

# Rehabilitation of Twenty-Seven (27) Public Schools in Lebanon

LRPS 2022-9174996

Q&A

**BIDDERS QUESTIONS - Technical related**  
**All Schools Related Technical Questions:**

1. Low current risers' layout is missing, please provide.

Schematic Riser Diagram, where needed, to be submitted by the Contractor

2. Telephone System

a. Required type of cable for Telephone system in the BOQ is cat3, on drawings cat6 and specifications mentions Cat5, would you please specify which type shall we consider?

b. Kindly advise if the telephone outlet shall be RJ11 or RG45

Apply BOQ (Cat3 + RJ11) Item 9.1

3. Required type of cable for Data system in the BOQ and drawings is Cat6, while in the specifications it is Cat6a, would you please specify which type should we consider?

Apply Cat6 in the BOQ item 10.5

4. CCTV, heating, fire alarm systems

a. Concerning CCTV system, kindly specify the type of cables.

b. Also, for the new CCTV, heating, and fire alarm systems, are these proposed to be exposed industrial type?

a. Cables for CCTV system to be coaxial Cables RG 59

b. Yes, exposed industrial type

5. Please confirm that no BMS system is required, since it is mentioned in the specifications but not available in the BOQ.

No B.M.S. is required

6. Schedule of doors, windows, and protection (aluminum, steel, and wood)

a. kindly send us the detailed schedule of doors, windows, and protection (aluminum, steel, and wood)

b. You are kindly asked to provide us with Door Schedule and Aluminum openings schedule showing the dimensions since the drawings are pdf and we have only one elevation for each project therefore we won't be able to know the exact dimensions of the openings

c. Window schedules are not shown on drawings. Could you please make it available in order to price this item.

d. Steel gates and windows are not shown on drawings. Could you please make it available in order to price this item.

e. Can you please provide the openings schedule (including dimensions)?

f. BOQ – Part 1, Aluminum Doors & Windows, section 8.2

Regarding pages 158 – 160, 166, 167, 169, & 173, the dimensions for the works on the windows and doors are not specified?

Refer to drawings for details

In rehabilitation work, these are mostly existing and need replacement or rehabilitation. So, no schedule can be done. Actual size dimension to be taken on site.

7. BOQ – Part 1, section 3.1.4.1.1, p.38

It is stated that a 120 m2 fair-faced concrete finish is expected but the specifications in terms of direction (vertical or horizontal finishing) and the thickness are not stated?

This is mainly to fix the cost of fairfaced concrete and to be applied where executed as on drawings.

8. BOQ – Part 1, Metal Works, section 5.1

Regarding pages 70, 80 & 81, the dimensions of the steel protections are not specified.

Regarding pages 85, the dimensions of the steel cover are not specified?

The steel protection dimension is per site dimension, refer to question 6 above.

#### 9. Tiling Works

##### a. BOQ – Part 1, Tiling Works, section 9.2

Regarding section 9.2.9.3 on page 196, is the polishing and rubbing of the new mosaic with an area of 2223 m<sup>2</sup> included among the required polishing and rubbing of the 6420 m<sup>2</sup> of old mosaic?

##### b. Tile size is not shown on drawings. Please specify size to be used in the schools.

##### c. For the tiling works, it is not clear where are you proposing the new tiles because in the BoQ the tiling qty of any school is roughly split half rehabilitation and half new one

a. The qty of 6420 m<sup>2</sup> is for old mosaic tiles and it doesn't include the new 2223 m<sup>2</sup> qty

b. Similar to existing or use 30 × 30 cm dimension

c. All is stated in the scope of works for each school (refer to architectural drawings)

#### 10. Due to the discrepancy between the English and Arabic description in part 1 item #7.1 (roof waterproof), kindly clarify if the screed is lightweight concrete or sand cement layer.

Moreover, if there are any other discrepancies between the English and Arabic descriptions, what description we must follow?

Light weight concrete to be used for screed.

#### 11. Solar System

##### a. Also, concerning Part 4, in all BOQs, item 13 – Electrical works (Solar System), in the BOQ (it is On Grid) while in the drawings (it is Off Grid), please clarify.

##### b. Solar Inverter type: Specifications and BOQ ask for a hybrid inverter, whereas drawings ask for on-grid and off-grid inverters, kindly clarify.

##### c. There are some discrepancies between specifications, drawings plans, drawings tables and line diagrams concerning the quantities of the solar panels especially for the following schools:

- Ghazir (Group 01)
- Omar Zeaini + Mohamad Shamel (Group 01)
- Al Hermel (Group 02)
- Rashaya (Group 03)

##### d. Concerning the Groups 01/02/03 schools, as per the BOQ, only the Hammana school needs batteries, however in the drawings it is shown that many others schools shall include batteries (contradiction with the BOQ), please clarify.

a. All solar systems are without batteries for this stage except for Hammana school.

b. Follow BOQ in all cases, Contractor should provide hybrid inverter.

c. Solar systems in these schools are listed in the BOQ under optional items – part 4. The BOQ states lump sum quantity for solar system (item 13 - optional items) which includes all components. Bidder to follow drawings for Qty of PV panels, and to follow BOQ for system components.

d. Batteries will be installed in Hammana school only as clearly mentioned in the BOQ.

