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**ACTED\_DHAMAR**  
Construction Outpatient Building  
Dhamar General Hospital

ARCHITECTURAL DRAWINGS

Drawing and design by Eng: Fares #by Eng Wadea

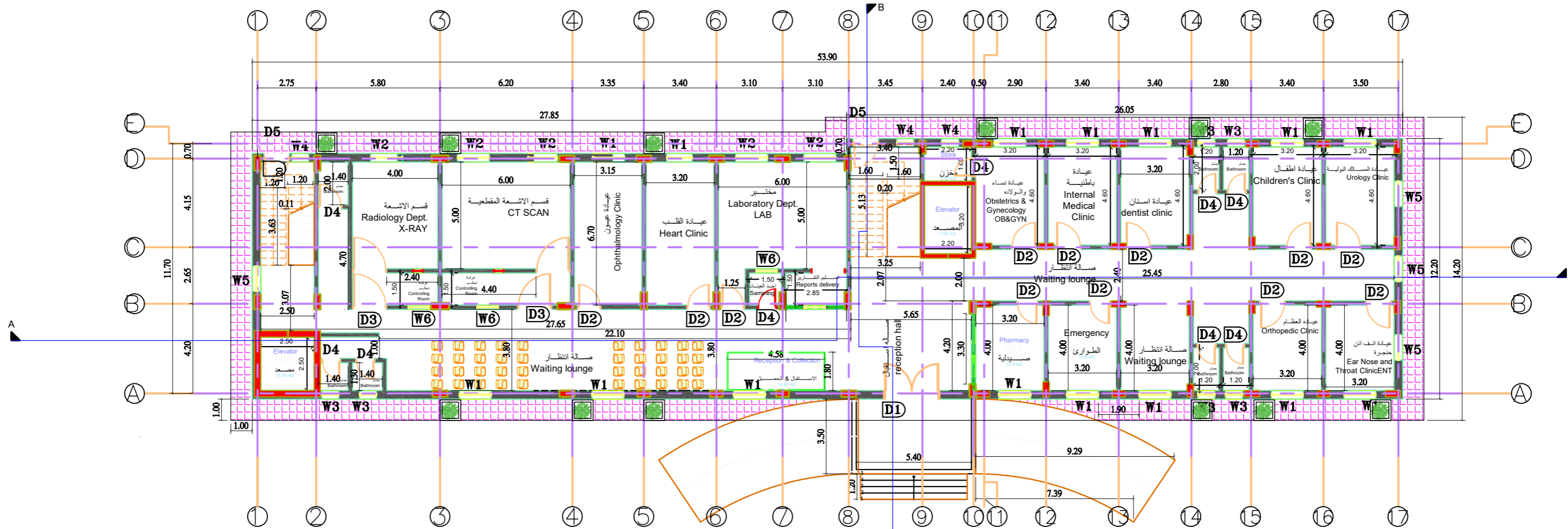
INDEX	REVISION	DATE

Site Plan  
Project Code:  
**15DYK**

Scale: 1:150  
Format: A2/A3  
Date: 2021

**A-001**





المواصفات	العدد	الارتفاع	العرض	الرمز	جدول نماذج الأبواب
باب زجاج سكرت نوع ممتازة		220	250	D1	
خشب ميرانتى أحمر سماكة 5 سم مع حلق عريض		200	110	D2	
خشب ميرانتى أحمر سماكة 5 سم مع حلق عريض		200	150	D3	
المنيوم جودة عالية مع عمل زجاج مسلك شفاف 60*60 سم		200	80	D4	
حديد محبب نوع ممتاز		200	120	D5	

المواصفات	العدد	الارتفاع	العرض	الرمز	جدول نماذج النوافذ
المنيوم برونزي ظفه ثابتة وظيفتين متحركة شبك حمايه مصبغات 16/م 15 سم مغطى بشبك صفيح واطار شلمان ابو 1.5 بدون فتحات عدا قسم المختبر مع درفات سحب		200	150	70	W1
		50	150	180	W2
المنيوم برونزي ظفه ثابتة وظيفتين متحركة شبك حمايه مصبغات 16/م 15 سم مغطى بشبك صفيح واطار شلمان ابو 1.5		80	60	160	W3
المنيوم برونزي ظفه ثابتة وظيفتين متحركة شبك حمايه مصبغات 16/م 15 سم مغطى بشبك صفيح واطار شلمان ابو 1.5		170	60	70	W4
المنيوم برونزي ظفه ثابتة وظيفتين متحركة شبك حمايه مصبغات 16/م 15 سم مغطى بشبك صفيح واطار شلمان ابو 1.5		200	120	70	W5
المنيوم جودة ممتازة خاص للفتحات الداخلية لتسليم واستلام النتائج		80	100	120	W6



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INDEX	REVISION	DATE

First Floor

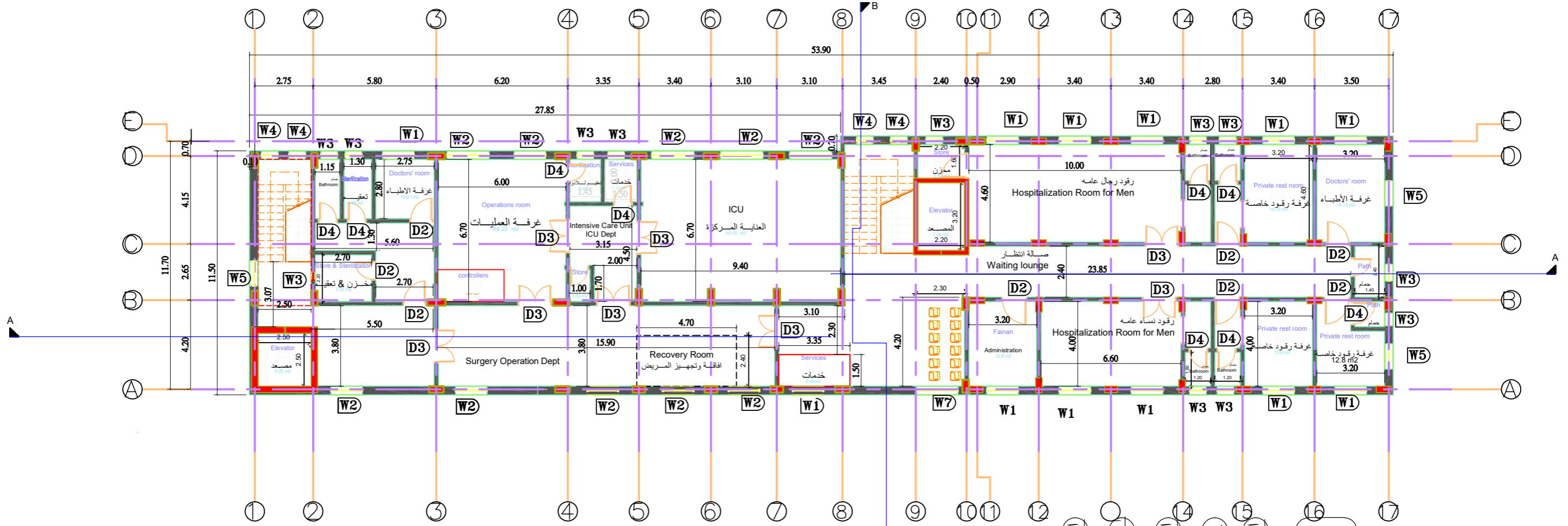
Project Code:

15DYK

Scale: 1:150  
Format: A2  
Date: 2021

A-002





الموصفات	العدد	الارتفاع	العرض	الرمز	جدول نماذج الأبواب
خشب ميرانتي أحمر سماكة 5 سم مع حلق عريض	220	250	D1		
خشب ميرانتي أحمر سماكة 5 سم مع حلق عريض	200	110	D2		
خشب ميرانتي أحمر سماكة 5 سم مع حلق عريض	200	150	D3		
المنيوم جودة عالية مع عمل زجاج مسلك شفاف 60*60سم	200	80	D4		

الموصفات	العدد	الارتفاع	العرض	الطسه	الرمز	جدول نماذج النوافذ
المنيوم برونزي ظفه ثابتة وظفتين متحركه نوع ممتاز	200	150	70	W1		
المنيوم برونزي ظفه ثابتة وظفتين متحركه نوع ممتاز	50	150	160	W2		
المنيوم برونزي ظفه ثابتة وظفتين متحركه نوع ممتاز	80	60	160	W3		
المنيوم برونزي ظفه ثابتة وظفتين متحركه نوع ممتاز	170	60	70	W4		
المنيوم برونزي ظفه ثابتة وظفتين متحركه نوع ممتاز	200	120	70	W5		
المنيوم برونزي ظفه ثابتة وظفتين متحركه نوع ممتاز	200	200	70	W7		



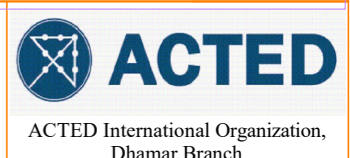
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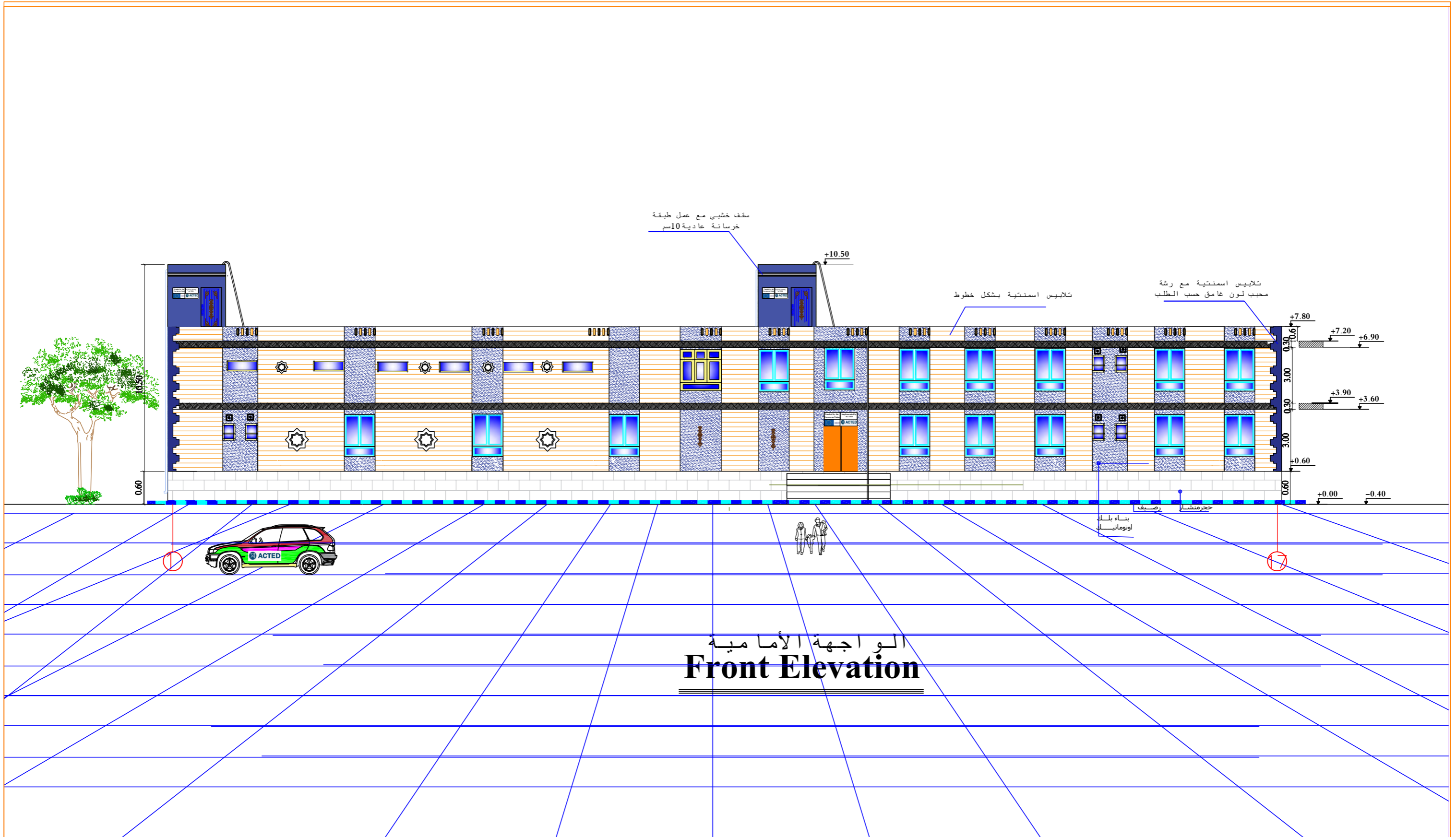
TITLE: ARCHITECTURAL DRAWINGS  
 Drawing and design by Eng: Fares #by Eng Wadea

INDEX	REVISION	DATE

Filename:   \_Secand Floor\_    
 Project Code: **15DYK**

Scale: 1:150  
 Format: A2/A3  
 Date: 2021  
**A-003**





الواجهة الأمامية  
**Front Elevation**



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 Construction Outpatient Building  
 Dhamar General Hospital

ARCHITECTURAL DRAWINGS

Drawing and design by Eng: Fares #by Eng Wadea

INDEX	REVISION	DATE

FRONT ELEVATION

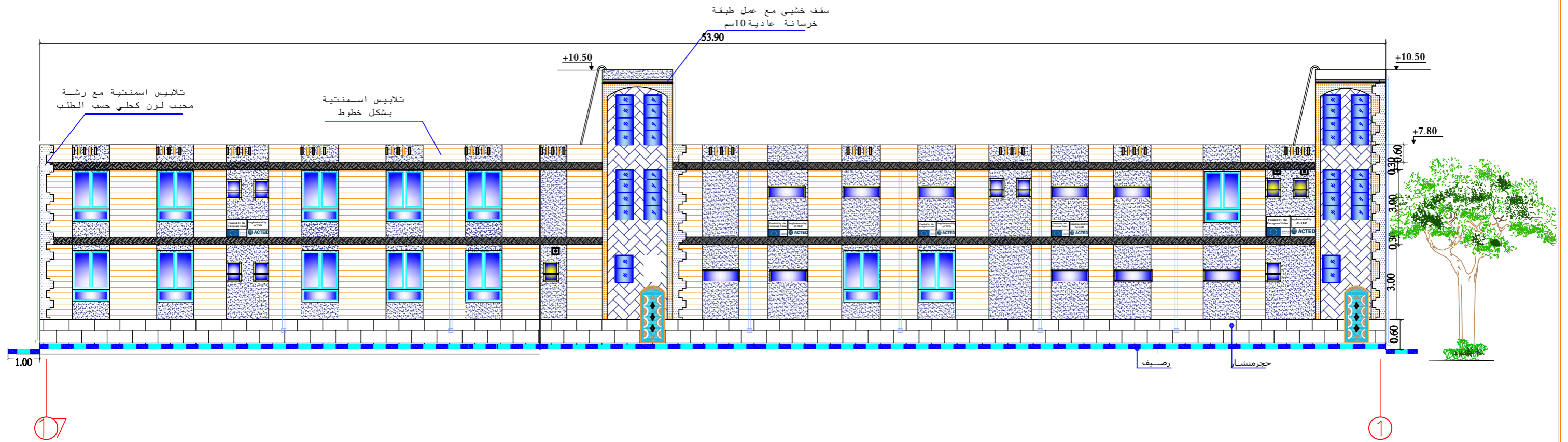
Project Code:

**15DYK**

Scale	Format
1:150	A2 A3
Date	2021

**A-004**





الواجهة الخلفية  
**Back Elevation**



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 Dhamar General Hospital

ARCHITECTURAL DRAWINGS

Drawing and design by Eng: Fares #by Eng Wadea

INDEX	REVISION	DATE

Back Elevation

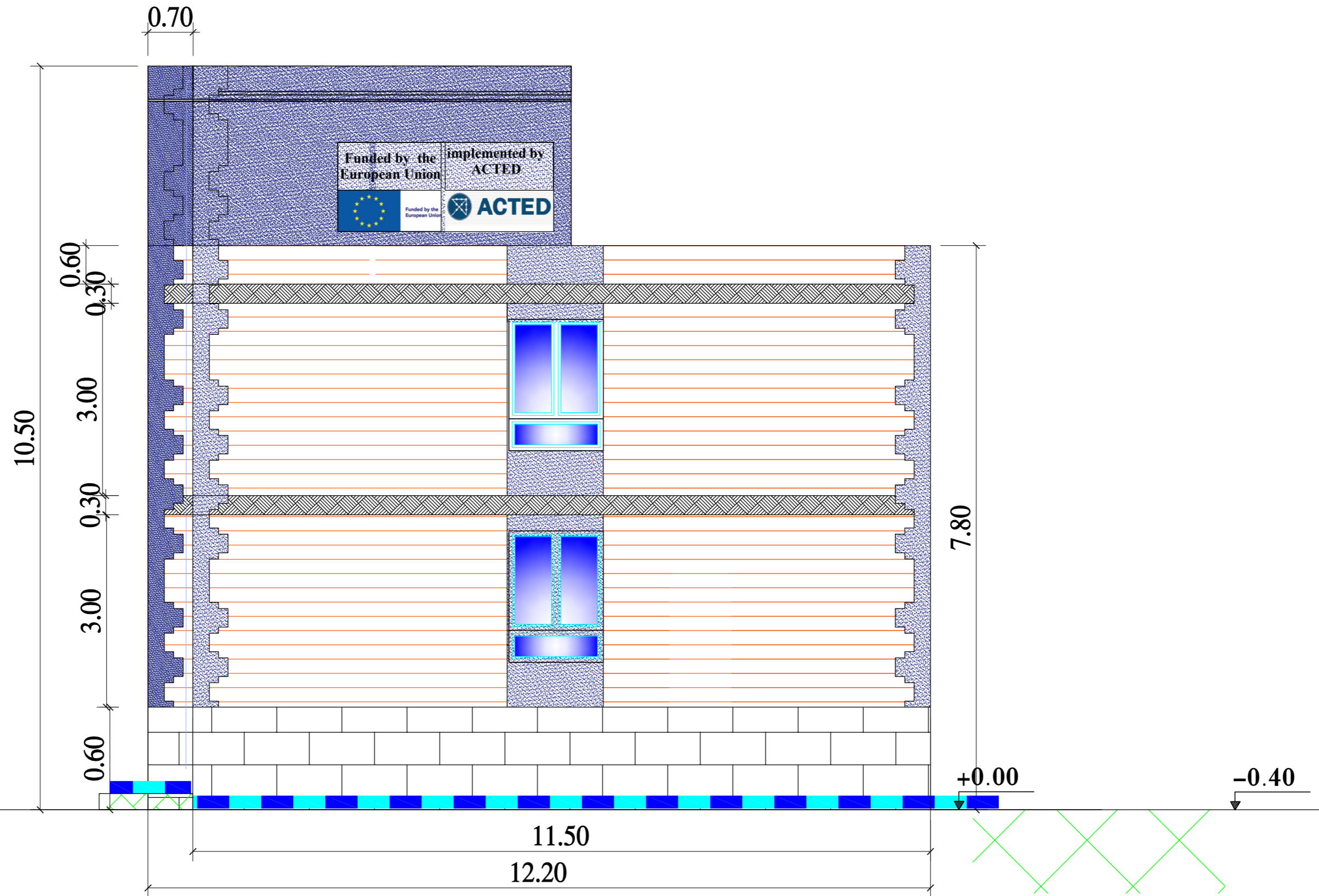
Project Code:

**15DYK**

Scale	Format
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Date	2021

**A-005**





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Construction Outpatient Building  
Dhamar General Hospital

ARCHITECTURAL DRAWINGS

Drawing and design by Eng: Fares #by Eng Wadea

INDEX	REVISION	DATE

Left Elevation

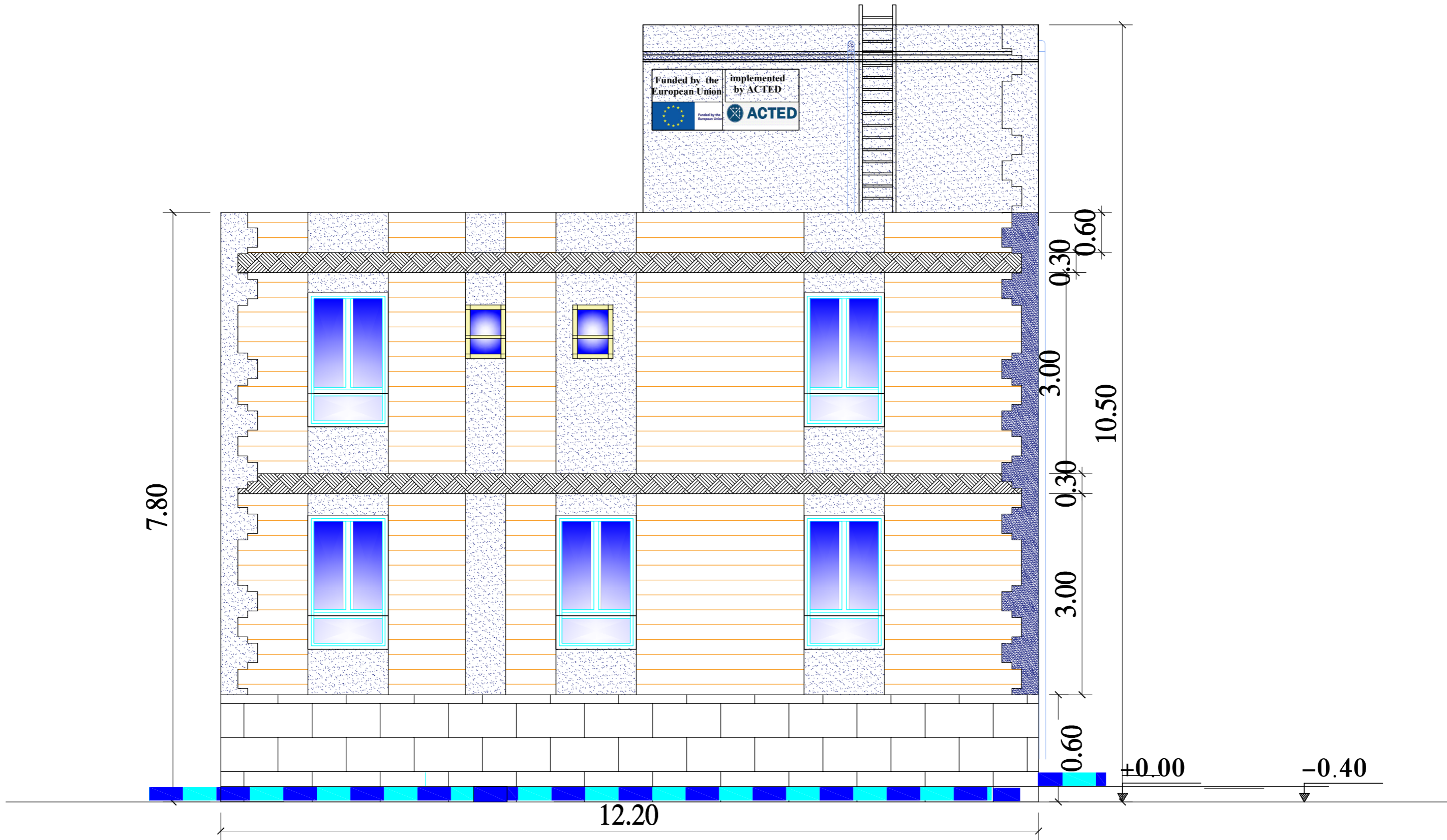
Project Code:

15DYK

Scale	Format
1:150	A2 A3
2021	

A-006





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ARCHITECTURAL DRAWINGS

Drawing and design by Eng: Fares #by Eng Wadea

INDEX	REVISION	DATE

Right Elevation

Project Code:

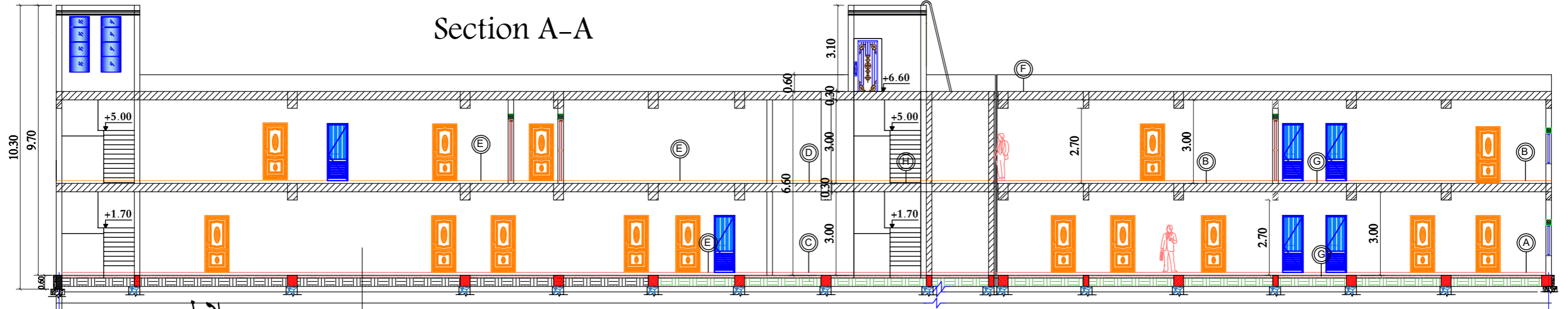
15DYK

Scale	Format
1:150	A2 A3
2021	

A-007



مقطع A-A  
Section A-A



بلاط  
مونة أسمنتية 3سم  
طبقة هلسن 5سم  
خرسانة عادية 10سم  
طبقة احجار جعم 10سم  
تربة مدكوكة جيدا

<p>بلاط سيراميك اسباني خشن لارضية الحمام مونة اسمنتية 3سم طبقة من الهلسن سماكة 5سم طبقتين من الفلت المتعامدة مع الدامر خرسانية عادية سماكة 10سم طبقة من الصولنج سماكة 15سم تربة مستوردة ومدكوكة جيدا</p>	<p>بلاط بورسلان للصالات والممرات مونة اسمنتية 3سم طبقة من الهلسن سماكة 5سم خرسانة مسلحة 30سم</p>	<p>بلاط سيراميك اسباني لغرف العيادات مونة اسمنتية 3سم طبقة من الهلسن سماكة 5سم خرسانية عادية سماكة 10سم طبقة صولنج 10سم</p>
<p>خرسانة ميول متوسط السماكة 7.5سم طبقتين من الفلت المتعامدة مع الدامر خرسانة مسلحة 30سم تليس اسمنتية 1.5سم</p>	<p>بلاط جرانيت ابيض لبساطات السلالم والقائم والنائم مونة اسمنتية 3سم طبقة من الهلسن سماكة 5سم خرسانة مسلحة 30سم</p>	<p>بلاط سيراميك اسباني لغرف العيادات مونة اسمنتية 3سم طبقة من الهلسن سماكة 5سم خرسانية عادية سماكة 10سم تربة مستوردة ومدكوكة جيدا</p>



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Dhamar General Hospital

ARCHITECTURAL DRAWINGS

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INDEX	REVISION	DATE

Section A-A

Project Code:

15DYK

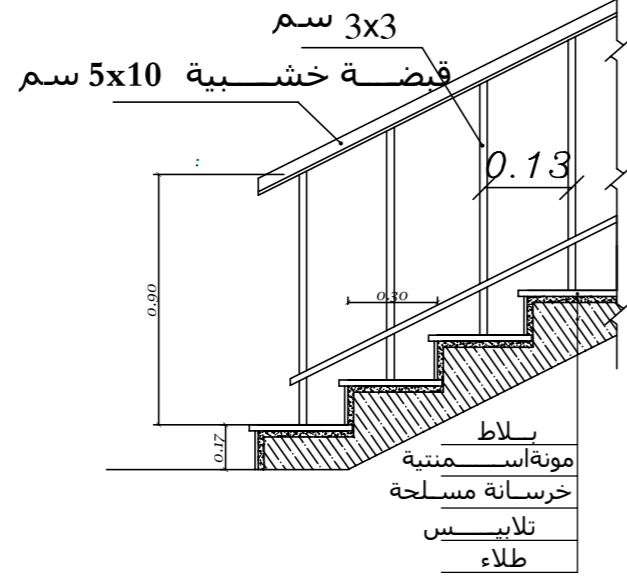
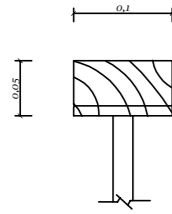
Scale  
1:150  
Date  
2021

