

# المثلث الذهبي للاستشارات الهندسية

GOLDEN TRIANGLE ENGINEERING CONSULTANCY

( تصميم - اشرف - مساحة - اعمال سلامة )

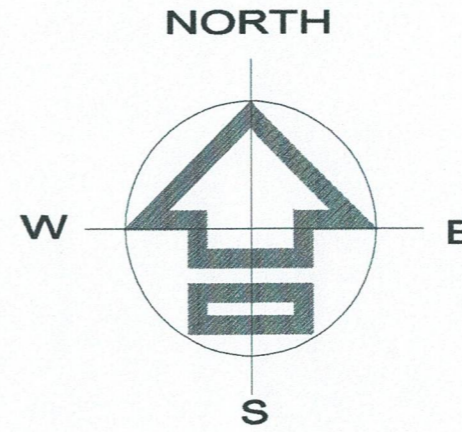
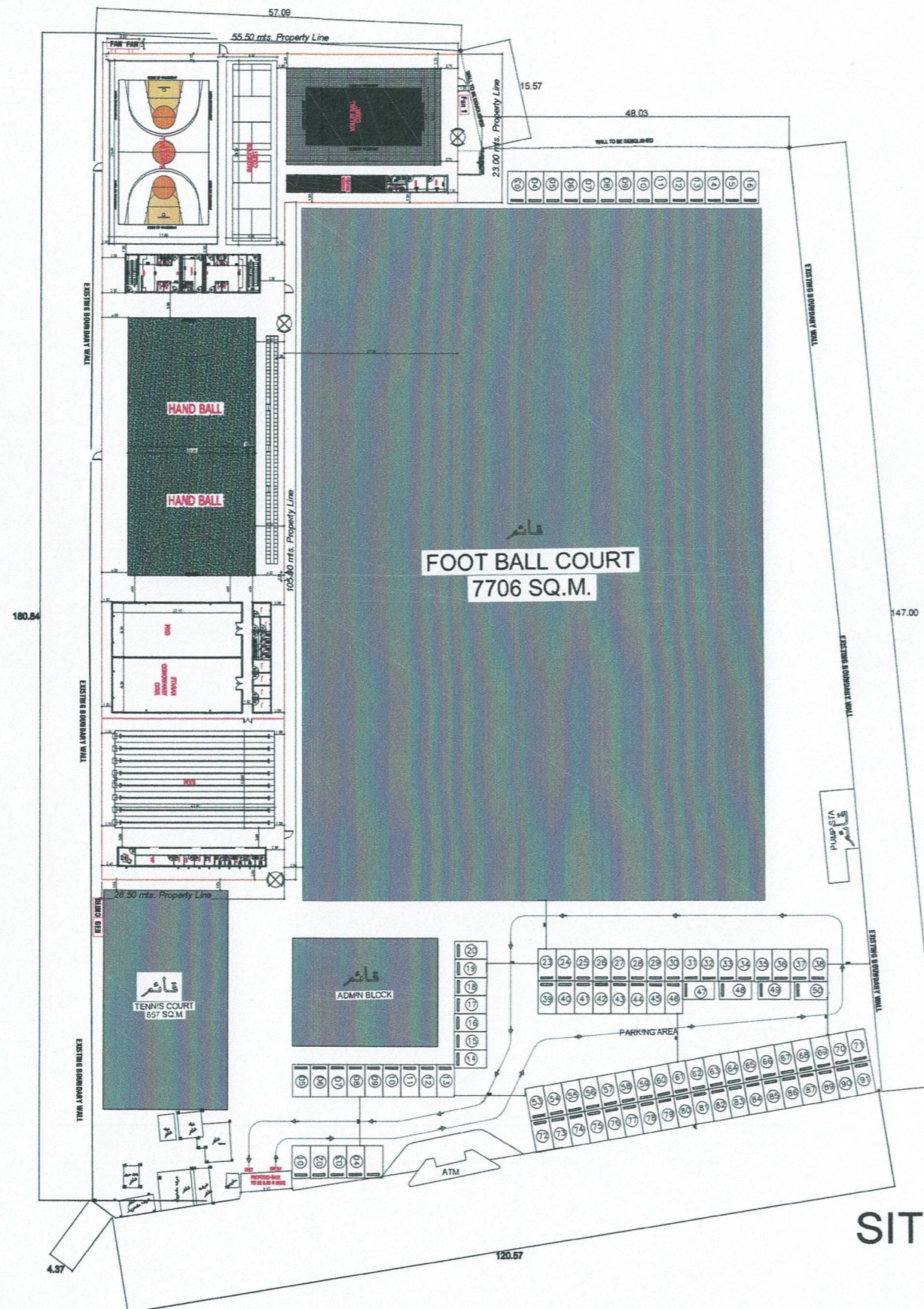
(DESIGN-SUPERVISION-SURVEYING -SAFETY)

PROJECT TITLE	:	نادى المحيط	:	اسم المشروع
OWNER	:	رعاية الشباب نادى المحيط	:	المالك
LOCATION	:	القطيف حى الجارودية	:	الموقع
LOT NO	:	١١	:	رقم القطعة
BLOCK NO	:	٣/٧٩٧	:	رقم المخطط

EASTERN REGION . QATIF  
2922 UHUD STREET .ALQUDAIH DISTRICT 6254  
POSTAL CODE 32661  
TEL 0505819063-0536441143  
LICENSE No. 5100000733  
P.O. BOX 6254  
QATIF



المنطقة الشرقية . القطيف  
٢٩٢٢ شارع احد . القديح ٦٢٥٤  
الرمز البريدي ٣٢٦٦١  
تليفون رقم ٠٥٠٥٨١٩٠٦٣ - ٠٥٣٦٤٤١١٤٣  
ترخيص رقم ٥١٠٠٠٠٧٢٣  
ص ب ٦٢٥٤  
القطيف



### AREA COMPUTATION

TOTAL LOT AREA	19222.83 sq. mts.
مساحة الارض	٢١٩٢٢٢,٨٣
SWIMMING POOL AREA	375.00 sq. mts.
SHOWER AND TOILET (FOR SWIMMING POOL)	69.60 SQM
GYM KARATE/ JUDO & TEAKWONDO	430.00 SQM
HAND BALL AREA	800.00 SQM
STORE AND TOILET HAND BALL AREA G.FLOOR	127.20 SQM
VIP LOUNGE AREA F.FLOOR	127.20 SQM
BASKET BALL COURT AREA	482.80 SQM
BADMINTON COURT AREA	228.00 SQM
VOLLEY BALL COURT AREA	162.00 SQM
FENCING WEAPON AREA	68.00 SQM
CAR PARKING AREA	1300.00 SQM
FENCE LENGTH	646.14 M

## SITE DEVELOPMENT PLAN

SCALE 1 : 100 M

#### General Note:

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مهندس / حسين عبدالله الناصر  
**ENGR. HUSSEIN AL-NASSER**  
 ٢٠٥٣١١٧٣٤٦  
 C.R. : 2053117346  
 Golden Triangle Eng. Consulting Office  
 SIGNED: \_\_\_\_\_ يعتمد:

الممثل الذهبي للاستشارات الهندسية  
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 ٥١٠٠٠٠٠٧٣٣ رقم ترخيص  
 ص.ب ٨٢٥٤ القطيف  
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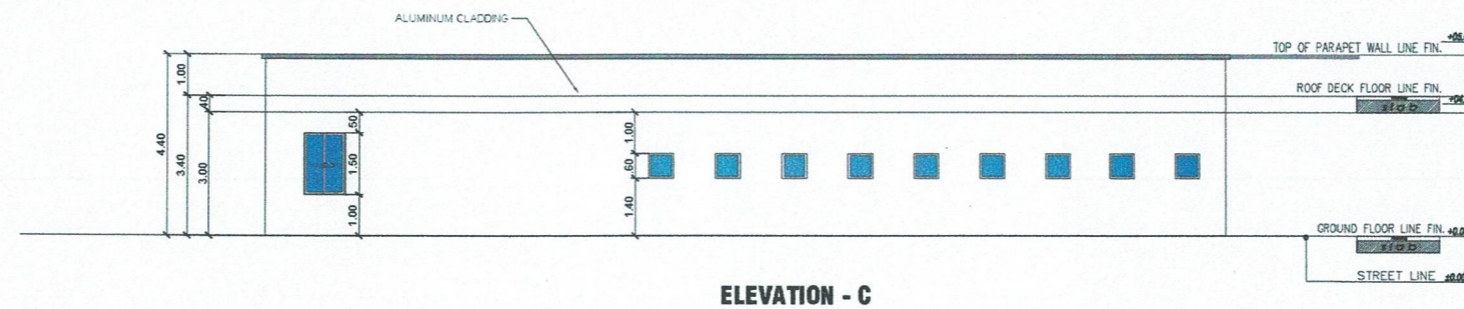
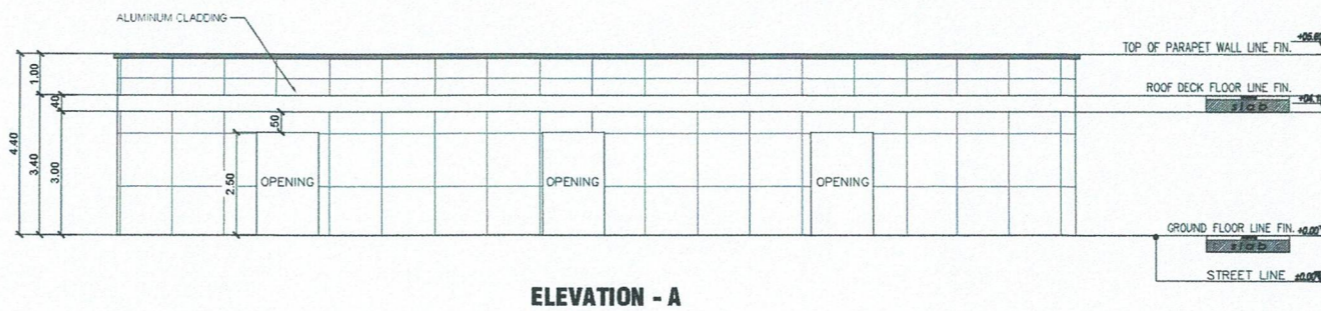
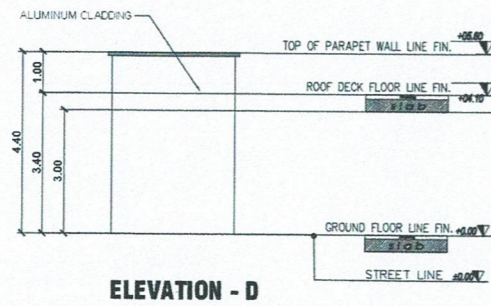
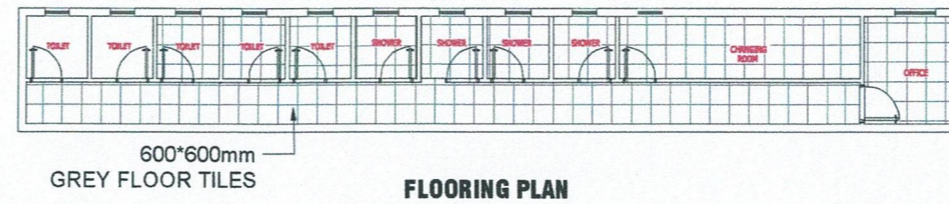
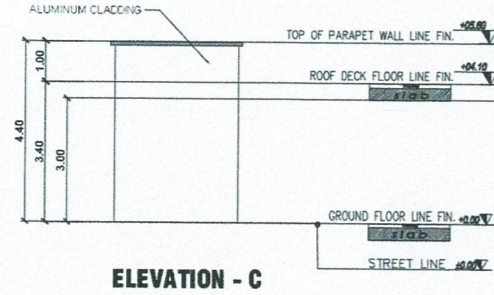
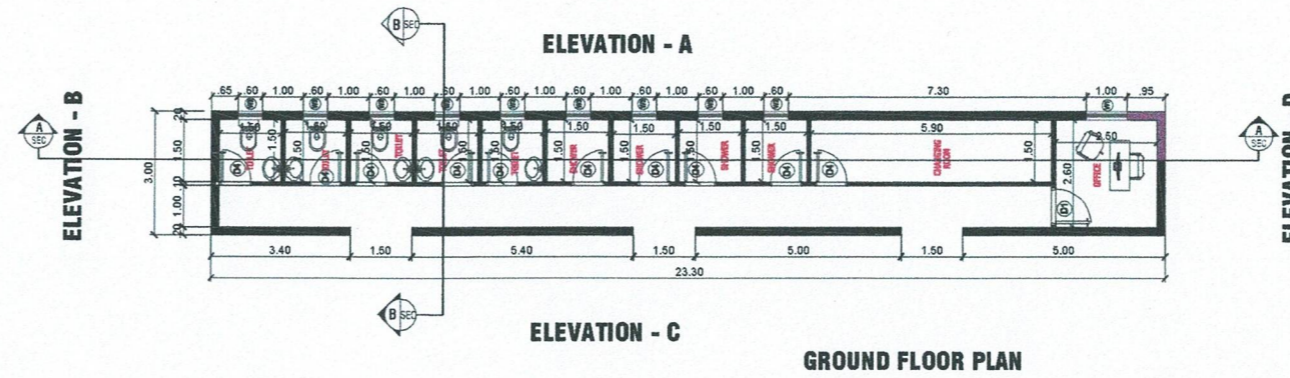


GOLDEN TRIANGLE ENGINEERING CONSULTANCY  
 DAMMAM, QATIF  
 2822 UHUD STREET ,ALQUDAIH DISTRICT 82554  
 POSTAL CODE 32861  
 TEL 0505818063-0538441143

اسم المشروع : نادي المحيط  
 Project Title :  
 المالك : رعاية الشباب نادي المحيط  
 Owner :  
 الموقع : القطيف حي الجارودية  
 Site :  
 رقم القطعة : ١١  
 Lot No. :  
 رقم المخطط : ٣/٧٩٧  
 Block No. :

Architect Designer:	ABDULAAL 197836	Arch.
Structure Engr:	HUSSEN 460607	Sheet NO.
Electrical Engr:	.....	Date:
Drawn By:	ABDULAAL 197836	Reference: 2022
Revised By:	ABDULAAL 197836	Drawing Title:
Scale:	As Shown	

# SHOWER AND TOILET (FOR SWIMMING POOL)



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سرب ٦٢٥٤  
القطيف  
EMAIL:



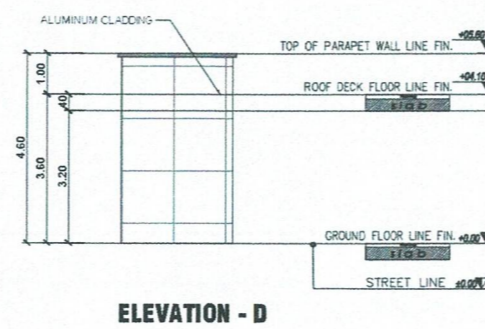
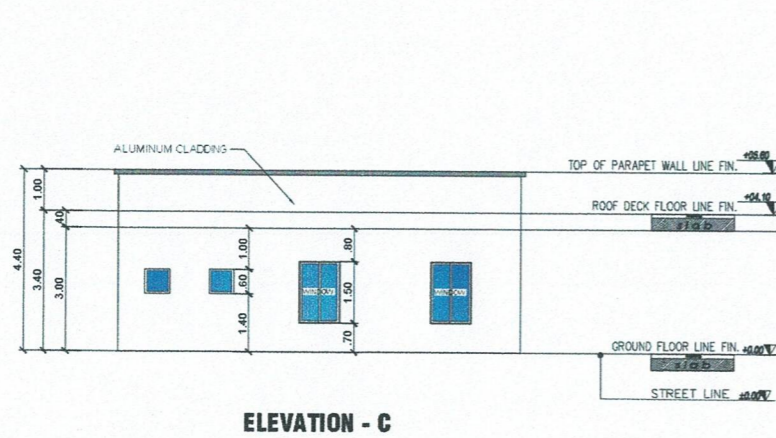
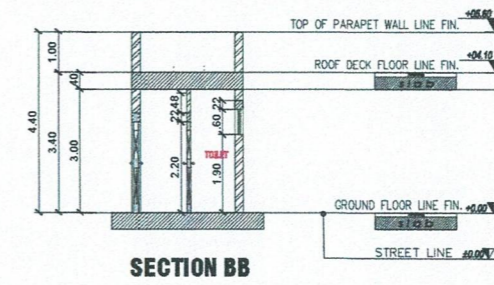
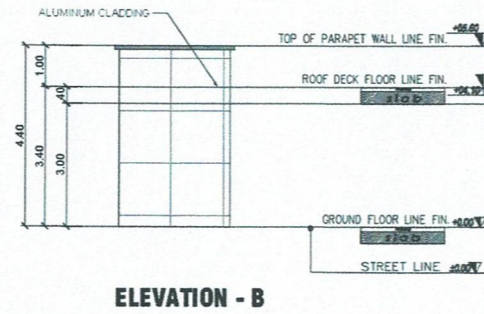
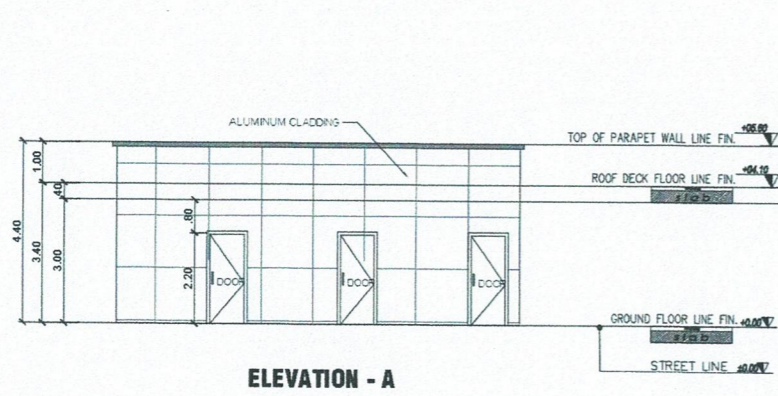
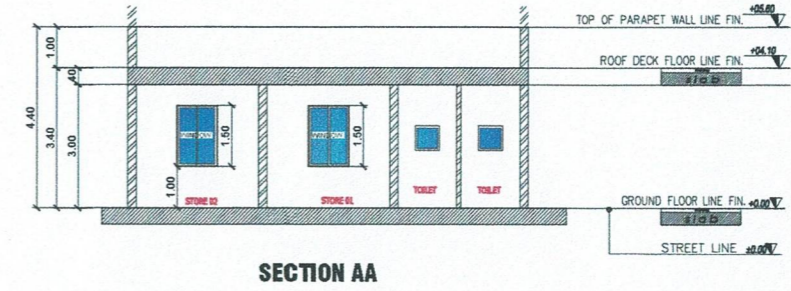
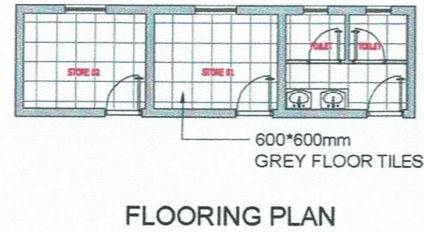
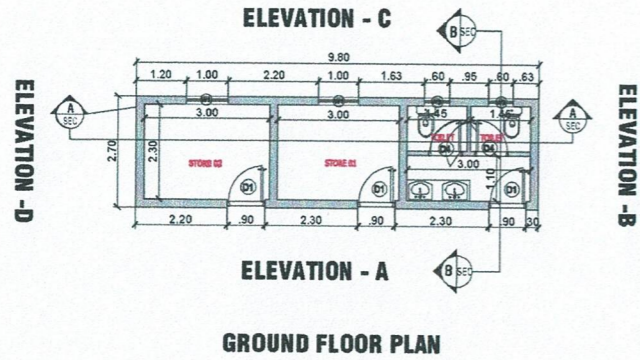
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TEL 0505819063-0538441143

اسم المشروع : نادى المحيط  
المالك : رعاية الشباب نادى المحيط  
الموقع : القطيف حى الجارودية  
رقم القطعة : ١١  
رقم المخطط : ٣٧٩٧

Architect Designer: ABDULAAL 197836  
Structure Engr: HUSSEN 460607  
Electrical Engr: .....  
Drawn By: ABDULAAL 197836  
Revised By: ABDULAAL 197836  
Scale: As Shown

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Sheet NO.  
Date:  
Reference: 2022  
Drawing Title:

## FENCING WEAPON SERVICE AREA



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ترخيص رقم ٥١٠٠٠٠٧٣٣  
صوب القطيف

EMAIL:



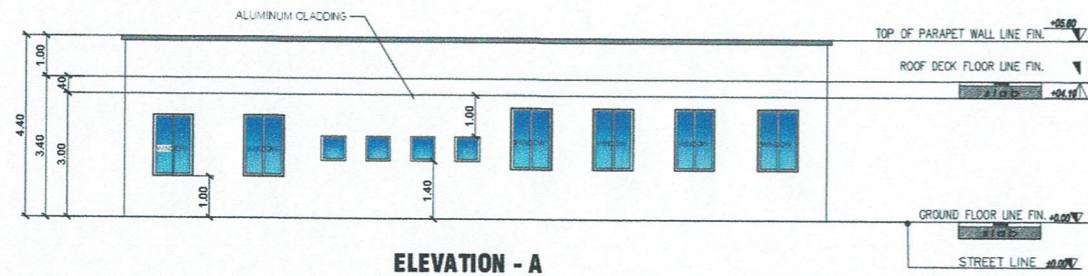
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2922 UHUD STREET .ALQUDAH DISTRICT 62554  
POSTAL CODE 32961  
TEL 0505819083-0536441143

Project Title :	نادى المحيط	اسم المشروع :
Owner :	المالك : رعاية الشباب نادى المحيط	
Site :	الموقع : القطيف حي الجارودية	
Lot No. :	رقم القطة : ١١	
Block No. :	رقم المخطط : ٣٧٩٧	

