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Standard Document: Fundamentals of the Evaluation and Approval Processes of New Construction Systems

A. The definition of “New Construction System”

A general term that refers to any new product in the construction industry, in the most general sense, for which the regulations and standards that exist do not provide the professional community engaged in the design, testing, control and issuance of building permits, engineering tools appropriate to the needs of design and testing its suitability for use in construction under the conditions of the country. This includes new construction materials, products, components, technology, or new construction systems that combine a part or all of the components mentioned above, or combine in a novel or original manner innovative products and materials that have been recognized and standardized. Among the professional entities mentioned above, it is possible to include the proposer and or the designer of the system in question, as well as the designers such as architects and engineers in the various applicable engineering fields, that design buildings or other engineering structures, using the above mentioned new construction system, as well as contractors and building supervisors making use of this system, and the construction licensing authorities.

B. Evaluation Phases of a New Construction System

In order to clarify the general evaluation process used by the Evaluation BSEU of the National Building Research Institute (hereon in “BSEU”) concerning the evaluation of a new construction systems, (the preparation of its assessment and approval), refer to the description of the main stages of the evaluation and approval process detailed below:

1. Preparing information on the proposed construction system for the purpose of submitting it for evaluation

The proposer will be required to prepare all of the applicable technical documents that present the construction system to be evaluated. In the appendices one can find the basic technical documents that must be submitted prior to the preliminary evaluation of the proposed construction system. In principle, it is required to submit all applicable documents on the construction system in three hardcopies as well as a softcopy in “FDF” format. All of these documents must be prepared in either the Hebrew or English language only. The materials submitted will be strictly technical and not include any sort of promotional materials or information not relevant to the understanding of technical details and the performance of the system. Data and information about the physical properties must be based on applicable standards or alternatively, be accompanied with laboratory test results.

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2. Preliminary evaluation of the proposed system

The purpose of the preliminary evaluation is to ensure that the proposed construction system is new and in the event that it is found so, to determine its capacity to match, in principle, the safety requirements, and applicable functionality and durability concerning it that would correspond with the applicable regulations, taking into account the expected terms of use in Israel. In other words, it assesses whether the construction system in question would not be outright rejected and whether it justifies a thorough examination necessary for the preparation of a preliminary assessment and issuing it a "temporary permit", in the case of a successful in-depth examination.

A preliminary evaluation of a new construction system can begin only after all of the relevant technical material on it has been submitted, attached to a written request for evaluation and the fee for a preliminary evaluation as described below. To request a preliminary evaluation a form must be filled in. The proposer must fill in all of the requested information on the form and submit it to the BSEU upon being signed by an authorized signatory of the proposer. The preliminary evaluation is based on an initial review of the technical documents submitted by the proposer. During the process the BSEU is permitted to request from the proposer additional technical information arising from the specifications of the system and the applicable topics being evaluated by the team of experts engaged in the evaluation. A summary of the preliminary evaluation is sent to the proposer within a number of weeks from the submission date of all the required technical information in a letter entitled, "Conclusion of the Preliminary Evaluation of a Construction System Notice."

If during the preliminary evaluation of a system that its end was successful, it becomes apparent that additional laboratory tests are needed, more than what was originally submitted by the proposer, these requirements will be detailed in the notice letter on the conclusion of the preliminary evaluation mentioned above. The responsibility of ordering these tests and sending the results to the BSEU, in instances where these tests are not performed within its framework, will be on the proposer. The proposer must also bear the full costs of these tests.

In the case where at the end of the preliminary evaluation a new construction system is rejected outright, as a result of basic deficiencies causing a lack of structural safety and/or functionality and/or specific durability requirements for its use in Israel, these requisites will get passed on to the proposer in writing. The BSEU will be permitted to pass the information about this decision after providing an advance notice to the proposer (who requested the evaluation), to the Ministry of Construction and Housing, to the Ministry of the Interior, as well as other governmental authorities and professional bodies connected to the construction industry in Israel; the information related to the rejection above will get published in any other way the BSEU deems appropriate, including the Internet.