A-008

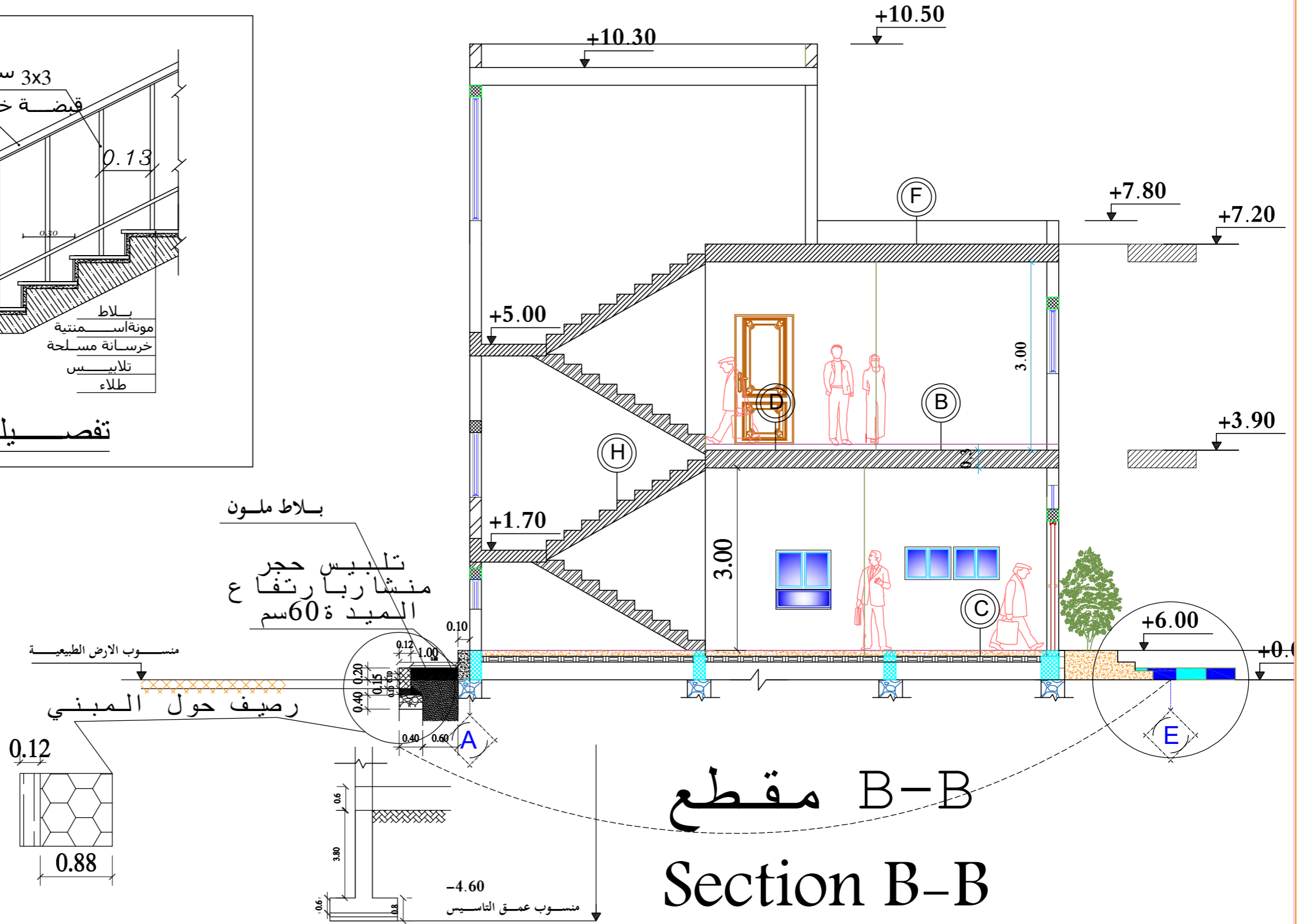




تفصيلة درجزي  
السلم



تفصيلة السلم



مقطع B-B  
Section B-B



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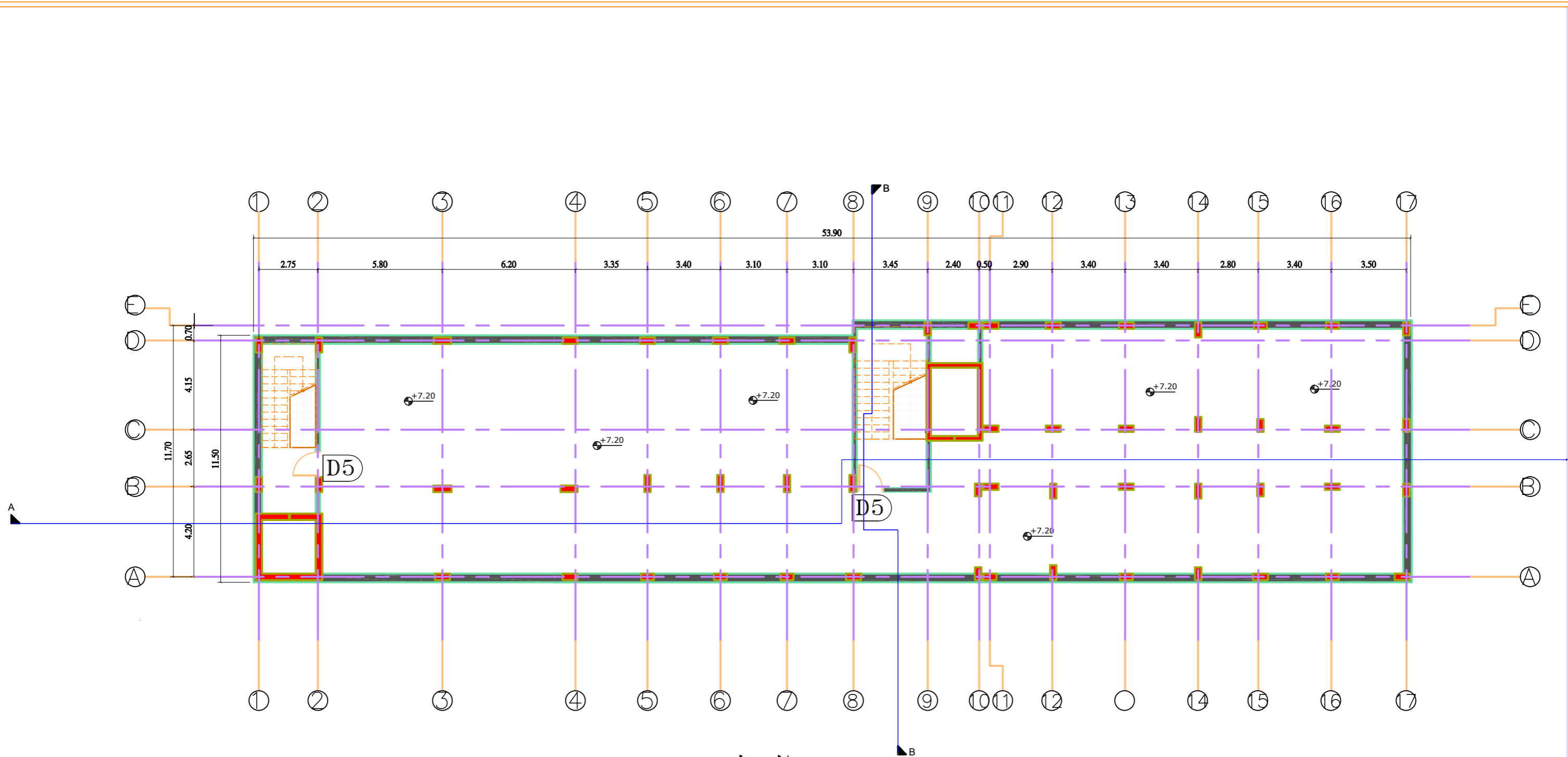
ARCHITECTURAL DRAWINGS  
Drawing and design by Eng: Fares #by Eng Wadea

INDEX	REVISION	DATE

Section B-B  
Project Code:  
15DYK

Scale: 1:150  
Format: A2/A3  
Date: 2021  
Sheet: A-009





السطح  
**Roof Floor**



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 Construction Outpatient Building  
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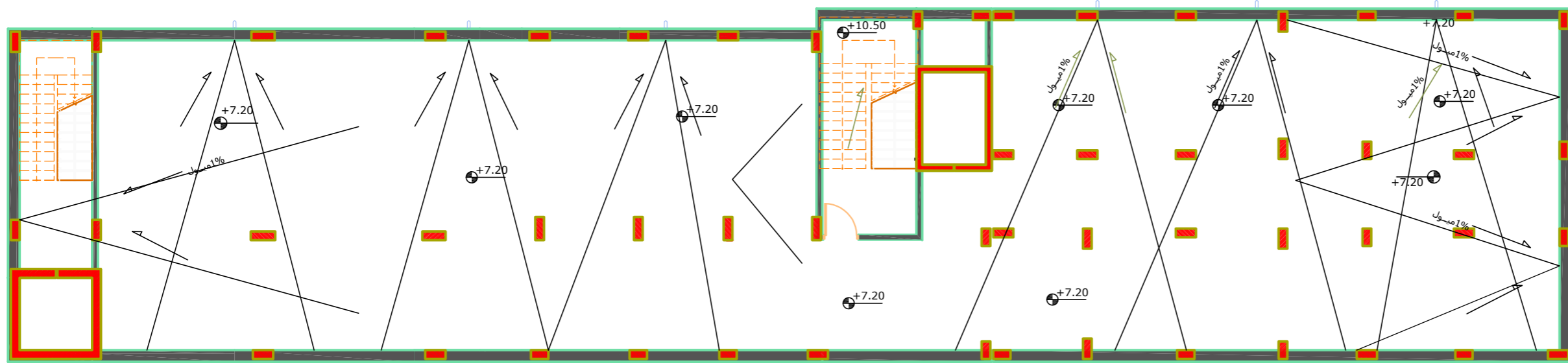
TITLE: **ARCHITECTURAL DRAWINGS**  
 Drawing and design by Eng: Fares #by Eng Wadea

INDEX	REVISION	DATE

**ROOF FLOR**  
 Project Code:  
**15DYK**

Scale: 1:150  
 Format: A2/A3  
 Date: 2021  
**A-010**





### ملاحظات عامة

يتم عمل ميول كما هو موضح في الرسومات

مواسير التصريف بلاستيكية قطر 4 انش فقط  
متوسط يمتد حتى أعلى الرصيف ب 5 سم وتنتهي  
بكوع زاوية مثبت بالخرسانة العادية من الجوانب

يلزم استمرار فاصل التمدد حتى العتلات / المثلث  
الخرساني

يتم تعبئة فواصل التمدد بخليط البيتومين  
الساخن والهلسن او الرمل بنسبة خلط 1:2

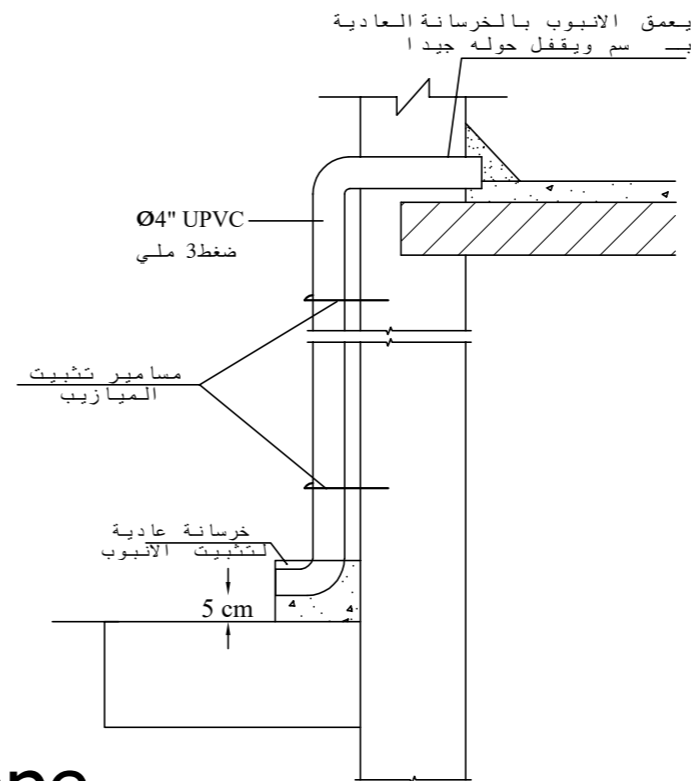
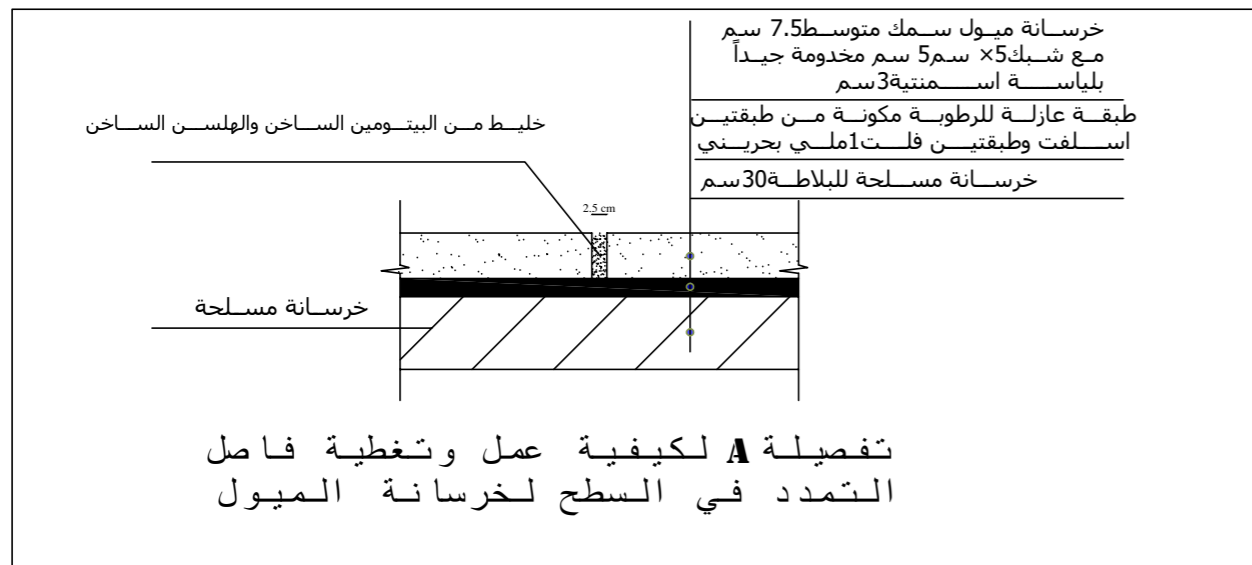
يتم تنظيف السطح جيداً قبل عمل الطبقات العازلة

يجب أن ترتفع طبقات الفت عند جدران السترة  
بمقدار لا يقل عن 15 سم بشكل مائل فوق مثلث  
الخرسانة العادية

يستخدم كيري كسارة لصبة الميول كيري رقم 2

يتم خدمة صبة الميول خدمة ممتازة بطبقة من  
اللياسة الأسمنتية قبل أن تجف صبة الميول

يلزم عدم إضافة أي مواد إلى مادة الدامر مثل الديزل أو  
الكيروسين



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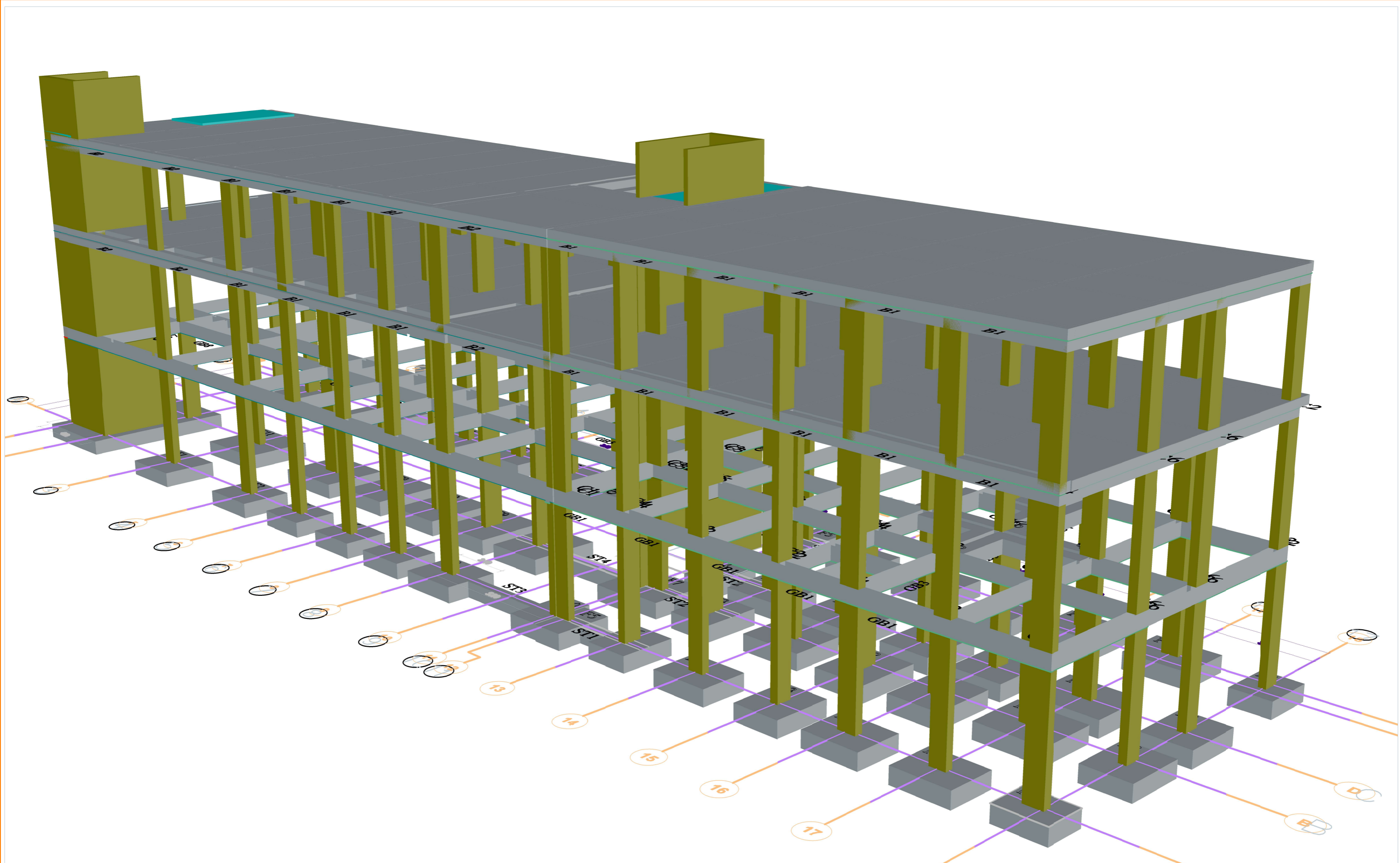
INDEX	REVISION	DATE

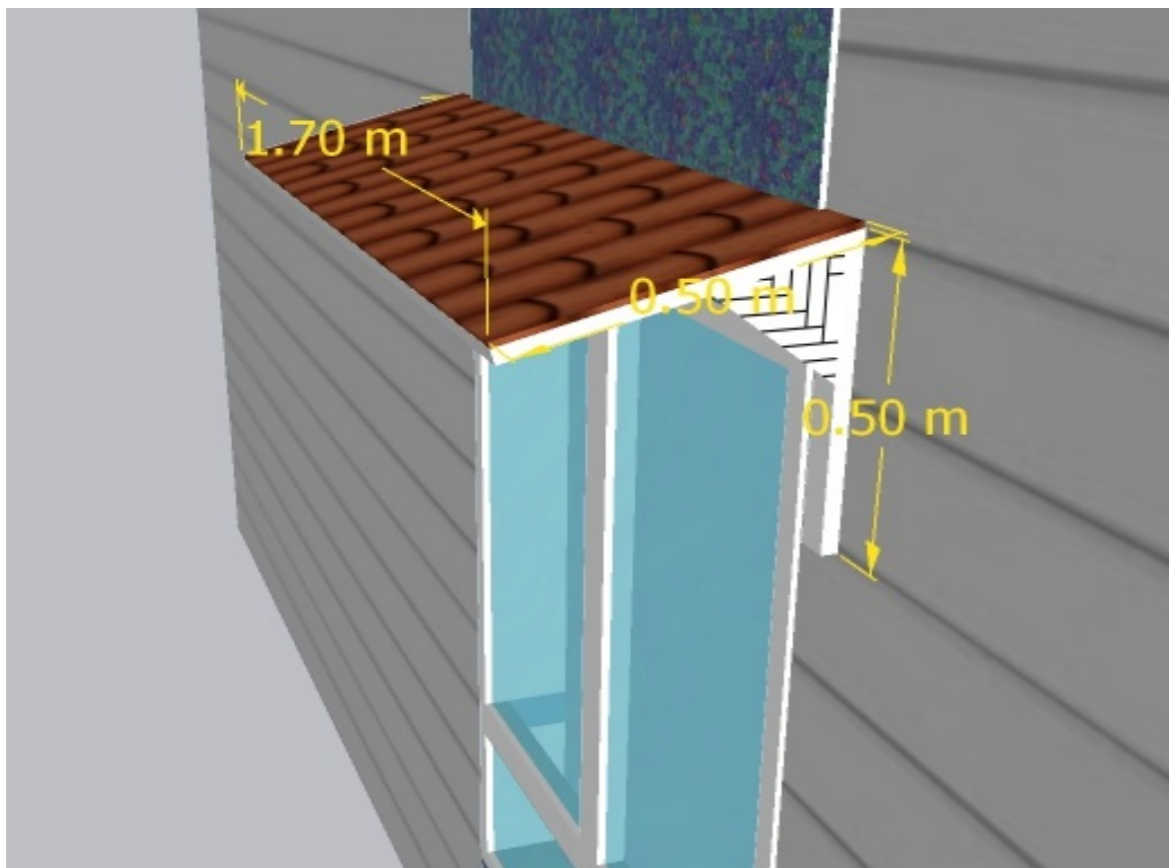
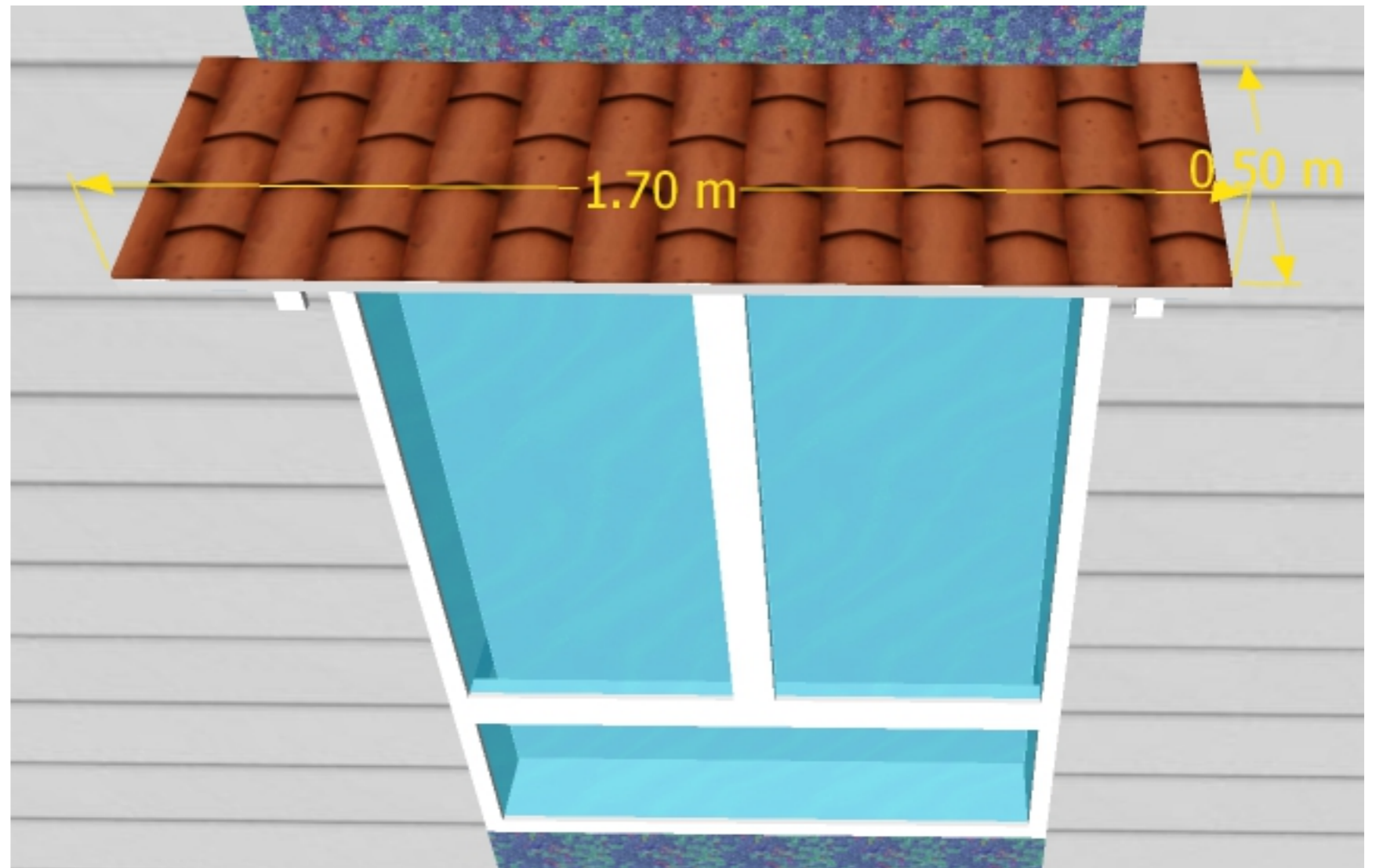
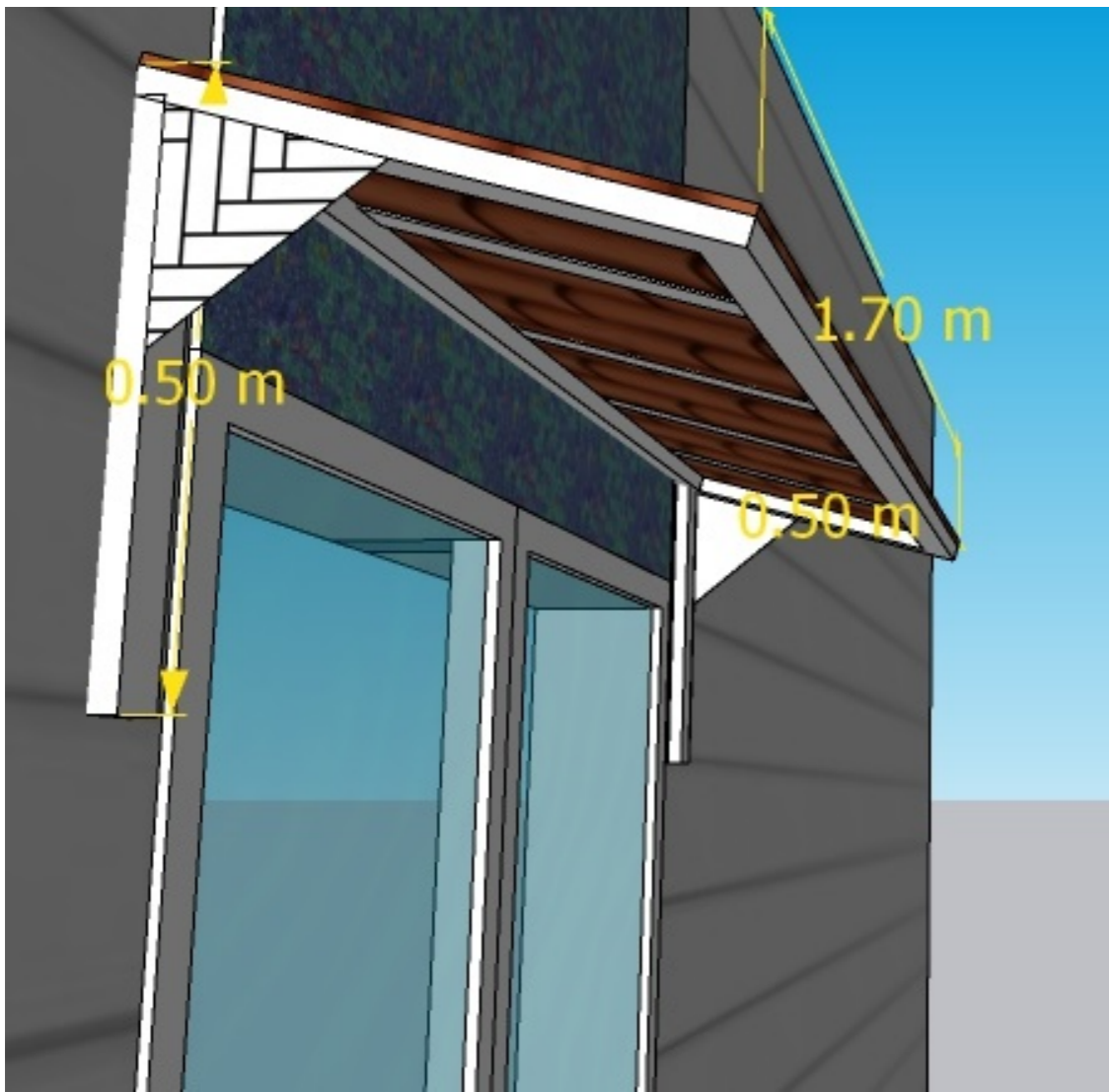
**Slope**  
Project Code:  
**15DYK**

Scale	Format
1:150	A2 A3
Date	2021

**A-011**







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**ACTED\_DHAMAR**

Construction Outpatient Building  
Dhamar General Hospital

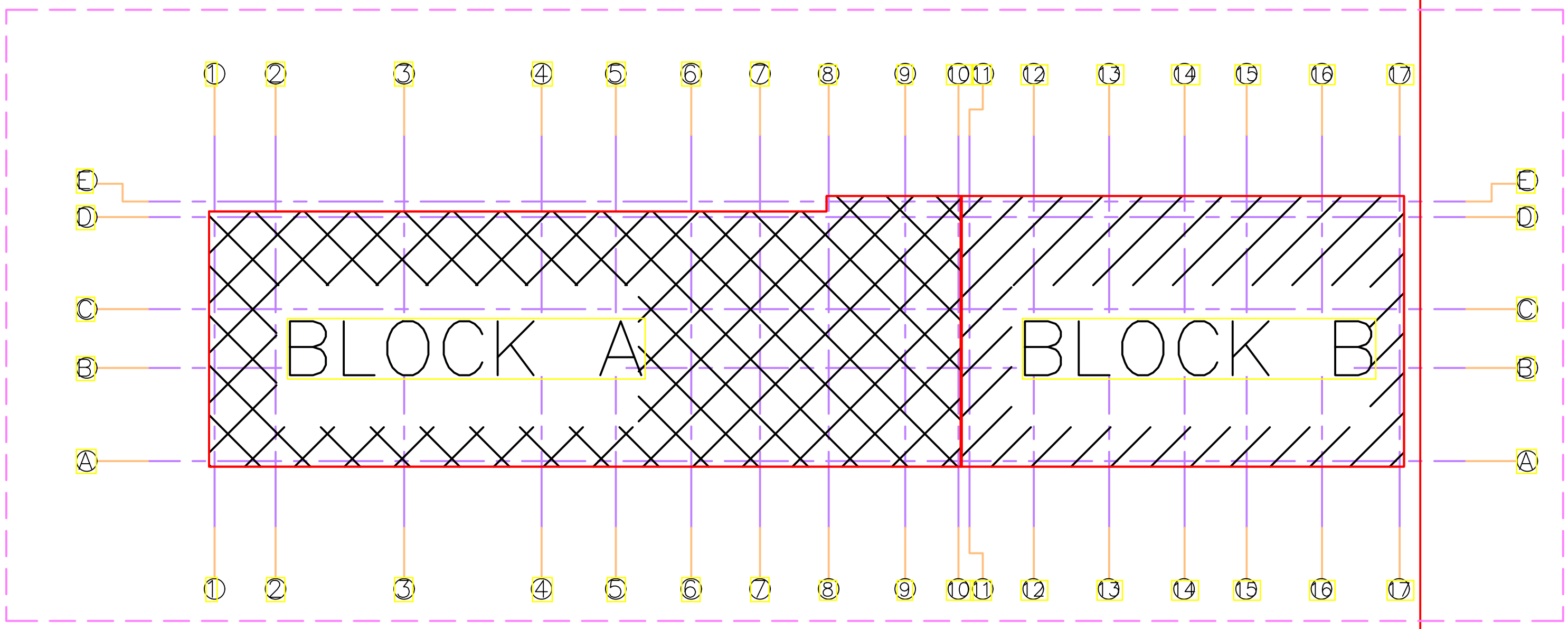
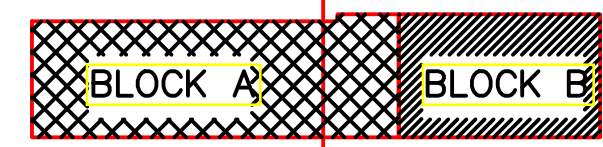
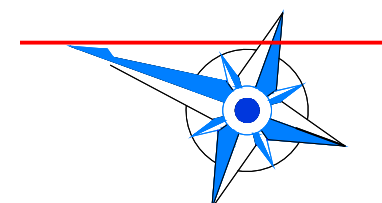
TITLE: ARCHITECTURAL DRAWINGS