#### 12. Please clarify the difference between the epoxy resin and the resin layer indicated in the BOQ.

Epoxy resin is paint, while resin layer for drinking basing

#### 13. Recycling Containers and Flagpole

##### a. Please provide us with size/volume for the recycling containers.

##### b. With reference to BOQ - Part 1 - Civil, Structural and Architectural and Part 4 - Optional Items, item 2.7.2 (Recycling Containers) and item 2.11 (Flagpole). Kindly note that the related drawings to these mentioned items GA186, GA187 and GA188 are not available.

a. It is available in the Market with volume Approx. 1 m3 b. Refer to attached drawings (GA186, GA187, GA188)
14. In many schools (e.g. Maghdoushe) the location of the existing bathrooms is changed, in that case how are you proposing to lay the electrical and mechanical works? exposed/suspended?
Provide hidden installation where applicable (based on roof / walls type and conditions)
15. New downspouts from the roof shall be exposed on the external facades?
Contractor shall refer to the tender drawing showing rainwater roof drains & raiser locations.
16. Do we have to hand over all the removed installations (like brick roofs, aluminum windows, wooden doors ...) if yes, to whom?
Yes, to the school principal
17. item 8.2: do you require natural stone reveals for all schools or just the ones clad from exterior by natural stone?
Reveals to openings (Sills, Jambs and Lintels) to be installed in all schools where new aluminum panels is requested
18. We attended the site visit dated 30 May 2022, but we couldn't check the Electromechanical items that need to be rehabilitated, and we have been told to send our queries by email asking for more details about the following items: *Part 2 mechanical BOQ, item 1.4.1, 8.1.1 *part 3 Electrical BOQ, Items 2.2.1, 2.2.2, 2.2.3 ,2.2.4, 2.2.26, 2.2.27, 2.2.28 ,2.2.29, 11.1, 11.2, 11.3, 11.4 ,11.6, 14.1, 14.2, 14.3 *Part 4 Optional Items BOQ, item 1.4.3, 15.1
Contractor during executing of work should check the existing conditions of MEP items that need rehabilitation works as per BOQ and do all necessary measures to do the required rehabilitation works or add new items as stated in BOQ preambles to ensure a fully operated systems or equipment. Each MEP system / equipment should be checked, tested and submit methodology of rehab / operational for approval.
19. kindly specify the rating level of fire rated doors (Part 1, BOQ Items 8.1.1.7, 8.1.1.8, 8.1.1.9, 8.1.1.10, 8.1.1.11)
Minimum one hour or according to specification.
20. Should the AC Registers be of double or single deflection type?
There is no AC system in the schools. For exhaust air register should be single deflection
21. Should Hot water be supplied for the Lab sinks or only Cold water?
There is only warm water supply for Lab sinks (hot water at 30°C maximum)
<b><u>Schools Specific Technical Questions</u></b>
<b>Rafic El Hariri School – Tikrit:</b>
22. Reference to the above-mentioned Subject, regarding the BOQ for Group 4 (Rafic El Hariri School – Tikrit – Item No. 8.3.2), kindly provide us with more details about the steel rod suspension system.
It is a simple canopy (Spider System) at the entrance of the school. Contractor shall submit shop drawings for consultant approval to fit on the site.
<b>Hammana School:</b>
23. Referring to Hammana school kindly specify the location of the lithium batteries.
24. Group 01- 24 Hammana, please provide us with the doors and windows tags for the ground floor architectural drawings.
• Refer to drawing 24-EO7R1, First Floor – PWR

- Ref to drawings 24- A06

**Ghazir School:**

25. Item 8.2.1.12 is it required to replace upper and lower window and please to specify if upper window fixed or sliding.

26. Item 8.2.1.15 . Is the new aluminum sliding or fixed.

- Yes, upper and lower windows are requested to be replaced, upper Windows are fixed
- As per the existing panels which need to be replaced by new aluminum panels

**Omar Zeani and Mhmd Shamel Schools:**

27. Group 01- 15+16 Omar Zeani + Mhmd Shamel, please specify if sheet A06 is to be third basement instead of second basement.

28. Part 4 – Optional Items - Item 15.1 (Lifts Rehabilitation), kindly clarify if we should make a complete rehabilitation of the existing elevators as per the description listed in the BOQ (in this case new elevators will be installed to meet the requirements)

28. It is the third basement

29. No, only rehabilitation of the existing elevator components and items in addition to provide all needed items in order that the lift become fully operated

**Omar Hamad School:**

29. Referring to Omar Hamad School, please provide us with information and technical specifications of the ventilation system.

30. Part 4 – Optional Items - Item 15.1 (Lifts Rehabilitation), kindly clarify if we should make a complete rehabilitation of the existing elevators as per the description listed in the BOQ (in this case new elevators will be installed to meet the requirements)

30. There is an existing ventilation system in parking level which should be rehabilitated completely to ensure proper workable system. Refer to drawing 03-M21 and BOQ Item 1.4.1, part 2 mechanical

31. No, only rehabilitation of the existing elevator components and items in addition to provide all needed items in order that the lift become fully operated

**Al Fadila School:**

31. Group 04- 013 Al Fadila, please indicate if steel door to be rehabilitated in roof is S410 as mentioned in BOQ and scope of work sheet but tagged S401 in drawings

As stated in the B.O.Q

**Salim Haydar School:**

32. Item 8.2.1 where it says "Replace The Existing Single Glazed Aluminum Upper Windows By Double Glazed Aluminum", should we remove the whole window or just replace the glazing (and in case of just replacing the glazing what happens to the installation of stone sills and jamb for the window).

33. Item 8.2.1 upper window to be fixed or sliding.

34. Item 4.2.4, 250m2 stone facade rehabilitation, this quantity seems to be much more than the existing quantity should it cover the facing bldg. (the facing bldg. is not in the contract)

35. Item 8.2.1.7 the listed window doesn't seem to appear in the plans.

36. Item 8.2.2.1 & 8.2.2.2 seems to be duplicated should we price both or just one?

37. Item 3.1.7 New Ramp 60m2, Kindly precise where this ramp should be executed.

33. We need double glazing panels with proper metallic sections

34. As per the existing situation

35. As stated in the B.O.Q, to be remeasured

36. It is only one window on plan

37. Price both

38. At the school entrance

#### **Taraya School**

38. Item 3.1.5.1 Reinforced Jacketing 10m<sup>3</sup>, Kindly precise where.

39. Item 3.1.2 36m<sup>3</sup> concrete for footings, parapets, column, tie beam etc.. seems not enough especially if all roof parapets should be executed, kindly clarify.

