Architectural Plans

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Architectural plans
Cover page

File name : alqaeda hospital – 2013–111.dwg

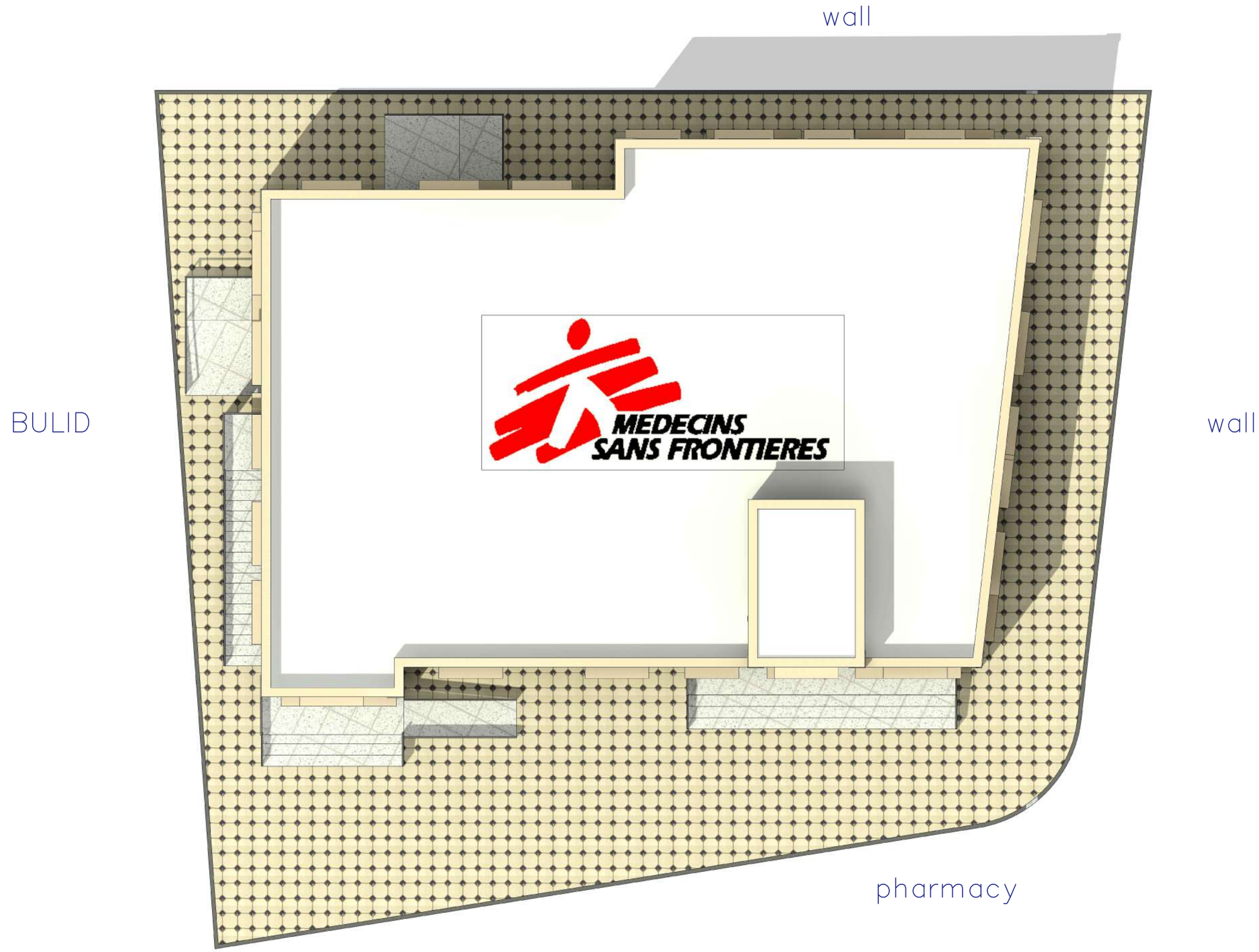
HQ stamp :

N°	Date	Issue
R1 :	13 / 12 / 2023	

Sheet N° : **A0**

scale :

Date : 13 / 12 / 2023



MEDECINS SANS FRONTIERES	PROJECT TITLE : **YE120 - KILO Hospital YEMEN Mission**	BUILDING NAME : **New Support Services and med Offices Building -Version 1**	DRAWING TITLE : **Realistic views** **LOCATION PLAN** File name : alqaeda hospital – 2013–111.dwg	HQ stamp :	N° Date Issue R1 : 13 / 12 / 2023	Sheet N° : **A2-1** scale : Date : 13 / 12 / 2023

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Architectural plans
SLD :single line diagram

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

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Date : 13 / 12 / 2023

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New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Architectural plans
SLD :single line diagram

File name : alqaeda hospital – 2013–111.dwg

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New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Architectural plans
SLD :single line diagram

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

N°	Date	Issue
R1 :	13 / 12 / 2023	

Sheet N° :

A2-4

scale :

Date : 13 / 12 / 2023

MEDECINS SANS FRONTIERES

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New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Architectural plans
SLD :single line diagram

File name : alqaeda hospital – 2013–111.dwg

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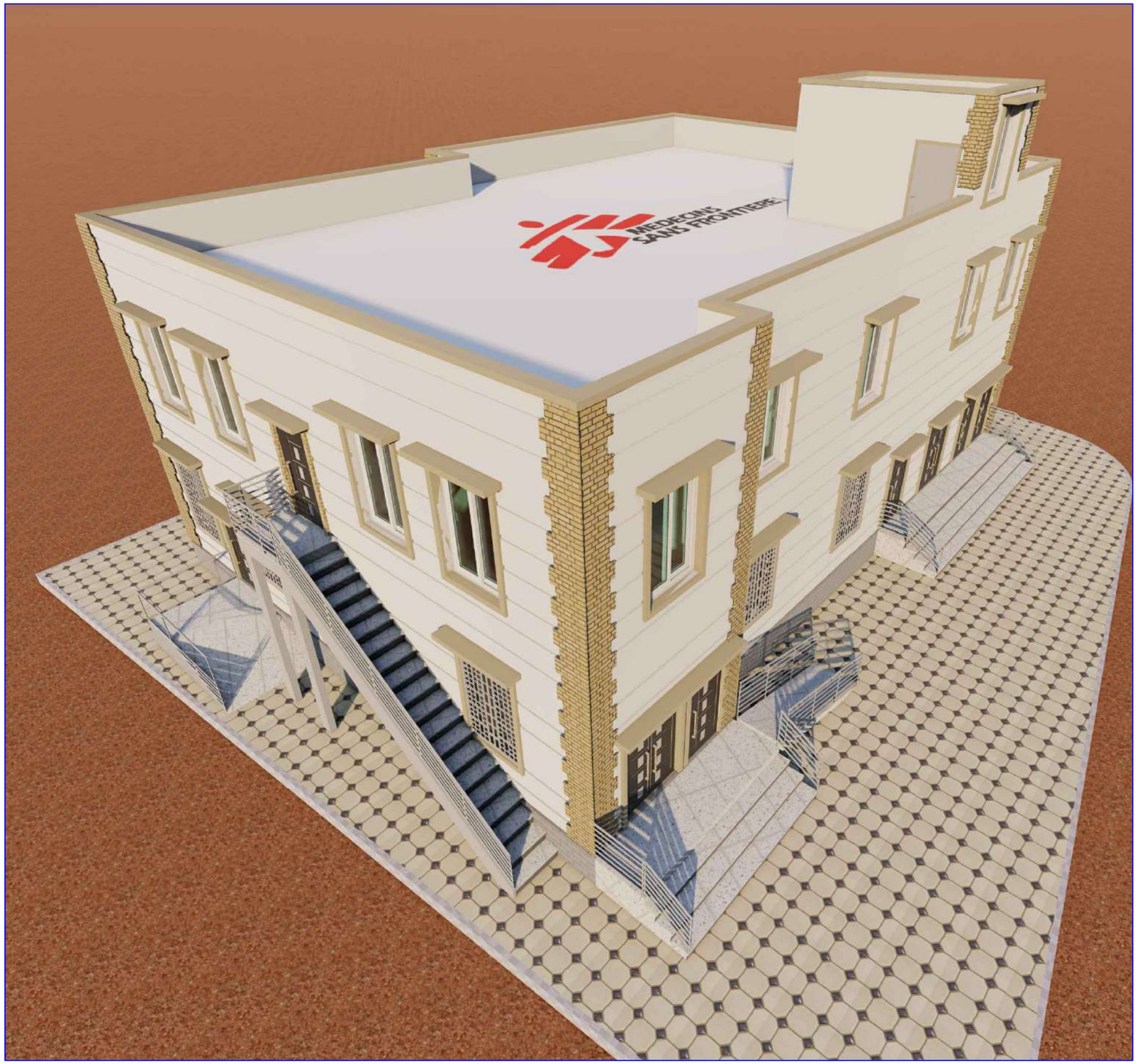
N° Date Issue
R1 : 13 / 12 / 2023

Sheet N° :
A2-5

scale :

Date : 13 / 12 / 2023



MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

External perspective

File name : alqaeda hospital – 2013–111.dwg

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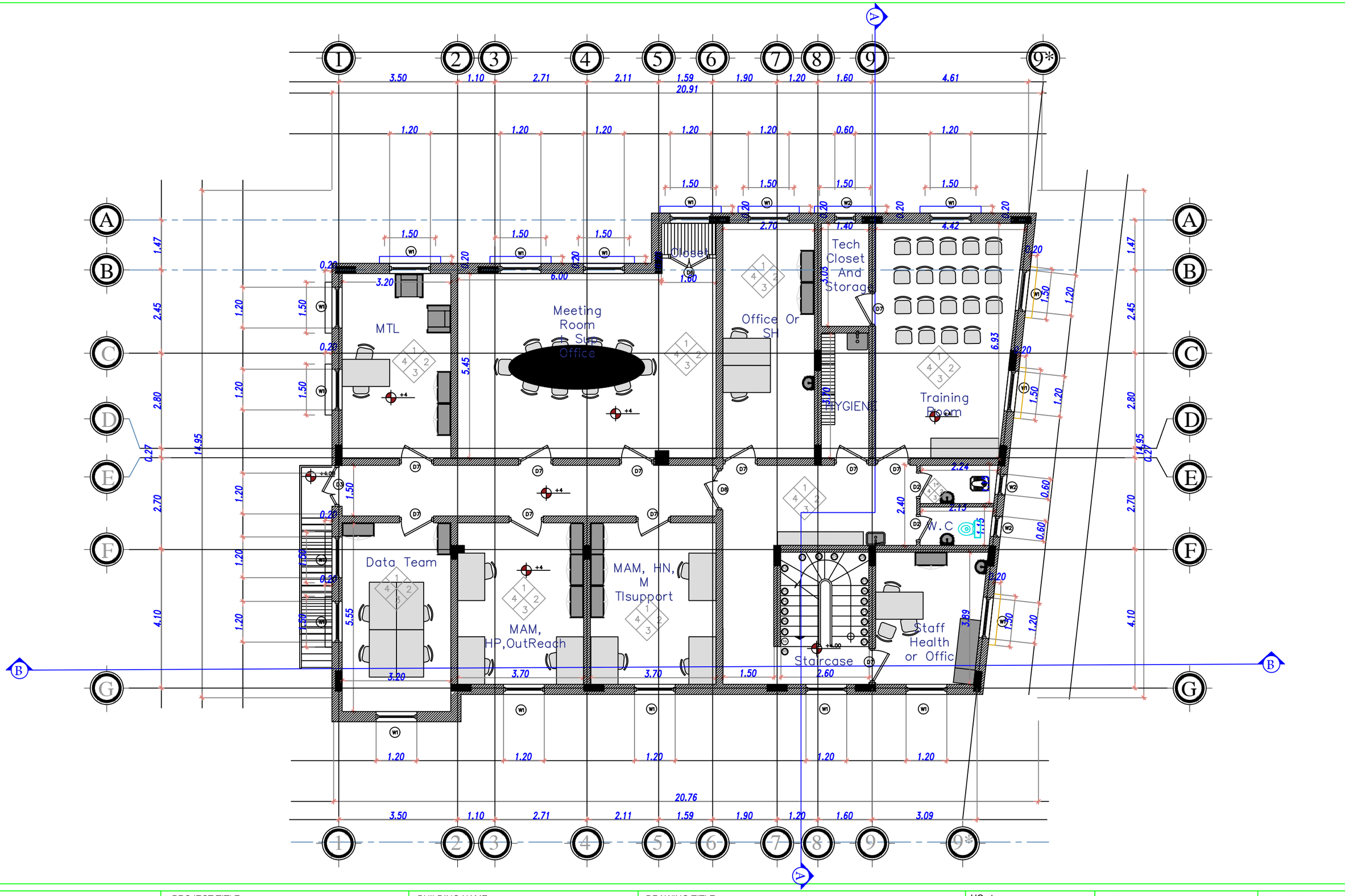
Date : 13 / 12 / 2023



MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

second floor plan

File name : alqaeda hospital – 2013–111.dwg

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N°	Date	Issue
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Sheet N° : **A5**

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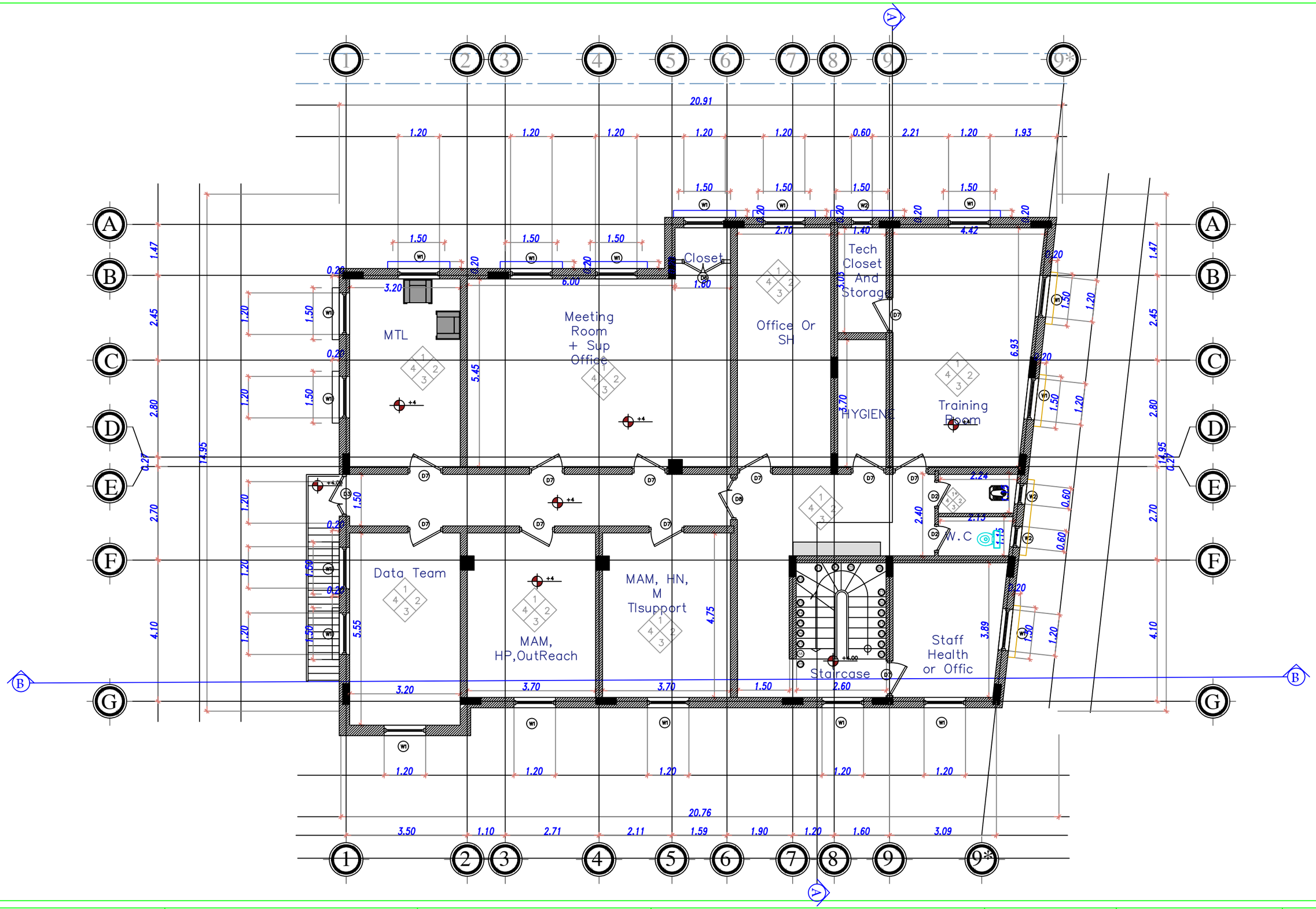
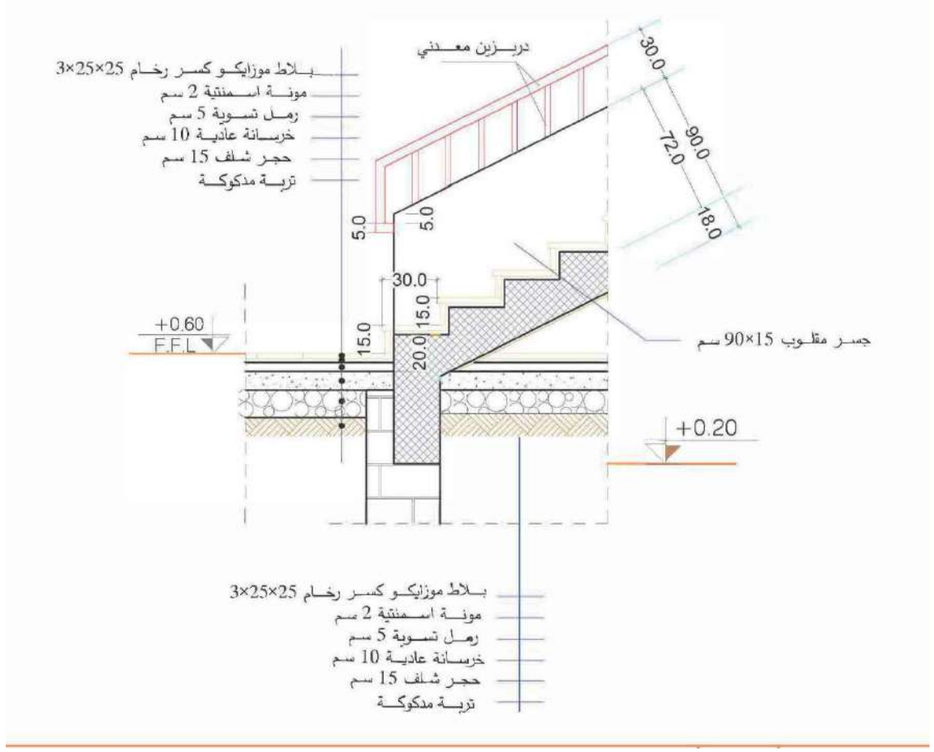
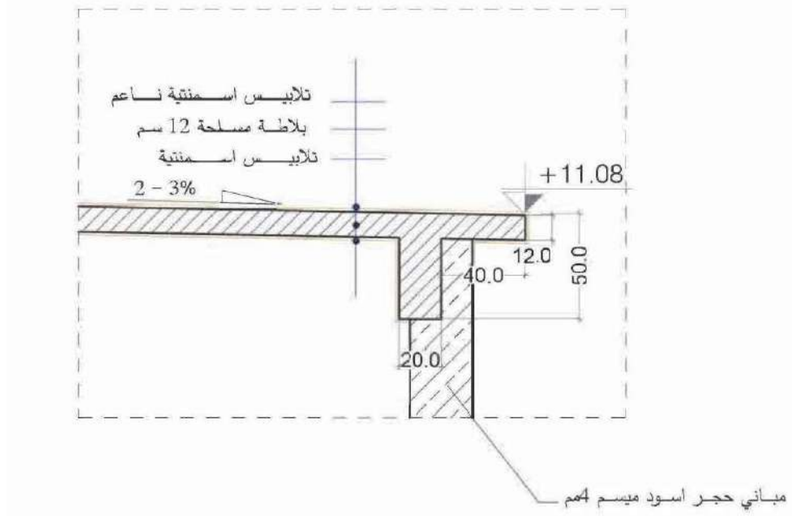
Date : 13 / 12 / 2023



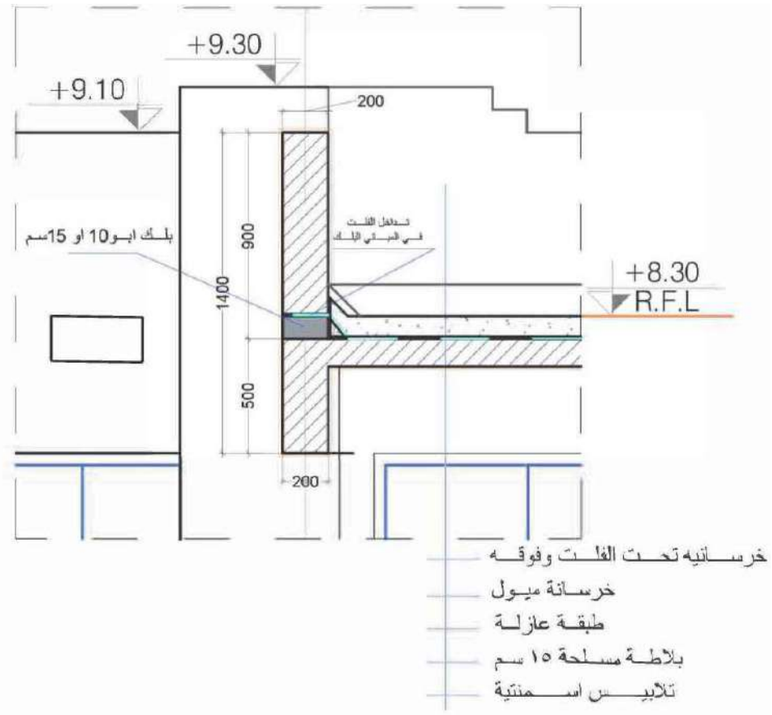
MEDECINS SANS FRONTIERES	PROJECT TITLE : **YE120 - KILO Hospital YEMEN Mission**	BUILDING NAME : **New Support Services and med Offices Building -Version 1**	DRAWING TITLE : **second floor plan**	HQ stamp :	N° Date Issue R1 : 13 / 12 / 2023
			File name : alqaeda hospital – 2013–111.dwg		Sheet N° : **A7** scale : Date : 13 / 12 / 2023



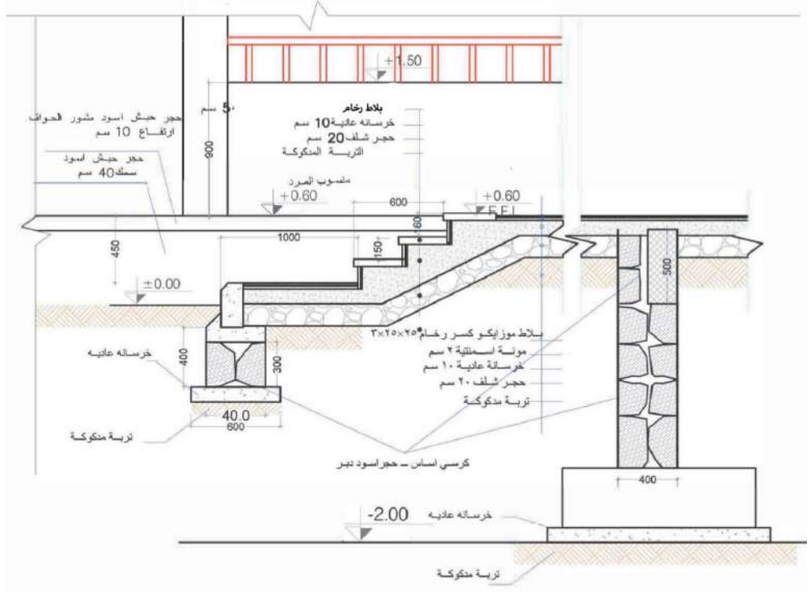
Detailed size of the first step of the ladder



Bridge and staircase slab

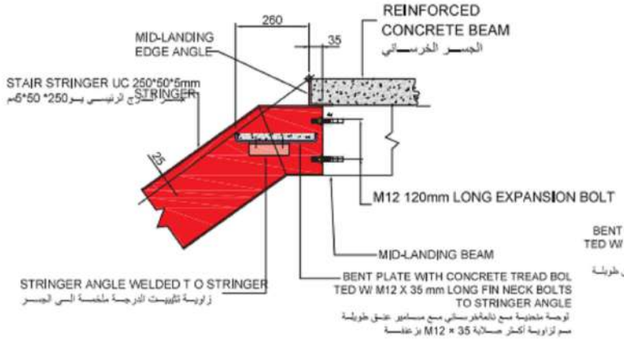


Detailed mirror surfaces



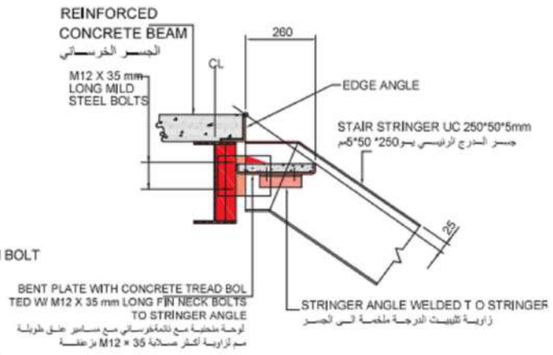
Vertical section for the front entrances

MEDECINS SANS FRONTIERES	PROJECT TITLE : **YE120 - KILO Hospital YEMEN Mission**	BUILDING NAME : **New Support Services and med Offices Building -Version 1**	DRAWING TITLE : **Architectural details** File name : alqaeda hospital – 2013–111.dwg	HQ stamp :	N° Date Issue R1 : 13 / 12 / 2023 Sheet N° : **A8 -1** scale : Date : 13 / 12 / 2023



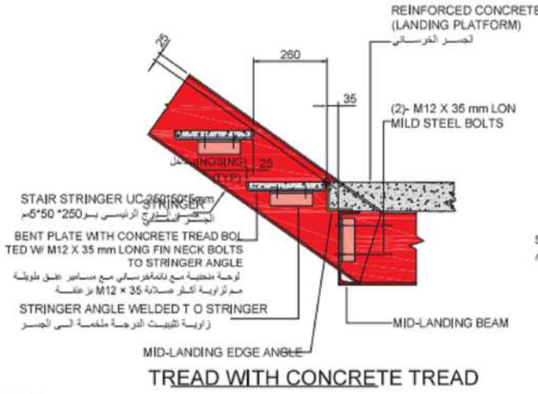
TREAD WITH CONCRETE TREAD

SECTION : CONNECTION AT MID-LANDING OR TOP LANDING



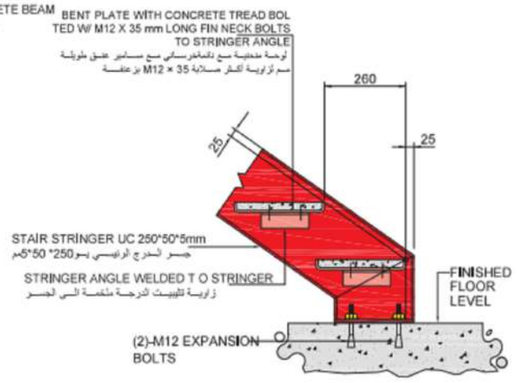
TREAD WITH CONCRETE TREAD

SECTION : CONNECTION AT HIGH LEVEL



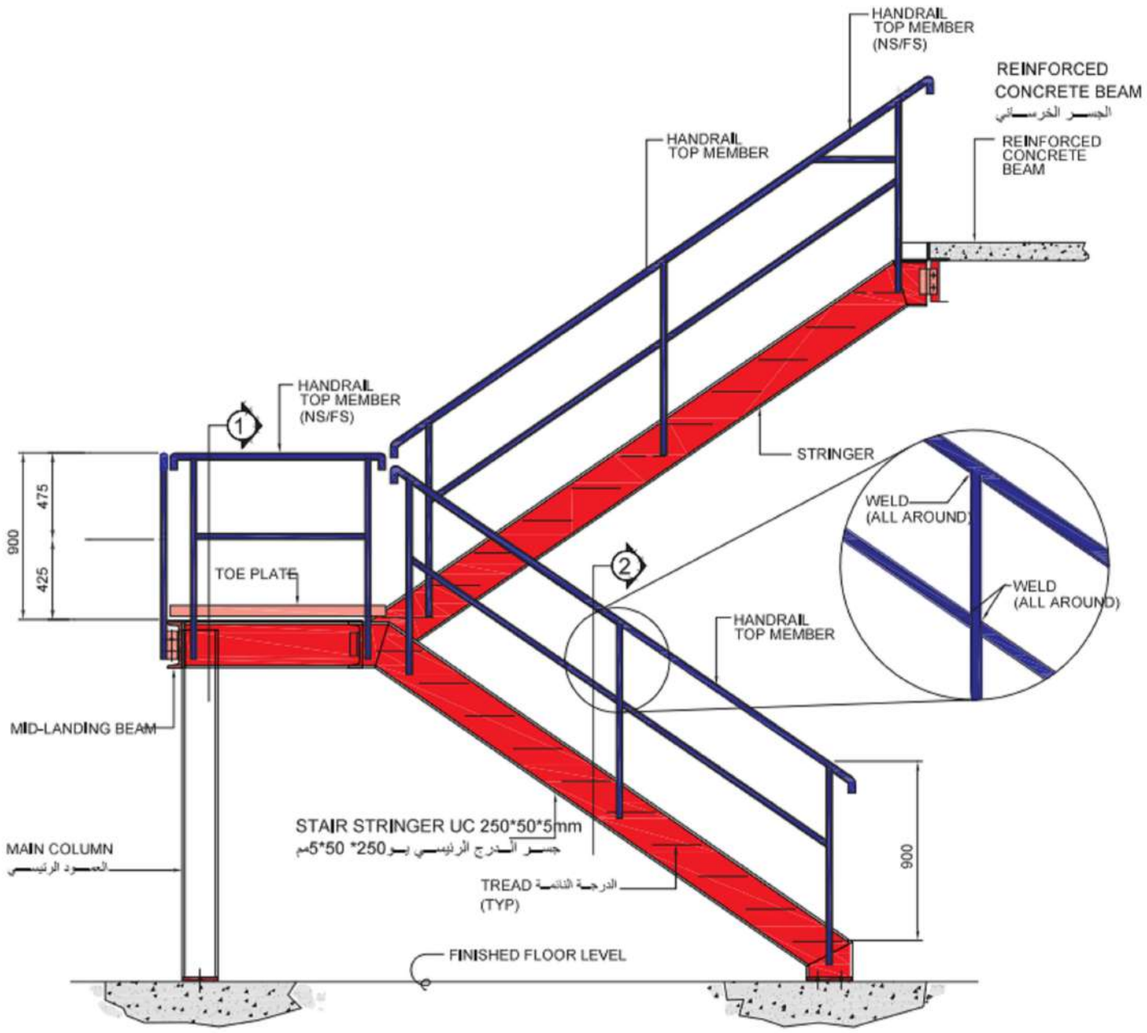
TREAD WITH CONCRETE TREAD

SECTION : CONNECTION AT MID-LANDING (DOUBLE FLIGHT STAIRCASE)



