

# STEP BY STEP FROM SHACK INTO A 3E HOUSE



ETP SLOVAKIA  
CENTRE FOR SUSTAINABLE DEVELOPMENT  
ZEMPLÍNSKA 15/A, 040 01 KOŠICE  
TEL./FAX.: +421 / 55 72 888 56  
E-MAIL: ETP@KE.ETP.SK  
WEB: WWW.ETP.SK

FROM SHACK INTO A 3E HOUSE



# STEP BY STEP FROM SHACK INTO A 3E HOUSE

## Manual for Workers in the Field of Social Housing

© ETP Slovakia – Centre for Sustainable Development, 2014  
Translation © Graham Jeffs, 2014  
Graphic Design © Mgr. Viktória Sabadošová, 2014  
© EQUILIBRIA, 2014

Photographs: Mgr. Tatiana Štofánová, Slavomír Kutaš,  
Ing. Arch. Katarína Smatanová, Henrich Mihaľov, Karol Horváth

ING. SLAVOMÍRA MAČÁKOVÁ, PHD.  
ING. ARCH. KATARÍNA SMATANOVÁ  
SLAVOMÍR KUTAŠ  
MGR. MARTIN VAVRINČÍK  
ING. VIERA GONDOVÁ  
JUDR. EVA ZELIŽŇAKOVÁ, MSc.

# TABLE OF CONTENTS

<b>INTRODUCTION</b>	<b>5</b>
<b>THANK YOU</b>	<b>6</b>
<b>WHY BUILD – VICTORY FOR ALL</b>	<b>7</b>
<i>Village as a Winner</i>	<b>9</b>
<i>Clients as Winners</i>	<b>9</b>
<i>State as a Winner</i>	<b>11</b>
<i>Community as a Winner</i>	<b>11</b>
<b>WHAT TO BUILD – INCREMENTAL HOUSING</b>	<b>12</b>
<b>HOW TO BUILD – STEP BY STEP</b>	<b>14</b>
<b>1. Preparation of the Construction and its Planning</b>	<b>14</b>
<b>2. Establishing Partnerships</b>	<b>15</b>
<b>3. Choice of Clients and Social Work</b>	<b>19</b>
<b>4. Financing of the Construction</b>	<b>24</b>
<i>Savings Program</i>	<b>24</b>
<i>Financial Education</i>	<b>27</b>
<i>Loans</i>	<b>27</b>
<b>5. Selection, Purchase and Preparation of Land</b>	<b>28</b>
<b>6. Contractual Relations</b>	<b>29</b>
<b>7. Preparation of Project Documentation</b>	<b>30</b>
<b>8. Preparation of Construction Activities</b>	<b>32</b>
<b>9. Land-use and Construction Proceedings</b>	<b>33</b>
<b>10. Commencement of Construction Activities</b>	<b>36</b>
<b>11. The Construction</b>	<b>37</b>
<b>12. Final Approval</b>	<b>45</b>
<b>ANNEXES</b>	<b>46</b>
<i>Annex 1 Project Documentation</i>	<b>46</b>
<i>Annex 2 The Average Budget for One House</i>	<b>50</b>
<i>Annex 3 Media Outlets</i>	<b>52</b>

## INTRODUCTION

It is our great pleasure to offer this **Step by Step** manual, which has arisen out of a pilot project constructing low-cost houses called *From Shack into a 3E (Ecological and Energy Efficient) House*, which was implemented in the village of Rankovce in the Košice Region of Eastern Slovakia in 2013/14. During the construction, we accumulated experience and tested the correctness of theories which we had used in designing the project.

This manual summarizes this experience with a view to making it available to the widest possible range of people. Our goal is **to inspire similar construction projects in other locations** either through Local Governments, NGOs, churches or motivated individuals - and to make their journey a little easier by sharing our knowledge with them.

The idea to provide support to young families to acquire their own low-cost homes had matured in us over several years. Our previous experience with the construction of rental housing in Moldava nad Bodvou and Hodejov in 2009 and 2010, together with the acquired knowledge of the construction of social housing in poor communities living in similar environment abroad, encouraged us to test these ideas in Slovakia.

The pilot project in Rankovce took place in a marginalized Roma community - all the builders were unemployed **Roma** living with their families in difficult conditions. Our belief is that **Step by Step** can serve not only to solve the housing problems of Roma settlements, but can also be an inspiration to all families in need, anywhere in Slovakia, to address their housing problems.

The optimal model could be a project which is aimed at the Roma minority but which is also accessible to families from the majority population – indeed such a joined project could be a way of overcoming prejudices and addressing social exclusion by creating bridges between the majority and the socially excluded minority. Some of the following experiences and the benefits presented, however, refer specifically to the construction of homes within Roma communities.

**Step by Step** is designed for those who want to help families living in substandard conditions to acquire, by their own work, a privately owned home. It is also dedicated to professionals who have been providing social assistance for a long time and to whom helping clients with the construction of their own home means taking another natural step in their social work. Our hope is, therefore, that this manual will contribute to improving the social and living conditions of your clients.



## THANK YOU

The pilot project of family houses construction "From Shack into a 3E House" in Rankovce has been supported by:

- United Nations Development Programme (UNDP) - GEF Small Grants Programme
- Open Society Foundation - OSF
- Habitat for Humanity
- Civic Association Pre lepší život (For a Better Life)
- Rankovce Municipality
- The Church of Jesus Christ of Latter-day Saints
- Holcim Foundation
- U.S. Steel, Košice
- RMC s.r.o.
- The Swiss-Slovak Cooperation Programme (The Swiss Financial Mechanism)
- VUB Foundation
- Friedrich Ebert Stiftung
- Dobrá Krajina (Good Country)
- Private donors

To all our sponsors and donors to the project, without whose generosity our work would not be possible, we hereby express our sincere thanks!



## WHY BUILD - VICTORY FOR ALL

Our aim of self-help construction of homes in private ownership was not simply to build houses, but, in doing so, to also help individuals, families and communities in their efforts to change their lives in a positive direction.

The actual construction was, first and foremost, viewed as innovative but has also proven to be a highly efficient **tool of social work with clients**.

The building work, and the requirements that are imposed on the client during the construction, help to change his personality and improve his life generally. Many times a new house is the most important thing the client has achieved in his life, and what is more, he has done so self-sufficiently. This represents **a great attitudinal shift** from passively waiting for and being reliant on assistance from elsewhere.

It is necessary to keep this aspect in mind throughout the entire process of the project implementation - do not consider the construction is simply for better shelter and improved living conditions for our clients. Just as important are the processes and procedures, i.e. how the new roof above the client's head is built and what changes the client undergoes during and after the construction. **Therefore, maximum responsibility for the outcome should be, throughout the entire construction process, borne by the client** - i.e. the builder.

Our experience shows that:

1. Self-help private home construction, under proper guidance, provides a unique opportunity for people without work experience to gain more **skills and better work habits**, which are known to increase their chances of success in the labor market.

*Michal Hada, one of the owners of the new houses in Rankovce, was previously active as a volunteer of ETP Slovakia. His main duties involved walking children to the Community Centre and back home. Michal has finished a two-year study program as a bricklayer. He finds working with children very fulfilling. For a while, he was running an after-school club for local students. In cooperation with local field social worker, he prepared a project for a new playground for children to be built near the newly constructed houses. The project, however, could not be implemented due to the unresolved legal settlement of the land. Michal also cooperated with other non-profit organizations, such as People in Need or Iuventa, the Slovak Youth Institute. When asked what his next plans are, he answers that he wants to work. He attends the Community Centre regularly, enquiring about job vacancies. He would not mind travelling for work to Košice, the will to take care of his family is stronger. Michal talks openly about various promises of work from people, but none of these have been fulfilled yet. I am, therefore, asking if he would consider finishing school to later find a job more easily; Michal says he has been thinking about it but to secure the living for his family, it is necessary for him to find a decent job first.*

*Yet, Michal is not the only home owner who would like to work. Rudo engages in activating works in the village twice a week. In August, Emil's wife started working as an Assistant in the Community Centre also as part of activating works, while Emil stays home with the kids. The basic connection between them all is not in the form of employment, but in transformation of their thinking - I want to work to repay the loan. It feels completely different to live in my own home, which I have built and decorated myself.*

2. The construction of homes in private ownership **leads people to take personal responsibility** and promotes merit, because the possibility to build is open only to those clients who are trying to improve their living conditions through their own efforts. Success in these efforts also motivates others in the community.

*Ivana Galdúnová works as a Health Care Assistant in Rankovce. After three years of standstill in their house construction, she and her husband decided to join the project From Shack into a 3E House, thanks to which they received a loan to finance and legalize their home. It was not easy at the beginning, other settlers were laughing at them. Today their laughter has been replaced by the desire of other settlers to build their own homes. The best proof for that is the fact that this year, in cooperation with the civic association For a Better Life, we start with the new constructions in Rankovce. The future home owners have their parcels located and their real interest can be expressed in concrete numbers; every month they deposit the agreed savings on time.*

- During the construction, the client develops a **relationship to his own home**, taking good care of its maintenance. When houses are built self-sufficiently, they are not faced with the problem of deterioration, as their owners take exemplary care of them.

*Last year, we helped four builders construct their new houses. Each of the homes is decorated in a different style according to the owner's taste. Lukáš, already in winter, bought a new fire heater. Michal has painted his kitchen blue and Rudo's mother Jana has started a small garden behind their house, where she is able to grow various kinds of vegetables – this season she has grown tomatoes, cabbage, peppers, carrots and parsley. The garden needs to be taken care of; Ms Jana says that she has always done so, even though sometimes people give her strange looks. To have vegetables produced in your own garden is not a matter of the size of your land or your social origin; it is about having connection to your own piece of land.*

- During the construction, **the participants gradually start thinking like builders**. For many of them, it is the first opportunity **to work with others**. The cooperation also brings **conflict situations**, which the builders are **learning to resolve**.
- A person who owns a house achieves a **higher social status** within their community and beyond. In addition, improving basic living standard is also a precondition for improvement of sanitary conditions, and thus better health, more efficient energy management, better conditions for education and better prospects in the labor market.

#### *Water for Rankovce*

*In Rankovce, the only public source of drinking water for the village population was a well 400 meters away, which was used on a daily basis by about three hundred people. With the kind support of the Church of Jesus Christ of Latter-day Saints, we helped to drill a new well and build a water tank for 50 households. In difficult geological conditions, using special rigs, we managed to find water at a depth of 30 meters. To provide water for a family house, a well to supply 0.2 to 0.5 liters per second is required. The container holds water to maintain a steady level of the groundwater in the well throughout the whole year, including in the dry season, thereby providing water for the population all through the year. A professional company is able to drill a well in one day. On a land that is legally settled, it may be built without any authorization, yet it must comply with the provisions of relevant laws (Water and Building Act). The costs of constructing the well and the water reservoir depend on the geological bedrock and the depth and diameter of the borehole. The price per meter ranges from 50 €, to which the cost of the material for the well's equipment and installation must be added. Other costs will arise from the purchase of pumping equipment, utility vault, borehole cover and distribution pipes to the house, which will amount to an additional 350 €.*



- By demonstrating the ability to save and repay a microloan within the prescribed period, as well as completing the actual construction of the house, the client receives **respect** from other people. This model strengthens good relations at the local level, since the neighbors from the majority have no reason to think that the client is getting something for nothing, and with no effort whatsoever.
- Clients paying for their own home using microloans to be repaid in ten years also **save public finances**. Unlike the subsidies provided for the construction of rental housing, loans can be used repeatedly, thus helping a larger number of clients.



*The Microloans that we provided last year will have been repaid in ten years' time. The clients who joined the pilot project have been paying the regular installments as agreed, thanks to which we can now provide finance for new self-built homes to the people who want to exchange their living in bad conditions for living in their own house.*

- Individual housing construction is also **highly cost-effective** because the client who is financing the work from his own resources (savings, plus loans) considers carefully every penny to be spent. The clients themselves carefully check the prices of materials and shop smarter. Many of the building materials can even be prepared on-site. Houses built by their future owners are, therefore, several times cheaper than those whose construction is financed from public funds.

For the above reasons, the self-help construction of houses in private ownership represents **a sustainable model of social housing, which we consider a suitable complement to existing policies and tools**.