Drawing and design by Eng: Fares #by Eng Wadea

INDEX	REVISION	DATE

Filename	Scale	Format	Sheet
3D- perspective	--	A2 A3	A-013
Project Code:	1:150	Date	
15DYK	2021		





**ACTED\_DHAMAR**  
 Construction Outpatient Building  
 Dhamar General Hospital

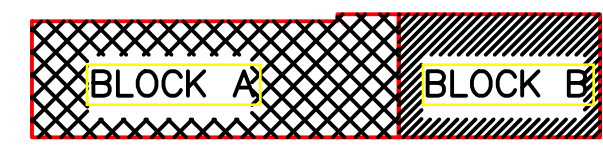
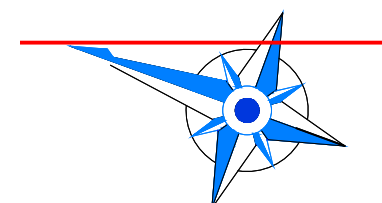
TITLE: **STRUCTURAL DESIGN**  
 Drawing and design by Eng: Fares #by Eng: Wadea

INDEX	REVISION	DATE

Filename: **\_ ALL BLOCKS \_**  
 Project Code: **15DYK**  
 Scale: 1:150  
 Format: A2/A3  
 Date: 2021

Sheet: **S-001**





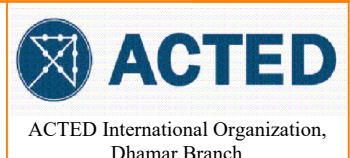
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**ACTED\_DHAMAR**  
 Construction Outpatient Building  
 Dhamar General Hospital

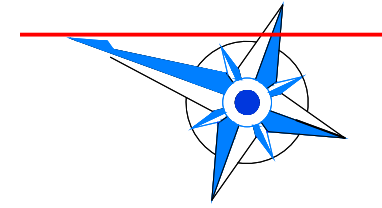
TITLE: **STRUCTURAL DESIGN**  
 Drawing and design by Eng: Fares # by Eng: Wadea

INDEX	REVISION	DATE

Filename: **\_ ALL COLUMNS \_**  
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 Scale: 1:150  
 Format: A2/A3  
 Date: 2021

Sheet: **S-002**



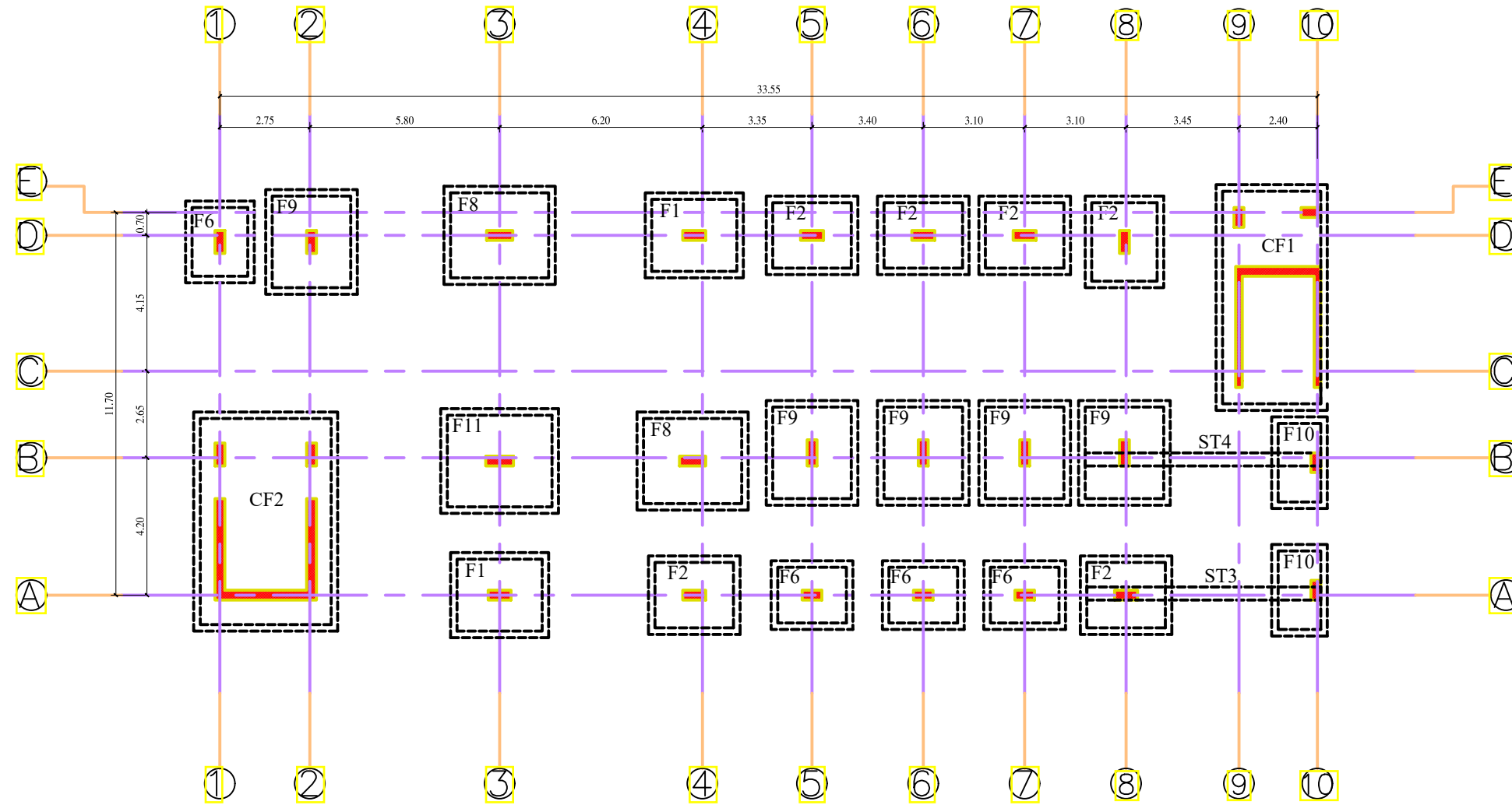


**BLOCK A**

**The building was designed for four floors**

NOTES:

- 1- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND AMERICAN CONCRETE CODE ( ACI ) 318-14AND ( UBC 1997)
- 2- SEISMIC LOAD USE ACCORDING TO UBC-ZONE 2A
- 3- NET ALLOWABLE BEARING CAPACITY OF SOIL ACCORDING TO Geotechnical Report IS 176 KN/m<sup>2</sup>
- 4- MINIMUM CONCRETE CUBE STRENGTH (F<sub>c</sub> 25= MPA)
- 5- YIELDING STREES OF STEEL IS GRADE 40ASTM 280= MPA
- 6- CLEAR CONCRETE COVER TO REINFORCEMENT FOR FOUNDATIONS SHALL BE AT LAST 50MM.
- 7- CONCRETE SHOULD BE MIXED MECHANICALLY.
- 8- THE SLICE LENGTH OF STEEL IS NOT LESS THAN 50Ø OR 1M WHICH IS GREATER.
- 9- BAR LENGTH SHALL BE ADJUSTED TO SATISFY THE MINIMUM DEVELOPMENT LENGTH REQUIREMENTS
- 10- SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES
- 11- Underneath all the Foundations , lay a layer of ordinary concrete not less than 10cm thick and extend 10cm from all sides of foundation.
- 12- Take into account the appropriate cables of steel diameter 16in the short and long directions of foundation, during equal distances to fix the steel bars of column.
- 13- IF THERE ARE DIFFERENCES QUANTITY OF REINFORCEMENT ON THE LEFT OR RIGHT OF THE STRAP BEAMS ,THE HIGHEST QUANTITY SHOULD BE USED.
- 14- ALL DIMENSION ARE IN CENTIMETER.
- 15- THIS DRAWING SHOULD BE READ FROM LEFT TO RIGHT.
- 16 - ALL FOOTINGS AND COLUMNS U.G LEVEL TO BE PAINTED WITH EPOXY COATING AS PER SPECIFICATION.



جدول أبعاد و تسليح القواعد : Ø 16 F<sub>y</sub>=250 N/mm<sup>2</sup>

Beam no.	Dimension		Bottom bars			Top bars			Stirrups	Remarks
	Width (cm)	Depth (cm)	At ext footing	Middle	At ent footing	At ext footing	Middle	At ent footing		
ST3	40	80	8 Ø 18	8 Ø 18	8 Ø 18	8 Ø 18	8 Ø 18	8 Ø 18	1 Ø 10 @ 15 cm	1
ST4	40	100	8 Ø 18	8 Ø 18	8 Ø 18	8 Ø 18	8 Ø 18	8 Ø 18	1 Ø 10 @ 15 cm	1

TYPE	Dimension			Bottom bars			Top bars		
	Width (cm)	Length (cm)	Depth (cm)	Long DIR / m	Short DIR / m	ADD bottom At column	Long DIR / m	Short DIR / m	ADD Above At mid
CF1	300	650	60	8 Ø 16	8 Ø 16	3 Ø 18	7 Ø 16	7 Ø 16	2 Ø 18
CF2	400	630	70	8 Ø 16	8 Ø 16	5 Ø 18	7 Ø 16	7 Ø 16	2 Ø 18

TYPE	Dimension			Bottom bars		CAPOLLE		Remarks
	Width (cm)	Length (cm)	Depth (cm)	Long DIR / m	Short DIR / m	Long DIR	Short DIR	
F1	220	260	60	6 Ø 16	6 Ø 16	2 Ø 16	2 Ø 16	2
F2	200	240	60	5 Ø 16	5 Ø 16	2 Ø 16	2 Ø 16	6
F6	170	210	50	5 Ø 16	5 Ø 16	2 Ø 16	2 Ø 16	4
F8	300	260	60	8 Ø 16	8 Ø 16	2 Ø 16	2 Ø 16	2
F9	280	240	60	7 Ø 16	7 Ø 16	2 Ø 16	2 Ø 16	5
F10	130	240	60	8 Ø 16	8 Ø 16	2 Ø 16	2 Ø 16	2
F11	320	280	70	9 Ø 16	9 Ø 16	2 Ø 16	2 Ø 16	1



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Dhamar General Hospital

TITLE: **STRUCTURAL DESIGN**

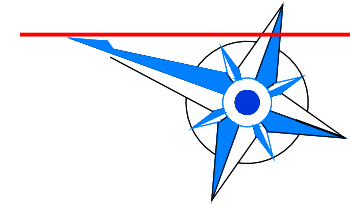
Drawing and design by Eng: Fares # by Eng Wadea

INDEX	REVISION	DATE

Filename	Scale	Format	Sheet
BLOCK A FOUNDATIONS _	1:150	A2 A3	S-003
Project Code:	2021		
<b>15DYK</b>			







**BLOCK B**

**THIS DRAWING WAS DESIGNED FOR UTM LEVELS**

- NOTES:
- 1- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND AMERICAN CONCRETE CODE ( ACI ) 318-14AND ( UBC 1997)
  - 2- SEISMIC LOAD USE ACCORDING TO UBC-ZONE 2A
  - 3- NET ALLOWABLE BEARING CAPACITY OF SOIL ACCORDING TO Geotechnical Report IS 176 KN/m<sup>2</sup>
  - 4- MINIMUM CONCRETE CUBE STRENGTH (F<sub>c</sub> 25= MPA)
  - 5- YIELDING STRESSES OF STEEL IS GRADE 40ASTM 280= MPA
  - 6- CLEAR CONCRETE COVER TO REINFORCEMENT FOR FOUNDATIONS SHALL BE AT LAST 50MM.
  - 7- CONCRETE SHOULD BE MIXED MECHANICALLY.
  - 8- THE SLICE LENGTH OF STEEL IS NOT LESS THAN 50Ø OR 1M WHICH IS GREATER.
  - 9- BAR LENGTH SHALL BE ADJUSTED TO SATISFY THE MINIMUM DEVELOPMENT LENGTH REQUIREMENTS
  - 10- SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES
  - 11- Underneath all the Foundations , lay a layer of ordinary concrete not less than 10cm thick and extend 10cm from all sides of foundation.
  - 12- Take into account the appropriate cables of steel diameter 16in the short and long directions of foundation, during equal distances to fix the steel bars of column.
  - 13- IF THERE ARE DIFFERENCES QUANTITY OF REINFORCEMENT ON THE LEFT OR RIGHT OF THE STRAP BEAMS ,THE HIGHEST QUANTITY SHOULD BE USED.
  - 14- ALL DIMENSION ARE IN CENTIMETER.
  - 15- THIS DRAWING SHOULD BE READ FROM LEFT TO RIGHT.
  - 16 - ALL FOOTINGS AND COLUMNS U.G LEVEL TO BE PAINTED WITH EPOXY COATING AS PER SPECIFICATION.

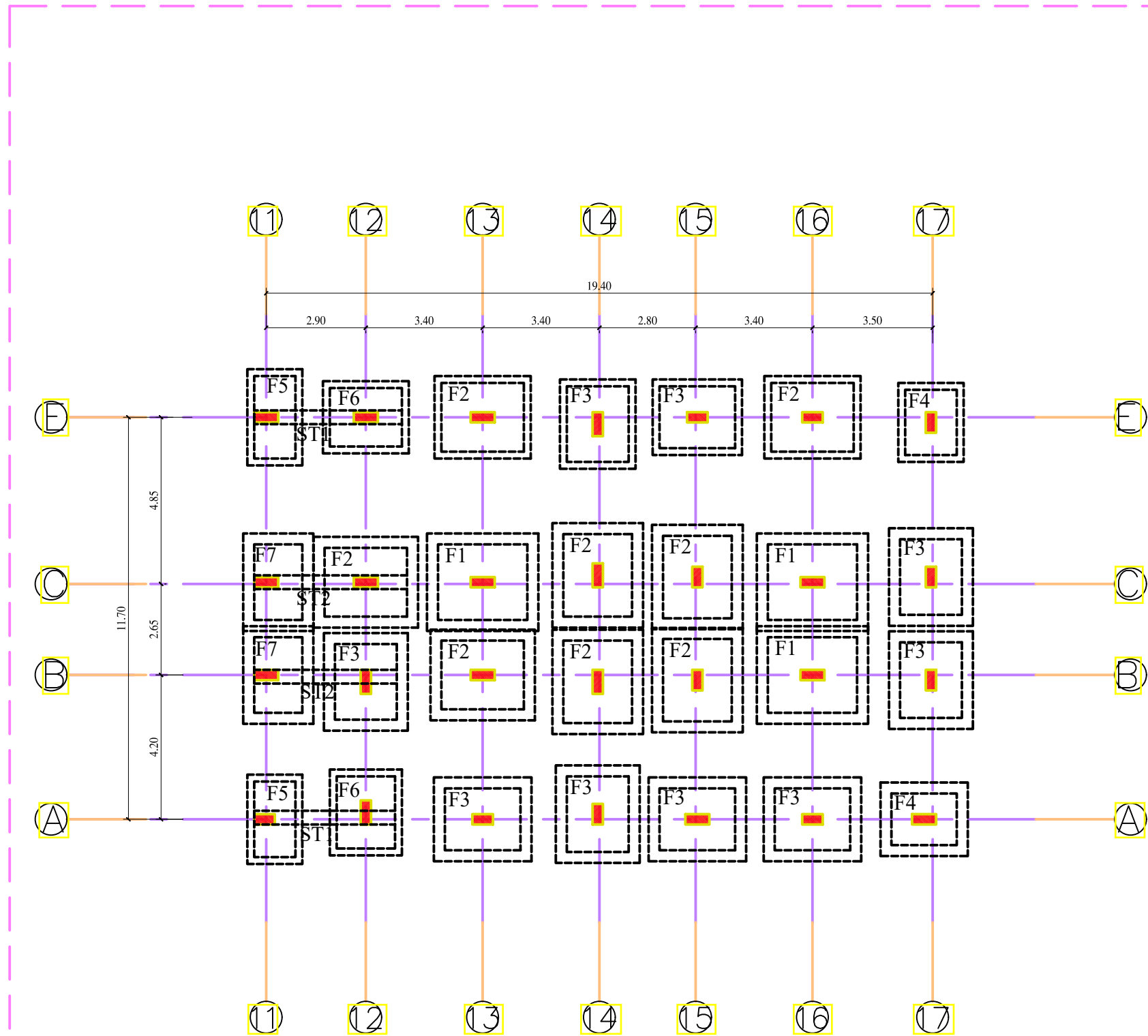


TABLE OF REINFORCEMENTS FOR SINGLE FOOTING

TYPE	Dimension			Bottom bars		CAPOLLE		Remarks
	Width (cm)	Lingth (cm)	Depth (cm)	Long DIR / m	Short DIR / m	Long DIR	Short DIR	
F1	220	260	60	6 Ø 16	6 Ø 16	2 Ø 16	2 Ø 16	3
F2	200	240	60	5 Ø 16	5 Ø 16	2 Ø 16	2 Ø 16	8
F3	180	220	50	5 Ø 16	5 Ø 16	2 Ø 16	2 Ø 16	9
F4	150	190	50	5 Ø 16	5 Ø 16	2 Ø 16	2 Ø 16	2
F5	120	220	50	7 Ø 16	7 Ø 16	2 Ø 16	2 Ø 16	2
F6	170	210	50	5 Ø 16	5 Ø 16	2 Ø 16	2 Ø 16	2
F7	140	220	50	8 Ø 16	8 Ø 16	2 Ø 16	2 Ø 16	2

TABLE OF REINFORCEMENTS FOR STRAP BEAMS FOR FOUNDATIONS

Beam no.	Dimension		Bottom bars			Top bars			Stirrups	Remarks
	Width (cm)	Depth (cm)	At ext footing	Middle	At ent footing	At ext footing	Middle	At ent footing		
ST1	40	80	5 Ø 18	5 Ø 18	5 Ø 18	6 Ø 18	6 Ø 18	6 Ø 18	1 Ø 10 @ 15 cm	2
ST2	40	80	7 Ø 18	7 Ø 18	7 Ø 18	7 Ø 18	7 Ø 18	7 Ø 18	1 Ø 10 @ 15 cm	2



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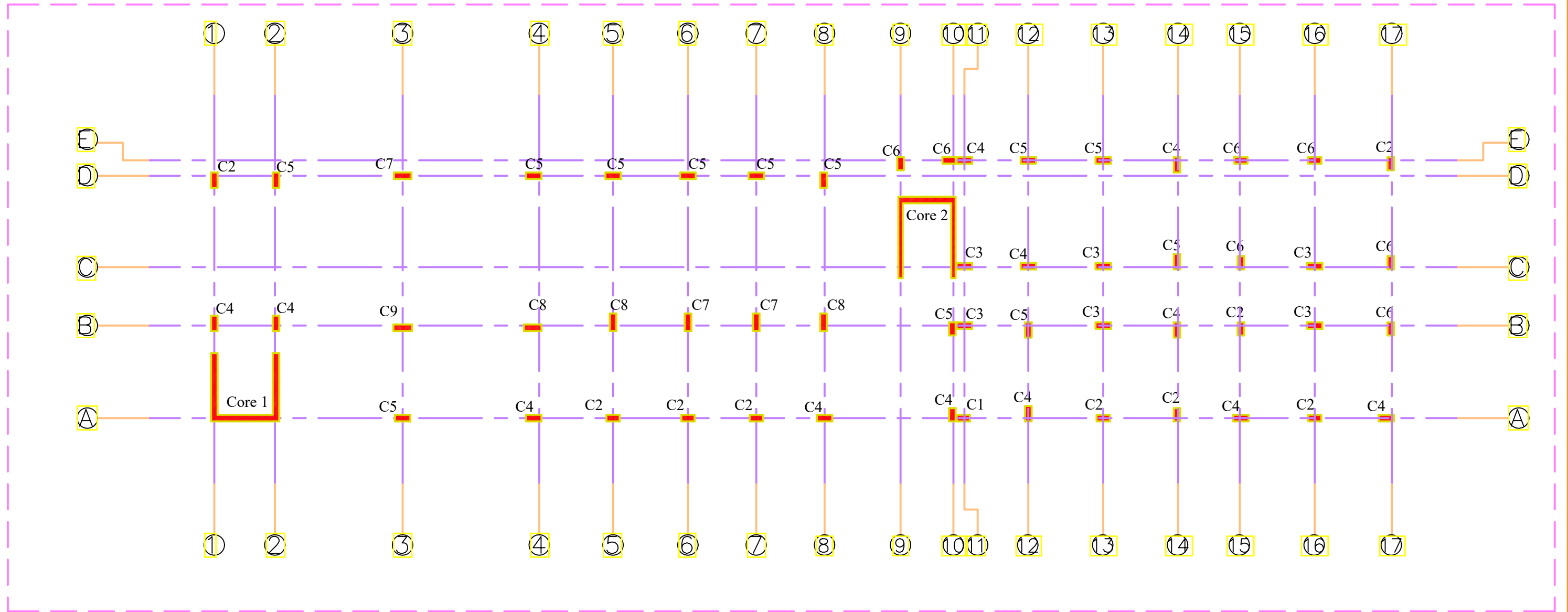
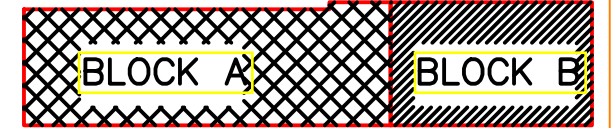
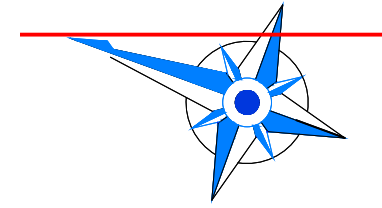
TITLE: **STRUCTURAL DESIGN**

Drawing and design by Eng: Fares # by Eng Wadea

INDEX	REVISION	DATE

Filename	Scale	Format	Sheet
<b>BLOCK B FOUNDATIONS_</b>	1:150	A2 A3	<b>S-004</b>
Project Code: <b>15DYK</b>	Date: 02/2021		





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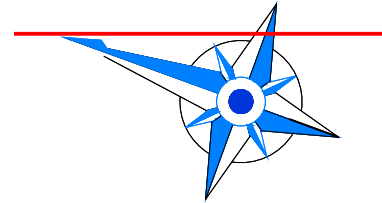
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Drawing and design by Eng: Fares # by Eng Wadea

INDEX	REVISION	DATE

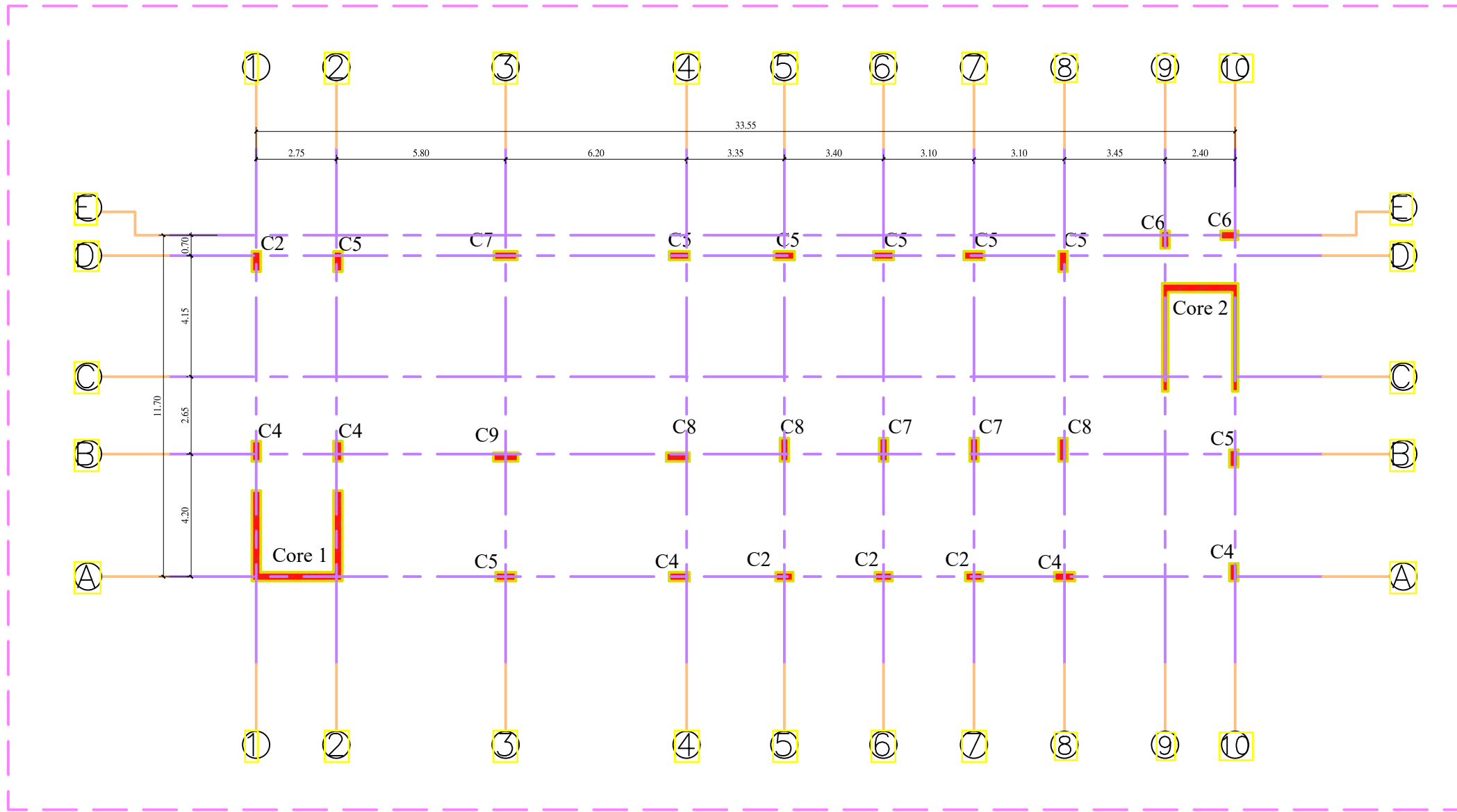
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Project Code: **15DYK**  
Scale: 1:150  
Format: A2/A3  
Date: 2021

Sheet: **S-005**





**BLOCK A**



**NOTES:**

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND AMERICAN CONCRETE CODE ( ACI ) 318-14 AND ( UBC 1997 )
- SEISMIC LOAD USE ACCORDING TO UBC-ZONE 2A
- MINIMUM CONCRETE CUBE STRENGTH ( F'c = 30 MPA )
- YIELDING STRENGTH OF STEEL IS GRADE 40 ASTM 300 MPA
- CLEAR CONCRETE COVER TO REINFORCEMENT FOR COLUMNS SHALL BE AT LEAST 4CM.
- CONCRETE SHOULD BE MIXED MECHANICALLY.
- THE SLICE LENGTH OF STEEL IS NOT LESS THAN 60Ø OR 1M WHICH IS GREATER.
- BAR LENGTH SHALL BE ADJUSTED TO SATISFY THE MINIMUM DEVELOPMENT LENGTH REQUIREMENTS
- SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES
- You must take into account all the details described in detail Structural drawing construction.