TREAD WITH CONCRETE TREAD

SECTION : CONNECTION AT STRINGER BASE



ELEVATION : TYPICAL HANDRAILS واجهة الدرابزين

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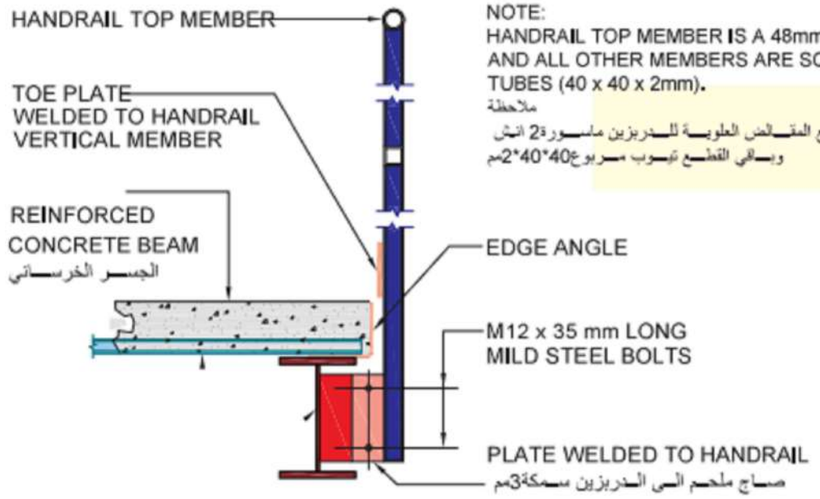
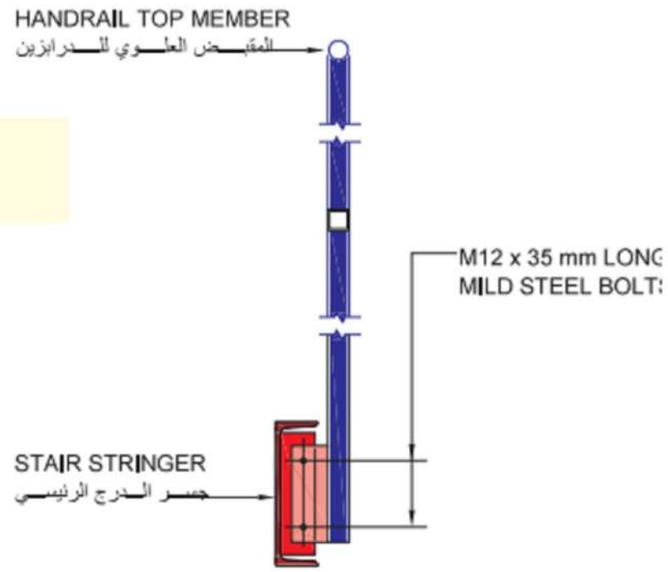
			File name : alqaeda hospital – 2013–111.dwg			

ELEVATION : TYPICAL HANDRAILS واجهـة الـدرابزين

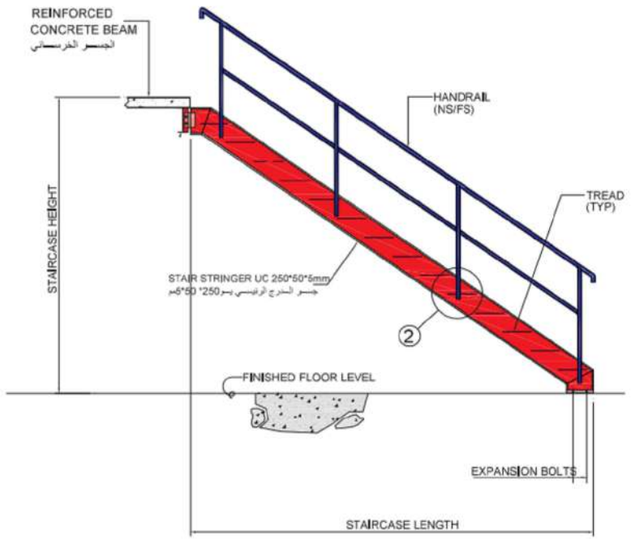


NOTE:
HANDRAIL TOP MEMBER IS A 48mm Ø PIPE AND ALL OTHER MEMBERS ARE SQUARE TUBES (40 x 40 x 2mm).
ملاحظة
جميـع المقـاطع العلويـة للـدربزين ماسـورة2 انش
وبـاقي القطـع تيـوب مـربوع40*40*2مم

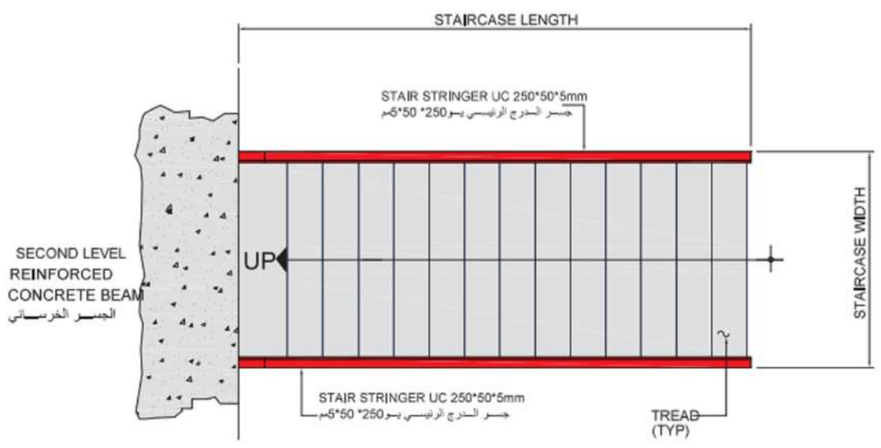
SECTION-1



SECTION-2



ELEVATION : SINGLE FLIGHT STAIRCASE WITHOUT TOP LANDING



PLAN : SINGLE FLIGHT STAIRCASE WITHOUT TOP LANDING

MEDECINS SANS FRONTIERES

PROJECT TITLE :
YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :
New Support Services and med Offices Building -Version 1

DRAWING TITLE :
Architectural details

File name : alqaeda hospital – 2013–111.dwg

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أعمال الإنشاءات المعدنية الحديدية :

(١) على المقاول تجهيز جميع قطع الحديد المطابقة للرسومات والمواصفات والموردة لمكان التشغيل سواء بورشة خارجية أو بالموقع وذلك برشم الحديد بالمطارق الخفيفة المخصصة لذلك مع استعمال فرش السلك لإزالة ما قد يوجد من صدأ سطحي لا يؤثر على سلامة قطوع الحديد وكذلك بالأسطبة لإزالة أي أثر لزيوت أو شحومات أو مواد لاصقة بسطح الحديد حتى يصبح جاهز للتشغيل ثم تبدأ أعمال الشنكرة وهي توقيع المقاسات المبينة بالرسومات على القطاعات المطلوبة ويتم ذلك بكل دقة وبالأجهزة الحديثة .

(٢) على المقاول الامتناع نهائيا عن استعمال بوري الغاز (لمبة القطعية) في عملية قطع وتثبيت الحديدية المطلوب ، وترفض جميع القطع التي قد تجهز بهذه الطريقة ، وتكون جميع عمليات تشغيل الحديد ميكانيكية ، فتكون أعمال القطع بالمقصات أو المناشير الصلب المناسبة للقطاع المطلوب وكذلك تكون أعمال التثقيب بالمثاقب الميكانيكية وببنط جديدة حسب الأقطار المطلوبة ومع استعمال سوائل التبريد عند الحاجة ، ومع استعمال أحجار الجلخ الميكانيكية لإزالة الرايش وتنظيف القطاعات ويلاحظ استبعاد أي قطعة حديد يحدث بها شرخ أو انبعاج نتيجة أعمال التشغيل ، وتكون جميع أعمال التشغيل على البارد .

(٣) نظرا لأن اللحام الكهربائي لأعضاء المنشأ الحديدي يعتبر أهم مراحل التشغيل في سلامة المنشأ ولذلك فعلى المقاول مراعاة المواصفات الفنية العالمية البريطانية أو الألمانية لأعمال اللحام بالقوس الكهربائي المغمور(EL CTRIC SUBMERCED-ARC-WOLFING) مع مراعاة الملاحظات الآتية :-

أ- تجهيز القطاعات الحديد المطلوب لحامها طبقا للرسومات والمواصفات وذلك بكشف سطح المعدن وعمل الشطف اللازم على الزوايا المطلوبة بالمقاشط الميكانيكية وطبقا للمواصفات المعتمدة لأعمال اللحام الكهربائي .

ب- تستعمل أسياخ اللحام المغطاة من نفس نوع الحديد ومن أجود الأصناف العالمية المعتمدة (COATED STEELL ALECTRODES) وذلك بالقطر المناسب لسمك اللحام .

جـ- يجب أن يكون اللحام الكهربائي على البارد (أي بدون تسخين سابق لأطراف الحديد المطلوب لحامه) ويكون السمك المطلوب بأقل عدد ممكن من الطبقات وبحيث يكون من طبقة واحدة لسمك ٦مم، مع مراعاة دق سطح اللحام بعد أن يبرد بمطرقة خفيفة واستعمال فرشة سلك لإزالة القشور والكشف عن الفقاعات الهوائية ثم إعادة ملئ اللحام في الأجزاء الناقصة حتى يتم السمك المطلوب وتكون الطبقة الثانية بنفس الطريقة حتى يتم الوصول للسمك النهائي المطلوب للطبقتين طبقا للرسومات والمواصفات.

د- يراعي في عملية اللحام التداخل والنفاذية (PENETRATTON & DIFFUSION) وذلك بين مادة الحديد الأساسية وبين مادة اللحام بحيث تحقق في النهاية مادة متجانسة مع قطاع الحديد ويكون مظهرها الخارجي لامع بنفس الدرجة مع سطح الحديد المكشوف .

هـ- يجب التأكد من قدرة ماكينة اللحام الكهربائية بحيث تكون سعة الماكينة بالأمبير كافية لتشغيل قطاع سيخ أو أسياخ اللحام المستخدمة في وقت واحد وذلك لضمان تداخل اللحام ونفاذيته وبحيث يتم ضبط الجهد الكهربائي أثناء اللحام وبحيث لا يرتفع عن المعدل المطلوب من ٢٢-٣٢ فولت وذلك لضمان سلامة مادة اللحام وعدم تعرضها للاختراق وبالتالي عدم تحمل اللحام للاجهادات .

و- للمشاريع الحق في أخذ عينات من وصلات اللحام لإجراء الاختبارات اللازمة عليها للتحقق من سلامة وجودة أعمال اللحام وترفض هذه الأعمال في حالة عدم مطابقتها للرسومات والمواصفات المعتمدة وعلى المقاول إعادة تشغيل أجزاء أخرى بدلا منها على حسابه دون المطالبة بتعويض نظير التوريد أو التشغيل أو خلافه .

(٤) على المقاول مراعاة الدقة التامة في أعمال تشغيل أجزاء القطاعات الحديدية التي يتم تجميعها بالورشة خارج الموقع ، وللمهندس المشرف الحق في متابعة الأعمال التي يجرى تشغيلها بالورشة المذكورة وعلى المقاول توفير وسائل الانتقال المناسبة للمهندس المشرف إلي مكان الورشة كما يجب على المقاول تأمين عمليات شحن ونقل وتفريغ أجزاء الجمالونات المصنعة بالورشة إلي موقع العملية للتركيب .

(٥) على المقاول مراعاة الدقة أيضا في أعمال تثبيت الركائز الخاصة بالكمرة (S.I.B)على الأعمدة الحديدية وذلك طبقا للأبعاد والمناسيب الموضحة بالرسومات وكذلك أعمال تجميع أجزاء المنشأ الحديدي بالموقع ورفعها وتثبيتها في مواضعها النهائية دون إجراء أية تعديلات نتيجة انحرفات أو اختلاف مناسيب أو خلافه ثم يتم تركيب الشكالات الأفقية والرأسية (BRACINS SYSTEM & PERLINS) والمدادات طبقا للرسومات والمواصفات .

(٦) تدهن جميع أعمال الحديد الظاهرة خمسة أوجه منها وجهان دهان يقاوم الصدأ أولهما قبل نقل أجزاء المنشأ المعدني من الورشة للموقع ، والثاني بعد رفع القطاعات الحديدية والشكالات والمدادات في مواضعها النهائية ، ثم ثلاثة أوجه بوية زيت أولها بطانة ثم وجهان ضهارة باللون المطلوب على أن تكون البويات من أجود الأنواع العالمية وتعتمد العينات قبل التوريد ، كما تدهن أعمال الحديد المغطاة بوجهين دهان يقاوم الصدأ فقط منهم وجه قبل التركيب .

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SCHEDULE OF DORS

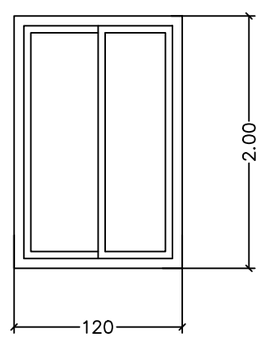
MARK	DESCRIPTION	M2 WIDTH	M2 HEIGHT	QNTY
D1	Iron door according to the specifications in BoQs	1.00	2.20	
D2	ALUMINIUM DOOR according to the specifications in BoQs	0.80	2.20	
D3	Iron door according to the specifications in BoQs	1.20	2.20	
D4	Iron door according to the specifications in BoQs	1.50	2.20	
D5	ALUMINIUM DOOR according to the specifications in BoQs	0.80	2.00	
D6	ALUMINIUM DOOR (doubl swing) according to the specifications in BoQs	1.50	2.20	
D7	ALUMINIUM DOOR according to the specifications in BoQs	1.00	2.20	
D8	ALUMINIUM DOOR according to the specifications in BoQs	1.20	2.20	

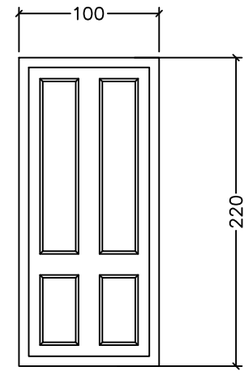
Schedule of interior finishes

DESCRIPTION		
Porcelain tiles for rooms according to the specifications in BoQs	1	Floors
Ceramic tiles for walls and floors in bathrooms and sinks according to the specifications in BoQs	1*	
Porcelain tiles in height 10 cm according to the specifications in BoQs	2	skirt tails
Plaster + oil paint 3m according to the specifications in BoQs	3	WALLS
Plaster + emulsion paint 2m according to the specifications in BoQs	3*	
Emulsion (water-based) paint according to the specifications in BoQs	4	اسقف ROOFS

SCHEDULE OF WINDOWS

الرمز MARK	DESCRIPTION	M2 WIDTH	M2 HEIGHT	QNTY
W1	Per square metre: Supply and implementation of white windows according to the specifications in BoQs	1.20	2.00	
W2	Per square metre: Supply and implementation of white windows according to the specifications in BoQs	0.60	2.00	





MEDECINS SANS FRONTIERES

PROJECT TITLE :
YE120 - KILO Hospital YEMEN Mission

BUILDING NAME :
New Support Services and med Offices Building -Version 1

DRAWING TITLE :
Tables of specifications and finishes

File name : alqaeda hospital – 2013–111.dwg

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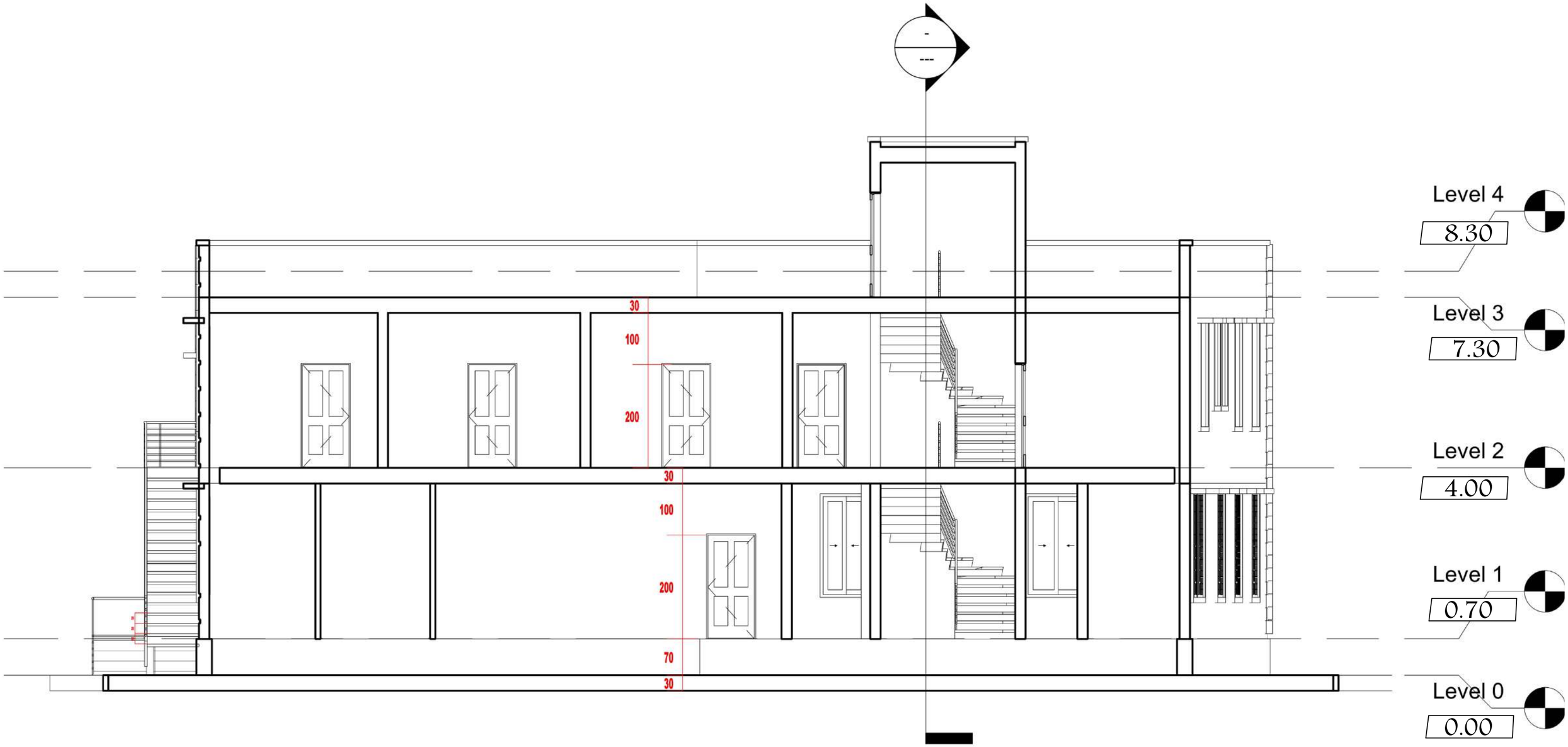
Date : 13 / 12 / 2023



MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

SECTION A-A

File name : alqaeda hospital – 2013–111.dwg

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N°	Date	Issue
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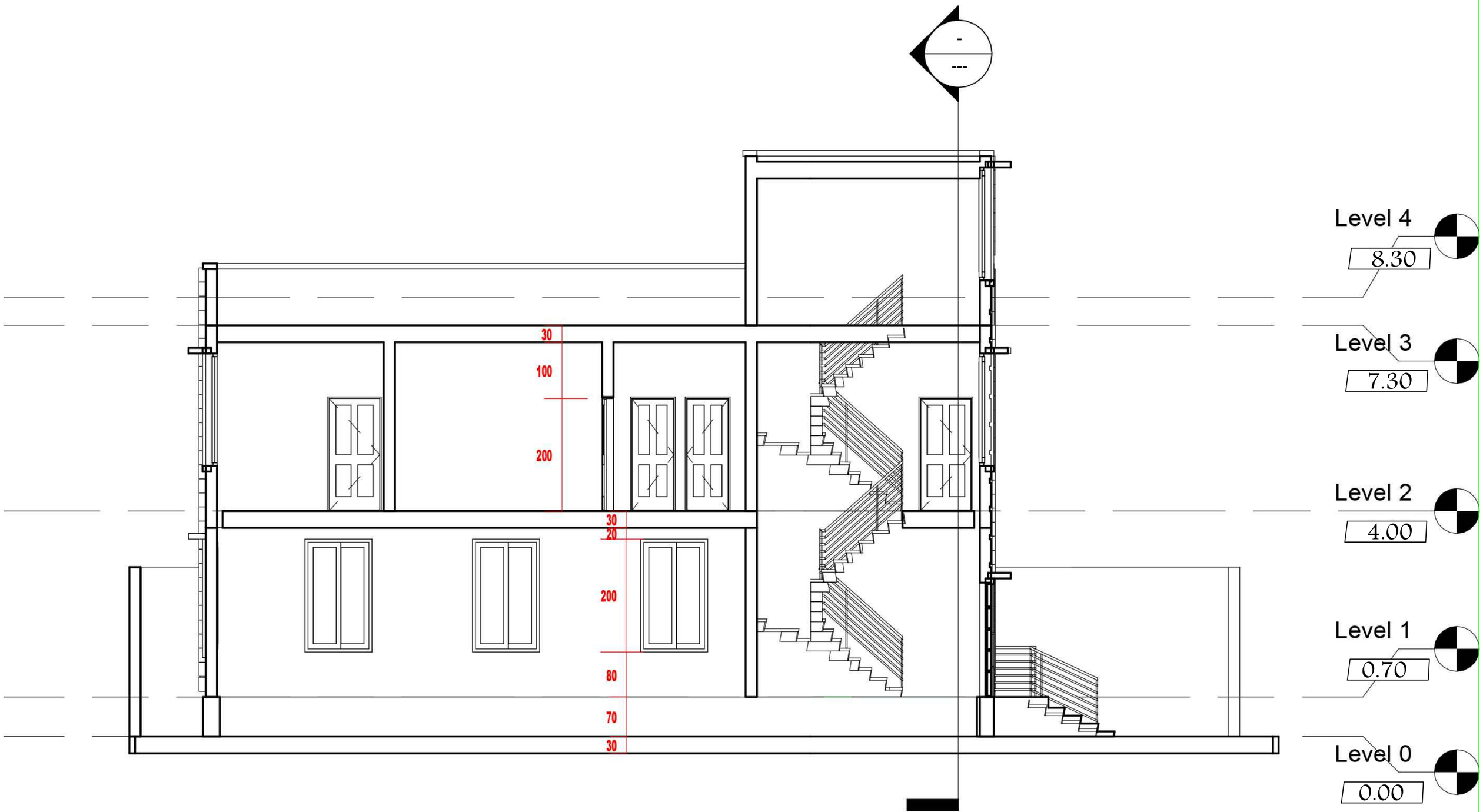

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

SECTION B-B

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

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A11

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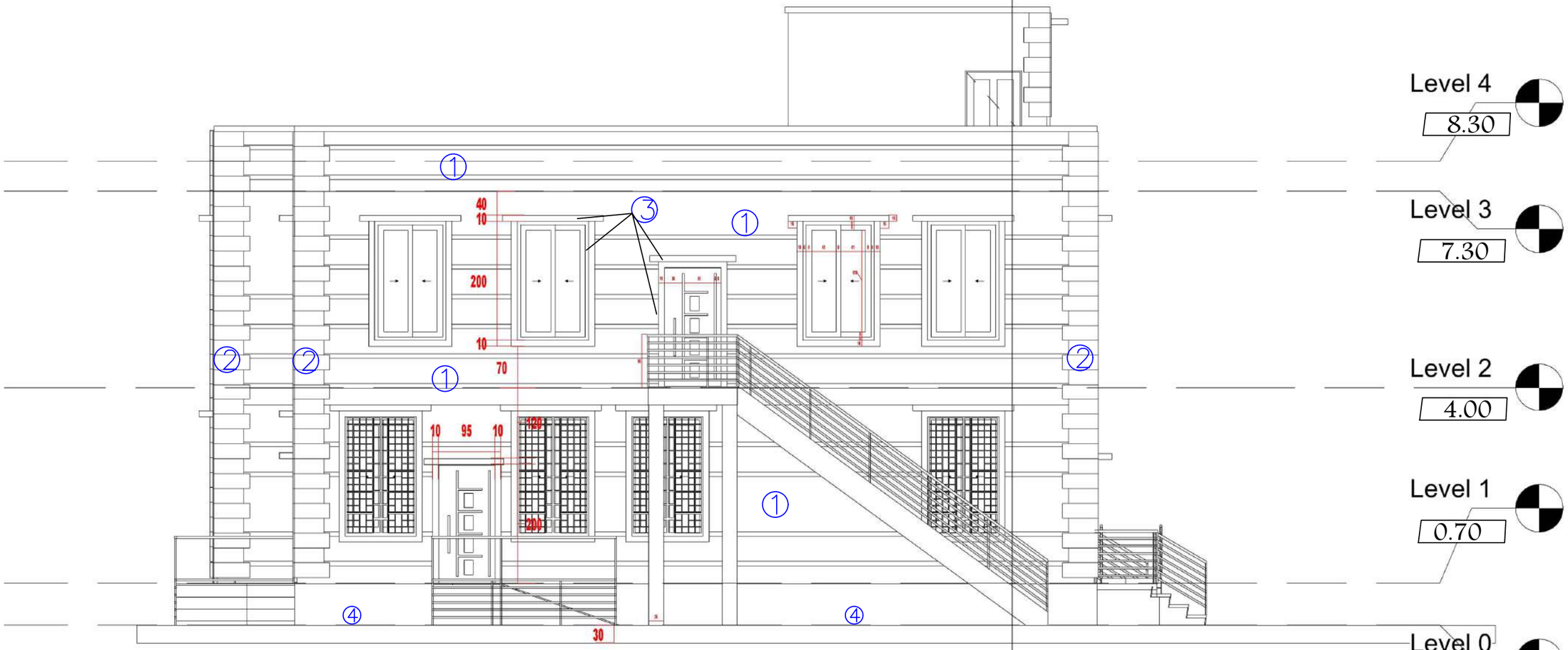
Date : 13 / 12 / 2023



SCHEDULE OF ELEVATION

MARK	DESCRIPTION
1	Making external cement cladding according to the specifications in the tables of quantities
2	Making external cement coverings and coloring them according to the specifications in the tables of quantities
3	Cement protrusion around the windows according to the specifications in the tables of quantities
4	BLAK STONE according to the specifications in the tables of quantities