The list of positive points goes on and on, and it may change between different sites and target groups. We propose that the model we have tried should have wider use, as part of the solution to the problem of social housing. The model proposes that the client himself, under the guidance of a construction supervisor, build his own house and that the State, an NGO, church or local municipality assist in the construction. **It is a model in which everyone is a winner.**

#### **Village as a Winner**

The municipality will (potentially) gain income from the sale of land and thus attract new taxpayers (to pay the tax on the building land and the legally constructed property). At the same time, the need to build rental apartments will be reduced, which will in turn lessen the financial burden of the municipality (no need for a loan to co-finance the construction) and will also reduce other burdens (in connection to the challenges emerging during the construction: selecting tenants, maintaining the flats, chasing rent and energy arrears, resolving disputes, etc.). The justification for the construction of rental housing remains only for those families who are unable to build their own house self-sufficiently (e.g. single mothers with children, the elderly, the disabled, etc.). The legal construction of houses to be in private ownership under valid building permits reduces the number of illegal constructions and the municipality is thereby developing in a desirable manner. The construction also creates favorable conditions for strengthening relations among the inhabitants of the village.

#### **Clients as Winners**

Housing is not simply to provide "shelter". The process of self-help construction, maintenance and care of a person's own house involves many actions and activities that are developing interpersonal, social, financial, labor and other skills in the inhabitants of the house.

The self-builders grow personally and gain professional skills that can be further applied in obtaining work. They can significantly improve their basic living conditions, which can have a direct impact on the family budget (e.g. by saving energy), their health, their children's education and the possibility of obtaining income from work. Following the final inspection of the house and full loan repayment, the

house becomes the owner's property. The clients enter into a higher social status, are more respected in the community and become more independent. If the client wishes to move to another village in the future, for work or other reasons, selling the house can raise capital. Home construction to private ownership is, therefore, also a long term investment for the client, not just a simple purchase.

Self-help construction can, therefore, help socially deprived clients step out of the vicious circle of poverty. Financing construction using microloans also develops financial skills so that the knowledge acquired can be applied in daily life. Clients learn to save and to realize the value of money and the necessity of planning the family budget.



### **State as a Winner**

Each year, the State spends considerable funds for the construction of lower standard rental housing and on other forms of housing support. To build state apartments, the village must take out a loan and then maintain the apartments in a habitable state for thirty years. In any event, the state fails to provide from public resources a sufficient number of apartments for socially disadvantaged populations, whose number is growing faster than the number of rental homes being built – so the situation is only getting worse in the long term.

Using the current forms of government assistance (the construction of municipal housing) can only ever help a small portion of the people who really need this help and are dependent on it. On the contrary, self-sufficient construction allows individuals and groups of clients to take care of themselves, thus freeing up the resources for those who are not able to manage on their own.

The combination of self-help construction of homes to become the client's personal property, financed by microcredit, as opposed to the construction of rental housing of lower standard using public resources, solves the problem of social housing far more effectively and also saves public resources.

### **Community as a Winner**

Self-construction helps to demolish stereotyped views about people from socially excluded communities, whom the majority population regards as abusers of social benefits, socially dependent, incapable, passive and constantly reliant upon state assistance. Self-help construction **undermines these myths, reduces tension and improves the overall atmosphere in the community.** Self-help legal construction of houses in private ownership also prevents illegal construction and other violations of the law (illegal abstraction of energy, abuse of landfills, soil and water pollution, etc.).

Motivated, persistent and diligent builders are also **positive models** and examples for the rest of the population who have been born into generational poverty and are unable to break out, without help, from the social trap. Working with these positive models is gradually creating conditions for work with the rest of the population, thus mobilizing their internal resources and bringing about change.

Our approach **gives people the opportunity to take care of themselves.** Our aim is to ensure that this opportunity can be taken advantage of. We prefer that **the burden of responsibility be borne by individuals – i.e. the builders,** with the maximum use of their potential and abilities.



## WHAT TO BUILD - INCREMENTAL HOUSING

The concept of achievement through self-help construction aims at legally obtaining decent housing. **It is not about the fulfillment of a dream.**

Between a self-built house and a dreamed-of house, there is a difference in comfort, technology, design and size. So, the dream house may have several bedrooms, a large living room, a garage, a garden, etc., but the home that our clients build, is a “**starter house**”, in which everything is subordinated to expediency and price, providing the minimum necessary while maintaining a **decent level of living**. We propose a basic model of a house, which is conveniently equipped with basic facilities that one needs for a decent life.

A young family which is gaining independence needs very little space to start with. However, as children are born, this increases demand on living space, and thus the original building needs to be extended.

If the builder one day discovers that his house is insufficient in space or some other aspect, he may extend it without interfering with the existing house construction. Such an approach is called **incremental housing**.

**Incremental housing** is a construction system which **already anticipates the future enlargement of the space**. For a start, the basic core is built, which usually contains basic technical equipment (bathroom, connections to utilities, a kitchen worktop, a heater, etc.) and a habitable room with minimum dimensions. The design of the house allows an easy way to add more rooms and **increase the standard of living**, thus meeting the demands for additional space or responding to changing financial circumstances.



The incremental housing model had already appeared in the seventies as a realistic approach to solving problems of basic living conditions for the poorer sections of the population. The model, in which the State would give people in material need the land and the help to build a basic core, was a common response to housing crises, which occurred as a result of migration of people from rural to urban areas in countries of South America and Asia.

This model of housing, however, has a long tradition in Slovakia as well. Folk and country houses traditionally developed in a similar way - the main house would be extended by adding a rear, a side or a courtyard wing, which were often joined by a porch.

Self-construction, as part of a model of incremental housing, not only saves public money, it also **saves the costs of the actual construction**. The basic core includes just the bare essentials, so there is no waste or unnecessary “luxuries”.

**The incremental housing construction model is also the best response to the individual needs and requirements of clients**, whereas the construction of rental housing provides lower standard type apartments designed to suit everyone. Experience, however, suggests that in many cases, it is not suitable. Every family in need is different in size; nowadays, also older people end up in a crisis situation and these people have completely different requirements from those of a young family. Individual incremental construction also allows residents of the house to continuously react to their changing housing needs, preferences and tastes.

## HOW TO BUILD - STEP BY STEP

The main part of this **Step by Step** manual is to provide instruction and present a sequence of individual steps of the construction. We have tried to include the most important parts of the entire process, as well as the most of our experience to serve not only as inspiration, but also as an aid in constructions similar to the one realized in the pilot project.

This manual only gives a basic overview of the necessary steps; **it may not in all cases be universally applicable**. The procedure described below may depend on various conditions in a given locality, the target group and its preferences, availability of resources and the like. It is appropriate, therefore, to **approach the manual critically and view it as recommendations** to be adjusted according to local conditions.

### 1. Preparation of Construction and its Planning

**Careful preparation is essential to prevent the emergence of potential problems during the construction process.** This initial phase should mainly be an examination of local conditions and existing resources (not only financial, but also human in terms of determining the range of partners supporting the construction), interest, capabilities and client needs. The preparation phase is also the time to evaluate existing risks and find ways to minimize them. The key is to obtain local government support, without which the implementation of an infrastructure project is impossible.

The initial phase of the plan must be realistic in terms of **financial and personal aspects of the support for the construction** and the options need to be rationally evaluated - we recommend doing so by starting small and gradually expanding the project when opportunities and capacities allow. There is nothing worse than unfulfilled promises and expectations of the target groups and partners - trust is a precious capital, which is built gradually, but can be lost very quickly.

*The pilot construction in Rankovce, which lasted about 12 months, involved the construction of four new houses and the legalization and completion of two existing buildings.*

*The coordination of construction, its financing, communication with all stakeholders, handling the necessary permits and supply of building materials was undertaken by a project manager, while another person was present during the construction on site as an expert adviser for the builders. Additional capacity is needed for social work with clients, for the implementation of the loan system, project administration and management, accounting, legal advice and promotion of the project. Particular project support was based in the Community Centre, which ETP operates in the village, as well as coming from a cooperating local civic association and the Church.*

*This model is considered as absolute minimalist. It is highly cost-effective in relation to the direct construction costs, but it is demanding in terms of the outreach activities, without which we do not believe the model will work. For example, in most cases the mere provision of construction financing through loans is not enough in itself and clients need support in dealing with administrative and legal matters, professional construction management, social work and counseling, education, planning the construction and provision of building materials.*

Poor planning and construction can bring significant complications to encumber the whole process, causing overpricing of the construction, disruption of interpersonal relationships and technical complications, etc. Therefore, we recommend that sufficient attention should be paid to the planning phase – by starting **at least a year before the actual construction**. Each activity should be counted as part of planning, sufficiently in advance as most of these activities take longer in practice than originally foreseen. A longer time frame also provides more time for social work with the clients to aid their gradual change, which cannot be rushed as it has certain chronology and patterns. If the time to work with clients before the construction is shorter, then a part of the potential of the social work is left wasted.

## 2. Establishing Partnerships

Partnerships, not only local, but also regional and national, are essential from the start of the whole process to **help realize the project goals**. There are several reasons: the synergistic effect of multiplying work with clients, the help to create a system for other future clients and, in particular, the saving of financial and other resources at all levels.

Partnerships which are created during the project have a wide range of effects and their intensity and quality directly affects the process of project implementation. The builders are not only our clients, they are also our partners. The Municipality is also our partner which provides cooperation. **Partnerships are, therefore, an essential prerequisite for the success of the project.**

The actual construction process is inherently social work - **work with people**, so it is also necessary to establish good cooperation with public officials (government and local government), field social workers, community centre staff, local churches and other volunteers who help socially excluded residents, or other stakeholders. Cooperation is a very important aspect of social work, and it must focus on the whole family. **The more subjects we involve in our common goal, the easier it will be achieved.**



**Local partnerships are particularly important from the following points:**

1. they strengthen the construction process,
2. they provide timely information to all stakeholders and prevent problems and misunderstandings,
3. they encourage innovation processes and feedback on such processes in the construction,
4. they save financial resources,
5. the process can be repeated easier in the future,
6. they can reduce social tensions.





The scope of subjects for cooperation is open. Below are examples of the most typical forms of cooperation with entities usually present at the local level.

#### Municipality

As already mentioned, implementing an infrastructure project without the support of the local government is virtually impossible and, in the long term, doomed to failure. **The Municipality is, therefore, a key partner** in the project and good partnership with it can greatly simplify and streamline the whole process.

Local government is particularly important with regard to the sale of land (if the construction is to be carried out on common land), providing

technical infrastructure, liaison during the construction and approval proceedings (especially when the Municipality is also the Building Office), and long-term social work with clients. Cooperation with the Municipality includes communication with the Council, the Mayor, Municipal Office employees, field social workers and other municipal employees, as well as the Building Authority (if that is the Municipality).

**The Municipal Council has the right to sell municipal property** for the purposes of individual self-help construction. If the Municipality has land for individual housing construction and is ready to transfer it to new owners, the land must be obtained to become the exclusive property of the client (unless for different reasons a different model, such as a long-term lease, is chosen). There is no legal entitlement, however, for the disposal of municipal land, and the decision depends only on the elected members, who also have the competence to **determine the price**.

The Municipal Council also determines **the municipal plan**. This competence is particularly important if the plot in question is not under the existing plan zoned for individual housing, or is in a rural zone. In such cases, the building office may insist on a separate land-use and construction proceeding, which means that the processing and approval of the necessary documents for both land and construction decisions take twice the time and effort.

The Municipal Council can slow down or even stop the whole process, or it may be helpful in accelerating the construction – it has the right to bind the Mayor to the resolution to implement certain steps in favor of the construction, or commit financial and other resources to support it. It is, therefore, necessary to get the local Council on one's side and patiently explain to its Members the benefits of such construction for the builders, the community and, ultimately, for the whole village.

We, therefore, recommend that before starting the whole project it should be introduced to the Council, so that all Members are provided enough information in advance. Especially helpful might be including information about already existing partnerships.

It is extremely important for the implementation of the project to work with the **Mayor** and for him to be convinced of the importance and benefits of the construction, as he can make the entire process significantly faster and easier – and can be an important ally in gaining the support of the Municipal Council and residents of the village. It is also within the Mayor's competence to call the Council meeting and suggest the sale of land and its price.

The role of the Mayor is even more important if the municipality is the **building authority**, i.e. it approves and signs all important decisions related to the construction, including construction permits, final building approval and the permit for joint land and construction proceedings.

With smaller municipalities, the building administration is usually carried out by the building office in the so-called central village, which functions as a common building office. Creating a positive relationship with the building office can accelerate the process. The officials of the building office may, like the local Council or Mayor, be able and willing to accelerate the entire process of construction (or at least ensure that it is not unnecessarily prolonged) if they feel that the issue of a construction permit for self-builders will be beneficial for the community.