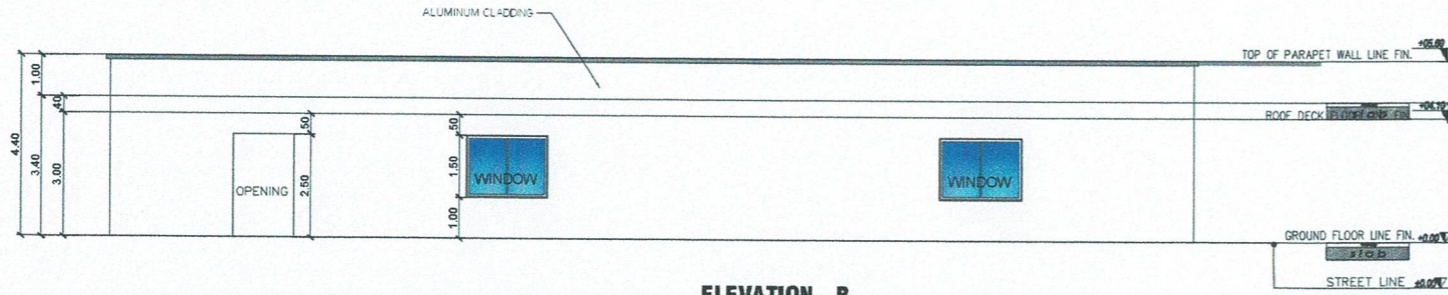
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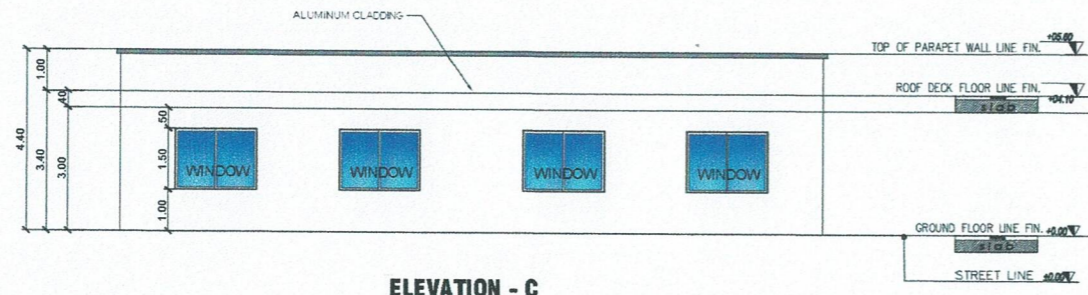
**GYM & KARATE  
TEAKWONDO & JUDO**



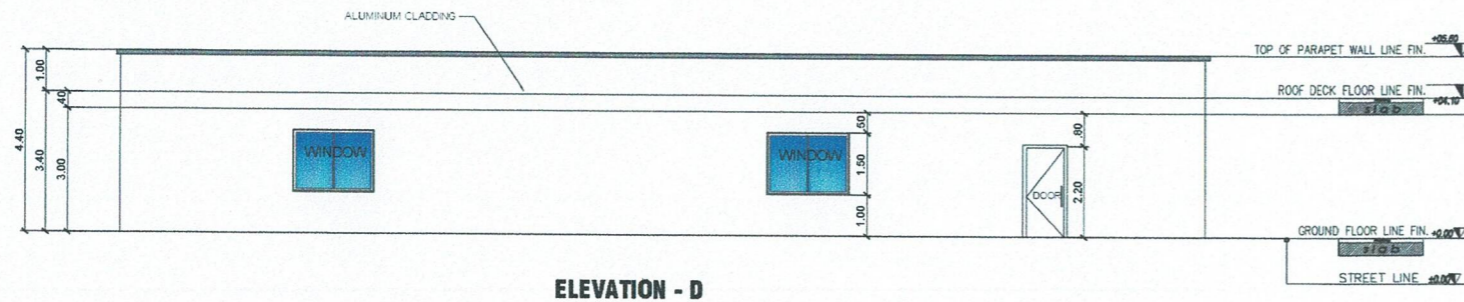
**ELEVATION - A**



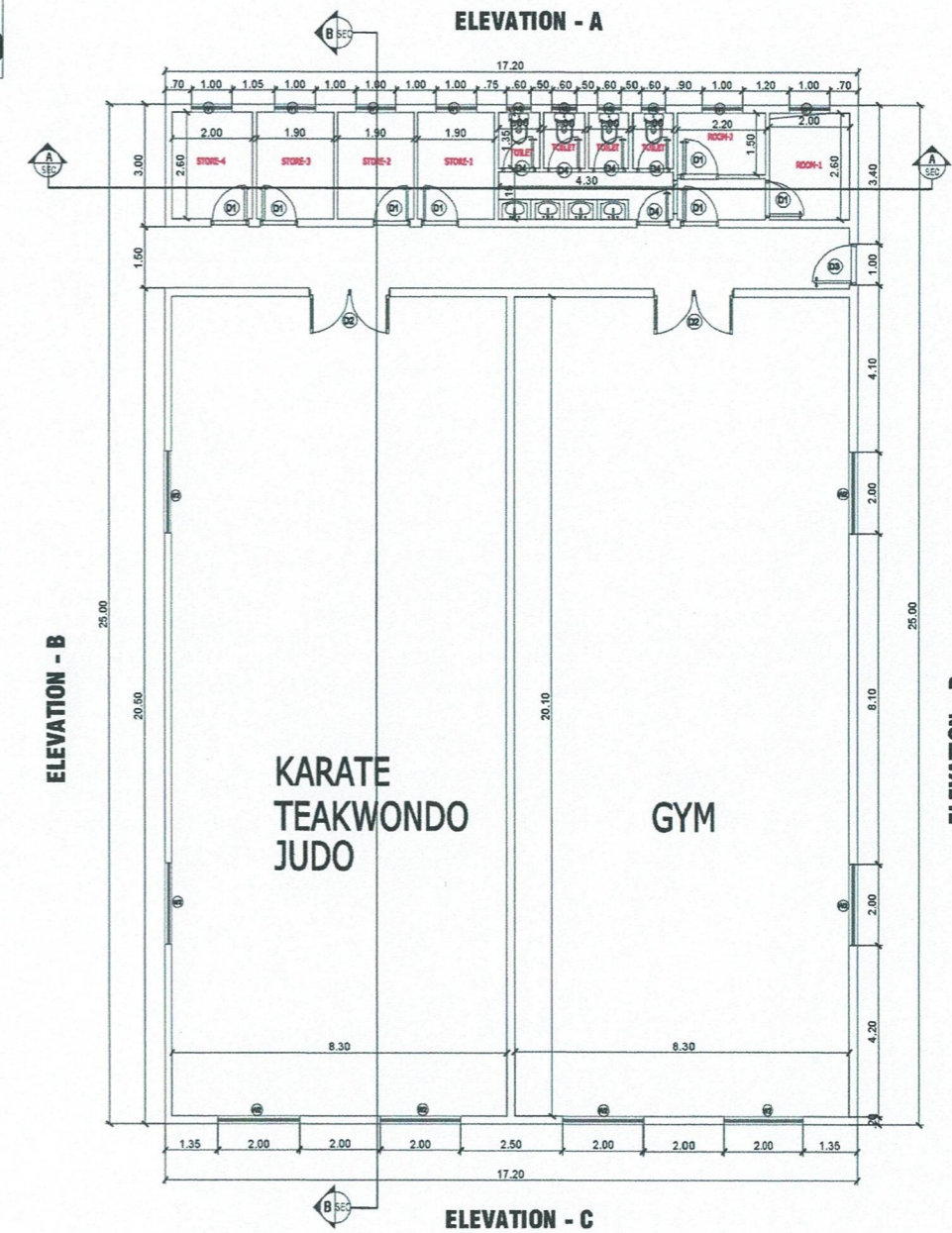
**ELEVATION - B**



**ELEVATION - C**



**ELEVATION - D**



**GROUND FLOOR PLAN**

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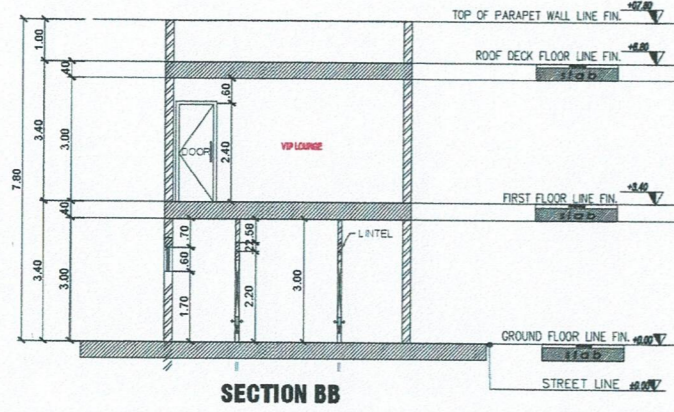
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رقم القطعة :	١١
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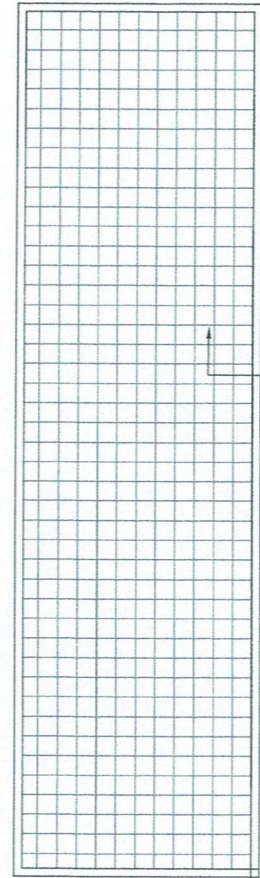
Architect Designer:	ABDULAAL 197836
Structure Engr`:	HUSSEN 460607
Electrical Engr`:	.....
Drawn By:	ABDULAAL 197836
Revised By:	ABDULAAL 197836
Scale:	As Shown

Arch.
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Drawing Title:

VIP LOUNGE AREA F.FLOOR



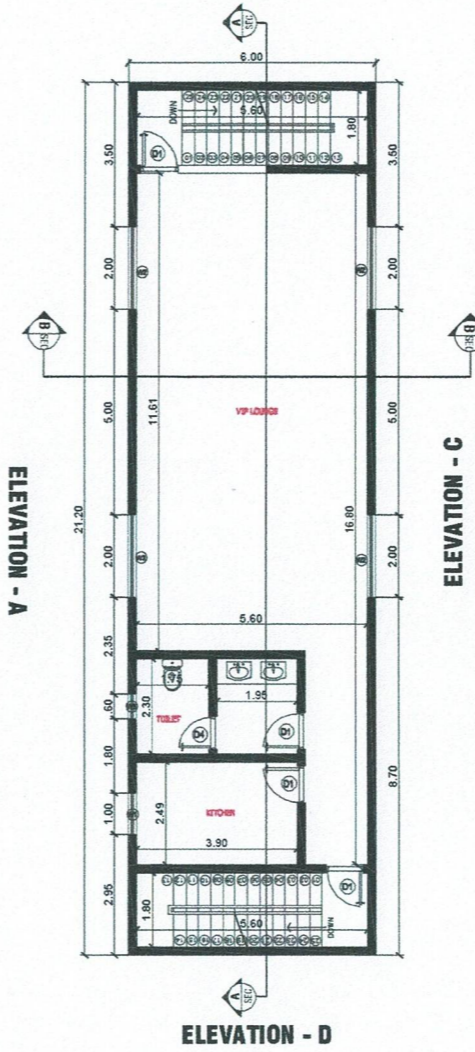
SECTION BB



600\*600mm  
GREY FLOOR TILES

FLOORING PLAN

ELEVATION - B



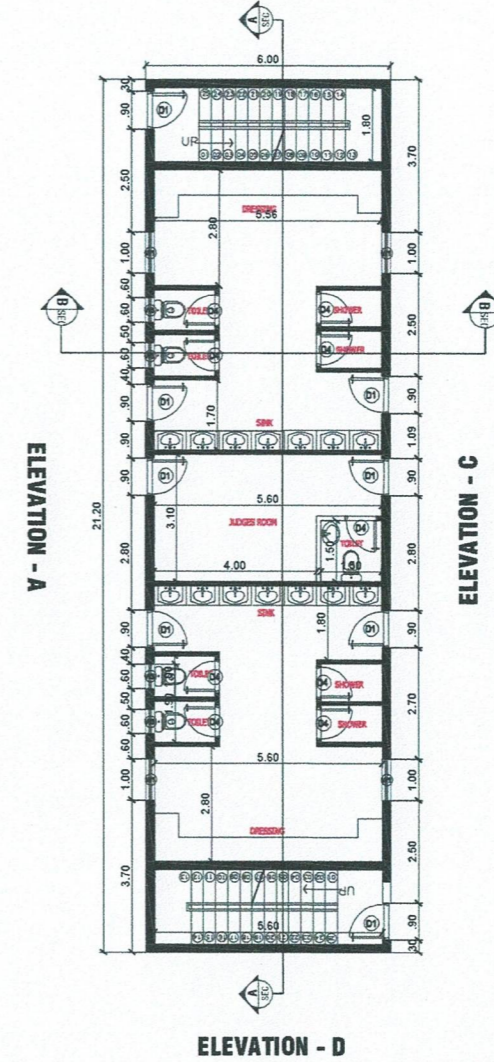
ELEVATION - A

ELEVATION - C

ELEVATION - D

FIRST FLOOR

ELEVATION - B

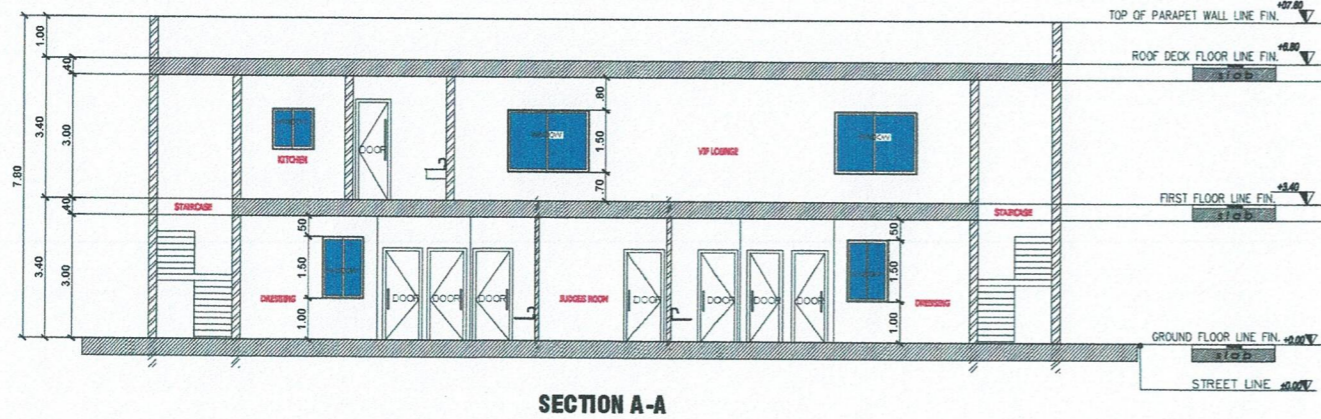


ELEVATION - A

ELEVATION - C

ELEVATION - D

GROUND FLOOR



SECTION A-A

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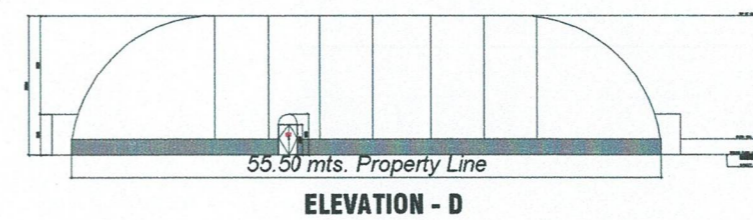
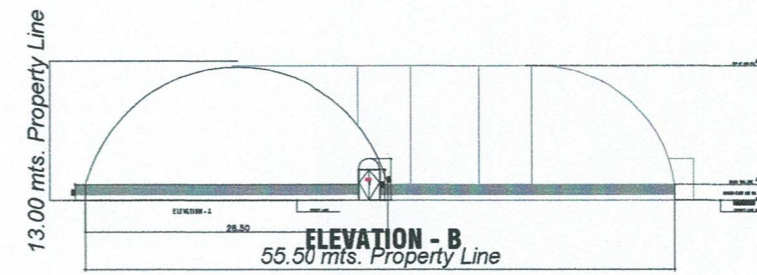
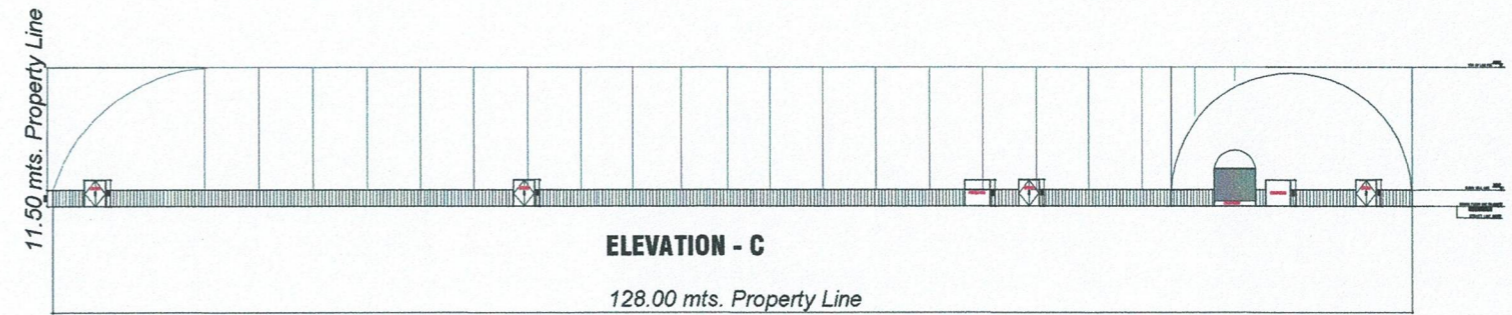
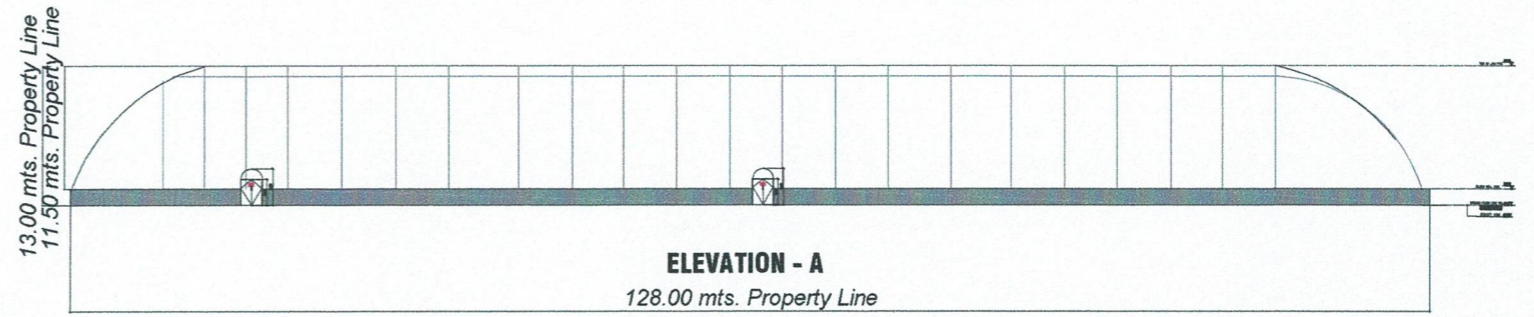
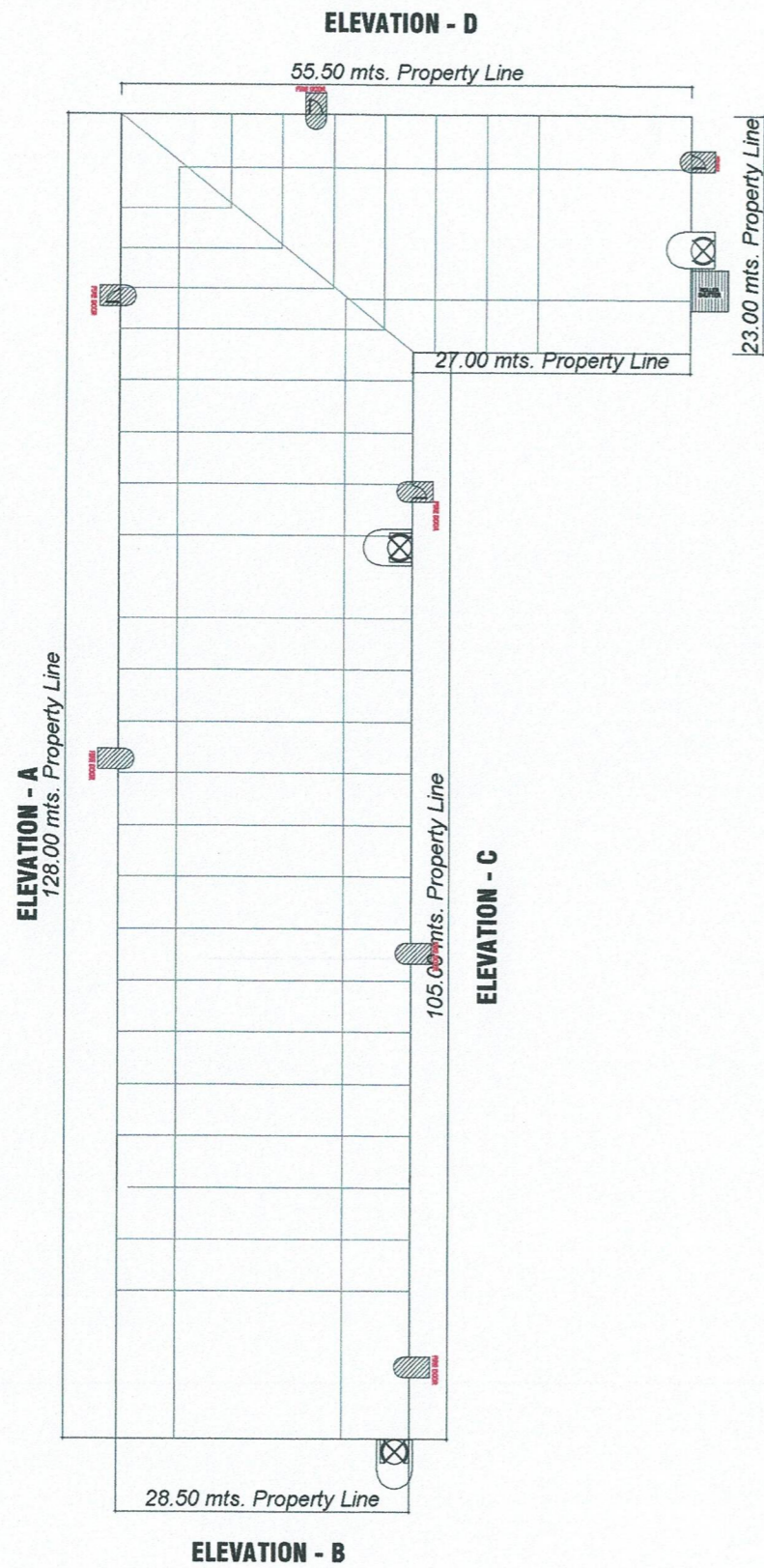
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رقم القطعة :	11
رقم المخطط :	٣٧٩٧

Architect Designer:	ABDULAAL 197836
Structure Engr:	HUSSEN 460607
Electrical Engr:	.....
Drawn By:	ABDULAAL 197836
Revised By:	ABDULAAL 197836
Scale:	As Shown

Arch.
Sheet NO.
Date:
Reference: 2022
Drawing Title:





### DOMES DETAILS

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 رقم الترخيص: ٢٠٥٣١١٧٣٤٦  
**C.R. : 2053117346**  
 Golden Triangle Eng. Consulting Office  
 يعتمد: SIGNED:

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 ص ب ٦٢٥٤  
 القطيف

EMAIL:

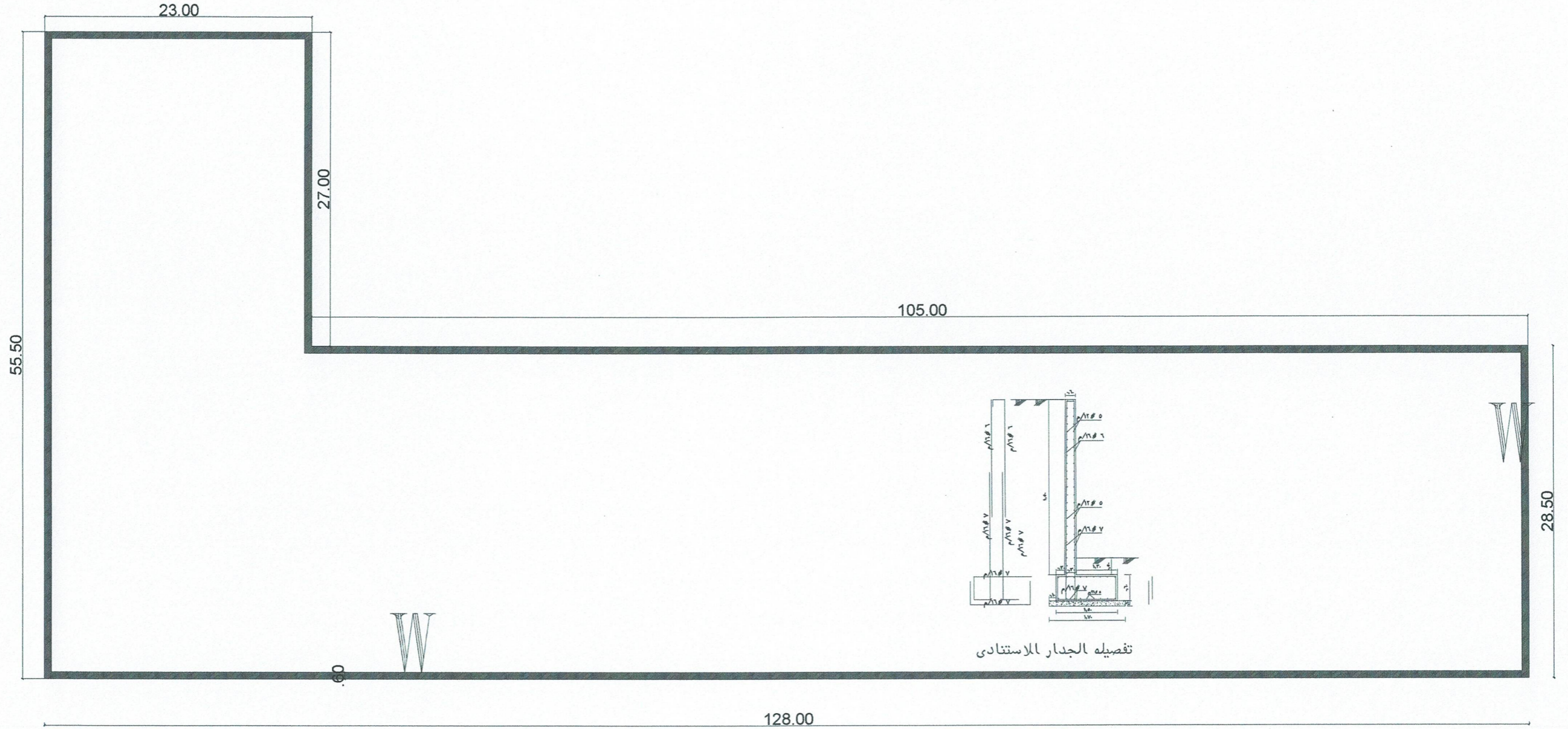


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Project Title :	نادي المحيط
Owner :	المالك زعاية الشباب نادي المحيط
Site :	الموقع : القطيف حي الجارودية
Lot No. :	رقم القطعة : ١١
Block No. :	رقم المخطط : ٣٧٩٧

Architect Designer:	ABDULAAL 197836
Structure Engr :	HUSSEN 460607
Electrical Engr :	.....
Drawn By:	ABDULAAL 197836
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Date:
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ENG. \ HUSSEIN AL-NASSER  
C.R. : 2053117346  
SIGNED: يعتمد:

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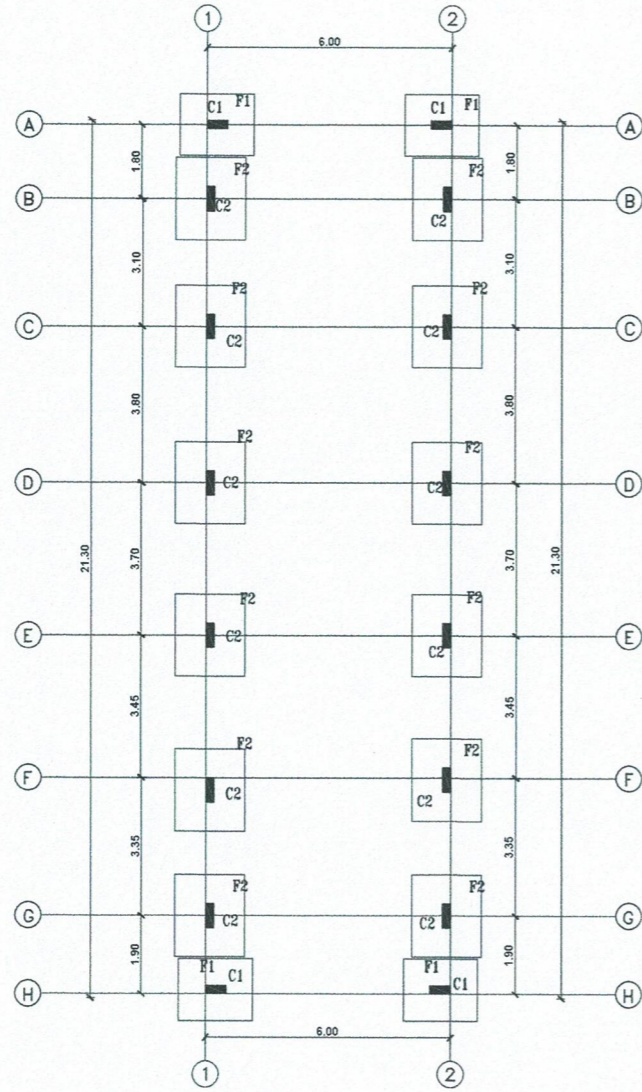


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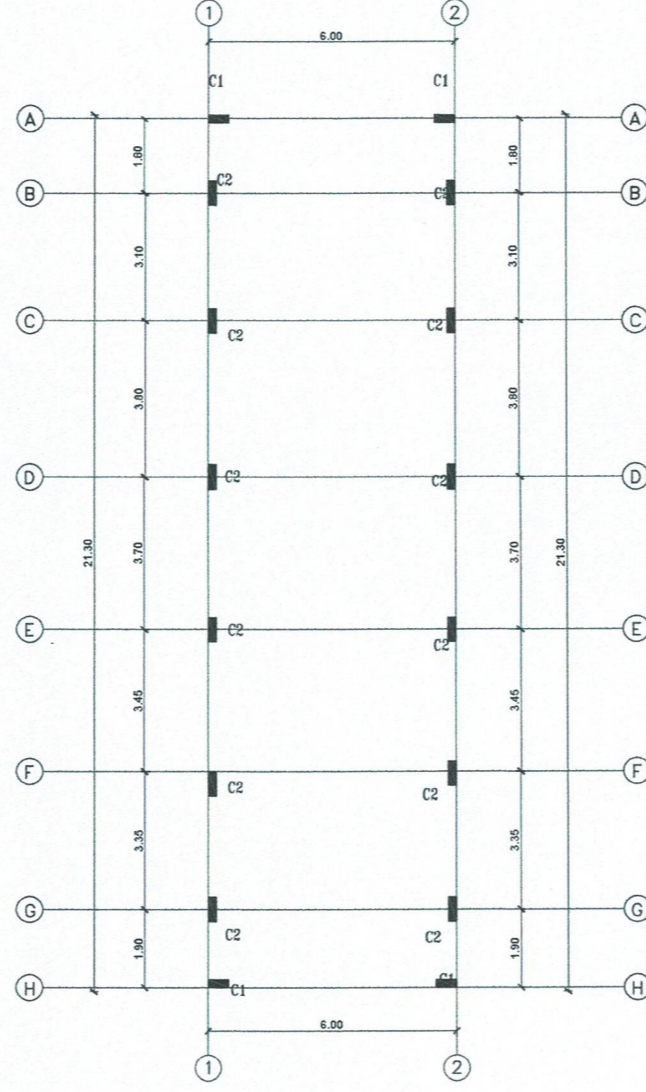
اسم المشروع :	نادى المحيط
المالك :	رعاية الشباب نادى المحيط
ال موقع :	القطيف حى الجارودية
رقم القلمة :	.....
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Architect Designer:	ABDULAAL 197836	Arch.
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Electrical Engr:	.....	Sheet NO.
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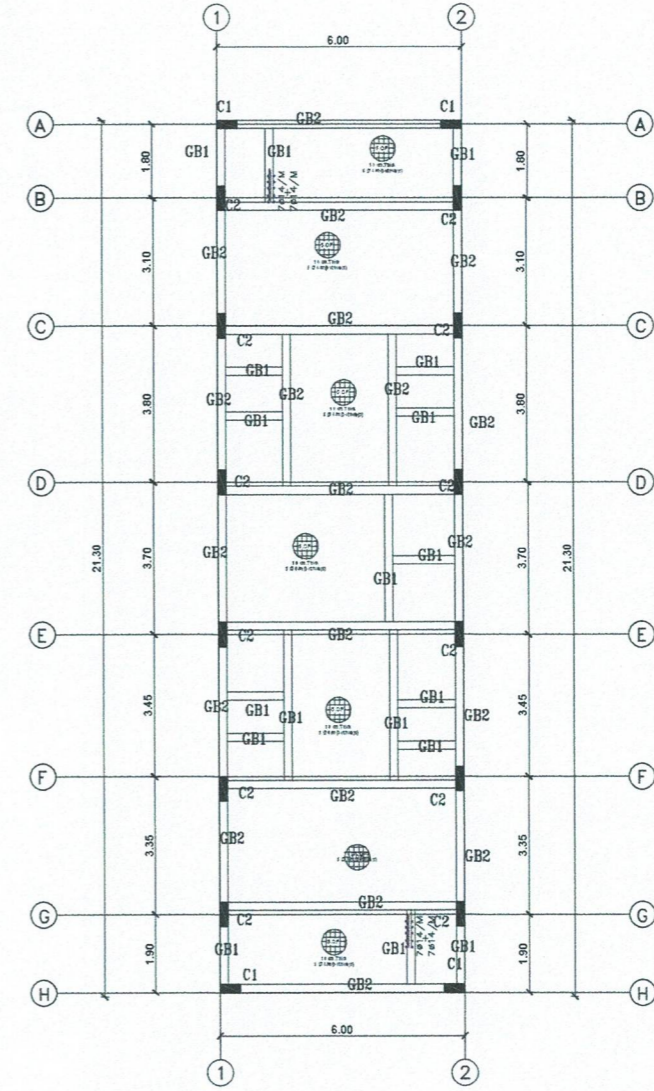
VIP LOUNGE AREA F.FLOOR



الأساسات  
FOUNDATION PLAN



المسقط الأفقي لمحاوير الأعمدة  
COLUMN AXIS LAYOUT PLAN



الجسور الارضية (الميدات)  
SLAB ON GRADE & GRADE BEAMS PLAN

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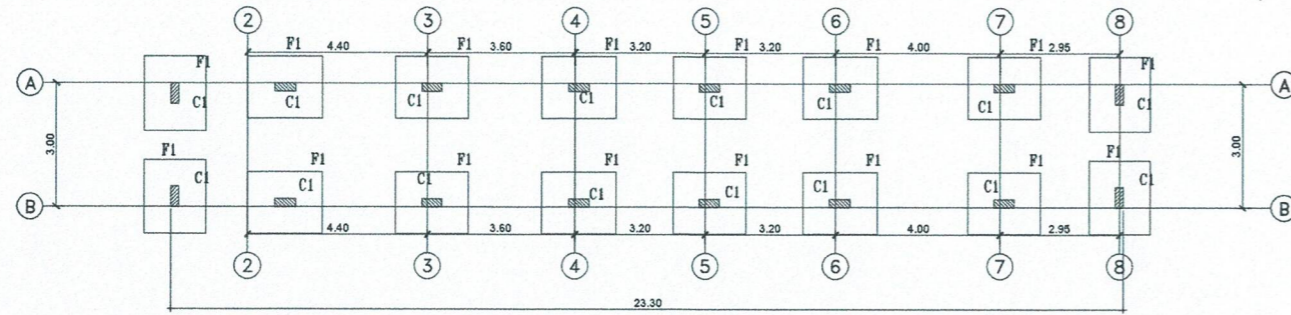


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Site :	القطيف حى الجارودية	الموقع :
Lot No. :	.....	رقم القطعة :
Block No. :	.....	رقم المخطط :

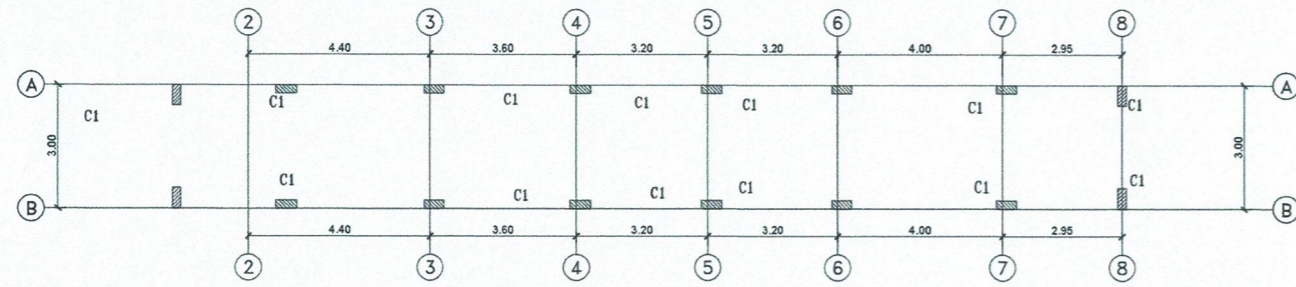
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Electrical Engr :	.....	Date:
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SHOWER AND TOILET  
(FOR SWIMMING POOL)

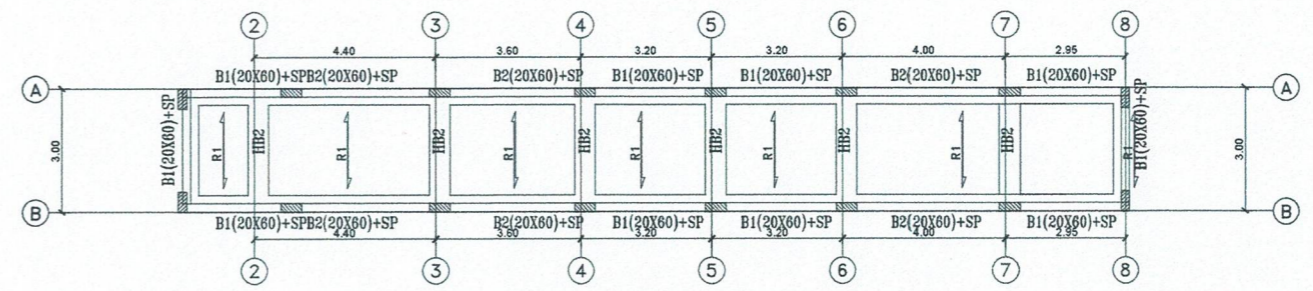


الأساسات  
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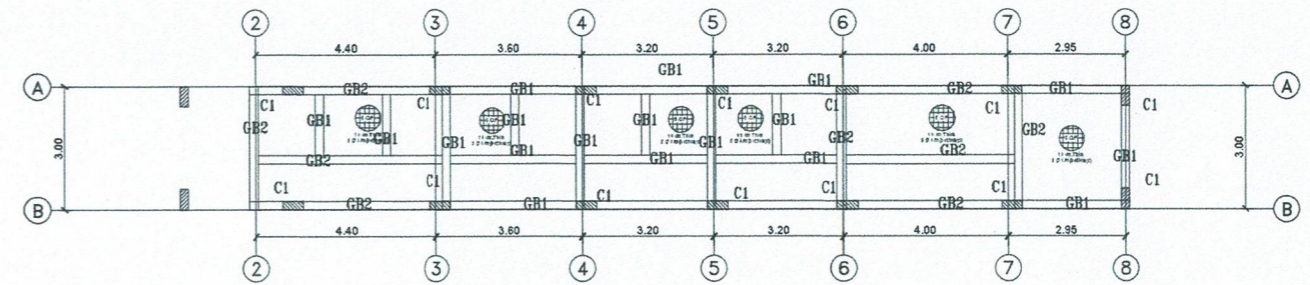
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المسقط الأفقى لمحاور الأعمدة  
COLUMN AXIS LAYOUT PLAN



تسليح سقف الدور الأرضى  
GROUND FLOOR ROOF FRAMING PLAN



الجسور الأرضية (الميدات)  
SLAB ON GRADE & GRADE BEAMS PLAN

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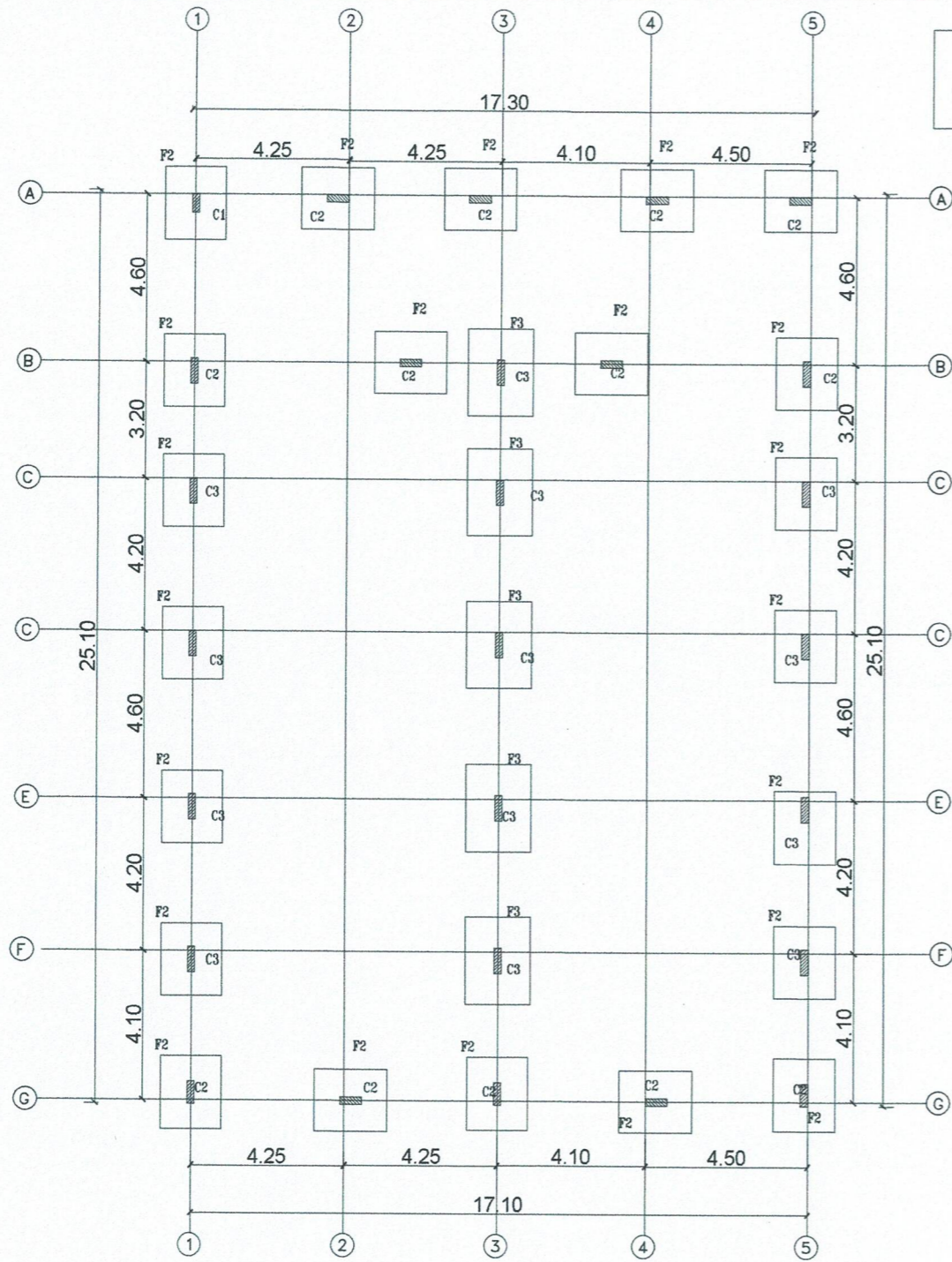


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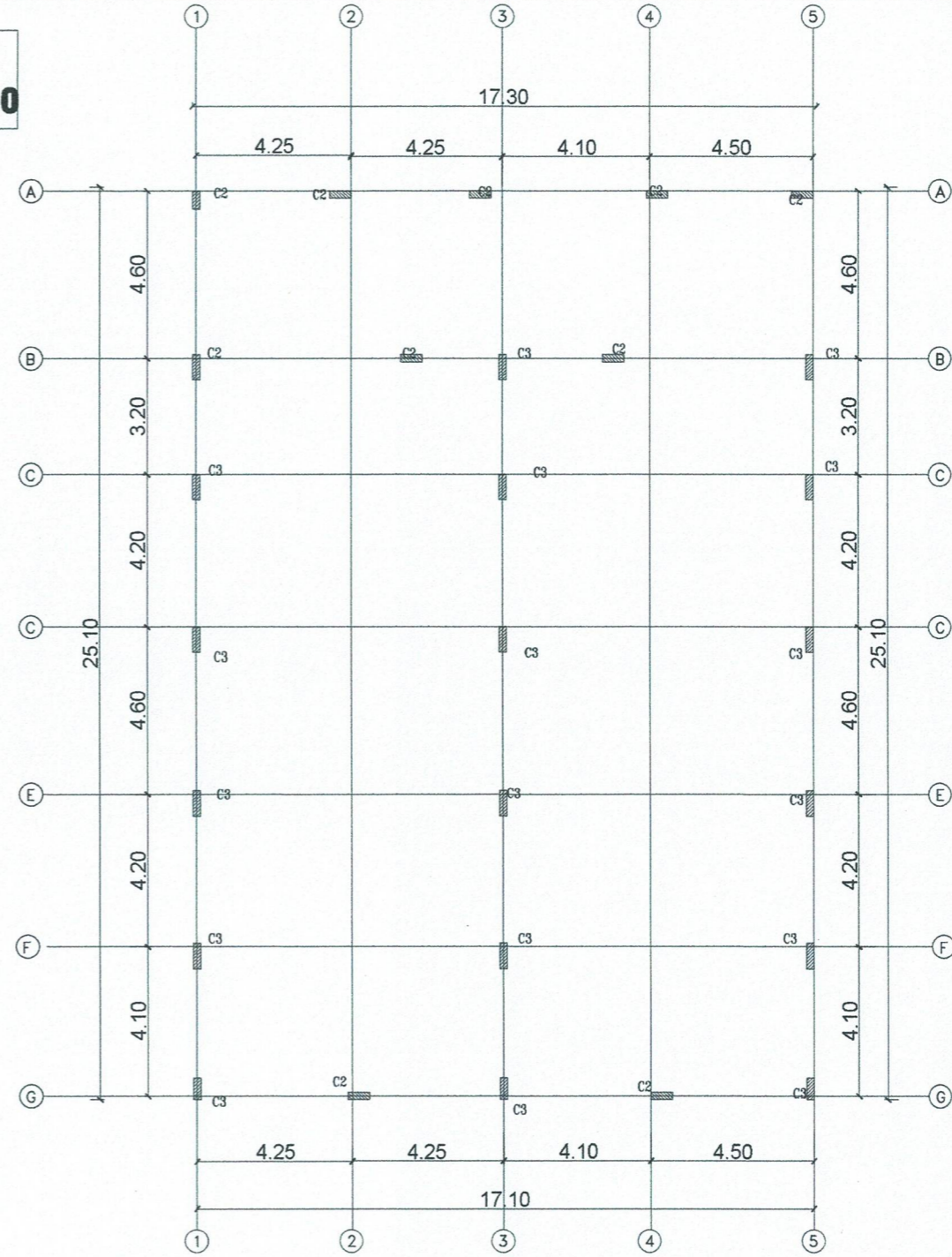
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Site :	القطيف حى الجارودية	الموقع :
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**GYM & KARATE  
TEAKWONDO & JUDO**