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

WEST ELEVATION

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

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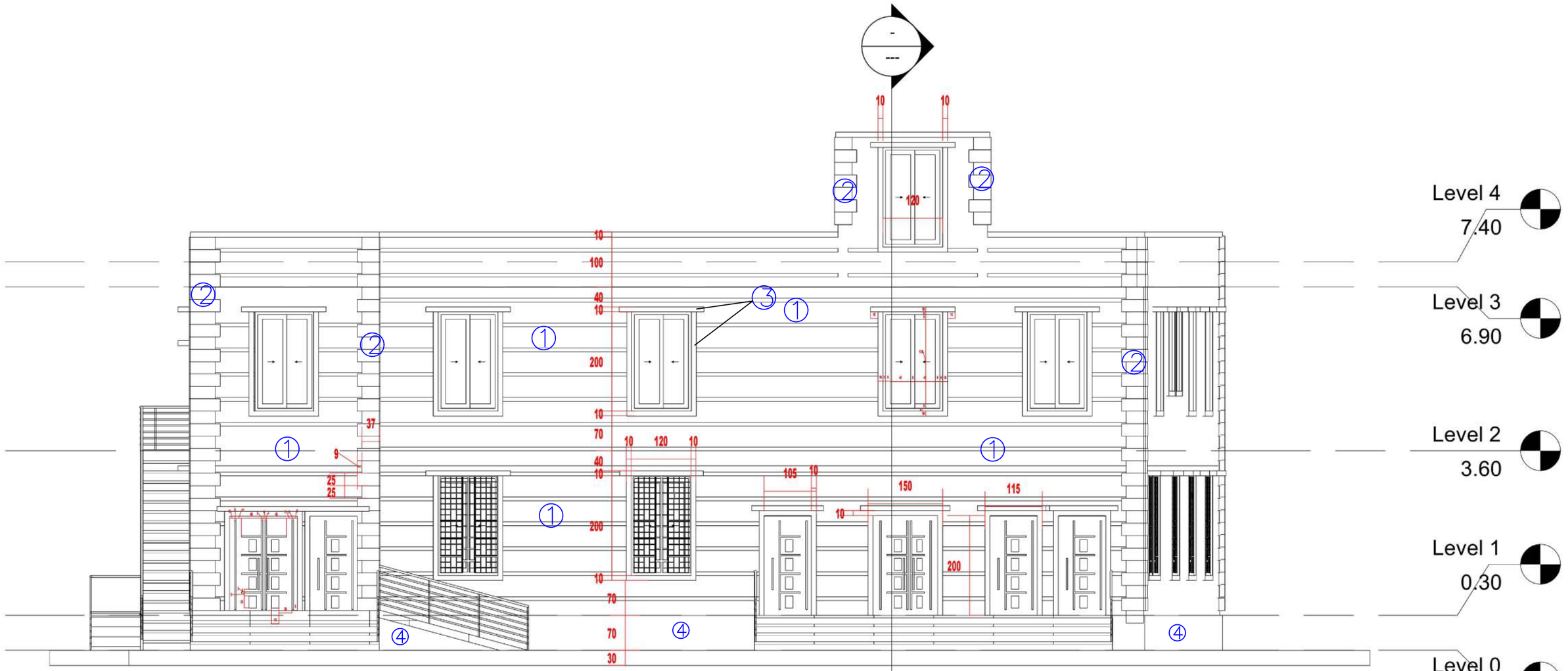
scale :

Date : 13 / 12 / 2023



SCHEDULE OF ELEVATION

MARK	DESCRIPTION
1	Making external cement cladding according to the specifications in the tables of quantities
2	Making external cement coverings and coloring them according to the specifications in the tables of quantities
3	Cement protrusion around the windows according to the specifications in the tables of quantities
4	BLAK STONE according to the specifications in the tables of quantities

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

SOUTH ELEVATION

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

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A13

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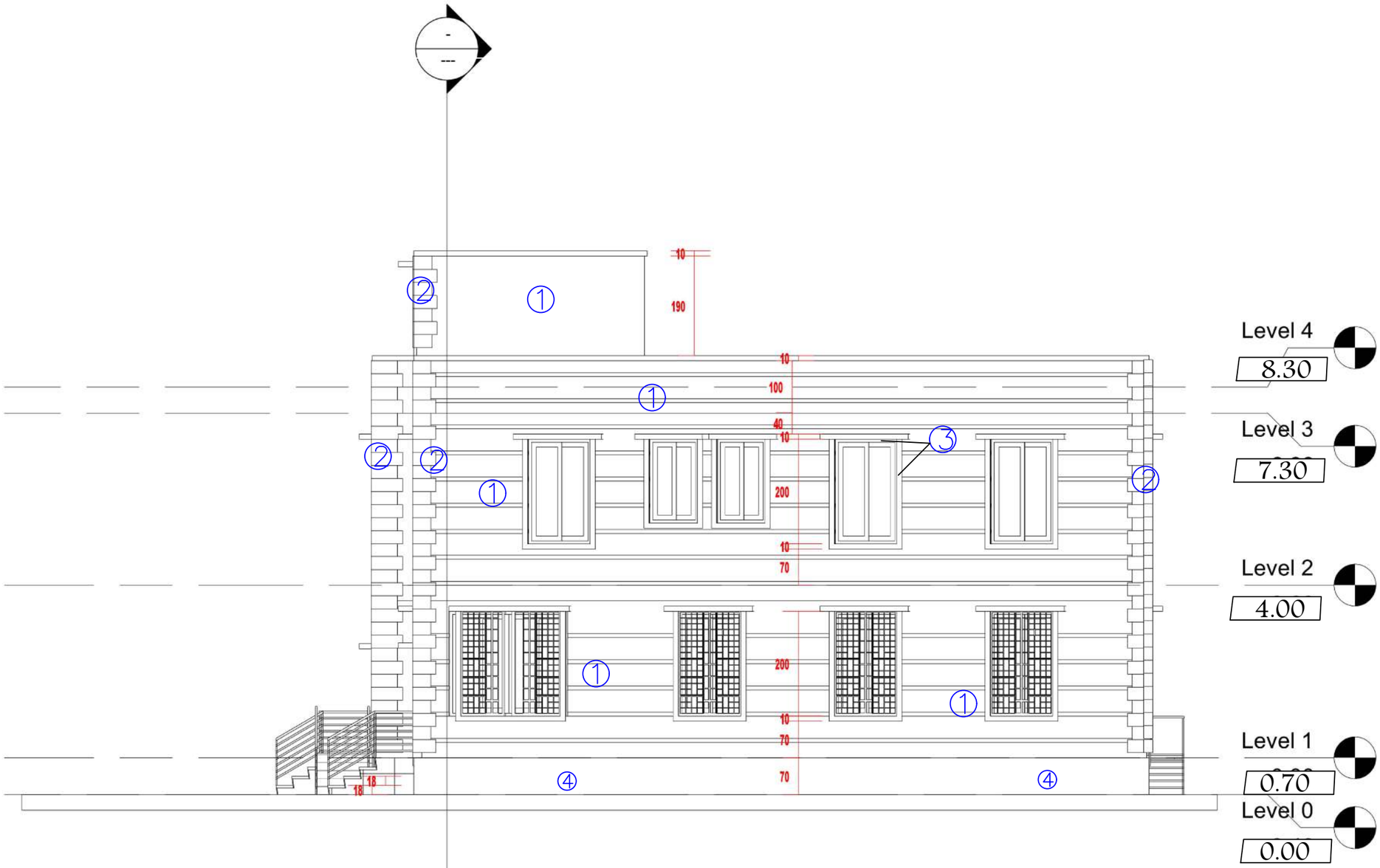
Date : 13 / 12 / 2023



SCHEDULE OF ELEVATION

MARK	DESCRIPTION
1	Making external cement cladding according to the specifications in the tables of quantities
2	Making external cement coverings and coloring them according to the specifications in the tables of quantities
3	Cement protrusion around the windows according to the specifications in the tables of quantities
4	BLAK STONE according to the specifications in the tables of quantities

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

EAST ELEVATION

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

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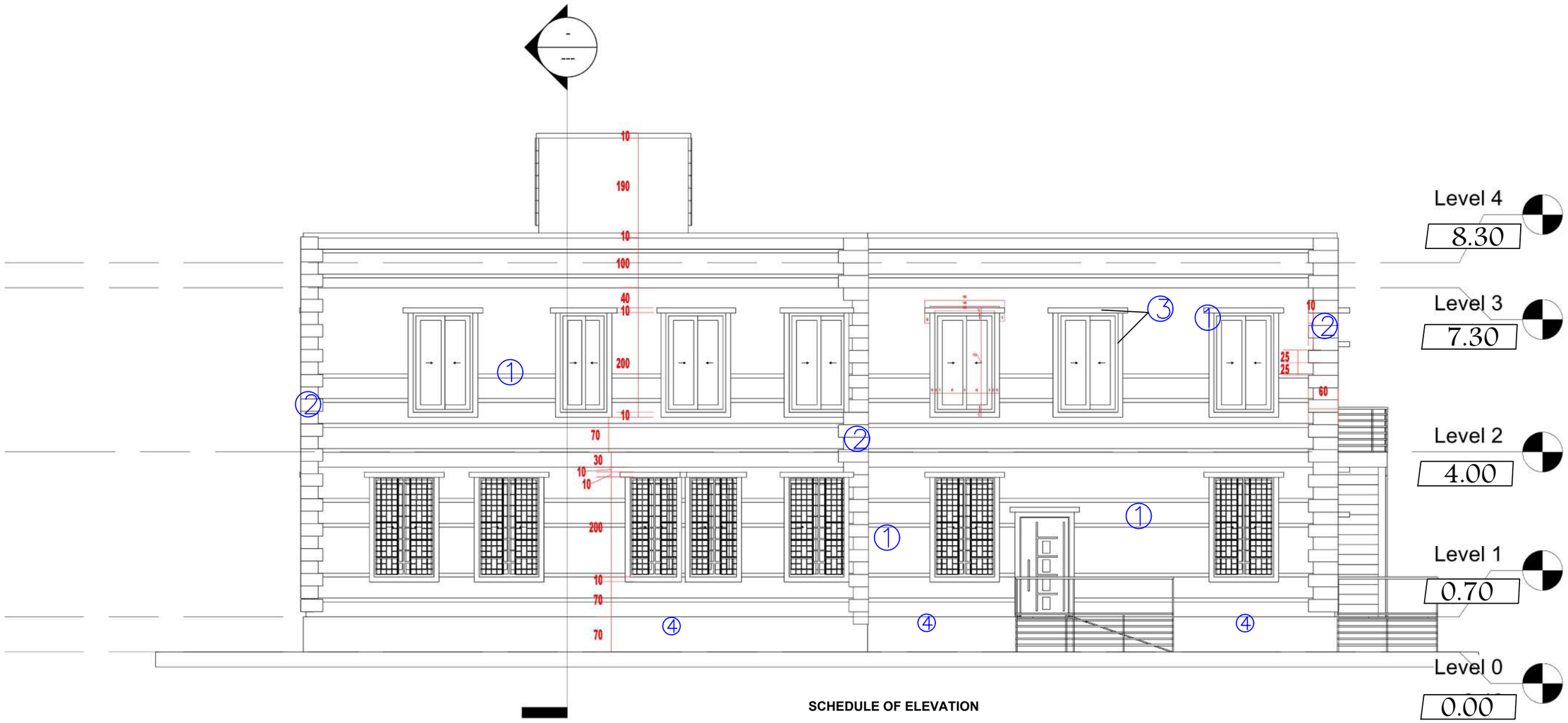
Date : 13 / 12 / 2023



SCHEDULE OF ELEVATION

MARK	DESCRIPTION
1	Making external cement cladding according to the specifications in the tables of quantities
2	Making external cement coverings and coloring them according to the specifications in the tables of quantities
3	Cement protrusion around the windows according to the specifications in the tables of quantities
4	BLAK STONE according to the specifications in the tables of quantities

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

NORTH ELEVATION

File name : alqaeda hospital – 2013–111.dwg

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Construction Plans

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Construction plans
SLD :single line diagram

File name : alqaeda hospital – 2013–111.dwg

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COLUMNS REMARKS

The dimensions and axis should be revised with the architectural drawings

The cement content for R.C. should be not less than 350kg ordinary Portland cement /m3 conditioning that the concrete strength is not less than 30 N/mm2 after 28 days from casting day

The used main steel and stirrups is amid steel of grade 60 .

The coasted concrete should be cured by spreading (or submerging) water twice daily in the morning and evening for a period not less than 7 days starting from the day after casting.

The constituents materials of concrete (sand , gravel , cement , water) should be free from impurities,dust,orgnic materials and agree with the requirements of specifications.

SURFACE REMARKS

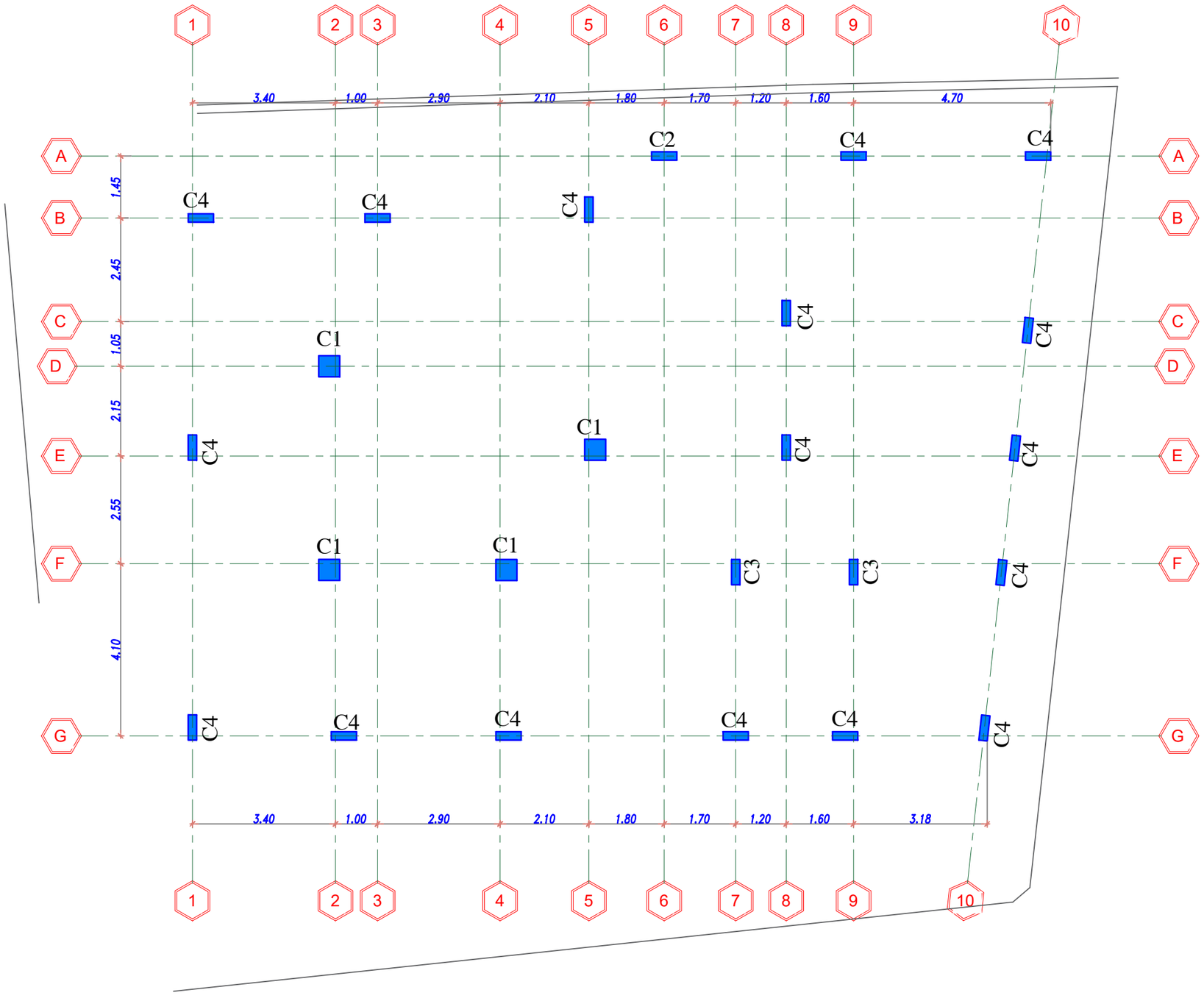
The used main steel is a high tensile steel of grade 60 .

The cement content for R.C. should be not less than 300kg ordinary Portland cement/m3 conditioning that the concrete strength is not less than 28 N/mm2 after 28 days from casting day.

The casted concrete should be cured by spreading (or submerging) water twice daily in the morning and evening for a period not less than 7 days starting from the day after casting.

MEDECINS SANS FRONTIERES	PROJECT TITLE : **YE120 - KILO Hospital YEMEN Mission**	BUILDING NAME : **New Support Services and med Offices Building -Version 1**	DRAWING TITLE : **Construction plans** **SLD :single line diagram** File name : alqaeda hospital – 2013–111.dwg	HQ stamp :	N° Date Issue R1 : 13 / 12 / 2023	Sheet N° : **C2** scale : Date : 13 / 12 / 2023

Axes and columns



C1	DIMENSION	MAIN BAR	STIRRUP
	500x500	16 Ø 16	3(5Ø 8/m)
C2	DIMENSION	MAIN BAR	STIRRUP
	200x750	12 Ø 16	3(5Ø 8/m)
C3	DIMENSION	MAIN BAR	STIRRUP
	200x650	10 Ø 16	2(5Ø 8/m)
C4	DIMENSION	MAIN BAR	STIRRUP
	200x550	10 Ø 16	2(5Ø 8/m)

-The columns condense at the top and bottom of the column at a distance of not less than 1meter .The amount of condensation is half the distance mentioned in the table of iron and dimensions for columns.

- The concrete resistance after 28 days is not less than 2.8 kg/cm2

-Iron stress 420 MPa

-The concrete cover of the columns is not less than 2.5 cm

-The length of the skewer signal that is connected to the pole of the next floor up is not less than 1 meter

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Construction plans
SLD :single line diagram

File name : alqaeda hospital – 2013–111.dwg

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C3

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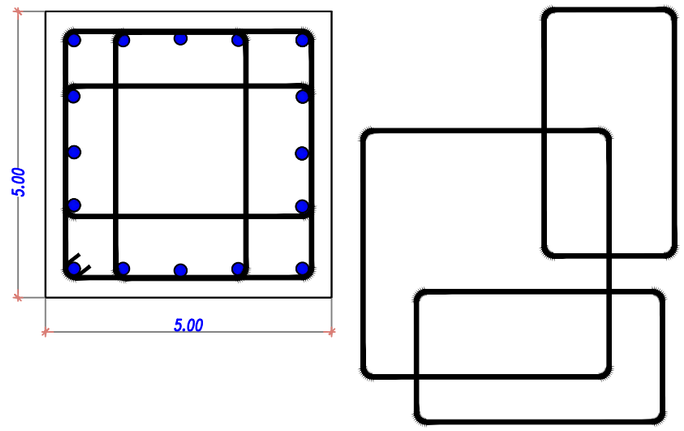
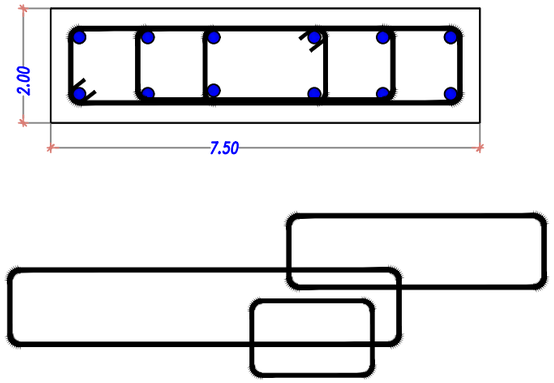
Column details

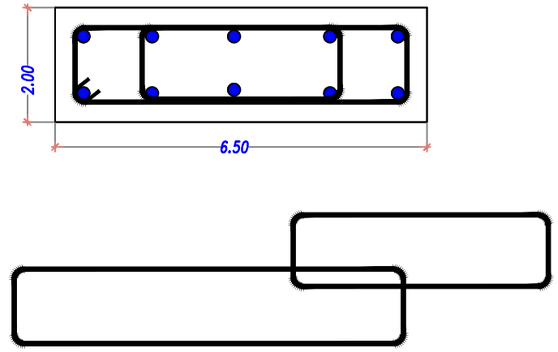
C1	DIMENSION	MAIN BAR	STIRRUP
	500x500	16 Ø 16	3(5Ø 8/m)



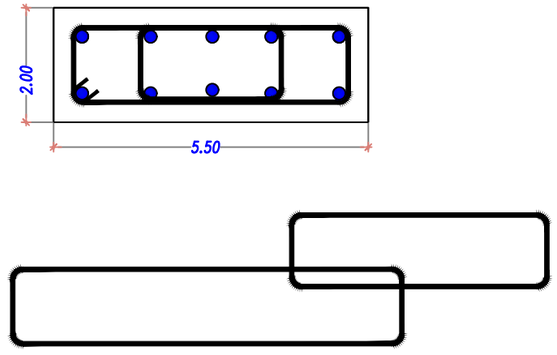
C2	DIMENSION	MAIN BAR	STIRRUP
	200x750	12 Ø 16	3(5Ø 8/m)



C3	DIMENSION	MAIN BAR	STIRRUP
	200x650	10 Ø 16	2(5Ø 8/m)



C4	DIMENSION	MAIN BAR	STIRRUP
	200x550	10 Ø 16	2(5Ø 8/m)



MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Construction plans
SLD :single line diagram

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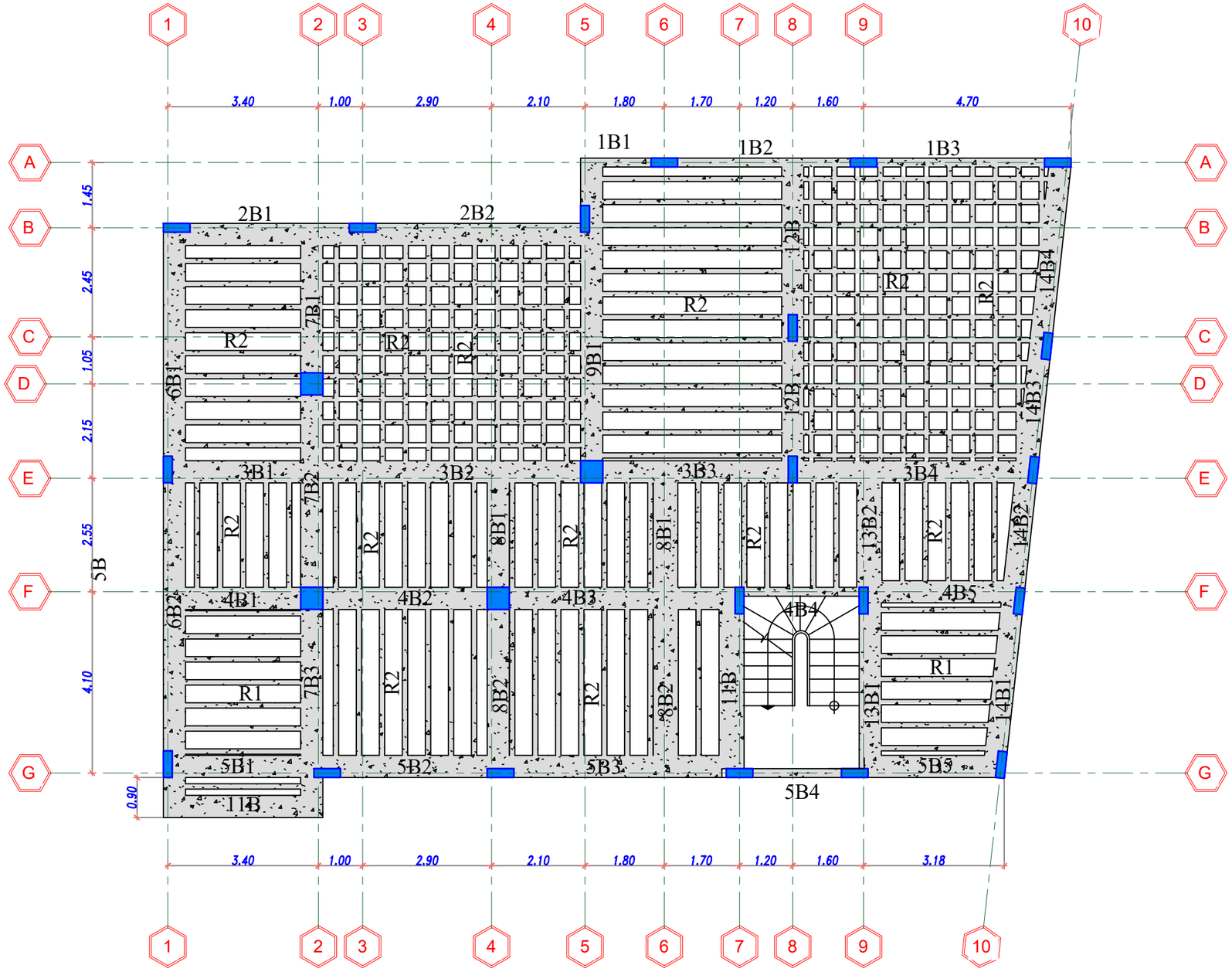
Roof bridges for the first and repeated floors



MEDECINS SANS FRONTIERES	PROJECT TITLE : **YE120 - KILO Hospital YEMEN Mission**	BUILDING NAME : **New Support Services and med Offices Building -Version 1**	DRAWING TITLE : **Construction plans** **SLD :single line diagram** File name : alqaeda hospital – 2013–111.dwg	HQ stamp :	N° Date Issue R1 : 13 / 12 / 2023
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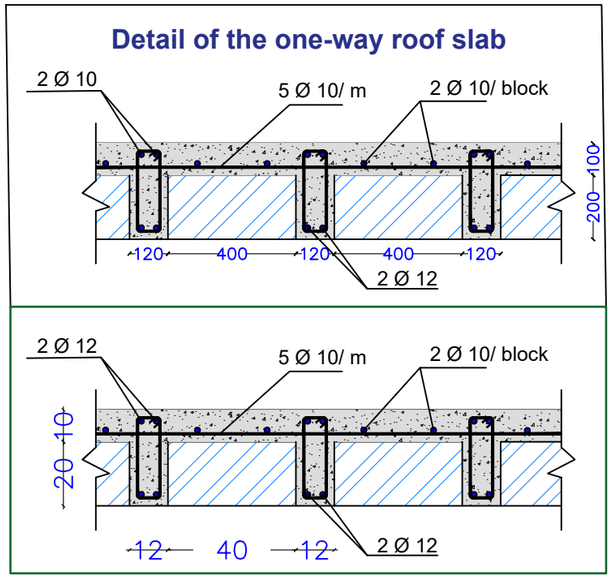
Tables of details of the reinforcement of the first and second floor roof beams

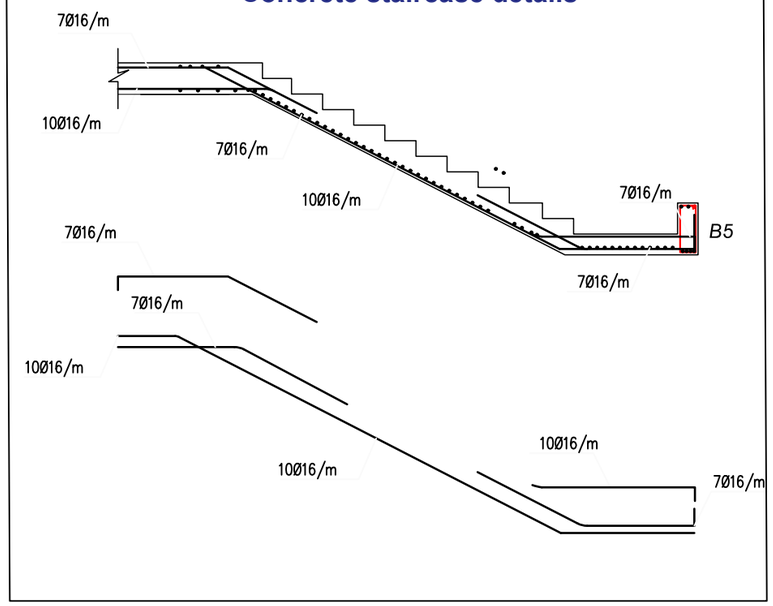
Details of the additional upper and lower iron	Reinforcing steel for stirrups	Reinforcing steel for stirrups		Expanded iron reinforcement		Dimensions in millimeters		Beam No.
		in the middle	Close to upport	Upper	Bottom	Height	wigth	
Add 3Ø16 1B1 1B2 Add 3Ø16 1B3		ϕ8/200mm	ϕ8/100mm	3Ø16	3Ø16	500	200	1B
Add 5Ø16 2B2 2B1 Add 1Ø16		ϕ8/130mm	ϕ8/130mm	4 Ø16	4Ø16	300	600	2B
Add 8Ø16 Add 2Ø16 3B1 3B2 3B3 3B4 Add 1Ø16		3ϕ8/130mm	3ϕ8/130mm	5Ø16	5Ø16	300	800	3B
Add 10Ø16 4B1 4B2 4B3 Add 5Ø16 4B5		2ϕ8/130mm	3ϕ8/100mm	7 Ø16	7Ø16	300	1000	4B
Add 4Ø16 5B1 5B2 5B3 Add 2Ø16 5B5		2ϕ8/130mm	2ϕ8/130mm	5 Ø16	5Ø16	300	600	5B
Add 3Ø16 Add 4Ø16 6B2 6B1		2ϕ8/130mm	2ϕ8/130mm	4 Ø16	4Ø16	300	550	6B
Add 3Ø16 Add 7Ø16 7B3 7B2 7B1 Add 3Ø16		3ϕ8/130mm	3ϕ8/110mm	7 Ø16	7Ø16	300	950	7B
Add 3Ø16 8B1 8B2		ϕ8/130mm	ϕ8/130mm	4 Ø16	4Ø16	300	500	8B
Add 3Ø16 9B1		2ϕ8/130mm	2ϕ8/130mm	7 Ø16	7 Ø16	300	700	9B
4B4 5B4		ϕ8/200mm	ϕ8/200mm	4 Ø16	4Ø16	500	200	4B4 5B4
11B1		ϕ8/130mm	ϕ8/130mm	5Ø16	5Ø16	300	550	11B
Add 3Ø16 12B1 12B2		2ϕ8/130mm	2ϕ8/130mm	6 Ø16	6Ø16	300	600	12B
Add 3Ø16 13B1 13B2		2ϕ8/130mm	2ϕ8/130mm	5 Ø16	5Ø16	300	600	13B
14B1 Add 3Ø16 14B1 Add 4Ø16 14B2 14B1		ϕ8/130mm	ϕ8/130mm	5Ø16	5Ø16	300	500	14B