**TABLE OF REINFORCEMENTS FOR COLUMN**

TYPE	Dimension		LONGITADNAL RIENF.	stirrups			Remarks
	B (cm)	L (cm)		L0 Cm	stirrups for L0Cm	for mid Column	
C2	30	60	10 Ø 16	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	4
C4	30	70	10 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	5
C5	30	70	12 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	8
C6	30	60	10 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	2
C7	30	80	10 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	3
C8	30	80	12 Ø 18	60	3 Ø 10 @ 15 cm	3 Ø 10 @ 20 cm	3
C9	30	85	14 Ø 18	60	3 Ø 10 @ 15 cm	3 Ø 10 @ 20 cm	1



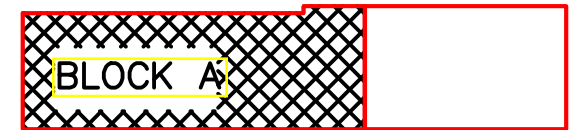
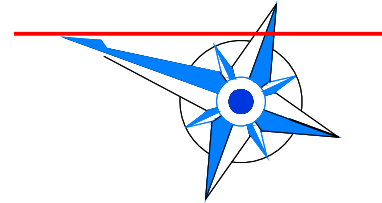
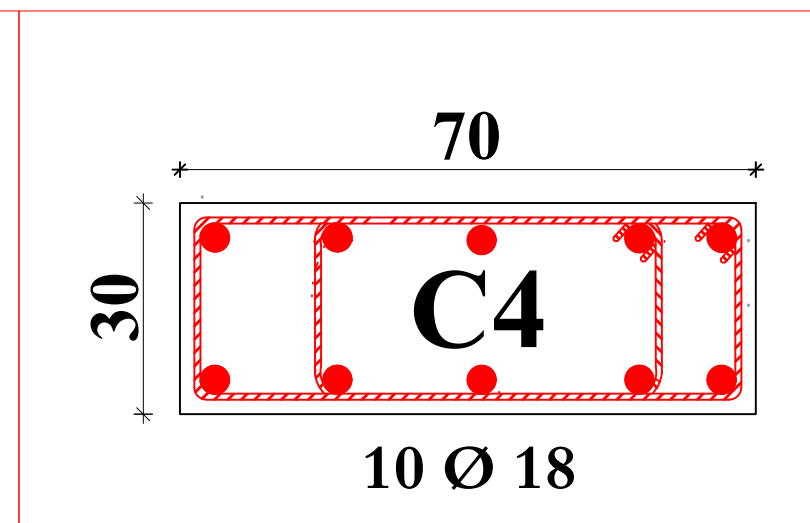
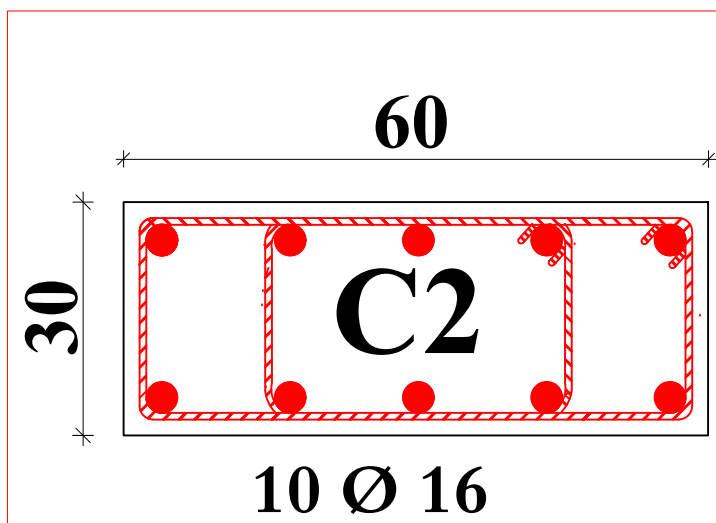
**ACTED\_DHAMAR**  
Construction Outpatient Building  
Dhamar General Hospital

TITLE: **STRUCTURAL DESIGN**  
Drawing and design by Eng: Fares # by Eng: Wadea

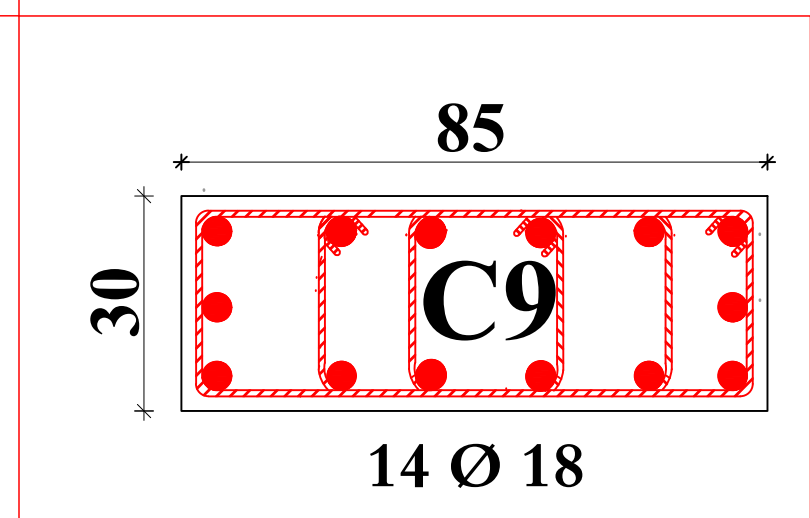
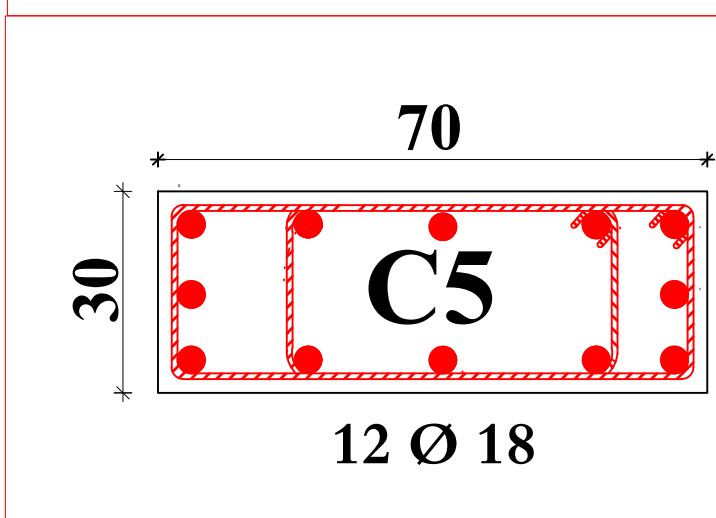
INDEX	REVISION	DATE

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Project Code: **15DYK**  
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Format: A2  
Date: 2021

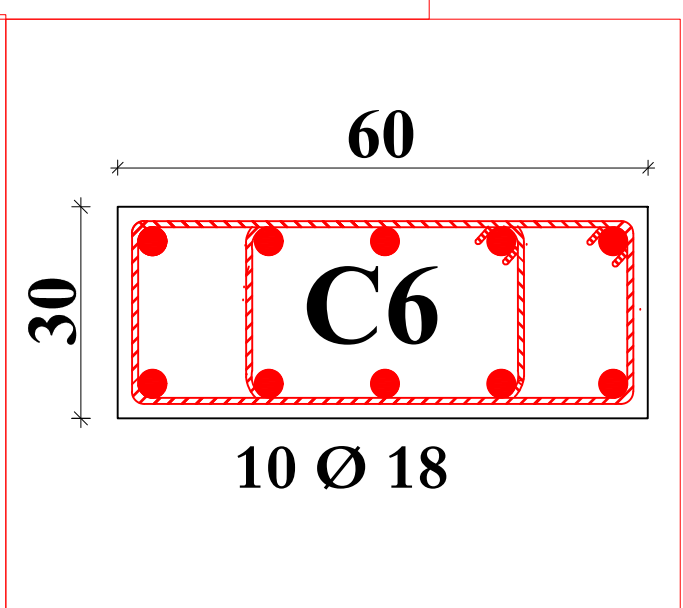
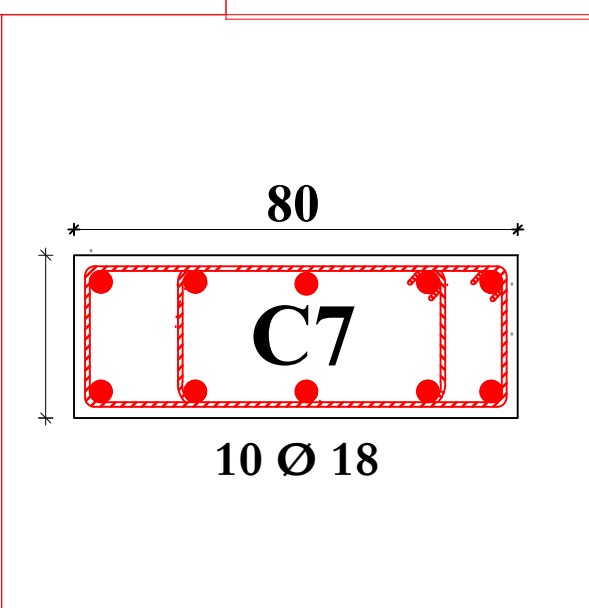
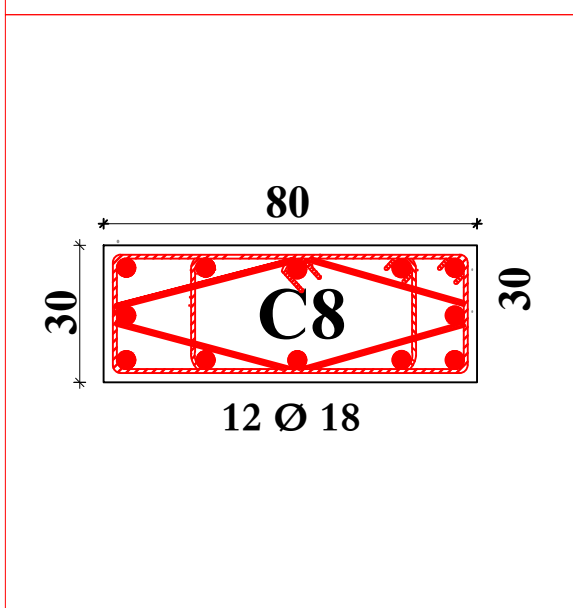
Sheet: **S-006**



Ø 16 & 18 Fy=300 N/mm<sup>2</sup> Grade=40



- NOTES:
- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND AMERICAN CONCRETE CODE ( ACI ) 318-14AND ( UBC 1997)
  - SEISMIC LOAD USE ACCORDING TO UBC-ZONE 2A
  - MINIMUM CONCRETE CUBE STRENGTH (F<sub>c</sub> = 30 MPA)
  - YIELDING STREES OF STEEL IS GRADE 40ASTM 300 MPA
  - CLEAR CONCRETE COVER TO REINFORCEMENT FOR COLUMNS SHALL BE AT LAST 4CM.
  - CONCRETE SHOULD BE MIXED MECHANICALLY.
  - THE SLICE LENGTH OF STEEL IS NOT LESS THAN 60Ø OR 1M WHICH IS GREATER.
  - BAR LENGTH SHALL BE ADJUSTED TO SATISFY THE MINIMUM DEVELOPMENT LENGTH REQUIREMENTS
  - SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES
  - You must take into account all the details described in detail Structural drawing construction.



TYPE	Dimension		LONGITADNAL RIENF.	stirrups			Remarks
	B (cm)	L (cm)		L0 Cm	stirrups for L0Cm	for mid Column	
C2	30	60	10 Ø 16	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	4
C4	30	70	10 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	5
C5	30	70	12 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	8
C6	30	60	10 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	2
C7	30	80	10 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	3
C8	30	80	12 Ø 18	60	3 Ø 10 @ 15 cm	3 Ø 10 @ 20 cm	3
C9	30	85	14 Ø 18	60	3 Ø 10 @ 15 cm	3 Ø 10 @ 20 cm	1



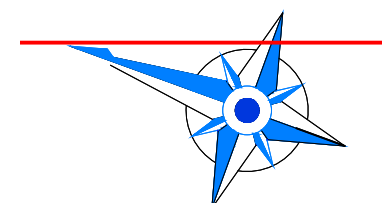
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TITLE: **STRUCTURAL DESIGN**  
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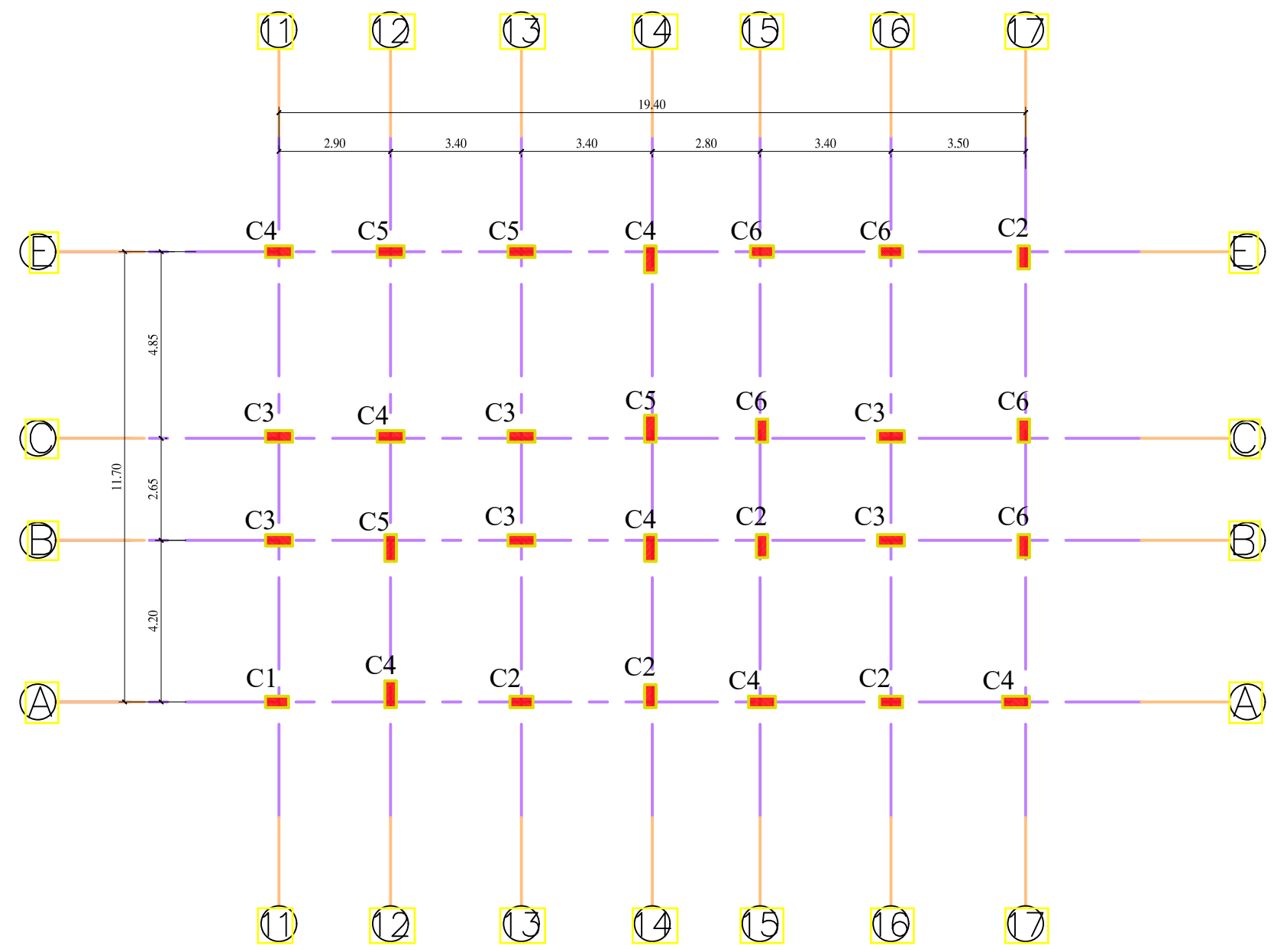
INDEX	REVISION	DATE

Filename: **\_ BLOCK A COLUMNS \_**  
 Project Code: **15DYK**  
 Scale: 1:150  
 Format: A2  
 Date: 2021

Sheet: **S-007**  
  
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**BLOCK B**



**NOTES:**

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND AMERICAN CONCRETE CODE ( ACI ) 318-14AND ( UBC 1997)
- SEISMIC LOAD USE ACCORDING TO UBC-ZONE 2A
- MINIMUM CONCRETE CUBE STRENGTH (F'c = 30 MPA)
- YIELDING STREES OF STEEL IS GRADE 40ASTM 300 MPA
- CLEAR CONCRETE COVER TO REINFORCEMENT FOR COLUMNS SHALL BE AT LAST 4CM.
- CONCRETE SHOULD BE MIXED MECHANICALLY.
- THE SLICE LENGTH OF STEEL IS NOT LESS THAN 60Ø OR 1M WHICH IS GREATER.
- BAR LENGTH SHALL BE ADJUSTED TO SATISFY THE MINIMUM DEVELOPMENT LENGTH REQUIREMENTS
- SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES
- You must take into account all the details described in detail Structural drawing construction.

TABLE OF REINFORCEMENTS FOR COLUMN							
TYPE	Dimension		LONGITADNAL RIENF.	stirrups			Remarks
	B (cm)	L (cm)		L0 Cm	stirrups for L0Cm	for mid Column	
C1	30	60	8 Ø 16	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	1
C2	30	60	10 Ø 16	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	5
C3	30	70	8 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	6
C4	30	70	10 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	7
C5	30	70	12 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	4
C6	30	60	10 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	5



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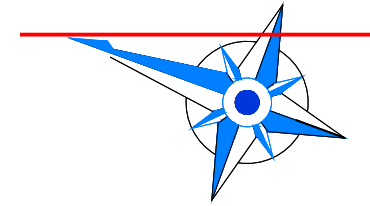
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 Drawing and design by Eng: Fares # by Eng Wadea

INDEX	REVISION	DATE

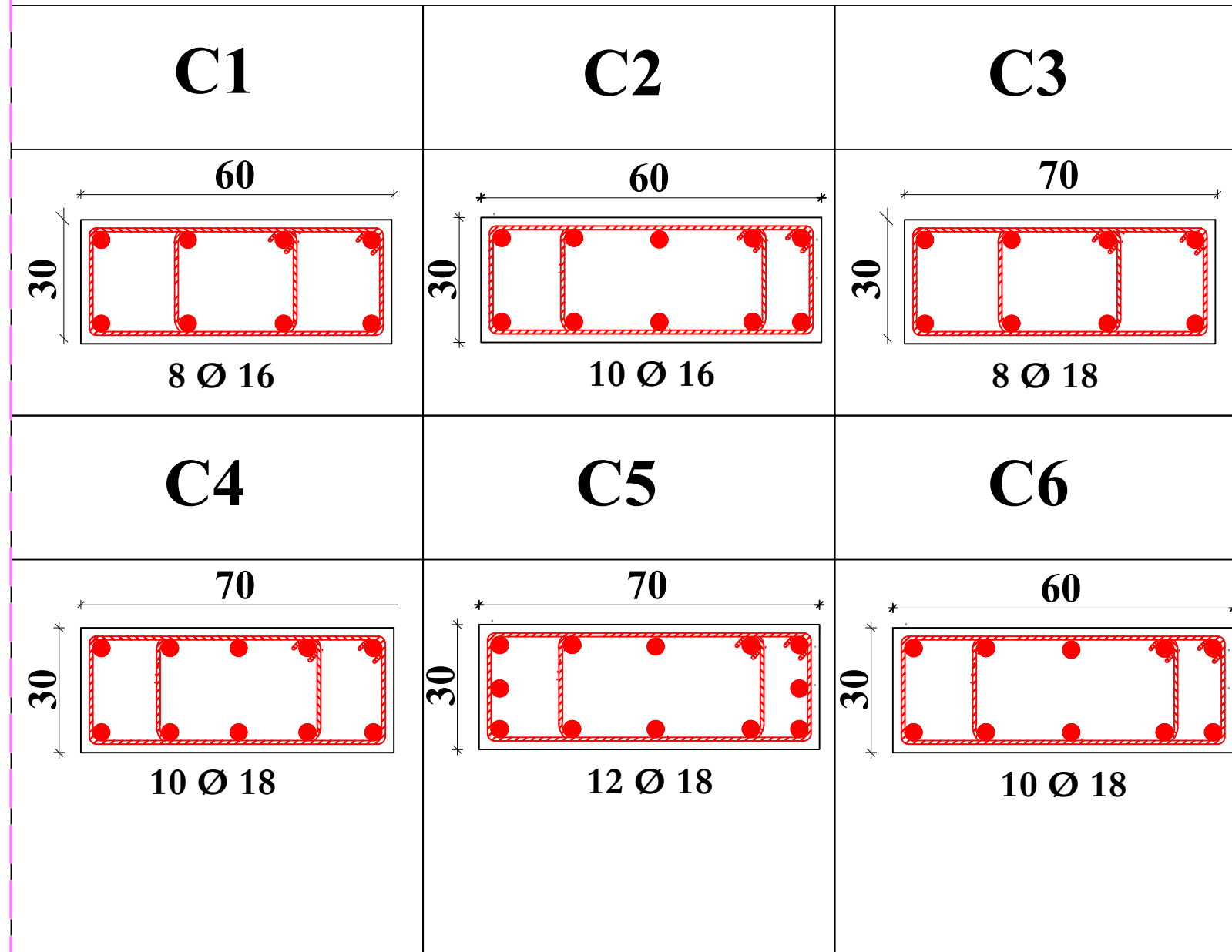
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 Project Code: **15DYK**  
 Scale: 1:150  
 Format: A2/A3  
 Date: 2021

Sheet: **S-008**  
  
 ACTED International Organization, Dhamar Branch

Ø 16 & 18  $F_y=300 \text{ N/mm}^2$ :



BLOCK B



**COLUMNS DETAILING**

NOTES:

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND AMERICAN CONCRETE CODE ( ACI ) 318-14AND ( UBC 1997)
- SEISMIC LOAD USE ACCORDING TO UBC-ZONE 2A
- MINIMUM CONCRETE CUBE STRENGTH ( $F'_c = 30 \text{ MPA}$ )
- YIELDING STREES OF STEEL IS GRADE 40ASTM 300 MPA
- CLEAR CONCRETE COVER TO REINFORCEMENT FOR COLUMNS SHALL BE AT LAST 4CM.
- CONCRETE SHOULD BE MIXED MECHANICALLY.
- THE SLICE LENGTH OF STEEL IS NOT LESS THAN  $60\phi$  OR 1M WHICH IS GREATER.
- BAR LENGTH SHALL BE ADJUSTED TO SATISFY THE MINIMUM DEVELOPMENT LENGTH REQUIREMENTS
- SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES
- You must take into account all the details described in detail Structural drawing construction.

TYPE	Dimension		LONGITADNAL RIENF.	stirrups			Remarks
	B (cm)	L (cm)		L0 Cm	stirrups for L0Cm	for mid Column	
C1	30	60	8 Ø 16	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	1
C2	30	60	10 Ø 16	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	5
C3	30	70	8 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	6
C4	30	70	10 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	7
C5	30	70	12 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	4
C6	30	60	10 Ø 18	60	2 Ø 10 @ 15 cm	2 Ø 10 @ 20 cm	5



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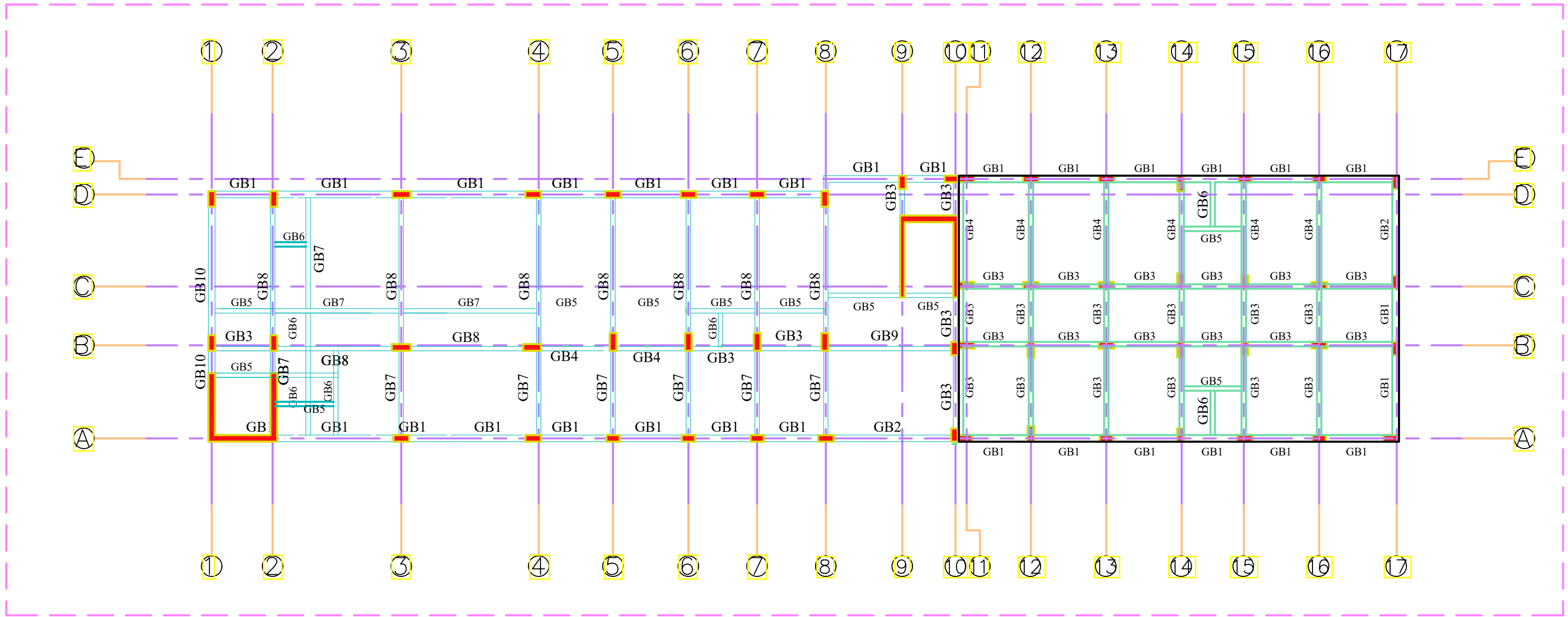
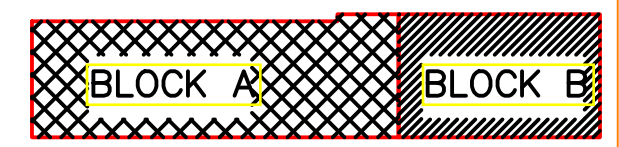
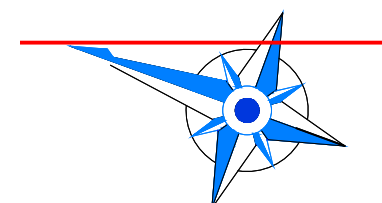
TITLE: **STRUCTURAL DESIGN**  
Drawing and design by Eng: Fares # by Eng: Wadea

INDEX	REVISION	DATE

Filename: **\_ BLOCK B COLUMNS \_**  
Project Code: **15DYK**  
Scale: 1:150  
Format: A2/A3  
Date: 2021

**S-009**





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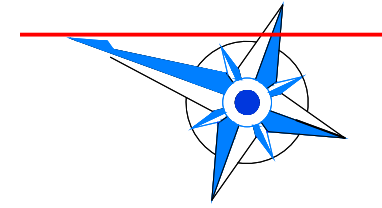
TITLE: **STRUCTURAL DESIGN**  
Drawing and design by Eng: Fares # by Eng Wadea

INDEX	REVISION	DATE

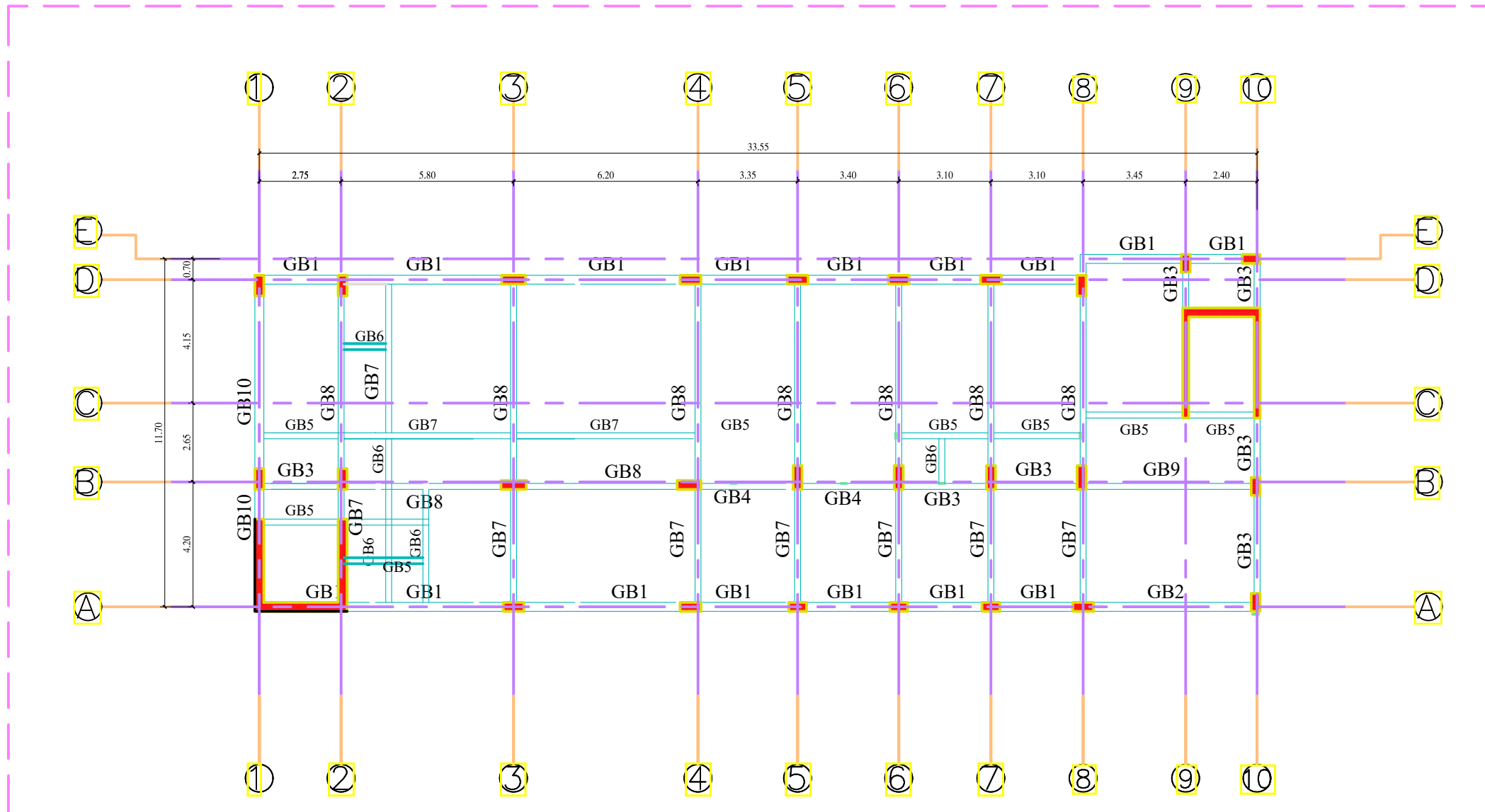
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Project Code: **15DYK**  
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Format: A2  
Date: 2021

Sheet: **S-010**



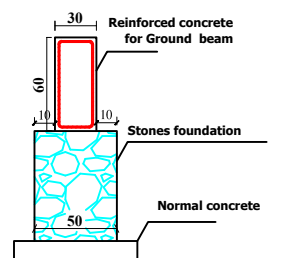


**BLOCK A**

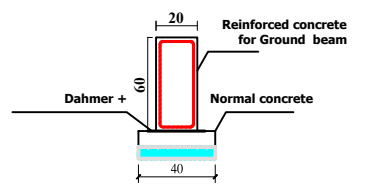


- NOTES:**
- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND AMERICAN CONCRETE CODE ( ACI ) 318-14 AND ( UBC 1997 )
  - SEISMIC LOAD USE ACCORDING TO UBC-ZONE 2A
  - MINIMUM CONCRETE CUBE STRENGTH ( F'c ) 25= MPA
  - YIELDING STREES OF STEEL IS GRADE 40 ASTM 280- MPA.
  - CONCRETE SHOULD BE MIXED MECHANICALLY.
  - THE SLICE LENGTH OF STEEL IS NOT LESS THAN 60Ø OR 1M WHICH IS GREATER.
  - HOOPS ( Ø16 BAR AND SMALLER-135 ) , deg BEND PLUS AN EXTENSION AT LEAST 10Ø
  - CLEAR COVER FOR BEAM 40MM
  - CLEAR COVER FOR SLAB 20MM
  - INSIDE DIAMETER OF BEND FOR STIRRUPS AND TIES SHALL NOT BE LESS THAN 4(Ø) FOR Ø16 BAR AND SMALLER.
  - BAR LENGTH SHALL BE ADJUSTED TO SATISFY THE MINIMUM DEVELOPMENT LENGTH REQUIREMENTS
  - REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION
  - SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES
  - THIS DRAWING SHOULD BE READ FROM LEFT TO RIGHT.
  - IF THERE ARE DIFFERENCES QUANTITY OF REINFORCEMENT ON THE LEFT OR RIGHT OF THE SUPPORT ,THE HIGHEST QUANTITY SHOULD BE USED.
  - THE MINIMUM LENGTH SPACE BETWEEN REINFORCED IS 2.5CM,OR APPLIED BY TOW LAYERS.

