

COMPETITION PROPOSAL FOR THE NEW BUILDING OF THE KARIN DOM FOUNDATION

EXPLANATORY NOTE - 1/2 PROJECT SPECIFICS

THE ARCHITECTURE OF THE NEW HOME FOR THE KARIN DOM FOUNDATION CHALLENGES THE CONVENTIONAL LAYOUT OF A THERAPY CENTER INTRODUCING A VILLAGE-LIKE STRUCTURE, SCALED DOWN TO SEVERAL BUILDING VOLUMES. THE NEW STRUCTURE ENHANCES ORIENTATION AND SECURITY THROUGH IT'S INTERNAL ORGANIZATION AND ALSO BRINGS IN GENEROUSLY NATURE AND DAYLIGHT INTO THE THERAPY AREAS THROUGH A TRANSLUCENT FACADE REDUCING IN THE SAME TIME OUTER STIMULI. THE LAYOUT GIVES THE POSSIBILITY TO SAVE AS MANY TREES AS POSSIBLE FROM THE EXISTING PARK. THE STRUCTURAL CONCEPT BRINGS IN FLEXIBILITY FOR FUTURE ADAPTATIONS AND THE MATERIAL USE IS CAREFULLY ADAPTED FOR COST-EFFECTIVE SOLUTIONS THAT BRING ALSO A HOME-LIKE FEELING INTO THE THERAPY AREAS, FULFILLING HYGENE AND TECHNICAL REQUIREMENTS IN THE SAME TIME. THE HEATING/COOLING AND VENTILATION SYSTEMS ARE DESIGNED TO REDUCE OPERATIONAL COSTS AND CREATE A TRULY SUSTAINABLE BUILDING WITH A MINIMAL CO2 FOOTPRINT. THE BUILDING ENVELOPE FURTHER SUPPORTS THE CONCEPT FOR A SUSTAINABLE ARCHITECTURE. THE MATERIALS AND FACADE SYSTEMS CHOSEN NOT ONLY BRING COST-EFFECTIVE SOLUTIONS BUT ARE ALSO TAILORED TO ENHANCE THE FUNCTIONS INSIDE.

KEY PROJECT ASPECTS:

FUNCTIONALITY & ACCESSABILITY:

ALL THE THERAPY AREAS ARE ORGANIZED IN JUST 2 LEVELS CONNECTED THROUGH A LIFT AND A RAMP, RESPECTING THE FUNCTIONAL PROGRAM AND DIAGRAM. ALL THE DIFFERENT FUNCTIONAL ZONES HAVE SEPARATE ENTRANCES THROUGH THE RECEPTION. INDEPENDENT ENTRANCES FROM THE OUTSIDE ARE PROVIDED FOR THE MONTESORY CENTER (D), THE MEDICAL CENTER (I) AND FOR THE TRAINING CENTER (J).

ALL THE SPACES ARE DESIGNED TO BE ACCESSIBLE FOR PEOPLE WITH SPECIAL NEEDS.

STRUCTURAL CONCEPT:

STEEL FRAMEWORK WITH KLH - WOODEN PANELS (CROSS LAMINATED TIMBER BOARDS) FOR THE FLOOR CONSTRUCTION AND STRUCTURAL INSULATED PANELS FOR THE FACADES.

FLEXIBILITY:

THE CHOSEN STRUCTURAL CONCEPT ALLOWS FOR FUTURE ADAPTATIONS AS THE INTERIOR IS ALMOST COMPLETELY COLUMN-FREE.

BUILDING ENVELOPE:

STRUCTURAL INSULATED PANELS WITH VENTILATED GALVANIZED METAL SHEET CLADDING (U-VALUE: 0,15 W/m²K, SI - 62dB) AND A TRANSLUCENT UV-PROTECTED POLYCARBONATE FACADE FLOODING THE INTERIOR SPACES WITH DAYLIGHT BUT IN THE SAME TIME REDUCING THE OUTER STIMULI & VISUAL OVERLOAD. (U-VALUE - 0,39 W/m²K, SI - 43dB).

THE OPENINGS IN THE FACADES ARE ENVISIONED WITH ALUMINIUM WINDOW ELEMENTS (U-VALUE OF APPROX. 0, 82 W/m²K AND SI - 38dB/48dB)

HVAC BUILDING SYSTEMS:

A HEATPUMP SYSTEM COMBINED WITH FLOOR HEATING/COOLING TOGETHER WITH CONVECTORS TO BALANCE THE HUMIDITY AND SUPPORT THE SYSTEM GREATLY REDUCES THE OPERATIONAL COSTS AND THE CARBON FOOTPRINT OF THE BUILDING. THE MECHANICAL VENTILATION WITH A HEAT RECOVERY SYSTEM FOR CHOSEN AREAS FURTHER IMPROVES THE CLIMATE OF THE INTERIOR SPACES. ALL THERAPY & STAFF AREAS HAVE ALSO NATURAL VENTILATION.