The concrete resistance after 28days is not less than 2.8kg/cm2
Iron stress 420 MPa
The concrete cover of bridges and slabs is not less than 2.5 cm

Detail of the one-way roof slab



Concrete staircase details



MEDECINS SANS FRONTIERES

PROJECT TITLE :
YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :
New Support Services and med Offices Building -Version 1

DRAWING TITLE :
Construction plans
SLD :single line diagram

File name : alqaeda hospital – 2013–111.dwg

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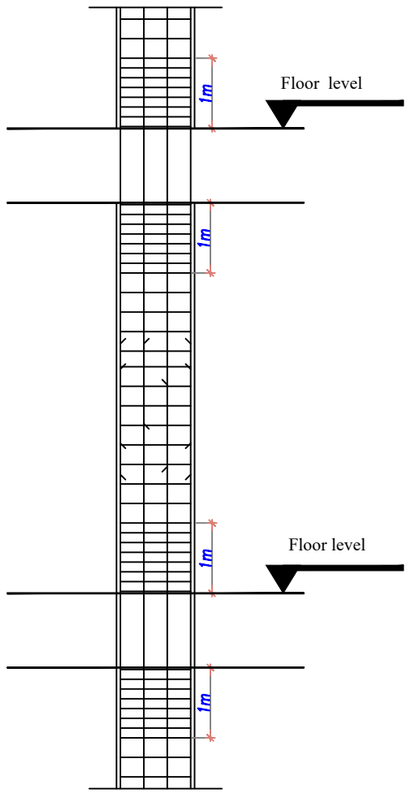
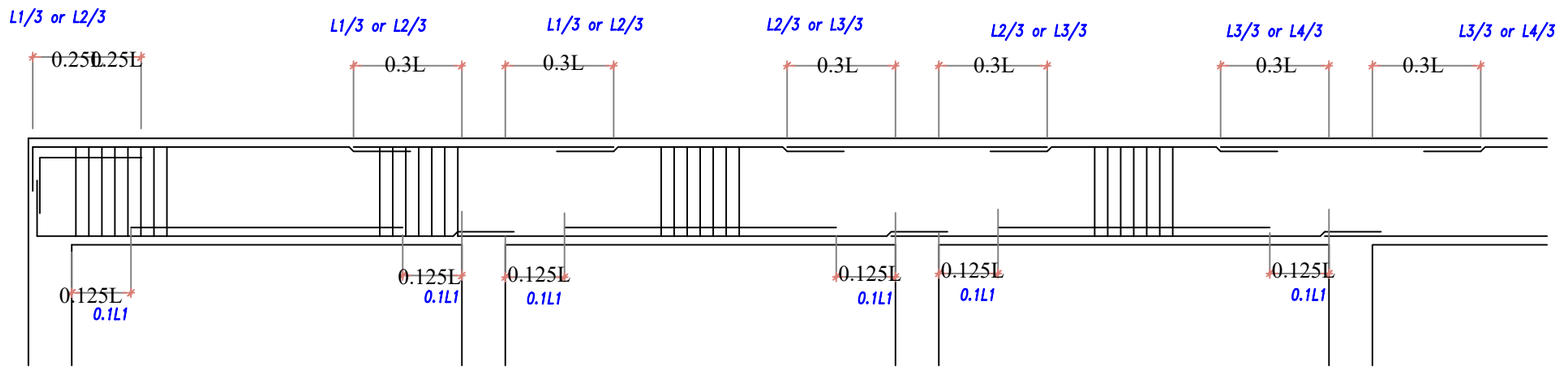
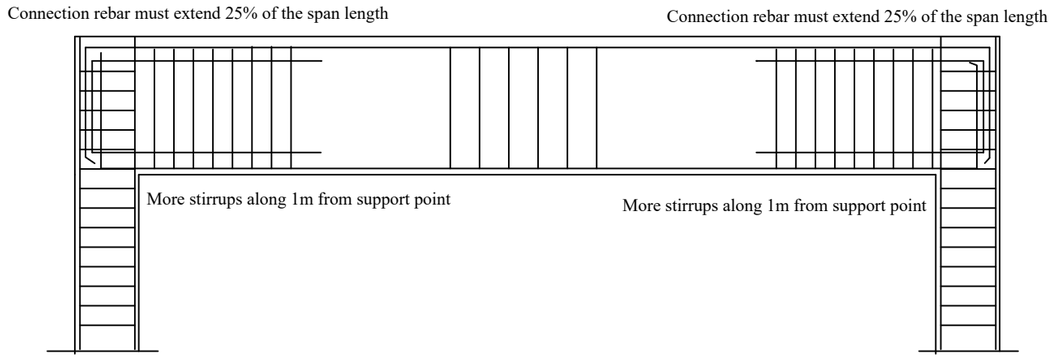


Models of condensation distances at the top and bottom of the column

Continuous beams





Continuous bridges

MEDECINS SANS FRONTIERES	PROJECT TITLE : **YE120 - KILO Hospital YEMEN Mission**	BUILDING NAME : **New Support Services and med Offices Building -Version 1**	DRAWING TITLE : **Construction plans** **SLD :single line diagram** File name : alqaeda hospital – 2013–111.dwg	HQ stamp :	N° Date Issue R1 : 13 / 12 / 2023	Sheet N° : **C12** scale : Date : 13 / 12 / 2023

Water supply Plans

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support
Services and med Offices
Building -Version 1

DRAWING TITLE :

File name : alqaeda hospital – 2013–111.dwg

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GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRE UNLESS OTHERWISE INDICATED.
2. ALL PIPE SIZES ARE IN MILLIMETRE UNLESS OTHERWISE SPECIFIED.
3. CONTRACTOR SHALL COORDINATE ALL BUILDERS WORK REQUIREMENT BASED ON DRAWINGS AND MATERIAL SUBMITTAL APPROVAL AND ALLOW SUCH WORK UNDER HIS CONTRACT.
4. AIR FLOW AND WATER FLOW IS IN L/S UNLESS OTHERWISE SPECIFIED.
5. ALL SERVICES RUNS AND CONNECTIONS, ACCESSORIES, ANCILLARY EQUIPMENT AND BUILDERS WORK SHALL BE PROVIDED TO SUIT
   THE EQUIPMENT INCLUDED BY THE CONTRACTOR, WHERE APPLICABLE AND WHERE INDICATED.
6. AC SYSTEMS DOCUMENTS WORKS SHALL BE READ AS ONE UNIT INCLUDING DRAWINGS, SCHEDULES, B.O.Q. AND SPECIFICATIONS.
7. THE DRAWINGS SHALL NOT BE SCALED FOR EXECUTING THE WORKS.
8. THE CONTRACTOR SHALL VERIFY ADEQUATE SPACES COORDINATE WITH OTHER DRAWINGS AND EXECUTE IN ACCORDANCE WITH THE APPROVED SHOP DRAWINGS.
9. PIPE AND DUCT ROUTING CAN BE MODIFIED TO SUIT FINAL EQUIPMENT SELECTION AND LOCATION. THE MODIFICATION NEEDS TO BE APPROVE BY THE SUPERVISING CONSULTANT.
10. COORDINATE WITH THE OTHER CONTRACTORS FOR RELATED AC SYSTEM WORKS.
11. PROVIDE CEILING ACCESS TO ALL EQUIPMENT PIPE CONNECTIONS INSTALLED ABOVE SUSPENDED CEILING FOR INSPECTION AND MAINTENANCE.
12. ALL OPENINGS FOR PIPES SHALL NOT IN ANY WAY PENETRATE A STRUCTURAL RIB ON BEAMS UNLESS OTHERWISE AUTHORIZED
13. FURNISH AND INSTALL UNIONS OR FLANGES FOR ALL PIPING SYSTEM WHERE REQUIRED FOR SERVICING AND MAINTENANCE.
14. COORDINATE OPENINGS THRU FLOORS, WALLS AND ROOF WITH ARCHITECTURAL AND STRUCTURAL DRAWINGS.
15. ALLOW CLEARANCE FOR SERVICING AND MAINTENANCE OF EQUIPMENT AS RECOMMENDED BY MANUFACTURER AND AS REQUIRED.
16. IN CASE OF CONFLICT OF MECHANICAL WORK SHOWN BETWEEN MECHANICAL AND ARCHITECTURAL DRAWINGS, THE MECHANICAL DRAWING SHALL PREVAIL.
17. ALL MECHANICAL/ELECTRICAL OPERATION AND PERFORMANCE CONTROLS WHETHER STATED IN THE DESIGN DOCUMENTS OR NOT
    SHALL BE INCLUDED TO THE PERTINENT MECHANICAL SYSTEM.
18. INSTALLATION OF ALL EQUIPMENTS AND OTHER ITEMS SHALL BE PER MANUFACTURER RECOMMENDATION.
19. ALL MATERIALS USED SHALL BE PER CLIENT VENDOR LIST AND SPECIFICATIONS.

HVAC GENERAL NOTES

1. ALL IN DOOR UNIT & FAHU DRAIN LINE SHALL BE CONNECTED TO NEAREST FLOOR DRAIN.
2. INDOOR UNIT / FAHU, THERMOSTATS AND ACCESS PANELS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED ARCHITECTURAL AND INTERIOR DECORATION DRAWINGS.
2. ALL DUCT WORK AND PIPE WORK IN AREAS WITH SUSPENDED CEILING SHALL RUN IN THE VOID OVER THE SUSPENDED CEILING VOID UNLESS OTHERWISE NOTED.
4. DOOR LOUVERS INSTALLED ON THE DOORS SHALL BE RATED TO MATCH THE DOOR FIRE RATING.
5. AIR CONDITIONING, VENTILATION DUCT WORK AND PIPE WORKS SHALL BE INSULATED AS SPECIFIED.
6. THERMOSTAT ELEVATION SHALL BE AS PER MANUFACTURE RECOMMENDATION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE TO INSTALL ALL NECESSARY ATTENUATORS AND VIBRATION ISOLATORS TO ENSURE THE SPECIFIED NOISE LEVELS.
8. THE DUCT SIZES SHOWN IN THE DRAWINGS ARE TO BE UPDATED BY THE CONTRACTOR TO PROVIDE DUCT SIZES BASED ON ACTUAL EQUIPMENT SELECTED.
9. CONTRACTOR TO SUBMIT STATIC PRESSURE CALCULATIONS FOR ALL FAHUS AND FANS SUPPORTED WITH SELECTING TABLES, CHARTS, DOCUMENTS TO ENGINEERS REVIEW AND APPROVAL PRIOR PLACING THE PURCHASE ORDER FOR THE EQUIPMENT.
11. ALL PIPES AND DUCT CONNECTIONS TO EQUIPMENT SHALL BE THROUGH A FLEXIBLE CONNECTION.
12. ALL OUTSIDE AIR TERMINALS ARE TO BE PROVIDED WITH ¼" GALVANIZED WIRE MESH SCREENS, ALL DUCT LINER INSULATION SHALL HAVE FACTORY APPLIED WOVEN GLASS FIBER FACING ON AIR SIDE.
13. DUCT DIMENSION TO BE INCREASED TO ACCOMMODATE DUCT LINER, TRANSITION FROM DUCT TO DUCT WRAP SHALL BE MADE WITH A ZEE TYPE NOSING OF TERMINATION OF THE LINING.
14. AS IT IS NOT POSSIBLE TO INDICATE THE OFFSETS, FITTINGS, VALVES OR SIMILAR ITEMS WHICH MAY BE REQUIRED TO MAKE A COMPLETE OPERATING SYSTEM DO NOT SCALE THE DRAWINGS.
15. CONTRACTOR TO CAREFULLY INVESTIGATE CONDITIONS AFFECTING THE WORKS AND THE INSTALLATION TO BE DONE IN SUCH A MANNER THAT INTERFERENCE BETWEEN PIPES, CONDUITS, DUCTS, AND EQUIPMENTS, ARCHITECTURAL AND STRUCTURAL FEATURES ARE AVOIDED.
16. INDOOR (FAC) UNIT SHALL SELECTED TO PROVIDE THE SPECIFIED AIR QUANTITIES. THE CONTRACTOR MAY IF NECESSARY SELECT A UNIT WHICH PROVIDE NOT GRATER NOR LESS THEN 5% OF SPECIFIED AIR QUANTITIES.
17. FLEXIBLE DUCTS TO ANY OUTLET SHALL NOT EXCEED A LENGTH OF 1.5 M AND SHALL BE MADE WITH STEEL CLAMPS ON BOTH ENDS.
18. ALL THE EXPOSED REFRIGERANT PIPES ON THE ROOF SHALL BE INSULATED WITH FLEXIBLE ELASTIC CELLULAR INSULATION 20MM THICK AND COVERED WITH 0.4MM RIBBED ALUMINIUM JACKET.
19. ALL AIR OUTLETS SHALL BE SHALL BE SELECTED FOR A MAXIMUM AIR NOISE LEVEL 30 NC.
20. ALL DUCT WORK SHALL BE FABRICATED AND INSTALLED ACCORDING TO LATEST EDITION OF SMACNA STANDARD.
21. TYPICAL INSULATION DETAILS ARE SHOWN IN GENERAL GUIDELINES AND SHOULD BE CONSTRUCTED AS SHOP DRAWINGS. CONTRACTOR SHALL
    PREPARE DETAILED INSULATION SHOP DRAWINGS INCLUDING ALL NECESSARY FASTENERS, ANCHORS, AND REQUIRED FOR COMPLETE AND APPROVED INSTALLATION.
22. THE OUT DOOR EQUIPMENT EXPOSED TO ATMOSPHERE SHALL HAVE ANTI-CORROSION COATING
23. INSTALL THE TEMPERATURE SENSOR IN THE RETURN AIR PLENUM AND INSTALL THE THERMOSTATS OF THAT FLOOR IN SUPERVISOR / VICE PRINCIPAL / ADMINISTRATION ROOM
24. INSTALL THE THERMOSTATS OF ALL CLASS ROOM, PHYSICAL LAB, COKING LAB , COMPUTER LAB AND CHEMICAL LAB IN PREPARATION AREA / SUPERVISED AREA.
25. ANY DUCT CROSSING THE FIRE RATED WALL SHALL HAVE FIRE DAMPER AND THE SLAB OR WALL OPENING OUTSIDE THE DUCT /PIPE SHALL BE SEALED WITH FIRE SEALANT WITH FIRE RATING NOT LESS THAN THE FIRE RATING OF THE MEMBER.
26. CONDENSATE DRAIN TO BE CONNECTED TO NEAREST FLOOR DRAIN.
27. OUTDOOR AND INDOOR DESIGN TEMPERATURES FOR COOLING HAVE TO COMPLY WITH (SASO 2681.T3)- INDOOR TEMPERATURE OF 25° C DB/19° C WB AND OUTDOOR TEMPERATURE OF 46°C/24°C.

WATER SUPPLY GENERAL NOTES

1. WATER DISTRIBUTION SYSTEM SHALL BE PER INTERNATIONAL PLUMBING AND UNIFORM PLUMBING CODE.
2. COORDINATE WITH THE OTHER CONTRACTORS FOR RELATED WATER DISTRIBUTION WORKS.
3. CONNECTIONS TO ALL FIXTURES SHALL BE THROUGH ISOLATING ANGLE VALVE.
4. PROVIDE WATER HAMMER ARRESTOR AT THE END OF EACH WATER PIPE IN TOILETS AND KITCHEN AND WHEREVER REQUIRED.
5. THE WATER HAMMER ARRESTORS SHALL BE EQUIPPED WITH GATE VALVE, SIZE MINIMUM EQUAL TO WHA CONNECTION SIZE.
6. MAINTAIN REQUIRED PRESSURE AT EACH FLOOR BY USING PRESSURE REDUCING VALVES. IF REQUIRED
7. ALL WATER PIPES RUNNING AT ROOF SHALL BE PROVIDED WITH INSULATION AND ALUMINUM JACKETING.
8. EACH RISER SHALL HAVE 3/4" AUTOMATIC AIR VENT AT THE TOP UNLESS OTHERWISE INDICATED.
9. THE DISTANCE BETWEEN THE COLD, HOT WATER PIPES RUNNING INSIDE THE BATHROOM SHALL BE MIN.150mm
10. PROVIDE MANUAL ISOLATING VALVES FOR ALL PIPES EQUIPMENTS.
11. HVAC AND PLUMBING WORKS IN KITCHEN SHALL BE COORDINATED WITH KITCHEN EQUIPMENT VENDOR.
12. ALL COLD AND HOT WATER DISTRIBUTION PIPES SHALL BE PER APPROVAL DESIGN DOCUMENTS.
13. PIPES TO HAVE PROPER ANCHORING AND EXPANSION JOINTS TO ACCOMMODATE THERMAL AND STRUCTURAL MOVEMENT OR EXPANSION
14. NO PORTION OF THE ANY PLUMBING SYSTEM SHALL BE CONCEALED UNTIL TESTED, INSPECTED AND APPROVED
15. INDIVIDUAL ELECTRIC WATER HEATER WILL BE INSTALLED IN EACH TOILET AS PER IPC & UPC.
16. ELECTRIC WATER HEATER STORAGE TYPE SHALL AT 60 C°TO PLUMBING FIXTURE.
17. ALL THE PIPE PENETRATIONS IN WALL AND SLABS SHALL BE THROUGH PIPE SLEEVE FILLED WITH SEALANT.
18. POTABLE WATER PIPE SHALL BE PURGED OF DELETERIOUS MATTER AND DISINFECTED IN ACCORDANCE WITH IPC.
19. VACUUM BREAKER SHALL BE INSTALLED IN WATER SUPPLY LINE TO PERENNIAL SPRAY.
20. VACUUM BREAKER SHALL BE INSTALLED IN WATER SUPPLY LINE TO HOSE BIB.

WATER SUPLY GENERAL NOTES

1. WATER SUPLY SYSTEM SHALL BE PER INTERNATIONAL PLUMBING AND UNIFORM PLUMBING CODE.
2. THE WATER SUPLY SYSTEM DOCUMENTS WORKS SHALL BE READ AS ONE UNIT INCLUDING DRAWINGS, SCHEDULES, B.O.Q. AND SPECIFICATIONS.
3. COORDINATE WITH THE OTHER CONTRACTORS FOR RELATED WATER SUPLY SYSTEM WORKS.
4. ALL WASTE, SANITARY WATER SUPLY AND VENT PIPES SHALL BE uPVC CLASS 4 MATERIAL CONFORMING TO SASO STANDARD.
5. ALL INDOOR UNITS DRAIN LINE SHALL BE CONNECTED TO NEAREST FLOOR DRAIN.
6. ACCESS POINTS TO BE CAREFULLY SITED TO ALLOW THE SERVICE ENTRY FOR CLEANING AND TESTING.
7. FOR ALL BENDS THAT ARE AT THE BASE OF STACKS, PROVIDE A 45 OR 90 DEGREE LONG RADIUS TYPE ELBOW.
8. ALL AC DRAINS SHALL CONNECTED TO WASTE PIPE SYSTEM VIA THE NEAREST FLOOR TRAP OR WASTE STACK.
9. SLOPES OF HORIZONTAL RUNS SHALL BE AS FOLLOWS. - FOR Ø110mm PIPE ---- 1:60 - FOR Ø150mm PIPE ---- 1:90 - FOR Ø200mm PIPE ---- 1:120
10. UNLESS OTHERWISE INDICATED, ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METERS.

FIRE PROTECTION GENERAL NOTES

1. THE INTENT OF THE DRAWINGS IS TO PROVIDE A COMPLETE FIRE PROTECTION SYSTEM.THE SYSTEMS PROVIDED SHALL CONFORM TO THE DETAILS STATED IN THE SPECIFICATIONS & SHOWN ON THE DRAWINGS. ITEMS OR WORK NOT SHOWN OR SPECIFIED, BUT REQUIRED FOR A COMPLETE FIRE PROTECTION SYSTEM, SHALL BE PROVIDED & SHALL CONFORM TO ACCEPTED TRADE PRACTICES, LOCAL CODES AND GOVERNING AUTHORITIES.
2. COORDINATE WITH THE OTHER CONTRACTORS FOR RELATED FIRE PROTECTION SYSTEM WORKS.
3. COORDINATE THE EXACT LOCATION OF ALL FIRE PROTECTION EQUIPMENT AND DEVICES WIT ARCHITECTURAL DRAWINGS PRIOR TO INSTALLATION.
4. WHOLE FIRE WATER SYSTEM SHALL BE HYDROSTATICALLY TESTED AT 1.5 TIMES AT THE WORKING PRESSURE FOR 2HRS.
5. ALL PIPES SHALL BE GALVANIZED SEAMLESS CARBON STEEL PIPE PER ASTM A53 GRADE B SCH-40 (OR) PER SPECIFICATIONS.
6. ALL FITTINGS SIZE UPTO Ø50mm SHALL BE OF GALVANIZED MALLEABLE IRON.
7. ALL FITTINGS SIZE Ø65mm AND ABOVE SHALL BE OF DUCTILE IRON / CARBON STEEL.
8. CONNECTIONS SHALL BE WELDED / GROOVED FOR Ø65mm AND ABOVE. CONNECTION SHALL BE THREADED FOR PIPES 50mm AND BELOW.
9. AAV SHALL BE PROVIDE AT TOP OF THE FIRE RISER.

PARTICULAR NOTES - HVAC

1. THE MECHANICAL TENDER DRAWINGS PROVIDES THE MECHANICAL SYSTEM DESCRIPTION AND OUTLINE. HOWEVER THE CONTRACTOR SHALL CONDUCT THE SITE SURVEY FOR MECHANICAL SYSTEM AND TAKE INTO CONSIDERATION ALL TECHNICAL AND COMMERCIAL ASPECT TO PROVIDE FULLY FUNCTIONAL SYSTEM PER DESIGN INTENT.
2. CONTRACTOR SHALL HIGHLIGHT ANY ONSITE CONDITIONS / DESIGN ISSUES WHICH HE DEEMS NECESSARY TO INCORPORATE FOR HEALTH AND HYGIENE FOR THE BUILDING OCCUPANT. THE CONTRACTOR SHALL TAKE ALL THE STEPS NECESSARY FOR THE HEALTH AND HYGIENE OF THE OCCUPANT DURING CONSTRUCTION TILL OCCUPANCY.
3. THE CONTRACTOR SHALL BE COMPLETELY FAMILIAR WITH THE NATIONAL AND INTERNATIONAL CODES PERTAINING TO SCHOOLS AND APPLY HIS KNOWLEDGE TO VERIFY THE DESIGN AND PERFORM CONSTRUCTION WORK PER CODES AND STANDARDS.
4. THE CONTRACTOR SHALL PERFORM DESIGN VERIFICATION FOR MECHANICAL SYSTEM. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A COMPLETE FUNCTIONAL SYSTEM PER DESIGN INTENT.
5. THE CONTRACTOR SHALL ENSURE THAT THE MECHANICAL DEMOLITION WORK ON THE EXISTING DAMAGED EQUIPMENT AND DUCTWORK, PIPE-WORK IS INCLUDED IN THE SCOPE.
6. WHEREVER THE TENDER DRAWINGS SHOWS TO RE-USE THE EXISTING FCUS, THE CONTRACTOR SHALL REMOVE, CLEAN, REPAIR, REPLACE ANY DAMAGED PART AND RE-USE THE FCU. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO TEST COMMISSION AND BALANCE THE EQUIPMENT AND PROVIDE A FULLY FUNCTIONAL SYSTEM.
7. WHEREVER THE TENDER DRAWING SHOWS TO RE-USE THE EXISTING DUCTWORK, THE CONTRACTOR SHALL REMOVE, CLEAN (STERILIZE) AND REPAIR ANY DAMAGED PART AND RE-USE THE DUCT WORK. DURING THESE ACTIVITY THE CONTRACTOR SHALL COORDINATE WITH SITE ARCHITECT, STRUCTURAL AND ELECTRICAL DISCIPLINES.
8. EVEN THOUGH THE TENDER DRAWING REQUIRES TO RE-USE THE EXISTING DUCTWORK, THE CONTRACTOR SHALL CHECK THE STRUCTURAL DRAWING, WHICH HAS THE MARKED AREAS TO REPAIR THE SOFFIT. THE CONTRACTOR SHALL ACCOUNT IN HIS SCOPE TO REMOVE THE DUCTWORK, STORE, CLEAN AND RE-USE AFTER SOFFIT IS REPAIRED.
9. CONTRACTOR SHALL ENSURE THAT ANY NEW HVAC EQUIPMENT SHALL COMPLY WITH LATEST AUTHORITY REGULATIONS ON EFFICIENCY AND USE ENVIRONMENTAL FRIENDLY REFRIGERANTS.
10. CONTRACTOR SHALL STUDY THE RELEVANT INTERDISCIPLINARY DRAWINGS AND PROVIDE PROVISIONS TO CATER THE OTHER SERVICES FOR FULLY FUNCTIONAL BUILDING.
11. ANY DUCT CROSSING THE FIRE RATED MEMBER SHALL HAVE A FIRE DAMPER AND THE OPENING SHALL BE SEALED WITH FIRE SEALANT WITH RATING NOT LESS THAN THE FIRE RATED WALL.
12. EVEN THOUGH THE TENDER DRAWING SHOWS TO USE THE EXISTING HVAC SYSTEM, THE CONTRACTOR SHALL ENSURE THE SYSTEM INTEGRITY AND CLEANLINESS FOR HEALTH OF THE OCCUPANT. THE WHOLE BUILDING SYSTEM IS THE CONTRACTOR'S RESPONSIBILITY.
13. WHEN THE TENDER DRAWING SHOWS TO RE-USE THE DUCTWORK, WHICH ARE NOT PROPERLY CAPPED, THE CONTRACTOR NEEDS TO CLEAN AND STERILIZE ALL THE PARTS OF THE DUCTWORK SUCH AS DUCT, DUCT ACCESSORIES, AIR OUTLETS ETC.
14. IT IS THE RESPONSIBILITY OF CONTRACTOR TO FURNISH FULLY FUNCTIONAL HVAC SYSTEM.

PARTICULAR NOTES -WATER SUPPLY

15. THE CONTRACTOR SHALL STUDY THE SITE LAYOUT. IDENTIFY THE SOURCE OF WATER FOR DIFFERENT USES. IDENTIFY WATER SUPPLY CONNECTION FROM NWC, WELL WATER (IF SPECIFIED), FLUSHING WATER (IF SPECIFIED), AND SWEET WATER (IF SPECIFIED).
16. THE CONTRACTOR SHALL CARRY OUT A DESIGN VERIFICATION FOR ALL THE SITE UTILITIES SUCH AS WATER TANKS, BUILDING OVERHEAD TANKS, HOLDING TANKS, SEWAGE MAN-HOLES, PUMP DUTY (FLOW AND HEAD).
17. THE EXISTING SITE SHOWS THE GREY WATER TREATMENT, STORAGE AND USAGE OF TREATED GREY WATER FOR WC FLUSHING IN THE MAIN TOILET OF TEACHING BUILDING. THE SYSTEM IS NOW DELETED
18. FOR THE DRAWING WHERE IT IS SHOWN THAT THE WATER SUPPLY NETWORK IS AVAILABLE. THE CONTRACTOR SHALL CHECK THE INTEGRITY FOR EXISTING PIE WORK FOR LEAKAGE, BLOCKAGE, ANY CONTAMINATION AND TAKE PROPER ACTIONS TO RECTIFY THE FAULT.
19. THE CONTRACTOR SHALL CARRY FORWARD WITH THE REMAINING WORK FROM THE EXISTING NETWORK. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE WATER TO THE FINAL POINT OF CONNECTION WITH PROPER FLOW, PRESSURE AND CLEANLINESS.
20. THE CONTRACTOR SHALL ENSURE THAT THE SWEET WATER SUPPLY WHICH IS USED FOR DRINKING PURPOSE IS HIGHEST LEVEL OF CLEANUNESS.
21. AS THE SCHOOL PROJECT HAS VARIOUS TYPE WATER USAGE SUCH AS COOKING LABORATORIES, CHEMICAL LABORATORIES, KITCHEN, TOILETS, DRINKING WATER FOUNTAINS ETC., THE CONTRACTOR SHOULD TAKE UTMOST CARE TO AVOID BACK FLOWS AND BACK SIPHON AGE WHICH MAY EFFECT IN CROSS CONTAMINATION.
22. THE CONTRACTOR SHALL TEST THE WHOLE WATER SUPPLY SYSTEM. THE TESTING SHALL BE DONE FOR BOTH THE WATER SUPPLY SYSTEM AND NEW WATER SUPPLY SYSTEM.
23. WHILE TESTING THE EXISTING WATER SUPPLY NETWORK, IF THE CONTRACTOR IDENTIFIES ANY DAMAGED WORK, LEAKAGE. THE CONTRACTOR IS RESPONSIBLE TO REPAIR AND CONDUCT THE TEST FOR SATISFACTORY PERFORMANCE
24. THE CONTRACTOR SHOULD TEST, BALANCE AND COMMISSION BOTH THE EXISTING AND NEW WATER SUPPLY SYSTEM. THE CONTRACTOR SHALL TAKE PROPER ACTION TO MAKE SYSTEM FUNCTIONAL
25. IT IS THE RESPONSIBILITY OF CONTRACTOR TO FURNISH FULLY FUNCTIONAL FIRE WATER SUPPLY SYSTEM.

