



Projects library of the specialized group for construction

SCHOOLS

Project Postconflict School Reconstruction
Project name Kilali – R.T.C.M School, Palai, Killinochchi

Country	Sri Lanka
Town/Region	District Killinochchi, DS Division Palai, Kilali
Project type	New school structure, 1 new toilet block, repair of existing toilet block, new well/water tank, new waste management hut, new security hut, new cycle shed
Typology	6 classrooms, library, computer room, science lab for primary / secondary school, grade 1-11 in new 2-storey building
Approach	Private sector contracted construction
Beneficiaries	Affected people in response to the conflict (IDP's, Refugees, Returnees)
Climate	Tropical, hot and humid
Special constraint	-
Start / End of project	2013/ 2014
Country GNP	2'004 USD/cap (2013)
Pictures	SDC Jaffna/Maps UN OCHA



Partners	
Organization (Donor)	SDC-HA
IO/NGO partners	-
Government partners	PTF Presidential Task Force Ministry of Education Provincial Education Director Zonal Education Director School Works Branch (SWB), Kilinochchi

Context to project	
Initial situation	<p>Just after the Indian Peace keeping force left the Island, the fighting between the Srilankan Army & LTTE restarted during the early part of 1990. Consequently the 1st displacement had been taken place while LTTE made an offensive operation against the Elephant Army camp during July 1991. Before displacement, about 500 children were attending the school.</p> <p>The people around the "buffer zone" (hard-fought border between LTTE and Sri Lankan Army) got displaced after 1993 and started returning after 2011. The resettlement is still ongoing and slow because of the immense mine field in this area, which is only partly cleared.</p> <p>The school was abandoned for approximately 20 years and reopened in 2011. Shortly after the reopening one new permanent school building was constructed by the government. The balance needs got covered with the construction of a temporary school building. In 2013 SDC started the reconstruction of the additional 2-storey Building to provide permanent learning environment to all children. Presently around 120 students are attending the school, but with the ongoing resettlement the number will increase every year.</p>
Goals, Beneficiaries	<p>The aim was to facilitate the resettlement and also to restore adequate school condition to the resettling student population. The rehabilitation of the school was done in close collaboration with the relevant Government Authorities.</p> <p>Through the reconstruction of Kilali school, the principle expects around 400 students to benefit once resettlement process is completed.</p>



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Implementations	SDC-HA pledged to reconstruct on behalf of the request of the School Development Society, the principal of the School and the teachers. The request was supported by the Government Agent, the additional Director of Education and the School Works Branch Office Kilinochchi.
Results by September 2014	120 students are currently attending the school & 10 teachers are employed at the school.

Reference data new buildings

Kilali Roman Catholic Tamil Mixed School			
GPS data	Latitude 9;37;54.80	Longitude 80;18;04.15	
Land plot	3'865m ²		
Total No of class rooms	8 + 1 Library	Number of units	9
Beneficiary /classroom	14	Total beneficiaries	120 students
Sanitary facilities	1 toilet for teachers. 1 toilet for disabled persons 9 toilets for students (4 for boys, 5 for girls) 9 urinals (boys), 1 store room	Other infrastructure	Hall (24.0m X 6.0m) Library Computer room Science Laboratory Water Tank and well Cycle park Security Hut Waste management hut
Ground floor (covered area)	370m ²	Floor levels	1 & 2
Total surface Building	676m ²	Surface / beneficiary	5.6 m ² / beneficiary
Total surface Ramp/Pathways	115m ² / 113m ²	Volume / beneficiary	17 m ³ / beneficiary
Volume (outside dim.)	2043m ³	Electrification	Yes
Cost per classroom (1 CHF=135 LKR)	16'209	Total cost / Student (1 CHF=135 LKR)	1'216
Total cost (1 CHF=135 LKR)	145'879		