**Ground Beams**



Typical section of terminal bridges



Typical section of intermediate bridges

**TABLE OF REINFORCEMENTS FOR BEAMS**

Beam no.	Dimension		Bottom bars			Top bars			Stirrups		Remarks
	Width (cm)	Depth (cm)	Lift	Middle	Right	Lift	Middle	Right	Ends (span/3) from face of support	Middle	
GB1	30	60	4 Ø 18	4 Ø 18	4 Ø 18	4 Ø 18	4 Ø 18	4 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	16
GB2	30	60	4 Ø 18	4 Ø 18	4 Ø 18	5 Ø 18	4 Ø 18	5 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	1
GB3	20	60	3 Ø 18	3 Ø 18	3 Ø 18	3 Ø 18	3 Ø 18	3 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	6
GB4	20	60	3 Ø 18	3 Ø 18	3 Ø 18	4 Ø 18	3 Ø 18	4 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	2
GB5	20	60	3 Ø 16	3 Ø 16	3 Ø 16	3 Ø 16	3 Ø 16	3 Ø 16	1 Ø 10 @ 15 cm	1 Ø 10 @ 20 cm	9
GB6	20	50	3 Ø 14	3 Ø 14	3 Ø 14	3 Ø 14	3 Ø 14	3 Ø 14	1 Ø 10 @ 20 cm	1 Ø 10 @ 20 cm	7
GB7	20	60	3 Ø 20	3 Ø 20	3 Ø 20	3 Ø 20	3 Ø 20	3 Ø 20	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	10
GB8	20	60	4 Ø 20	4 Ø 20	4 Ø 20	5 Ø 20	5 Ø 20	5 Ø 20	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	9
GB9	20	60	4 Ø 20	4 Ø 20	4 Ø 20	4 Ø 20	4 Ø 20	4 Ø 20	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	1
GB10	30	60	3 Ø 20	3 Ø 20	3 Ø 20	3 Ø 20	3 Ø 20	3 Ø 20	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	2



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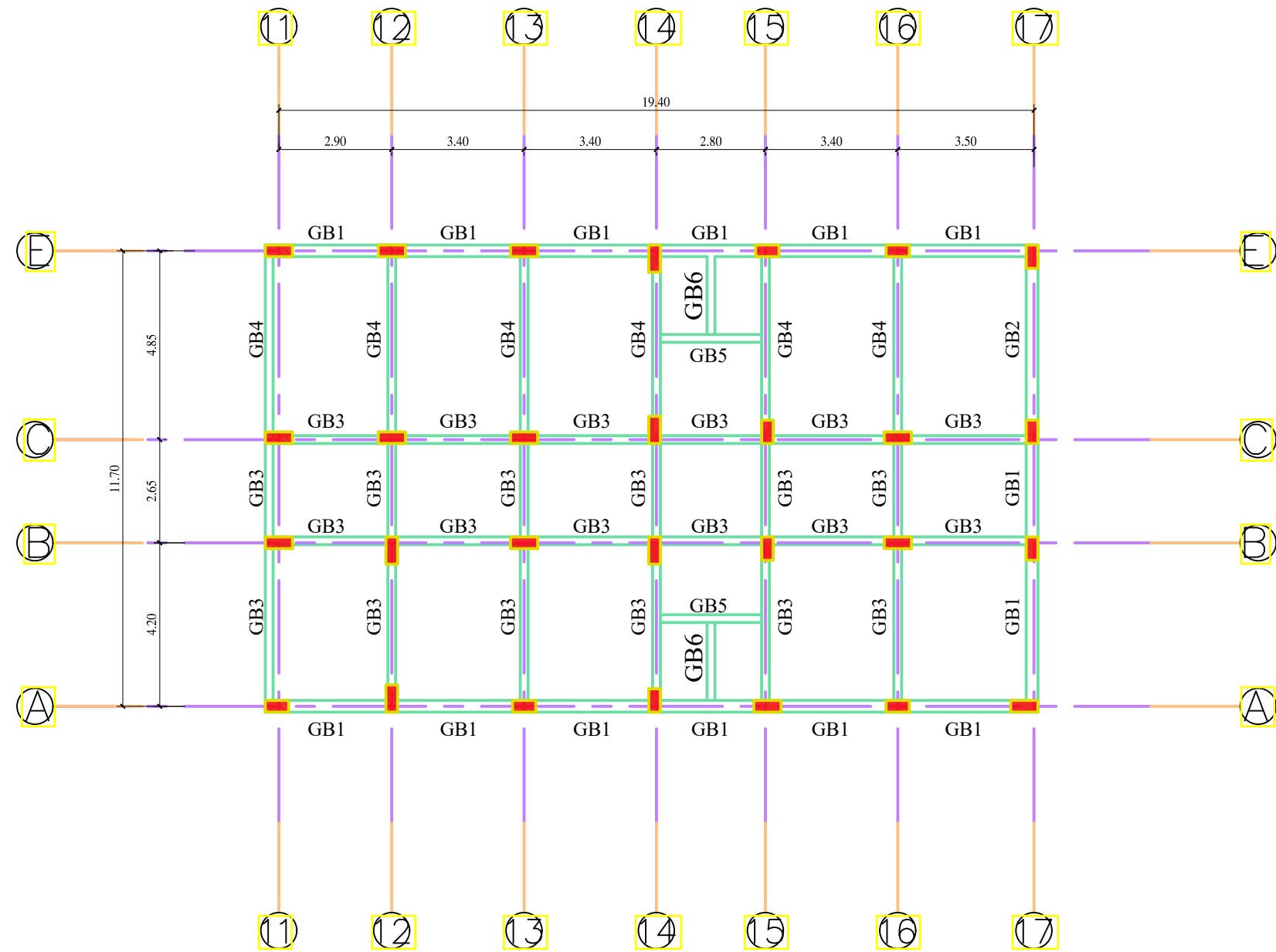
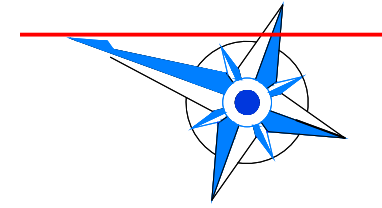
TITLE: **STRUCTURAL DESIGN**  
 Drawing and design by Eng: Fares # by Eng: Wadea

INDEX	REVISION	DATE

Filename: **\_BLOCK A GROUND BEAMS\_**  
 Project Code: **15DYK**  
 Scale: 1:150  
 Format: A2/A3  
 Date: 2021

Sheet: **S-011**  
  
 ACTED International Organization, Dhamar Branch





**NOTES:**

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND AMERICAN CONCRETE CODE ( ACI ) 318-14 AND ( UBC 1997 )
- SEISMIC LOAD USE ACCORDING TO UBC-ZONE 2A
- MINIMUM CONCRETE CUBE STRENGTH ( F'c ) = 25 MPA
- YIELDING STRENGTH OF STEEL IS GRADE 40 ASTM 280- MPA.
- CONCRETE SHOULD BE MIXED MECHANICALLY.
- THE SLICE LENGTH OF STEEL IS NOT LESS THAN 60Ø OR 1M WHICH IS GREATER.
- HOOPS ( Ø16 BAR AND SMALLER-135 ) , deg BEND PLUS AN EXTENSION AT LEAST 10Ø
- CLEAR COVER FOR BEAM 40MM
- CLEAR COVER FOR SLAB 20MM
- INSIDE DIAMETER OF BEND FOR STIRRUPS AND TIES SHALL NOT BE LESS THAN 4(Ø) FOR Ø16 BAR AND SMALLER.
- BAR LENGTH SHALL BE ADJUSTED TO SATISFY THE MINIMUM DEVELOPMENT LENGTH REQUIREMENTS
- REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION
- SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES
- THIS DRAWING SHOULD BE READ FROM LEFT TO RIGHT.
- IF THERE ARE DIFFERENCES QUANTITY OF REINFORCEMENT ON THE LEFT OR RIGHT OF THE SUPPORT , THE HIGHEST QUANTITY SHOULD BE USED.
- THE MINIMUM LENGTH SPACE BETWEEN REINFORCED IS 25CM, OR APPLIED BY TOW LAYERS.

**TABLE OF REINFORCEMENTS FOR BEAMS**

Beam no.	Dimension		Bottom bars			Top bars			Stirrups		Remarks
	Width (cm)	Depth (cm)	Lift	Middle	Right	Lift	Middle	Right	Ends (span/3) from face of support	Middle	
GB1	30	60	4 Ø 18	4 Ø 18	4 Ø 18	4 Ø 18	4 Ø 18	4 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	14
GB2	30	60	4 Ø 18	4 Ø 18	4 Ø 18	5 Ø 18	4 Ø 18	5 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	1
GB3	20	60	3 Ø 18	3 Ø 18	3 Ø 18	3 Ø 18	3 Ø 18	3 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	24
GB4	20	60	3 Ø 18	3 Ø 18	3 Ø 18	4 Ø 18	3 Ø 18	4 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	6
GB5	20	60	3 Ø 16	3 Ø 16	3 Ø 16	3 Ø 16	3 Ø 16	3 Ø 16	1 Ø 10 @ 15 cm	1 Ø 10 @ 20 cm	2
GB6	20	50	3 Ø 14	3 Ø 14	3 Ø 14	3 Ø 14	3 Ø 14	3 Ø 14	1 Ø 10 @ 20 cm	1 Ø 10 @ 20 cm	2



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**ACTED\_DHAMAR**  
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Dhamar General Hospital

TITLE: **STRUCTURAL DESIGN**

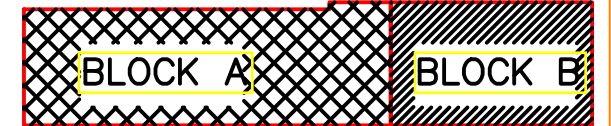
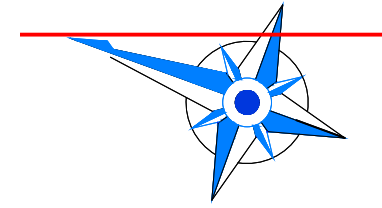
Drawing and design by Eng: Fares # by Eng: Wadea

INDEX	REVISION	DATE

Filename: <b>_BLOCK B GROUND BEAMS_</b>	Scale: 1:150	Format: A2/A3
Project Code: <b>15DYK</b>	Date: 2021	

Sheet: **S-012**

ACTED International Organization,  
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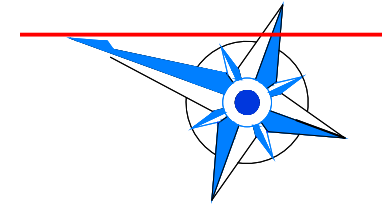
**ACTED\_DHAMAR**  
Construction Outpatient Building  
Dhamar General Hospital

TITLE: **STRUCTURAL DESIGN**  
Drawing and design by Eng: Fares # by Eng: Wadea

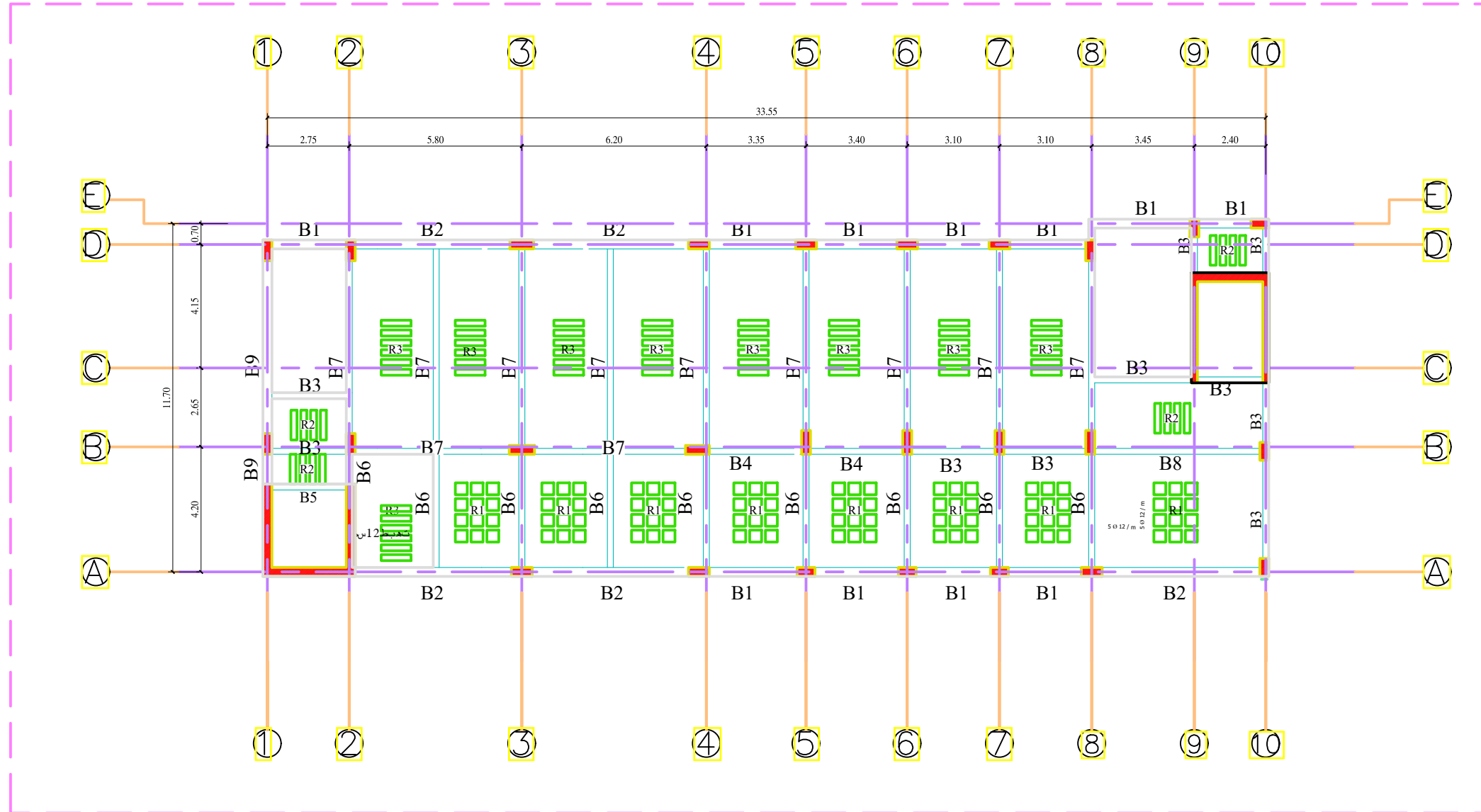
INDEX	REVISION	DATE

Filename	Scale	Format	Sheet
_ ALL SLABS & BEAMS FOR FLOOR _	1:150	A2 A3	S-013
Project Code:	Date		
<b>15DYK</b>	02/2021		





**BLOCK A**



- NOTES:**
- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND AMERICAN CONCRETE CODE ( ACI ) 318-14 AND ( UBC 1997 )
  - SEISMIC LOAD USE ACCORDING TO UBC-ZONE 2A
  - MINIMUM CONCRETE CUBE STRENGTH ( F'c = 25= MPA )
  - YIELDING STREES OF STEEL IS GRADE 40 ASTM 280- MPA.
  - CONCRETE SHOULD BE MIXED MECHANICALLY.
  - THE SLICE LENGTH OF STEEL IS NOT LESS THAN 60Ø OR 1M WHICH IS GREATER.
  - HOOPS ( Ø16 BAR AND SMALLER-135 ) , deg BEND PLUS AN EXTENSION AT LEAST 10Ø
  - CLEAR COVER FOR BEAM 40MM
  - CLEAR COVER FOR SLAB 20MM
  - INSIDE DIAMETER OF BEND FOR STIRRUPS AND TIES SHALL NOT BE LESS THAN 4(Ø) FOR Ø16 BAR AND SMALLER.
  - BAR LENGTH SHALL BE ADJUSTED TO SATISFY THE MINIMUM DEVELOPMENT LENGTH REQUIREMENTS
  - REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION
  - SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES
  - THIS DRAWING SHOULD BE READ FROM LEFT TO RIGHT.
  - IF THERE ARE DIFFERENCES QUANTITY OF REINFORCEMENT ON THE LEFT OR RIGHT OF THE SUPPORT , THE HIGHEST QUANTITY SHOULD BE USED.
  - THE MINIMUM LENGTH SPACE BETWEEN REINFORCED IS 2.5CM, OR APPLIED BY TOW LAYERS.

**TABLE OF REINFORCEMENTS FOR RIBS' SLABS**

Slab no.	Dimension		Bottom bars		Top bars		Stirrups
	Width (cm)	Depth (cm)	MIN	ADD	MIN	ADD	
R1	12.5	30	2 Ø 14	---	2 Ø 14	---	1 Ø 10 @ 15 cm
R2	12.5	30	2 Ø 14	---	2 Ø 12	---	1 Ø 10 @ 15 cm
R3	12.5	30	3 Ø 14	---	3 Ø 14	---	1 Ø 10 @ 15 cm

**TABLE OF REINFORCEMENTS FOR BEAMS**

Beam no.	Dimension		Bottom bars			Top bars			Stirrups		Remarks
	Width (cm)	Depth (cm)	Lift	Middle	Right	Lift	Middle	Right	Ends (span/3) from face of support	Middle	
B1	30	60	4 Ø 18	4 Ø 18	4 Ø 18	4 Ø 18	4 Ø 18	4 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	11
B2	30	60	4 Ø 18	4 Ø 18	4 Ø 18	5 Ø 18	4 Ø 18	5 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	5
B3	20	60	3 Ø 18	3 Ø 18	3 Ø 18	3 Ø 18	3 Ø 18	3 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	10
B4	20	60	3 Ø 18	3 Ø 18	3 Ø 18	4 Ø 18	3 Ø 18	4 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	2
B5	20	60	3 Ø 16	3 Ø 16	3 Ø 16	3 Ø 16	3 Ø 16	3 Ø 16	1 Ø 10 @ 15 cm	1 Ø 10 @ 20 cm	1
B6	20	60	4 Ø 20	4 Ø 20	4 Ø 20	4 Ø 20	4 Ø 20	4 Ø 20	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	9
B7	20	60	4 Ø 20	4 Ø 20	4 Ø 20	5 Ø 20	5 Ø 20	5 Ø 20	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	11
B8	20	60	4 Ø 20	4 Ø 20	4 Ø 20	4 Ø 20	4 Ø 20	4 Ø 20	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	1
B9	30	60	3 Ø 20	3 Ø 20	3 Ø 20	3 Ø 20	3 Ø 20	3 Ø 20	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	2



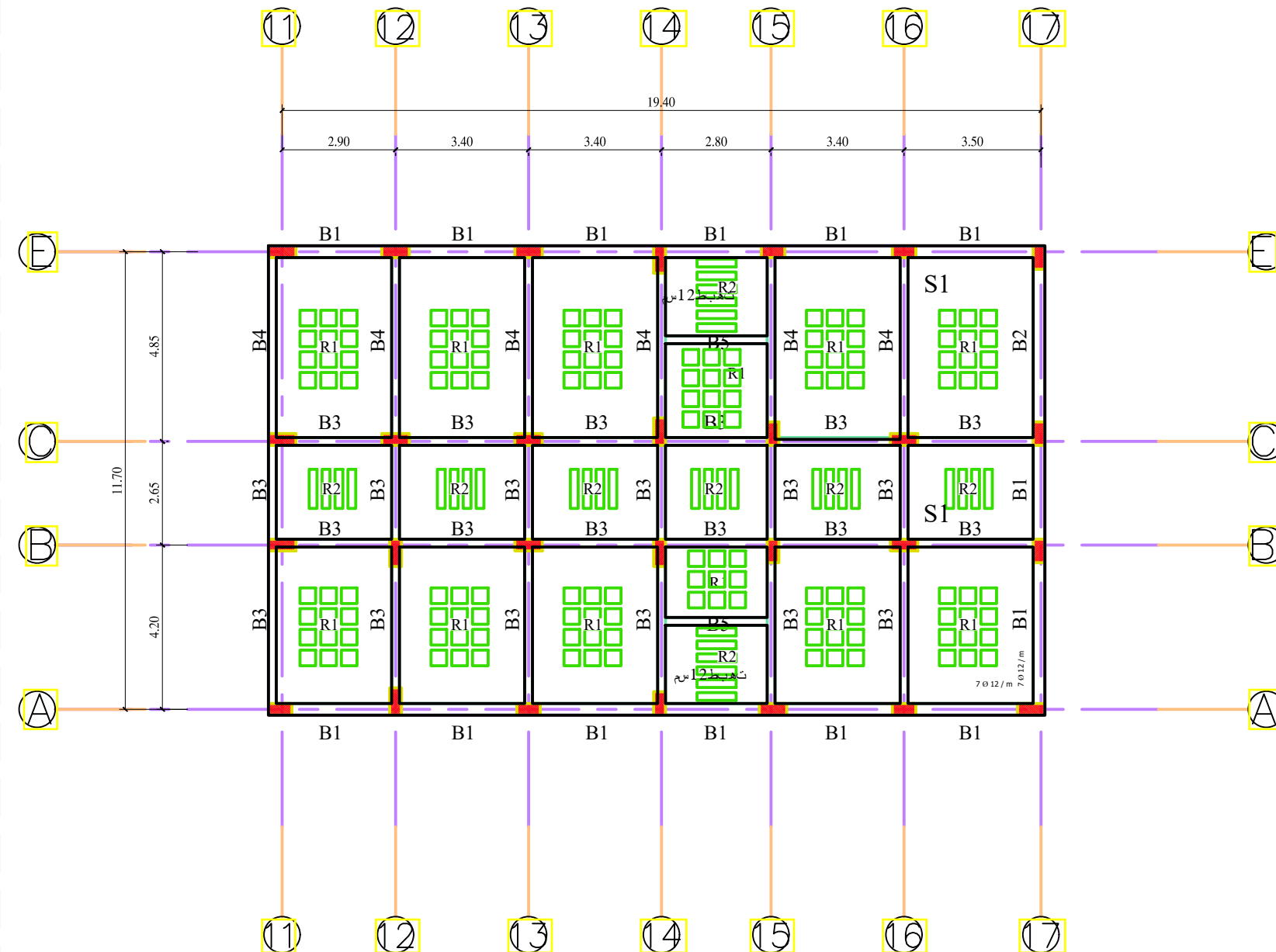
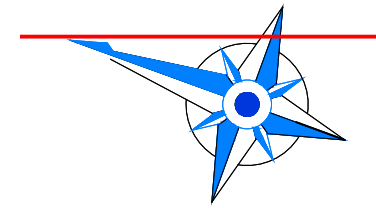
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**ACTED\_DHAMAR**  
 Construction Outpatient Building  
 Dhamar General Hospital

TITLE: **STRUCTURAL DESIGN**  
 Drawing and design by Eng: Fares # by Eng: Wadea

INDEX	REVISION	DATE

Filename: **\_BLOCK A SLABS & BEAMS FOR FLOOR\_**  
 Project Code: **15DYK**  
 Scale: 1:150  
 Sheet: A2/A3  
 Date: 2021

**S-014**  
  
 ACTED International Organization,  
 Dhamar Branch



**NOTES:**

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE SPECIFICATION AND AMERICAN CONCRETE CODE ( ACI )318-14AND (UBC 1997)
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Beam no.	Dimension		Bottom bars			Top bars			Stirrups		Remarks
	Width (cm)	Depth (cm)	Lift	Middle	Right	Lift	Middle	Right	Ends (span/3) from face of support	Middle	
B1	30	60	4 Ø 18	4 Ø 18	4 Ø 18	4 Ø 18	4 Ø 18	4 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	14
B2	30	60	4 Ø 18	4 Ø 18	4 Ø 18	5 Ø 18	4 Ø 18	5 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	2
B3	20	60	3 Ø 18	3 Ø 18	3 Ø 18	3 Ø 18	3 Ø 18	3 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	24
B4	20	60	3 Ø 18	3 Ø 18	3 Ø 18	4 Ø 18	3 Ø 18	4 Ø 18	1 Ø 10 @ 12 cm	1 Ø 10 @ 20 cm	6
B5	20	60	3 Ø 16	3 Ø 16	3 Ø 16	3 Ø 16	3 Ø 16	3 Ø 16	1 Ø 10 @ 15 cm	1 Ø 10 @ 20 cm	2

Slab no.	Dimension		Bottom bars		Top bars		Stirrups
	Width (cm)	Depth (cm)	MIN	ADD	MIN	ADD	
R1	12.5	30	2 Ø 14	---	2 Ø 14	---	1 Ø 10 @ 15 cm
R2	12.5	30	2 Ø 14	---	2 Ø 12	---	1 Ø 10 @ 15 cm



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**ACTED\_DHAMAR**  
Construction Outpatient Building  
Dhamar General Hospital

TITLE: **STRUCTURAL DESIGN**  
Drawing and design by Eng: Fares # by Eng Wadea

INDEX	REVISION	DATE

Filename: **\_BLOCK B SLABS & BEAMS FOR FLOOR\_**  
Project Code: **15DYK**  
Scale: 1:150  
Format: A2/A3  
Date: 2021

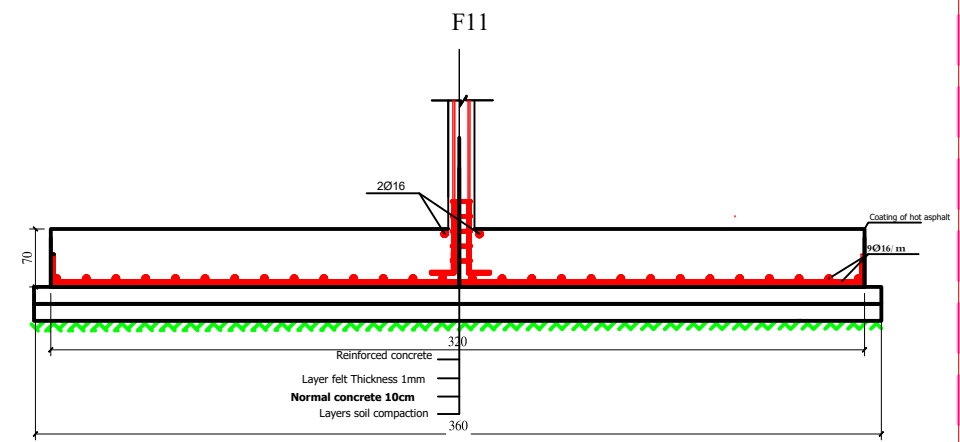
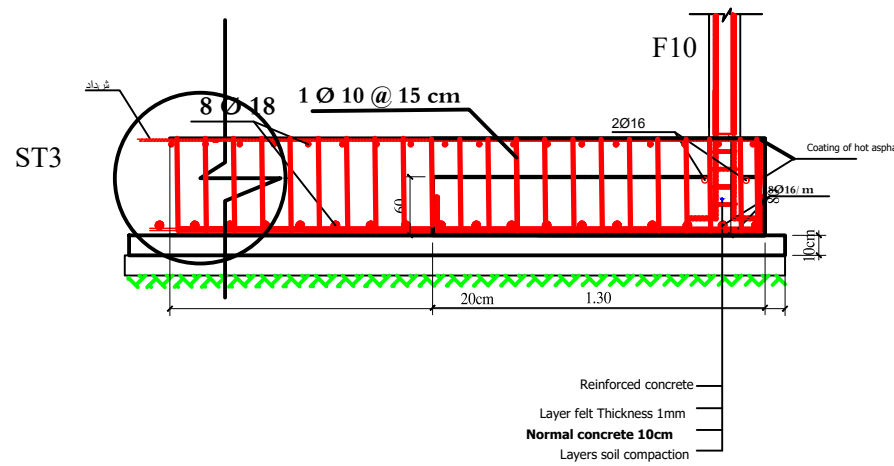
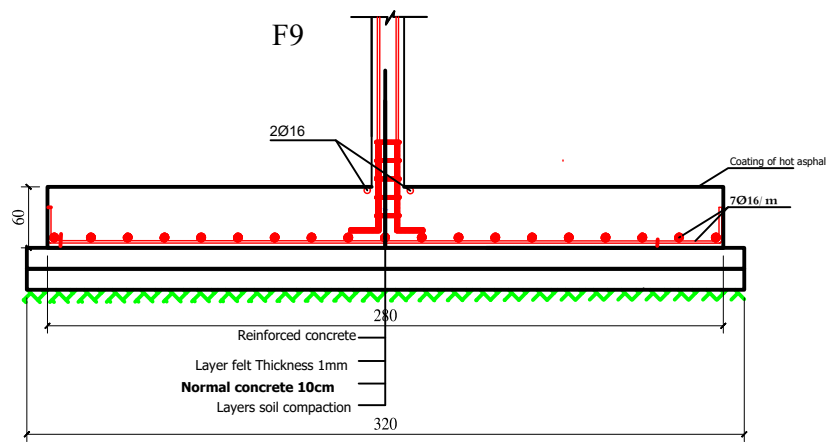
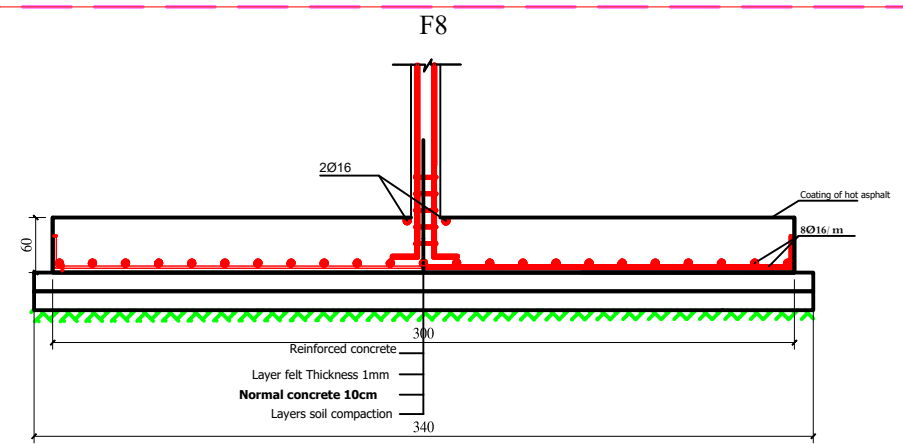
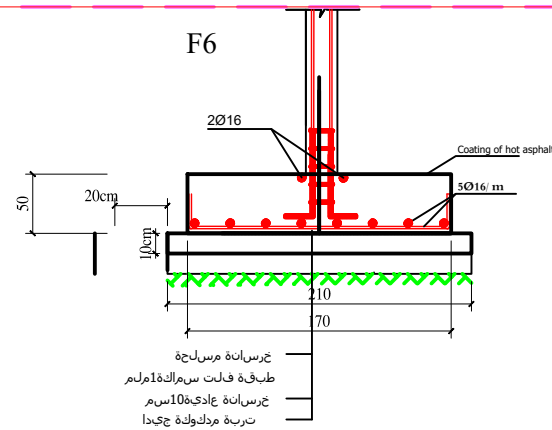
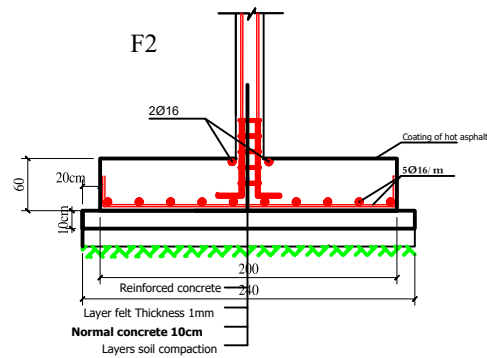
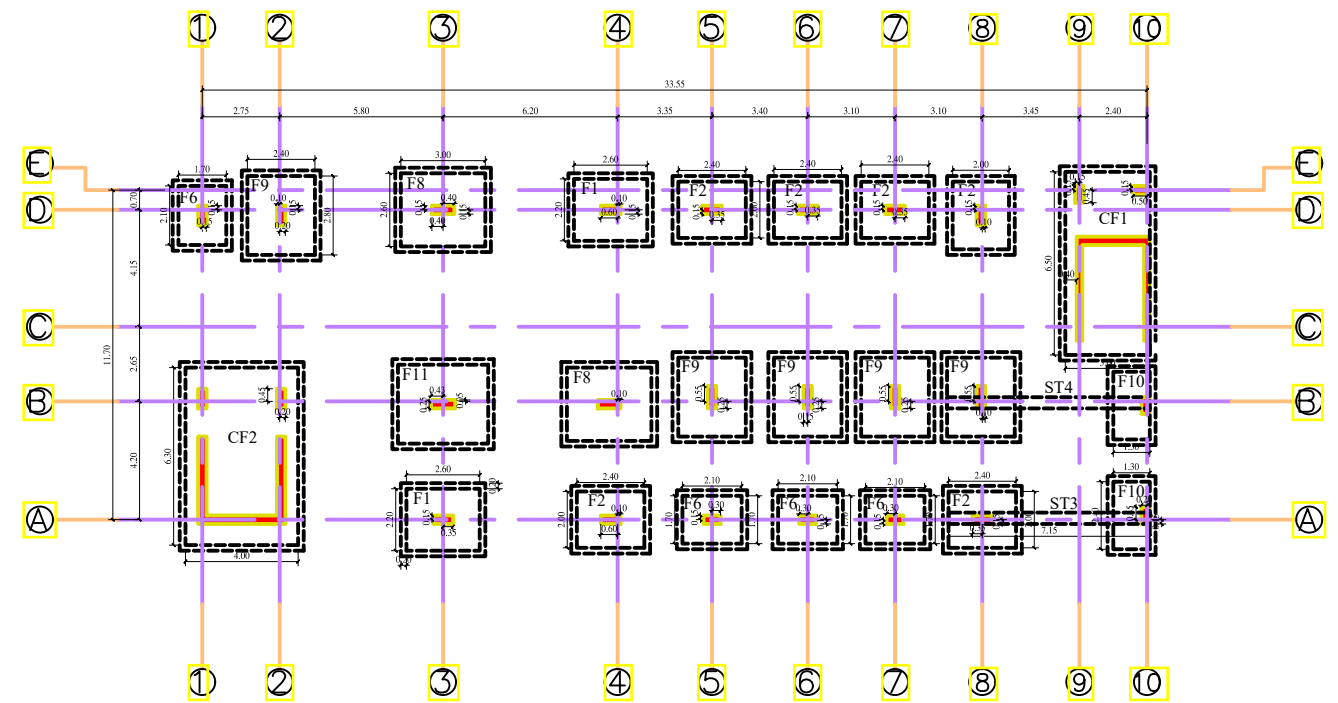
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 ACTED International Organization, Dhamar Branch