PARTICULAR NOTES -WATER SUPLY

26. THE CONTRACTOR SHALL STUDY THE SITE LAYOUT. IDENTIFY THE EXTERNAL WATER SUPLY NETWORK. COORDINATE WITH INFRASTRUCTURE NETWORK TO CONNECT THE BUILDING WATER SUPLY.
27. CONTRACTOR SHALL STUDY THE INVERT LEVELS OF EXTERNAL MAN-HOLES AND SHOULD CONNECT THE BUILDING WATER SUPLY TO WATER SUPLY INFRASTRUCTURE NETWORK.
28. WHEREVER THE TENDER DRAWING INDICATES, WATER SUPLY PIPE IS INSTALLED AT SITE. THE CONTRACTOR SHALL CLEAN THE EXISTING WATER SUPLY PIPING SYSTEM. FLUSH THE PIPING SYSTEM AND ENSURE THAT THE PIPING SYSTEM IS FREE FROM BLOCKAGE, DAMAGE OR LEAKAGE.
29. THE CONTRACTOR SHALL TEST THE WHOLE WATER SUPLY SYSTEM. THE TESTING SHALL BE DONE FOR BOTH THE EXISTING WATER SUPLY SYSTEM AND NEW WATER SUPLY SYSTEM.
30. WHILE TESTING THE EXISTING WATER SUPLY NETWORK, IF THE CONTRACTOR IDENTIFIES ANY DAMAGED WORK, LEAKAGE. THE CONTRACTOR IS RESPONSIBLE TO REPAIR AND CONDUCT THE TEST FOR SATISFACTORY PERFORMANCE
31. THE CONTRACTOR SHOULD TEST, BALANCE AND COMMISSION BOTH THE EXISTING AND NEW WATER SUPLY SYSTEM. THE CONTRACTOR SHALL TAKE PROPER ACTION TO MAKE SYSTEM FUNCTIONAL
32. THE CONTRACTOR SHALL COORDINATE WITH SITE ARCHITECT TO GET PROPER SLOPE IN THE WET AREA TOWARDS FLOOR DRAIN.
33. THE CONTRACTOR SHALL COORDINATE WITH SITE ARCHITECT TO GET PROPER SLOPE ON ROOF TOWARDS ROOF DRAIN.
34. CONTRACTOR SHALL ENSURE THAT THE FAN COIL UNITS AND FRESH AIR HANDLING UNITS HAVE CONDENSATE RAIN. THE CONDENSATE DRAINS SHALL HAVE PROPER SLOPES AND SHALL BE CONNECTED TO NEAREST FLOOR DRAIN.
35. IT IS THE RESPONSIBILITY OF CONTRACTOR TO FURNISH FULLY FUNCTIONAL WATER SUPLY SYSTEM.

PARTICULAR NOTES -FIRE FIGHTING

1. THE CONTRACTOR SHALL STUDY THE SITE LAYOUT. IDENTIFY THE EXTERNAL FIRE-FIGHTING NETWORK. COORDINATE WITH INFRASTRUCTURE NETWORK TO CONNECT THE BUILDING.
2. CONTRACTOR SHALL TEST AND COMMISSION THE FIRE PUMPING SYSTEM.
3. CONTRACTOR SHALL PERFORM HYDRAULIC CALCULATIONS OF THE FIRE FIGHTING SYSTEM, SUBMIT THE CALCULATIONS FOR CLIENT'S REPRESENTATIVE APPROVAL.
4. THE CONTRACTOR SHALL USE THE RESULTS FROM HYDRAULIC CALCULATION FOR FIRE PUMP SELECTION.
   THE CONTRACTOR SHALL USE THE RESULTS OF HYDRAULIC CALCULATIONS FOR FINAL FIRE WATER PIPE SIZING. THE CONTRACTOR SHALL PREPARE THE SHOP DRAWINGS BASED ON THESE CALCULATION.
5. CONTRACTOR SHALL COMPLY WITH ALL THE APPLICABLE CHAPTERS OF NFPA AND LOCAL CIVIL DEFENCE. IT IS THE RESPONSIBILITY OF CONTRACTOR TO PERFORM DESIGN INTEGRITY VERIFICATION WITH NFPA AND LOCAL CIVIL DEFENCE.
6. IT IS RESPONSIBILITY OF CONTRACTOR TO GET THE LOCAL CIVIL DEFENCE APPROVAL FOR DESIGN DRAWINGS AND AS-BUILT DRAWING.
7. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAN, FLUSH AND TEST THE WHOLE FIRE FIGHTING PIPING SYSTEM. INCLUDING THE EXISTING AND NEW INSTALLATION.
8. IT IS THE RESPONSIBILITY OF CONTRACTOR TO FURNISH FULLY FUNCTIONAL FIRE FIGHTING SYSTEM

MECHANICAL EQUIPMENT NOISE CRITERIA

VFD

- THE VFD CONTROLLER SHOULD HAVE A FEATURE CALLED "CRITICAL FREQUENCY BAND JUMP"

VIBRATION ISOLATION DEVICES

1. RIBBED OR WAFFLED "NEOPRENE PAD" TO BE USED FOR THE APPLICATIONS WHERE THE VIBRATION FREQUENCY DOES NOT EXCEED 100 HERTZ AND THE STATIC DEFLECTION DOES NOT EXCEED 1.2MM.
2. "NEOPRENE IN SHEAR FLOOR MOUNTS" TO BE USED FOR THE APPLICATION WHERE THE STATIC DEFLECTION UP TO 12MM AND THE VIBRATION FREQUENCY IN EXCESS OF 50 HERTZ.
3. STEEL SPRING FLOOR MOUNTS TO BE USED FOR THE APPLICATION WHERE THE STATIC DEFLECTIONS IN THE RANGE FROM ABOUT 12 TO 100MM.

DISMANTLING OF EXISTING MECHANICAL SERVICES

THE CONTRACTOR SHALL SUBMIT THE METHOD STATEMENT FOR DISMANTLING WORK FOR MECHANICAL SERVICES TO THE SUPERVISING CONSULTANT. ON RECEIPT OF APPROVAL, THE CONTRACTOR SHALL PROCEED FOR DISMANTLING THE SERVICES. THE CONTRACTOR SHALL PERFORM THE INTERDISCIPLINARY COORDINATION WITH ARCHITECTURAL, STRUCTURAL AND ELECTRICAL SERVICES FOR THIS ACTIVITY.

MECHANICAL SYSTEM (HVAC, WATER SUPPLY, FIRE FIGHTING) CLEANING, FLUSHING, TESTING COMMISSIONING AND BALANCING

IT IS THE COTRATORS RESPONSIBILITY TO CLEAN, FLUSH, TEST COMISION AND BALANCE THE EXISTING AND NEWLY SYSTEM. THE CONTRACTOR SHALL COORDINATE BETWEEN THE EXISTING AND NEW INSTALLED SYSTEM SUCH THAT THE BOTH THE SYSTEM SYNCHRONISE WITH EACH OTHER IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE A COMPLETE RELIABLE, GUARENTEED AND FUNCTIONAL SYSTEM.

TAGGING

THE STATUS OF THE SYSTEM IS DEPICTED USING THE TAGGING. IF THE TAGGING IS NOT MENTIONED, CONTRACTOR NEEDS TO CONSIDER THE SYSTEM SHALL BE INSTYALLED AS NEW.

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Water supply Plans
Notes-1

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

N° Date Issue
R1 : 13 / 12 / 2023

Sheet N° : **WS2**

scale :

Date : 13 / 12 / 2023

GENERAL NOTES & SPECIFICATION :

WATER SUPLY SYSTEM:
-SCHEDULE 40 POLY VINYL CHLORIDE (PVC) PIPES & FITTINGS SHALL BE USED FOR ALL SOIL, WASTE, STORM AND UNPOLLUTED WASTE WATER SUPLY SYSTEM .THE INSTALLATION IS GENERALLY SHOWN ON THE DRAWING.
-WATER SUPLY PIPING SYSTEM SHALL BE PROPERLY ALIGNED & INSTALLED AT A UNIFORM SLOPE OF NOT LESS THAN 2% AND ADEQUATELY SUPPORTED.
-WATER SUPLY SYSTEM SHALL BE ADEQUATELY VENTED. THE INSTALLATION IS SHOWN ON THE DRAWING
-ALL SECTION OF WATER SUPLY & VENT SYSTEM SHALL BE SUBJECT TO A WATER TEST OF NOT LESS THAN 3 METERS HEAD & SHALL BE KIPTON THE SYSTEM FOR NOT LESS THAN 15 MINUTES BEFORE INSPECTION STARTS.
-LOCATION & DESCRIPTION OF SEPTIC TANK & CATCH BASINS ARE SHOWN ON THE DRAWING.

WATER SUPPLY SYSTEM
- SCHEDULE 80 PVC PIPES & FITTINGS SHALL BE USED FOR ALL COLD WATER SUPPLY SYSTEMS
-CPVC PIPES OR COPPER PIPES &FITTINGS SHALL BE USED FOR ALL HOT WATER SUPPLY SYSTEMS.
-ALL SECTION OF HOT & COLD WATER SYSTEM SHALL BE SUBJECTED TO AN AIR PRESSURE TEST OF NOT LESS THAN 344.5 kpa (50 psi) FOR NOT LESS THAN 15 MINUTES. PIPING MUST NOT LEAK WHEN SUBJECTED TO SUCH TEST.
-THE INSULATION OF WATER SUPPLY SYSTEM INCLUDING WATER PUMP STORAGE TANK , WATER HEATERS & VALVES GENERALLY SHOWN ON THE DRAWING

GENERAL :
-UNDER GROUND PIPES SHALL BE BURIED TO A MINIMUM DEPTH OF 30 cm.BELOW THE TOP OF THE GROUND AND AT A MINIMUM DISTANCE OF 60 cm. FROM THE BUILDING.

-ALL PIPING PASSING THROUGH OUT THE WALLS. SLABS. BEAMS OR ANY PART OF THE BUILDING. SHALL BE PROTECTED FROM BREAKAGE AND ALL CONNECTIONS SHALL NOT BE SUBJECTED TO UNDUE & STRESS.

-ALL PLUMBING WORKS PERFORMED SHALL BE CARRIED OUR OR UNDER THE SUPERVISION OF A FULLY LICENCED PLUMBER & SHALL COMPLY IN ALL RESPECT TO THE LATEST UNIFORM PLUMBING CODE.

-ALL MATERIALS, METHOD OF INSTALLATION AND QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

1-DERANGE FIXTURE UNIT (D.F.U) VALUES FOR VARIOUS PLUMBING FIXTURES
TABLE 30-5 CODE SBC 1102 PART 8 (PLUMBING) PAGE 751 CHAPTER 30

2- MAXIMUM FIXTURE UNITS ALLOWED TO BE CONNECTED TO BRANCHES AND STACKS
TABLE 30-7 CODE BC 1102 PART 8 (PLUMBING) PAGE 752 CHAPTER 30

3. MAXIMUM NUMBER OF FIXTURE UNITS ALLOWED TO BE CONNECTED TO THE BUILDING DRAIN
TABLE 30-8 CODE SBC 1102 PART 8 (PLUMBING) PAGE 752 CHAPTER 30

4-SUBMERSIBLE SEWAGE PUMP
FIG 30-15 CODE SBC 1102 PART 8 (PLUMBING) PAGE 760 CHARTER 30

5- VENT TERMINATION THROUGH EXTERIOR WALL
FIG 31-4 CODE SBC 1102 PART 8 (PLUMBING) PAGE 782 CHAPTER 31

6- HOT WATER DEMAND PER FIXTURE FOR VARIOUS TYPES OF BUILDINGS
TABLE -10 FROM ASHERA 48/2007

7-TYPICAL CAPACITY TABLE FOR TANKLES WATER HEATER & TYPICAL CAPACITY GRAPH
TABLE 28-1 CODE BC 1102 PART 8 (PLUMBING) PAGE 612 CHAPTER 28
FIG 28-1 & 28-2 CODE SBC 1102 PART 8 (PLUMBING) PAGE 612 CHAPTER 28

8-REQUIRED CAPACITIES AT POINT OF OUTLET DISCHARGE
TABLE 29-4 CODE SBC 1102 PART 8 (PLUMBING) PAGE 683 CHAPTER 29

9-MAXIMUM FLOW RATES AND CONSUMPTION FOR PLUMBING FIXTURES AND FIXTURE FITTINGS
TABLE 29-5 CODE BC 1102 PART 8 (PLUMBING) PAGE 683 CHAPTER 29

10- WATER SUPPLY FIXTURES UNIT VALUES FOR VARIOUS PLUMBING FLEXURES (W.S.F.U)
TABLE 29-6 CODE SBC 1102 PART 8 (PLUMBING) PAGE 684 CHAPTER 29

11- CONVERSIONS FROM WATER SUPPLY FIXTURES UNIT TO GALLON PER MINUTE FLOW RATES
TABLE 29-7 CODE SBC 1102 PART 8 (PLUMBING) PAGE 685 CHAPTER 29

MEDECINS SANS FRONTIERES

PROJECT TITLE :
YE120 - KILO Hospital YEMEN Mission

BUILDING NAME :
New Support Services and med Offices Building -Version 1

DRAWING TITLE :
Water supply Plans
Notes-2

File name : alqaeda hospital – 2013–111.dwg

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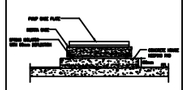
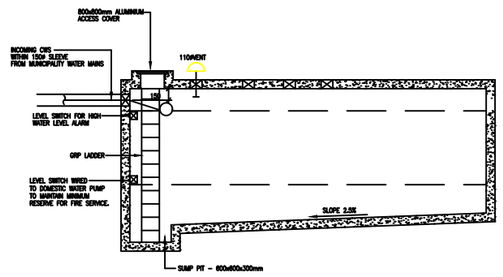
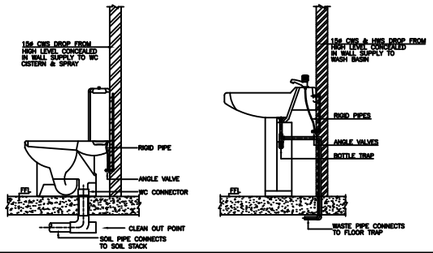
Date : 13 / 12 / 2023



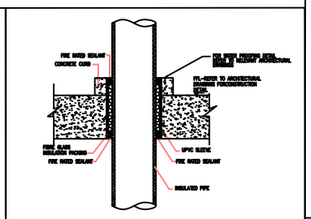
TYPICAL PUMP FOUNDATION DETAIL



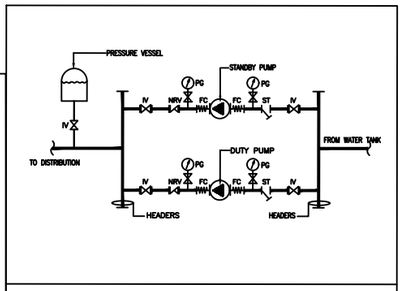
UNDER GROUND WATER TANK DETAIL



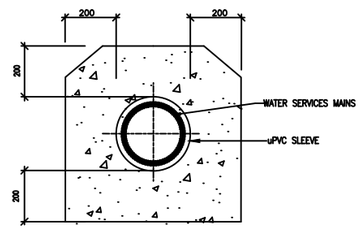
TYPICAL CONNECTION DETAILS OF SANITARYWARE



TYPICAL DETAIL OF PIPE PENETRATION IN FLOOR SLAB OF WET AREAS AND PLANT ROOMS



BOOSTER PUMPS CONNECTION DETAIL



CONCRETE PROTECTION OF PIPELINES AT ROAD CROSSING

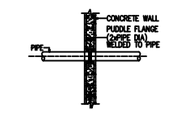
GENERAL NOTES:-

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF ALL SERVICES.
2. ALL CWS PIPEWORK AND HWS PIPEWORK TO BE AS SPECIFIED
3. THE CONTRACTOR SHALL COORDINATE WITH THE FINAL KITCHEN AND LAUNDRY EQUIPMENT LAYOUT ADVISED BY THE ARCHITECT.
4. ALL HOT WATER PIPEWORK SHALL BE THERMALLY INSULATED AS SPECIFIED.
5. UNLESS OTHERWISE INDICATED ALL PIPE WORK IN TOILETS/BATH ROOMS SHALL BE 20mm DIA. WITH REDUCTIONS TO 15mmDIA. ONLY FOR LAST BRANCH FEEDING A SINGLE CONNECTION. CONNECTIONS TO ALL FIXTURES SHALL BE 15mm DIA.
6. PUMP CONTROL PANEL TO INCORPORATE INCOMING MCCB, OUTGOING MCCB FOR EACH PUMP, CYCLIC CHANGEOVER FACILITY, HAND/ AUTO SWITCH FOR EACH PUMP, DUTY/STANDBY SELECTOR SWITCH, AUTOMATIC CHANGEOVER IN CASE OF DUTY PUMP FAILURE RUN/TRIP/OFF INDICATOR LAMPS FOR EACH PUMP, LOW LEVEL INDICATOR AND HIGH LEVEL ALARM FOR WATER TANK. CONSTRUCTION DETAILS SHALL BE AS PER THE ELECTRICAL SPECIFICATION.
7. CONTRACTOR SHALL INCLUDE FOR AUTOMATIC WATER HAMMER ARRESTORS SHALL BE INSTALLED FOR HOT AND COLD WATER SYSTEM BRANCH IN EVERY TOILET/ PANTRY AND AT THE END OF EVERY HOT & COLD WATER SUPPLY BRANCH OF KITCHEN WHETHER SHOWN OR NOT ON LAYOUT.
8. FINAL COLD AND HOT WATER PIPE DISTRIBUTION AND CONNECTION IN KITCHEN , PANTRIES , ETC. SHALL BE CO-ORDINATED WITH THE FINAL KITCHEN SPECIALIST EQUIPMENT LAYOUT. SAME SHALL BE INCLUDED IN MEP CONTRACTOR SCOPE OF WORK.
9. CONTRACTOR SHALL INCLUDE FOR INSTALLATION OF ALL PRV, IV & NRV'S AS REQUIRED FOR THE PUMPING SYSTEM.
10. CONTRACTOR SHALL INCLUDE FOR REARRANGING EQUIPMENT ASSOCIATED PIPING & ELECTRICAL CONNECTION WITH PLANT ROOMS AS REQUIRED IN CO-ORDINATION WITH ACTUAL PLANT SIZE AND AVAILABLE SPACE
11. ALL HIGH POINTS OF THE EVERY BOOSTED WATER SYSTEM SHALL BE PROVIDED WITH AUTOMATIC AIR VENT AND THE LOW POINT SHALL BE PROVIDED WITH DRAIN POINT WHETHER SHOWN ON LAYOUT OR NOT
12. CONTRACTOR TO ENSURE THAT ALL PUMPS AND MECHANICAL PLANT ARE INSTALLED ON MINIMUM 150mm CONCRETE PLINTH.
13. FOR SIZES OF RISER REFER, SCHEMATIC DRAWING.
14. CONTRACTOR SHALL FOLLOW WATER PIPE SPECIFICATIONS FOR HIGH OR LOW PRESSURE RATING AS SPECIFIED.
15. THE CONTRACTOR SHALL RELOCATE AND DISTRIBUTE THE WATER PIPING FOR AREAS WHICH ARE PROVIDED BY SERVICE PROVISIONS ACCORDING TO THE FINAL ID, KITCHENS AND LAUNDRY EQUIPMENT LAYOUTS.
16. PPR-C PIPE SIZES SHALL COMPLY WITH THE FOLLOWING TABLE ALL IN CONFORMANCE WITH BS 3505.

DESIGNATED PIPE SIZE		OUTSIDE DIAMETER
INCH	MM	MM
3/8	10	17.1
1/2	15	21.4
3/4	20	26.5
1	25	33.6
1-1/4	32	42.2
1-1/2	40	48.3
2	50	60.3
2-1/2	65	75.2
3	80	88.9
4	100	110
6	150	----

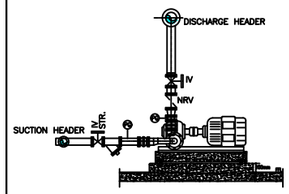
LEGENDS:-

CWS	COLD WATER SUPPLY PIPE
BCWS	BOOSTED COLD WATER SUPPLY PIPE
HWR	HOT WATER RETURN
BHWS	BOOSTED HOT WATER SUPPLY PIPE
DWS	DIONIZED WATER SUPPLY
IV (— —)	ISOLATING VALVE
NRV (—\/—)	NON RETURN VALVE
BV (— —)	BALANCING VALVE
MC	BY PASS VALVE (NORMALLY CLOSED)
PRV (—▭—)	PRESSURE REDUCING VALVE STATION
PRV (—|—)	PRESSURE REDUCING VALVE
ST (—▽—)	STRAINER
OP	OVERFLOW PIPE
FA	FROM ABOVE
FB	FROM BELOW
TA	TO ABOVE
TB	TO BELOW
BT	BATHTUB
WC	WATER CLOSET
KS	KITCHEN SINK
WHB	WASH HAND BASIN
BD	BIDET
SH	SHOWER TRAY
AAV	AUTOMATIC AIR VENT
DW	DISH WASHING MACHINE
WM	WASHING MACHINE
WF	WATER FILTER (CARTRIDGE TYPE)
PG	PRESSURE GUAGE
FC	FLEXIBLE CONNECTION
L/s	LITTER PER SECOND
CP	CONTROL PANEL
H/L	HIGH LEVEL
L/L	LOW LEVEL

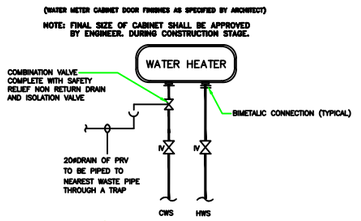


NOTES:
1. PUDDLE FLANGES SHALL BE INSTALLED AS FOLLOW OR AS DIRECTED BY THE ENGINEER.
2. ALL FLOODED PIPES FROM CONCRETE WATER TANKS.
3. ALL DRAIN PIPES PASSING THROUGH MANHOLE WALLS BELOW WATER TABLE LEVEL.
4. ALL PIPES PASSING THROUGH WALLS WHICH COULD HAVE HYDROSTATIC PRESSURE, PRESSURE DIFFERENTIAL ACROSS THE WALL PENETRATION.

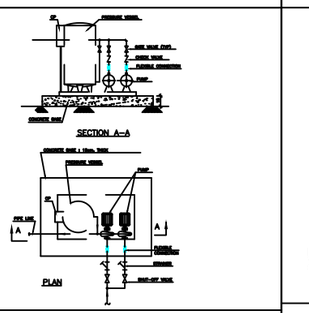
TYPICAL DETAIL OF PIPE PUDDLE FLANGE



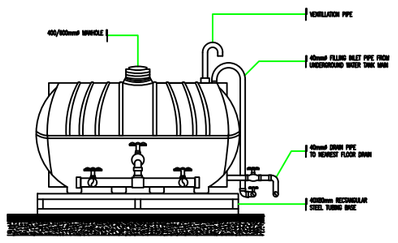
PUMP FOUNDATION DETAIL



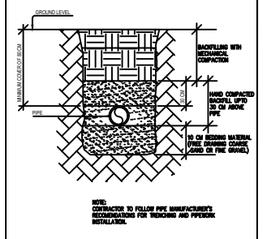
TYPICAL WATER HEATER CONNECTION DETAIL



BOOSTER SET PUMP INSTALLATION DETAILS



ROOF WATER TANK DETAILS



BACKFILL DETAIL FOR WATER MAINS

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Water supply Plans
DETAILS-1

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

N° Date Issue
R1 : 13 / 12 / 2023

Sheet N° :
WS4

scale :

Date : 13 / 12 / 2023

TRANSFER PUMP SCHEDULE

UNIT TAG	QTY	CAPACITY (GPM)	HEAD (m)	ELECTRICAL DATA		POWER SUPPLY		ORIENTATION
				POWER (kW)	V / Hz / ø	NORMAL	EMERGENCY	
TRANSFER PUMP SET–1	2	26.5	48	1.29	230 / 50 / 1	Y	N	

ELECTRIC WATER HEATER SCHEDULE

UNIT TAG	QTY	CAPACITY (L)	ELECTRICAL DATA		POWER SUPPLY		ORIENTATION	REMARKS
			POWER (kW)	V / Hz / ø	NORMAL	EMERGENCY		
EWH–30L	8	30	1.2	230 / 60 / 1	Y	N	VERTICAL	
EWH–50L	4	50	1.5	230 / 60 / 1	Y	N	VERTICAL	
EWH–80L	2	80	2.0	230 / 60 / 1	Y	N	VERTICAL	

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Water supply Plans
Pump and heaters specifications

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

N°	Date	Issue
R1 :	13 / 12 / 2023	

Sheet N° : **WS5**

scale :

Date : 13 / 12 / 2023

PLUMBING (DRAINAGE) – LIST OF SYMBOLS AND ABBREVIATIONS

ABBREV.	SYMBOL	DESCRIPTION
		COLD WATER LINE
		HOT WATER LINE
		MAIN TRANSFER WATER LINE
		COLD AND HOT WATER MIXING VALVE
		ELECTRICAL WATER HEATER
		COLD WATER ANGLE VALVE
		FLEXIBLE CONNECTION
		GLOBAL VALVE
		ISOLATION VALVE
		NON-RETURN VALVE
	PG	PRESSURE GAUGE
		PUMP
		WATER TANK
		SHATTAF
		STERNER
		HOT WATER ANGLE VALVE
		MAIN VALVE

ABBREV.	SYMBOL	DESCRIPTION
GF		GROUND FLOOR
DN		DOWN
FA		FROM ABOVE
FB		FROM BELOW
TA		TO ABOVE
TB		TO BELOW
FL		FINISH LEVEL
AWC		ASIATIC WATER CLOSET
EWC		EUROPEAN WATER CLOSET
B		BIDET
BT		BATHTUB
LAV		LAVATORY
UR		URINAL
MS		MOP SINK
S		SINK
FT		FLUSH TANK
FV		FLUSH VALVE
DF		DRINKING FOUNTAIN
EWH		ELECTRIC WATER HEATER
D/W		DISH WASHER
W/M		WASHING MACHINE
DWF		DRINKING WATER FILTER
BFS		BELOW FLOOR SLAB
IW		IN WALL

ABBREV.	SYMBOL	D I R E C T I O N S
UT		UNDER TILE
UG		UNDER GROUND
UCR		UNDER COUNTER
LL		LOW LEVEL
HL		HIGH LEVEL
UP		UP
DN		DOWN
FM		FROM
VTR		VENT THROUGH ROOF
NTS		NOT TO SCALE
NIC		NOT IN CONTRACT
BFR		BELOW FLOOR RIB
VTR		BOTTOM OF PIPE
SRD		SIDE ROOF DRIAN
RWP		RAIN WATER PIPE
RWS		RAIN WATER STACK

A B B R E V I A T I O N S

T/A	TO ABOVE
F/A	FROM ABOVE
T/B	TO BELOW
F/B	FROM BELOW
CWS	COLD WATER SUPPLY
HWS	HOT WATER SUPPLY
AAV	AUTOMATIC AIR VENT
EWH	ELECTRIC WATER HEATER
FV	FLOAT VALVE
IV	ISOLATION VALVE
PRV	PRESSURE REDUCING VALVE
HS	HOSE SPRAY
TDH	TOTAL DYNAMIC HEAD
WHA	WATER HAMMER ARRESTOR
LL	LOW LEVEL
HL	HIGH LEVEL
IGV	GATE VALVE
FV	FLOAT VALVE
PG	PRESSURE GAUGE
A.F.F.L	ABOVE FLOOR FINISHED LEVEL
B.O.S	BOTTOM OF SLAB
VB	VALVE BOX
FLV	FLUSH VALVE

PLUMBING GENERAL NOTES:

All dimentions are in millimeters unless otherwise noted.
All Level are in meters.
All Piping is shown Schematically.
All Pipes to pass through sleeves should in RC work.
All Vent Pipes above roof to be Galvanized Iron.
All Vent Pipes penetrating roof to have flashing.
All (PVC) Sanitary Drainage Piping to be Class 4.
All Finished flooring to slope towards floor drain.
All cold & Hot Water supply Pipes inside building should be PPR .