**Employees of the Municipality**, including field social workers, can be of great help through all phases of the construction process, from the initial preparation, the selection of clients, the sale of land, the provision of social work, as well as the repayment of microloans. Support of **field social workers** is very important, as they are usually familiar with the atmosphere in the community and know clients better than anyone outside the village. They know their characters, problems, and the most effective way of communicating with them.

*In Rankovce, the project was fully supported by the local government. Although the Municipality was not the building authority, a key factor was the allocation of land for individual construction and the sale of land for future builders at the beginning of the whole process at reasonable prices and in a relatively short time. Through its field social workers, the Municipality was also intensively involved in social work with clients and their preparation for construction, both during and after the construction process.*

*Completing all formal requirements and acquiring the building permit to start the construction took about 3 months in the case of Rankovce.*

In municipalities with favorable local and financial circumstances, local government can participate in investment in technological networks, infrastructure, public space, etc.



### Business Sector

In the implementation phase of the construction, it can be very helpful to have co-operation with businesses and firms. The possibility of support increases if a company is based, or has its plant, nearby.

Big companies can provide substantial **discounts on certain building materials**, or can donate materials that can be used on site but would otherwise be wasted. Partnerships with large firms can be used to reach smaller companies that cooperate with them and gain a wider range of partners. Some companies are willing to help even directly with the financing of certain costs associated with the construction or provide discounts on purchases. Small business can also provide discounts, rent construction tools and equipment or donate some material as sponsors.



Small businesses are an important part of the community and working with them can have a huge impact on **coexistence at the local level**. However, local companies tend to employ people mostly from the local majority population, who often have deep-rooted prejudices about the “incompetence and passivity” of socially excluded Roma (or people living on the margins of society). On the contrary, many poor Roma families are trying to stand on their own feet and work hard to improve themselves, but this effort and positive examples are almost unknown to the public. Cooperation with small businesses often allows local residents to gain the experience with their neighbors from the settlement who are active, who are trying to solve their housing issues to move forward, to live better, and who are not waiting for help from the state.

Besides financial contributions, the importance of local partnerships is in **demolishing prejudices and helping to build a bridge** across the imaginary barriers that arose in previous decades.

*During the construction of houses in Rankovce, we worked with U.S. Steel Košice and Holcim, the largest supplier of building materials. Moreover, on the basis of a project we submitted, the Holcim Foundation additionally provided a grant of € 2,000, which we used to purchase building materials. The company U.S. Steel contributed € 1,000, which we used to cover the costs of the construction supervisor. In addition, we worked with small local businesses such as construction warehouses, a private farm (tractor rental) and a quarry.*

*Direct and indirect financial support for the project by the business sector was extremely important to the project, helping to reduce the cost of construction of the 4 houses up to about 30%.*

*Our experience with the owners and employees of small businesses (builders stores, manufacturers of plastic windows, etc.) was that, after having understood that local Roma can build their houses self-sufficiently on the land purchased from their own savings and microloans, which will have to be repaid, they changed not only their rhetoric against Roma, but gradually they themselves tried to help within their means.*

### Religious Organizations

Churches are partners who have a natural authority and who can multiply commitment and discipline. Our experience confirms that the active cooperation of the Mayor, the community, field social workers, churches and the local priest is a prerequisite for successful long-term work with clients. The church community is also helpful to change any discriminatory attitudes of the majority population.

### Local Civic Associations

Social work is vital to the aim of the self-construction of a house to become personal property. Local civic associations and volunteers working in the community are, therefore, very important partners during the construction and after its completion. They help the home builders not only with the construction itself, but they also encourage them to take care of their house, eventually assisting them in coping with various life situations – thereby helping to multiply the result of everyone’s joint efforts.

*In Rankovce, we cooperated with the civic association For a Better Life, which helped to identify active young families responsible in managing the family budget.*

### State Administration and Other Entities

Although the state administration, due to its legal status and competences, is not usually seen as a partner or ally in the strict sense, the attitudes of its agencies (e.g. Land and Forest, Environmental Protection, land ownership offices, the Monuments Board, the Water Management Authority and others) are potentially important for success. A similar position applies to providers of electricity, gas, water supply and telecommunications.

These providers all issue permissions which are important in the building proceedings and any difficulties in obtaining their permissions can greatly complicate our goals. Good communication with all the relevant institutions can greatly facilitate the process.

## 3. Choice of Clients and Social Work

Choosing reliable, responsible and sufficiently motivated clients is a **critical phase of the project, and should therefore be given the utmost attention**. The selection of individuals and families that will be involved in the actual construction is sensitive and cannot be done quickly or on the basis of incomplete information.

The choice of clients to become partners for many months (or years), and the strength and success of our connection determines the outcome of all our efforts. When selecting clients, several criteria must be considered:

### Clients’ Proactive Approach

Selected clients with whom we choose to work together must be **active and willing to participate** in all stages of the construction. Their participation is required in the planning and construction procedures, as well as in the broader social work with their family (if needed or requested).



**Client's true intrinsic motivation** is a key factor – to enable him to handle the long-term and complicated construction processes, but also to create conditions where the client bears substantial responsibility for the outcome. Client assessments should include the degree to which clients have already shown some efforts to improve their situation. The client must have the possibility to directly participate in the construction and, where appropriate, to engage the members of his family too.

One indicator which can help in assessing the suitability of the client to participate in the project is the measure of their **voluntary activities**. It is a good sign if the client in material need participates in activation or voluntary work (working as a volunteer in the community centre, etc.), participates in activities which are offered, cooperates with social workers, takes care of his household, does not face debt, etc.

#### **Clients' Social Situation**

The clients' social situation plays a crucial role in their selection because the aim is to provide for those clients who **really need this help**. Houses are designed as decent homes for socially disadvantaged clients who, because of their economic situation, usually have no access to bank accounts, loans and mortgages, or other forms of finance that are available to other groups of Slovak citizens (e.g. the loans from the State Housing Development Fund). The microloan is often the only chance for residents of socially excluded communities to raise funds to enable them to improve their basic living conditions.

#### **Financial Discipline and Accountability**

It is essential for the client to realize that the house will be built from his own resources, together with a microloan that will have to be repaid over the agreed period. The client's financial discipline is the ability to fulfill his obligations in the long term. At the same time, it amounts to his ability to repay his debts. Arising from social dependence, clients frequently face great indebtedness, persisting for many years and often over several generations. One of the conditions for joining the project is to have a good record of payment of such things as waste charges, local taxes, etc. The client's financial situation needs to be examined to ensure, for example, that he is not liable to distraint (which could even result in client losing his newly built house).

#### **Acceptance of Terms**

In order to join the project, the client has to **accept all the conditions** and agree not to take any steps that would jeopardize the construction (e.g. start building before the permits have taken effect). The clients need to have all the conditions explained to them in detail, including those relating to the actual construction, the financial and other requirements, and they need to have all their questions answered. Clients need to be aware that they will also be involved in the handling of the formalities associated with construction, and that at the end of the construction, their obligations do not stop; the house will have to be taken care of and kept in good shape.

Another important part of selecting clients includes **obtaining information from cooperating institutions**, local government, field social workers, local community centres, churches, schools, etc. When selecting clients, it is important to gather the information about activities in which they and their family members have previously been involved, what challenges they have faced and what is the best way to communicate with them.

When selecting clients, it is advisable to choose a few alternates in case of unforeseen circumstances and any inability to work with the originally selected clients.

Throughout the construction process, it is essential that the client – our partner – understands everything properly and is timely **informed**. Part of this awareness is familiarity with cash flow, construction techniques and the construction calendar. Complete and correct information is part of **building confidence**, while at the same time avoiding misunderstandings. Client trust is only built slowly and over the long term. It cannot be



expected to exist after just a few meetings - and here again partnerships that we have managed to build at the local level can be helpful. If there is no **existing trust between clients and ourselves, the project cannot be successfully implemented.**

The prerequisites for good relationships and cooperation with the clients are: precisely formulated expectations, rights, obligations and opportunities for all stakeholders. In particular, it is necessary to cover in detail the specific items in the building budget, so that clients know exactly what type of building materials will be involved, in what quality and at what price, and what the possible alternatives are. **Especially in terms of finance, there must never be left even a hint of uncertainty.** The clients may need to go through some things several times until everything is completely understood.



*Our experience from Rankovce has taught us that a number of conflicts, misunderstandings and other difficulties can be caused by exaggerated expectations of clients or by the lack of information on their responsibilities in the project.*

*It is necessary to devote extra capacity and pay really close attention to repeated, detailed information for clients throughout the process at the regular weekly planning and progress meetings. What has also proven effective were informal meetings after work, which strengthen the feeling of belonging and of shared responsibilities, as well as the spirit of partnership and cooperation. In our experience, the cooperation with clients always improved after such meetings and became easier and smoother.*

The clients should have **true partner status – they should themselves make individual decisions, be proactive and responsible including, if necessary, even for unavoidable errors** (as in real life!). They should be, to maximum possible extent, responsible for the progress in construction and its result - **the builder is in charge, we just help him** with those parts of the process and problems that are objectively beyond his capacity (usually in connection to financing the construction and the administrative and legal requirements). The most difficult part of the social work is to estimate the correct measure of assistance - **to help more than necessary is counterproductive** and is directed against one of the objectives of helping clients; to start to change and to take responsibility for their lives.



*Repeatedly, we discovered that if clients at any stage had a sense that any part of the project would be carried out without their personal input, they tended to lose the initiative and regress into the passive position of aid recipients.*

*We proved it to be extremely positive to involve the whole family and especially the women - mothers, wives and partners, who managed to have a positive impact on clients' responsibility and positive approach to meeting obligations. The presence of women in the construction always meant a dramatic increase in productivity.*

It is important to remember that **each client is different**, has different preferences, perceptions, degrees of autonomy, responsibility, readiness for construction, work habits and skills and objectives. Each builder should, therefore, be approached as an individual, even within the group of builders in one location. The approach chosen for one client can be totally counterproductive if used with another client.

*In Rankovce, clients were already active partners in the design and drawings phase - each of the clients had slightly different ideas about some of the details, so each built home is different. What is important is client satisfaction and a sense of "ownership" of the project.*

**After the construction has been completed, the work with social workers does not come to an end.** On the contrary, self-construction by means of incremental housing is only one of the instruments of social work in the fight against poverty and social exclusion. To eliminate generational poverty, a **comprehensive, holistic approach is required**, which includes not only programs aimed at improving the quality of housing, but also programs aimed at educating community residents of all ages ("cradle to grave") through educational programs focused on health, job creation and social, financial and legal advice.

The client builder and his family should be involved as much as possible in all development activities. There should be intensive work with the client's family, to supervise its financial, social, housing and health situation, so that the process relating to construction is continued and the potential is maximized for further development. It is particularly important to try to **use the newly acquired skills and work habits** to assist the client in joining the labor market.

It is possible to use the alliances which have been created over the construction period and the increased confidence in the client in working with the community; to hold the client up as a model for others and an example of purposeful efforts bringing results. Subsequent work with other members of the community can become significantly simpler and more efficient, and the effect is transmitted to all parts of the action in the community.

#### 4. Financing of the Construction

**Transparent, continuous and smooth financing is another of the key elements of the project.** Financial stability allows for long-term planning, strengthens confidence in not only clients but also all partners and communities, and it enables efficient construction. It is particularly important not to forget the **indirect costs** of the construction process – essential social work, management of construction and all assistance activities, without which the project will, in most cases, fail, or will not maximize its mission and full potential.

We strongly recommend that the project should not be started unless full funding is in place. To have to stop construction because of the lack of resources is the worst possible scenario and can cause irreparable damage. **Unfinished houses are worse than none**, and much energy, time and resources will have been invested into the process without a usable result. Such a failure would probably be assigned to the clients regardless of any degree of their fault, and could damage their reputation and perception in the community.

It is, therefore, extremely important to undertake a sober assessment, before construction starts, of our as well as client's options. If necessary, it is appropriate to postpone the start of the construction and devote more time to acquiring additional resources.

*Financing the construction in Rankovce was possible thanks to several donors referred to in the acknowledgements, who provided resources including the bonuses for clients involved in the savings program, the microloans and the funding of staff involved in the project.*

*The following conditions for the financing were based on a combination of several projects implemented by our organization over the last eight years.*

##### **Savings Program**

A vital source of funding to start the construction is the **savings program, smoothly followed by the microloans program**. A combination of these sources (plus other client savings) should cover all direct construction costs borne on the side of the client.