الأساسات  
**FOUNDATION PLAN**



المسقط الأفقى لمحاور الأعمدة  
**COLUMN AXIS LAYOUT PLAN**

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**ENG. HUSSEIN AL-NASSER**  
C.R. : 2053117346  
SIGNED: \_\_\_\_\_ يعتمد: \_\_\_\_\_

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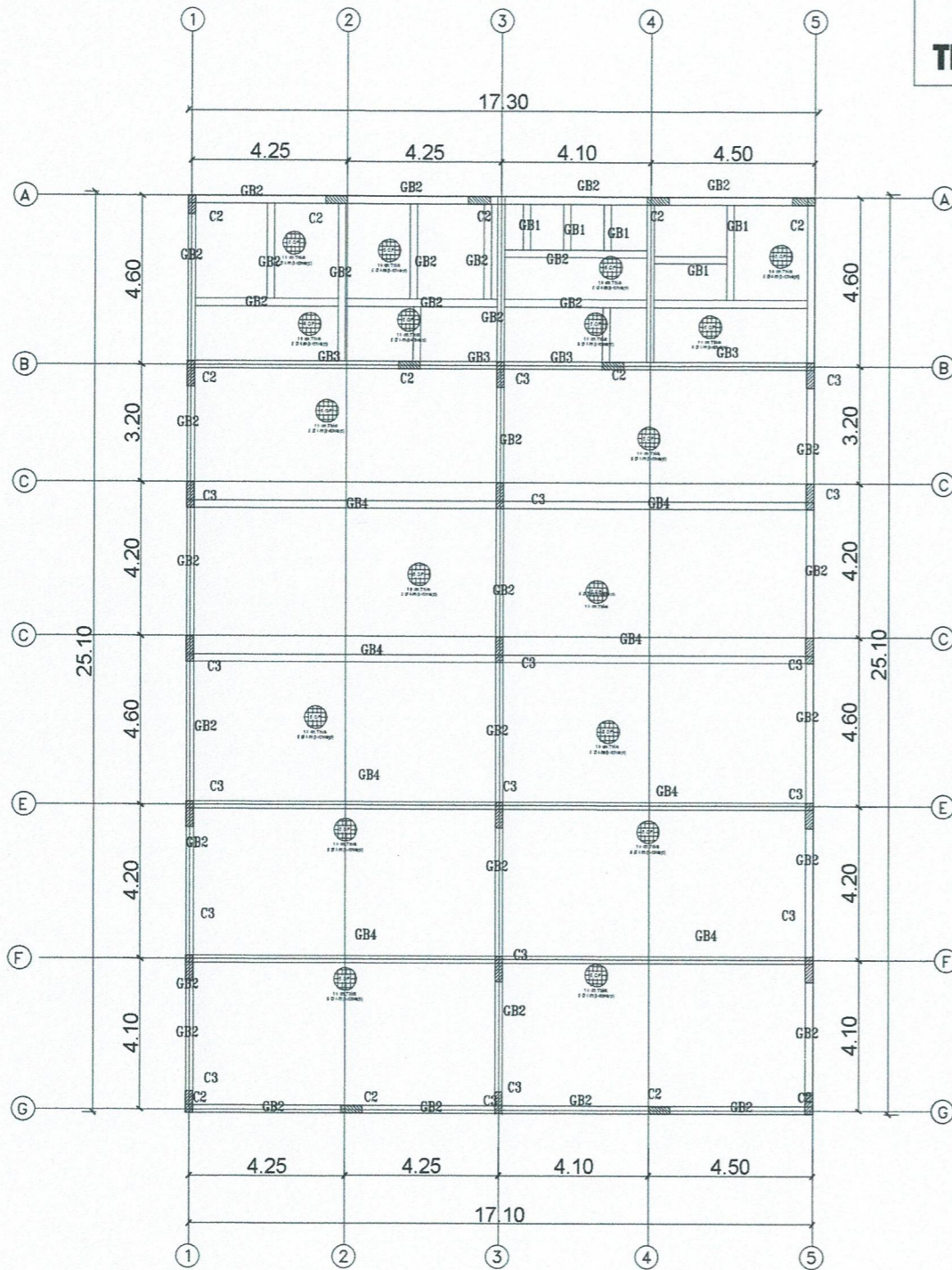
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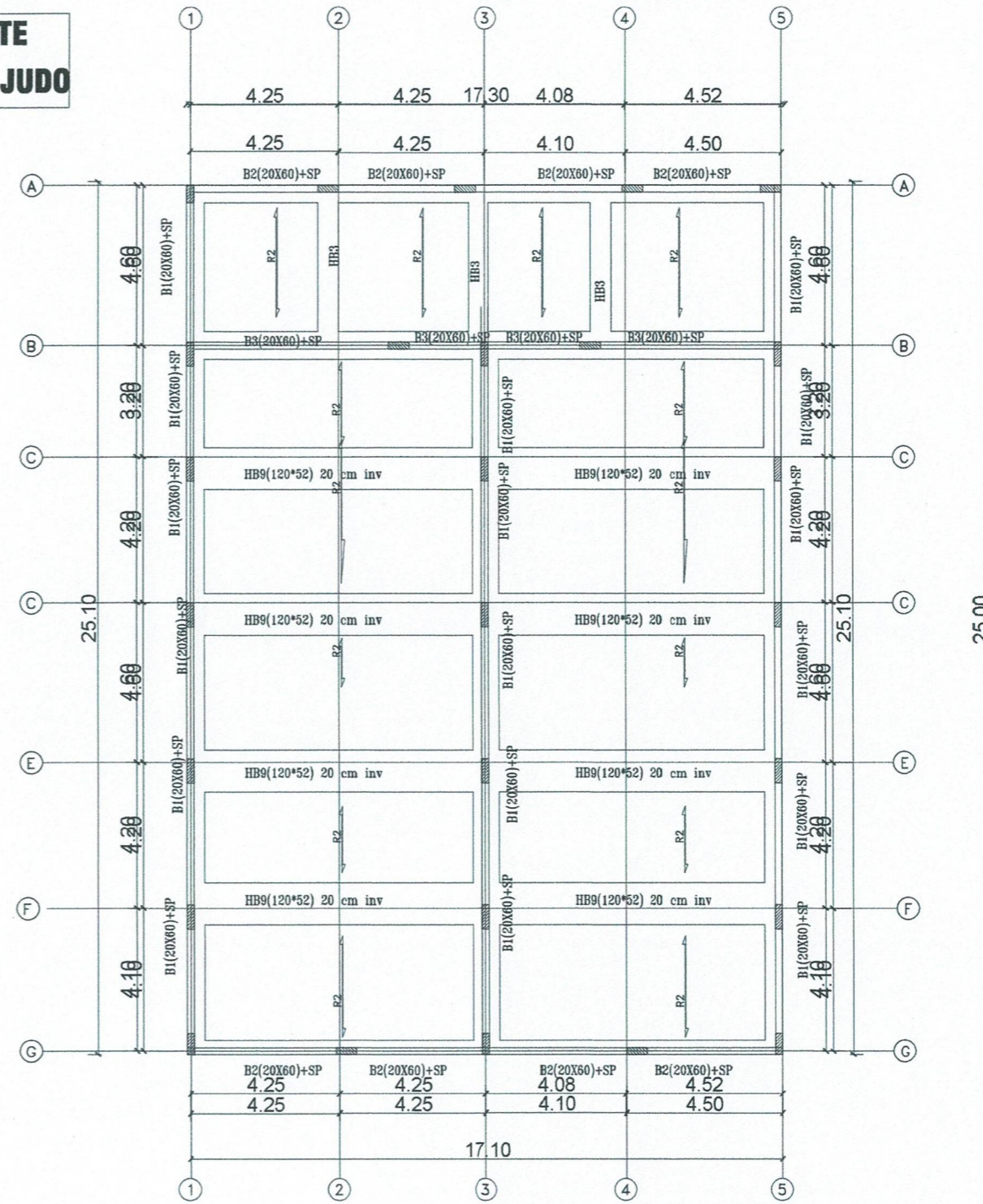
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الجسور الارضية (الميدات)  
SLAB ON GRADE & GRADE BEAMS PLAN



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SIGNED: *[Signature]* Golden Triangle Eng. Consultancy Office

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SCHEDULE OF FLOOR BEAMS										REMARK
MARK	DIMENSION		REINFORCING BARS				STIRRUPS SIZE AND SPACING FROM FACE OF SUPPORT TO MID-SPAN			
	العرض WIDTH	العمق DEPTH	التسليح السفلي BOTTOM BARS		التسليح العلوي TOP BARS		USING 6 mm Ø STIRRUPS			
	cm	cm	CONT. BARS	EXTRA BARS	CONT. BARS	EXTRA BARS	AT MID. SPAN	AT SUPPORTS		
HB1	40	32	4 Ø 16	-----	4 Ø 16	-----	6 Ø 10 mm/m.	6 Ø 10 mm/m.	الكانات أربعة نوع 4 BRANCH	
HB2	50	32	7 Ø 16	-----	4 Ø 16	3 Ø 16	6 Ø 10 mm/m.	6 Ø 10 mm/m.		
HB3	60	32	5 Ø 16	4 Ø 16	5 Ø 16	4 Ø 16	6 Ø 10 mm/m.	7 Ø 10 mm/m.		
HB4	70	32	6 Ø 16	5 Ø 16	6 Ø 16	5 Ø 16	6 Ø 10 mm/m.	7 Ø 10 mm/m.	الكانات ستة نوع 6 BRANCH	
HB5	80	32	7 Ø 16	6 Ø 16	7 Ø 16	6 Ø 16	6 Ø 10 mm/m.	8 Ø 10 mm/m.		
HB6	90	32	8 Ø 16	7 Ø 16	8 Ø 16	7 Ø 16	6 Ø 10 mm/m.	8 Ø 10 mm/m.		
HB7	100	32	9 Ø 16	8 Ø 16	9 Ø 16	8 Ø 16	6 Ø 10 mm/m.	8 Ø 10 mm/m.		
HB8	120	52	9 Ø 18	9 Ø 18	9 Ø 18	9 Ø 18	6 Ø 10 mm/m.	8 Ø 10 mm/m.		
B1	20	60	3 Ø 16	-----	3 Ø 16	-----	6 Ø 10 mm/m.	6 Ø 10 mm/m.	الكانات ثريين 2 BRANCH	
B2	20	60	3 Ø 16	3 Ø 16	3 Ø 16	3 Ø 16	6 Ø 10 mm/m.	6 Ø 10 mm/m.		
B3	20	60	4 Ø 16	2 Ø 16	4 Ø 16	2 Ø 16	6 Ø 10 mm/m.	8 Ø 10 mm/m.		

SCHEDULE OF GRADE BEAMS										REMARK	
MARK	PLAIN CONCRETE			REINFORCED CONCRETE			TOP REINFORCEMENT		BOTTOM REINFORCEMENT		
	DEPTH ( centimeter)	WIDTH ( centimeter)	DEPTH ( centimeter)	CONTINUOUS	ADDITIONAL AT SUPPORT	CONTINUOUS	ADDITIONAL AT MID-SPAN	STIRRUPS			
GB1	10	20	60	3Ø14	---	3Ø14	---	6#10MM/M		6#10/M	
GB2	10	20	60	3Ø14	2Ø14	3Ø14	2Ø14	6#10MM/M			
GB3	10	20	60	4Ø14	2Ø14	4Ø14	2Ø14	6#10MM/M			
GB4	10	20	70	4Ø14	2Ø14	4Ø14	2Ø14	6#10MM/M			

جدول تسليح القواعد										
نموذج MARK	تسليح علوي CANTI. REBARS		تسليح سفلي REINF. BARS		أبعاد المملحة REINF. D CONC.			أبعاد العادية PLAIN CONC.		
	قصير SHORT	طويل LONG	قصير SHORT	طويل LONG	عمق DEPTH	عرض LENGHT	عرض WIDTH	عمق D	عرض L	عرض W
1 ق	3Ø14	3Ø14	7Ø14/m	7Ø14/m	.50	2.20	1.50	.10	2.40	1.70
2 ق	3Ø14	3Ø14	7Ø14/m	7Ø14/m	.50	2.00	1.70	.10	2.20	1.90
3 ق	3Ø14	3Ø14	7Ø14/m	7Ø14/m	.50	2.40	1.80	.10	2.60	2.00
4 ق	7Ø14/m	7Ø14/m	7Ø14/m	7Ø14/m	.50	2.90	1.90	.10	3.10	2.10

NOTE : FOUNDATION AND COLUMNS ARE DESIGN FOR (2) STOREY ONLY.

ASSUMED B/C = 1.50KG./M

THAT B/C = 1.50KG/M2 BEFORE WORKING

THE OWNER AND CONTRACTOR MUST BE SURE

التفاصيل الانشائية

STRUCTURAL DETAILS

SCHEDULE OF COLUMNS					
MARK	GROUND COL		1ST COL		LATERAL TIES AND SPACING (CM)
	DIMENSIONS	VERT. BARS	DIMENSIONS	VERT. BARS	
	cm	mm	cm	mm	
C1	20X50	8Ø16	20X50	8Ø16	2X7 Ø 10 mm/m.
C2	20X60	10Ø16	20X60	10Ø16	2X7 Ø 10 mm/m.
C3	20X70	12Ø16	20X70	12Ø16	2X7 Ø 10 mm/m.

SCHEDULE OF RIBBED SLAB:							تسليح اعصاب السقف
TYPE	RC. FOOTING SIZE			REINFORCEMENT			
	العرض	الطول	العمق	التسليح السفلي	التسليح العلوي	الكانات	
R1	15	Cont.	32	2Ø12	2Ø12	6Ø10/m	
R2	15	Cont.	32	2Ø14	2Ø12	6Ø10/m	
R3	15	Cont.	32	2Ø16	2Ø14	6Ø10/m	
X.R	20	Cont.	32	3Ø16	3Ø16	6Ø10/m	
SP	20	Cont.	32	2Ø14	2Ø14	6Ø10/m	

يجب ضرورة ملاحظة الاتي

- سمك سقف الهوردي ٣٢ سم لذلك يجب عمل كانات الجسور المدفونة وكذلك الاعصاب بارتفاع ٢٥ سم مع وجود غطاء خرساني سفلي ٢,٥ سم وعلوي ٤,٥ سم مالم يذكر خلاف ذلك على الرسم اما الجسور المساطة فينطبق عليها نفس الشروط بمعنى ان ارتفاع الكانات يكون نفس عمق الجسر خصوصا مئة قيمة الغطاء العلوي والسفلي وهو مقدار ٧ سم .
- ارتفاع البولسترين المستخدم في السقف ٢٥ سم
- يجب ضرورة تربيط الكانات مع حديد الجسور العلوي والسفلي على حد سواء
- يمنع عمل وصلات للحديد العلوي للجسور أو الاعصاب المستمرة عند نقاط الارتكاز (الاعمدة) وكذلك للحديد السفلي عند وسط البحر سواء كان الحديد مستمر او اضافي .

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 C.R. : 2053117346  
 Golden Triangle Eng. Consulting Office  
 SIGNED: \_\_\_\_\_

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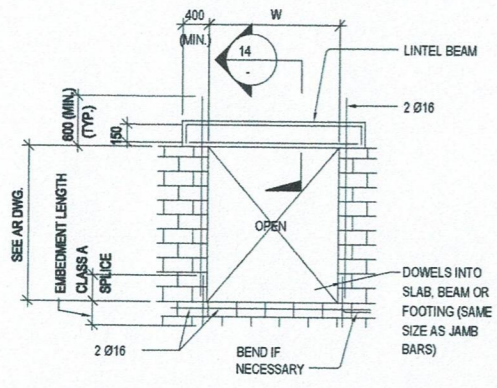
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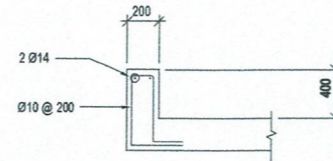
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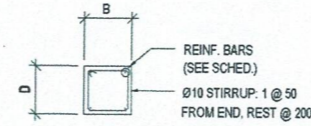
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Structure Engr :	HUSSEN 460607	
Electrical Engr :	.....	Sheet NO.
Drawn By:	ABDULAAL 197836	Date:
Revised By:	ABDULAAL 197836	Reference: 2022
Scale: As Shown		Drawing Title:



LINTEL BEAM SCHEDULE			
W (MM)	B (MM)	D (MM)	REINF. BARS
2000 OR LESS	200	200	4 Ø12
3000	200	300	4 Ø16

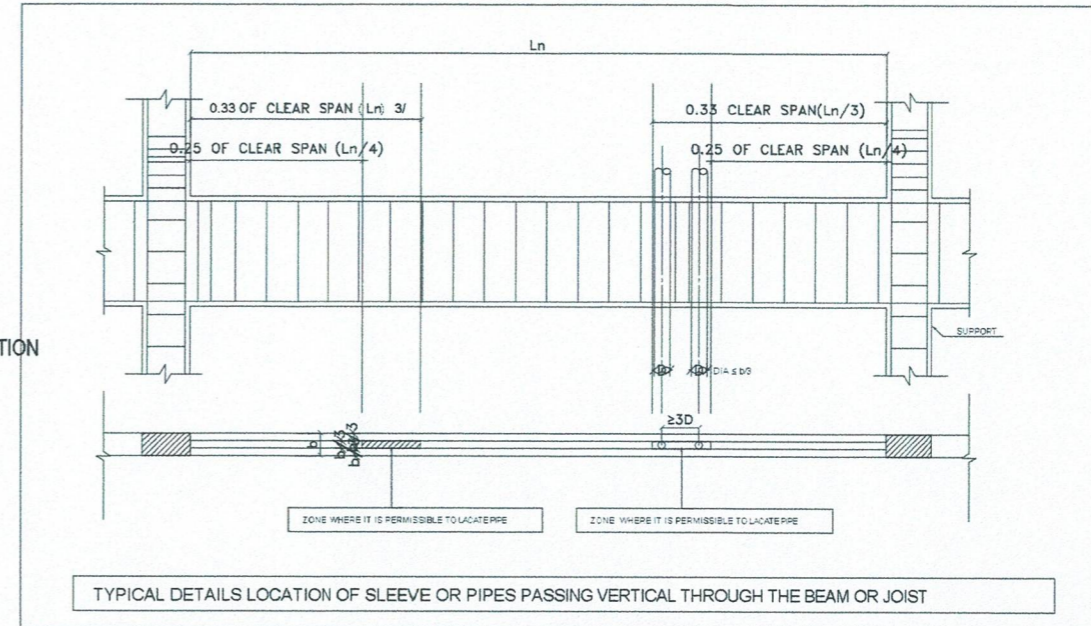


INVERTED BEAM 20X40CM  
AROUND OPENINGS AND EDGES FOR INSULATION

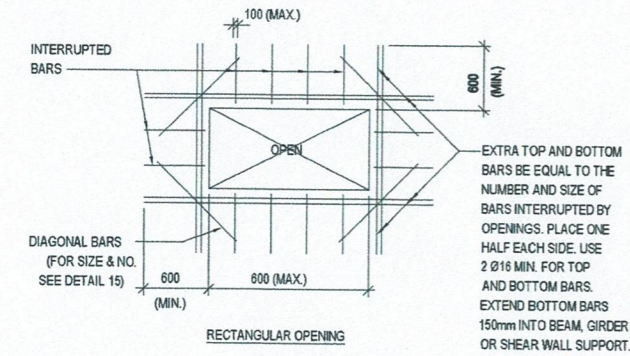


SECTION 14

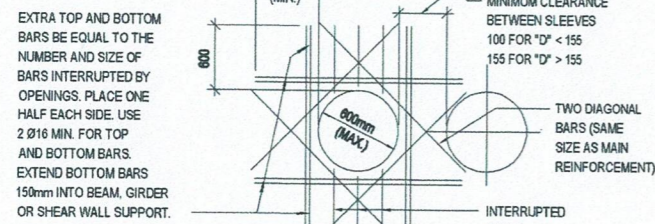
OPENING WITH LINTEL BEAM



TYPICAL DETAILS LOCATION OF SLEEVE OR PIPES PASSING VERTICAL THROUGH THE BEAM OR JOIST

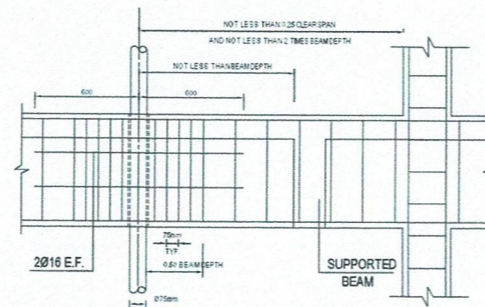


RECTANGULAR OPENING

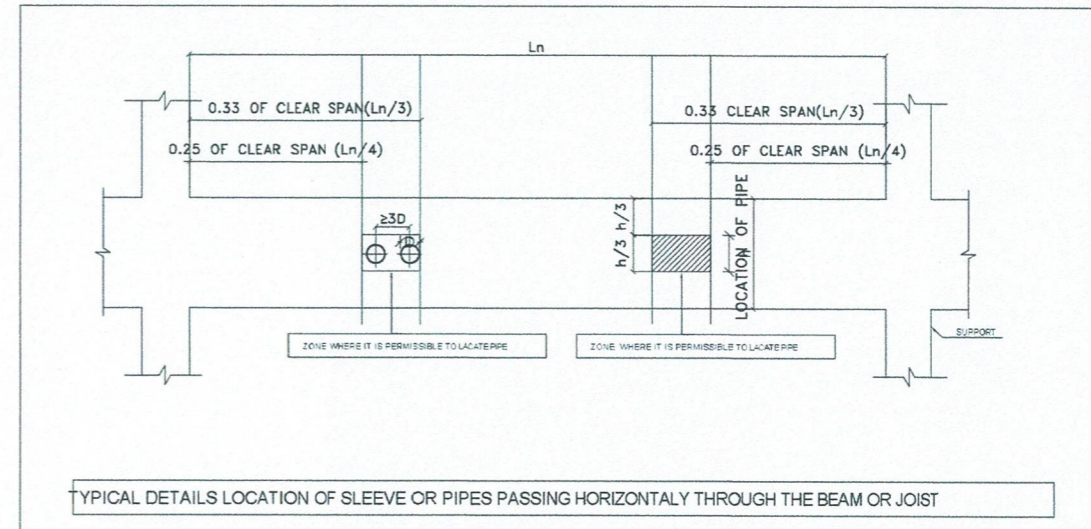


CIRCULAR OPENING

SUSPENDED CONCRETE SLAB OPENING



TYP. VERTICAL SLEEVE IN A BEAM



TYPICAL DETAILS LOCATION OF SLEEVE OR PIPES PASSING HORIZONTALLY THROUGH THE BEAM OR JOIST

التفاصيل الإنشائية  
STRUCTURAL DETAILS

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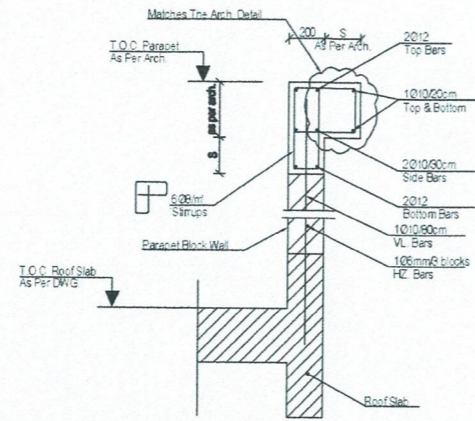
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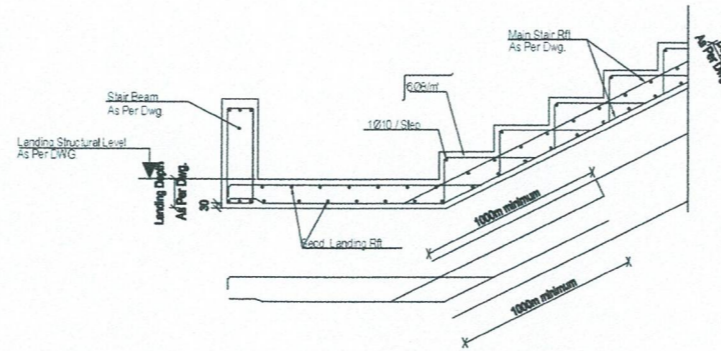
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Block No. :	.....	رقم المخطط :