MEDECINS SANS FRONTIERES

PROJECT TITLE :
YE120 - KILO Hospital YEMEN Mission

BUILDING NAME :
New Support Services and med Offices Building -Version 1

DRAWING TITLE :
Water supply Plans
Symbols and abbreviations

File name : alqaeda hospital – 2013–111.dwg

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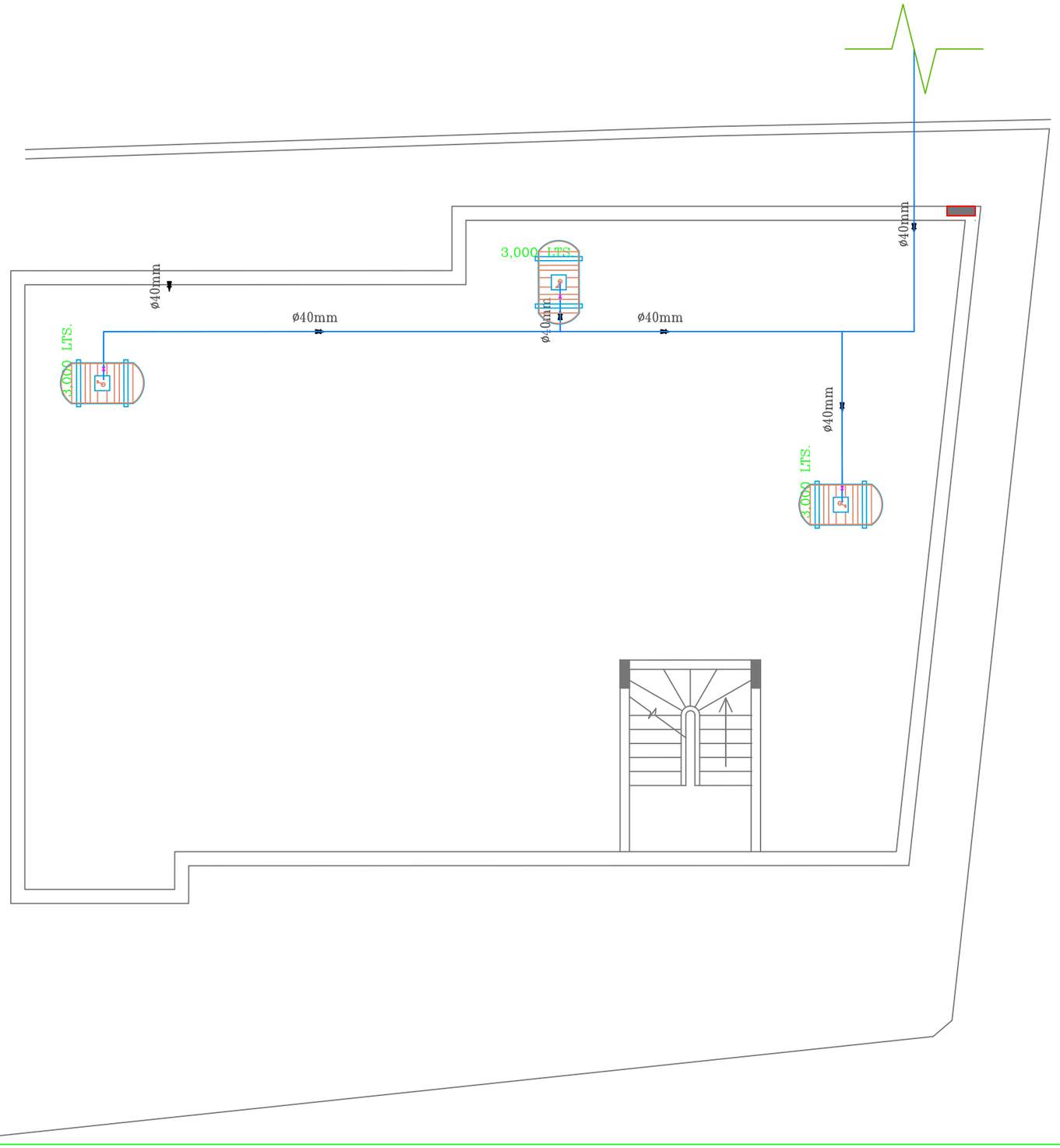
N° Date Issue
R1 : 13 / 12 / 2023

Sheet N° : **WS6**

scale :

Date : 13 / 12 / 2023



MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Water supply Plans
Water supply from GF WT to roof WT

File name : alqaeda hospital – 2013–111.dwg

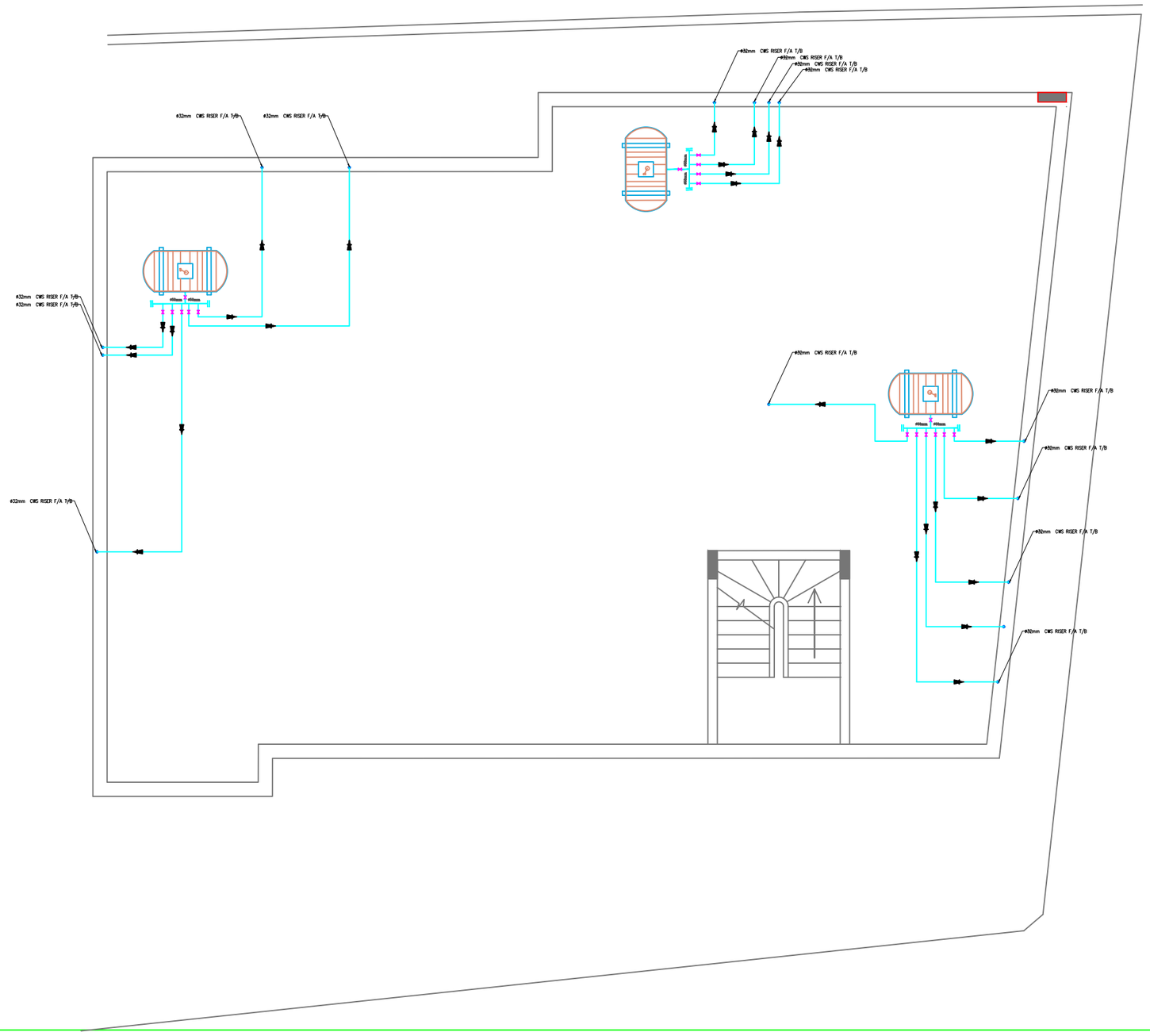
HQ stamp :

N°	Date	Issue
R1 :	13 / 12 / 2023	

Sheet N° : **WS7**

scale :

Date : 13 / 12 / 2023



MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Water supply Plans
Water supply from RT to toilet and kitchen

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

N° Date Issue
R1 : 13 / 12 / 2023

Sheet N° :
WS8

scale :

Date : 13 / 12 / 2023

MEDECINS SANS FRONTIERES	PROJECT TITLE : **YE120 - KILO Hospital YEMEN Mission**	BUILDING NAME : **New Support Services and med Offices Building -Version 1**	DRAWING TITLE : **Water supply Plans** Water supply to first floor File name : alqaeda hospital – 2013–111.dwg	HQ stamp :	N° Date Issue R1 : 13 / 12 / 2023	Sheet N° : **WS9** scale : Date : 13 / 12 / 2023

Sanitation Plans

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

N°	Date	Issue
R1 :	13 / 12 / 2023	

Sheet N° : **S0**

scale :

Date : 13 / 12 / 2023

PLUMBING (DRAINAGE) - LIST OF SYMBOLS AND ABBREVIATIONS

ABBREV.	SYMBOL	DESCRIPTION	ABBREV.	SYMBOL	DESCRIPTION	ABBREV.	SYMBOL	D I R E C T I O N S
SP		SOIL PIPE	GF		GROUND FLOOR	UT		UNDER TILE
WP		WASTE PIPE	DN		DOWN	UG		UNDER GROUND
VP		VENT PIPE	FA		FROM ABOVE	UCR		UNDER COUNTER
IC	I.C	INSPECTION CHAMBER	FB		FROM BELOW	LL		LOW LEVEL
WM	WM	WASHING MACHINE	TA		TO ABOVE	HL		HIGH LEVEL
AWC		ARABIC WATER CLOSET, FLUSH TANK	TB		TO BELOW	UP		UP
GT	GT	GULLY TRAP	FL		FINISH LEVEL	DN		DOWN
FD		FLOOR DRAIN	AWC		ASIATIC WATER CLOSET	FM		FROM
WS		SERVICE SINK	EWC		EUROPEAN WATER CLOSET	VTR		VENT THROUGH ROOF
WC		WESTERN WATER CLOSET, FLUSH TANK	B		BIDET	NTS		NOT TO SCALE
LAV1		LAVATORY VANITY	BT		BATHTUB	NIC		NOT IN CONTRACT
KS		KITCHEN SINK	LAV		LAVATORY	BFR		BELOW FLOOR RIB
FCO		FLOOR CLEAN OUT	UR		URINAL	VTR		BOTTOM OF PIPE
MS		MEDICAL SINK	MS		MOP SINK	SRD		SIDE ROOF DRIAN
RDS		RAIN DRAIN PIPE DISCHARGE	S		SINK	RWP		RAIN WATER PIPE
		FLOW DIRECTION	FT		FLUSH TANK	RWS		RAIN WATER STACK
		CHECK VALVE	FV		FLUSH VALVE			
		SIDE ROOF DRAIN	DF		DRINKING FOUNTAIN			
		FLOOR CLEAN OUT	EWH		ELECTRIC WATER HEATER			
		CIRCLE INSPECTION CHAMBER	D/W		DISH WASHER			
		SUBMERSIBLE PUMP	W/M		WASHING MACHINE			
		SERVICE SINK MADE FROM RED BLOCK	DWF		DRINKING WATER FILTER			
			BFS		BELOW FLOOR SLAB			
			IW		IN WALL			

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Sanitation Plans
ABBREVIATIONS

File name : alqaeda hospital – 2013–111.dwg

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S2

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SIZE OF DRAIN, VENT& FIXTURE TRAPS
FOR VARIOUS TYPES OF PLUMBING FIXTURES

FIXTURE	SOIL	WASTE	VENT	TRAP (mm)
WESTERN WATER CLOSET (FV)	110mm	-	50 mm	INCLUDED
EASTERN WATER CLOSET (FV)	110mm	-	50 mm	INCLUDED
LAVATORY	-	50 mm	50 mm	50 mm
KITCHEN SINK	-	50 mm	50 mm	50 mm
SERVICE SINK	-	50 mm	-	50 mm
FLOOR DRAIN	-	110 mm	-	110 mm

MEDECINS SANS FRONTIERES

PROJECT TITLE :
YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :
New Support Services and med Offices Building -Version 1

DRAWING TITLE :

File name : alqaeda hospital – 2013–111.dwg

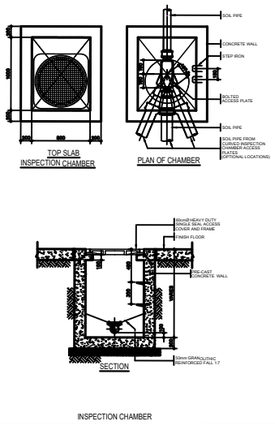
HQ stamp :

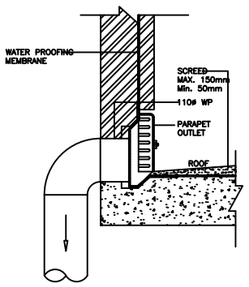
N° Date Issue
R1 : 13 / 12 / 2023

Sheet N° : **S3**

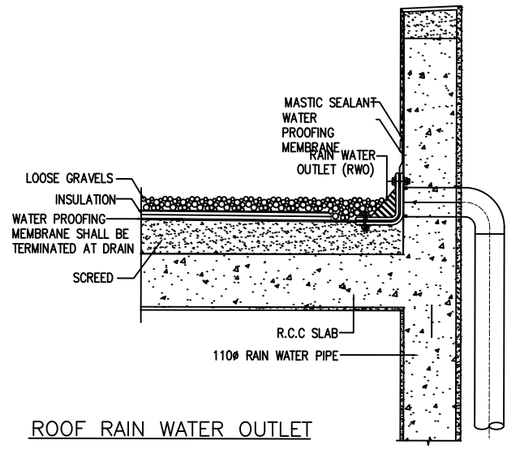
scale :

Date : 13 / 12 / 2023

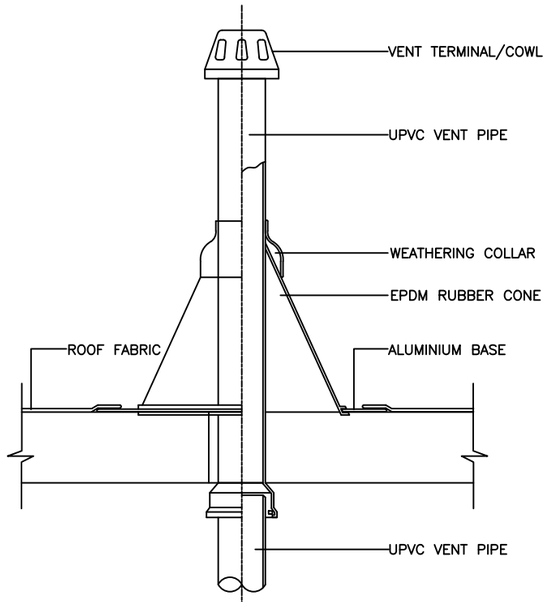




PARAPET TYPE OUTLET (RWO-B)

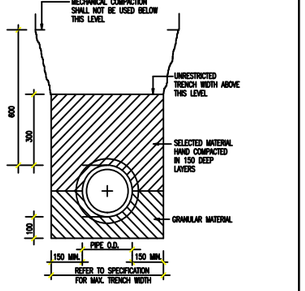


ROOF RAIN WATER OUTLET



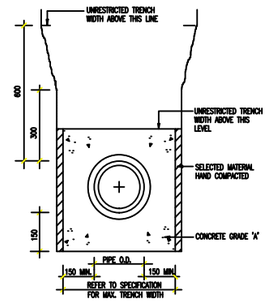
VENT PIPE TERMINATION DETAILS

NOT TO SCALE



CLASS 'B' BEDDING

SCALE NTS



CLASS '0' BEDDING

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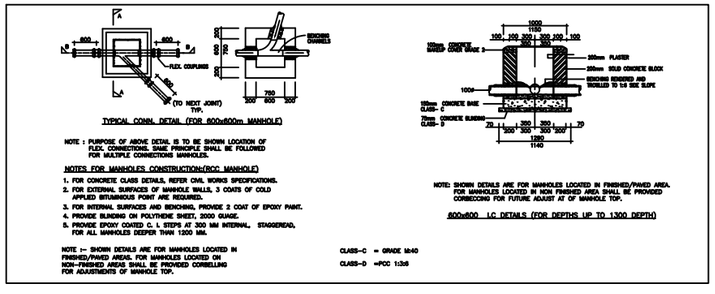
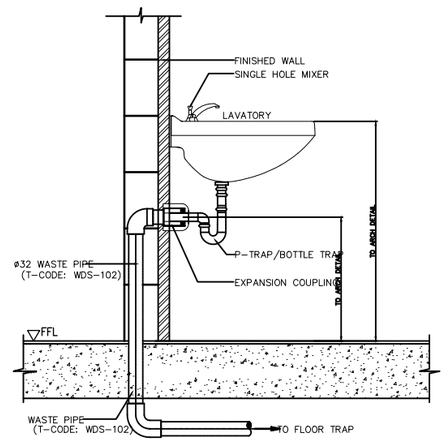


DETIALS

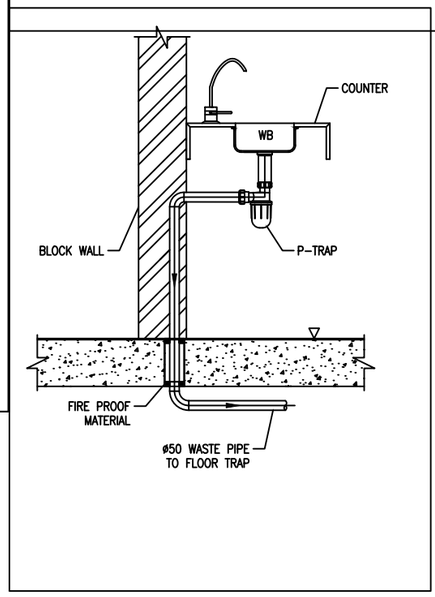
NOTE:
THE SHOWN SANITARY TYPE AND ITS FIXATION DETAIL IS INDICATIVE ONLY.
REFER TO ARCHITECTURAL DRAWINGS FOR SANITARY DETAILS.
THIS DETAIL IS MEANT TO SHOW THE PIPE CONNECTION ONLY.



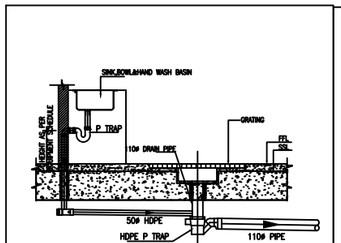
TYPICAL DETAILS OF LAVATORY WASTE CONNECTION

(NOT TO SCALE)

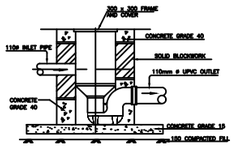
DETIALS



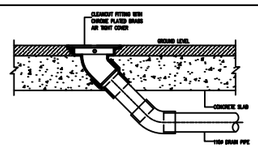
MEDECINS SANS FRONTIERES	PROJECT TITLE : **YE120 - KILO Hospital YEMEN Mission**	BUILDING NAME : **New Support Services and med Offices Building -Version 1**	DRAWING TITLE : **Sanitation Plans** VENT PIPE SYSTEM File name : alqaeda hospital – 2013–111.dwg	HQ stamp :	N° Date Issue R1 : 13 / 12 / 2023 Sheet N° : **S5** scale : Date : 13 / 12 / 2023

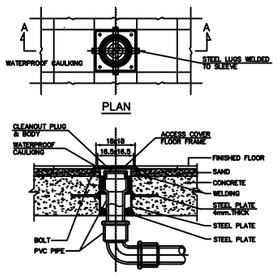


TYPICAL SINK,BOWL & HAND WASH BASIN INSTALLATION

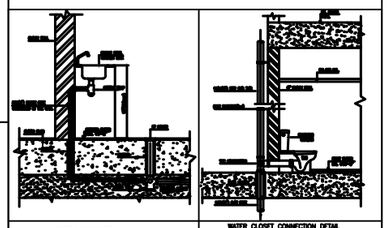


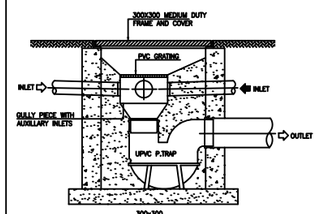
TYPICAL DETAIL OF GULLY TRAP
(SCALE: N.T.S)



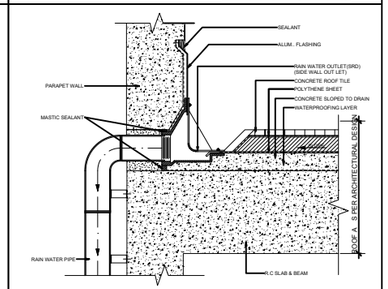


PVC FLOOR CLEANOUT DETAIL
SCALE N.T.S.





GULLY TRAP DETAIL



ROOF RAIN WATER OUTLET DETAILS

DRAINAGE PIPEWORK BEDDING SCHEDULE

DEPTH	UNDER ROADS	UNDER BUILDINGS @	OTHER AREAS
0–600 DEEP	CLASS 'Z'	CLASS 'O' *	CLASS 'Z' #
600–1200 DEEP	CLASS 'Z'	CLASS 'O'	CLASS 'O'
OVER 1200 DEEP	CLASS 'O'	CLASS 'O'	CLASS 'O'

* WHERE THE CROWN OF THE PIPE IS WITHIN 300mm OF THE UNDERSIDE OF THE CONCRETE FLOOR SLAB THE BEDDING SHALL BE CLASS 'Z'.

@ OR WITHIN 1.000M OF BUILDINGS FOUNDATIONS.

\# PIPE TO HAVE A 300mm WIDE x 50mm THICK CONCRETE SLAB 75mm ABOVE PIPE.

MEDECINS SANS FRONTIERES

PROJECT TITLE :
YE120 - KILO Hospital YEMEN Mission

BUILDING NAME :
New Support Services and med Offices Building -Version 1

DRAWING TITLE :
Sanitation Plans
RAIN WATER SYSTEM

File name : alqaeda hospital – 2013–111.dwg

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R1 : 13 / 12 / 2023

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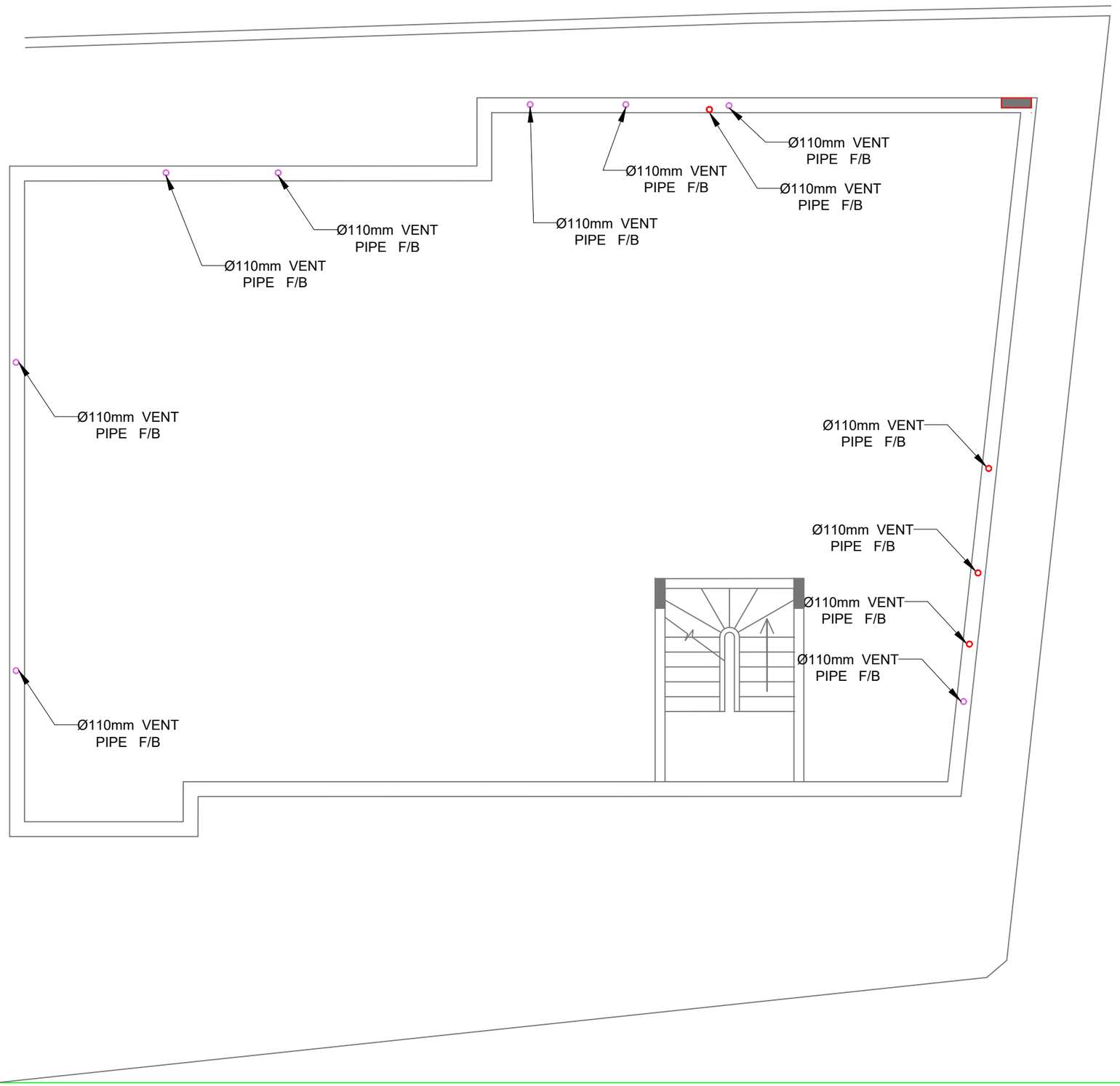
Date : 13 / 12 / 2023



MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Sanitation Plans
RAIN WATER SYSTEM IN ROOF FLOOR

File name : alqaeda hospital – 2013–111.dwg

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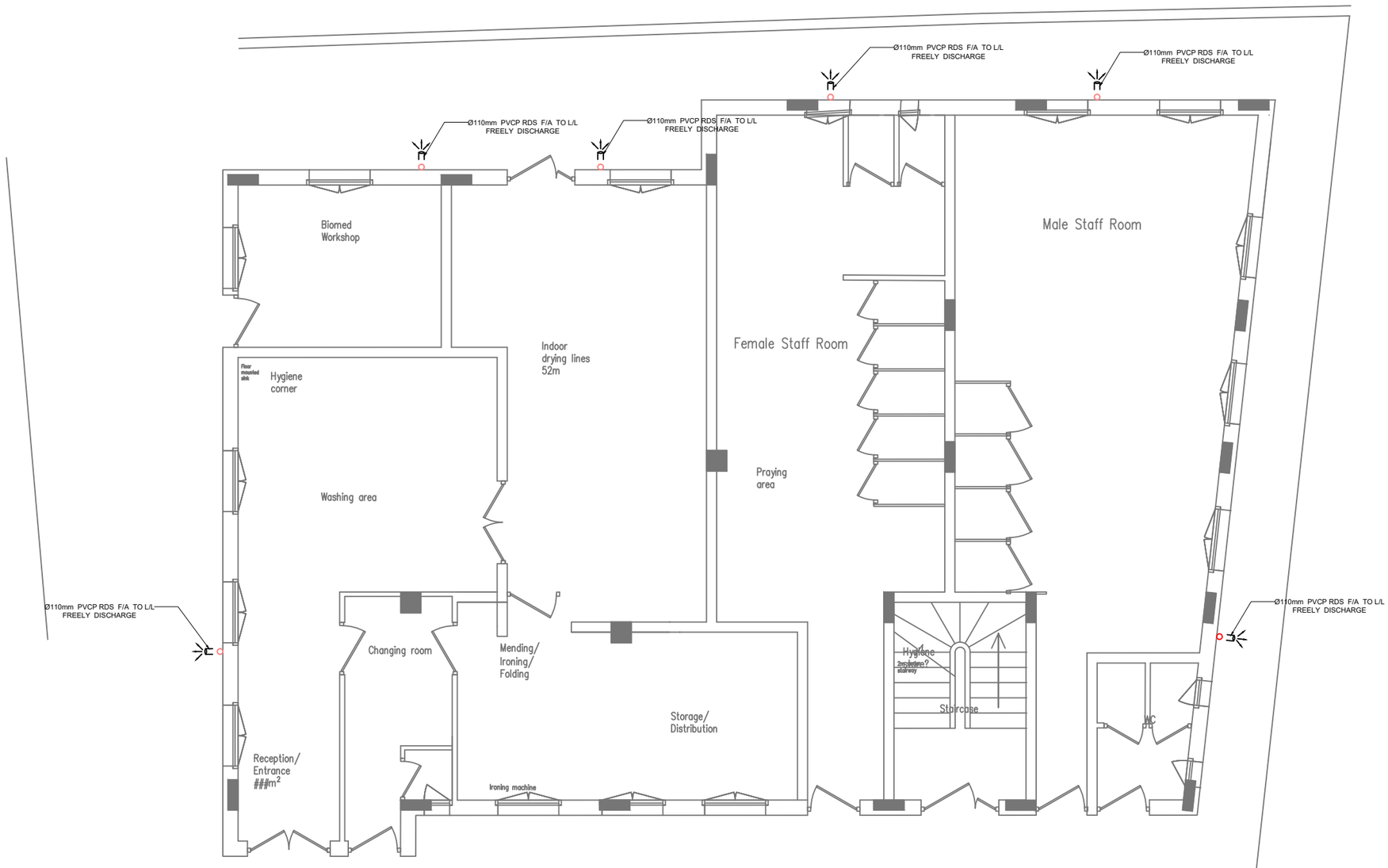
N°	Date	Issue
R1 :	13 / 12 / 2023	