38. Minor structural cracks between Classroom G10 and Toilets G11 (Drawing 18-A06R1) need some jacketing works subject to inspection during executing of the works

39. Follow the BOQ quantities.

#### **Rihan & Ansar schools**

40. What is the capacity of the proposed solar PV system in Rihan & Ansar schools

Available in drawings:

Check 37-E08R1 / 37-E13R1 for Rihan.

Check 28-E10R1 / 28-E06R1 for Ansar

#### **Maghdoushe school**

41. You are proposing two 20,000 L water tanks to be installed in the staircase of Maghdoushe school, did you take into consideration the load imposed by those tanks when assessing the structural integrity of the school?

To avoid any risk on the roof, the 20,000 Liters tank can be split to 2 x 10,000 Liters tanks and can be placed at 2 locations in attic level to be determined during construction and subject to site conditions.

#### **Qob Elias School**

42. Existing External Tyrolen should it be removed or can we apply external paint above it?

43. Existing internal Tyrolen for Classes ceiling should it be removed to apply paint or can we apply paint over it?

44. Windows above the class's doors are not listed in the BOQ; However, doors are required to be changed will the existing window remain in their current situation?

45. Item 8.2.1.3 & Item 8.2.1.4 seems to contain the window and kindly provide details for windows 56-57-58-59-60-61-62-63-64-64a-79 (fixed or sliding etc..) and kindly indicate the location for window 79a.

46. Item 8.2.2.1 kindly provide details for windows 10a-11a-12a-15a-20a (size and whether fixed or sliding)

47. Item 5.1.17 the skylight is listed in both categories; 5.1.17.1 steel frame and 5.1.17.2 aluminum frame, what should it be and should we price both items?