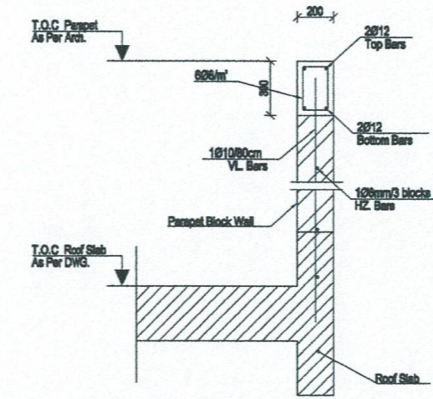
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Structure Engr :	HUSSEN 460607	Sheet NO.
Electrical Engr :	.....	Date:
Drawn By:	ABDULAAL 197836	Reference: 2022
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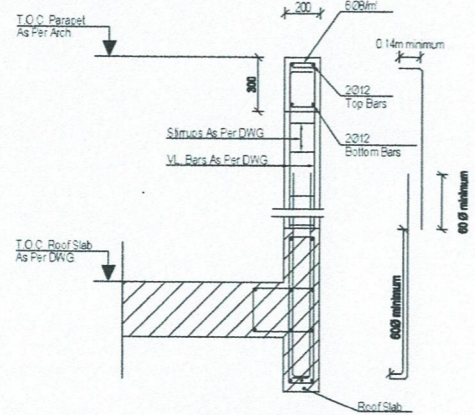
Typical Detail for Decorative Parapet Top Beam



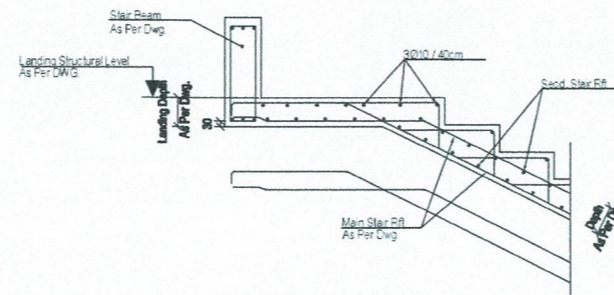
Typical Stair Details Up to Floor Level



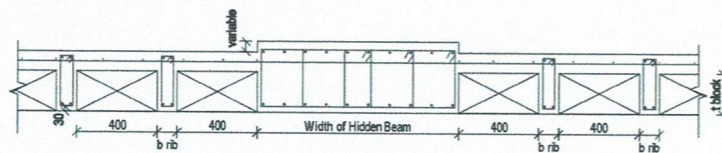
Typical Detail for Parapet Top Beam



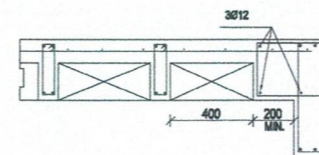
Typical Detail for Parapet Column



Typical Stair Details Up to Landing Level



Typical Detail of Inverted Hidden Beam and Hollow Block Slab arrangement



Typical Detail of projected Beam and Hollow Block Slab arrangement

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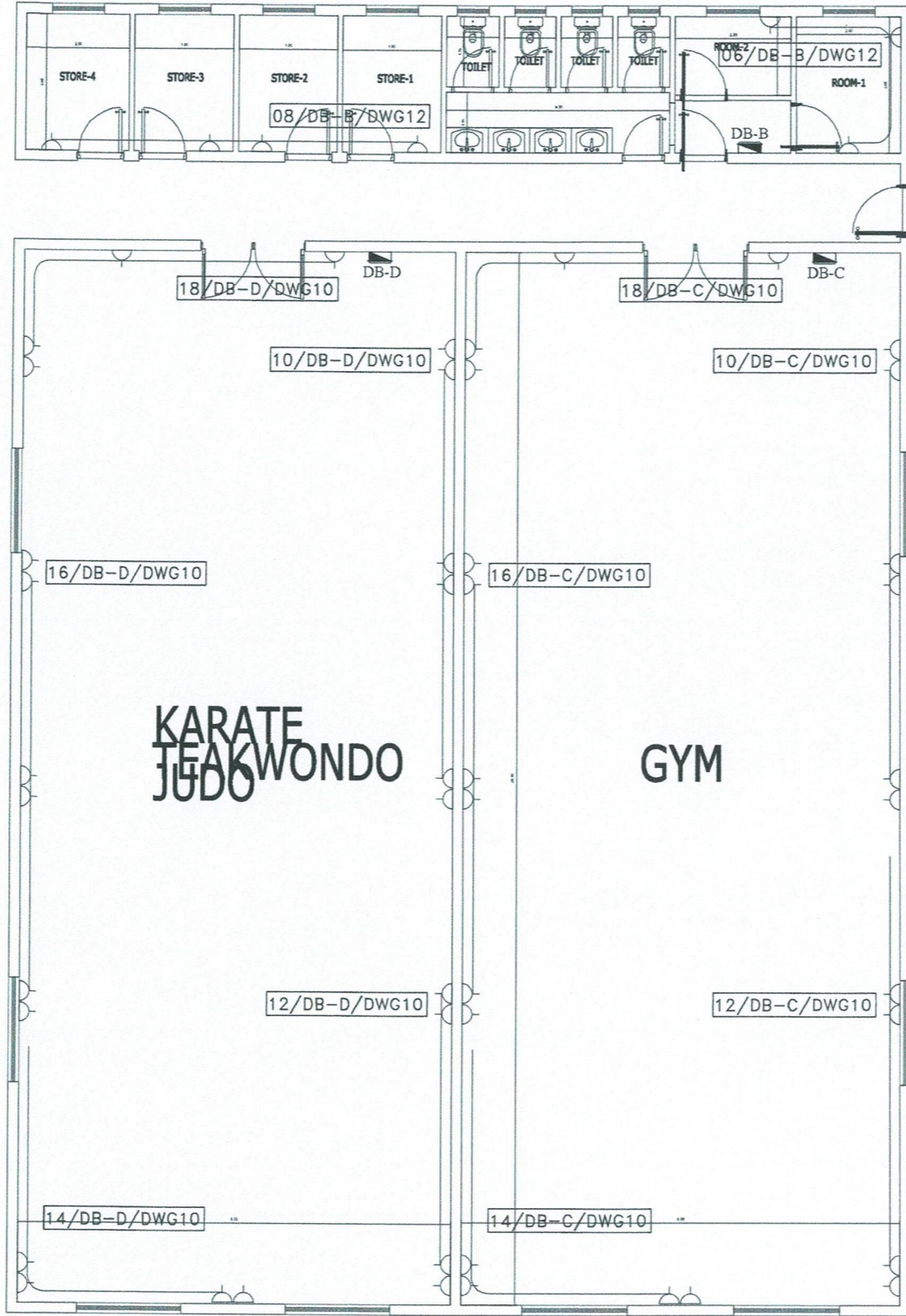


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الأعمال الكهربائية للدور الأرضي  
GROUND FLOOR ELECTRICAL  
POWER AND AUXILIARY LAYOUT

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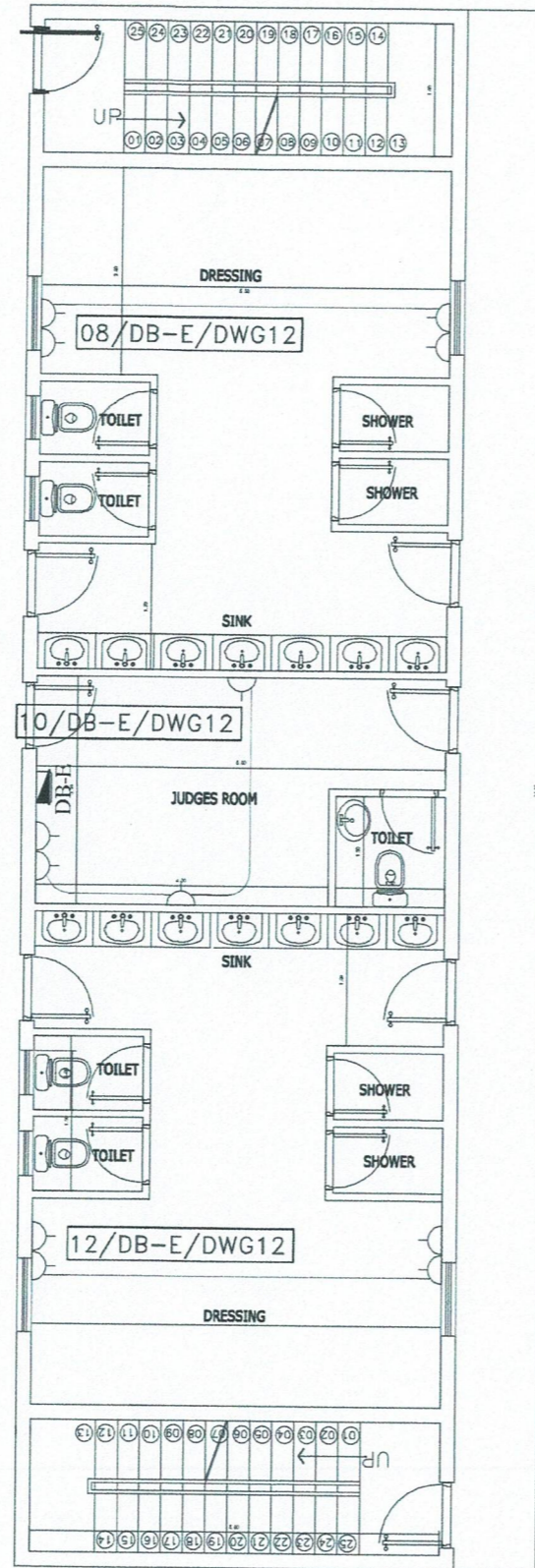


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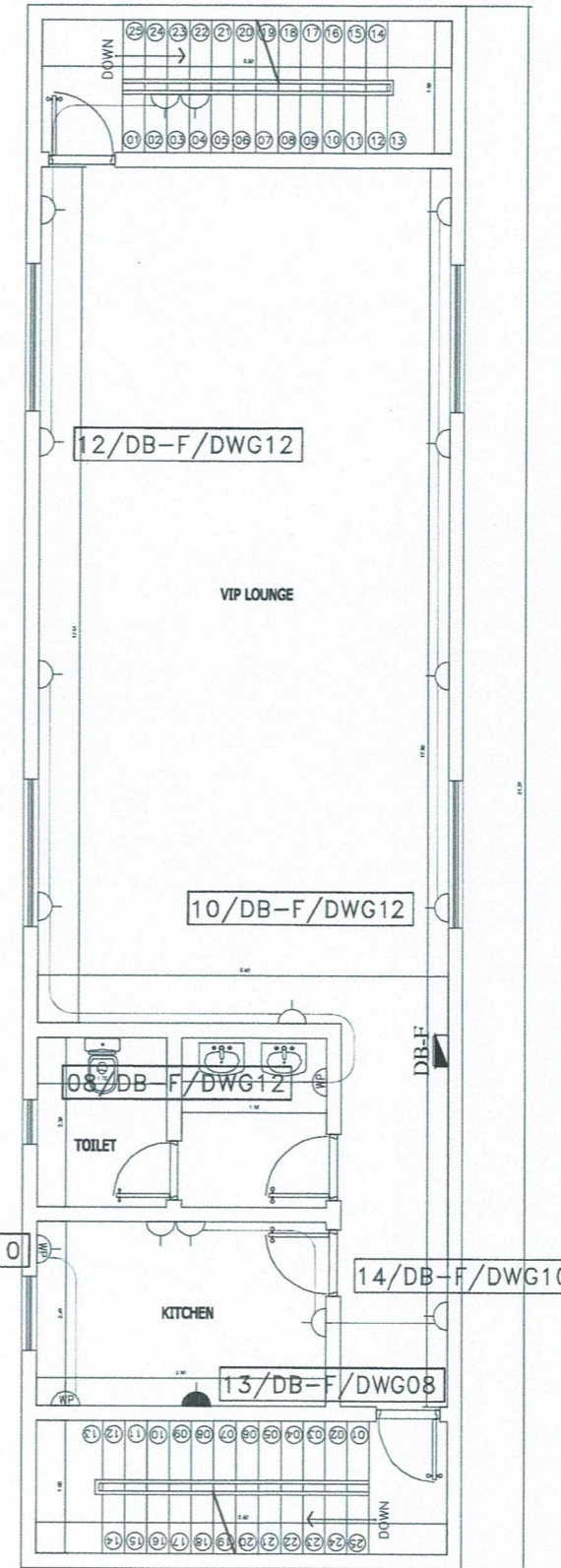
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الأعمال الكهربائية للدور الأرضي  
GROUND FLOOR ELECTRICAL  
POWER AND AUXILIARY LAYOUT



الأعمال الكهربائية للدور الأول  
FIRST FLOOR ELECTRICAL  
POWER AND AUXILIARY LAYOUT

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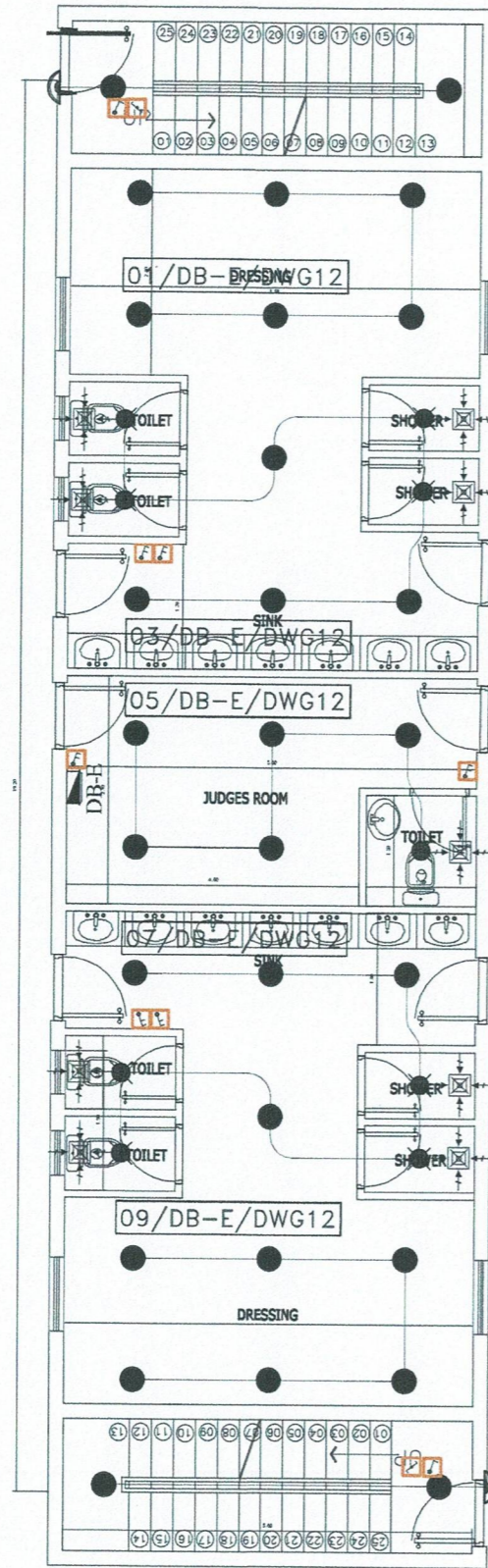
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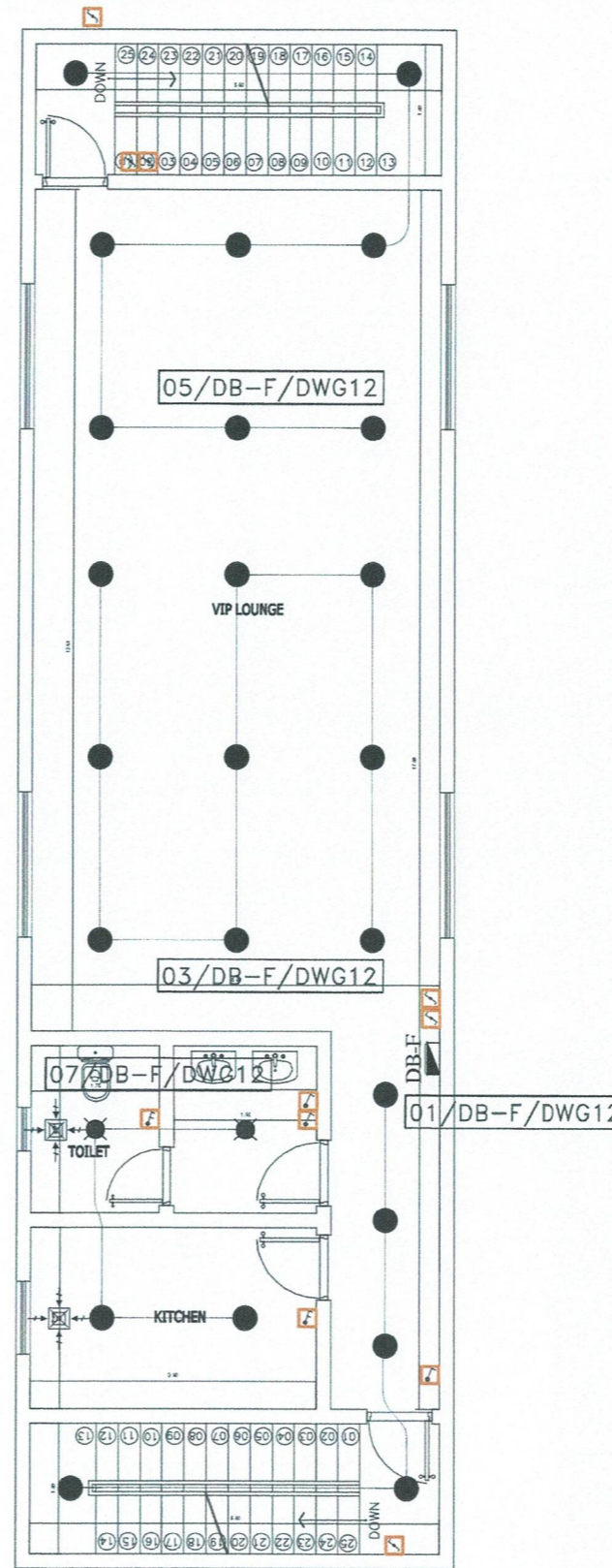
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دوائر أنارة الدور الأرضي  
GROUND FLOOR ELECTRICAL LIGHTING LAYOUT



دوائر أنارة الدور الأول  
FIRST FLOOR ELECTRICAL LIGHTING LAYOUT

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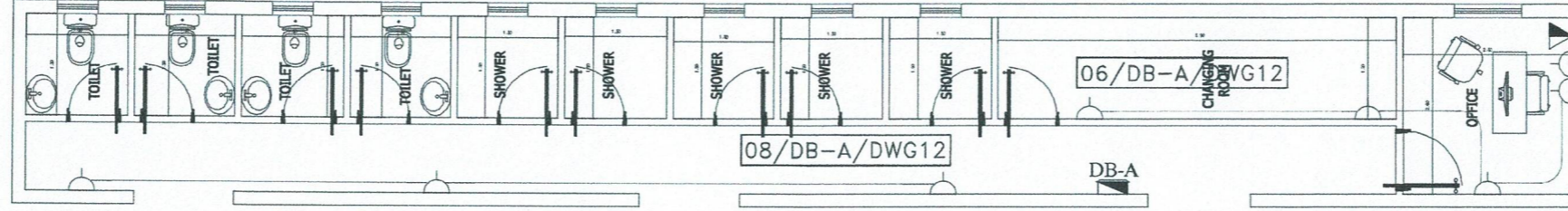
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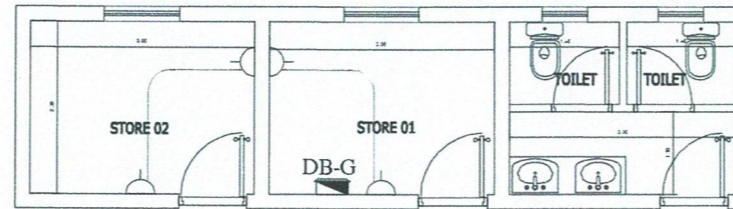
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الأعمال الكهربائية للدور الأرضي  
GROUND FLOOR ELECTRICAL  
POWER AND AUXILIARY LAYOUT