Approach to results	
Project concept	<p>In agreement with the Ministry of Education, the School Works Branch (SWB), the village authorities and the principal, SDC decided to rebuild the Kilali School (approx. 120 students) and therewith establish a decisive return factor for the former residents of the area.</p> <p>A new 2-storey school structure was constructed, including assembly hall, science lab, library and computer room.</p> <p>A new security hut incl. store room was constructed.</p> <p>Waste management was introduced in the schools and therefore a waste collection point was built. The goal is to teach the children how to separate waste, collect waste and do composting.</p> <p>Construction of a new well and water tank.</p> <p>The existing toilet block will be used in future for boys only. For the girls a new toilet block was constructed, including a teachers toilet and a toilet for persons with special needs.</p> <p>The newly constructed cycle shed will also be used as a stage area for school events.</p> <p>A new kitchen and dining area was constructed.</p> <p>All pathways have been newly constructed.</p> <p>Programme manager, engineer, technical officer attached to SDC and the school works branch technical division managed to complete the above described tasks.</p> <p>A maintenance manual was prepared by SDC & handed over to the principal & teachers to organize & to carryout regular maintenance along with support of the parents and school work society.</p>
Project procedure	<p>Based on bills of quantities and through public bidding procedures, the lump sum contract was given to the private sector construction contractor. Through a set of specific criteria in terms of price, quality and performance, capable contractor has been identified and the contract awarded. Contract documents were derived and adapted from international FIDIC standards.</p> <p>Due to the fact that the rainy season 2013/2014 was delayed and didn't bring enough water, the construction process was not delayed due to weather conditions. The construction period started in September 2013 and finished in August 2014. Site supervision was carried out directly by the technical officer employed by SDC & with the support of the School works branch engineer & technical officer, project engineer and project manager of SDC. The finishing standards are of good quality.</p> <p>Legal handing over certificates and maintenance plans were provided upon project completion.</p>
Structural concept and finishing design	<p>RCC frame with pad foundation / confined masonry on strip foundation for walls; roof with steel trusses, timber frame work and tiles; floor finish in cement rendering; walls cement block masonry & plaster, internal & external walls emulsion/enamel paint, doors, windows applied with vanish; ramp for wheelchair access</p> <p>16 students/classroom, black board on one wall, toilet walls & floors with glazed tile, plumbing pipes installed inside walls, 3-phase electrification, elevated water tank of pad footing, columns, all of reinforced G25 concrete.</p>
Issues/Constraints	<p>Additional works and changes in standards at a late stage (waste collection hut, path ways, plumbing, electricity, slab work) as a consequence of lessons learnt lengthened the construction duration period by 2 months.</p>
Lessons learned	<p>Assembly hall: Slab height should be raised by 45cm.</p> <p>Plumbing: Use of better quality plumbing material, maintenance valves and inside wall installation add to a more sustainable plumbing system (if the water quality allows it).</p> <p>Aluminium sliding windows are available now and allow more daylight in the classrooms.</p> <p>Glass tiles in toilets allow more light in toilet rooms. It improves the security in the toilets and makes dirt visible.</p>



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Legal framework

Political attachment	Through the bilateral agreement between SDC and the Government of Sri Lanka followed by an MoU between SDC-HA and PTF
Type of ownership	District Education Department on behalf of Ministry of Education Northern Province

Relevant building construction costs (excl. planning, design and supervision)

Construction / Renovation	In LKR	In CHF
Renovation of Main 2 story Building (27m x 7.5m)	14'470'884	107'192
Renovation of existing Toilet Block / Construction of Toilet Block incl. Septic Tank	1'591'479	11'789
Construction of Water tank incl. all plumbing	1'242'392	9'203
Construction of Well	310'149	2'297
Construction of Waste Collection Hut	211'352	1'566
Construction of Security Hut	755'264	5'595
Construction of Cycle Shed (45m x 2.4m)	371'770	2'754
Ramps/Pathways/Rainwater Harvesting	621'848	4'606
Renovation of existing School Building	118'480	879
(1 CHF=135 LKR)		
Total	19'693'618	145'880

Urban planning

Kilali Roman Catholic Tamil Mixed School	
Distance to main area -- Palai	7.0 km
Public transport	Regular public transport available at A9 road (2 km away)

For further information

Involved SDC-HA construction group consultants	Martin Studer / Debora Bühlmann / Lea Moser Haug
Other involved SDC-HA consultants	Rajkumar Kumararajaratnam
Author / Contact:	Rajkumar Kumararajaratnam, rajkumar.kumararajaratnam@sdc.net
Recommended Institutions:	N / A
Recommended partners:	N / A
Recommended books/reports:	Further information (drawings, contract, etc.) on construction group website or email above available
Relevant other projects (links):	Project Document of the Cash for School Program, Sri Lanka, containing the reconstruction of Schools. Website: www.cfhsrilanka.com