SUSTAINABILITY:

- RENEWABLE ENERGY SOURCES - PHOTOVOLTAIC PANELS ON THE ROOF AND A RWH (RAIN WATER HARVESTING SYSTEM) FOR WATERING THE LANDSCAPE.
- ALMOST ALL BUILDING COMPONENTS ARE RECYCABLE (APART FROM THE UNDERGROUND LEVEL).
- THE CONSTRUCTION METHOD WITH A STEEL FRAMEWORK AND STRUCTURAL INSULATED PANELS PROVIDES GREAT THERMAL INSULATION, REDUCES BUILDING TIMES AND CONSTRUCTION-SITE WASTE.
- THE HVAC SYSTEMS, SUSTAINABLE IN NATURE NOT ONLY REDUCE THE OPERATIONAL COSTS AND THE CARBON FOOTPRINT BUT ALSO GREATLY IMPROVE THE CLIMATE IN THE INTERIOR SPACES.

FEASIBILITY:

THE PREFABRICATION OF THE BUILDING ELEMENTS SAVES ON TRADES, LABOUR AND CONSTRUCTION TIME, THUS PROVIDING A COST-EFFECTIVE SOLUTION FOR THE NEW BUILDING.

SOCIAL ASPECTS:

THE KARIN DOM FOUNDATION AND ITS MISSION MAKE FOR A GREAT SOCIAL IMPACT ALONE. APART FROM THAT WE ENVISION ALSO THE INCLUSION OF NOT ONLY THE CHILDREN AND STAFF ACTIVELY INTO TO THE PLANNING PROCESS, BUT ALSO COLABORATING WITH, AND ACTIVATING LOCAL STRUCTURES LIKE NEARBY SCHOOLS OR UNIVERSITIES TO FURTHER PROMOTE THE FOUNDATION'S MISSION.

SECURITY & EVACUATION EXITS:

THE BUILDING IS SEPARATED INTO 2 FIRE-COMPARTMENT ZONES WHERE ALL THERAPY AREAS HAVE 2 EVACUATION EXITS - ONE DIRECT EXIT OUT OF THE BUILDING AND A SECOND ONE INTO A SEPARATE FIRE-COMPARTMENT ZONE. THE BUILDING WOULD BE EQUIPPED WITH A SECURITY AND FIRE ALARM SYSTEMS ACCORDING TO LOCAL REGULATIONS. THE OUTDOOR / PLAY AREAS WOULD BE ENCLOSED WITH TRANSPARENT NON-CLIMABLE FENCES.

INTERIOR DESIGN:

THE INTERIORS AIM AT CREATING A CALM ATMOSPHERE WITH A LOT OF DAYLIGHT. THE WOODEN CEILINGS FROM THE KLH PANELS BRINGS WARMNESS AND A HOME-LIKE FEELING, WHILE THE SUBTLE COLOR-PALETTE OF THE VINYL FLOORS SUPPORTS THE CONCEPT AND HELP ORIENTATION. THE INTRODUCTION OF MULTIFUNCTIONAL FURNITURE ELEMENTS

TAILORED TO SUPPORT THE FUNCTIONAL UNITS IN THE INTERIOR PROVIDE NOT ONLY FUNCTIONALITY AND FLEXIBILITY BUT ALSO FOLLOW THE OVERALL DESIGN IDEA AND ARCHITECTURE.

EXPLANATORY NOTE - 2/2 BUDGET

WE BELIEVE THE COMPETITION PROPOSAL CAN BRING A LOT FOR THE NEW HOME OF THE KARIN DOM FOUNDATION AND THAT THROUGH COLLABORATION AND COLLECTIVE EFFORT WE ARE GOING TO BE ABLE TO ACHIEVE A BUILDING WE ARE ALL PROUD OF, BUT MOST IMPORTANTLY – THE CHILDREN OF KARIN DOM WOULD IDENTIFY WITH IT, INTERACT WITH IT, GROW AND FEEL SAFE IN IT.