الأعمال الكهربائية للدور الأرضي  
GROUND FLOOR ELECTRICAL  
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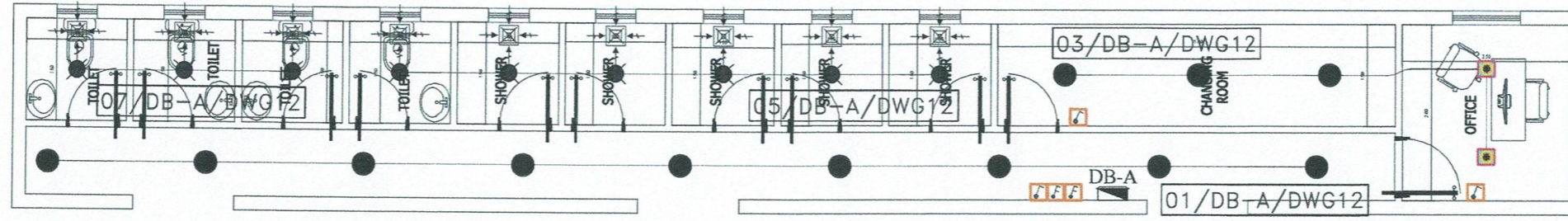
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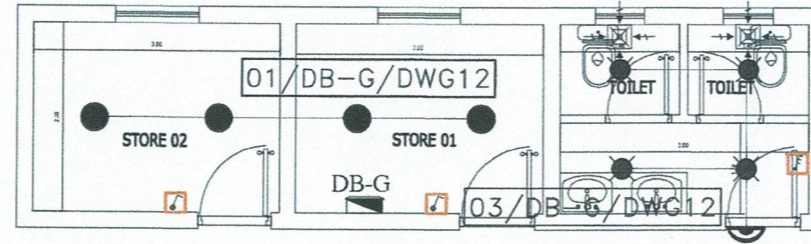
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دوائر أنارة الدور الأرضي  
GROUND FLOOR ELECTRICAL  
LIGHTING LAYOUT



دوائر أنارة الدور الأرضي  
GROUND FLOOR ELECTRICAL  
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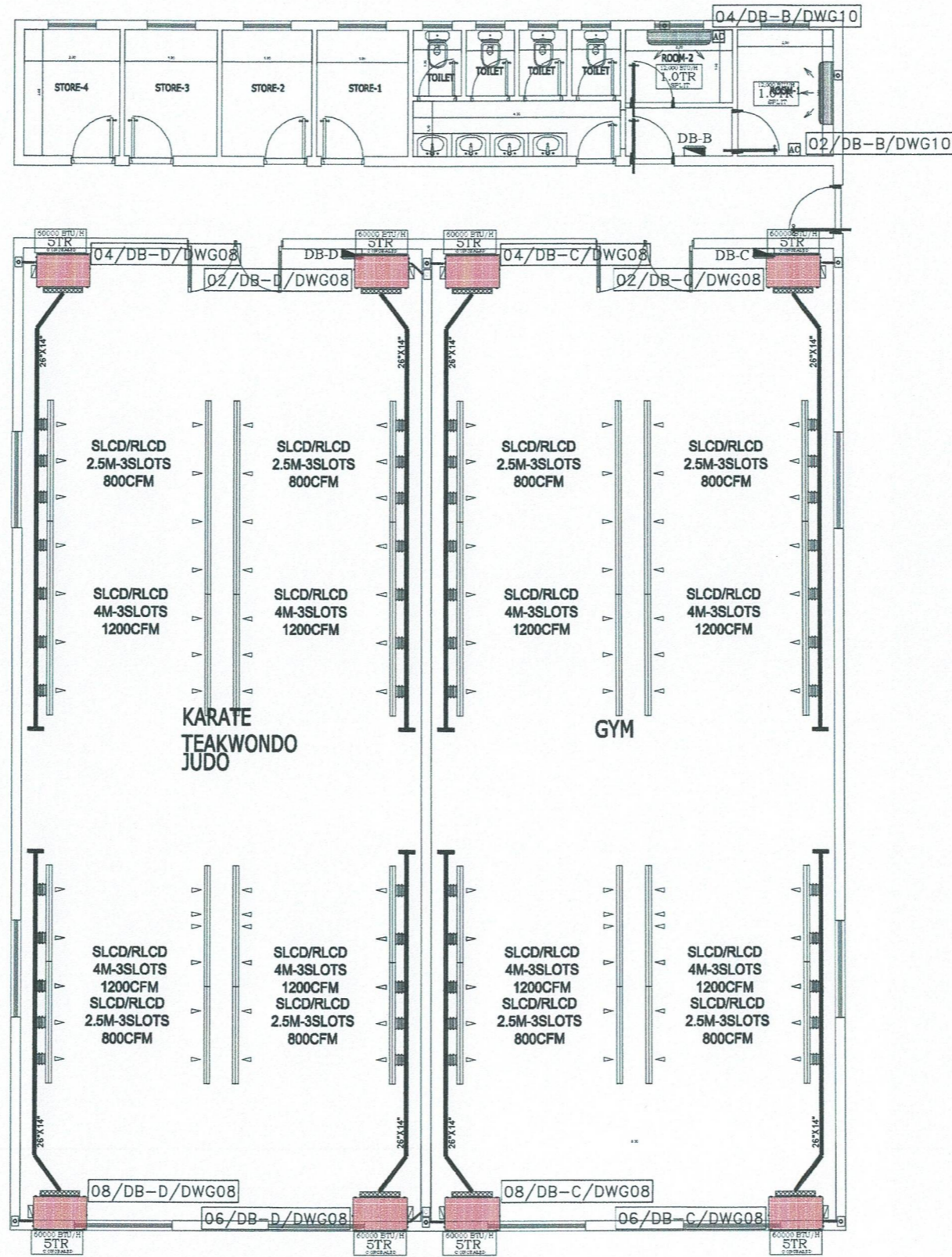
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### GROUND FLOOR A/C LAYOUT

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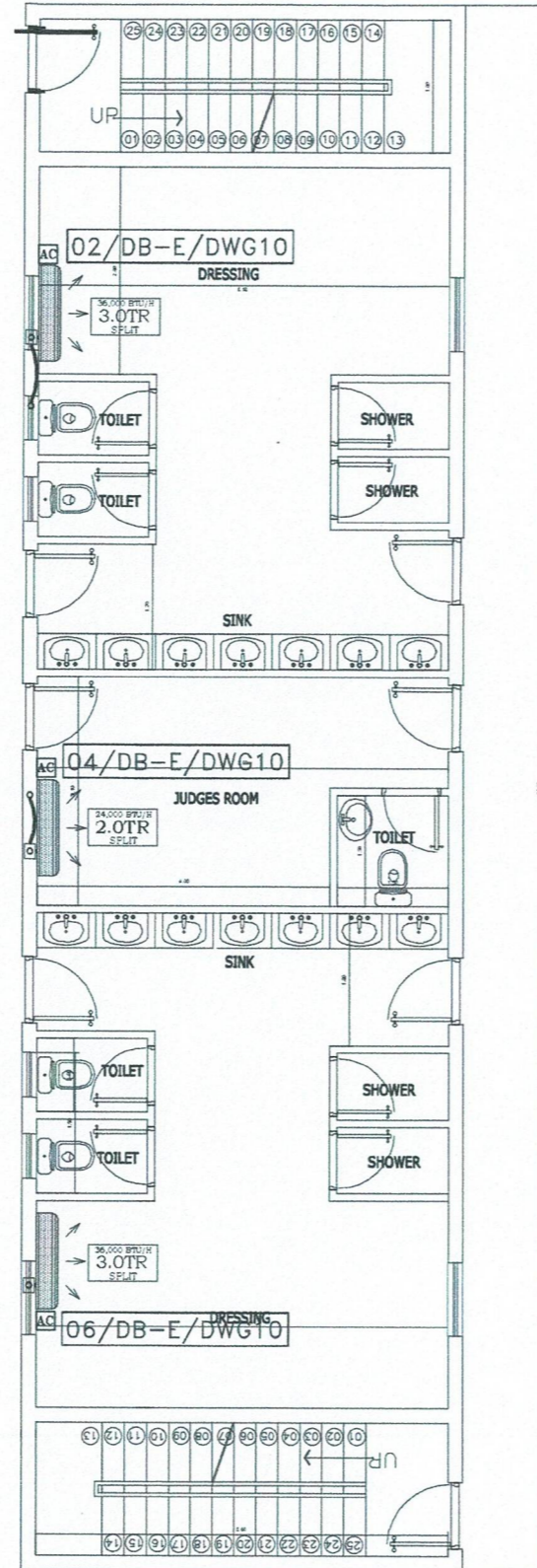
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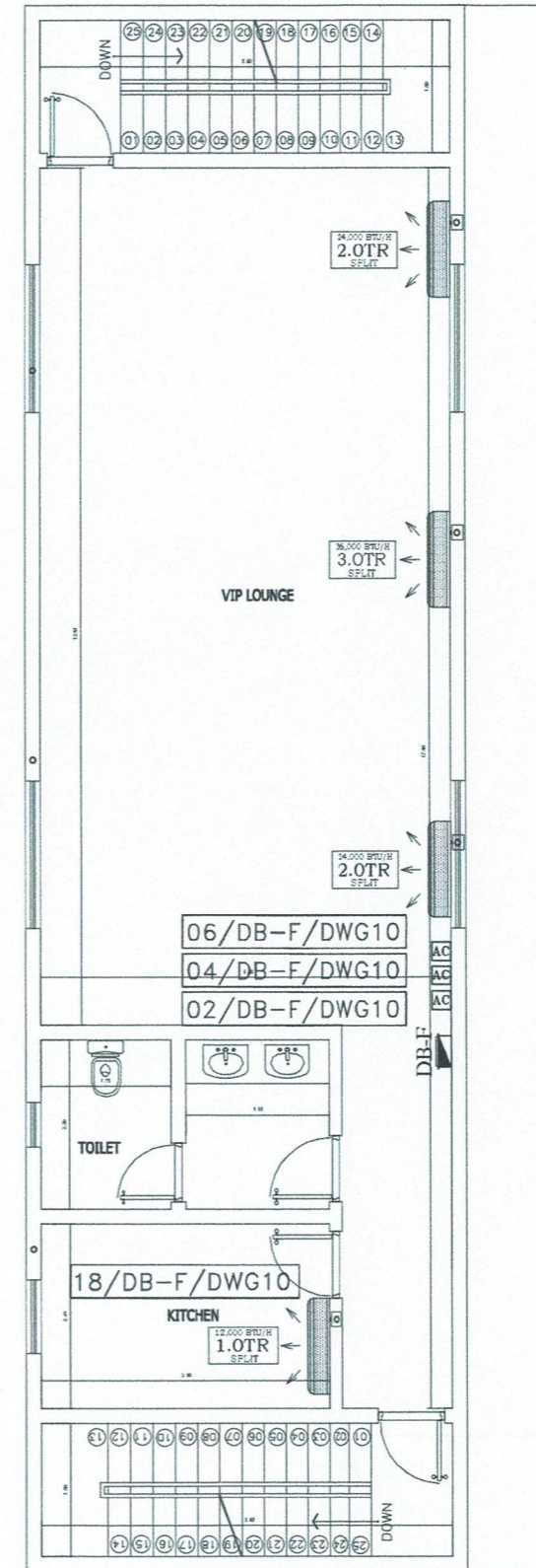
GOLDEN TRIANGLE ENGINEERING CONSULTANCY  
 DAMMAM ,QATIF  
 2922 UHUD STREET ALQUDAH DISTRICT 62554  
 POSTAL CODE 32961  
 TEL 0505819063-0538441143

Project Title:	نادى المحيط	اسم المشروع:
Owner:	رعاية الشباب نادى المحيط	المالك:
Site:	القطيف حى الجارودية	الموقع:
Lot No.:	.....	رقم القطعة:
Block No.:	.....	رقم المخطط:

Architect Designer:	ABDULAAL 197836	Arch.
Structure Engr:	HUSSEN 460607	
Electrical Engr:	.....	Sheet NO.
Drawn By:	ABDULAAL 197836	Date:
Revised By:	ABDULAAL 197836	Reference: 2022
Scale:	As Shown	Drawing Title:



GROUND FLOOR A/C LAYOUT



FIRST FLOOR A/C LAYOUT

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- 6-ALL EXTERIOR WALLS SHALL BE 0.20 M THK. THERMOBLOCKS.

مهندس / حسين عبدالله الناصر  
**ENG. HUSSEIN AL-NASSER**  
 مكتب الاستشارات الهندسية  
 رقم ترخيص: ٢٠٥٣١١٧٣٤٦  
 C.R. : 2053117346  
 Golden Triangle Eng. Consulting Office  
 يعمد:

المثلث الذهبي للاستشارات الهندسية  
 GOLDEN TRIANGLE ENGINEERING CONSULTANCY  
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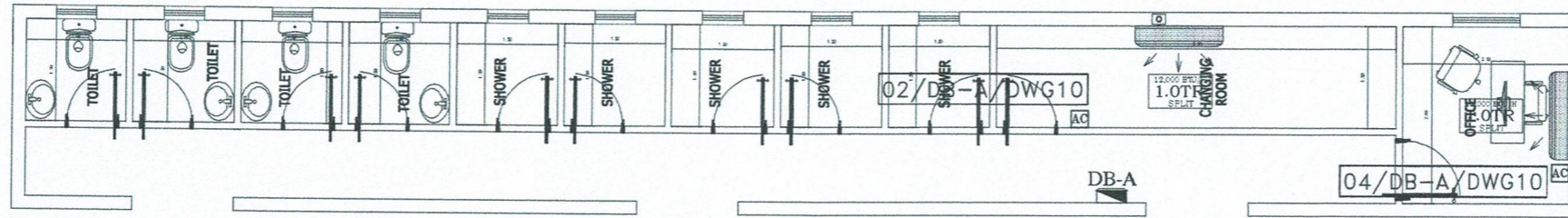
LICENSE No. 5100000733  
 P.O. BOX 6254  
 QATIF  
 ٠١.....٧٣٣  
 ترخيص رقم  
 صرب ٢٠٤٤  
 القطيف  
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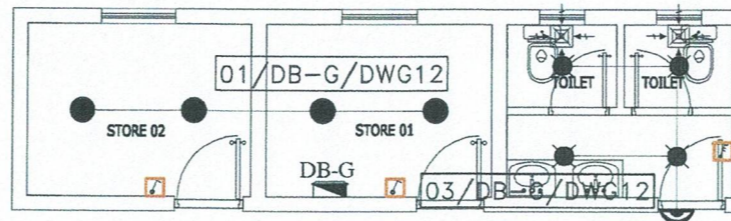
GOLDEN TRIANGLE ENGINEERING CONSULTANCY  
 DAMMAM .QATIF  
 2922 UHUD STREET .ALQUDAH DISTRICT 62564  
 POSTAL CODE 32961  
 TEL 0505819063-0536441143

اسم المشروع :	نادي المحيط
Project Title :	نادي المحيط
المالك :	رعاية الشباب نادي المحيط
Owner :	رعاية الشباب نادي المحيط
الواقع :	القطيف حي الجارودية
Site :	القطيف حي الجارودية
رقم القطعة :	.....
Lot No. :	.....
رقم المخطط :	.....
Block No. :	.....

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Structure Engr`:	HUSSEN 460607	Sheet NO.
Electrical Engr`:	.....	Date:
Drawn By:	ABDULAAL 197836	Reference: 2022
Revised By:	ABDULAAL 197836	Drawing Title:
Scale:	As Shown	



GROUND FLOOR A/C LAYOUT



GROUND FLOOR A/C LAYOUT

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مهندس / حسين عبدالله الناصر  
**ENG. \ HUSSEIN AL-NASSER**



SIGNED:

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 القطيف

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 POSTAL CODE 32961  
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Project Title :	نادى المحيط	اسم المشروع :
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Block No. :	.....	رقم المخطط :

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Structure Engr`:	HUSSEN 460607
Electrical Engr`:	.....
Drawn By:	ABDULAAL 197836
Revised By:	ABDULAAL 197836
Scale:	As Shown

Arch.
Sheet NO.
Date:
Reference: 2022
Drawing Title:

## POWER PANEL SCHEDULE

PANEL TYPE MCCB/24 WAY-BOTTOM FEED  
 SURFACE MOUNTED  
 SERVICE VOLTAGE 230/400 VOLTS, 3 PHASE, 4 WIRE, 60 HZ  
**DIS.BAORD(DB-F)FIRST FLOOR FLUSH MOUNTED**

CKT NO.	TRIP AMP	NO. OF PCLE	CON SIZE mm	NO. WAIR 2 mm	LOAD IN WATT	LOAD DESCRIPTION	3 φ , 4 WIRE 230/400V 60HZ	LOAD DESCRIPTION	LOAD IN WATT	NO. WAIR 2 mm	CON SIZE mm	NO. OF PCLE	TRIP AMP	CKT NO.
							40A							
1	16	1	20	3X4	500	LIGHTING		A/C SPLIT	3000	3X6	25	1	32	2
3	16	1	20	3X4	500	LIGHTING		A/C SPLIT	3000	3X6	25	1	32	4
5	16	1	20	3X4	500	LIGHTING		A/C SPLIT	3000	3X6	25	1	32	6
7	16	1	20	3X4	500	LIGHTING		OUT 220V	1000	3X6	25	1	20	8
9	32	2	25	3X6	3000	CENTRAL WATER HEATER		OUT 220V	1000	3X6	25	1	20	10
11	20	2	25	3X4	500	MOTOR PUMP FOR HEATER		OUT 220V	1000	3X6	25	1	20	12
13	40	1	32	3X10	3000	ELEC-OVEN		OUT 220V	1000	3X6	25	1	20	14
15	—	—	—	—	—	SPARE		OUT 220V	1000	3X6	25	1	20	16
17								A/C SPLIT	3000	3X6	25	1	32	18
19														20
21														22
23														24

TOTAL CONNECTED LOAD = 25.5 K.W & MAIN CIRCUIT BREAKER 40AT,160 AF,3P,400V,60HZ- MCCB  
 DEMAND FACTOR = 100 % & FEEDER CABLES 4X35mm<sup>2</sup>CU XLPE/PVC +1-35mm<sup>2</sup> G  
 DEMAND LOAD = 25.5 KVA in 75mm Ø PVC PIPE  
 BUS BAR SIZE=20 MM2 (THICKNESS - WIDES) NOTE: CHECK BALANCE BETWEEN 3 -PH TOL. 10 %

## POWER PANEL SCHEDULE

PANEL TYPE MCCB/6 WAY-BOTTOM FEED  
 SURFACE MOUNTED  
 SERVICE VOLTAGE 230/400 VOLTS, 3 PHASE, 4 WIRE, 60 HZ  
**DIS.BAORD(DB-G)GROUND FLOOR FLUSH MOUNTED**

CKT NO.	TRIP AMP	NO. OF PCLE	CON SIZE mm	NO. WAIR 2 mm	LOAD IN WATT	LOAD DESCRIPTION	3 φ , 4 WIRE 230/400V 60HZ	LOAD DESCRIPTION	LOAD IN WATT	NO. WAIR 2 mm	CON SIZE mm	NO. OF PCLE	TRIP AMP	CKT NO.
							20A							
1	16	1	20	3X4	500	LIGHTING		OUT 220V	1000	3X4	20	1	20	2
3	16	1	20	3X4	500	LIGHTING								4
5	20	1	20	3X6	1500	W.HEATER								6

TOTAL CONNECTED LOAD = 3.5 K.W & MAIN CIRCUIT BREAKER 20AT,100 AF,3P,400V,60HZ- MCCB  
 DEMAND FACTOR = 100 % & FEEDER CABLES 4X10mm<sup>2</sup>CU XLPE/PVC +1-35mm<sup>2</sup> G  
 DEMAND LOAD = 3.5 KVA in 50mm Ø PVC PIPE

## POWER PANEL SCHEDULE

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مهندس / حسين عبدالله الناصر  
**ENG. \ HUSSEIN AL NASSER**  
  
 C.R. : 2053117346  
 Golden Triangle Eng. Consulting Office  
 SIGNED: \_\_\_\_\_ يعتمد: \_\_\_\_\_

المثلث الذهبي للاستشارات الهندسية  
 GOLDEN TRIANGLE ENGINEERING CONSULTANCY  
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 ص.ب ٦٢٥٤  
 القطيف  
 EMAIL: \_\_\_\_\_



GOLDEN TRIANGLE ENGINEERING CONSULTANCY  
 DAMMAM QATIF  
 2922 UHUD STREET ALQUDAH DISTRICT 62554  
 POSTAL CODE 32861  
 TEL 0505819063-0538441143

اسم المشروع : نادى المحيط  
 Project Title : نادى المحيط  
 المالك : رعاية الشباب نادى المحيط  
 Owner : رعاية الشباب نادى المحيط  
 الموقع : القطيف حى الجارودية  
 Site : القطيف حى الجارودية  
 رقم القطعة : .....  
 Lot No. : .....  
 رقم المخطط : .....  
 Block No. : .....