43. To be removed

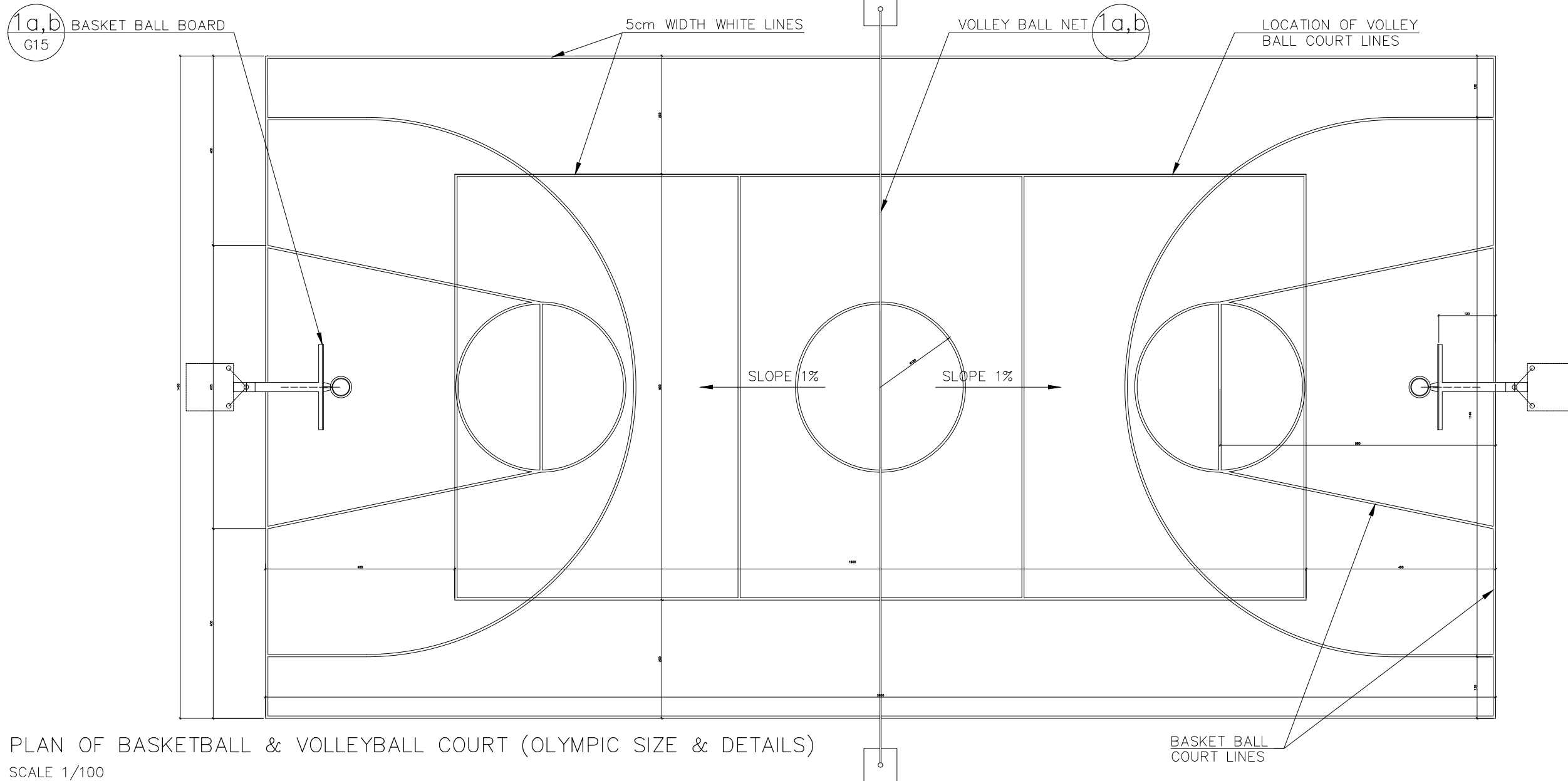
44. To be removed

45. The windows above the classroom's door are included in the door item to be replaced by new

46. Windows as existing, Window 79a is located above window 79

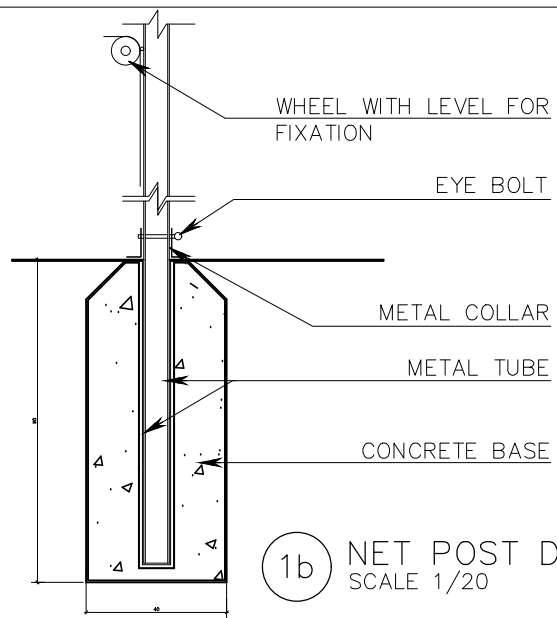
47. Similar to existing