The purpose of the savings program, in addition to being the primary source of finance for the building costs, is to create conditions **to build motivation and responsibility in the client**. By regularly depositing in their own account, having their own passbook, the clients prove their **financial discipline**, which is very important during the construction and after. The time for regular savings, as a basic condition of participation in the project, provides space to work with the client, make preparations, undertake the planning phase, deal with administrative formalities, etc.

The whole process also helps consolidate the social work with the client - the client learns to **better manage family finances and plan their spending**. At the same time, his thinking focuses more on the future.



**The savings phase of the project is, for the above reasons, a vital part of its implementation in any case and (even if there are enough funds from other sources) should not be omitted or shortened.**

*In our experience, the savings period should be at least 12 months and the monthly savings should amount to at least 50 €. The advantage of saving in our project was a 1:1 bonus at the end of the savings period, which in addition to motivating the clients allowed the financing of the building materials.*

Inclusion in the savings program is conditional upon the revenue and expenditure criteria of the client. The aim of the **analysis of the financial condition of the client** is to determine whether he will be able to repay the loan and comply with pre-established rules. For the savings program, we have developed a questionnaire to reveal the client's eligibility to apply for participation in it. This questionnaire gives us the answer to the fundamental question: **Is the client likely to meet his future financial obligations?**

The savings program is aimed at low-income clients. According to our previous experience, the low-income families usually have different sources of income - formal (social assistance, benefits and other social system allowances, income from contracts, agreements, etc.) and also informal (joining crews, collecting scrap metal, berry picking, etc.).

For the savings program, an assessment is made of the amount of income, formal and informal, on the basis of information from the client, local government and other local sources. A questionnaire is completed with the client, which aims to objectively evaluate and verify the **financial capacity** of the client's involvement in the program.

The questionnaire sets out the expected monthly income and expenses, and the difference is the minimum the client chooses as his monthly savings.

Criteria should also be set so that the client in material need is given a chance to become the next builder too. In assessing the revenue, we need to take into account both formal and informal income, such as income from the collection of scrap metal, sales of mushrooms, help with loading firewood and others - but these resources should be assessed with a sober view. The assessment of the capacity to meet future obligations relating to the repayment of loans can also include future income - for example, housing allowance, which the client may become entitled to once he lives in a legally constructed home.

If the questionnaire reveals that the client's income is less than his expenditures, then we need to continue to communicate with the client to find the causes of this condition. Our task is to modify personal finances so that the costs are lower or equal to the client's income. **Clients who are unable to manage their family in a financially sustainable manner cannot be accepted into the program, even if they meet all other conditions.** Their admission would cause undue stress and tension on the family budget, as well as in the construction process. At the same time, it would also send a very negative signal to other builders who had to meet strict conditions.

If the questionnaire shows the client's long-term financial discipline, keeping a positive balance, part of which can be deposited in a savings account, another aspect to be considered are the **client's current obligations** (i.e. client's total indebtedness) both to the Municipality, and also in relation to other entities.

**Settlement of debts** to local government should again be a condition of inclusion in the program, as it strengthens the long-term responsibility of the client and improves his perception and community relations. Debt settlement can take place in the form of a payment schedule agreed with the Municipality, but it is important that the client take responsibility for all commitments.

Another aspect of assessing a client is his general indebtedness. Could **his property be distrained against?** If so, for what reason and in what amounts? In answering these questions, the client can be excluded from the whole process. If the client is facing distraint relating to a large sum, it is likely that the enforcement officer could take at least some of his savings, and eventually also the purchased land and the new house. It is, therefore, important that the client, before entering into the project, offsets any long-term commitments or distraints (again using the payment schedule).

A proper **assessment of the financial condition** of clients may require a deeper analysis, during which we need to obtain even more intimate details, which often clients are unwilling to provide, or at least find annoying to discuss. It is, therefore, important to consider not only the data we collect, but also the overall situation and atmosphere in which those data are collected. Does the person who goes to examine the financial condition of clients have a personal relationship with them? Has he or she won their confidence?

If we evaluate the client's financial condition as satisfactory, meaning the client is qualified for the savings program, the next step is **opening a savings account**.

The client opens a savings account in his own name at the bank of his choice and makes regular deposits of the agreed amount every month. Clients regularly take their passbook to be checked by local staff responsible for the savings program in the village. The deposits may not be withdrawn, except for serious situations. However, in theory, we must leave the possibility of a withdrawal open (the saving should not be in form of term deposit). Any decision to postpone spending in favor of the future must be the client's own and autonomous choice.

It is preferable that the person responsible for working with the clients already knows them. In most cases, this will be the social or outreach social worker in the village. The client reports all income changes and every problem that may be preventing him from regularly saving, while the social worker attempts to resolve the issues.

When the savings have reached the agreed amount, together with the savings bonus (when part of a savings program), they are used to finance the construction as previously agreed (land purchase, funding foundations, etc.). In general, the provision of additional resources should be linked to the depletion of the client's existing resources.

### **Financial Education**

Throughout the periods of saving and preparation, it is necessary to work with the client and his entire family **to improve their financial literacy**, which is one of the objectives of the project.

An important element of this process is the completion of formal financial education, which should cover at least the following topics:

- Current financial flows
- Seasonality of revenue and expenditure
- Saving methods and options, their importance
- Emergency expenses and an emergency fund
- Reasonable loan and debt risks
- The financial plan and planning process

The aim of the training is to ensure that the client himself becomes a **financially responsible individual** and progressively modifies his financial behavior in a positive direction. Given the difficulty and nature of these topics, it is very important that this training is conducted in an interesting way and that formal language is adapted to suit clients and their ability to understand the issues. The clients need to gain hands-on budgeting experience for their family and make realistic plans for the future. The training should be informal and conducted in small groups, so that if there is a sensitive topic, an individual can talk openly about more personal aspects of financial matters.

### **Loans**

The low costs of construction and flexible timescales do not usually correspond with the traditional way of construction, and the usual way of financing through standard credit systems is neither appropriate, nor even possible, if we take into consideration our target group. It is, therefore, necessary to provide small, flexible and relatively short-term financing schemes. Based on our experience, the most appropriate is a micro-loan scheme.

The construction costs – including materials, tools, supplies, services (drilling wells, delivering materials, providing skilled labor, etc.) – are all financed from the funds provided to each client based on the loan agreement.

**Clients are not generally given cash, but the costs relating to the construction are allocated to the individual builder's accounts.** The final amount of the loan is thus known only after the construction and completion of all expenditures, and therefore, may vary between individual clients (depending on their choices). This approach, however, may be partially or even completely modified during the construction process – as a confidence booster to clients. As their level of financial literacy increases, part of the expenses can be passed on in the form of cash loans and the ratio gradually increased, thus similarly increasing their degree of responsibility.

The allocation of installments from the microloans can be tied into the construction phase, i.e. further loan is not released until certain pre-agreed construction work has been completed. For example, funds for the construction of external structures are released to the client only after the foundations are completed, and so on. Under such a system of financing, the client assumes full responsibility for the planning of the construction of his house. Dividing the micro-loans into smaller installments motivates the client to proceed relatively quickly.

An important element is absolute **financial transparency** and the client's understanding of the expenditures incurred – the optimal model is to check all expenses that are part of the loan weekly, and to confirm them in writing to avoid any doubts and misunderstandings.

## 5. Selection, Purchase and Preparation of Land

A major prerequisite for the construction itself is the selection and purchase of land on which the houses are to be located. Given the relative financial complexity of the infrastructure project, as well as its long-term nature, significant attention should be paid to the choice of land and the location of the building on the site.

Based on our experience, one of the fundamental problems in building houses into private ownership is the unavailability of suitable land. Many times it is beyond client's capabilities to find available building land (vague owners, many heirs, etc.). An important role in overcoming this obstacle can be played by the **Municipality** - whether by selling the land, facilitating the sale from a private owner, or by engaging in the process of settling legal relationships around the available land.

An often neglected element is the value of the **location of the site**, as the choice of appropriate location determines the success of all future construction. The new homes must **not be allowed to deepen spatial segregation**, so the land should be situated within the village and as close to the existing technical and social infrastructure as possible.

An important factor in selecting land relates to the availability and provision of **technical infrastructure and connections to utilities** that help reduce the energy requirements of the new buildings, as well as to simplify the construction process. The connection to utilities has an immediate impact on the increase of the quality of client's life. Very important is the proposed positioning of the building on the land; it should be situated properly to the cardinal points, and adjusted to the shape of the terrain.

The selection of building land from available parcels depends upon the client's financial situation and requirements, as well as on the possibilities of the municipality which owns the land. **The plot size** should be a reasonable compromise between clients' financial possibilities and the size of the land the municipality (or other seller) is able to provide. It should be borne in mind that the **minimum dimensions and the size of the land** arise from the standards set by the technical requirements that need to be met. They especially involve compliance with certain prescribed distances from neighboring parcels and the positioning of buildings on the property (see the section Preparation of project documentation, p. 30).

When deciding on the size of the land, **the possibility of future expansion of the house** to provide further living space should not be forgotten. According to the dimensions of the prototype designed, the land width should not be less than 16 m if the house is to be placed breadthwise, or no less than 11 m if the house is to be placed in length. The ideal compromise is 16 x 25 m, which is **400 m<sup>2</sup>**. The minimum size which is recommended for the construction of this type of house is **250 m<sup>2</sup>**.

*Construction in Rankovce was implemented on land with an area of about 200-260 m<sup>2</sup>.*

Setting **the land price** is always a matter of agreement. In case it is sold by the Municipality, it is essential to follow the financial regulations of the Act on Budgetary Rules. The Municipality is not only the manager of its property (including building land), but also provider of social assistance, and thus can make the decision whether it wants to profit from the sale of land, or choose the path of social assistance and sell the land at a lower price to address the housing needs of its citizens in distress, thus creating wider conditions for their social inclusion.

*In Rankovce the Municipal council set the price at 3 € / m<sup>2</sup> for the disposal of land. In this case, it was a land without basic infrastructure located in a rural zone.*

The next step in making the sale of land is the preparation of a surveyor's **plat map**, which can be verified at the land registry office. A proper plat map is the basis for land disposal to clients and subsequent entry in the land registry.

In the event that the Municipality has prepared a plat map, based on the resolution of the court's expert assessment, the issue of disposal of land for construction purposes in favor of the inhabitants will

become the point of discussion at the Municipal Council Meeting. An application for approval of the land disposal is given based on the measurement of the concrete plot of land (e.g. on the plot Nr. 567/14 with an area of 5200 m<sup>2</sup> two new plots will be established: Nr. 567/15 and Nr. 567/16, both with the size of 300 m<sup>2</sup>, and a plot Nr. 567/14 with the size of 4600 m<sup>2</sup>). The disposal relates to the specific plot in the plat map, into which the newly established plot of the size approved by the Municipal Council will be entered. The plat map becomes part of the purchase (or lease) agreement.

After creating the plat map, making the entry and creating the plots in question, it is possible to take legal steps to transfer the ownership of the land to the clients.



## 6. Contractual Relations

During the construction of houses, it is necessary to enter into multiple contractual relationships. The possible scenarios for these relations are many and the most suitable choice may depend on several factors.

The most typical contracts relate to the client's **land acquisition (purchase, lease agreement) and funds (loan agreement)** for the actual construction.

In obtaining land, clients may have several options, which depend mainly on who owns the land (the municipality, or other entity) as well as on the financial capacity of the client:

1. **A lease with a possible option to purchase** is fully acceptable for the purpose of building proceedings. It allows the client to build legally, but it does not give him complete legal certainty that the land will be his at the end of the construction process. The lease option is appropriate where the client does not have sufficient funds to buy the property before the construction starts, but the builder is exposed to the risk that the owner of the land may terminate the tenancy agreement in the future. At the same time, the owner cannot guarantee that the client will purchase the land one day. In both instances, we might end up with someone else's property built on the land. Due to the risks mentioned above, this model is not recommended as the standard solution.

2. At the conclusion of the **sales contract** under the Civil Code, after the client has paid the purchase price and the building has been entered in the land registry, the builder becomes the owner of the land before the actual construction starts. So far, this has been applied in most of our cases. Based on our good experience, we recommend it if the client has sufficient funds to purchase the land.

