГУ И ЗАДАТКЕ СТРУЧНОГ НАДЗОРА ТОКОМ ИЗГРАДЊЕ

Сажетак: У раду се разматрају улоге и задаци стручног надзора током изградње, у складу са националним и међународним правним прописима. Представљени су улога и задаци стручног надзора током изградње. Рад садржи и сажети преглед надзора у складу са тренутно важећим законским одредбама у Републици Србији (Закон о планирању и изградњи, Правилник о садржини и начину вођења стручног надзора), као и Посебним узансама о грађењу. Такође, приказана је улога „надзорног органа“ у складу са FIDIC Општим условима уговарања. Указано је и на разлике између националног законодавства и FIDIC Општих услова уговарања.

Кључне ријечи: стручни надзор, закон о планирању и изградњи, правилник о садржини и начину вођења стручног надзора, посебне узансе о грађењу, FIDIC