Architect Designer:	ABDULAAL 197836	Arch.
Structure Engr :	HUSSEN 460607	Sheet NO.
Electrical Engr :	.....	Date:
Drawn By:	ABDULAAL 197836	Reference: 2022
Revised By:	ABDULAAL 197836	Drawing Title:
Scale: As Shown		

## POWER PANEL SCHEDULE

PANEL TYPE MCCB/24 WAY-BOTTOM FEED  
SURFACE MOUNTED

SERVICE VOLTAGE 230/400 VOLTS, 3 PHASE, 4 WIRE, 60 HZ

DIS.BAORD(DB-E)GROUND FLOOR FLUSH MOUNTED

CKT NO.	TRIP AMP	NO. OF PCLE	CON SIZE mm	NO. WAIR <sup>2</sup> mm	LOAD IN WATT	LOAD DESCRIPTION	3 φ , 4 WIRE 230/400V 60HZ	LOAD DESCRIPTION	LOAD IN WATT	NO. WAIR <sup>2</sup> mm	CON SIZE mm	NO. OF PCLE	TRIP AMP	CKT NO.
							40A							
1	16	1	20	3X4	500	LIGHTING		A/C SPLIT	3000	3X6	25	1	32	2
3	16	1	20	3X4	500	LIGHTING		A/C SPLIT	3000	3X6	25	1	32	4
5	16	1	20	3X4	500	LIGHTING		A/C SPLIT	3000	3X6	25	1	32	6
7	16	1	20	3X4	500	LIGHTING		OUT 220V	1000	3X6	25	1	20	8
9	16	1	20	3X4	500	LIGHTING		OUT 220V	1000	3X6	25	1	20	10
11	32	2	25	3X6	3000	CENTRAL WATER HEATER		OUT 220V	1000	3X6	25	1	20	12
13	20	2	25	3X4	500	MOTOR PUMP FOR HEATER								14
15	—	—	—	—	—	SPARE								16
17														18
19														20
21														22
23														24

TOTAL CONNECTED LOAD = 18 K.W

DEMAND FACTOR = 100 %

DEMAND LOAD = 18 KVA

BUS BAR SIZE=20 MM2 (THICKNESS - WIDES)

MAIN CIRCUIT BREAKER 40AT,160 AF,3P,400V,60HZ- MCCB

FEEDER CABLES 4X25mm<sup>2</sup>CU XLPE/PVC +1-35mm<sup>2</sup> G in 75mm Ø PVC PIPE

NOTE: CHECK BALANCE BETWEEN 3 -PH TOL. 10 %

## POWER PANEL SCHEDULE

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مهندس / حسين عبدالله الناصر  
**ENG. \ HUSSEIN AL-NASSER**  
 مكتب المثلث الذهبي للاستشارات الهندسية  
 رقم الترخيص: ٢٠٥٣١١٧٣٤٦  
 C.R.: 2053117346  
 Signed:  يعتد:

المثلث الذهبي للاستشارات الهندسية  
 GOLDEN TRIANGLE ENGINEERING CONSULTANCY  
 ( تصميم - اشراف - مساحة - اعمال سلامة )  
 (DESIGN-SUPERVISION-SURVEYING -SAFETY)

LICENSE No. 5100000733  
 P.O. BOX 6254  
 QATIF  
 ترخيص رقم ٥١٠٠٠٠٧٣٣  
 صوب القطيف  
**EMAIL:**



GOLDEN TRIANGLE ENGINEERING CONSULTANCY  
 DAMMAM .QATIF  
 2922 UHUD STREET .ALQUDAH DISTRICT 62554  
 POSTAL CODE 32961  
 TEL 0505819063-0536441143

Project Title : **نادى المحيط** : اسم المشروع

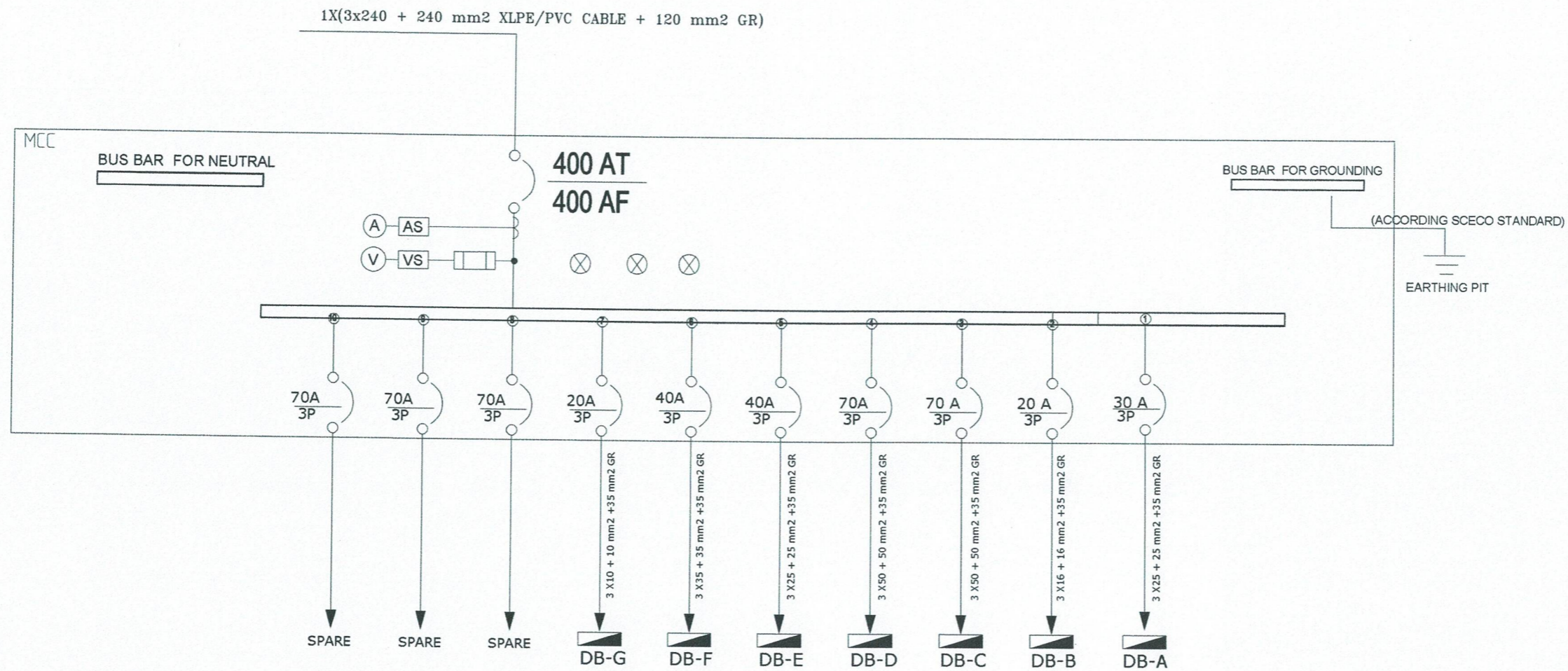
Owner : **رعاية الشباب نادى المحيط** : المالك

Site : **القطيف حى الجارودية** : الموقع

Lot No. : ..... : رقم القطعة

Block No. : ..... : رقم المخطط

Architect Designer:	ABDULAAL 197836	<b>Arch.</b>
Structure Engr`:	HUSSEN 460607	
Electrical Engr`:	.....	Sheet NO.
Drawn By:	ABDULAAL 197836	Date:
Revised By:	ABDULAAL 197836	Reference: 2022
Scale: As Shown		Drawing Title:



## SINGLE LINE DIAGRAM

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مهندس/ حسين عبدالله الناصر  
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DAMMAM ,QATIF  
2922 UHUD STREET ,ALQUDAH DISTRICT 62554  
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TEL 0505819063-0536441143

Project Title :	نادى المحيط	اسم المشروع :
Owner :	رعاية الشباب نادى المحيط	المالك :
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## POWER PANEL SCHEDULE

PANEL TYPE MCCB/24 WAY-BOTTOM FEED  
 SURFACE MOUNTED  
 SERVICE VOLTAGE 230/400 VOLTS, 3 PHASE, 4 WIRE, 60 HZ  
**DIS.BAORD(DB-C&D)GROUND FLOOR FLUSH MOUNTED**

CKT NO.	TRIP AMP	NO. OF PCLE	CON SIZE mm	NO. WAIR 2 mm	LOAD IN WATT	LOAD DESCRIPTION	3 φ , 4 WIRE		LOAD DESCRIPTION	LOAD IN WATT	NO. WAIR 2 mm	CON SIZE mm	NO. OF PCLE	TRIP AMP	CKT NO.
							230/400V	60HZ							
							70A								
1	16	1	20	3X4	500	LIGHTING			A/C CONCEALED	7000	3X10	32	1	50	2
3	16	1	20	3X4	500	LIGHTING			A/C CONCEALED	7000	3X10	32	1	50	4
5	16	1	20	3X4	500	LIGHTING			A/C CONCEALED	7000	3X10	32	1	50	6
7	16	1	20	3X4	500	LIGHTING			A/C CONCEALED	7000	3X10	32	1	50	8
9	—	—	—	—	—	SPARE			OUT 220V	1000	3X6	25	1	20	10
11									OUT 220V	1000	3X6	25	1	20	12
13									OUT 220V	1000	3X6	25	1	20	14
15									OUT 220V	1000	3X6	25	1	20	16
17									OUT 220V	1000	3X6	25	1	20	18
19														20	
21														22	
23														24	

TOTAL CONNECTED LOAD = 35 K.W & MAIN CIRCUIT BREAKER 70AT,160 AF,3P,400V,60HZ- MCCB

DEMAND FACTOR = 100 % & FEEDER CABLES 4X50mm<sup>2</sup> CU XLPE/PVC +1-35mm<sup>2</sup> G

DEMAND LOAD = 35 KVA in 75mm φ PVC PIPE

BUS BAR SIZE=20 MM2 (THICKNESS - WIDES) NOTE: CHECK BALANCE BETWEEN 3 -PH TOL. 10 %

## POWER PANEL SCHEDULE

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 صرخب القطيف  
 EMAIL:



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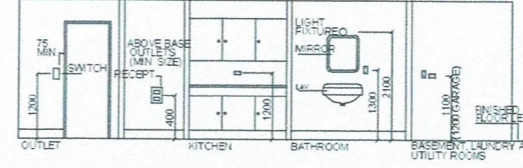
**GENERAL NOTES**

- THE ELECTRICAL INSTALLATION SHALL BE DONE IN ACCORDANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AND WITH EXISTING ORDINANCES, RULES AND REQUIREMENTS OF THE POWER AND TELEPHONE COMPANIES.
- THE MAIN DISTRIBUTION PANEL TO BE SUPPLIED SHALL BE 400/230V AC THREE PHASE, 4 WIRES + E, 50-HERTZ
- THE CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF SERVICE ENTRANCE FOR PROPER CONNECTION OF SERVICE DROP AND METER
- ALL WIRING SHALL BE INSTALLED IN STANDARD OR PVC, RIGID PVC AND SCHEDULE 40 RS CONDUITS WHICH IT SHALL BE RUN EMBEDDED INSIDE THE CONCRETE, SLABS, COLUMNS, WALLS AND PARTITIONS AND/OR RUN CONCEALED BET. DOUBLE WALL WOODEN PARTITIONS AND INSIDE THE CEILING SPACES
- COLOR CODES OF CONDUCTORS INSTALLATION ARE AS FOLLOWS :

	SERVICE ENTRANCE	INTERNAL WIRING
a. LINE A	RED	RED
b. LINE B	YELLOW	YELLOW
c. LINE C	BLUE	BLUE
d. NEUTRAL	BLACK	BLACK
e. GROUND	GREEN	GREEN

- THE LIGHTING FIXTURES TO BE INSTALLED IN THIS PROJECT SHALL BE FURNISHED BY THE OWNER UNLESS OTHERWISE NOTED.
- ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND OF THE APPROVED TYPE FOR LOCATION AND PURPOSES.
- STANDARD TYPE OF ACCESSORIES, SPlicing DEVICES TERMINATIONS BUSHINGS, COUPLINGS, SUPPORTS, CABLE TIES, WIRE/CAVBLE MARKERS AND OTHER APPURTENANCES FOR THE ENTIRE ELECTRICAL INSTALLATION SHALL BE USED.
- UNLESS OTHERWISE SPECIFIED, THE MINIMUM SIZE OF WIRE AND CONDUIT SHALL BE NO 4mm<sup>2</sup> AND 20mm (3/4") Ø EMT RESPECTIVELY.
- WHEREVER REQUIRED AND NECESSARY, PULL/JUNCTION BOXES OR SLEEVES OF APPROPRIATE SIZE SHALL BE INSTALLED AT CONVENIENT AND APPROPRIATE LOCATIONS ALTHOUGH THEY ARE NOT SHOWN ON THE PLANS.
- THE ELECTRICAL WORKS SHALL BE DONE UNDER DIRECT AND IMMEDIATE SUPERVISION OF A LICENSED ELECTRICAL ENGINEER.
- ALL EQUIPMENTS AND PANELS SHOULD BE GROUNDED SEPERATELY.
- THE MAIN PANELS SHOULD BE CONNECTED TO GROUND ROD, WHICH SHALL BE 2400mm LONG x 19mm DIA. COPPER ROD, A.B.C OR INSULATED GREEN CONDUCTOR.
- ALL RECEPTACLE OUTLET LOCATED IN THE BATHROOM, KITCHEN, OUTDOORS WET AREA'S SHOULD BE GFCI TYPE.
- ALL WALL OUTLETS SHALL BE INSTALLED AT THE FOLLOWING HEIGHTS ABOVE THE FINISHED FLOOR LEVEL UNLESS OTHERWISE NOTED:

- a. KITCHEN OUTLETS ..... 1200 mm  
FOR REFR. FREEZER, TEL. & INTERCOM FOR RANGE, G.D. & D.W. SHALL BE PROVIDED ONE JB (100 x 100 mm. SQUARE, 33 mm. DEPTH) 150 mm HB QHT SHALL RUN 15 mm. EMT NONDUTY IN THE WALL FROM JB. UP TO A SWITCH OUTLET AT 1200 mm HEIGHT. A SWITCH SHALL BE RATED AS REQUIRED.
- b. TV, TELEPHONE, INTERCOM & RADIO OUTLETS ..... 400 mm
- c. AIR COND. & THERMOSTAT FOR AHU OUTLETS ..... 1500 mm
- d. LAUNDRY, BASEMENT & UTILITY OUTLETS ..... 1100 mm
- e. HEAVY DUTY RECEPTACLE (SINGLE OUTLET) ..... 400 mm MIN.
- f. ELECTRIC TIME CLOCK OUTLET ..... VARIABLE
- g. EXHAUST FAN OUTLET ..... 1800 mm MIN.
- h. PANELBOARD & BREAKER (TO THE TOP) ..... 1800 mm
- i. FIRE ALARM BELL OUTLET (BELOW CEILING) ..... 450 mm
- j. EMERGENCY LIGHT, CHIME BELL ETC. OUTLETS ..... 1800 mm MIN.
- k. WALL MOUNTED TEL. & INTERCOM OUTLETS (FOR HALLWAY, TOILET) ..... 1300 mm
- l. WALKWAY LIGHT OUTLET ..... 400 mm



- ALL FLUSH DEVICE BOXES AND FITTINGS SHALL BE SO INSTALLED THAT THE FRONT EDGE OF BOXES/FITTING WILL NOT SET BACK OF NON-COMBUSTIBLE FINISHED SURFACE MORE THAN 6.35 mm.
- WHERE PRACTICABLE, ALL SWITCH, RECEPTACLE AND AUXILIARY BOXES SHALL BE SEPERATED AS FOLLOWS:



- PROVIDE/INSTALL 13 mm (1/2") Ø EMT CONDUITS FROM EACH AHU TO CU OF THE SAME COOPERATING SYSTEM FOR CONTROL WIRES
- ALL MEASUREMENTS ARE SHOWN IN MILLIMETERS EXCEPT OTHERWISE NOTED
- ALL EXHAUST FAN OUTLET @ TOILET SHALL BE CONNECTED TO NEAREST LIGHTING

**CONDUIT FILL TABLE**

CONDUIT SIZE > WIRE SIZE	MAXIMUM NUMBER OF PVC INSULATED CONDUCTORS IN CONDUIT (BASED ON 40% FILL)					
	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"
	20mm	25mm	32mm	38mm	50mm	63mm
2.5 mm <sup>2</sup>	6	11	-	-	-	-
4.0 mm <sup>2</sup>	4	8	-	-	-	-
6.0 mm <sup>2</sup>	3	6	11	-	-	-
10 mm <sup>2</sup>	-	4	6	8	-	-
16 mm <sup>2</sup>	-	2	5	7	12	-
25 mm <sup>2</sup>	-	-	3	4	8	-
35 mm <sup>2</sup>	-	-	2	3	6	10
50 mm <sup>2</sup>	-	-	-	2	4	7
70 mm <sup>2</sup>	-	-	-	-	3	5

**GENERAL NOTES & LEGEND**

SCALE \_\_\_\_\_ NTS \_\_\_\_\_

**FLOOR BOXES**

- 1 FLOOR BOX COMPRISING NORMAL DUPLEX SOCKET, UPS DUPLEX SOCKET, DATA SOCKET, TELEPHONE SOCKET
- 2 BOX COMPRISING 4 INDUSTRIAL SOCKETS EACH 32A, 220V AS PER OWNER REQUIREMENT (THE BOX IS OUT OF SCOPE)

No.	SYMBOL	DESCRIPTION
1		4 LED BULBS, 1 x 24 WATTS, 20W, 30 Hz DECOARTIVE CHANGELER WITH MULTI LEVEL LUMINATION CONTROL BY A DIMMER SWITCH IN DOOR USING (P2) OUT COOR. RECEPT.
2		General LED down light 22W, 1 for kitchen and toilet
3		DECOARTIVE SPOT LED OR SPOT LIGHT FIXTURE 1 x 24 WATTS 30V, 60 Hz, 3 INCH WITH DIMMER ELECTRONIC BALLAST CONTROL BY A DIMMER SWITCH (OPTIONAL) IN DOOR USING (P2) RECEPT. METHOD OF COOR. RECEPT.
4		DECOARTIVE ENLIGHTENED SPOT LED FIXTURE 1 x 24 WATTS COMPACT DOWN, 60 Hz, 4 OR 6 INCH WITH DIMMER ELECTRONIC BALLAST CONTROL BY A DIMMER (OPTIONAL) IN DOOR USING (P2) RECEPT. METHOD OF COOR. RECEPT.
5		220 VOLTS, 60 Hz DECOARTIVE LED SPOT 11 WATT - WALL MOUNTED LIGHT (P2)
6		DECOARTED LIGHT FOR FENCE 14 WATTS 20V/30Hz
7		FLUORESCENT LIGHT FIXTURE, SURFACE CEILING MOUNTED, 2X2X/LAMPS (P2)
8		MR OR FLUORESCENT LIGHT 1 x 18 WATT
9		GROUND LIGHT 14 WATT 1" 18 WATT
10		DECOARTIVE WALL MOUNTED LAMP WITH STANDARD LAMP HOUSING - METAL HALOIDE WATER PROOF IP 55 & NORMAL
11		FENCE LIGHTING RECESSED WALL LIGHT WITH METAL HOUSING POLY CARBONATE DIFFUSER AND LAMPEDED COVER, 2411V, 220V
12		DECOARTIVE WALL BRACKET LAMPARE OUTDOOR TYPE OF ONE-PIECE ALUMINUM HOUSING AND METAL HOUSING POLY CARBONATE DIFFUSER, 450/1100X, 220V
13		CHD CHANDERLER, 20W/30V CHE CHANDERLER, 60W/220V
14		THERMOSTAT SENSOR CONTROL
15		EXHAUST FAN WITH OUTLET
16		220V, 20 AMP, 60 Hz DUCTED EXHAUST FAN OUTLET CONNECTED TO NEAREST LIGHTS
17		220V, 10 AMP, 60 Hz ONE GANG ONE WAY DECOARTIVE SWITCH WITH LED LIGHT ON INDICATION (OPTIONAL)
18		220V, 10 AMP, 60 Hz TWO GANG ONE WAY DECOARTIVE SWITCH WITH LED LIGHT ON INDICATION (OPTIONAL)
19		220V, 10 AMP, 60 Hz THREE GANG ONE WAY DECOARTIVE SWITCH WITH LED LIGHT ON INDICATION (OPTIONAL)
20		220V, 10 AMP, 60 Hz ONE GANG TWO WAY DECOARTIVE SWITCH WITH LED LIGHT ON INDICATION (OPTIONAL)
21		220V, 10 AMP, 60 Hz TWO GANG TWO WAY DECOARTIVE SWITCH WITH LED LIGHT ON INDICATION (OPTIONAL)
22		STAIR CASE SWITCH
23		220V, 10 AMP, 60 Hz DECOARTIVE SINGLE / DUPLEX RECEPTACLE OUTLET WEATHER PROOF RECEPTACLE OUTLET (20A/30A/50A)
24		220V, 30 AMP, 60 Hz ISOLATOR SWITCH AS A FOR AC
25		TV OUTLET, FOR COAXIAL CABLE 60/100MM PVC PIPE UP TO THE SPLITER
26		FLAT DECOARTIVE TELEPHONE DATA OUTLET WITH CAT 5E DATA CABLE 100 WALL MOUNTED AT 1200 - 1400 MM A.F.F.L
27		SPECIAL PURPOSE OUTLET EQUIPMENT AS INDICATED ON THE XX (REF. DIA - RANGE/4 - WASHING MACHINE DIA) 220V
28		DISTRIBUTION PANEL BOARD - IN DOOR - RECESSED ON WALL
29		MAIN DISTRIBUTION PANEL, OUT DOOR - WATER PROOF - IP 45 (STAND FLOOR)
30		CIRCUIT NUMBER, PANEL BOARD NUMBER, PANEL BOARD NAME
31		NON - FUSIBLE DISCONNECT SWITCH (2P/4P/6P)
32		INTERCOM SOUND DEVICE & SPEAKER
33		INTERCOM STATION WITH PUSH BUTTON AND LOUD SPEAKER (OUT DOOR UNIT)
34		A/C OUTDOOR CONDENSING UNIT (A/C)
35		A/C INDOOR FAN COIL UNIT (WALL MOUNTED)
36		A/C CASSETTE - INDOOR FAN COIL
37		220V, 20 AMP, 60 Hz SPECIAL PURPOSE OUTLET WATER HEATER
38		A/C DRIVE MOTOR 400V, 3 PHASE, 30 HP, 3000 RPM, 30 AMP, 60 Hz, 3000 RPM, 30 AMP, 60 Hz, 3000 RPM, 30 AMP, 60 Hz, 3000 RPM
39		POWER CIRCUIT LINE OR KV MINIMUM OF 300V UNLESS SPECIFIED TEL. & TV RECESSED 20 CM x 20 CM WALL MOUNTED BOX
40		SATTIATE DISH
41		PHOTOCELL SENSOR SWITCH FOR OUTDOOR LIGHTING
42		CENTRAL WATER HEATER 80 GAL
43		A/C COIL UNIT HI-WALL WINDOWS TYPE A/C
44		WALL MOUNTED OUTDOOR FIXED CAMERA
45		ENCLOSED DISCHARGE FLOOD LIGHT WITH INTEGRAL CONTROL GEAR, WHITE GLOSS BODY, POLY-CRYSTAL FRONT GLASS, 1765 - 250W METAL HALIDE LAMP SAME AS THOSE ASSEMBLED ON 45
46		4X18 W DOUBLE PARABOLIC FLUORESCENT LIGHTING ARMATURE
47		ELEC. SHUTTER OUT LET

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 6-ALL EXTERIOR WALLS SHALL BE 0.20 M THK. THERMOBLOCKS.

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 المالك : رعاية الشباب نادى المحيط  
 الموقع : القطيف حى الجارودية  
 رقم القلعة : .....  
 رقم المخطط : .....