3. **Acquisition of land in the form of a lease** was used for the project in Rankovce. Unless the financial possibilities enable clients to purchase land at the stage of construction, this option is the most appropriate. At the conclusion of the contract, the client becomes the lessee, and makes regular monthly installments as rent but for the purchase of the land. The contract is non-cancellable provided that the client fulfills all the conditions of the contract. Upon payment of the final installment, the seller issues a certificate of payment of the full purchase price, based on which the client can enter his ownership in the land registry, thus becoming the owner of the land. Until the client has paid the entire purchase price of the land, the monthly payments are considered rent. If the customer fails to meet his obligations under the contract, for example, does not pay the agreed rent, the owner may terminate the contract and let

the plot to another person. In such case, the builder is not entitled to claim what he has already paid.

The provision of funds for the construction is based on the common **loan agreement**. It is appropriate to secure this relationship with standard tools, such as blank bill of exchange (before providing loans), or acknowledgment of debt in the form of a notary statement (after providing the loan), which can serve as an enforcement order. If the client fails to meet his obligations, it is therefore possible to carry out distraint against him to collect the repayment of funds which he was provided.



It is advisable to strengthen the legal status of the creditor after the completion of the construction and its final approval by establishing a lien on the property, which shall be entered in the land registry for the period of loan repayment.

## 7. Preparation of Project Documentation

The **project documentation** is an essential prerequisite for the self-help construction, and is also the basis for the arrangement of required formalities, such as the construction decision and the final approval.

**Project documentation must include at least the following:**

1) **A Drawings Section**, which describes:

- The setting of the house on the plot, which shows the surrounding relationships and connections to the local infrastructure (water, gas, electricity, sewage),
- The foundation construction,
- Ground floor plan,
- The attic floor plan (if any),
- The roof construction,
- Transverse and longitudinal section of the building,
- Views from different points of the compass,

2) **A Technical Report** consisting of:

- Characteristics of the area,
- Urban planning and architectural design,
- Description of the building structure,
- Description of the technical solution,
- Organization of construction and arrangement of site,
- The environmental protection measures,
- Statics,
- Energy evaluation of the building,

3) **Projects** for:

- Water and sewer connections,
- Building wiring and electrical connection,
- Gas connection.

The documentation should be drawn up by a professional designer depending on the conditions of the site. To meet all the criteria, there should be four originals of the project documentation.

**The project can be changed only with the architect's approval** and agreed changes should be entered in the site diary. All changes must be approved by the architect, the builder and the construction supervisor. Without their permission, no changes can take place. If they eventually do, it is the responsibility of the construction supervisor to enter the change in the site diary. The builder is responsible for any changes; he bears the consequences and risks any ensuing problems at the final approval. Any change to the construction project must be reported to the competent building authority.

**Location of the building structure on the parcel** is dependent mainly on the street alignment and the size and shape of the plot.

The Ministry of Environment of the Slovak Republic Regulation No. 532/2002 Coll., which provides details on the general technical requirements for construction as well as the requirements for buildings used by persons with limited mobility and orientation, imposes minimum **spacing of adjacent structures**. Mutual distances of buildings must meet the urban, architectural, environmental, hygiene and veterinary requirements, they must respect groundwater and surface water protection, protection of monuments, fire safety, civil protection, requirements for daytime lighting and the maintenance of the residents' well-being. Spacing must allow for access to maintain buildings and it has to enable access for technical and other facilities related to the functional use of the area.

The Regulation further provides in § 6 Art. 3, that if there is large free space between family houses, the distance between them may not be less than 7 m. The distance between the houses and the common land borders may not be less than 2 m. Pursuant to § 6 Art. 6 of the Regulation, the distance of the facade of a building that includes windows of habitable rooms must be at least 3 m from the edge of the road.

These distances can be changed only on serious grounds and must be agreed among all the participants of the land-use proceedings (owners of adjacent land, the Municipality, the Building Office, etc.). If any of the parties to the proceedings disagrees, no building permit will be issued. In cases where the size of the building land does not allow for all the distances determined by the Regulation to be maintained, it is possible for these distances to be reduced with the consent of the owners of the adjacent parcels.

Where a larger number of houses are to be built at the same time, it is recommended that a **land-use plan** of the zone or an urban study be prepared. The purpose of the study is to determine the long-term development of the part of the village in question. Timely preparations and comprehensive planning will help prevent the unregulated construction, and thus create a new, neat and functioning space within the



village. The urban study should define the street lines for the newly constructed objects, the changes in exterior spaces, public lighting, the placement of waste bins, playgrounds, or even the position of bus stops, i.e. all facilities from which the entire community will benefit.

Thoughtful **urban solution** for larger construction projects (maintaining street line in relation to the objects) provides for the creation of fully-fledged **public spaces**, streets and high-quality facilities for a better quality of life.

## 8. Preparation of Construction Activities

The commencement of the construction itself must be preceded by thorough **preparation and planning** - any hasty start will cause serious complications for formal or practical reasons.

Before the land-use proceedings that will determine the placement of the building on the plot in accordance with the project, no on-sight work should be commenced. Similarly, work cannot begin until the effective date of the construction permit. At this stage, it is, therefore, important to **curb the enthusiasm and unorganized activity of the builders**, who at this point already are the owners of the property. Clients are often impatient; unlike their skills in manual labor, they may not have enough idea about the pitfalls of arranging for all the necessary formalities and may even not perceive such issues as important or interrelated.

Any action taken ahead of the legal procedures can lead to significant complications in land, construction and approval proceedings. Therefore, clients must already at this stage learn to respect order in following the already explained and agreed procedures.



The actual construction activity must be preceded not only by all the statutory requirements, but also by the **preparatory works**. One of these is to prepare the land for the building itself, which includes, for example, landscaping (leveling of the surface can save significant amounts of money spent on the foundations, especially when the land is steep). The landscaping may start before the building proceedings, in which case it is necessary to **notify the Building Office on the commencement of the landscaping** in writing.

*Where the sloping site is not leveled and the height difference exceeds 1 meter, then foundation trenches higher than 1.8 meters need to be constructed. This means it is necessary to spend huge sums on cement and aggregate. However, if we pay attention to evening out the plot in the place where the house is to be situated, we can save up to €1,000 on the foundations.*

We recommend landscaping should be undertaken only after the consultation with the staff of the Building Authority, who is able to confirm the acceptance of the proposed placement of the construction on the plot and ensure the smooth running of the proceedings. However, this is to be expected only in cases in which the site does not have underground lines, the plot is quite large and the distance between the house and the adjacent parcels is sufficient. If the above conditions are not met, then it is appropriate to postpone any landscaping work until the decision on the location of the building has come into force.

The preparatory work may also include **site preparation**. The construction site must be clean, free of rubbish and ready for the manipulation with building material, i.e. fenced, mowed, without any wild bushes, etc. Manual labor to prepare the site in this way is a useful occupation for clients as they fill the time waiting for building permission.

### Construction Supervision

In preparation for construction, it is necessary to provide a person to function as a construction supervisor. The person who will carry out this task must be a qualified professional who works in the region closest to the construction site to keep the travel costs down.

A work agreement must be entered into, according to which the construction supervisor undertakes to carry out the supervision in an impartial manner with due professional care and to record all findings in the site diary.

In the Agreement, the builder commits to:

- allow the construction supervisor to access the construction site as required in respect to the extent and time,
- follow the instructions of the supervisor relating to the construction,
- tell him all the important facts that would have a negative impact on the construction,
- adhere to project documentation and building permit provisions,
- comply with all applicable regulations during the construction, including Slovak Technical Standards (STN),
- keep a construction diary reflecting actual events.

## 9. Land-use and Construction Proceedings

The acquisition of legal housing is essential to the progress and gradual empowering of clients, and a valid building permit is a prerequisite for the acquisition. It is the **legality of the housing**, as well as leading the clients to abide by the law, which is one of the important social work aspects of the project.

*In Rankovce, we found that even a minor matter such as the client's having his own refuse bin and having to make regular payments for its emptying, is a significant shift in the perception of the responsibilities by the client; he had always been used to considering a waste container a "gadžo" thing ("gadžo" meaning a member of the majority), which does not concern him. A household's own refuse bin has, then, the potential to change their social status in the community - but also their approach to meeting their obligations.*

*Insistence on respect for all statutory obligations during the construction is, therefore, a very important element of the associated social work. In Rankovce, the local Roma had been building houses well before the implementation of our project - it is, however, the legality of the housing that is adding value. This is also because of the increase in income resulting from the legality of the housing resulting in the client's eligibility for a housing allowance. Another advantage is a higher technical standard of legally built homes.*



The issue of a building permit is preceded by rather complicated construction proceedings, which consist of several steps. It is quite important to ensure the handling of formalities in advance (e.g. during winter) so this does not delay construction.

*The completion of all formal requirements for the commencement of construction (i.e. the building permit) took about 3 months in Rankovce.*

The situation is much simpler if the land to be developed is already zoned in the local **land-use plan** as an area for the future construction of individual houses. If so, it is possible to apply for **joint land-use and construction proceedings**.

If the territory is not zoned for residential use, it is not possible to ask for joint land-use and construction proceedings and this will extend the approval process by at least three months, as separate consents from the relevant institutions are required for the land-use and then later for construction proceedings. Zoning and construction administration then run separately, while the construction proceedings may commence only after the land-use decision has taken effect.

There is an option to contact the relevant municipal council and ask that the land-use plan of the municipality be changed, to set a new area for individual home construction. However, this procedure is relatively time consuming and can take up to a year. If the municipality was intending to implement any changes in its land-use plan anyway, or the land-use plan is yet to be finalized, this can be the most effective solution.

**The Building Office** is usually prepared to give the applicant for the building permit the list of all resolutions of institutions that are necessary for the decision in the land-use and construction permission process. This list reflects the specifics of the site, so it can vary depending on the location where we plan to build.

The list of resolutions and permits depends on the nature and complexity of ownership relations, the infrastructure in the area, whether it is near a river or whether it is in the area of archaeological importance, etc. In general, the more complex the infrastructure, the more resolutions and permits will be required. In addition, in locations which include protected areas, additional licenses and permits will be required from other institutions.



*The list of attachments required for the application for a building permit in the joint land-use and construction proceedings in Rankovce included:*

- **a Certificate of Title (an original) with €8 stamp** indicating the soil quality (required for the extraction of arable land and permanent grassland from the agricultural land fund and their reclassification as building land),
- **a copy of the land ownership map (an original),**
- **a consent from the Mayor of the respective Municipality for:**
  - connecting the house to public utilities – water and sewerage,
  - connecting the house with local roads,
  - establishing a small source of pollution,
  - constructing a cesspit,
- **2x situational drawing of the current state on the basis of the land ownership map** involving the building in question, indicating its position, its connection to the surrounding environment and other buildings, the proposed extensions and connections,
- **2x proposed construction documentation + architect's certificate** (architectural and urban integration of the building into the area, its appearance, visual design, energy assessment, demands for the water-resources management, energy and construction preconditions for the connection to existing technical facilities of the area) and an energy assessment of the proposed construction,
- **Architect's Certificate (photocopy),**

- **Statements about the existence of underground lines from the following institutions:**
  - Telecommunications,
  - Electricity Distribution Company,
  - Water Supply Company,
  - Gas Supply Company,
- **Resolutions, approvals, assessments, and, if necessary, also the decisions of the government bodies prescribed by special regulations:**
  - Permission to use farmland obtained from the District's Land Office,
  - Statement from the District's Environmental Office,
  - Declaration of the District's Office for Road Transport and Communications,
  - Resolution on the project documentation, the planned consumption and the point of connection to individual utilities providers,
  - Statement by the Regional Monuments Board,
- **Declaration of the authorized person carrying out the construction supervision**  
+ photocopy of the certificate,
- **Proof of payment of the administrative fee to the respective Municipality.**

If the land on which we plan to build is part of the **agricultural land fund**, it is necessary to take into account the necessity for the land extraction and reclassification, as well as the payment of a fee for the exemption. The price per m<sup>2</sup> is determined according to the soil quality, while there is direct correlation between the quality and the price paid. If the land does not contain any quality soil, it is possible to reclassify it free of charge, but only if the applicant is the Municipality and the construction area does not exceed 1000 m<sup>2</sup>. When extracting a larger area, it is necessary to count on a fee or have the land extracted through several applications for each parcel separately.

## 10. Commencement of Construction Activities

The start of the construction activities consists of the various steps listed below, which must be carried out in the prescribed sequence in order to avoid the loss of time and money. This preparatory works phase takes at least 5 weeks (according to the level of previous planning and preparation of the site).