TABLE OF REINFORCEMENTS FOR STRAP BEAMS FOR FOUNDATIONS										
Beam no.	Dimension		Bottom bars			Top bars			Stirrups	Remarks
	Width (cm)	Depth (cm)	At ext footing	Middle	At ent footing	At ext footing	Middle	At ent footing		
ST3	40	80	8 Ø 18	8 Ø 18	8 Ø 18	8 Ø 18	8 Ø 18	8 Ø 18	1 Ø 10 @ 15 cm	1
ST4	40	100	8 Ø 18	8 Ø 18	8 Ø 18	8 Ø 18	8 Ø 18	8 Ø 18	1 Ø 10 @ 15 cm	1

جدول أبعاد و تسليح القواعد: Ø 16 Fy=250 N/mm<sup>2</sup>

TABLE OF REINFORCEMENTS FOR SINGLE FOOTING								
TYPE	Dimension			Bottom bars		CAPOLLE		Remarks
	Width (cm)	Length (cm)	Depth (cm)	Long DIR / m	Short DIR / m	Long DIR	Short DIR	
F1	220	260	60	6 Ø 16	6 Ø 16	2 Ø 16	2 Ø 16	2
F2	200	240	60	5 Ø 16	5 Ø 16	2 Ø 16	2 Ø 16	6
F6	170	210	50	5 Ø 16	5 Ø 16	2 Ø 16	2 Ø 16	4
F8	300	260	60	8 Ø 16	8 Ø 16	2 Ø 16	2 Ø 16	2
F9	280	240	60	7 Ø 16	7 Ø 16	2 Ø 16	2 Ø 16	5
F10	130	240	60	8 Ø 16	8 Ø 16	2 Ø 16	2 Ø 16	2
F11	320	280	70	9 Ø 16	9 Ø 16	2 Ø 16	2 Ø 16	1



Typical Plane for Foundation



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**ACTED\_DHAMAR**  
Construction Outpatient Building  
Dhamar General Hospital

TITLE: **STRUCTURAL DESIGN**

Drawing and design by Eng: Fares # by Eng Wadea

INDEX	REVISION	DATE

Filename: **BLOCK A FOUNDATIONS**  
Project Code: **15DYK**

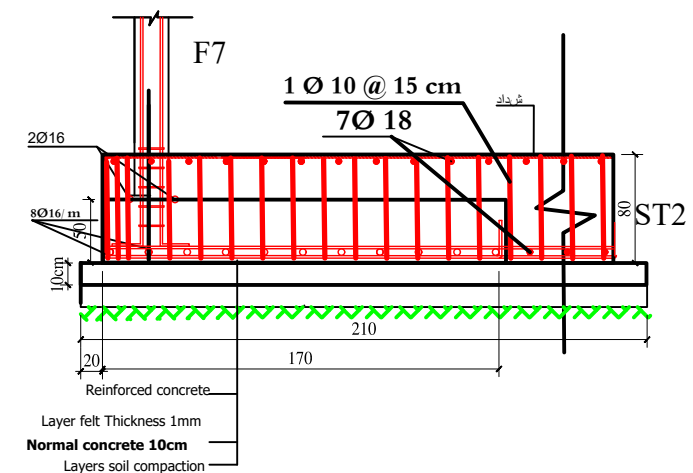
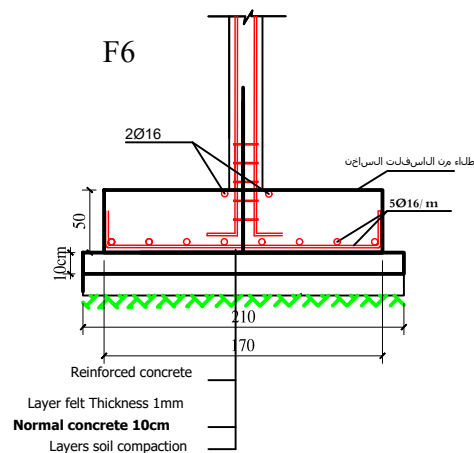
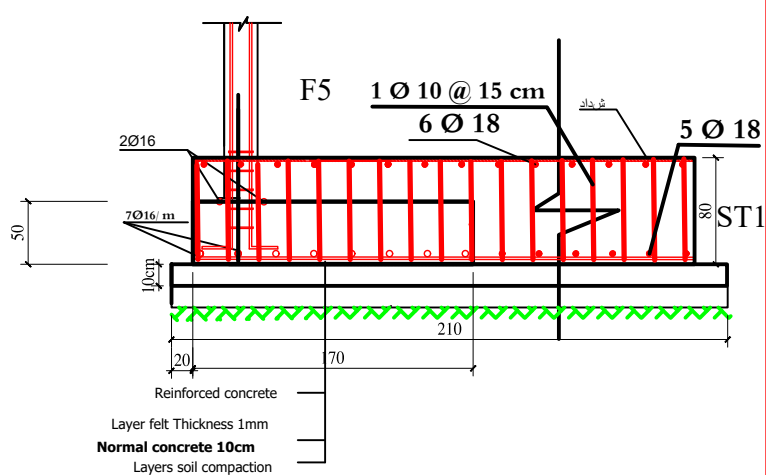
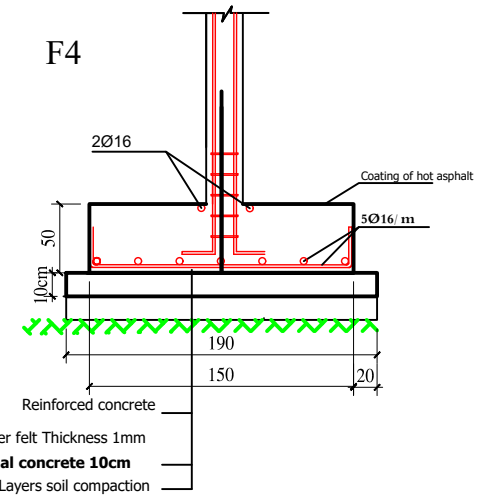
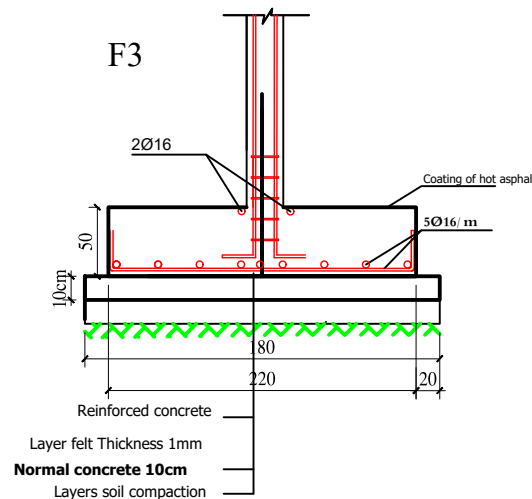
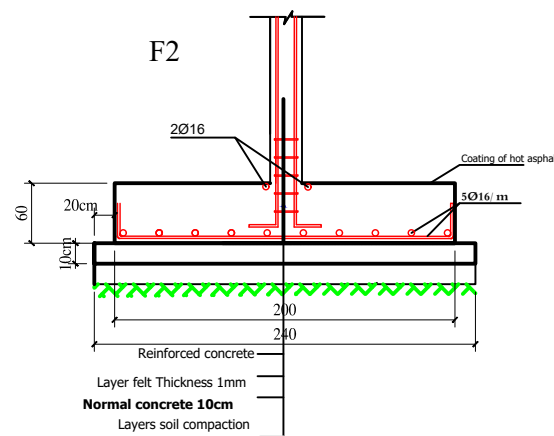
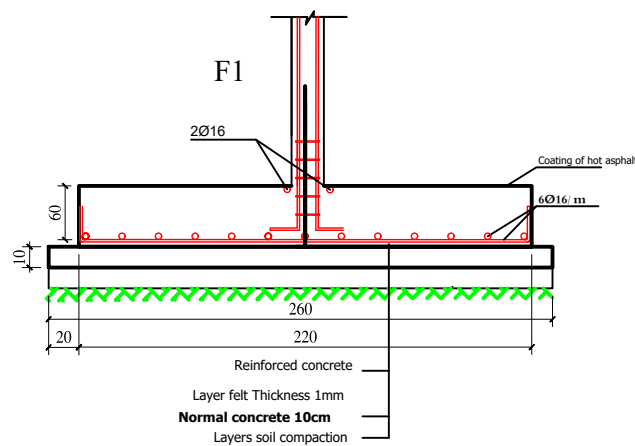
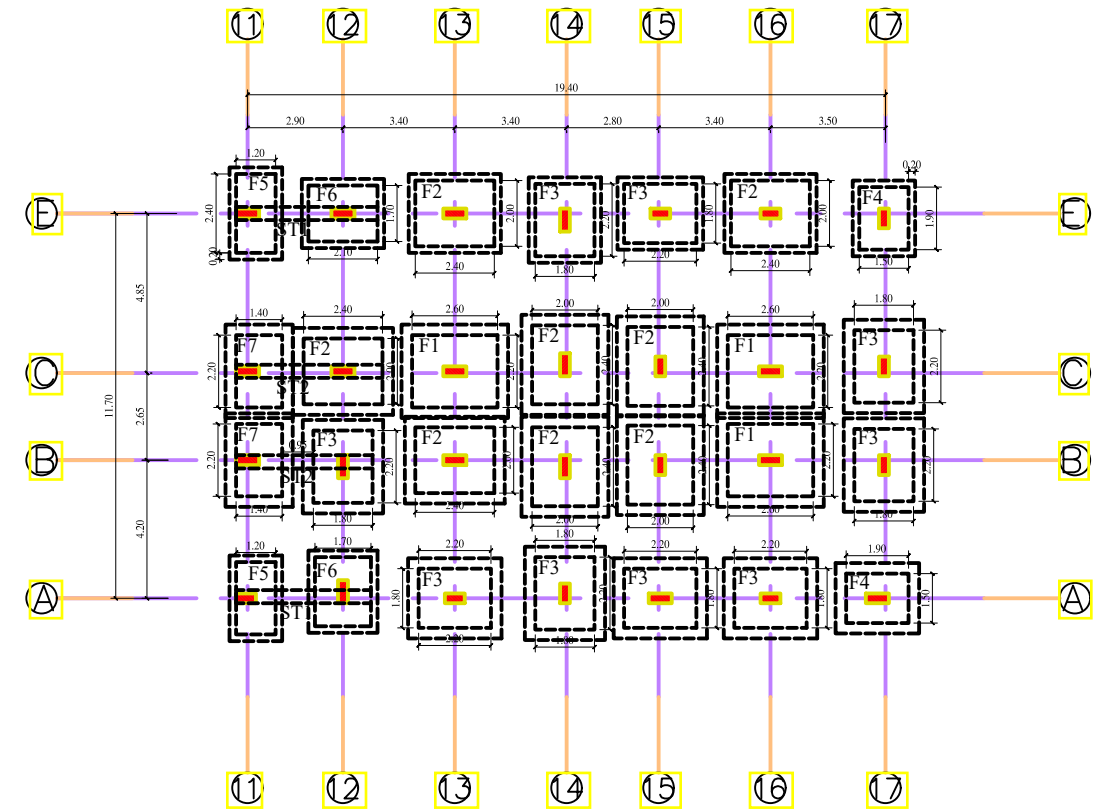
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Format: A2/A3  
Date: 2021

Sheet: **S-017**



TABLE OF REINFORCEMENTS FOR STRAP BEAMS FOR FOUNDATIONS										
Beam no.	Dimension		Bottom bars			Top bars			Stirrups	Remarks
	Width (cm)	Depth (cm)	At ext footing	Middle	At ent footing	At ext footing	Middle	At ent footing		
ST1	40	80	5 Ø 18	5 Ø 18	5 Ø 18	6 Ø 18	6 Ø 18	6 Ø 18	1 Ø 10 @ 15 cm	2
ST2	40	80	7 Ø 18	7 Ø 18	7 Ø 18	7 Ø 18	7 Ø 18	7 Ø 18	1 Ø 10 @ 15 cm	2

TABLE OF REINFORCEMENTS FOR SINGLE FOOTING								
TYPE	Dimension			Bottom bars		CAPOLLE		Remarks
	Width (cm)	Length (cm)	Depth (cm)	Long DIR / m	Short DIR / m	Long DIR	Short DIR	
F1	220	260	60	6 Ø 16	6 Ø 16	2 Ø 16	2 Ø 16	3
F2	200	240	60	5 Ø 16	5 Ø 16	2 Ø 16	2 Ø 16	8
F3	180	220	50	5 Ø 16	5 Ø 16	2 Ø 16	2 Ø 16	9
F4	150	190	50	5 Ø 16	5 Ø 16	2 Ø 16	2 Ø 16	2
F5	120	220	50	7 Ø 16	7 Ø 16	2 Ø 16	2 Ø 16	2
F6	170	210	50	5 Ø 16	5 Ø 16	2 Ø 16	2 Ø 16	2
F7	140	220	50	8 Ø 16	8 Ø 16	2 Ø 16	2 Ø 16	2



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**ACTED\_DHAMAR**  
Construction Outpatient Building  
Dhamar General Hospital

TITLE: **STRUCTURAL DESIGN**  
Typical Plane for Foundation  
Drawing and design by Eng: Fares # by Eng: Wadea

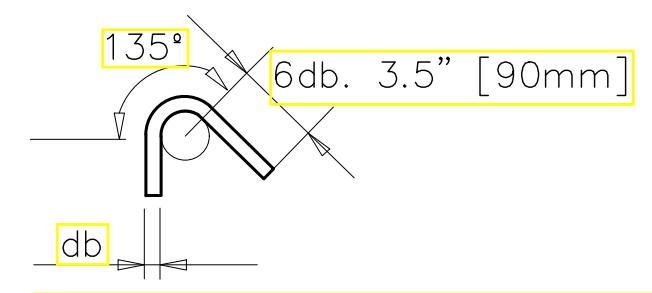
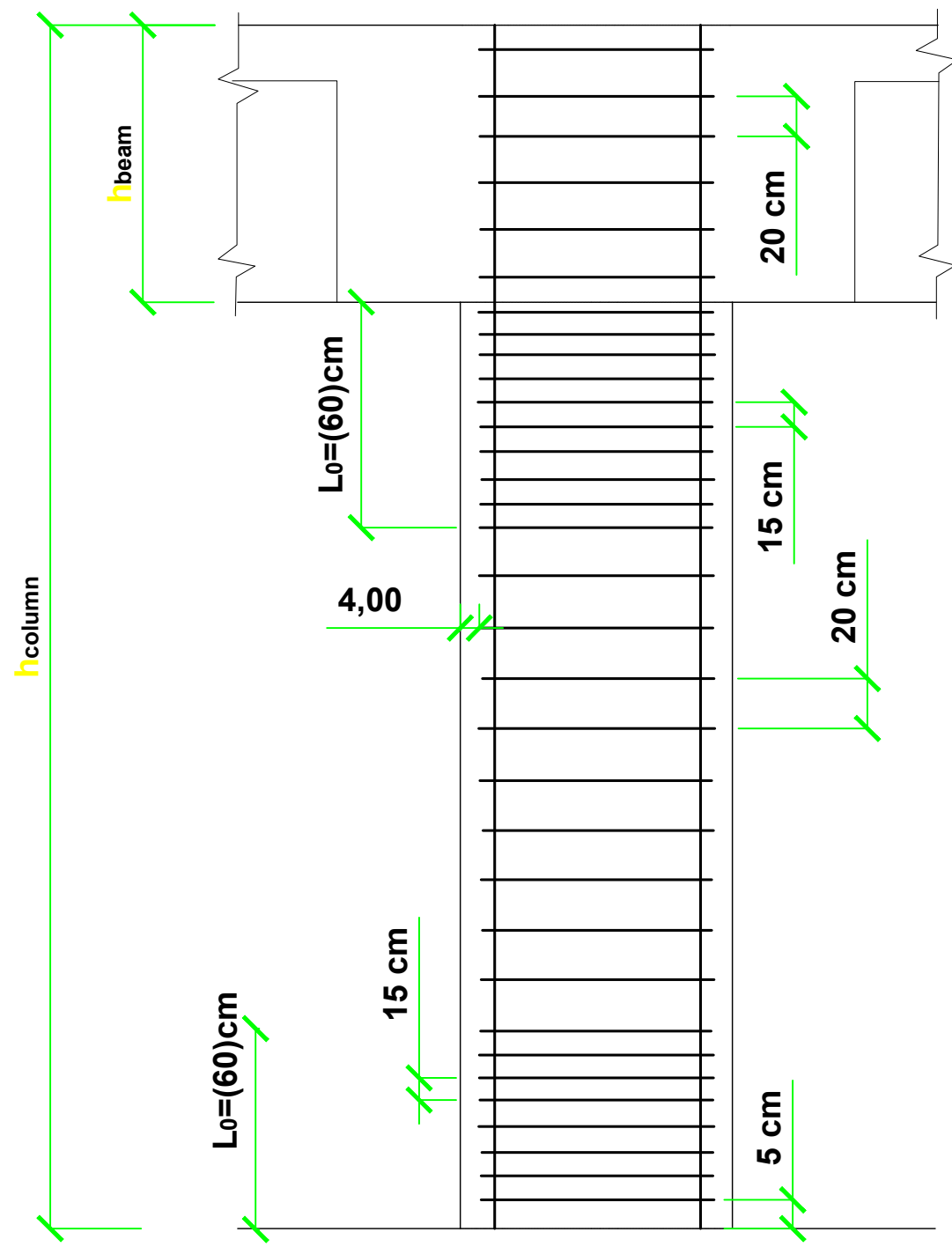
INDEX	REVISION	DATE

Project Name: **BLOCK B FOUNDATIONS**  
Project Code: **15DYK**

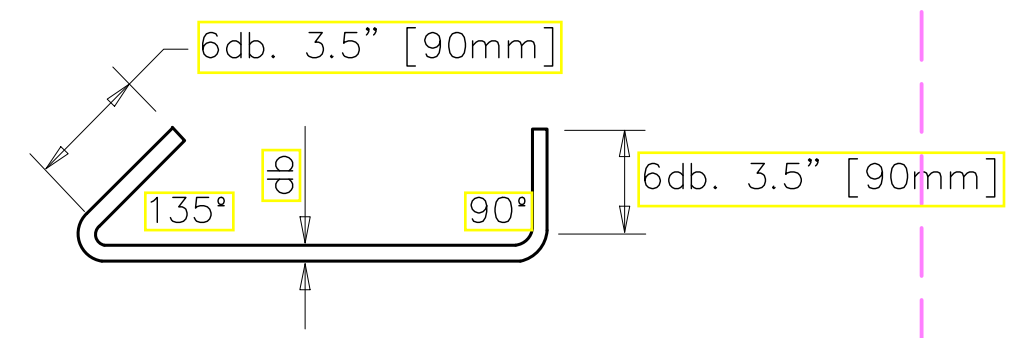
Scale	Format
1:100	A2 A3
Date	2021

Sheet: **S-018**





COLUMN HOOP HOOKS AT EACH END



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Dhamar General Hospital

TITLE: **STRUCTURAL DESIGN**  
Drawing and design by Eng: Fares # by Eng Wadea

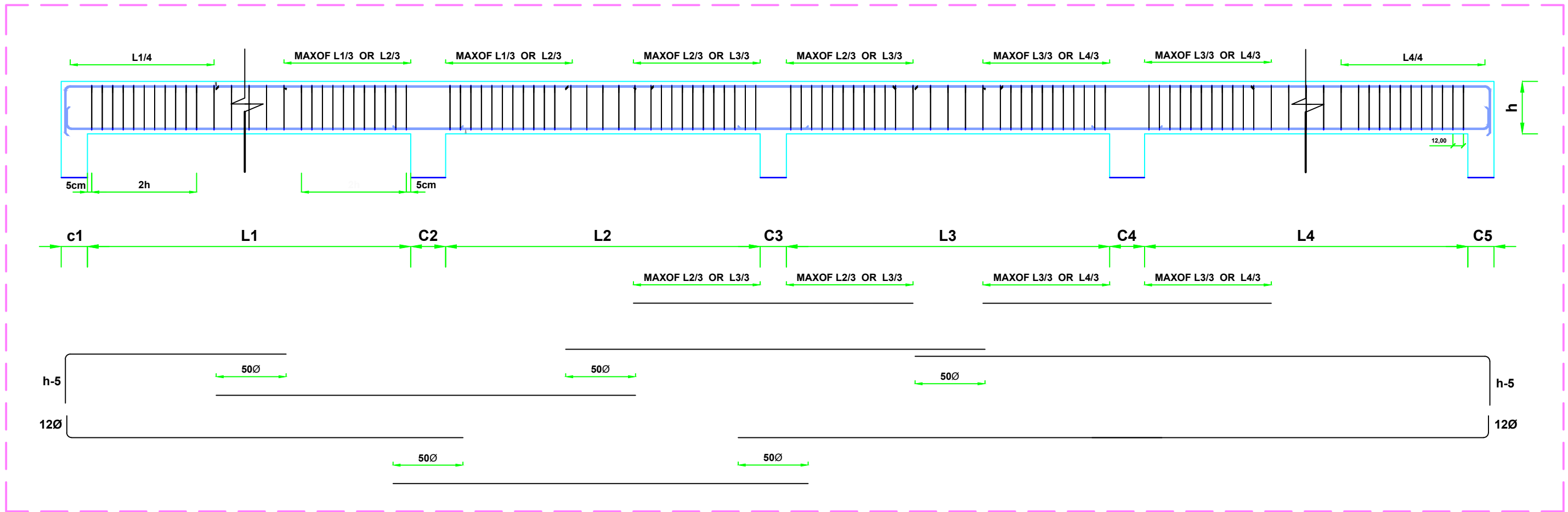
INDEX	REVISION	DATE

Filename: **\_ TYPICAL COLUMN DETAILING \_**  
Project Code: **15DYK**  
Scale: 1:100  
Format: A2 A3  
Date: 2021

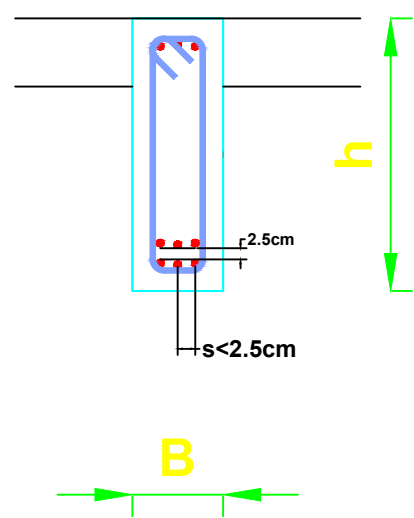
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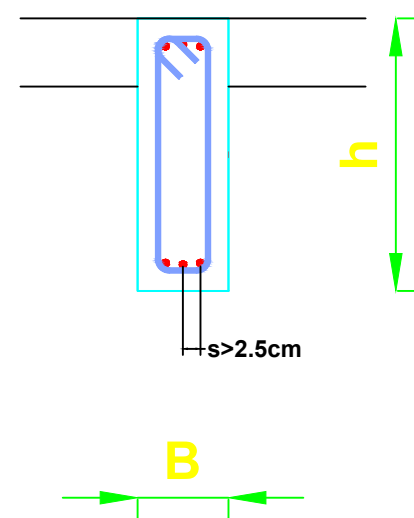




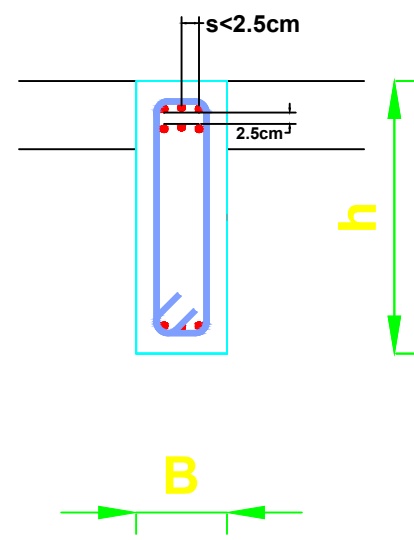
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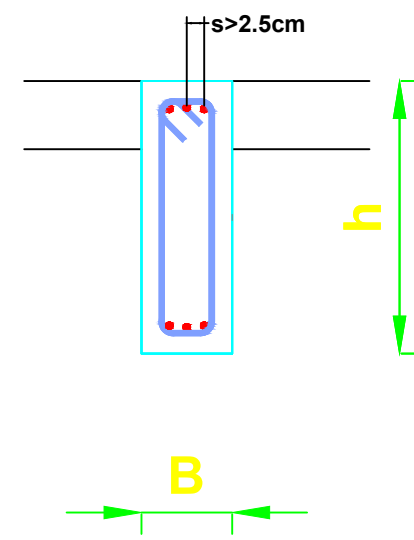
**ONE LAYER**



**TWO LAYERS**



**ONE LAYER**



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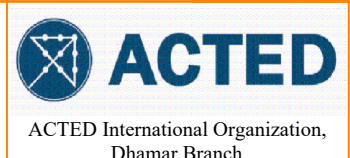
**ACTED\_DHAMAR**  
Construction Outpatient Building  
Dhamar General Hospital