48. Price both

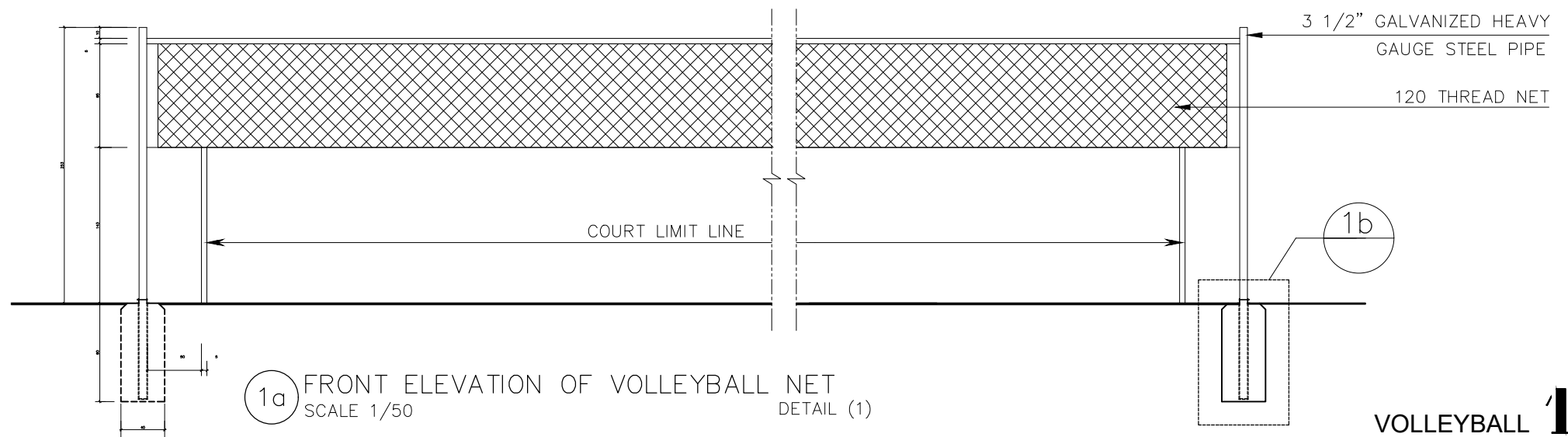


2a PLAN OF BASKETBALL & VOLLEYBALL COURT (OLYMPIC SIZE & DETAILS)  
SCALE 1/100

BASKETBALL 2

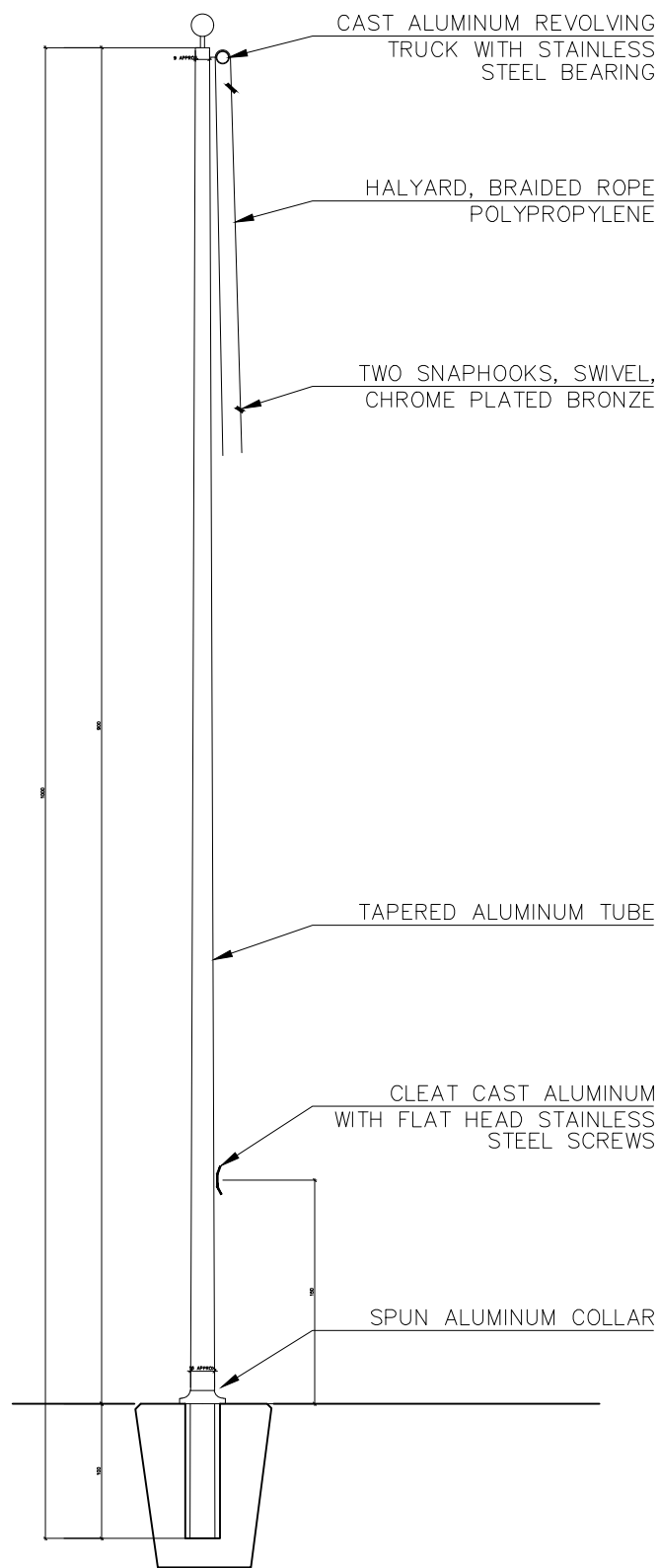


1b NET POST DETAIL FIXATION  
SCALE 1/20  
DETAIL (2)



1a FRONT ELEVATION OF VOLLEYBALL NET  
SCALE 1/50  
DETAIL (1)