### Outlining the Plot

In the event that the building plot is not yet definitely outlined, it is necessary that a surveyor determine the exact land boundaries before starting any building activity. From the border of the plot, the foundation footings will be set, so outlining the plot may be joined with outlining the foundations.

### Construction of the Access Road

The construction of the access road will facilitate the entire process of construction and can save time because building materials can be deposited directly on the site. It will also save money as there is no need to employ special equipment to transport materials from a temporary storage place.

The relevant building office should not issue a building permit for the site without an access road. The Land Department of the District Office may insist on building a temporary and later also a permanent access road. If the future road is planned on a land classified as permanent grassland, it is necessary to ask the Land Department to extract the soil from the agricultural land fund and reclassify it as another type of land or as a temporary communication. If the future road is situated in the village or close to a first class road, the decision on connecting the land to the communication is required also by the District Office for Road Transport and Communications. It is, therefore, very important to think about the road infrastructure at the outset of the project to avoid unnecessary future complications.

### Construction of Networks

The construction of networks includes creating connections to technical and infrastructure networks for such things as water, electricity and sewage. The very process of house construction is very demanding on energy and water use. Building the infrastructure is possible before issuing a building permit, based on a previously prepared project of connection to water supply, sewerage and electricity, for which a professional designer is required. For connection to an electricity grid, a review report issued by the engineering inspector is needed after the implementation itself. The project requires to be certified by the appropriate network administrator. Based on his positive decision, the network connections can be built by skilled workers in accordance with the project. After completing the connections and issuing

the review report (for electricity), it is necessary to submit an application to connect to the network and enter into a contract for delivery.

### A Warehouse for Construction Tools and Materials

After the construction of the road, area networks and fencing, but before the actual construction starts, it is necessary to provide storage for the building materials. This is necessary to store purchased materials close to the building site, thus saving funds for transport. Otherwise, daily deliveries of material in small quantities would make the construction much more expensive. Transportation costs are a significant budget item. If we rely on daily deliveries, we lose not only money, but also time.

### The Setting of the Foundations

The demarcation of the foundations is a vital step because upon them stands the entire structure of the house. Any error in their setting is quite difficult to remedy in the future. We must be sure that the place where we are going to build, as well as the foundations plan, is exactly as it should be and in accordance with the project.

Another possibility is that the surveyor determines the property line and at the same time sets the location and boundaries of the foundations. The basic 3E houses built in Rankovce are 5 x 10 meters.

To verify the accuracy and to determine the angles we can measure the diagonal of the foundations, which is 11.18 meters in the case of 3E houses. In case of a different layout of the foundations, it is possible to calculate the diagonal using the formula  $c^2 = a^2 + b^2$  (diagonal 2 =  $52 + 102$ , diagonal 2 =  $25 + 100 = 125$ , diagonal 2 =  $125$ ,  $\sqrt{125} = 11.18$  m).

Laying out the foundation strips and starting the excavation of the trenches is the first steps in the construction process.

## 11. The Construction

### Earthworks

The first excavation of the foundation trenches can be done in two ways: by machine, which is faster but more expensive and not entirely accurate, or by the builders themselves; although this takes longer, the foundations are dug more accurately and cheaper. The excavation by machine will only save up to two days, so it is preferable to dig the foundations manually. The foundations must be at a depth of at least 80 cm and, at the same time, at least 20 cm above the ground. The minimum width should be at least 60 cm.

### Footings

After digging the foundations, the shuttering is made (construction of wooden forms in which the concrete is poured and compacted). In doing so, one should not forget to leave openings in the foundations for the distribution of plumbing, sewage, electricity and possibly gas, all in accordance with the project.

There are two possible solutions to the establishment of the footings: (1) they are poured into the shuttering directly or (2) foundation blocks are laid. The advantage of blocks is that they can save a considerable amount of concrete as it is poured into predetermined shapes, which allows to accurately calculate the amount of concrete required. The disadvantage is that it is also necessary to buy reinforcing rods, which makes this option considerably more expensive. It is essential that this work be overseen by an expert, since it is necessary to do the foundations absolutely accurately.



*It is recommended that the footings be concreted in the traditional way, i.e. by means of hand excavated precise strips. Then the shuttering is placed in the trenches reaching at least 20 cm above the ground. Next, the concrete is made in concrete mixers and the foundations are filled with quarry stone to the maximum. The pieces of stone must not touch each other and the spaces between them should be filled with concrete.*



*The materials needed for the footings are: 20 tons of 16-32mm gravel, 30 tons of quarry stone, 0.5 cubic meters of building timber, 3.5 kg of black wire and 10 kg of No. 80 nails.*

#### **Foundation Slab**

The completion of the footings is followed by 21 days in which the concrete needs to harden, watering the concrete every morning and evening. After the concrete has hardened, work can continue with the construction of the foundation slab. It must be fitted with sewerage tubes, water tubes and wiring with outlets situated above the slab on one side and out towards the water shaft on the other side. The internal space should be excavated or filled with clay soil to a level no higher than 20 cm below the top of the foundations. The internal space is then completely filled with 32-120 mm gravel. After the gravel has been leveled, the internal space is compacted, using a vibrating plate. Care must be taken not to damage the already inserted fittings. After the gravel has been uniformly compacted, the wooden parts from the foundations are used to frame the concrete foundation slab, which should be 20 cm thick. First, a 10 x 10 cm welded wire mesh is laid, followed by pure concrete (not diluted with quarry stone). In the center of the base, it is necessary to create a full length expansion joint as thick as the slab (2.5 cm), which prevents the spontaneous formation of cracks in the concrete. The foundation slab is formed by pouring the concrete in and evening it out with a leveling lath, while the accuracy is being checked with a long spirit level. For the house to be accurately built, it must be ensured that everything is absolutely straight and level from the very start of the construction so that the foundation slab can be a good foundation for straight external walls.

After pouring the concrete to form the foundation slab, it is necessary to wait at least 21 days, watering the plate morning and night, allowing time for the concrete to dry and for all chemical reactions to take place. This process is said to be concrete "sweating".

#### **Construction of the External Walls**

After hardening of the concrete slab, the builder can proceed to build the external walls. The first step is laying a waterproofing membrane where the walls will be built from the so called bitumen sheet.

Building the wall begins after laying the waterproofing membrane. Onto the foundation footings the foundation mortar is laid, upon which the first row of blocks is placed, using a spirit level and repeatedly checking the height and the angles. Only then can we proceed with placing the next rows. The basis of good and accurate bricklaying is a perfectly made foundation slab and correct foundation blocks. A 45° isosceles triangle should be used to measure the angles of the building. The sides are measured with the builder's tape measure. The diagonal of the foundations should also be checked. Heights are measured with an optical level or using a hose water level.

It is necessary to use a spirit level to check every block and do a re-check at the end of every row (the ground floor of the house is nine rows of blocks). All the walls are then checked for height. If the height difference between the walls is more than 2 mm, it is necessary to find the error and fix the entire wall.

The chimney must not be neglected when laying the blocks; it should be incorporated into the central interior wall. The chimney should be a part of the structure of the house as the heat emitted from the chimney walls acts as radiator in the attic.

Simultaneously with the external walls, the pillars for the front porch are built. The blocks of the pillars must reach the same height as the blocks of the external structures because a bond beam is then placed around the top of the pillars.

If the external walls are built on the area of 5 x 5 meters of the 5 x 10 meters foundations, the pillars may form the base for the walls of another room, which clients can build at a later stage. The pillars should copy the foundations layout. The basic housing module (5 x 5 meters) and the pillars are joined by a bond beam.

#### **Construction of a Bond Beam**

For the construction of a bond beam, it is necessary to build a framework for vertical structures (the wall and the pillars), into which concrete is poured. The bond beam should be 200 mm high and 360 mm wide (the width of the entire block).

The bond beam must include reinforcing steel bars (minimum 5 x 12 mm). The construction of a bond beam requires 25 bags of 25 kg of cement, 10 tons of 0-4mm gravel, water, black wire and 175 meters of reinforcing steel with a diameter of 12 mm and 112 meters of reinforcing steel with a diameter of 6 mm, which are bound



with  $\varnothing$  12 mm rods (for every 25 cm it is necessary to tie 15 x 25 x 15 x 25 rectangle - as in Fig. below - and to place an extra rod in the center).

The bond beam should be allowed to harden for 21 days, similar to the foundation slab.



Fig.: Placing the reinforcing steel bars into the bond beam

#### **Construction of the Ground Floor**

After the bond beam has hardened, wooden ceiling joists are placed evenly at a distance of about 80 cm from each other. The joist by the middle interior wall is aligned with the wall and another one is positioned 90 cm from it. Between these two beams, the stairs to the attic will be situated.

The construction of the ceiling requires 12 pieces of wooden ceiling joists with dimensions of 10 x 18 x 600 cm.

#### **Construction of the Attic**

After laying the ceiling joists the walls continue to be built for the attic to a height of 750 mm (representing three rows of blocks). The vertical walls of the attic are then finished with a 15 cm thick bond beam, into which threaded rods are fixed. These rods have a nut and a flat washer at the bottom, which secures them in the concrete. The bars are fixed where the wall plate will be laid. The wall plate is then anchored to the house by means of the rods. Since the upper bond beam does not have to withstand as much pressure as the lower concrete parts, after one week the work can continue.

#### **The Gable**

After the upper bond beam has hardened, the gable will be constructed. The pillars will be erected in the center to fit the purlins. In the middle of the house, where the chimney is located, the pillars must be constructed on both sides of the chimney and built into the middle of the gable.

After constructing the pillars, the wooden framework is placed on them so that the threaded rods can be embedded for the purpose of securing the purlins as with the wall plate (we need 15 cm high framework, a threaded rod, flat washers and nuts).

After the concrete has hardened, the purlins are embedded. They are placed in the middle of the blocks right on the rods, which are then fastened with the nut through the flat washer. Thus begins the work on the roof structure (the roof truss).



#### **Truss Construction**

The entire truss structure is covered with a protective coating. The truss structure is designed as a simple gable roof, which sits on the purlin and transfers some weight from the truss onto the purlins. The rafters are on both sides bound in 2/3 of their length by the plinths and fastened with M12 connecting bolts.

The roof truss consists of the following parts:

- Rafter - 10 pieces - 650 x 120 x 200 cm
- Plinth - 8 pcs - 30 x 150 x 250 cm
- Purlin - 2 pcs - 180 x 180 x 300 cm
- Wall plate - 2 units - 180 x 180 x 600 cm



Fig.: Placing the rafter on the wall plate

The rafter binds to the wall plate in such a way that (1) the rafter itself is placed onto the threaded rod or (2) it is secured to the wall plate with a self-cutting screw into the wood larger in diameter. Before placing the rafter onto the wall plate, it is necessary to first make a cut in the rafter to enlarge the point of contact between the rafter and the wall plate.

#### Roof Covering

Once the roof truss has been constructed, a vapor-permeable membrane should be laid on top of the roof. The membrane strips are joined with adhesive tape so as to form a uniform membrane surface. Roofing battens are then placed on top of the membrane. These battens are rectangular pieces of the size 3.5 x 5 cm, placed at a mutual distance of 35 cm. They serve as a rack for the roof covering. Onto the battens, the roof covering is then placed. Between the covering and the membrane, a 3.5 cm high air gap is formed, which is important to prevent the roof covering from sticking to the membrane. In such case, it would not fulfill its function, which is to let the vapor out from the insulation.

For the purpose of roof covering, metal roofing material is recommended as it has several advantages. First, it is lightweight and so does not burden the roof structure. The second advantage is that it is easy and quick to manipulate. The roofing can then be done also by a less skilled builder. It is, therefore, recommended to use galvanized or plastic coated trapezoidal sheeting, which does not require any professional skills. This minimizes the chance of problems, while the covering still meets all the basic, i.e. aesthetic and utility, conditions.

#### Roof Insulation

After the roof has been covered, thermal insulation of the roof truss should follow. The truss should be insulated fully with mineral wool, which means that 18 cm thick mineral wool strips should be inserted in the spaces between the rafters. The strips should be tied with a builder's string line so as not to dismantle.

#### Insulation of the Ceiling over the Porch

It is necessary to insulate the floor over the porch in



the same way as the roof truss. Again a wooden rack needs to be constructed, either from rectangular pieces of 3.5 x 5 cm or from recycled waste wood from pallets. The wood is used to make a structure for the ceiling above the front porch. The ceiling can be covered with plasterboard used for bathrooms (green – penetrated, suitable for humid environment) or with OSB board. After that, the floor above the porch should be insulated.