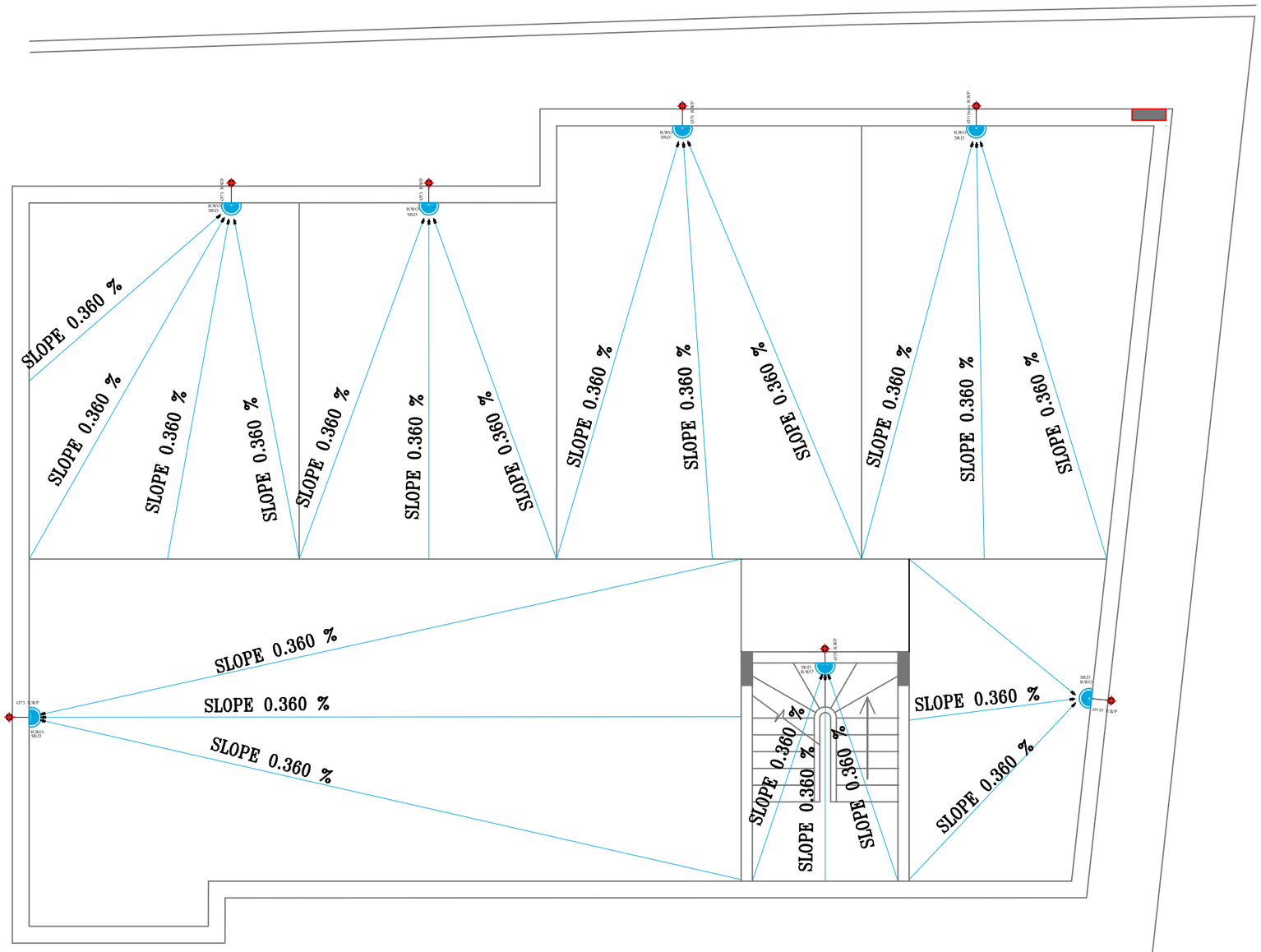
Sheet N° : **S7**

scale :

Date : 13 / 12 / 2023



MEDECINS SANS FRONTIERES	PROJECT TITLE : **YE120 - KILO Hospital YEMEN Mission**	BUILDING NAME : **New Support Services and med Offices Building -Version 1**	DRAWING TITLE : **Sanitation Plans** RAIN WATER SYSTEM - Ground floor File name : alqaeda hospital – 2013–111.dwg	HQ stamp :	N° Date Issue R1 : 13 / 12 / 2023	Sheet N° : **S8** scale : Date : 13 / 12 / 2023



MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Sanitation Plans
RAIN WATER SYSTEM / Slope IN ROOF FLOOR

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

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Date : 13 / 12 / 2023

MEDECINS SANS FRONTIERES	PROJECT TITLE : **YE120 - KILO Hospital YEMEN Mission**	BUILDING NAME : **New Support Services and med Offices Building -Version 1**	DRAWING TITLE : **Sanitation Plans** DRAINAGE SYSTEM-FIRST FLOOR File name : alqaeda hospital – 2013–111.dwg	HQ stamp :	N° Date Issue R1 : 13 / 12 / 2023	Sheet N° : **S11** scale : Date : 13 / 12 / 2023

Electrical Plans

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

N° Date Issue
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Sheet N° :
E0

scale :

Date : 13 / 12 / 2023

	Electrical Legend
	LED Ceiling lighting device 24w
	wall mounted outdoor lighting with toughened ,diaphanous glasses ,galvanized steel arm and 50W led lamp white color
	LED wall lighting device 20w IP65
	LED Ceiling lighting device 12w
	anti-mosquitoes device 20w
	Ceiling fan device 40w
	Fan control switch
	Wall exhaust fan
	Photocell lighting control
	Emergency LED lighting device
	Electrical distribution board
	One-way lighting switches
	Two-way lighting switches

	Electrical Legend
	Electrical distribution board
	Switched power socket BS13 A240 V+E
	Switched power socket BS13 A240 V+E IP 65
	Switched DUPLEX power socket BS13 A240 V+E
	Switched DUPLEX power socket BS13 A240 V+E IP 65
	Switched power socket 20A240 V+E
	Switched power socket 20A240 V+E
	Electrical insulation breaker 4P TP 63A inside box
	Switched power socket 16A240 V+E
	Power socket 50A380 V+E 5(pins)

	Data Legend
	Data Socket (Double)cat.6A
	Data Socket cat.6A
	Data Socket cat.6A at ceiling (access point)
	Data cabinet with 32P data switch and Patch panel

Lighting & Earthling sys. protection	
	AIR ROD with base
	EARTHING HOLE
	Down point, ground rod

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Electrical plans
Electrical Legend

File name : alqaeda hospital – 2013–111.dwg

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N° Date Issue
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scale :

Date : 13 / 12 / 2023

NOTES:

.1 Very important notes ,they must be read completely before starting work

.2 The implementation of electrical works must be strictly adhered to according to the plans and specifications prepared by the electrical engineer and the instructions of the supervising engineer

.3 Pipes and tubes must be fixed with special fasteners and cement mortar must be added to them to cover them after installation.

.4 The extensions and pipes of the different panels and systems must be independent of each other and in different colors to distinguish between them , and the neutral line should not be included between the systems.

.5 Power socket extensions must be independent of lighting extensions

.6 Pipe extensions must not conflict with any other extensions ,and the necessary precautions must be taken to protect them from moisture or water leakage.

.7 The height of the centers of the key boxes above the level of the tiles must be 110to 130cm ,their horizontal distance from the edges of the doors must be 15-20cm ,and the height of the sockets for offices must be 40to 60cm and in residential apartments 80-90cm ,and for kitchens and bathrooms not less than 140 - 120cm.

.8 Care must be taken when extending wires and cables and pulling lines so that they are not exposed to any damage ,injury ,or damage to the insulators , and that pulling should be done after completing the plastering work ,and that they should not be strongly tightened ,and that numbering should be done immediately after pulling.

.9 The technician must take measurements for the roof foundation work from the edge of the walls ,not the columns ,if the columns are prominent.

.10 Cable and wire sections must be approved from the load tables for electrical panels ,each circuit according to what is registered for it.

.11 All sockets ,panels ,cable trays and junction boxes must be grounded and connected to the grounding pins in electrical panels.

.12 The ends of the pipes must be tightly closed so that the mortar or concrete does not leak into them and hinder pulling the wires later.

.13 Pipes must be fixed with tie wires so that they do not bend during casting or rise above the level of the casting on the ceilings.

.14 It prevents the orange pipe from breaking at a vertical angle ,and if there is a need to do so ,it is necessary to use a plastic pull box to change the direction.

.15 The distance of pulling wires must not exceed 9meters without a pulling section ,box ,or distribution or pulling box.

.16 Take care to insert the pipes into the wall for a distance of 2cm so that they can be easily covered with mortar.

.17 It is necessary to cover the cans with paper or something so that they are not exposed to the cement mortar when plastering later.

.18 The design of electrical circuits should be taken into account in accordance with engineering standards ,such that a maximum of 8to 12points are connected to each circuit ,so that the circuit load does not exceed the limit required according to the standard specifications.

.19 Telephone ,satellite ,network ,electricity ,lighting ,fire ,and camera pipes are pulled out individually ,using a separate pipe network ,and as far away from the electricity pipes as possible.

.20 It is preferable to use white pipes with colored ends for light current wires ,and sockets and lighting should be drawn with black pipes.

.21 The end of each wire or end of any circuit must either end in a box ,box ,or partition .It is prohibited to leave the end of the wires and pipes protruding on the walls ,especially at points of external or wall lighting or lighting of mirrors.

.22 All electrical sockets ,electrical panels ,ducts ,cable trays ,and any metal parts or electrical devices in the project must be grounded.

.23 Leave a suitable length of electrical wires (about 20cm)in the box and another suitable length in the drum.

.24 When you want to connect two or more copper wires ,it is necessary to use the plastic suits and prevent the connection to the dishes.

.25 It is necessary to pull the wires in an organized and consistent manner according to the colors and distribute them in the panel in the same way with numbering for all electrical circuits and wires.

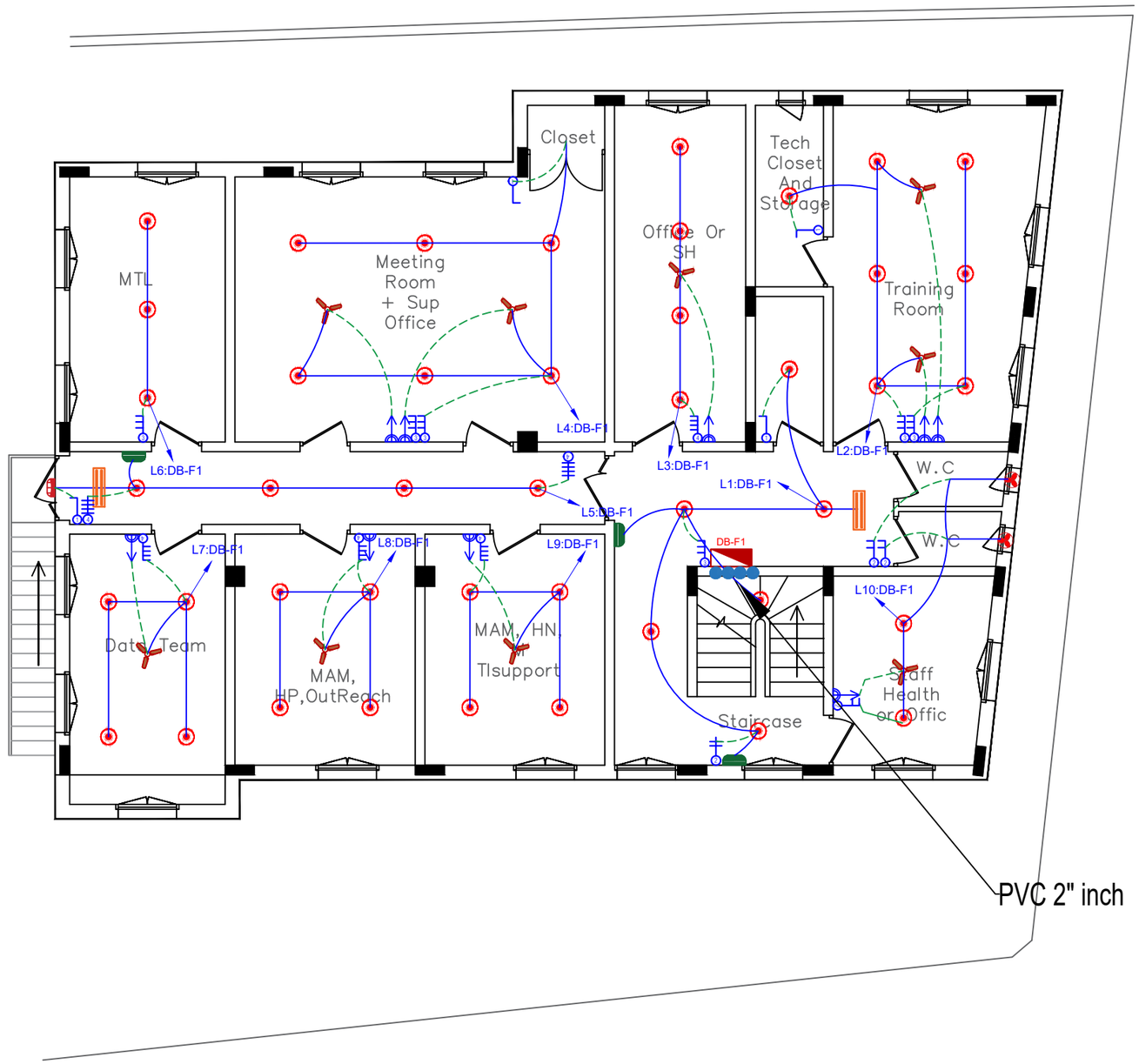
.26 Installation of covers ,switches and lighting shall be done after painting work.

.27 Do not use plastic wires to hang devices and lamps ,but rather use iron chains or ties.

.28 It is necessary to conduct a full load test and operate the air conditioners ,lighting ,and every electrical device upon completion of the installation.

MEDECINS SANS FRONTIERES	PROJECT TITLE : **YE120 - KILO Hospital YEMEN Mission**	BUILDING NAME : **New Support Services and med Offices Building -Version 1**	DRAWING TITLE : **Electrical plans** **Notes and Conditions** File name : alqaeda hospital – 2013–111.dwg	HQ stamp :	N° Date Issue R1 : 13 / 12 / 2023	Sheet N° : **E3** scale : Date : 13 / 12 / 2023

LUX per M^2(NEC)code						
	space name	area	no of light	watt / lump	total of watt	Lux
1	training room	28.1	6	24	144	410
2	office of RH	18.7	4	24	96	411
3	meeting room	41.4	6	24	144	278
4	mtl	17.4	3	24	72	331
5	data team	17.8	4	24	96	431
6	mam hp	17.6	4	24	96	436
7	mam hn	17.6	4	24	96	436
8	staff health	12.1	4	24	96	635



Electrical Legend	
	LED Ceiling lighting device 24w
	wall mounted outdoor lighting with toughened ,diaphanous glasses ,galvanized steel arm and 50W led lamp white color
	LED wall lighting device 20w IP65
	LED Ceiling lighting device 12w
	anti-mosquitoes device 20w
	Ceiling fan device 40w
	Fan control switch
	Wall exhaust fan
	Photocell lighting control
	Emergency LED lighting device
	Electrical distribution board
	One-way lighting switches
	Two-way lighting switches

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Electrical plans

the Lighting plan -first floor

File name : alqaeda hospital – 2013–111.dwg

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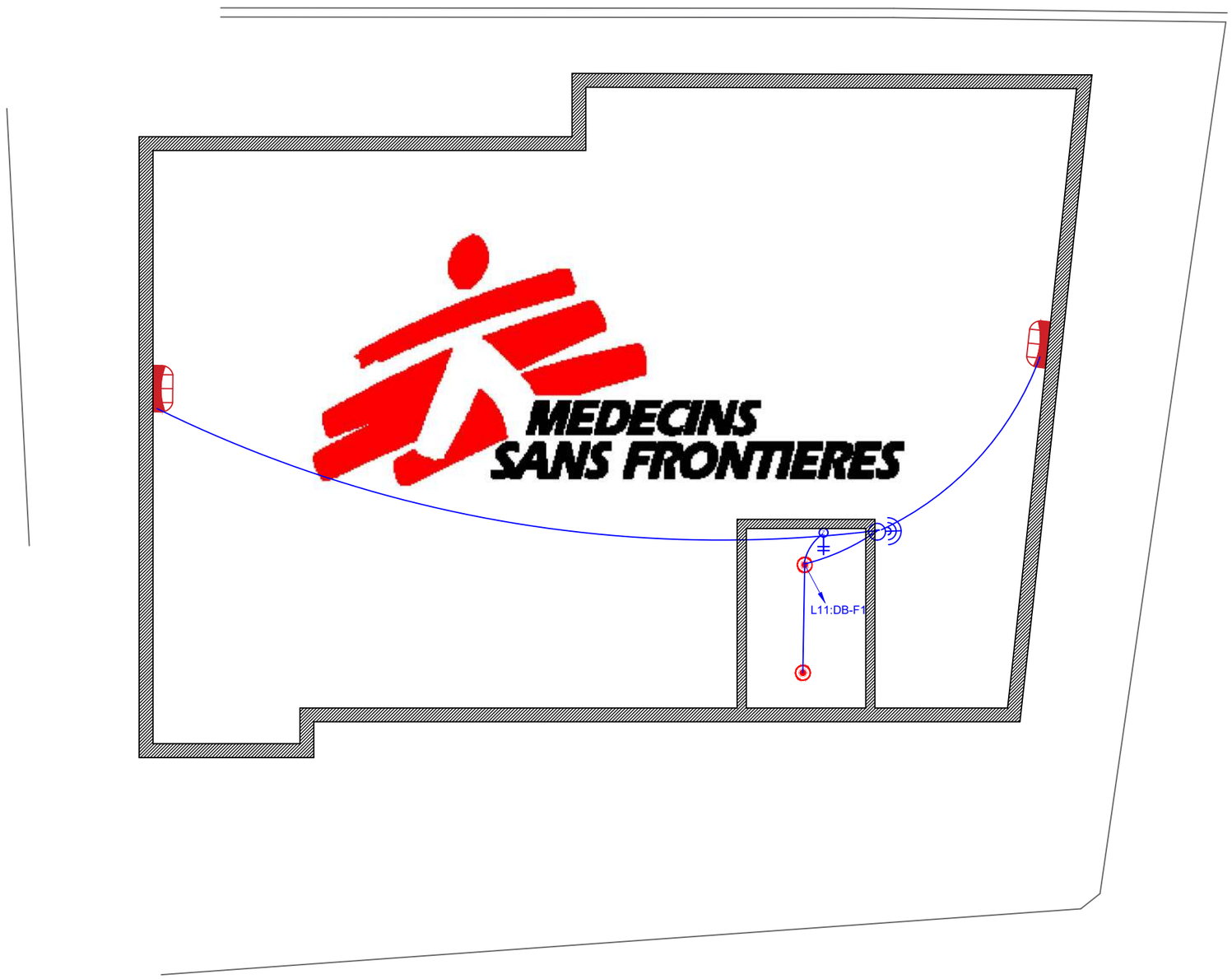
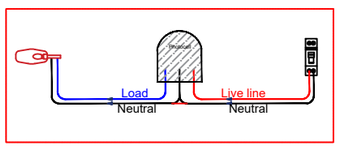
scale :

Date : 13 / 12 / 2023





	Electrical Legend
	LED Ceiling lighting device 18w
	LED wall lighting device 30w IP65
	One-way lighting switches
	Potocell lighting switch

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Electrical plans
the Lighting plan -Roof floor

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

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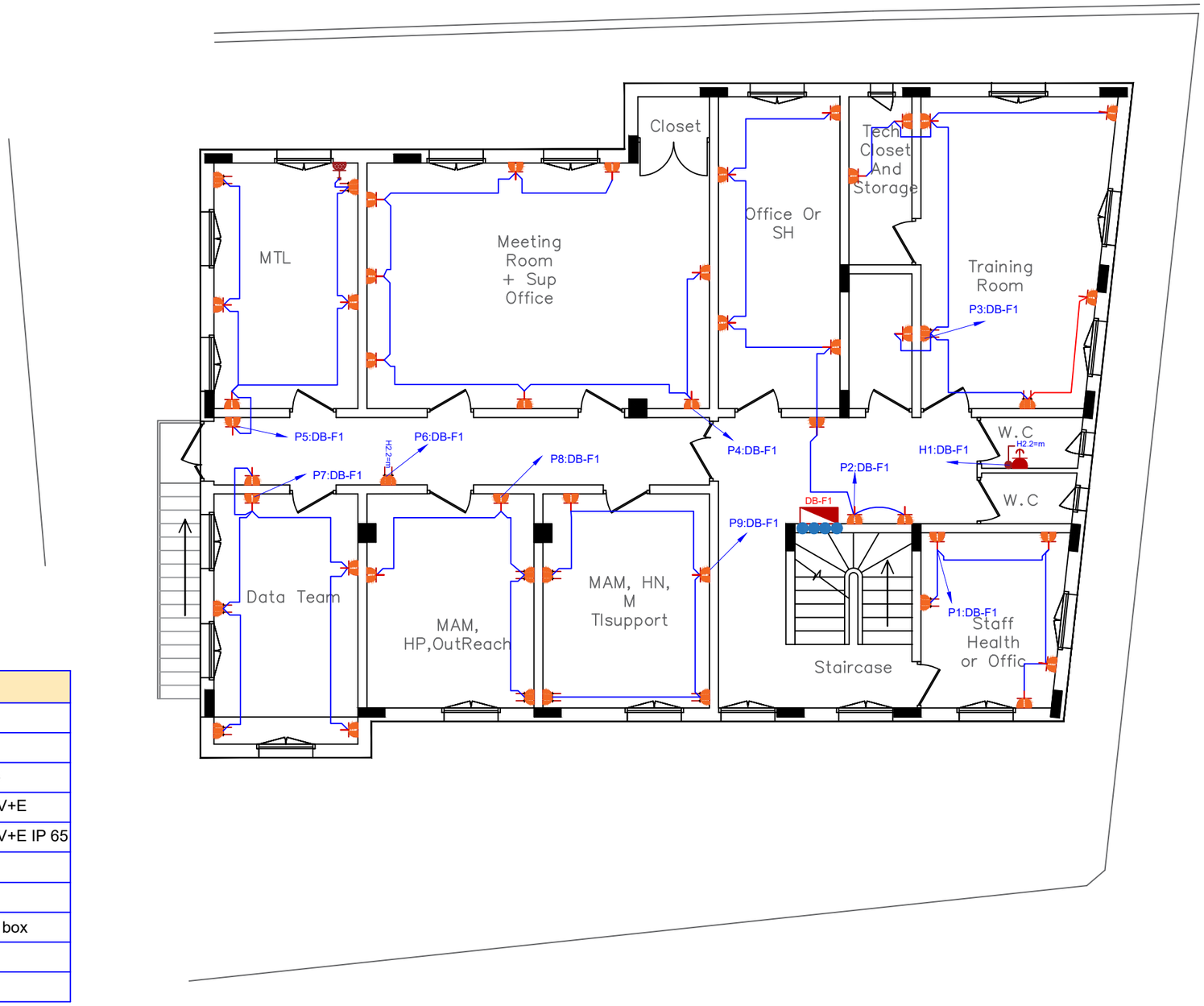
Date : 13 / 12 / 2023



	Electrical Legend
	Electrical distribution board
	Switched power socket BS13 A240 V+E
	Switched power socket BS13 A240 V+E IP 65
	Switched DUPLEX power socket BS13 A240 V+E
	Switched DUPLEX power socket BS13 A240 V+E IP 65
	Switched power socket 20A240 V+E
	Switched power socket 20A240 V+E
	Electrical insulation breaker 4P TP 63A inside box
	Switched power socket 16A240 V+E
	Power socket 50A380 V+E 5(pins)

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Electrical plans

the Power socket plan -first floor

File name : alqaeda hospital – 2013–111.dwg

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N°	Date	Issue
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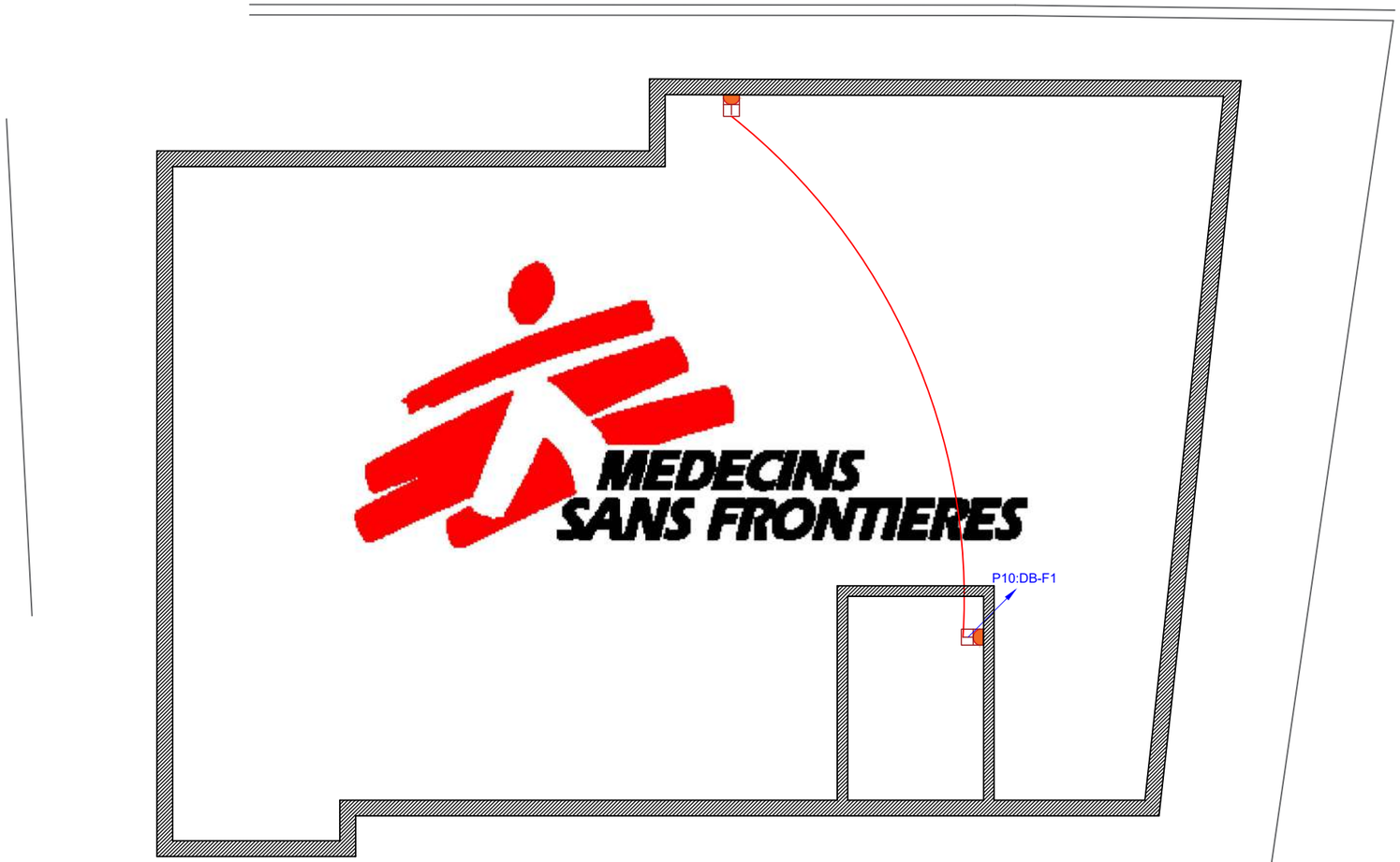

	Electrical Legend
	Switched power socket BS13 A240 V+E IP 65

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Electrical plans
the Power socket plan -Roof floor

File name : alqaeda hospital – 2013–111.dwg

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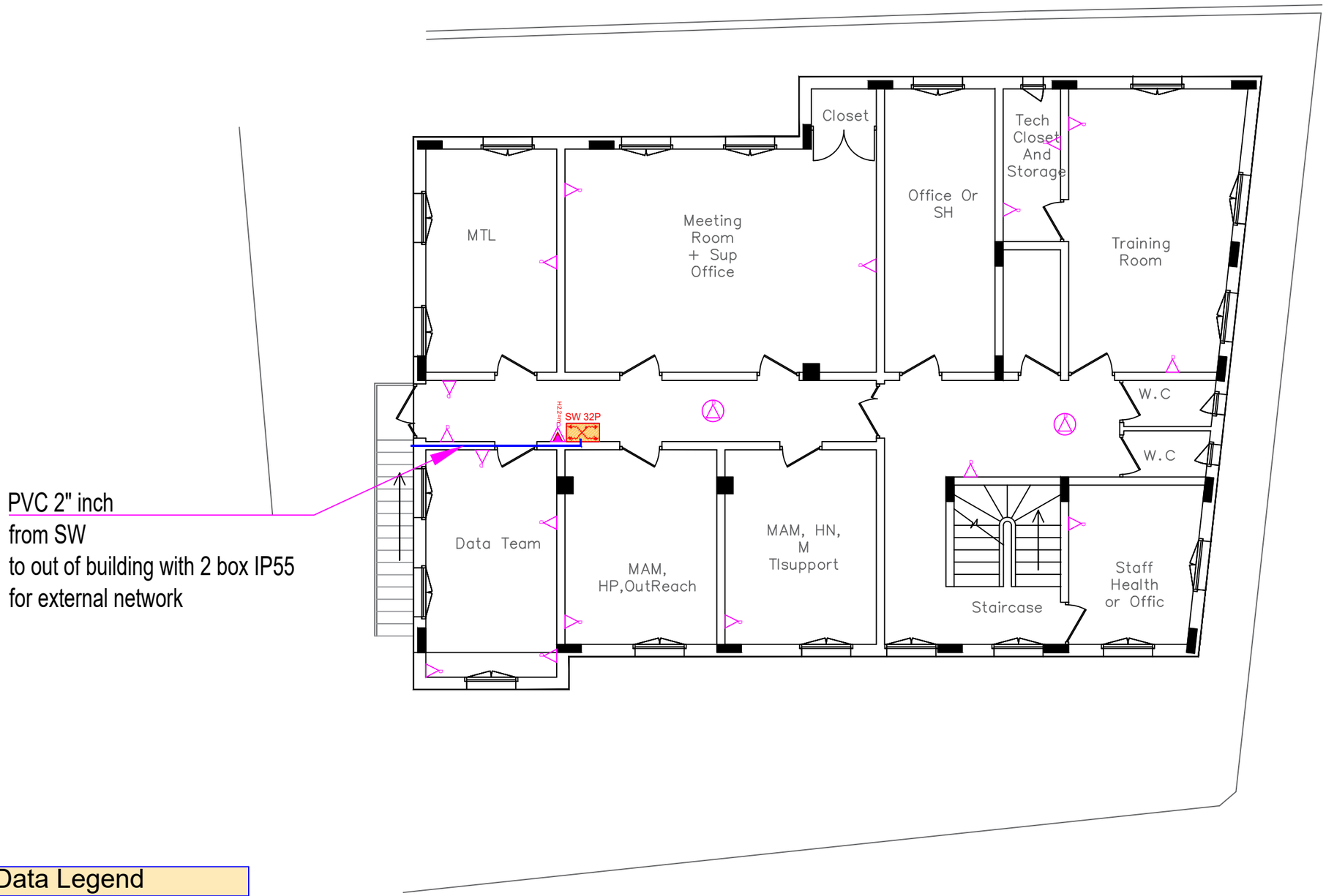