VOLLEYBALL 1

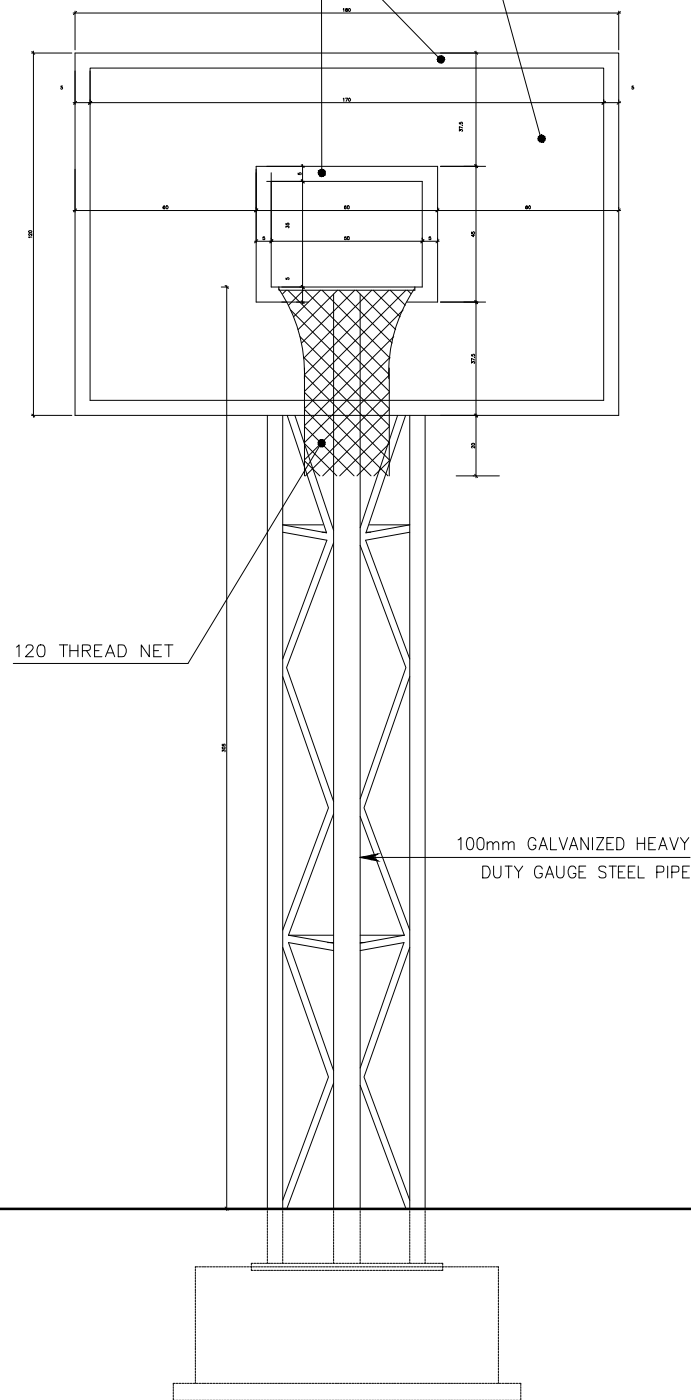


FLAG POLE ELEVATION

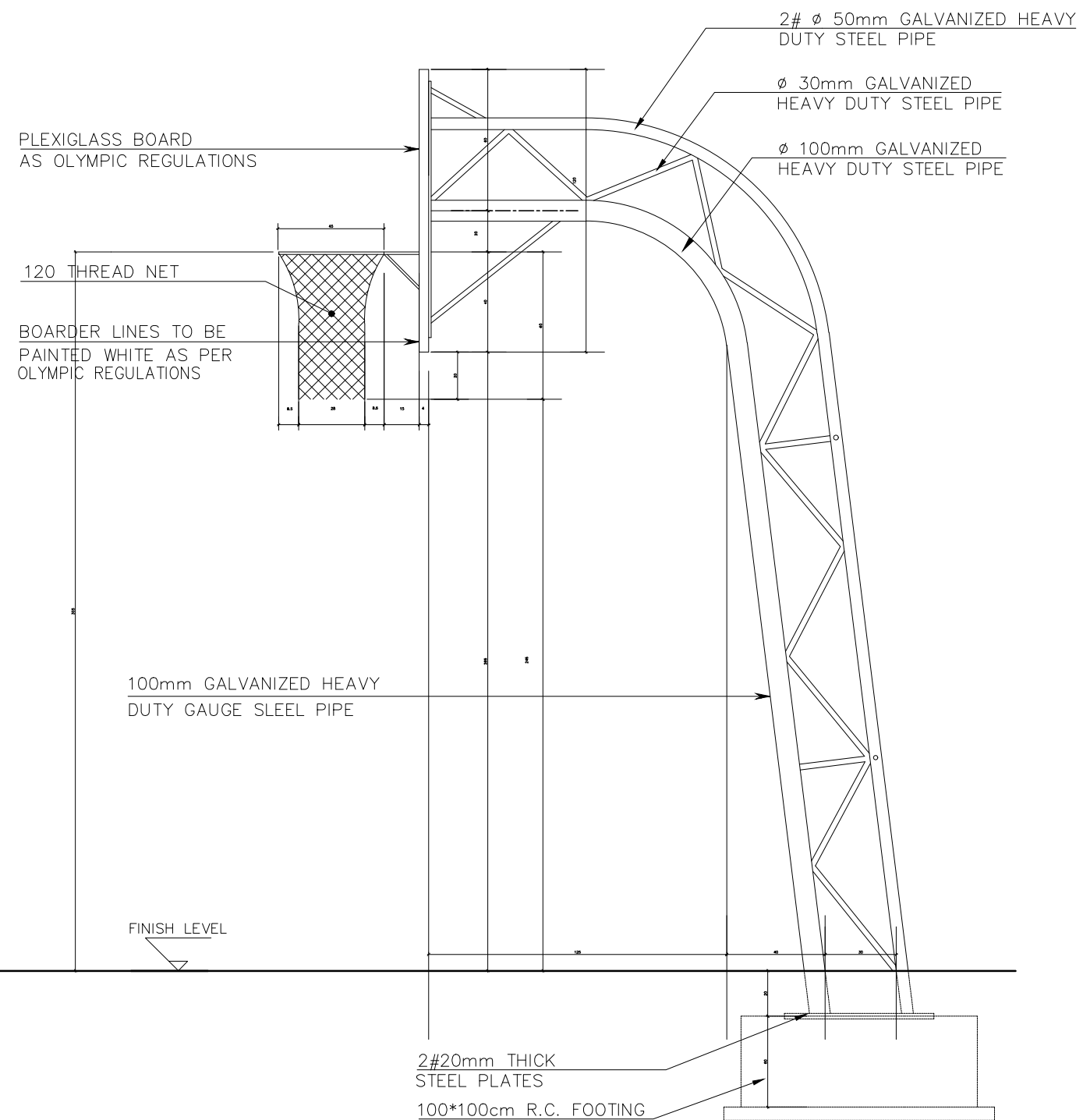
FLAG POLE DETAIL N.T.S **2**

PLEXIGLASS BOARD AS OLYMPIC REGULATIONS THE CONTRACTOR SHOULD SUBMIT COMPLETE SHOP DRAWINGS FOR MATERIALS & CONSTRUCTION

BOARDER LINES TO BE PAINTED WHITE AS PER OLYMPIC REGULATIONS



**1b** FRONT ELEVATION OF BASKETBALL BOARD SCALE 1/25



**1a** SIDE ELEVATION OF BASKETBALL BOARD SCALE 1/25

BASKETBALL BOARD DETAIL SCALE 1/25 **1**

NOTE:  
 - THE CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS FOR VOLLEY & BASKET BALL COURT  
 - ALL DIMENSIONS AND ACCESSORIES SHOULD MATCH OLUMPIC REGULATIONS

- READY MADE SELF FREE FIXING IS ACCEPTABLE CONDITION TO BE FROM A WELL KNOW MANUFACTURER

**سبكتروم للاستشارات الهندسية ش.م.م.**  
**SPECTRUM ENGINEERING CONSULTANTS s.a.r.l.**

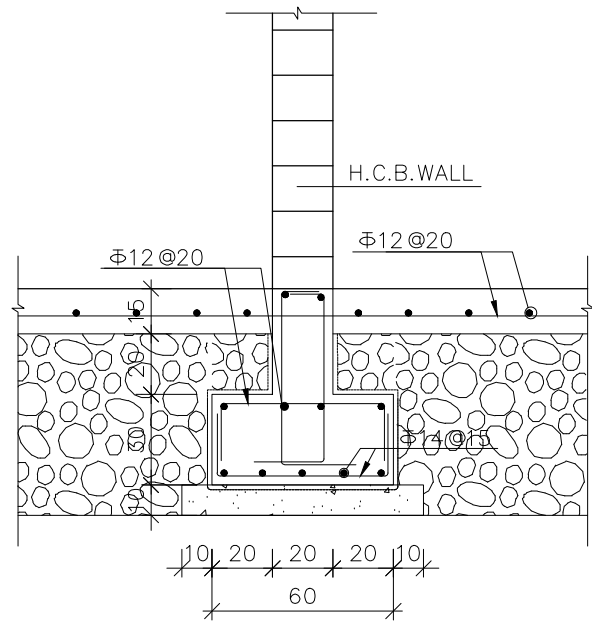
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DRAWN:	S.K	DESIGNED	A.M
CHECKED:	A.M	APP'D:	A.M
SCALE:	1/25	DATE:	MAR 2022