Relevant illustrations



1L	New Main Building
2R	New Main Building with Water point



1L	New Main Building
2R	New Main Building, Hall



1L	New Main Building Corridor 1 st Floor
2M	New Main Building Corridor Ground Floor
3R	Stair



1L	New Toilet Block
2R	New and renovated Toilet Block (renovated Block on the left) and new Footpath



1L	New Toilet Block inside
2M	Plumbing new Toilet, Taps with Tin Covers
3R	Water Point



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1L	Construction of new Cycle Shed
2R	Construction of new Hut for Security Guard and Gate



1L	Garbage bins
2R	New Waste Collection Point

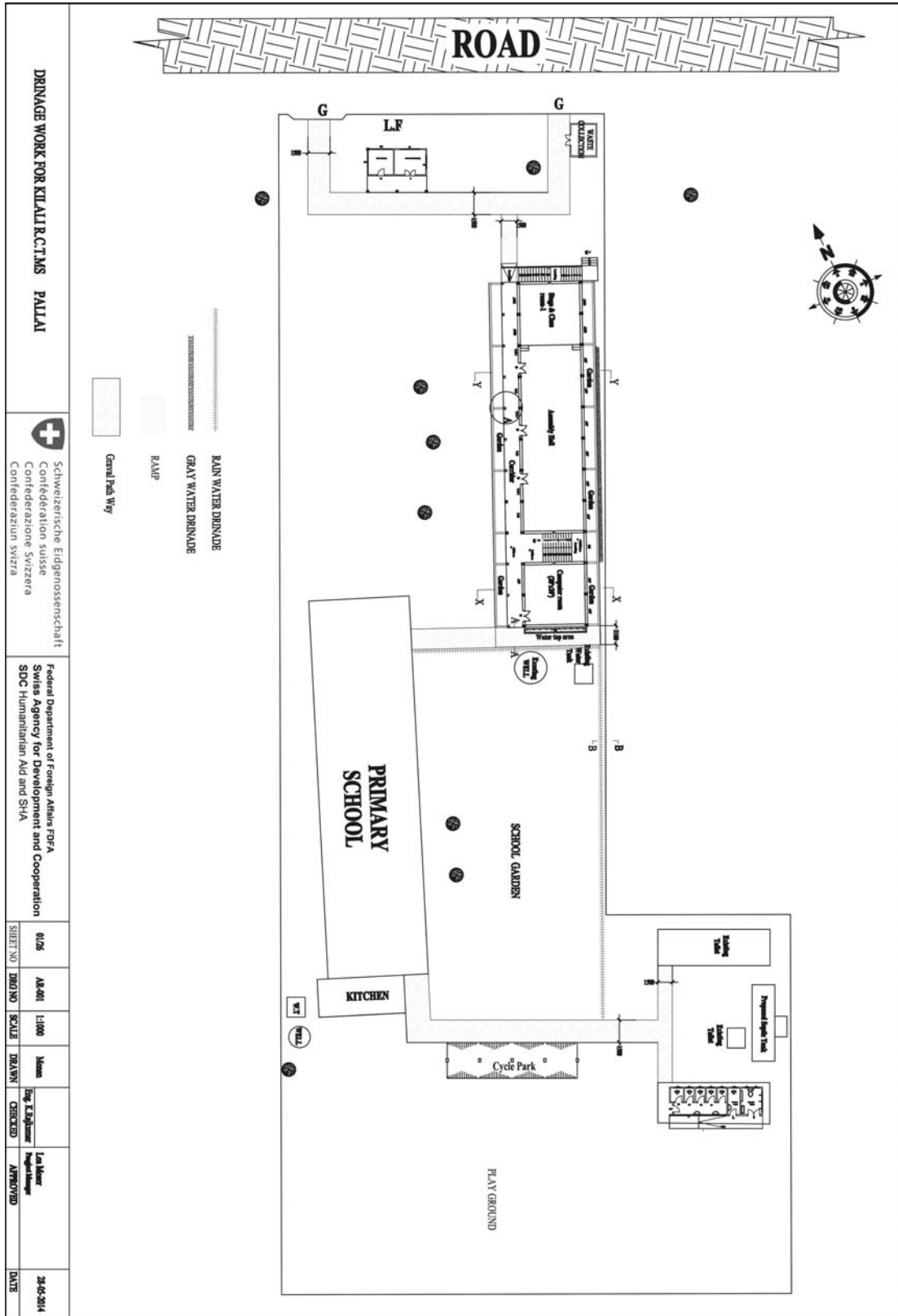


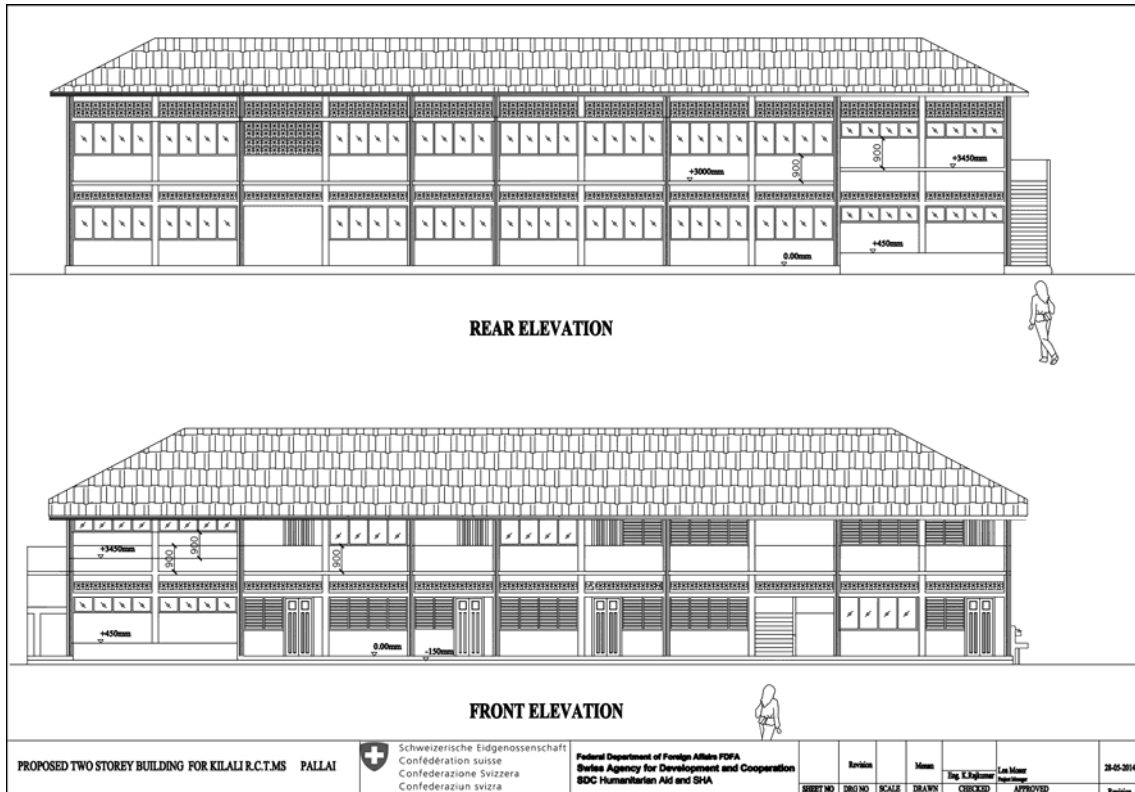
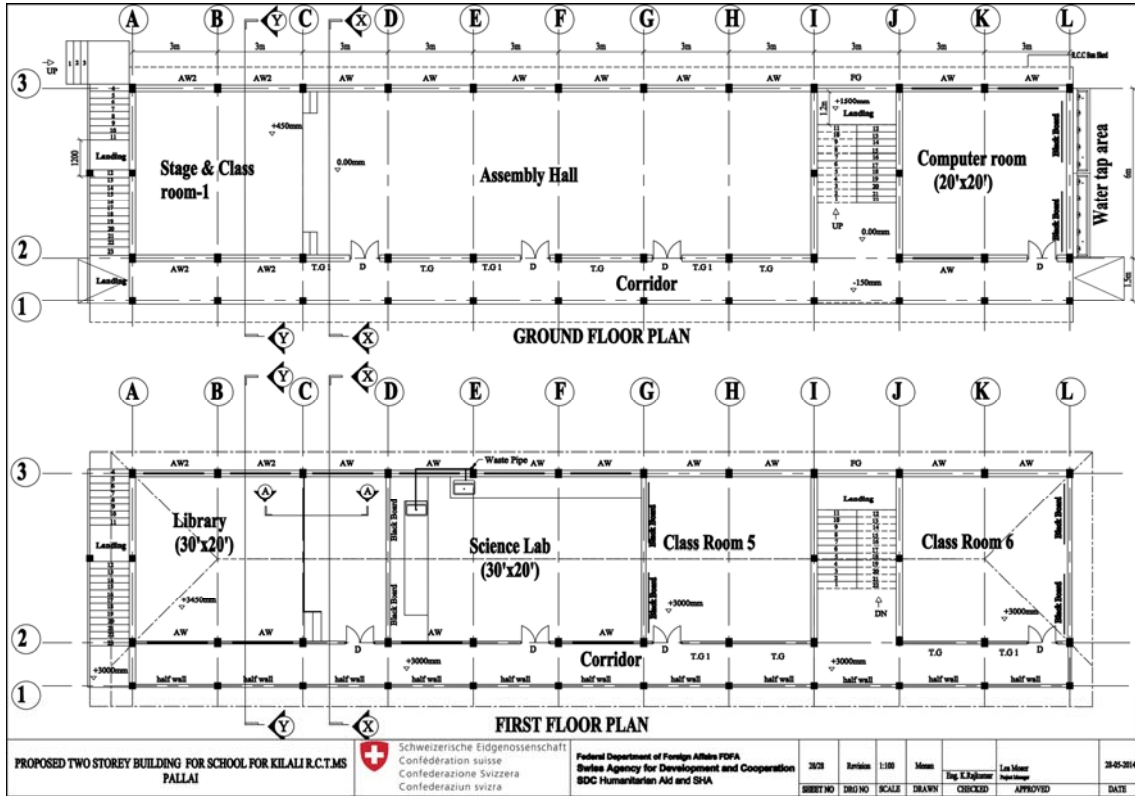
1L	Construction of new Watertank and Well
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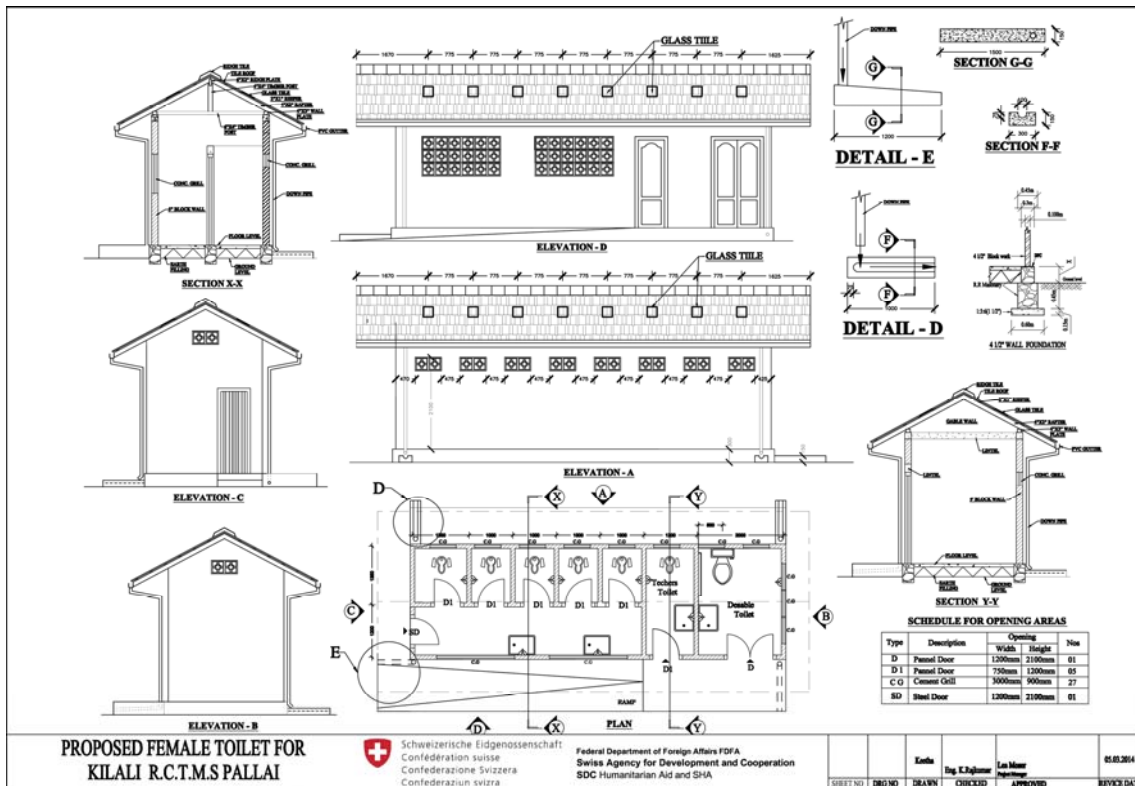