#### Plasterboard Ceilings

The insulation is first finished with a damp-proof membrane. The membrane will be covered with a straight structure to insert plasterboard, which will be used for the final aesthetic interior modifications. The structure could be made of simple pieces of wood or aluminum components used for plasterboard structures. However, these are relatively expensive. Any gaps or cracks in the plasterboard should be filled with plaster, which afterwards will be covered with plaster mortar.

#### Attic Flooring

Once the house has its roof, a start can be made on the interior work, including the flooring of the attic. If sufficient funds are available, 44 m<sup>2</sup> of wooden boards (2.5 cm) or OSB sheets (2 x 12 mm) can be purchased. They are then fastened to the joists.

*If there is less money, other materials can be used, for example, recycled wooden pallets. In our case, the pallets were donated by US Steel Kosice. The pallets are dismantled and every 25 cm a board is screwed onto the joist, creating a wooden slatted structure, onto which floorboards are screwed. As floorboards, discarded furniture made from chipboard can also be used. The old furniture needs to be carefully dissected and cut to the appropriate size (min. 50 cm high and 18 mm thick). Such a surface will provide sufficient stability and thickness for a floating floor to be added later.*

A dry attic plate is not as stable and solid as a cast reinforced concrete plate but it is completely sufficient for the safety and normal living standard of the occupants of the house. The strength and quality of the plate reaches the standard of wooden prefabricated houses.



### **Fittings and Interior Installations**

The next steps in the construction are plumbing and interior work. At this stage, bathroom walls need to be erected. The bathroom is located in the corner opposite the front door. We build bathroom partitions using concrete blocks with a thickness of 10 cm.

After the walls have been assembled, the door frame and windows on the ground floor and in the attic are installed. They should be either PVC or wooden windows, or windows obtained by recycling (e.g. the restoration of neighbor's old unneeded windows, etc.).



Installation of the doors and windows is followed by fitting works, which must be completed before plastering because these need to be embedded into the external walls. Wiring and plumbing should be installed by experts on a project basis. Due to the need for a wiring inspection report, it is necessary to do the installation exactly according to the approved project.

### **The Staircase**

After the plastering and coating have been completed, the stairs to the attic can be installed. These can be of different types. A carpenter or a more experienced client can construct and fit the stairs easily and single handedly.

### **The Ground Floor**

After the installation of the staircase, the bathroom equipment can be fitted and the floor can be finished. After that a heating system, i.e. a solid fuel stove, needs to be installed.

### **Finishing the Walls - Plastering and Insulation**

Walls can be finished with plastering only after the plumbing and electrical fittings have been completed.

Since even accurate building blocks have a tendency to move slightly and to crack over time, it is necessary to follow the established technological procedure; glue is applied on the block to hold a fiberglass mesh as a base layer. The layer is then covered with a soft coating before the paint is applied.

The same is true for the exterior. If funds allow, polystyrene or other thermal insulation material can be applied under the fiberglass mesh.

## **12. Final Approval**

The final approval procedure starts with the builder's application to the relevant building office for the issue of the final approval. The application must be accompanied by all annexes required by that office. These include, in particular:

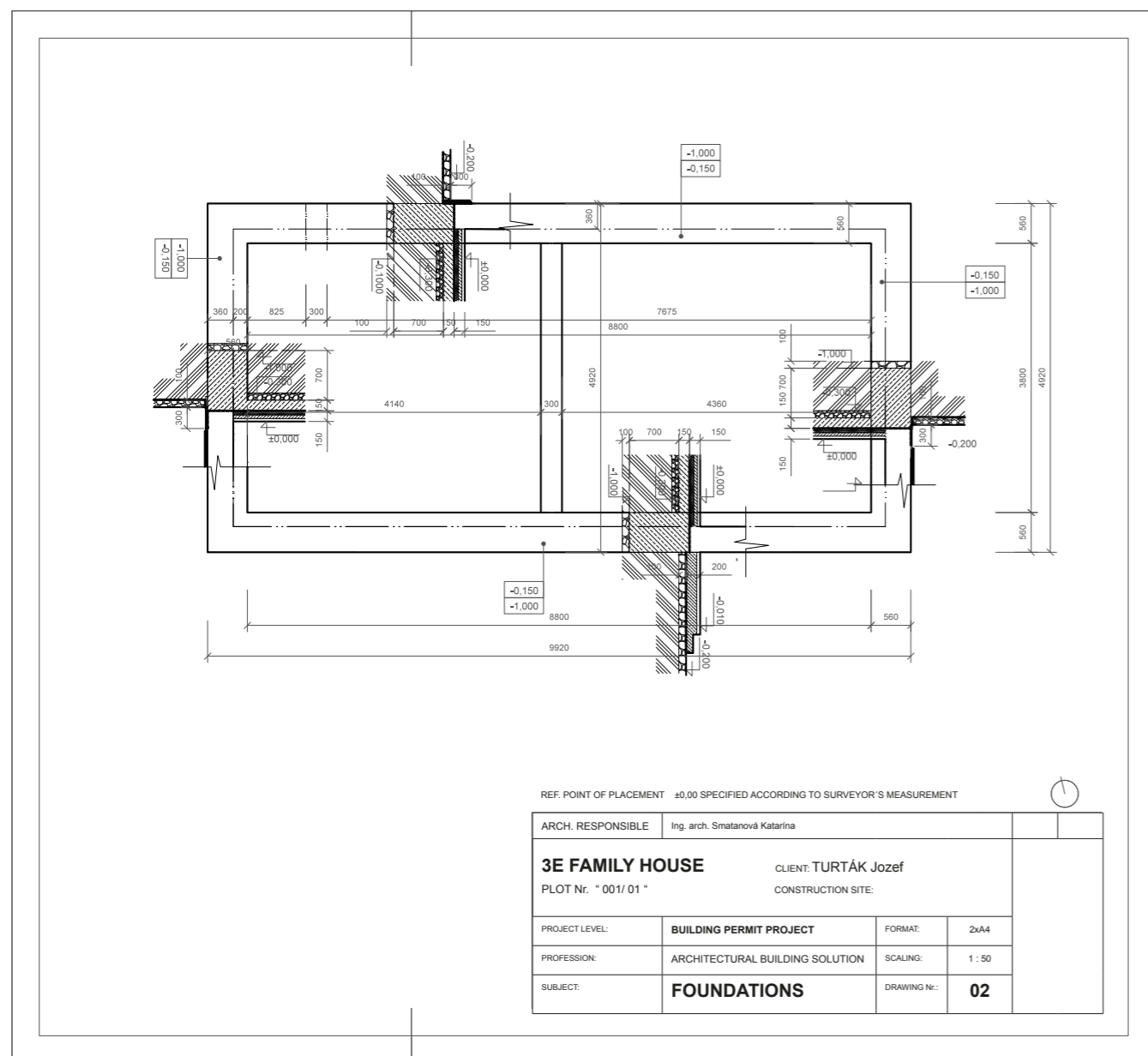
- Project documentation of the actual construction, if during the construction stage the size or location of certain parts or structures has been changed from the original design
- A measurement of the construction performed by a surveyor
- A copy of the site diary
- The review reports

After submitting all the required documents, the building office notifies all parties and relevant authorities about the commencement of the approval procedure, at least 10 days before the oral proceeding joined with the site examination. Then, on the site and its surroundings, the Approval Commission examines whether the construction has been carried out in accordance with the approved project documentation and whether all the conditions of the land-use plan, land-use decision and building permit have been complied with.

When all statutory conditions have been met, the building authority will issue the approval decision, indicating that the construction process has been completed.

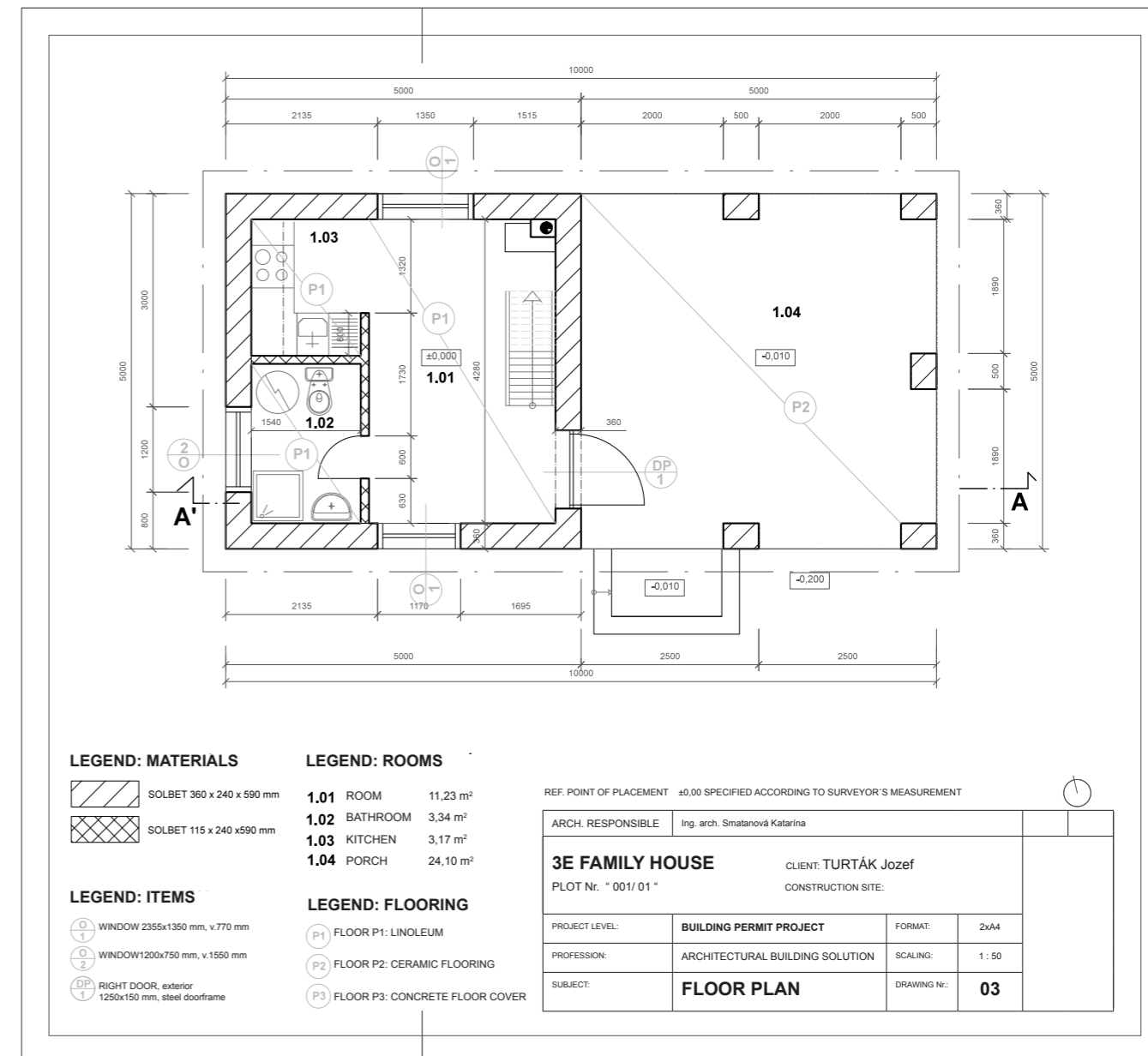


## Annex 1 Project Documentation



The project documentation is indispensable for issuing the building permit, but also serves as a 'manual' throughout the entire construction. It contains all relevant information on the building and the construction materials used. It is designed to meet all valid technical standards, thus guaranteeing a high quality of housing. It is, therefore, necessary to comply with all the structures and materials specified in the project documentation and not to implement any changes before a consultation with the architect and the construction supervisor. This will also prevent any problems in obtaining final approval.