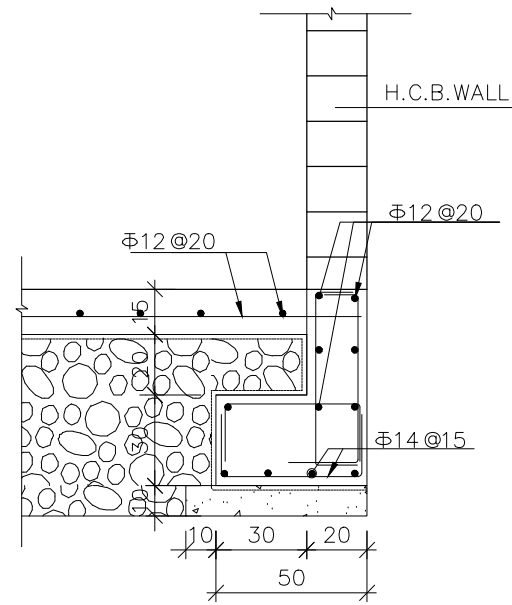
UNITED NATIONS CHILDREN'S FUND (UNICEF)	
CONSULTING ENGINEERING SERVICES	
REHAB PROJECT 40 PUBLIC SCHOOLS	
<b>BASKETBALL, VOLLEYBALL COURT &amp; FLAG POLE DETAILS - SH. 2/2</b>	
FINAL DESIGN	ARCHITECTURAL DRAWINGS - GENERAL DETAILS

PROJ. No.:	L2021-05
DWG. No.:	GA187

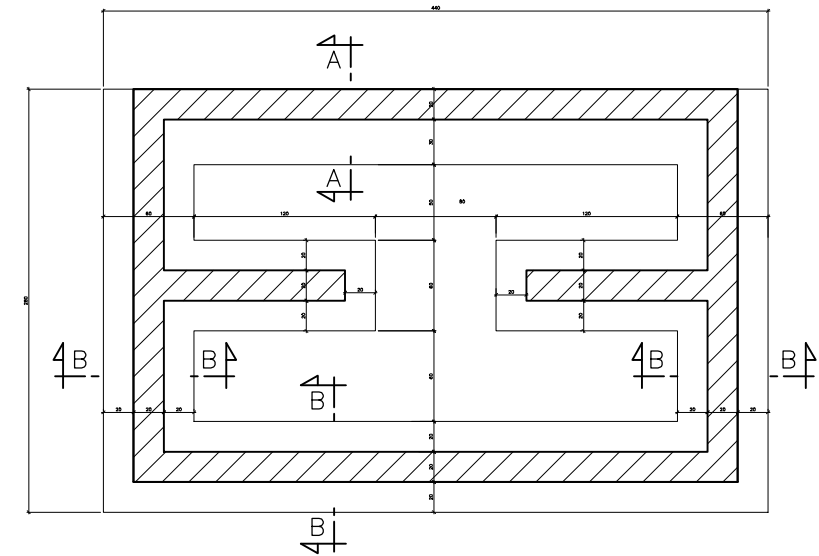




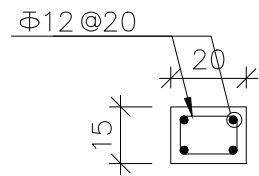
1f TYPICAL FOOTING SECTION B-B  
SCALE : 1/25



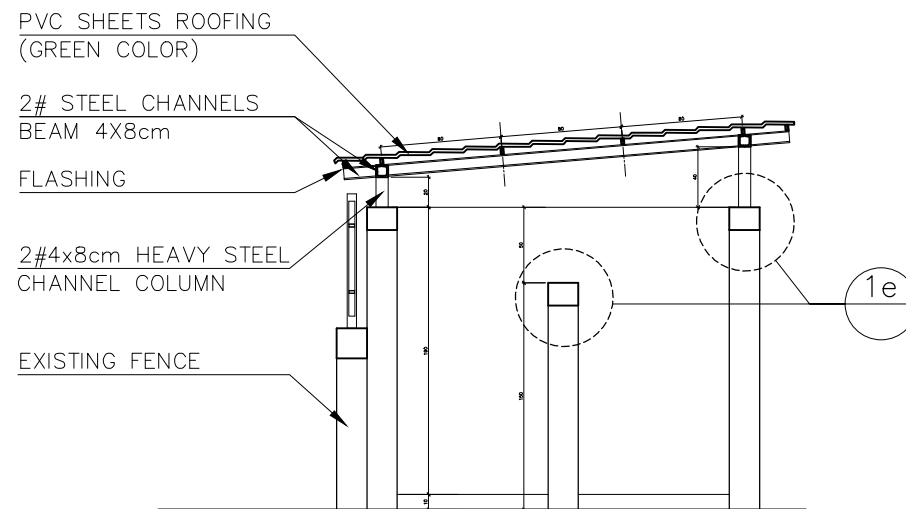
1d TYPICAL FOOTING SECTION A-A  
SCALE : 1/25