	Data Legend
	Data Socket (Double)cat.6A
	Data Socket cat.6A
	Data Socket cat.6A at ceiling (access point)
	Data cabinet with 32P data switch and Patch panel

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Electrical plans
the Data socket plan -first floor

File name : alqaeda hospital – 2013–111.dwg

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PANEL BOARD: DB-GF					PANEL BOARD SIZE:			TITLE:	first floor panel				LOCATION:	Ground Floor		SUPPLY SOURCE:	MDB	
SHORT CIRCUIT INTERRUPTING CAPACITY: 1000 AMPS SYMETERICAL					BUS RATING: 250 AMPS			POWER SUPPLY: 3 PH - 380 VOLT - 50 Hz - 4 WAY WITH NEUTRAL & GROUND BUS					MOUNTING:	RECESSED MOUNTED IN WALL			IP65	
	LOAD		BREAKER		PHASE LOAD (W)			CONDUCTOR (mm^2)		CKT NO.	BUS CONNECTION			CKT NO.	CONDUCTOR (mm^2)		PHASE LOAD (W)			BREAKER			LOAD	
	DESCRIPTION	POLE	AT	Type	L1	L2	L3	PHASE	GROUND		L1	L2	L3		GROUND	PHASE	L3	L2	L1	Type	AT	POLE	DESCRIPTION	
L1	Lighting	2	10	B	190			2x1.5	1x1.5	1				2	1x1.5	2x1.5			255	B	10	2	Lighting	L2
L3	Lighting	2	10	B		150		2x1.5	1x1.5	3				4	1x1.5	2x1.5		220		B	10	2	Lighting	L4
L5	Lighting	2	10	B			145	2x1.5	1x1.5	5				6	1x1.5	2x1.5	75			B	10	2	Lighting	L6
L7	Lighting	2	10	B	185			2x1.5	1x1.5	7				8	1x1.5	2x1.5			145	B	10	2	Lighting	L8
L9	Lighting	2	10	B		145		2x1.5	1x1.5	9				10	1x2.5	2x4		175		B	10	2	Lighting	L10
L11	Roof lighting	2	10	B			140	2x2.5	1x2.5	11				12	1x2.5	2x2.5	1500			B	16	2	water heater	H1
P1	Power sokt.	2	16	C	1500			2x2.5	1x2.5	13				14	1x2.5	2x2.5			1500	C	16	2	Power sokt.	P2
P3	Power sokt.	2	16	C		1500		2x2.5	1x2.5	15				16	1x2.5	2x2.5		1500		C	16	2	Power sokt.	P4
P5	Power sokt.	2	16	C			1500	2x2.5	1x2.5	17				18	1x2.5	2x2.5	1500			C	16	2	Power sokt.	P6
P7	Power sokt.	2	16	C	1500			2x2.5	1x2.5	19				20	1x2.5	2x2.5			1500	C	16	2	Power sokt.	P8
P9	Power sokt.	2	16	C		1500		2x2.5	1x2.5	21				22	1x2.5	2x2.5		1500		C	16	2	Roof PWR S.	P10
	Spare	2	16	C						23				24						C	16	2	Spare	
	Spare	2	16	B						25				26						B	16	2	Spare	
	Spare	2	16	B						27				28						C	16	2	Spare	
	TOTAL LOAD (W)				3375.0	3295	1785.0										3075.0	3395.0	3400.0				TOTAL LOAD (W)	
	BUS R (KW)	6.78			PERCENTAGE OF LOAD UNBALANCE IN R,Y,B BUS		1.23 %	THE PERMISSIBLE PERCENTAGE OF UNBALANCE IS (0-10%)							DEMAND FACTOR			60	%	MAX. DEMAND LOAD (KW)		14
	BUS Y (KW)	6.69													DEMAND LOAD			11.0	KW	MAX. DEMAND CURRENT (A)		26
	BUS B (KW)	4.86			FEEDER SIZE:		4X70 + 50 E mm^2 CU - XLPE / PVC				6.8 KW	6.7 KW	4.860		25% SPARE LOAD			13.7	KW	RATED C.B CURRENT (I_{CB})		26
TOTAL LOAD		18 KW			Average load	6(KW)			MAIN CB		40A	MCCB 35KA 4P 3+RCCB 63A 30mA 2P+SPD II											

R Y B

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Electrical plans

Electrical distribution boards 1 -st plan

File name : alqaeda hospital – 2013–111.dwg

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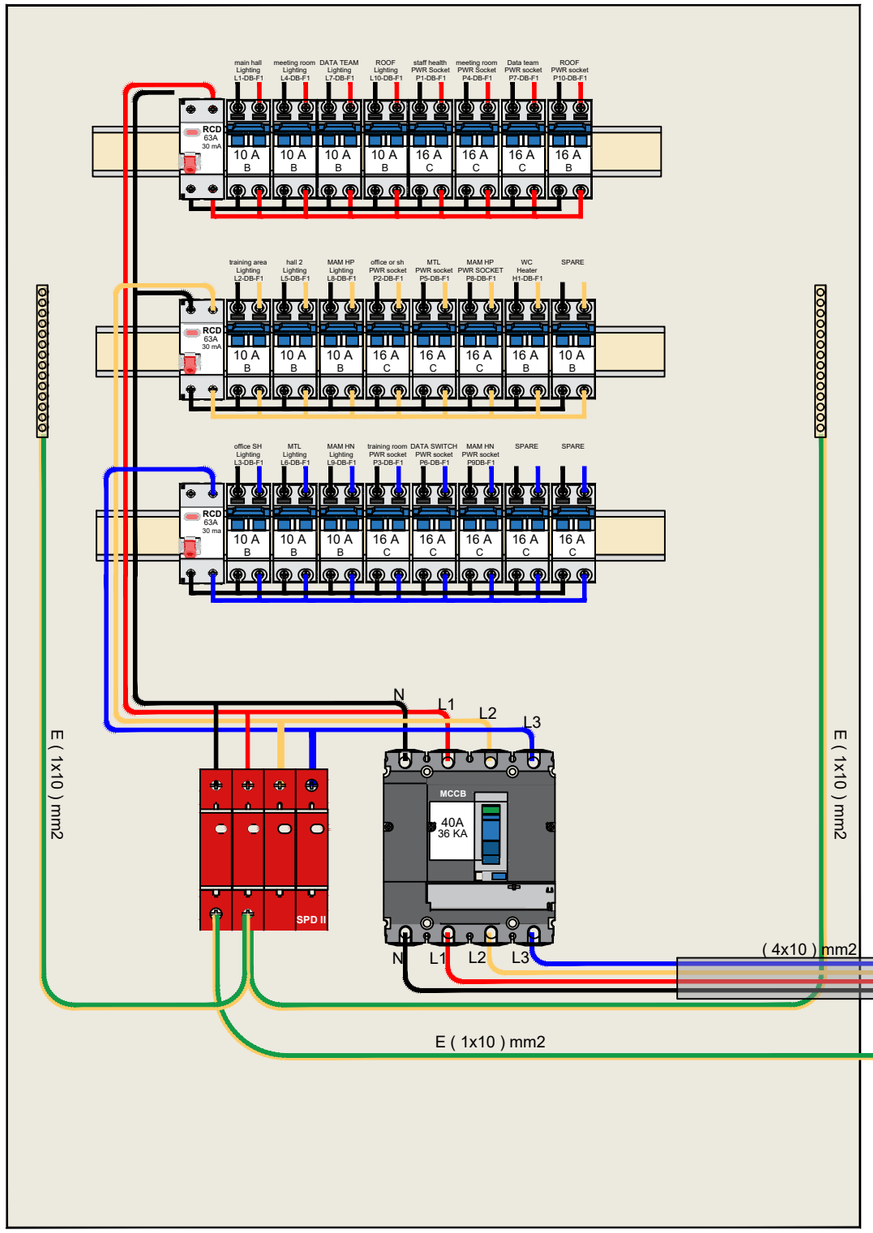
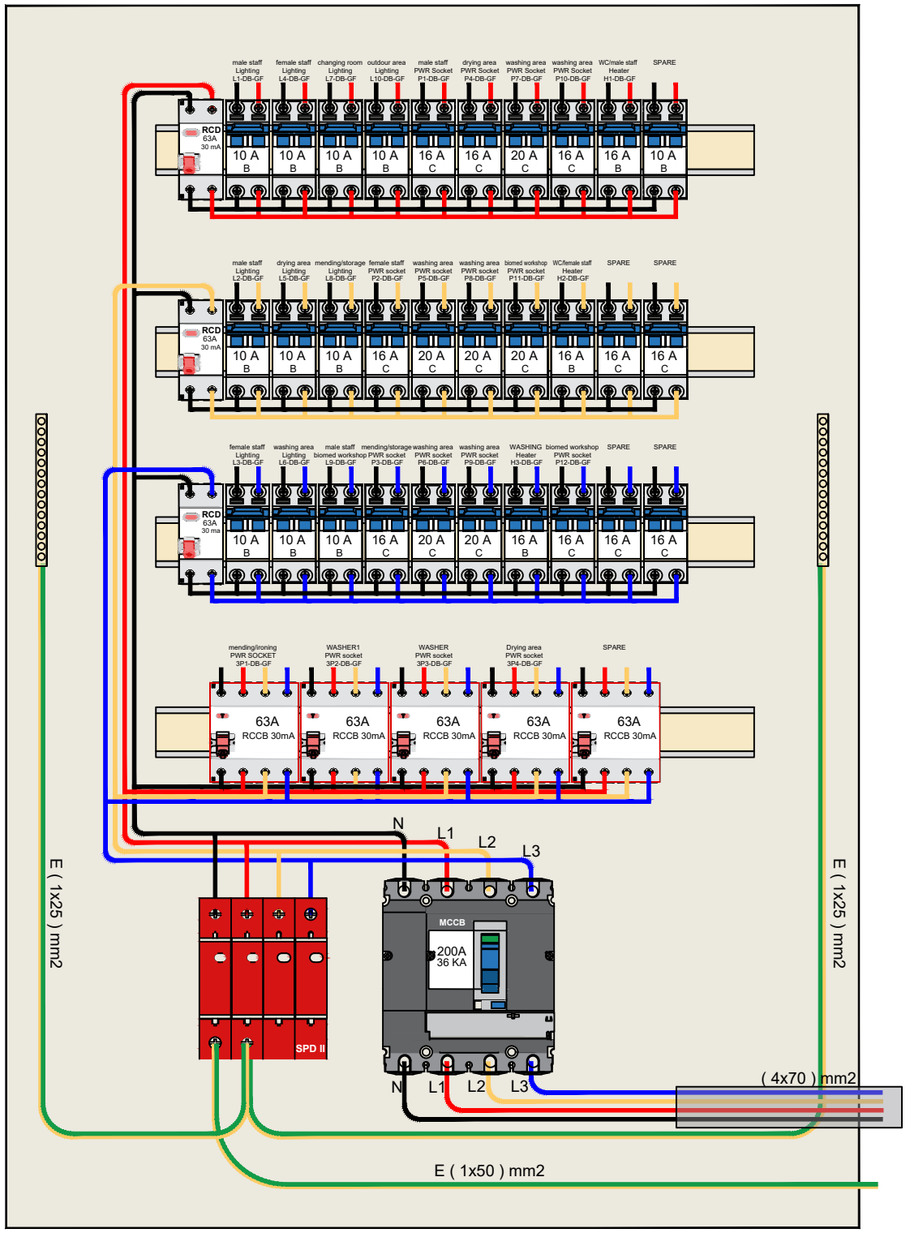
FRIST FLOOR
DB-F1



GROUND FLOOR
DB-GF



MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Electrical plans
Electrical distribution boards

File name : alqaeda hospital – 2013–111.dwg

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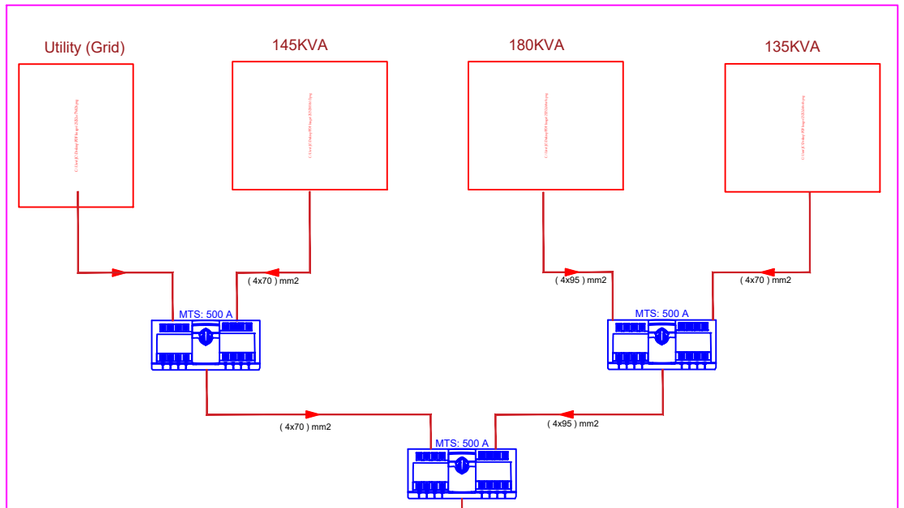
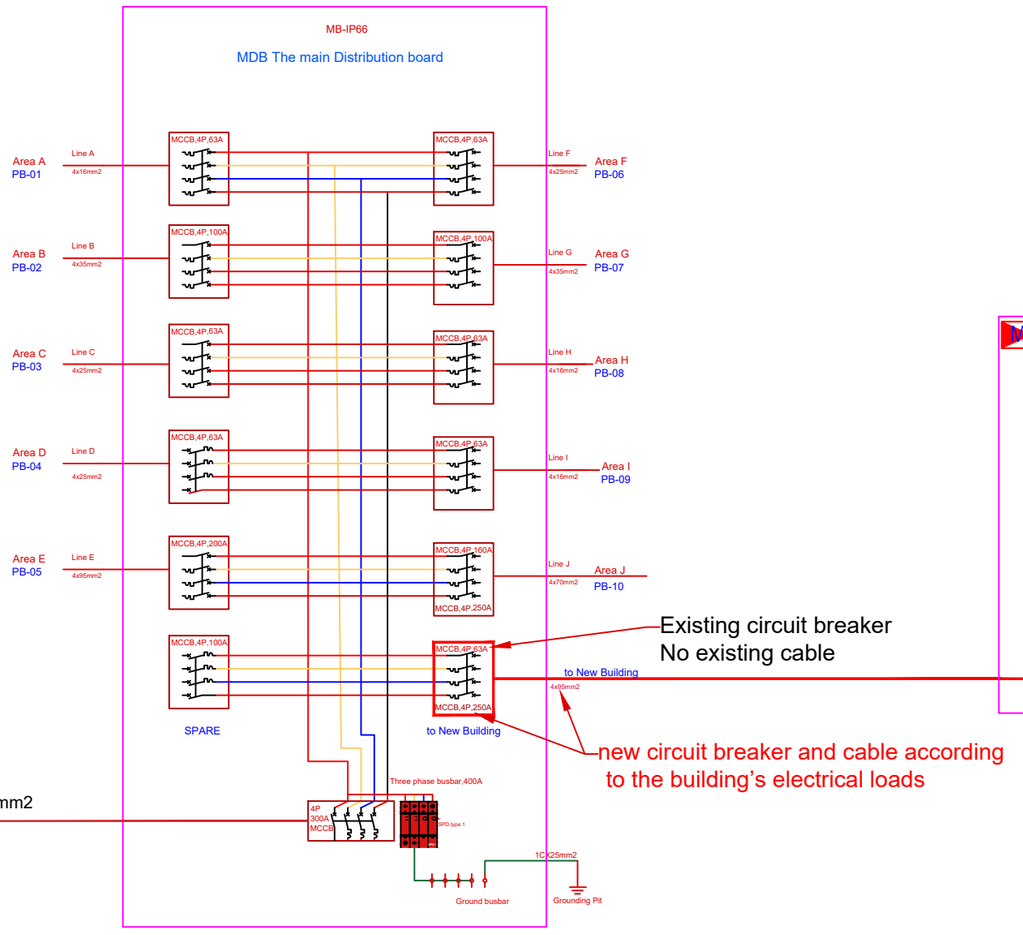
POWER SOURCES



existing MDB



NEW BUILDING

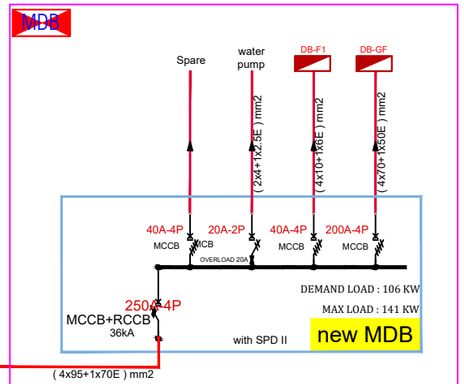


Table of Symbols	
ITEM SYMBOLE	Description
IP66 MB	Main Board Protection degree
	Surge Protection Device,T2
	Ground busbar
	3 phase Cable with neutral
	Three phase Compensation Busbar
	4P,MCB/MCCB
	Grounding
Area - PB-xx	Final Board NO & Location
MTS: 500 A	ATS or change over

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Electrical plans
SLD :single line diagram

File name : alqaeda hospital – 2013–111.dwg

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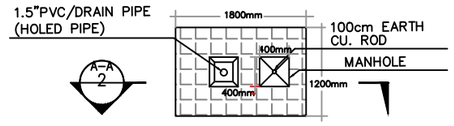
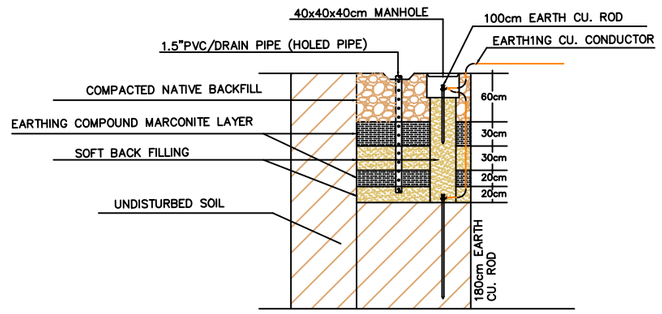
TYPE E1

this type used for panels



1 TYPICAL PLANE DETAILS FOR EARTHING PIT (TYPE E1)
SCALE NTS

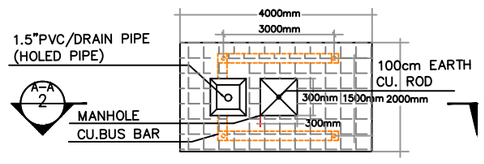


2 SECTION A–A
SCALE NTS

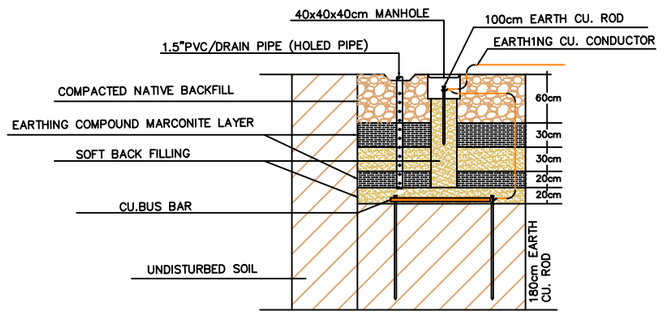
NOTE (FOR ELECTRICAL NETWORK):
EARTHING ELECTRODES QUANTITIES BASED ON SOIL RESISTIVITY WHICH SHOULD NOT EXCEED 2Ω.

TYPE E2

this type used for lighting sys. protection



1 TYPICAL PLANE DETAILS FOR EARTHING PIT (TYPE E3)
SCALE NTS



2 SECTION A–A
SCALE NTS

NOTE (FOR ELECTRICAL NETWORK):
EARTHING ELECTRODES QUANTITIES BASED ON SOIL RESISTIVITY WHICH SHOULD NOT EXCEED 2Ω.

MEDECINS SANS FRONTIERES

PROJECT TITLE :
YE120 - KILO Hospital YEMEN Mission

BUILDING NAME :
New Support Services and med Offices Building -Version 1

DRAWING TITLE :
Electrical plans
Executive details EARTHING SYSTEM

File name : alqaeda hospital – 2013–111.dwg

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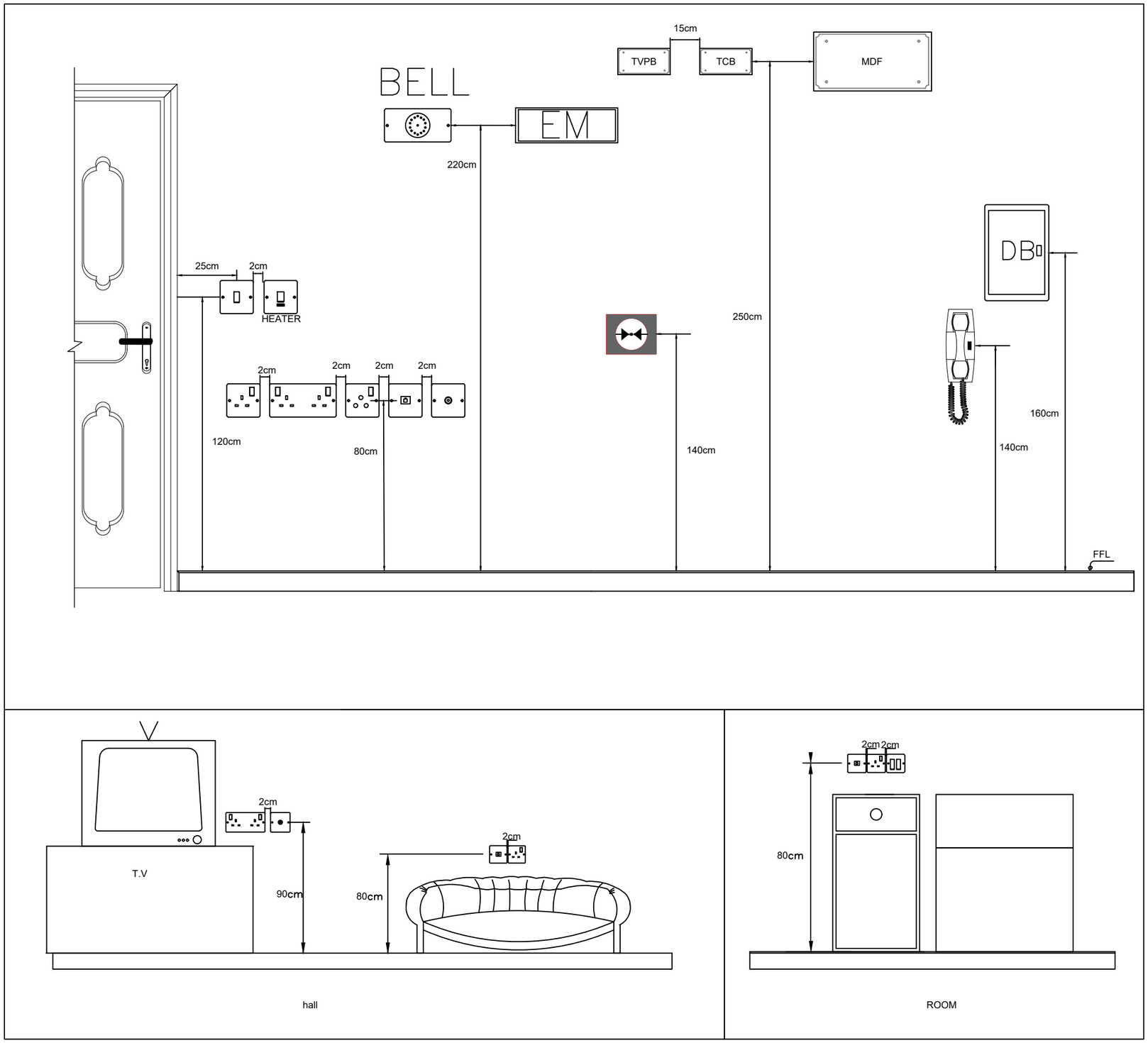

hall

ROOM

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Electrical plans
Executive details sockets and switch position

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

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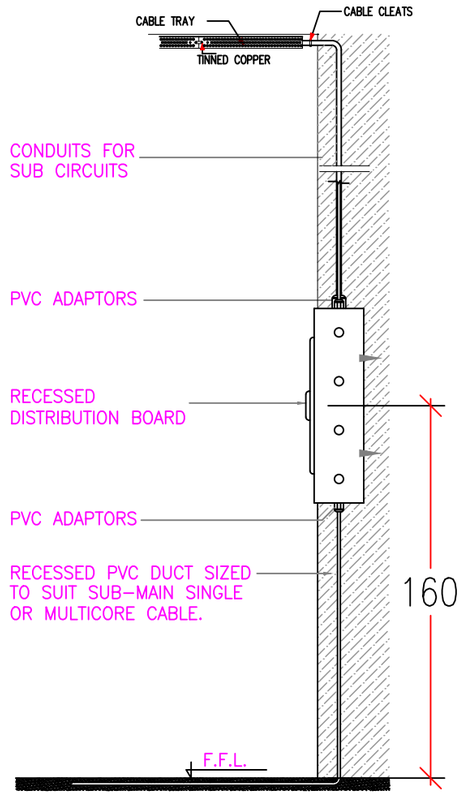
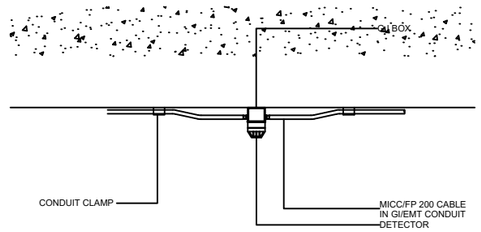
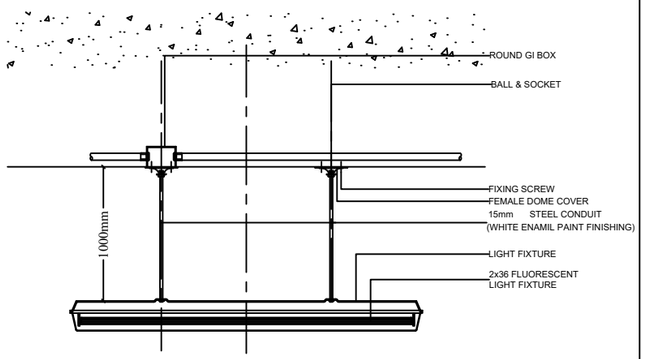


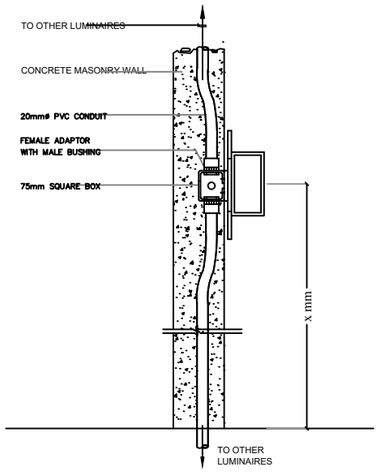
TYPICAL SUB-DISTRIBUTION BOARDS INSTALLATION DETAIL



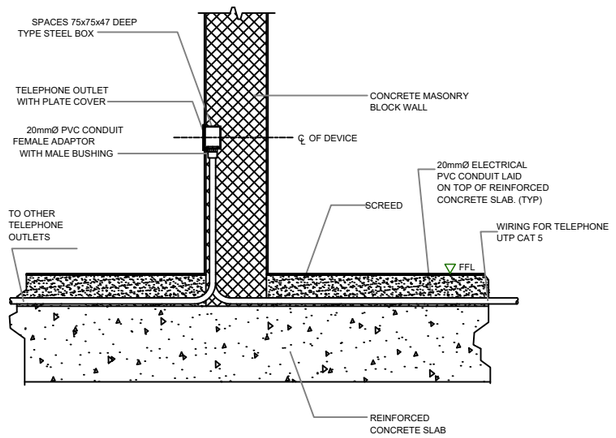
FIRE DETECTOR INSTALLATION IN CEILING SLAB



TYPICAL HANGING TYPE LIGHT FIXTURE INSTALATION DETAIL



WALL MOUNTED LUMINAIRE



TYPICAL TELEPHONE OUTLET INSTALLATION DETAILS

MEDECINS SANS FRONTIERES

PROJECT TITLE :

YE120 - KILO Hospital
YEMEN Mission

BUILDING NAME :

New Support Services and med Offices Building -Version 1

DRAWING TITLE :

Electrical plans
Executive details

File name : alqaeda hospital – 2013–111.dwg

HQ stamp :

N°	Date	Issue
R1 :	13 / 12 / 2023	

Sheet N° : **E22**

scale :

Date : 13 / 12 / 2023