AS ARCHITECTS WITH EXPERIENCE WITH SUCH PROJECTS, WE KNOW THAT ONE OF THE BIGGEST CHALLENGES WILL BE STAYING ON BUDGET, BUT WE BELIEVE THAT THE ENVISIONED € 1 452 000 WILL COVER THE DESIGN PROPOSAL INCLUDING ALSO A RESERVE OF APPROX. 3,5 % AND ALMOST A 0,5% FOR ART INSTALLATIONS FROM THE BUDGET FRAME. THE PROPOSED CONSTRUCTION METHOD WITH PREDOMINANTLY PREFABRICATED ELEMENTS SUGGESTS AN ELABORATE PLANNING PROCESS, BUT CAN HAVE QUITE AN IMPACT ON THE BUDGET, GIVING THE POSSIBILITY TO INVEST RESOURCES INTO THE INTERIOR OR INTO THE BUILDING SYSTEMS FOR EXAMPLE.

PREFABRICATION OF ELEMENTS:

SOME OF THE BUILDING ELEMENTS LIKE THE POLYCARBONATE FAÇADE, THE KLH FLOOR PANELS (CROSS LAMINATED TIMBER BOARDS) AND THE STRUCTURAL INSULATED FAÇADE PANELS FOR EXAMPLE SAVE ON TRADES, LABOR AND CONSTRUCTION TIME, AND ALSO ON CONSTRUCTION SITE WASTE. THE TRANSLUCENT POLYCARBONATE FAÇADE DOES NOT ONLY FLOOD THE INTERIORS WITH DAYLIGHT, PROTECTING IN THE SAME TIME FROM VISUAL OVERLOAD. IT HAS ALSO GREAT INSULATION PROPERTIES AND IS MOUNTED FAST PROVIDING A FINISHED WALL BOTH ON THE OUTSIDE AND INSIDE. IN THIS RESPECT IT REDUCES BUILDING TIMES AND TRADES IMMENSELY, THEREFORE IT REDUCES ALSO THE COSTS. THE CROSS LAMINATED TIMBER BOARDS FOR THE FLOOR CONSTRUCTION (KLH) ARE A GREAT FLOOR SYSTEM THAT IS NOT ONLY ASSEMBLED FAST ON THE CONSTRUCTION SITE – IF LEFT EXPOSED ON THE CEILING (WHERE POSSIBLE) IT PROVIDES A NICE WOODEN FINISH ON FOR NO EXTRA COST. IN THIS RESPECT WE USE AN EXPOSED STRUCTURAL ELEMENT TO BECOME AN INTEGRAL PART OF OUR INTERIOR CONCEPT, BRINGING A SAFE AND A HOME-LIKE WARM FEELING.

THE BUILDING SYSTEMS:

ALTHOUGH THE PROPOSED HVAC BUILDING SYSTEM IS NOT REALLY THE CHEAPEST ONE, IT WILL GREATLY REDUCE THE OPERATIONAL COSTS AND BRING COMFORT. THESE TYPES OF SYSTEMS NEED FAR LESS AREA FOR THE TECHNICAL ROOMS, THEREFORE PROVIDING A COMPACT COST-EFFECTIVE SOLUTION. THE GREAT SYNERGY BETWEEN A HEAT

PUMP AND A FLOOR HEATING/COOLING WITH CONVECTORS TO SUPPORT AND ALSO REGULATE HUMIDITY HAS DRIVEN MANY PROJECTS TOWARDS THIS TYPE OF SYSTEMS AND COMPANIES LIKE DAIKIN OR CIAT ARE MAKING THEM NOWADAYS AFFORDABLE EVEN FOR SMALL-SCALE PROJECTS LIKE SINGLE-FAMILY HOMES.

THE PHOTOVOLTAICS ON THE ROOF COMPLEMENT AND ENHANCE THE EFFECTIVENESS OF THE CHOSEN SYSTEM, ALTHOUGH THE SCALE OF THE INSTALLATION IS YET TO BE DEFINED AT A LATER STAGE.

KEEPING THE BUDGET ON A TIGHT LEASH:

THE INITIAL COST-ESTIMATE FROM THE IDEA PROJECT IS THAN UPDATED WITH THE PHASE OF THE MUNICIPALITY-COORDINATED AND APPROVED PLANS. AFTER THAT INSTEAD OF BEGINNING WITH THE WORKING PLANS OUR PRACTICE IS TO CREATE AND EVALUATE THE MAIN DETAILS AND SPECIFICATIONS AS THIS PHASE GIVES US THE FLEXIBILITY TO ADJUST TO THE BUDGET. THIS PHASE IS THE BASIS FOR THE TENDER DOCUMENTATION. THE PROJECT MANAGEMENT MONITORS COSTS ALSO DURING THE WORKING, TECHNICAL AND BUILDING PHASES OF THE PROJECT.