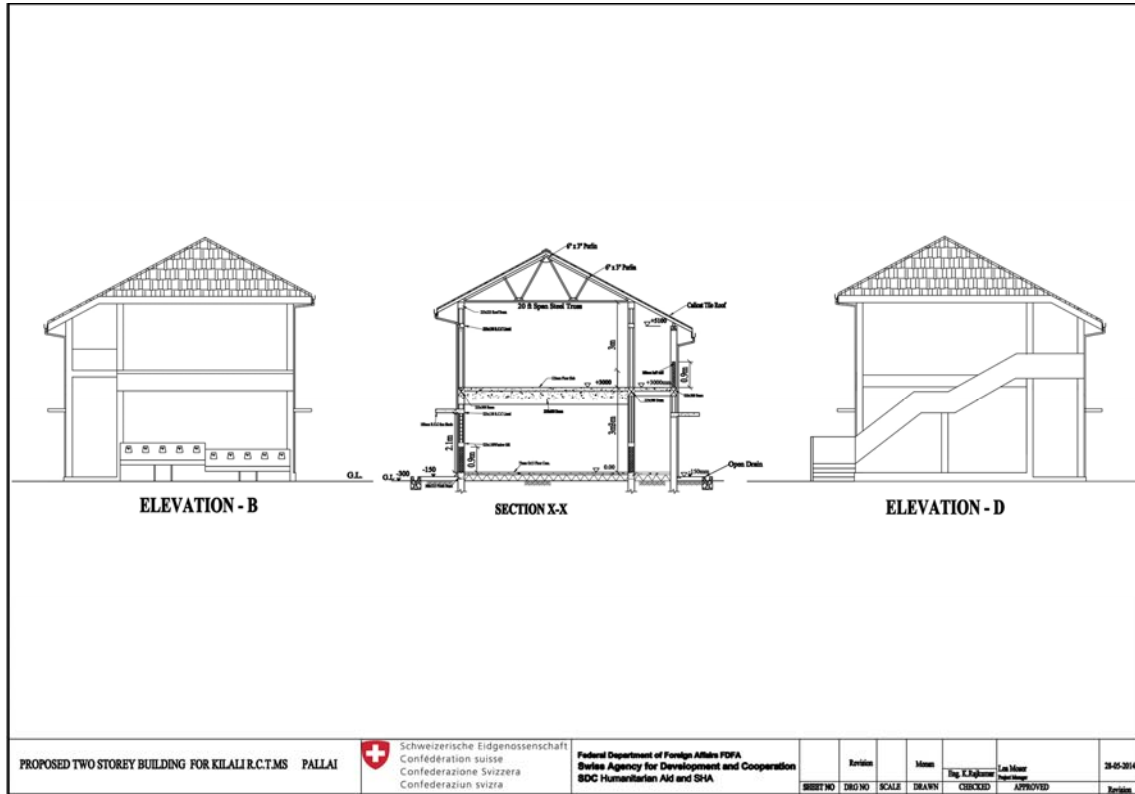


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Relevant Drawings (without scale)









ELEVATION - C

ELEVATION - A

ELEVATION - D

ELEVATION - B

FOUNDATION DETAILS

4" Thick Block wall

SCHEDULE FOR OPENING AREAS

Type	Description	Opening		Position above	Nos
		Width	Height		
D	Pannel Door	1050mm	2100mm	00mm	01
D 1	Pannel Door	750mm	1200mm	00mm	01
W	Pannel Window	1800mm	1200mm	900mm	01
W 1	Pannel Window	1200mm	1200mm	900mm	01
T.G	Timber Grill	2175mm	1200mm	900mm	02

PLAN

SECTION X X

SECURITY HUT FOR KILALI R.C.T.MS PALLAI

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Federal Department of Foreign Affairs FDFA
Swiss Agency for Development and Cooperation
SDC Humanitarian Aid and SHA

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