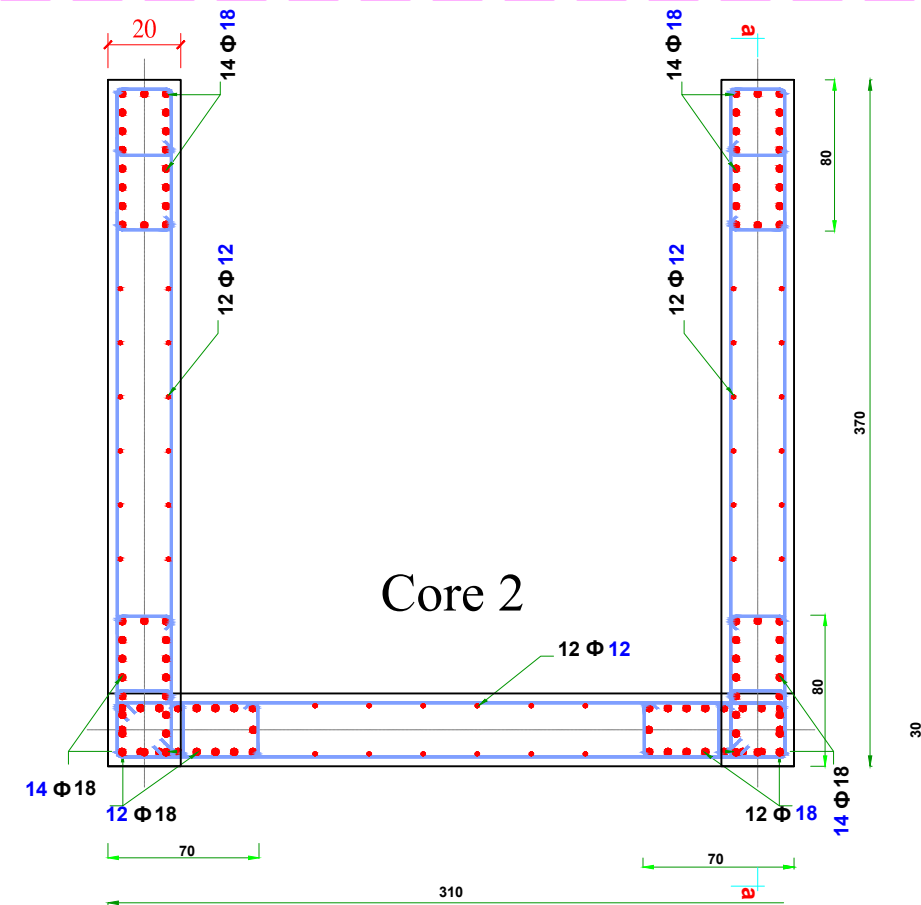
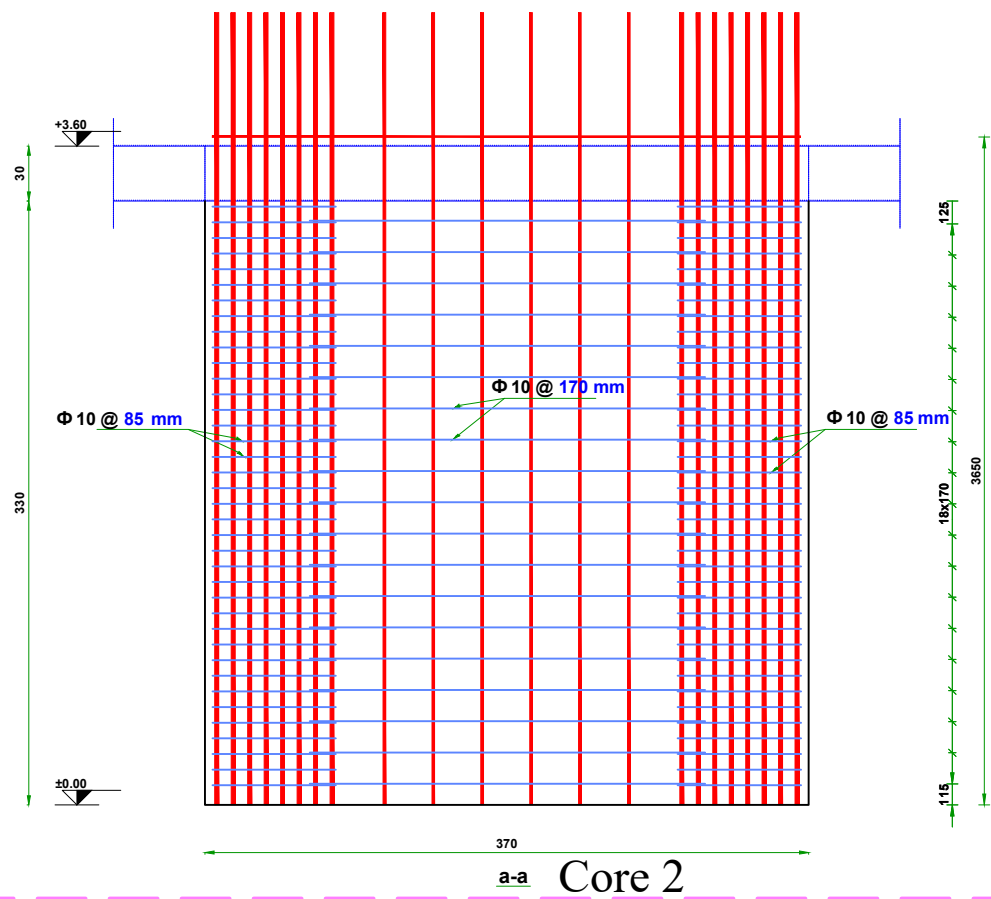
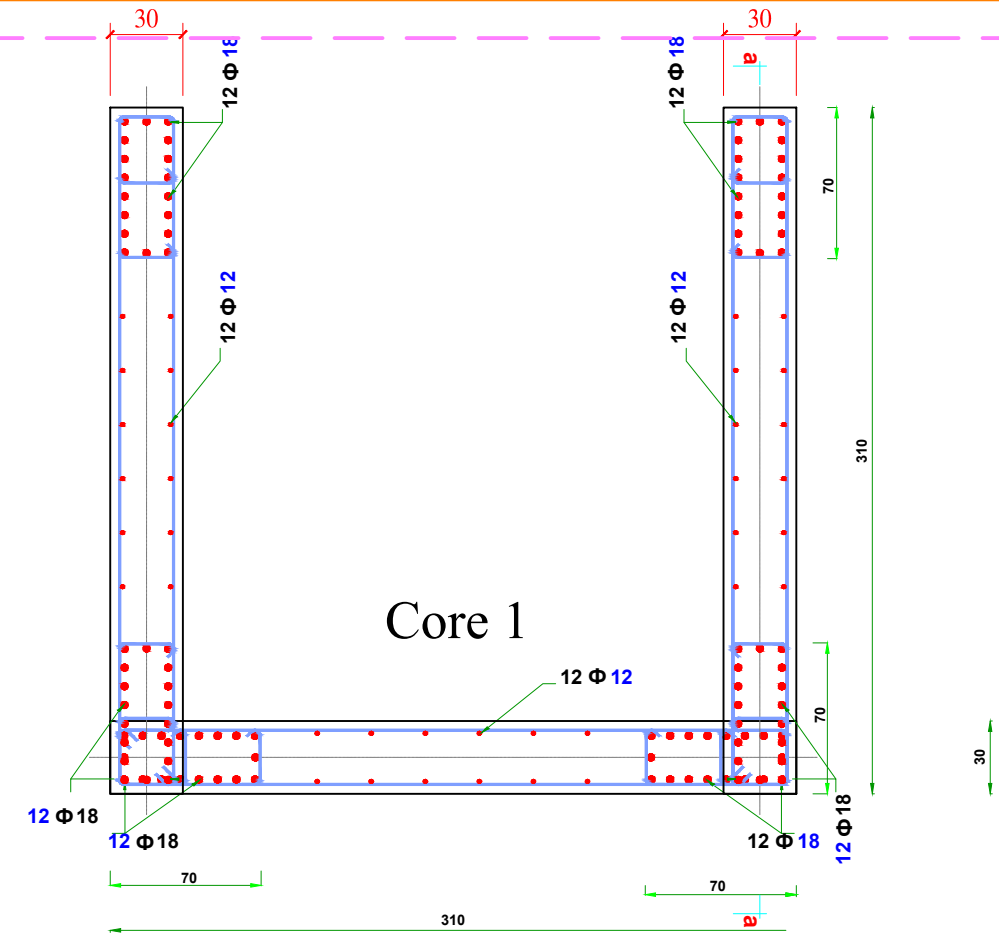
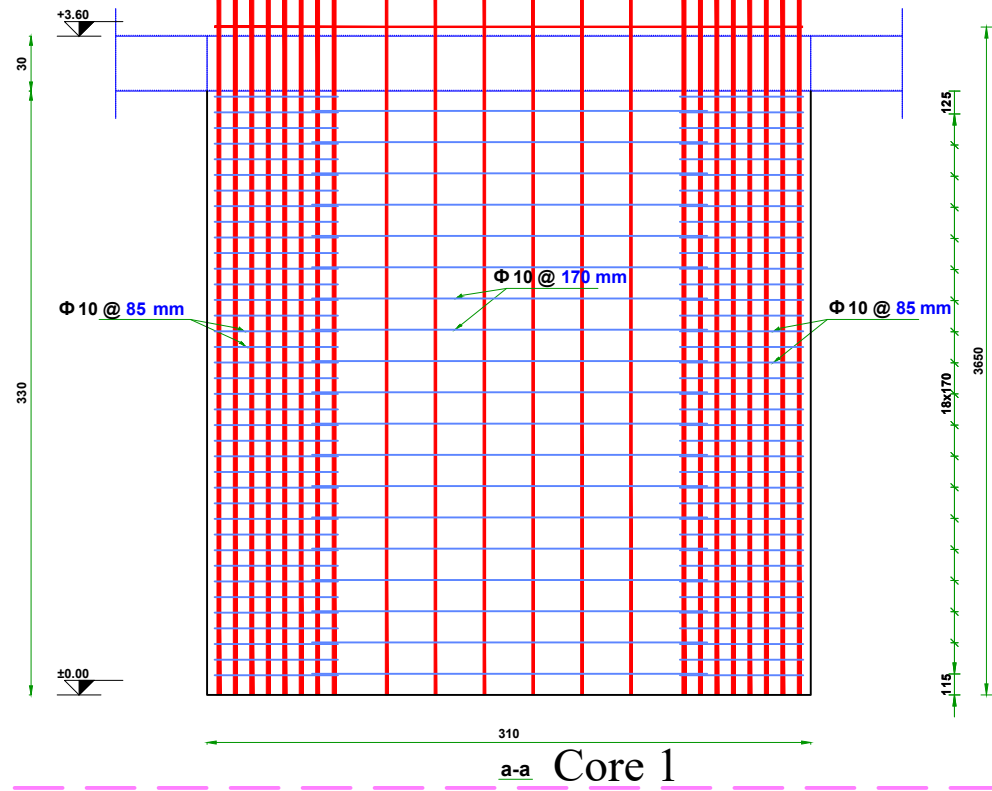
TITLE: **STRUCTURAL DESIGN**  
Drawing and design by Eng: Fares # by Eng: Wadea

INDEX	REVISION	DATE

Filename: **\_ TYPICAL BEAM DETAILING \_**  
Project Code: **15DYK**  
Scale: 1:100  
Format: A2/A3  
Date: 2021

Sheet: **S-020**





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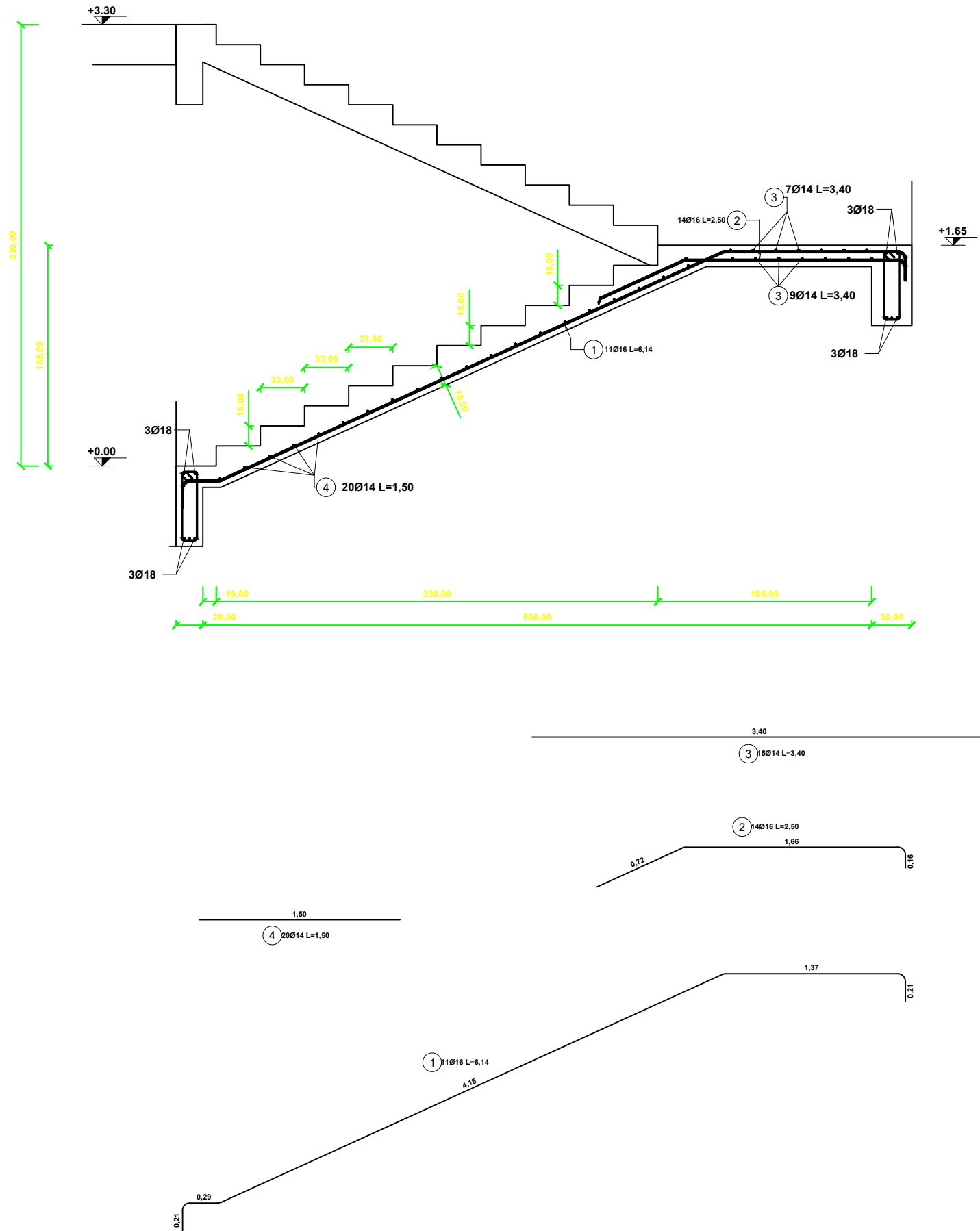
TITLE: **STRUCTURAL DESIGN**

Drawing and design by Eng: Fares # by Eng: Wadea

INDEX	REVISION	DATE

Filename	Scale	Format	Sheet
_BLOCK A Cores DETAILING _	1:150	A2 A3	S-021
Project Code:	2021		
<b>15DYK</b>			





Position	Diameter	Symbol	Mass (kg)	Number of	Length of Rebar (m)	Total Length of Rebars (m)
				Rebars		
1	16		106.04	11	6.14	67.54
2	16		54.95	14	2.50	35.00
3	14		61.20	15	3.40	51.00
4	14		36.00	20	1.50	30.00



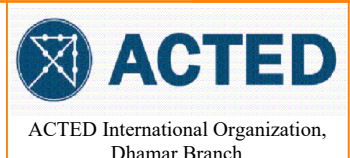
Funded by the European Union  
**ACTED\_DHAMAR**  
 Construction Outpatient Building  
 Dhamar General Hospital

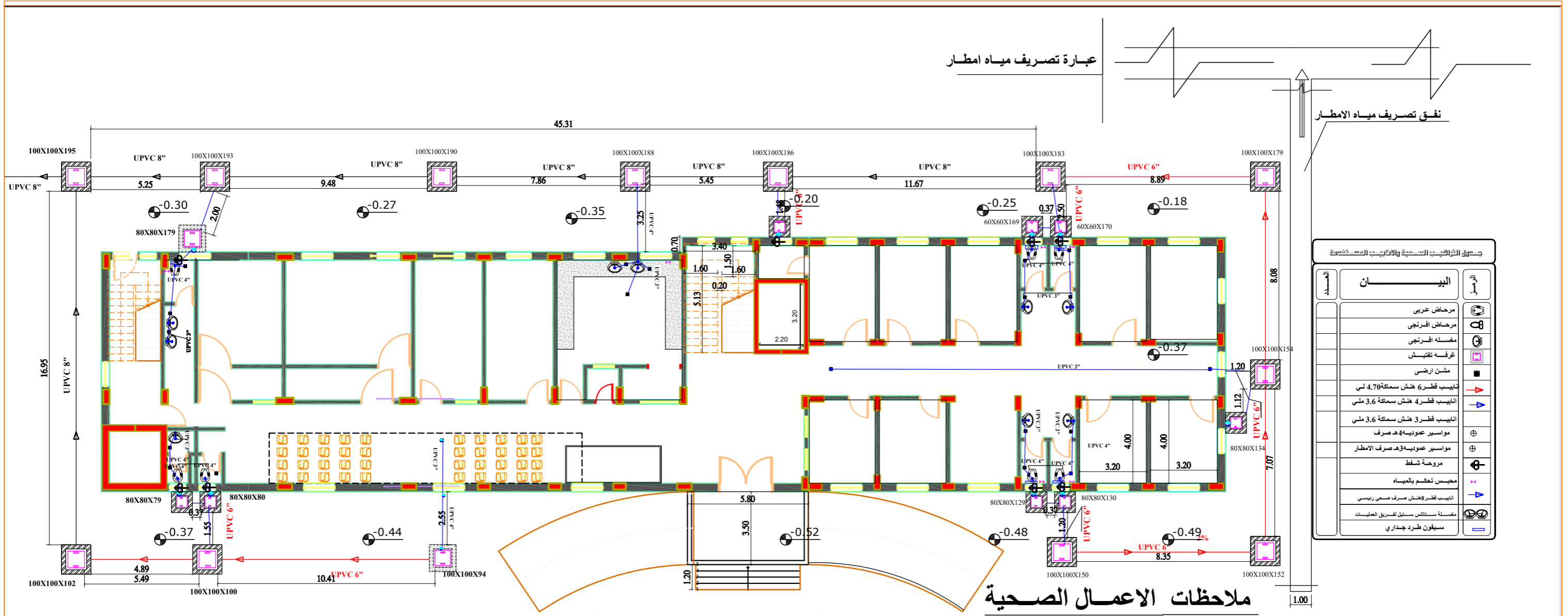
TITLE: **STRUCTURAL DESIGN**  
 Drawing and design by Eng: Fares # by Eng: Wadea

INDEX	REVISION	DATE

Filename: **\_ STAIRS \_**  
 Project Code: **15DYK**  
 Scale: 1:100  
 Format: A2/A3  
 Date: 2021

Sheet: **S-022**





- 1- يجب ان تكون مواسير الصرف الصحي بين غرف التفتيش الرئيسية قط - 8 و 6 هنش سماكة مم ضغط كامل بحيث يتم الحفر والردم حول المواسير بالرمل الناعم من جميع الجوانب
- 2- جميع الاحواض والكراسي مصنوعة من الخزف المزجج ماركة معتمدة ويقبلها المهندس المشرف -
- 3- جميع مواسير الصرف الداخلية للحمامات بلاستيك ضغط عالي -
- 4- يجب ان ترفع حنفيات الحمامات - 60 سم من مستوى البلاط للارضيات
- 5- يجب ان تكون مواسير تصريف مياه الامطار بلاستيك نصف ضغط قطر - 4 هنش سماكة 3.6 مم
- 6- يجب تركيب الخزانات في السطح على ارتفاع - 90 سم مع تركيب العوامة
- 8- يجب التاكسير لمواسير التغذية بالمياه في الجدران بشكل جيد -
- 9- يجب اختبار جميع المواسير للمياه بواسطة ضخ الماء قبل اعمال البلاط للجدران والارضيات -
- 10- يجب تركيب اكواع ريحة في كل حمام وكذا تركيب محبس لكل حمام -
- 11- جميع التمديدات الخارجية الخاصة بتغذية الحمامات والمغاسل ومواسير التمديدات الداخلية بلاستيك --



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Dhamar General Hospital

HEALTH DRAWINGS

Drawing and design by Eng: Fares #by Eng Wadea

INDEX	REVISION	DATE

First Floor

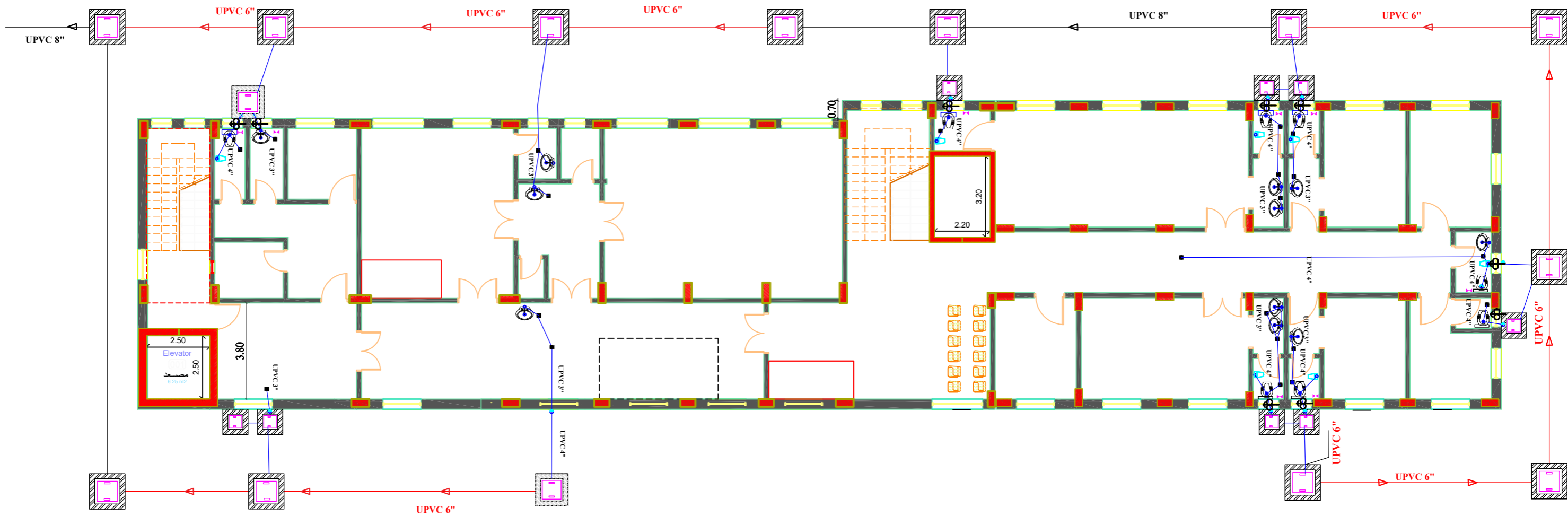
Project Code:

15DYK

Scale  
1:150  
Date  
2021

A-001





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**ACTED\_DHAMAR**  
Construction Outpatient Building  
Dhamar General Hospital

**HEALTH DRAWINGS**

Drawing and design by Eng: Fares #by Eng Wadea

INDEX	REVISION	DATE

**\_ Secand Floor \_**

Project Code:

**15DYK**

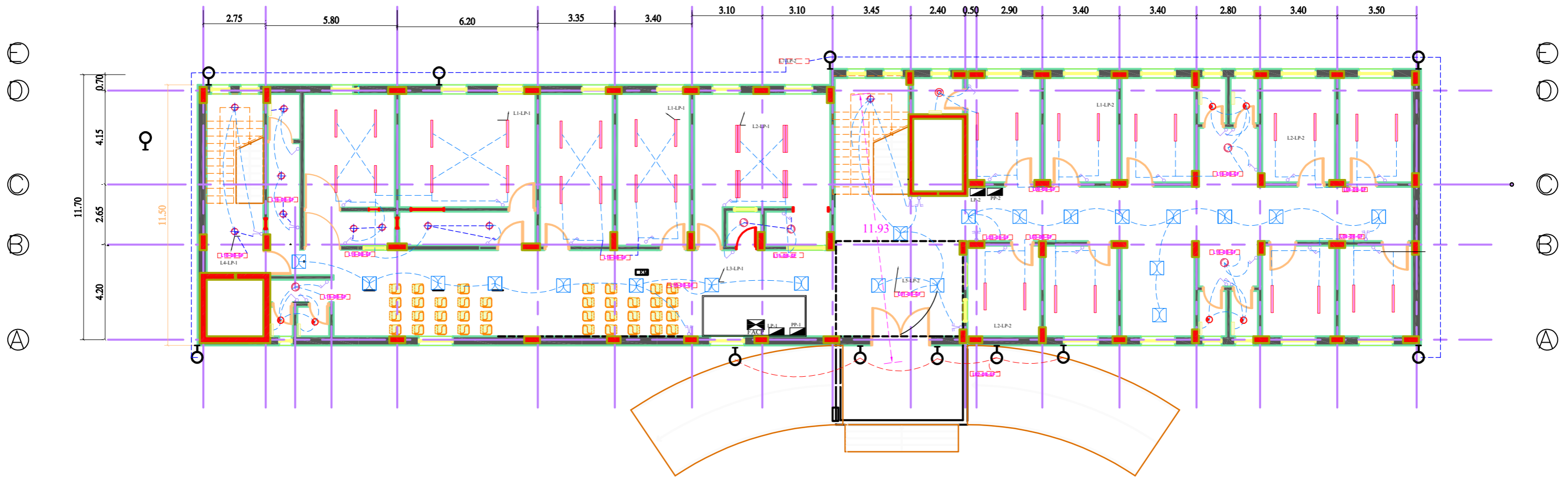
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Date: 2021

**A-002**



# مسقط الدور الاول - نظام الانارة



البيان	الرمز
منفذ غيش كهرباء 13 امبير 220 فولت بجناح سورين نيل مع اضاءة	⊙
منفذ غيش كهرباء 20 امبير 220 فولت بجناح سورين	⊗
منفذ غيش كهرباء 20 امبير 220 فولت بجناح سورين محسي من الرطوبة والصدأ	WP ⊗
منفذ غيش كهرباء 380 فولت اعداد 3L+N+PE حذية مع RCCB	⊞

البيان	الرمز
انارة غرفة العمليات	⊙
كاشف حريق حراري OPTICAL	⊙
ماخذ فيشن مسالايت	⊙
لوحة تحكم بقدار الحريق ADDRESSABLE	⊙
لوحة تحكم بنظام المراقبة للمرضى	⊙
منغرفة حريق نعل بكسر الزجاج	⊙
ماخذ كمبيوتر	⊙
كاشف حريق دخاني OPTICAL	⊙

البيان	الرمز
انارة اعداد بغطاء نصف دائري بلاستيك لاسي ولوحة القياس 10 وات عند الجهد	⊙
انارة اعداد بغطاء نصف دائري بلاستيك لاسي ولوحة القياس 10 وات	⊙
منفذ غيش كهرباء 20 امبير 220 فولت بجناح سورين محسي من الرطوبة والصدأ	⊙
منفذ غيش كهرباء 13 امبير 220 فولت بجناح سورين	⊙
منفذ غيش كهرباء 20 امبير 220 فولت بجناح سورين محسي من الرطوبة والصدأ	WP ⊙
منفذ غيش كهرباء 13 امبير 220 فولت بجناح سورين نيل	⊙

البيان	الرمز
لوحة التوزيع الرئيسية	MDB
جهاز انارة فلورست 60*60 سم 60 وات مع غطاء محمي بغطاء بلاستيك بوزن 10 كغ اعداد بغطاء نصف دائري بلاستيك لاسي ولوحة القياس 10 وات عند الجهد	⊙
جهاز انارة فلورست 60*60 سم 60 وات مع غطاء محمي بغطاء بلاستيك بوزن 10 كغ اعداد بغطاء نصف دائري بلاستيك لاسي ولوحة القياس 10 وات عند الجهد	⊙
لوحة تحكم بعداد العمليات	⊙
جهاز انارة فلورست 60*60 سم 60 وات مع غطاء محمي بغطاء بلاستيك بوزن 10 كغ اعداد بغطاء نصف دائري بلاستيك لاسي ولوحة القياس 10 وات عند الجهد	⊙
اقلح سخان	⊙
ضبا لفة لاسي ماء بمرضات	⊙
منفذ خاص بنظام المراقبة للمرضى	⊙
مجفف ايدي	⊙

البيان	الرمز
جهاز انارة 18 وات LAD	⊙
جهاز انارة 18 وات LAD	⊙
وحدة انارة بغطاء بلاستيك اعداد بغطاء نصف دائري بلاستيك لاسي ولوحة القياس 10 وات عند الجهد	⊙
منفذ انارة 18 امبير	⊙
one way one,tow and three gang 10 ampere switch.	⊙
tow way one and tow gang 10 ampere switch.	⊙
لوحة توزيع كهرباء	⊙
ماخذ فلورن بالخطي	⊙
الانارة انارة فلورست بغطاء نصف دائري بلاستيك لاسي ولوحة القياس 10 وات عند الجهد	⊙
انارة انارة فلورست بغطاء نصف دائري بلاستيك لاسي ولوحة القياس 10 وات عند الجهد	⊙
لوحة توزيع (الوحدة)	⊙



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Dhamar General Hospital

**ELECTRICAL DRAWINGS**  
Lighting Layout Plan

INDEX	REVISION	DATE

**\_ First Floor \_**  
Project Code:  
**15DYK**

Scale: 1:150  
Form: A2  
Date: 2021

**A-001**

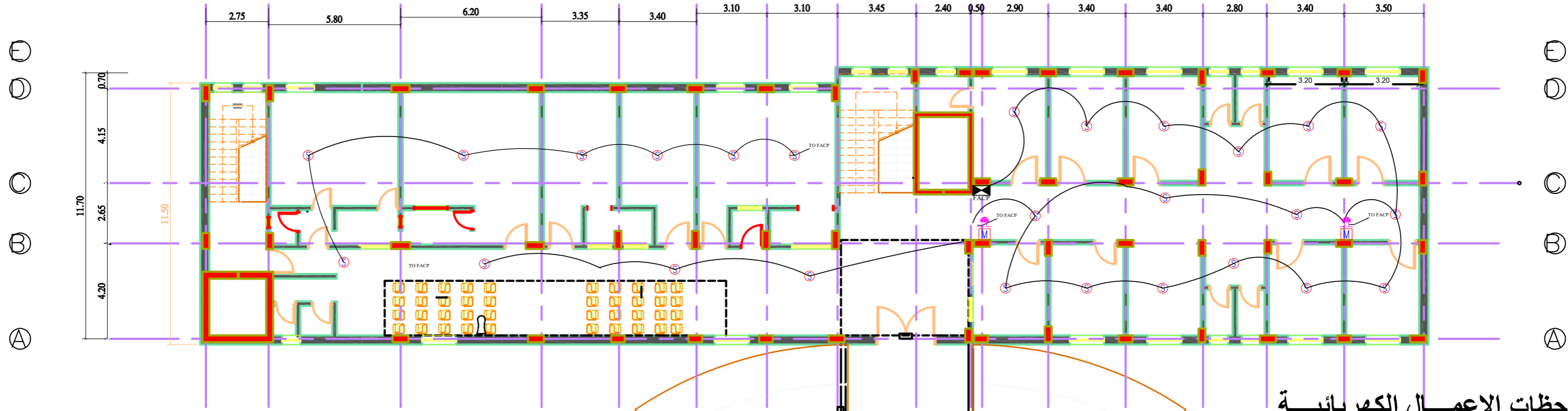












### ملاحظات الاعمال الكهربائية

Symbols Table of Low current Network

Symbol	Description
	fire alarm smoke detector.
	fire alarm heat detector.
	fire alarm manual call point/h:1300mm.
	fire alarm bell/h:2200mm.
	fire alarm control panel.