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3. An In-Depth Evaluation of a New Construction System

When the result of the preliminary evaluation show that the construction system proposed is new and not rejected outright, it becomes qualified for an in-depth evaluation. The written notice issued at the conclusion of the preliminary evaluation, mentioned in paragraph 2 above, also specifies the estimated duration of the in-depth evaluation, along with associated fees and payment methods, and provides information regarding missing data and/or required changes/adjustments/completion including details of other required laboratory tests to the proposer, along with a work plan detailing all the different stages of the in depth evaluation. To request an in-depth evaluation, the form entitled "In-Depth Evaluation Request Form of a New Construction System" must be filled in and submitted along with the letter indicating the conclusion of the preliminary evaluation; a sample of this letter can be found on the BSEU's website. Commencement of the in-depth evaluation is subject to the down-payment of the fee, along with a commitment by the proposer to pay the rest of the sum according to the payment plan detailed in the "Conclusion of the Preliminary Evaluation of a Construction System Notice." The in-depth evaluation will only be put into action once all the information called for in the letter indicating the conclusion of the preliminary evaluation is delivered to the BSEU as required.

If during the in-depth evaluation it becomes apparent that additional lab tests are needed, these requisites will be detailed in a notice letter to the proposer of the system. The responsibility of ordering these tests and sending the results to the BSEU, in instances where these tests are not performed within its framework, will be on the proposer. Additionally, the proposer must also bear the full costs of these tests.

A construction system that successfully completed an in-depth evaluation is entitled to a "preliminary assessment report" and a "temporary approval" will be issued. The "preliminary assessment report" and a "temporary approval" will only be issued to the proposer if the sample monitoring phase, as detailed in section 4 below, has been requested. It is emphasised that a "temporary permit" issued to a new construction system, if and when it is granted, is restricted both in time and scope of possible application and is subject to the sample monitoring of the actual application of the system by the BSEU.

It is also emphasised that the assessment of a system and its findings (including the preliminary assessment report and the temporary approval prepared upon the successful completion of the preliminary evaluation or the decision to reject the proposed system) will be based solely on applicable technical materials on the proposed system submitted by the proposer to the BSEU. Based on the fact that when a new construction system successfully passed the Thorough Evaluation Phase and a "preliminary assessment report" was prepared and a "temporary approval" was issued, all of these are based on the examination of technical documents only,

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and may include a few laboratory tests, but it is not based on actual application of the proposed construction system, and therefore should not be understood as being a “final Assessment Report” or “Final Approval.” Therefore, a “Temporary approval” issued to a proposed construction system is restricted both in time and scope of possible application.

4. Sample Monitoring of a New Construction System and the Issuance of a “Renewed Temporary Assessment Report” or “Final Assessment Report”

A “Final Assessment Report” and “Final Approval” can be prepared only for construction systems that received a positive “preliminary assessment report” and a “Temporary Approval” for its implementation (a “temporary approval” followed by a “renewed temporary approval” if necessary) and has been implemented in satisfactory volumes, and the sample monitoring has been implemented for a number of years. In order for a construction system to be approved for the sample monitoring phase and the preparation of a “renewed preliminary assessment report” and a “renewed temporary approval” where an additional cycle of sample monitoring is required, or “final assessment report” if the sample monitoring proved that it is feasible to finalize the evaluation process and issue a “final assessment report” for the proposed construction system, the proposer must submit appropriate requests to the BSEU.

Requests for sample monitoring, either at the conclusion of the thorough evaluation phase, or when an additional cycle of sample monitoring is required, can be carried out by completing the special request forms, which are attached to the “preliminary assessment report” or to a “renewed preliminary assessment report” A sample of this form can be found on the BSEU’s website.

For the sample monitoring, the proposer must notify the BSEU and the team of experts of the BSEU that are evaluating the construction system **of all the projects** where this construction system is being implemented, at the various stages of construction of these projects, and to present their full details. Additionally, the proposer must also commit to purchasing applicable insurance policies for each project of the new construction system in question, which will include an applicable conversion clause for the BSEU to test and approve new construction systems by the National Building Research Institute. Furthermore, the proposer must pledge to hand over all applicable information regarding the implementation of the construction system in question, including the ongoing transfer of all test results detailed in the “preliminary assessment report” and or the “renewed preliminary assessment report,” and a full report of all faults and/or damage and/or defects during implementation and or during the use of the above mentioned construction system, as well as a full report on all complaints and/or lawsuits arising from the implementation of the above mentioned construction system.