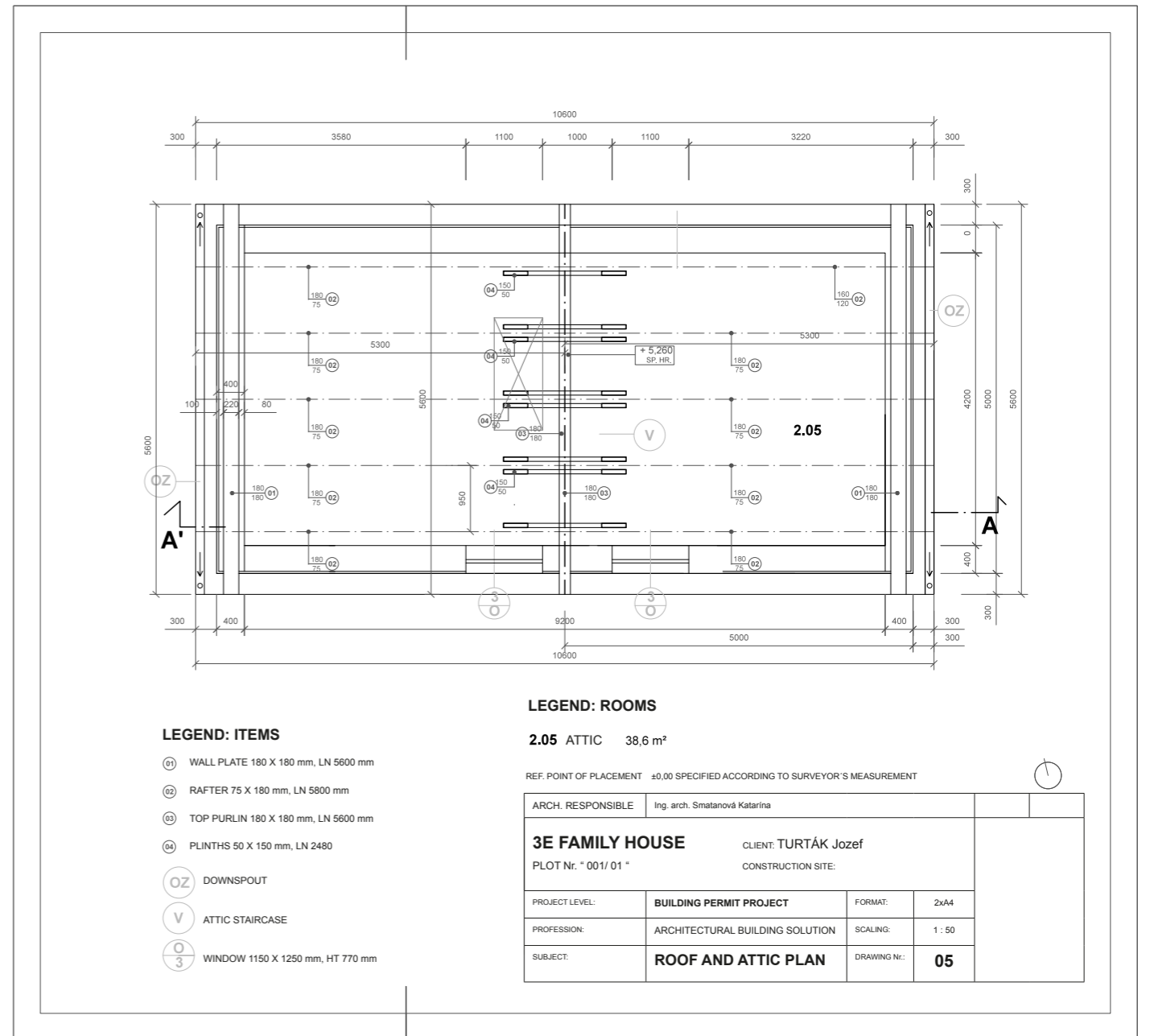
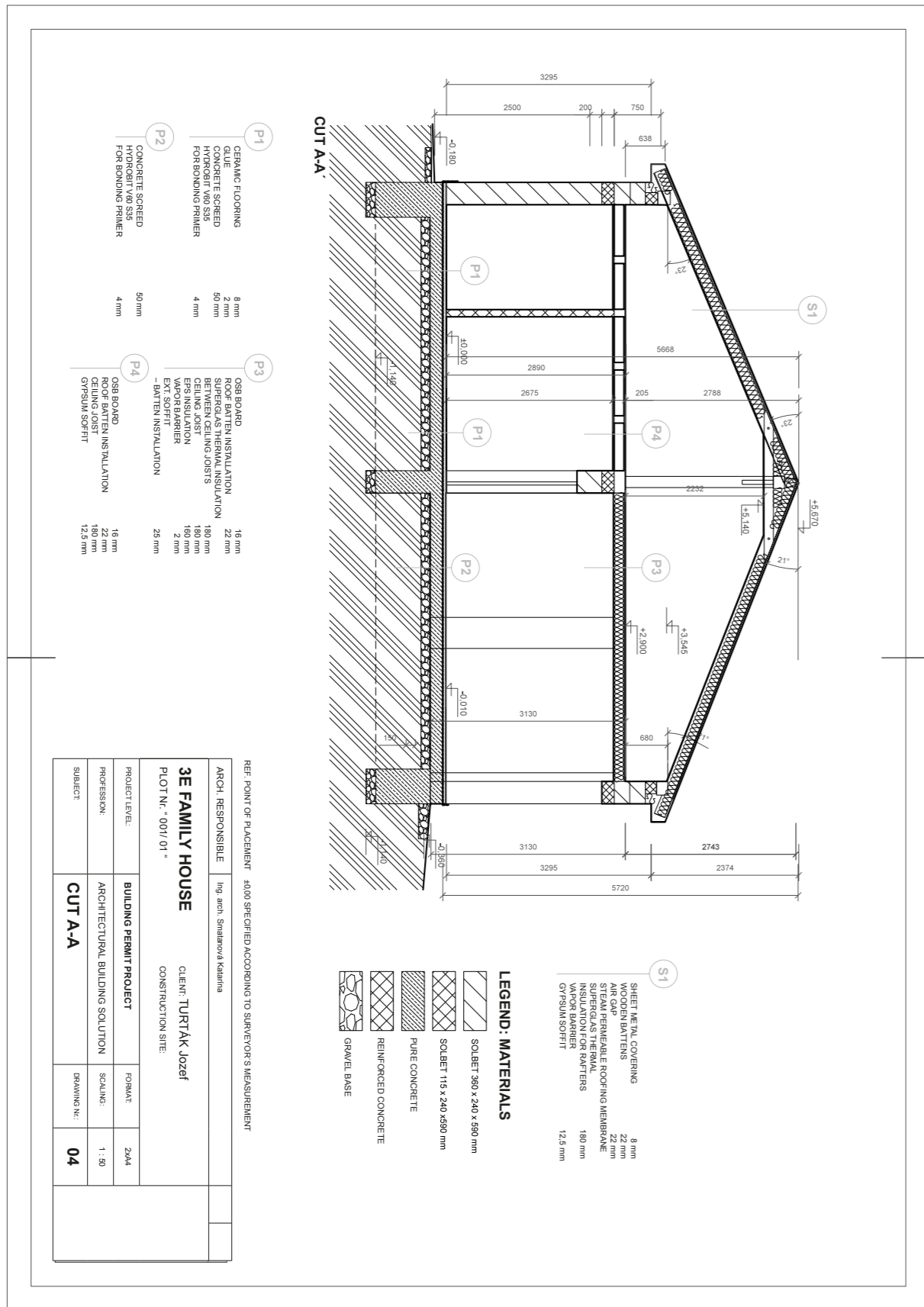
The project documentation must always be suitably adapted to the local features of the land and its surroundings, reflecting the orientation of the cardinal points and the slope of the terrain.



It is also necessary to take into account the individual needs of each client. These usually include changes in the positions and sizes of window openings or entrance doors. In case of the client's better financial prospects, the changes may involve planning a 'finished' house with an enclosed floor plan of 5 x 10 m.

The project documentation can only be edited by a person authorized for designing construction projects. If there are changes in the project during the construction, these should be incorporated into the documentation called **The Change in the Construction before Completion** and reported to the appropriate building office. Alternatively, new documentation of the existing construction may be issued.





## *Annex 2 The Average Budget for One House*

The average budget for a house	
Transport	820
Building materials	6180
Tools	525
Administrative fees	390
Technical and professional work	3145
Household equipment	300
Land purchase	930
<b>TOTAL</b>	<b>12290</b>
Financing of a house	
Client's own savings	400
Bonus	1200
Microloan	6160
Donations from sponsors and donors (infrastructure and construction materials)	<b>4530</b>
<b>TOTAL</b>	<b>12290</b>



### **Annex 3 Media Outlets**

**From Shacks to 3E Homes: Artificial Aggregates from Blast-Furnace Slag Help Municipalities and Protect Environment [SK], Oceľ východu, Issue 2/2014, 22.1.2014:** <http://www.usske.sk/ov/2014/1402008s.htm>

**American Actors Helped Slovak Roma Build Their Houses [SK], 22.7.2013:**  
[http://www.tvnoviny.sk/domace/1687366\\_americki-herci-pomahali-nasim-romom-stavat-domy](http://www.tvnoviny.sk/domace/1687366_americki-herci-pomahali-nasim-romom-stavat-domy)

**In Rankovce, the Roma are Building Their Houses, American Actors Will Also Help [SK], 21.7.2013:**  
<http://www.ta3.com/clanok/1023786/v-rankovciach-si-romovia-stavaju-domy-pomozu-im-aj-americkiherci.html>

**The Construction in Rankovce is Moving Forward [SK], 22.10.2013:**  
<http://www.etp.sk/vystavba-v-rankovciach-napreduje/>

**Ambassador Schmunk Visits Roma Houses in Rankovce [SK], 26.11.2013:**  
[http://www.pressburg.diplo.de/Vertretung/pressburg/sk/AKTUELL/2013/131126\\_\\_Schmunk\\_20in\\_20Rankovce.html](http://www.pressburg.diplo.de/Vertretung/pressburg/sk/AKTUELL/2013/131126__Schmunk_20in_20Rankovce.html)

**Rankovce: Local Roma Helped With House Construction by Young American Artists [SK], 22.7.2013:**  
<http://www.hlavnespravy.sk/rankovce-miestnym-romom-pri-stavbe-domov-pomahaju-mladi-americkiumelci/121172/>

**In Rankovce, American Actors Will Help Local Roma with House Construction [SK], 20.7.2013:**  
<http://www.hlavnespravy.sk/rankovce-miestnym-romom-pomozu-s-vystavbou-domov-americkiherci/120733/>

**American Actors Help Local Roma With House Construction [SK], 22.7.2013:**  
<http://www.teraz.sk/regiony/romovia-stavba-domy-amerika-herci/53154-clanok.html?mostViewedArticlesInSectionTab=0>

**In Rankovce, Local Roma and American Actors Will Join Hands [SK], 21.7.2013:**  
<http://www.webnoviny.sk/slovensko/v-rakovciach-spoja-sily-miestni-romovia/705496-clanok.html>

**Photoreport: How American Actors Build Houses With Our Roma [SK], 23.7.2013:**  
<http://kosice.dnes24.sk/fotoreportaz-takto-americki-herci-s-nasimi-romami-stavaju-domy-158024>

**US Actors Help With House Building [EN], 22.7.2013:**  
<http://www.newweb.rozhlas.sk/radio-international-en/news/US-Actors-Help-With-House-Building?l=2&i=66217&p=1>

**American Actors Will Help Improve the Settlement: They Will Build Houses for the Roma [SK], 20.7.2013:**  
<http://www.topky.sk/cl/10/1356026/Americki-herci-pomozu-pri-zveladovani-osady--Romom-budustavat-domy>

**Message from Clever Roma to People Living in Settlements: Where There Is a Will, There Is Also a Way [SK], 19.4.2014:**  
[http://www.tvnoviny.sk/domace/1752932\\_sikovni-romovia-odkazuju-romom-z-osad-ked-sa-chce-taksa-to-da](http://www.tvnoviny.sk/domace/1752932_sikovni-romovia-odkazuju-romom-z-osad-ked-sa-chce-taksa-to-da)

**Workshop on Social Housing at the National Council of the Slovak Republic in Bratislava [SK], 26.6.2013:**  
[http://www.youtube.com/watch?v=z\\_2HBHs7YEk](http://www.youtube.com/watch?v=z_2HBHs7YEk)

**Discussion: Workshop on Social Housing at the National Council of the Slovak Republic in Bratislava [SK], 26.6.2013:**  
[http://www.youtube.com/watch?v=fLBkZ\\_H5b5w](http://www.youtube.com/watch?v=fLBkZ_H5b5w)

**World Trends in Social Housing and Possibilities of Their Implementation in Slovakia, National Council of the Slovak Republic in Bratislava [SK]:**  
<http://www.youtube.com/watch?v=SJH5lwPpYQg>

**Conclusion: Workshop on Social Housing at the National Council of the Slovak Republic in Bratislava [SK], 26.6.2013:**  
<http://www.youtube.com/watch?v=FcwMNZ1VrUw>