- 1- يجب ان تكون جميع الاسلاك نوع سعودي معتمد
- 2- يجب ان يكون ارتفاع الماخذ 1 م من مستوى البلاط
- 3- يجب ان يكون ارتفاع مفاتيح الاضاءة 1.5م من مستوى البلاط الارضي
- 4- يجب ان تكون تمديدات الماخذ ارضي تحت البلاط بواسطة مواسير سوداء بلاستيك ويمنع استخدام المواسير ذات الحنجور
- 5- يجب ان تكون اسلاك الاضاءة 1.5\*2.5-3\*2.5مم واسلاك الماخذ 4 مم
- 6- يجب ان تكون اسلاك ماخذ السخانات 4 مم والماخذ 20 امبير
- 7- يجب ان تربط المفاتيح والافيش الى اللوحات بشكل مناسب
- 8- يجب ان تكون الماخذ موزنة
- 9- ر التمديدات الكهربائية للسطوح ظاهرة بعد الصب ولذا يتم تمديدها فوق الحديد وانزلها عند مواقع العب او ربطها بسلك الى الاعلى وذلك لمنع ظهورها بعد فك الشدة الخشبية تجنبا لحدوث شروخ في اماكن مرورها
- 10- يجب عمل التاريض لكل ماخذ حتى اللوحات الفرعية والى اللوحة الرئيسية ومن ثم يتم التوصيل لتاريض الرئيسي
- 11- يتم عمل حفرة او غرفة تفتيش للتاريض ومن ثم يتم عمل سيخ نحاس وفحم وملح حول سلك التاريض
- 12- ( يجب ان تكون مفاتيح اللوحات نوع Lagrend ) ابيض



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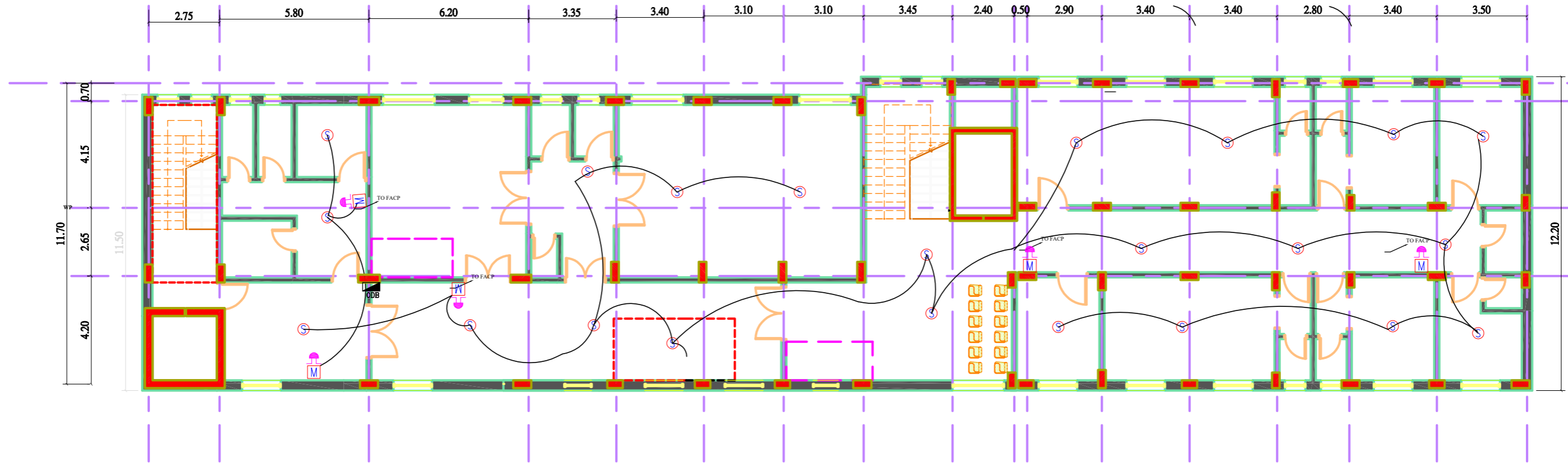
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INDEX	REVISION	DATE

Scale: 1:150  
 Format: A2/A3  
 Date: 2021  
 Project Code: **15DYK**

**A-005**  
 ACTED International Organization,  
 Dhamar Branch

Ⓔ  
Ⓛ  
ⓐ  
ⓑ  
Ⓒ  
Ⓝ  
Ⓓ



Symbols Table of Low current Network

Symbol	Description
Ⓢ	fire alarm smoke detector.
ⓗ	fire alarm heat detector.
Ⓜ	fire alarm manual call point/h:1300mm.
	fire alarm bell/h:2200mm.
facp	fire alarm control panel.



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Construction Outpatient Building  
Dhamar General Hospital

**ELECTRICAL DRAWINGS**

INDEX	REVISION	DATE

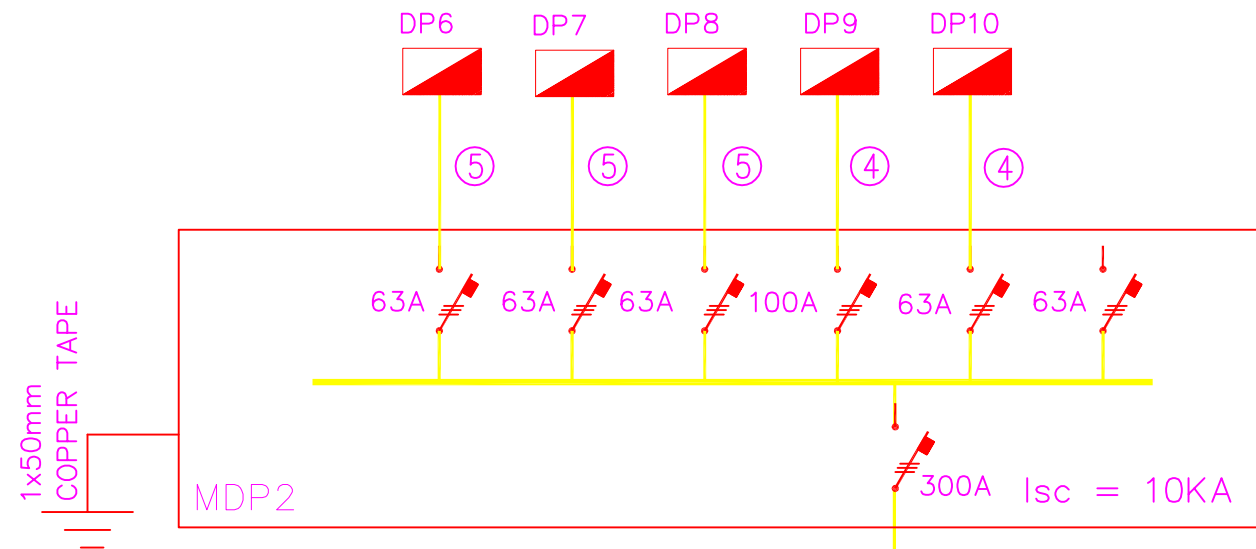
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2021	

**\_ Second Floor \_**  
Project Code:  
**15DYK**

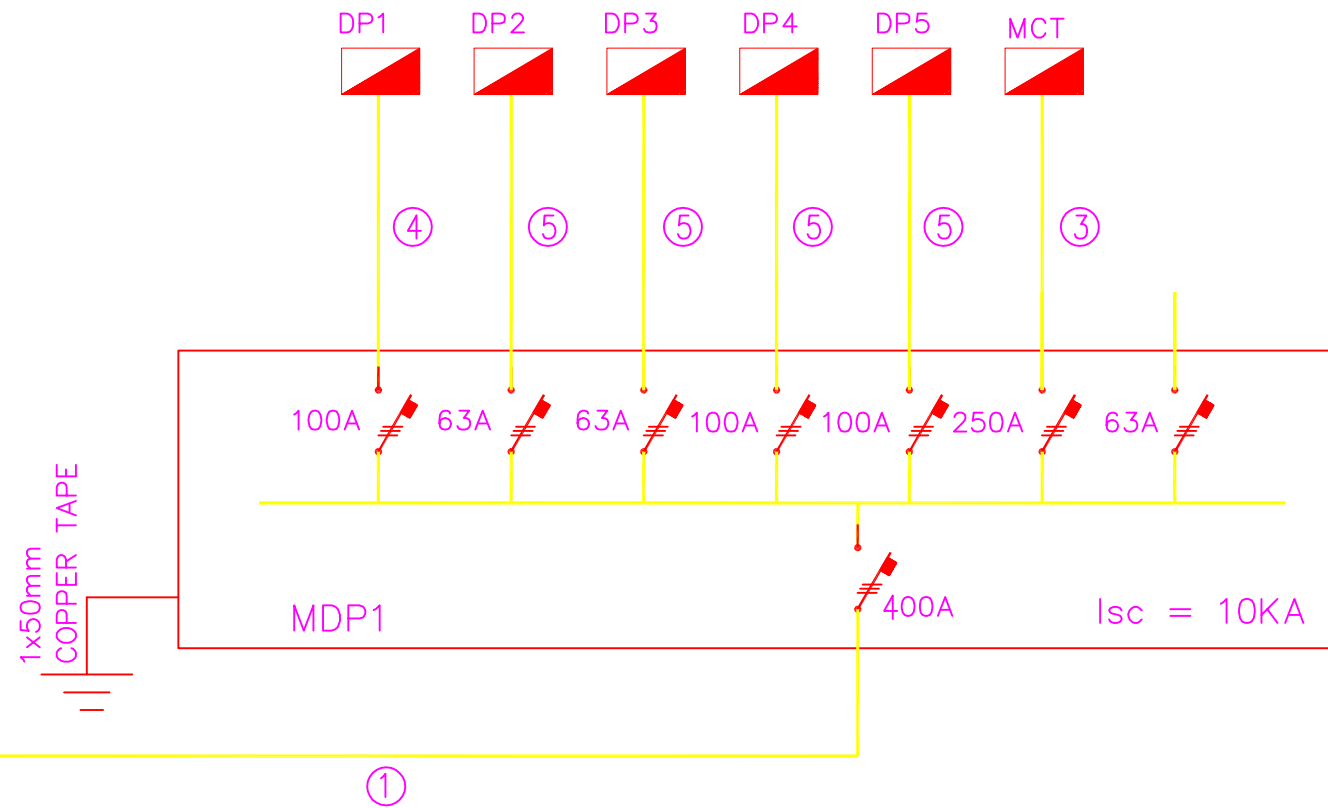
**A-006**



SECOND FLOOR



FIRST FLOOR

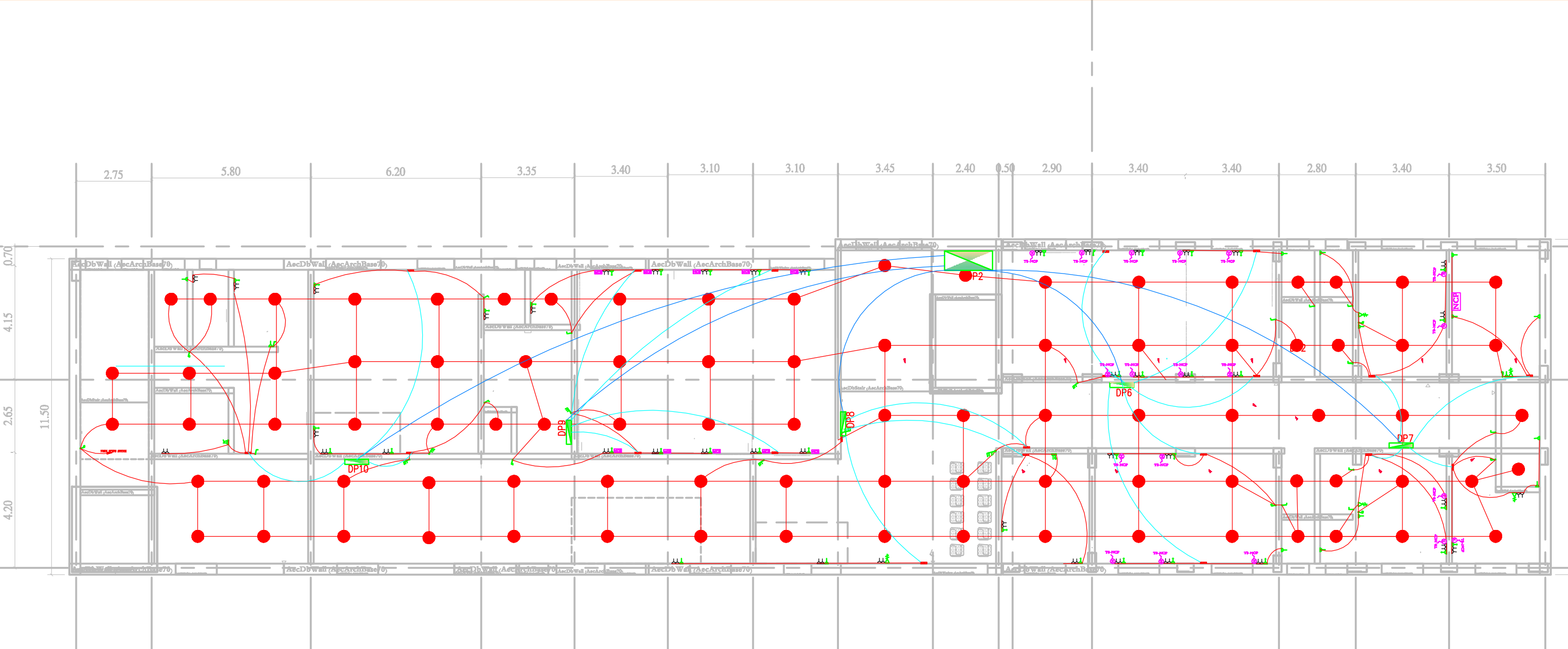


CABLE SIZES :-

- ① 4x185+50 mm<sup>2</sup> PVC/PVC (LSF) CABLE
- ② 4x120+50 mm<sup>2</sup> PVC/PVC (LSF) CABLE
- ③ 4x70+25 mm<sup>2</sup> PVC/PVC (LSF) CABLE
- ④ 4x35+16 mm<sup>2</sup> PVC/PVC (LSF) CABLE
- ⑤ 4x25+10 mm<sup>2</sup> PVC/PVC (LSF) CABLE

INDEX	REVISION	DATE

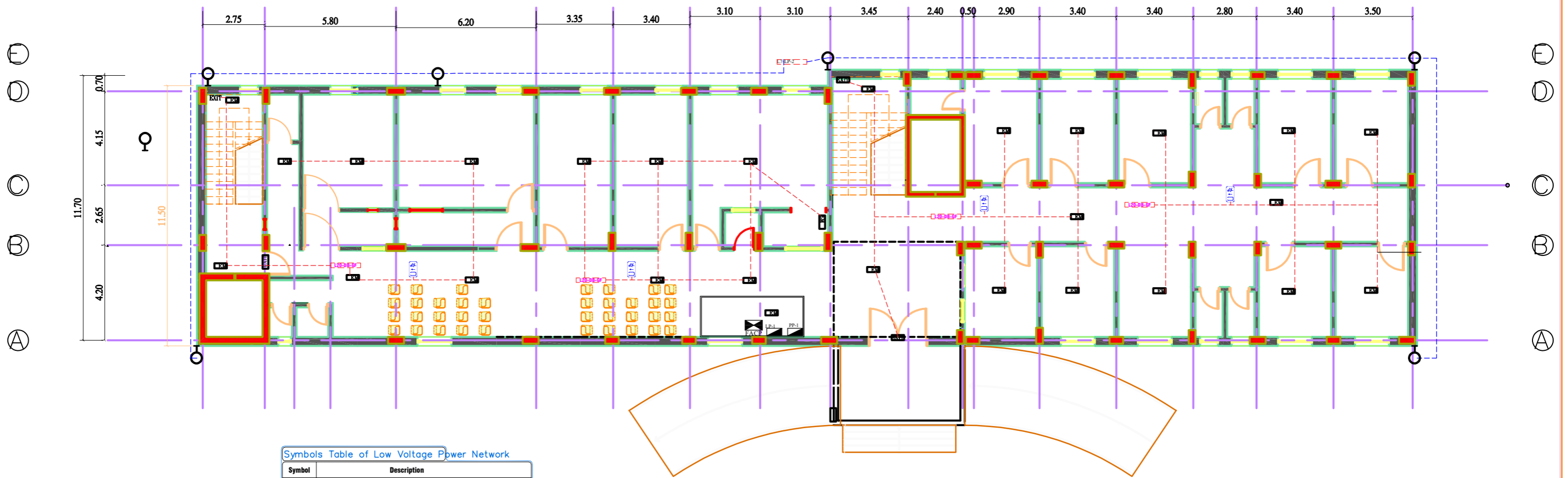
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_ Secand Floor _		--	A2	A-007
Project Code:		1:150	A3	
15DYK		Date	2021	



☒	وحدة اضاءة 18x2
	لمبة 18 وات
⊕	كشافه 70

●	نقاط اضاءة
●	نقاط إنذار مبكر
●	سرينه انذار حريق
●	دخان + حساس حريق مزدوج حراري
⊕	حساس دخان
⊕	ضاغطة حريق
⊕	ضاغطة استدعاء ممرضة
⊕	وحدة استدعاء الممرضات
⊕	وحدة مراقبة المريض

▲	مأخذ كمبيوتر
▲	مأخذ تلفون
⌋	مفتاح اضاءة مفرد
⌋	مفتاح اضاءة مزدوج
⌋	مفتاح اضاءة ثلاثي
▬	لوحة توزيع ثانوية
▬	الوحدة التوزيع الرئيسية
▬	التحويل الرئيسية للتلفون
▬	المأخذ الرئيسي للكمبيوتر
▬	لوحة توزيع تلفون
▬	مسندون ربط



Symbols Table of Low Voltage Pbwver Network

Symbol	Description
EM	Emergence LIGHTING 1x10w/220v/50Hz with 2h backup LITHIUM battery.
EWS	Emergence LIGHTING 1x10w/220v/50Hz with 2h backup LITHIUM battery and escape way sign.
DS	duple side.



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Dhamar General Hospital

**ELECTRICAL DRAWINGS**

INDEX	REVISION	DATE

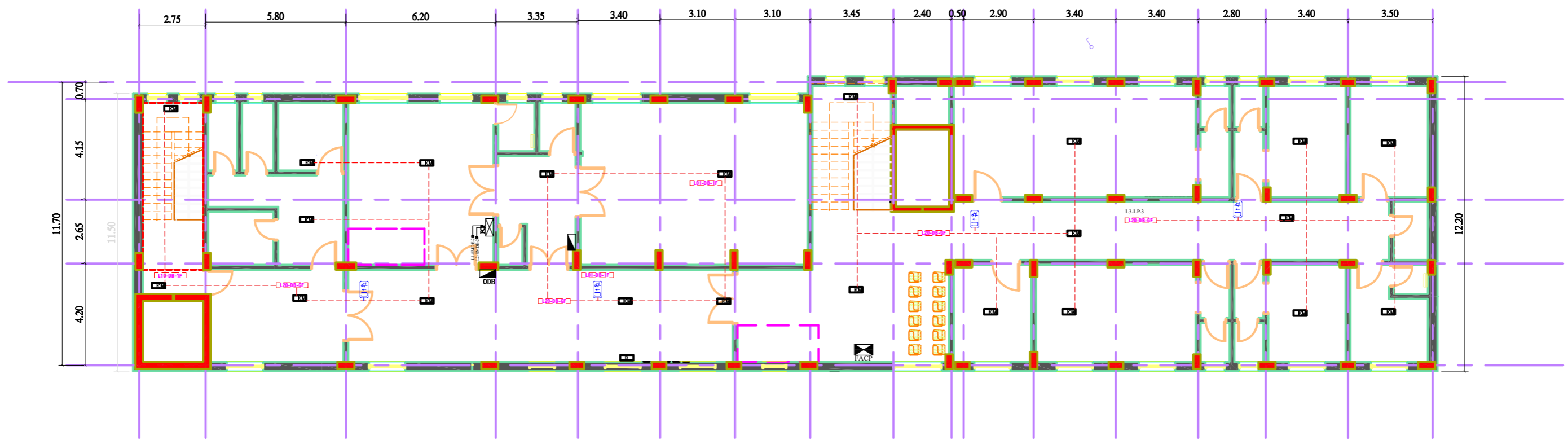
**Emergency Lighting**  
Project Code:  
**15DYK**

Scale	Format
1:150	A2 A3
Date	2021

**A-009**



Ⓔ  
Ⓕ  
Ⓖ  
Ⓑ  
Ⓐ



**Symbols Table of Low Voltage Power Network**

Symbol	Description
	Emergency LIGHTING 1x10w/220v/50Hz with 2h backup LITHIUM battery.
	Emergency LIGHTING 1x10w/220v/50Hz with 2h backup LITHIUM battery and escape way sign.
DS	duplex side.



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Dhamar General Hospital

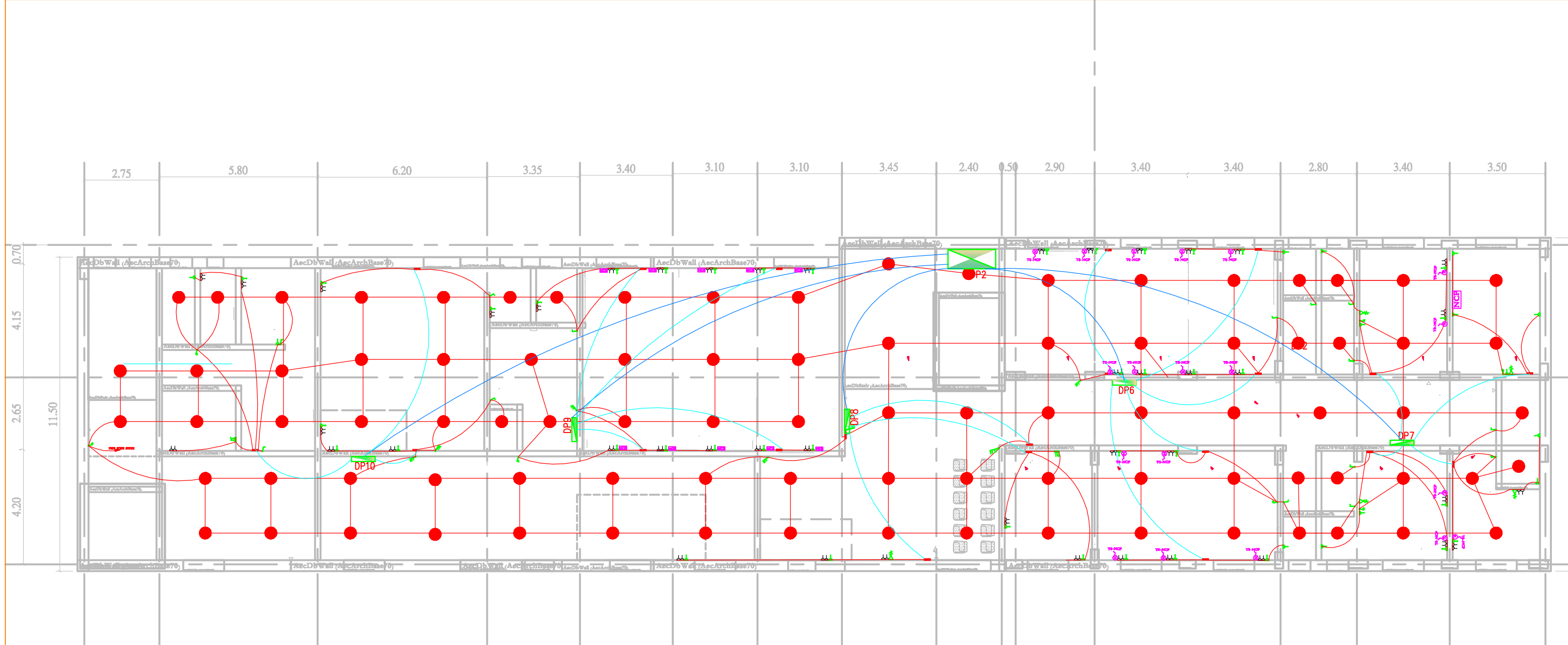
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INDEX	REVISION	DATE

Emergency Lighting  
Project Code:  
**15DYK**

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Format: A2/A3  
Date: 2021  
**A-010**



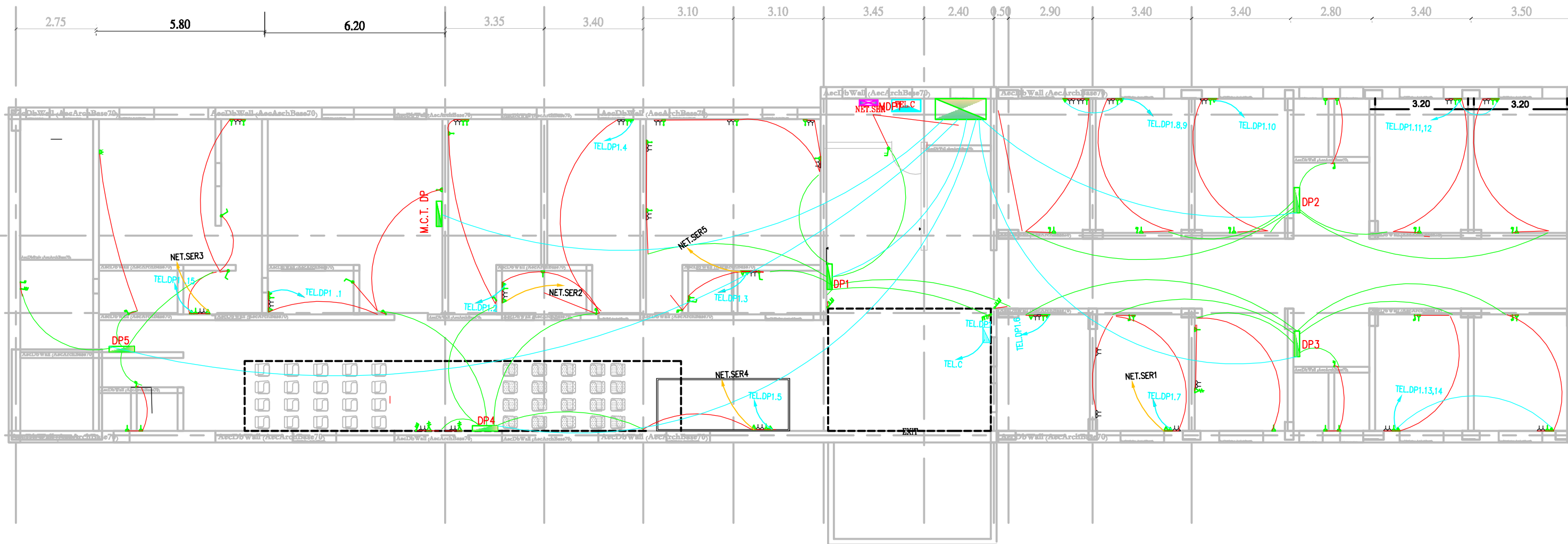


☒	وحدة اضاءة 18x2
⊕	لمبة 18 وات
⊖	كشافه 70

●	نقاط اضاءة
●	نقاط إنذار مبكر
●	سرينه انذار حريق
●	دخان + حساس حريق مزدوج حراري
⊖	حساس دخان
⊖	ضاغطة حريق
⊖	ضاغطة استدعاء ممرضة
⊖	وحدة استدعاء الممرضات
⊖	وحدة مراقبة المريض

▲	مأخذ كمبيوتر
▲	مأخذ تلفون
⌋	مفتاح اضاءة مفرد
⌋	مفتاح اضاءة مزدوج
⌋	مفتاح اضاءة ثلاثي
▬	لوحة توزيع ثانوية
▬	الوحدة التوزيع الرئيسية
▬	التحويل الرئيسية للتلفون
▬	المأخذ الرئيسي للكمبيوتر
▬	لوحة توزيع تلفون
▬	مسندوق ربط





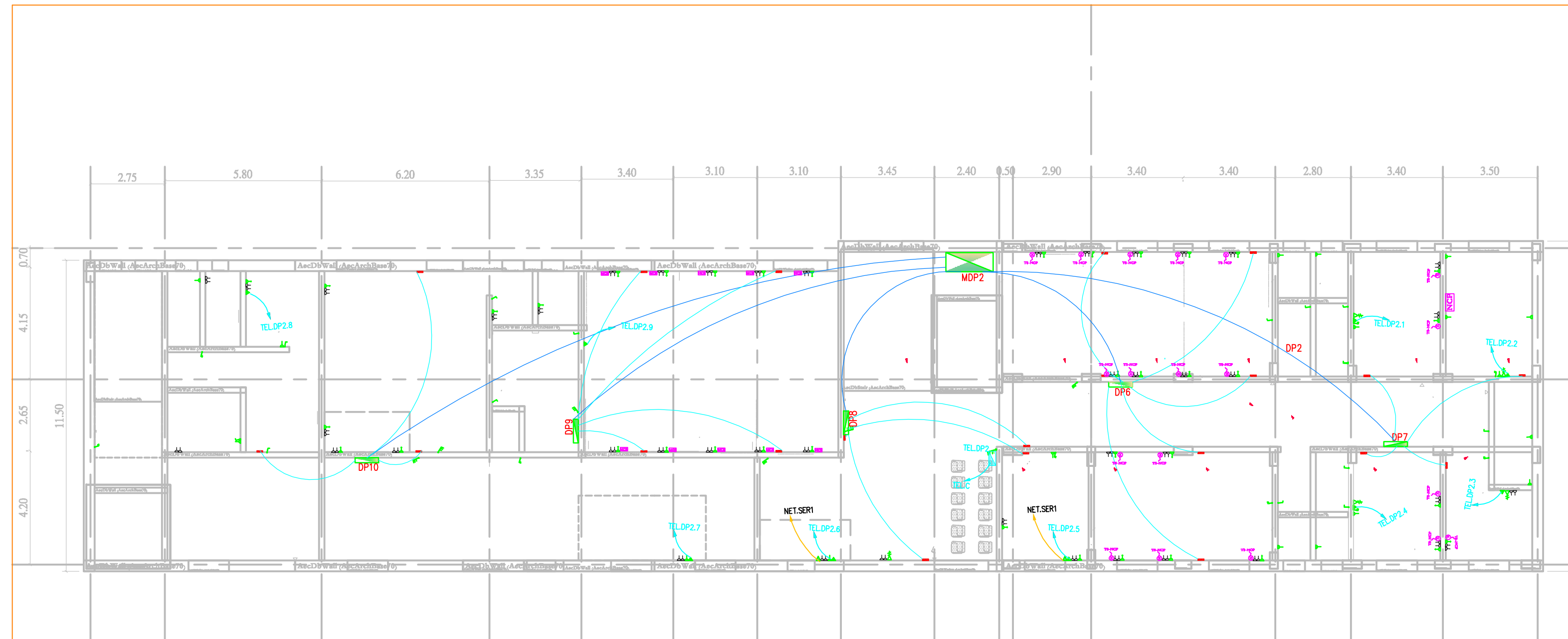
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○	لمبة 18 وات
○	كشافة 70

●	نقاط اضاءة
●	نقاط اذار ميكرو وات
●	سرينه اذار حريق
●	دخان + حساس حريق مزدوج حراري
○	حساس دخان
○	ضاغطة حريق
○	ضاغطة استعداد ممرضة
○	وحدة استعداد الممرضات
○	وحدة مراقبة المريض

▲	مأخذ كبيوتر
▲	مأخذ تليفون
]	مفتاح اضاءة مفرد
]	مفتاح اضاءة مزدوج
]	مفتاح اضاءة ثلاثي
▭	لوحة توزيع ثانوية
▭	الوحدة التوزيع الرئيسية
▭	التحويل الرئيسية للتليفون
▭	المأخذ الرئيسي للكمبيوتر
▭	لوحة توزيع تلفون
▭	مسدود ربط

1





وحدة اضاءة	⊠
لمبة 18 وات	
كشافه 70	⊙

نقاط اضاءة	●
نقاط إنذار مبكر	●
سرينه انذار حريق	
دخان + حساس حريق مزدوج حراري	
حساس دخان	⊙
ضاغطة حريق	⊙
ضاغطة استدعاء ممرضة	⊙
وحدة استدعاء الممرضات	⊙
وحدة مراقبة المريض	⊙

مأخذ كمبيوتر	▲
مأخذ تلفون	▲
مفتاح اضاءة مفرد	⌋
مفتاح اضاءة مزدوج	⌋
مفتاح اضاءة ثلاثي	⌋
لوحة توزيع ثلوية	⌋
الوحدة التوزيع الرئيسية	⌋
التحويل الرئيسية للتلفون	⌋
المأخذ الرئيسي للكمبيوتر	⌋
لوحة توزيع تلفون	⌋
مسندون ربط	⌋