Members of the expert team evaluating the system will randomly select projects where they will perform the sample monitoring visits for evaluating the implementation of the construction

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system in action. The duration of the monitoring phase will be determined by the members of the evaluation team.

It is important to emphasize that this type of monitoring is for purposes of evaluating the new construction system by the BSEU only and does not constitute any supervision and /or guidance and /or approval of any kind regarding the manner of implementation of these projects in which the new construction system is being applied.

The sample monitoring performed by members of the evaluation team of new construction systems does not constitute a replacement of any actions or processes that the proposer of the system is responsible for undertaking, such as hiring professional designer/s and supervisor/s, for the purposes of designing these projects, for closely supervising their implementation, and for overseeing them.

A “final assessment report” for the new construction system, which successfully passes the full evaluation, will be prepared based on the “preliminary assessment report” and or the “renewed preliminary assessment report” mentioned above, with adjustments and changes where necessary, resulting from the findings provided by the sample monitoring phase mentioned above, and the accumulated experience in implementing the construction system in question.

Based on favorable “final assessment report,” a “final approval” will be issued for the application of the new construction system. A construction system that was granted a “final assessment report” and was issued a “final approval” will no longer be considered a new construction system. Accordingly, at the end of the evaluation and approval process, the proposer should initiate the appropriate regulatory action, in order to for the system to be incorporated into relevant Israeli standards. As long as these regulatory actions are not completed, the construction system in question must be re-examined every few years for the purposes of confirming its suitability in accordance with the new developments, changes and updates of applicable laws, regulations and standards.

5. Making the Information Public

It should be emphasized that the “preliminary assessment report,” the “renewed preliminary assessment report,” and the “final assessment report” will include a detailed account of all the details of the new construction system, as had been submitted by the proposer, including drawings, physical properties and technical details. The BSEU will publish these documents in its website and will make it available to all. In instances where the proposer wishes that certain details of the construction system remain confidential (not to be included in the documents mentioned above), he/she must notify the BSEU ahead of time, at the same time that the information is delivered, and the BSEU will consider this request and will provide the proposer with its decision if it can, under these conditions, meet his/her request and continue with the evaluation of the construction system. In cases where the BSEU found that it cannot meet the

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request, it will notify the proposer of the system that the evaluation will be terminated unless he/she withdraws the request.

It should be pointed out that the BSEU will make public on its website and will provide full information to anyone about the evaluation phase that the construction system is at, as well as the results of each stage including documents as “preliminary assessment report,” “renewed preliminary assessment report,” “final assessment report,” “temporary approval”/ “renewed temporary approval” and “final approval.” This information will also include a list of construction systems that were rejected at any given stage and of construction systems of which evaluations were stopped or frozen at any given phase of the process.

C. Additional Information on the Evaluation Process

The fee of a preliminary evaluation mentioned in clause 2 above is NIS _____ plus VAT (subject to monthly rate). Upon receiving the request for a preliminary evaluation of a proposed construction system and its above mentioned payment, and after all of the applicable technical documents for the construction system in question has been submitted, the proposer will be sent a letter within a number of weeks, summarizing the results of the preliminary evaluation of the technical data submitted by the proposer. If the construction system in question is considered suitable for thorough evaluation, a letter stating the conclusion of the preliminary evaluation will be attached along with a work plan for the thorough evaluation and the preparation of all concluding documents (including the “preliminary assessment report,” and the “temporary approval” for new construction systems that successfully passed the thorough evaluation), including details of additional technical material to be submitted to the BSEU for the thorough assessment, laboratory tests as required, and the estimated time period for the in-depth evaluation is expected to take along with its cost, as mentioned in section 3 above.

Information regarding the sample monitoring phase of the above mentioned construction systems will be given in the future, after the preliminary assessment report has been prepared and after the relevant request work orders have been received, on the condition that the construction system will be implemented in projects that will allow the members of the team of experts that are evaluating the system to make sample monitoring visits during the construction phase and if necessary, also after these buildings and/or civil structures are finished and are in use.