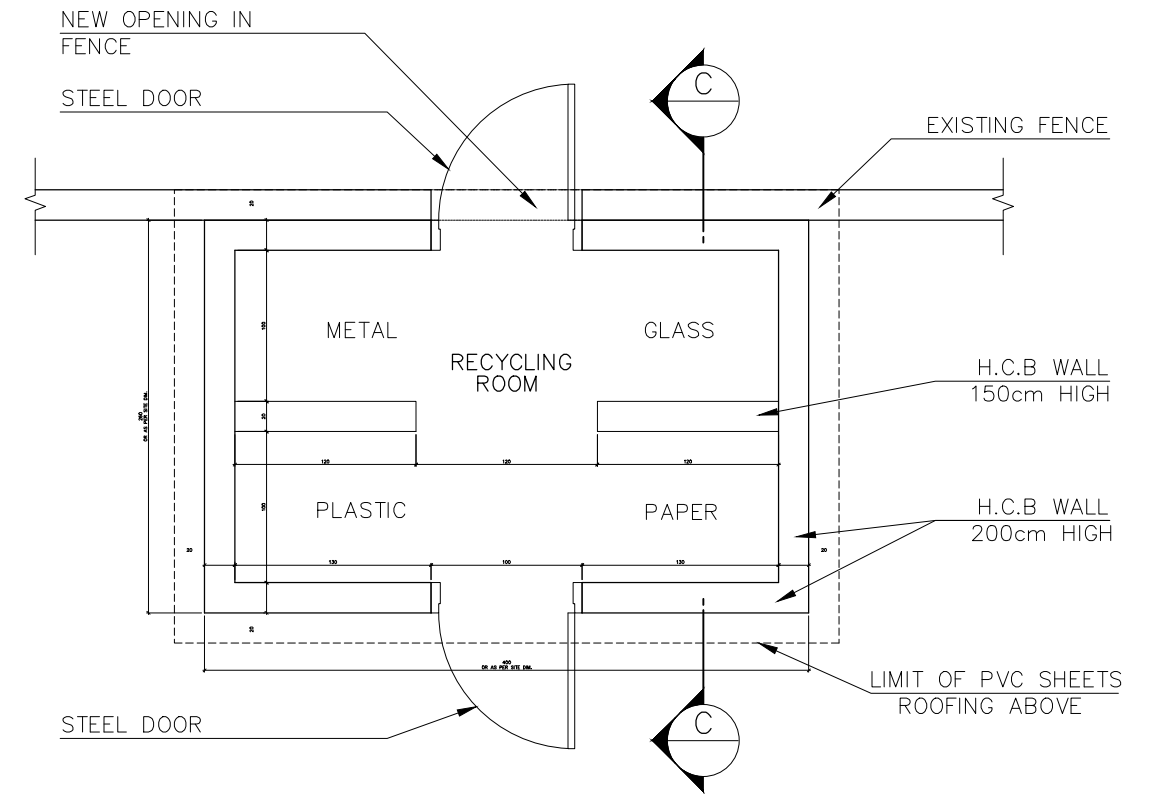
1b TYPICAL SLAB REINFORCEMENT DETAIL  
SCALE : 1/50



1e TYPICAL LINTEL REINFORCEMENT DETAIL  
SCALE : 1/20



1c TYPICAL RECYCLING ROOM SECTION C-C  
SCALE : 1/50



1a TYPICAL RECYCLING ROOM PLAN  
SCALE : 1/50

(N.B)

- THE CONTRACTOR IS RESPONSIBLE FOR INVESTIGATING AND MAKING A FINAL REVISION OF STRUCTURAL DESIGN REGARDING THE DIMENSIONS, KIND OF CONCRETE SECTION AND STEEL REINFORCEMENT AND IF THERE IS ANY RISK ON EXISTING STRUCTURE.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY ERRORS IN STRUCTURAL DESIGN AFTER REVISION AND VERIFICATION OF THE FINAL DESIGN
- THE CONTRACTOR MUST INFORM ENGINEER IF ANY STRUCTURAL MODIFICATIONS IS REQUIRED.
- CONTRACTOR SHOULD SUBMIT THE REQUIRED SHOP DRAWINGS FOR CONSULTANT'S APPROVAL PRIOR TO ANY EXECUTION WORK.
- ALL LEVELS ARE INDICATIVE EXACT LEVELS TO BE DETERMINE TO SITE.
- THE CONTRACTOR SHOULD REVISE ALL MEASUREMENT ON SITE.
- ALL PROPOSALS AND EXECUTION METHODS SHALL BE AUTHORIZED BY THE ENGINEER PRIOR TO COMMENCEMENT OF WORKS ON SITE.
- REINFORCED CONCRETE FOR ALL COLUMN AND SLABS SHOULD BE CLASS "A" TYPE I WITH MINIMUM 28 DAYS DESIGN COMPRESSIVE STRENGTH ON STANDARD 15x30 CYLINDER  $f'_c = 300 \text{ kg/cm}^2$ .
- STRUCTURE CONCRETE CLASS "A" , THE MINIMUM CEMENT CONTENT SHALL BE 350 kg/m<sup>3</sup>.
- DESIGN BEARING CAPACITY OF SOIL UNDER FOUNDATION IS CONSIDERED 2.0 Kg/cm<sup>2</sup>. IT IS CONSIDERED THE CONTRACTORS RESPONSIBILITY TO INSURE THE BEARING CAPACITY.

RECYCLING ROOM DETAILS **1**

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DRAWN: S.K  
CHECKED: A.M  
SCALE: AS NOTED  
DESIGNED: A.M  
APP'D: A.M  
DATE: MAR 2022

UNITED NATIONS CHILDREN'S FUND (UNICEF)  
CONSULTING ENGINEERING SERVICES  
REHAB PROJECT 40 PUBLIC SCHOOLS  
**TYPICAL RECYCLING ROOM DETAILS**  
FINAL DESIGN ARCHITECTURAL DRAWINGS - GENERAL DETAILS

PROJ. No.: L2021-05  
DWG. No.: GA188