Architect Designer:	ABDULAAL 197836	Arch.
Structure Engr:	HUSSEN 460607	
Electrical Engr:	.....	Date:
Drawn By:	ABDULAAL 197836	Reference: 2022
Revised By:	ABDULAAL 197836	Drawing Title:
Scale: As Shown		



## ELECTRICAL NOTES

- ALL ELECTRICAL WORK HERE UNDER MUST COMPLY WITH THE LATEST EDITION OF THE NEC, THE RULES AND REGULATIONS OF THE LOCAL COMPANY (SCECO), AND EXISTING LOCAL AND NATIONAL AUTHORITIES CONCERNED IN ENFORCEMENT OF ELECTRICAL LAWS AND ORDINANCE.
- SCECO INCOMING SUPPLY IS 220/127V, 3 PHASE, 4 WIRE, 60 HZ AND UP TO UNIT SUBSTATION AND METERING EQUIPMENT ONLY.
- ELECTRICAL WORK HERE IN SHALL BE DONE UNDER THE DIRECT SUPERVISION OF ELECTRICAL ENGINEER.
- THE CONTRACTOR SHALL COORDINATES WITH OTHER TRADES CONTRACTOR TO AVOID EQUIPMENT LOCATION CONFLICTS.
- ALL MATERIALS AND EQUIPMENT TO BE USED SHALL BE NEW AND OF THE APPROVED TYPE FOR BOTH PURPOSE AND LOCATION INTENDED.
- INSTALLATION OF WIRING SHALL BE DONE IN INTERMEDIATE METTALIC CONDUIT (IMC) OR ELECTRICAL METALLIC TUBING (EMT) HOWEVER FOR UNDER GROUND AND CONCEALED IN CONCRETE LAYOUT, THE P.V.C PIPE SHALL BE USED.
- ALL EXPOSED CONDUIT WORKS SHALL RUN PERPENDICULAR AND IN PARALLEL TO THE BUILDING.
- PROPER GROUNDING SHALL BE OBSERVED IN ALL WIRING THE SYSTEM AND ALL THE EQUIPMENT SHALL BE EFFECTIVELY GROUNDED.
- ALL SINGLE PHASE LOADS SHALL BE BALANCED AMONG THREE PHASE LINE.
- ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE SPECIFIED.
- AIR CONDITIONING UNIT OUTLETS (ACU) SHOULD BE COORDINATED TO MECHANICAL BLOCKOUTS OF ACU UNIT.
- AUXILLARY SYSTEM SHALL MEAN TELEPHONE, TV, INTERCOM, AND OTHER EXTRA LOW VOLTAGE SYSTEM.
- ALL A/C SPLIT AND CENTRAL UNITS ARE ASSUMED, THE CLIENT AND CONTRACTOR MUST SUBMIT THE FINAL A/C DESIGN DRAWINGS FROM THE HVAC SUPPLIER TO VERIFY AND CHECK THE ASSUMED ELECTRICAL DESIGN BEFORE THE CONSTRUCTION.
- FOR ACU DESIGN AND DISTRIBUTION AT ROOF JUST PRIMARY DESIGN AND THE CLIENT AND MAIN CONTRACTOR TO BE VERFY AND RECHECK THE AC DESIGN AND THE UNITS WAS LOCATED AT ROOF BEFOR CONSTRUCTION START

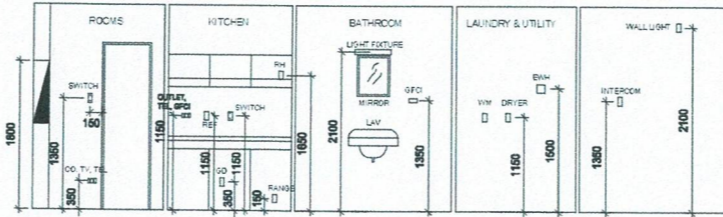
### SPECIFICATIONS:

- ALL WIRES - CONDUCTORS ARE OF COPPER INSULATED BY HEAT RESISTANT THERMOPLASTIC AMERICAN THHN OR APPROVED EQUIVALENT TYPE
- ALL CABLE WITH MOISTURE & HEAT RESISTANT PVC INSULATED OR OF CROSS LINKED POLY ETHYLENE XLPE OR APPROVED EQUIVALENT TYPE
- ALL ELECTRICAL DESIGN AND INSTALLATIONS SHALL COMPLY WITH :
  - NEC - NATIONAL ELECTRICAL CODE
  - SCECO POWER UTILITY STANDARDS
- COLOR CODES OF CONDUCTORS INSTALLED ARE AS FOLLOWS:
 

FEEDER	INTERNAL WIRING
a.) LINE A	RED
b.) LINE B	YELLOW
c.) LINE C	BLUE
d.) NEUTRAL	BLACK
e.) GROUND	GREEN
f.) TRAVELLER WIRE	BLACK
- DISTRIBUTION PANELS, POWER PANELS, APPLIANCE PANELS AND LIGHTING PANELS ARE PROPERLY GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.

### MOUNTING HEIGHT OF SWITCHES & OUTLETS:

- (\*) UNLESS OTHERWISE SPECIFIED, UTILITY BOXES ARE USED FOR THE FOLLOWING
- |   |  |
|---|--|
| (a) CONVENIENCE OUTLET                    | 4" x 2 1/8" x 1 7/8" DEEP BOX              |
| (b) LIGHTING OUTLETS                      | 4" x 4" x 1 1/2" DEEP BOX                  |
| (c) SWITCH OUTLETS                        | 4" x 2 1/8" x 1 7/8" DEEP BOX              |
| SINGLE POLE SWITCH                        | GANGABLE MASONRY BOX                       |
| DOUBLE / MULTI SWITCHES                   |  |
| (d) CLOTHES DRYER, EWH AND COOKING RANGE. | 4" SQUARE x 2 1/8" DEEP BOX W/ RISER PLATE |
| (e) FIRE ALARM OUTLET                     | 4" OCTAGON x 1 1/2" DEEP BOX               |
| (f) TEL/CATV OUTLET                       | 4" x 2 1/8" x 1 7/8" DEEP BOX              |
| (g) INTERCOM AND CHIME OUTLET             | 4" x 2 1/8" x 1 7/8" DEEP BOX              |
| (h) A/C SWITCH ( WINDOW A/C)              | 3" x 3" x 2 1/8" DEEP BOX                  |
- (\*) UNLESS OTHERWISE SPECIFIED ALL WALL OUTLETS ARE INSTALLED AT THE FOLLOWING HEIGHTS ABOVE FINISHED FLOOR LEVEL TO BOTTOM OF DEVICE UNLESS OTHERWISE NOTED.
- |  |                |
|--|----------------|
| (a) KITCHEN OUTLETS  |                |
| FOR REFRIGERATOR   | 1150 mm        |
| FOR TELEPHONE  | 1150 mm        |
| GARBAGE DISPOSER PROVIDED WITH JUNCTION BOX, 4" x 2 1/8" x 1 7/8" DEEP, INSTALLED AT 350mm HEIGHT AND SHALL RUN 20mm DIA. CONDUIT IN THE WALL FROM JUCTION BOX UP TO A SWITCH OUTLET INSTALLED AT 1150 HEIGHT. |                |
| (b) TELEVISION/CATV AND TELEPHONE OUTLETS  | 350 mm C.O.B.  |
| (c) CONVENIENCE OUTLETS  | 350 mm C.O.B.  |
| (d) PANEL BOARDS AND BREAKERS WITH ENCLOSURE (TOP OF PANEL)  | 1800 mm        |
| (e) INTERCOM OUTLETS AT GATE / DOOR  | 1350 mm C.O.B. |
| (f) LAUNDRY AND UTILITY OUTLETS  | 1150 mm C.O.B. |
| (g) WALKWAY LIGHT OUTLETS  | 2100 mm C.O.B. |
| (h) RANGE OUTLET   | 150 mm C.O.B.  |



### أقصى عدد للأسلاك داخل الماسورة

نوع الكابلات	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
الكابلات النحاسية	2	3	4	5	6	8
الكابلات الحديدية	2	3	4	5	6	8
الكابلات البولي إيثيلين	2	3	4	5	6	8
الكابلات البولي بروبيلين	2	3	4	5	6	8
الكابلات البولي إيثيلين	2	3	4	5	6	8
الكابلات البولي بروبيلين	2	3	4	5	6	8

### ملاحظات كهربائية

- يتم عمل أرضي عام وهو عبارة عن لوح من النحاس قياس 500x500م يثبت بجوار لوحة التوزيع الرئيسية على عمق لا يقل عن 3متر ويغطي طبقة من الحصى و الملح ويوصل بسلك نحاس يوصل بأرضي اللوحة على ألا تزيد مقارفته من 15 أوم
- يجب أن تكون لوحات التوزيع من النوع العائس بالجدار وتكون معدنية مجهزة بقواطع تيار التوماتيكية
- يراعى استخدام الجدول الاتي في حساب مشوب حثاق القوى والمخارج الأخرى من البلاط هذا بصفة عامة وبصفة خاصة تكون الارتفاعات على حسب رغبة المالك
- يراعى أن تكون دوائر مستقلة لكل من الأتارة والبرايز المؤرزة ومخارج سخانات المياه والأفران الكهربائية وبراييز القوى كل على حدة
- تصحب دوائر التليفزيون والتليفون في مواشير مستقلة كل منها في ماسورة
- تكون الأسلاك المستخدمة من النحاس المعزول بالثرمو بلاستيك PVC-75 ف وتكون رقم 12 امريكى او في مقطع 4-4 للإتارة والبرايز وتكون رقم 10 امريكى او في مقطع 6-6 للمكيفات كحد أدنى ويزداد مقطع الأسلاك بزيادة للمكيفات
- تعدد الأسلاك داخل مواشير حسب الجدول المبين وبصورة عامة للإتارة والبرايز 6 وللماكيفات 6
- يمكن زيادة عدد البراييز وتغيير أماكنها وكذا قطع الأضائة وذلك حسب رغبة المالك وتحت إشراف المهندس المشرف
- تفقيط خطوط وبراييز التليفزيونات والتليفونات في كل غرفة وبالصالت حسب رغبة المالك
- يركب لفظة المكيف حلق من الخشب سمك 5 و يثبت مع العائس لتثبيت المكيف نظام شبك
- يضاه الوارش (السلطح) من جميع الجوانب على أن يكون في كل جانب 2 لمية في كل جانب وبوزن 20كجم بجوار بيت الدرج كما يضاه بيت الدرج بعدد لمبتين في الداخل
- يجب تصيد الكيبات الارضية في مواشير PVC قطر 3 من لوحة التوزيع الى القاطع الرئيسى ومن القاطع الرئيسى الى عداد الكهرباء.
- يضاه سور الفيللا على الواجهة بكشافات فوق العائس والمسافة بينهما 3 متر وضاه السور مع الجيار بكشافات على العائس من الداخل بمسافة بينية لا تزيد عن 6 متر كما يضاه الجراج بعدد لمبتين بالداخل ولمية على مدخل الجراج
- يتم عمل الوصلات والدوائر الخاصة بالاتفون على الجوابات وداخل المبني على حسب رغبة المالك
- توزع جميع الاحمال الكهربائية على الفازات الثلاث بالتساوى
- يقوم بتنفيذ الاعمال الكهربائية متخصص ويتم العمل حسب المخطط وطبقا للمواصفات وحسب الاسول الفنية المعماري عليمًا وحسب تعليمات المهندس المشرف
- جميع الابعاد بالمتر مالم يذكر خلاف ذلك على المخططات
- للملاحظات العامة والاختصاصات يرجى مراجعة مخططات ( الرموز والتفاصيل العامة)
- مخططات التكيف الخاصة بالانابيب ومسارات العوايق تقديمها من قبل الشركة المظفة
- يجب توصيل جميع نقاط الصرف الخاصة بالتكيف بالقرب ماسورة صرف موجودة بالدور ويصل مناسب

### مواصفات واشتراطات (سككوى)

#### مواصفات واشتراطات تركيب البوابز الخاص بالعدادات

- مسك بربواز الخشب لا يقل عن 2 سم
- لا يسمح للمشارك بتوصيل أكثر من كابل واحد على عداد الشركة
- يقوم المشارك بتركيب قاطع خاص به خلف العداد من جانب لا تزيد مسفة عن سعة قاطع الشركة
- أقل مسافة بين صندوق عداد الكهرباء والخدمات الأخرى الكابله والعائف هو مترين
- يجب أن يكون ارتفاع الصندوق 80سم من الرصيف ويكون 100سم من مشوب الأسفلت
- في حالة عمل رخام أو حجر على السور يلزم ترك مسافة 5 سم بين حافة الصندوق العليا وبين الحجر أو الرخام

## قائمة الرموز والتفاصيل العامة LEGENDS & GENERAL DETAILS

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 2922 UHUD STREET ALQUDAH DISTRICT 62554  
 POSTAL CODE 32861  
 TEL 0505819063-0538441143

Project Title :	نادى المحيط
Owner :	المالك : رعاية الشباب نادى المحيط
Site :	الموقع : القطيف حى الجارودية
Lot No. :	رقم القطعة : .....
Block No. :	رقم المخطط : .....

Architect Designer:	ABDULAAL 197836	Arch.
Structure Engr :	HUSSEN 460607	Sheet NO.
Electrical Engr :	.....	Date:
Drawn By:	ABDULAAL 197836	Reference: 2022
Revised By:	ABDULAAL 197836	Drawing Title:
Scale: As Shown		



**WS WATER SUPPLY GROUND FLOOR PLAN**  
 WS-01 SCALE 1:100

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 4-ALL ARCHITECTURAL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH ALL RELATED.STRUCTURAL,ELECTRICAL & MECHANICAL DRAWINGS.  
 5-DEPRESS TOILETS,BATH & KITCHEN BY 0.10 M FROM FINISH FLOOR LEVEL & PROVIDE MEMBRANE WATERPROOFING ON FLOOR SLAB.  
 6-ALL EXTERIOR WALLS SHALL BE 0.20 M THK. THERMOBLOCKS.

مهندس/ حسين عبدالله الناصر  
**ENG. \ HUSSEIN AL-NASSER**  
  
 SIGNED:

الممثل الذهبى للاستشارات الهندسية  
**GOLDEN TRIANGLE ENGINEERING CONSULTANCY**  
 (تصميم - اشراف - مساحة - اعمال سلامة)  
 (DESIGN-SUPERVISION-SURVEYING -SAFETY)

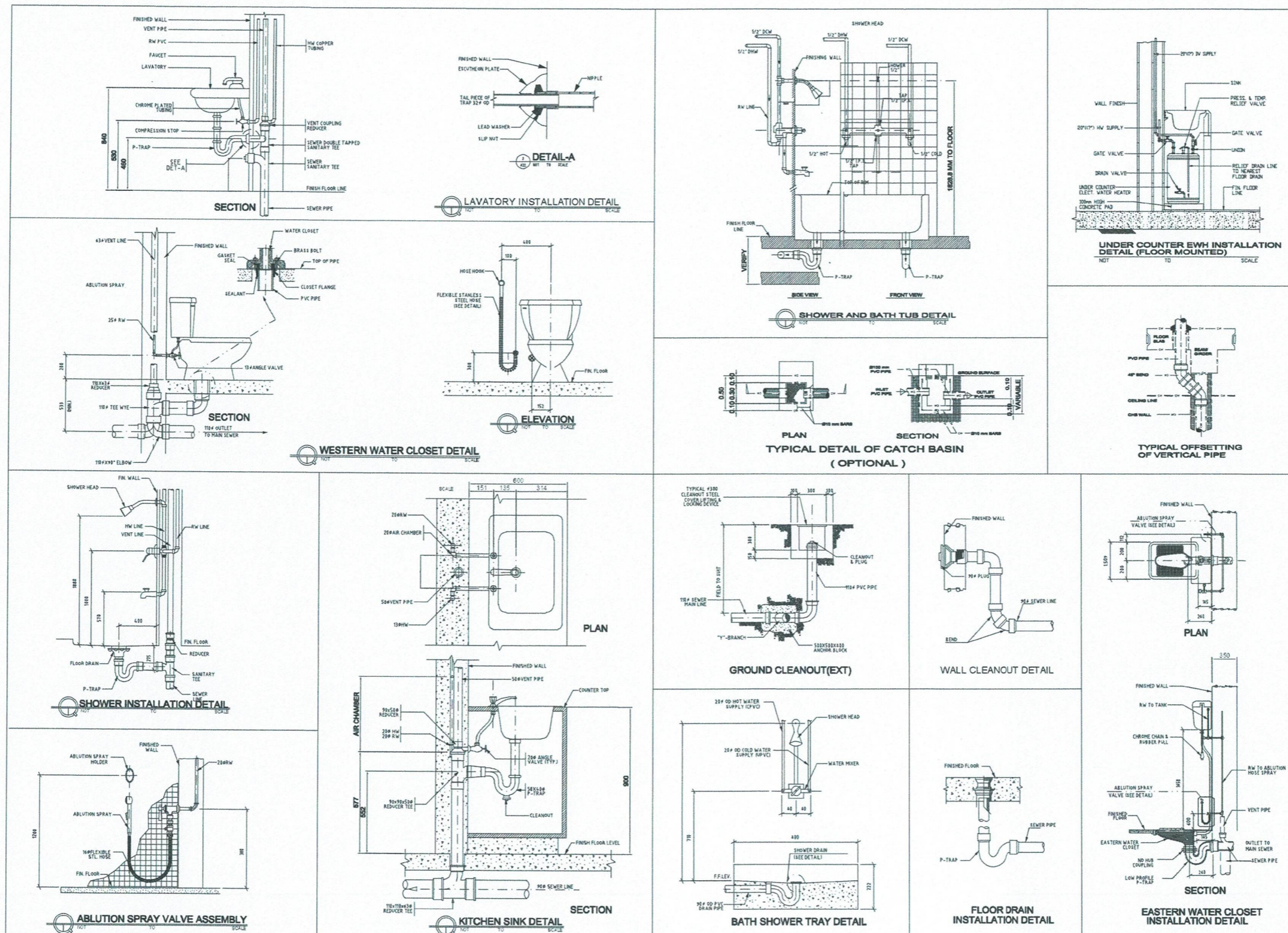
LICENSE No. 5100000733  
 P.O. BOX 6254  
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 القطيف  
**EMAIL:**



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 DAMMAM OATIF  
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Owner :	رعاية الشباب نادى المحيط	المالك :
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**DR DRAINAGE GENERAL DETAIL LAYOUT**  
 DR-05 SCALE 1:100

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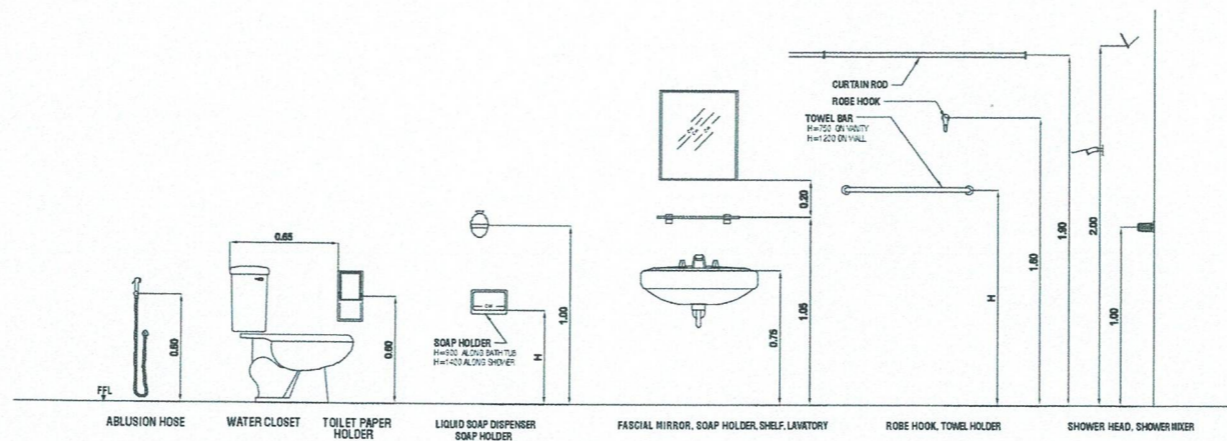
مهندس / حسين عبدالله الناصر  
**ENG. A. HUSSEIN AL-NASSER**  
 مكتب المثلث الذهبي للاستشارات الهندسية  
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 C.R. : 2053117346  
 Golden Triangle Eng. Consulting Office  
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 GOLDEN TRIANGLE ENGINEERING CONSULTANCY  
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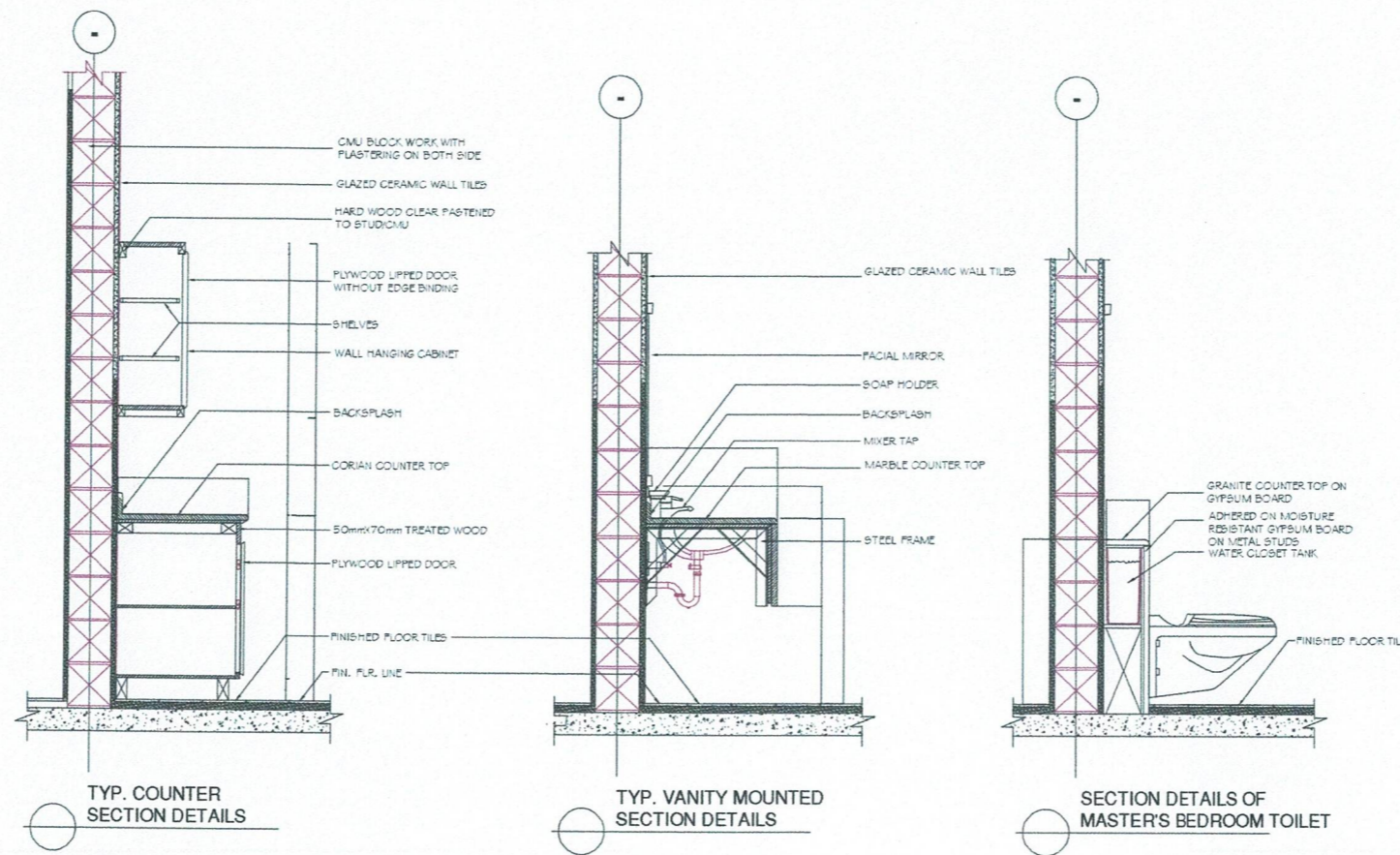
  
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FIXTURES MOUNTING ELEVATIONS



**WS** WATER SUPPLY GENERAL DETAIL LAYOUT  
WS-05 SCALE 1:100

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شركة المثلث الذهبى للاستشارات الهندسية  
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PLUMBING SYSTEMS																																																																																																																																																																																																														
GENERAL NOTES - POTABLE WATER SYSTEM	HYDRAULIC SERVICES NOTES	SYMBOL LEGEND AND DESCRIPTIONS																																																																																																																																																																																																												
<p>1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.</p> <p>2. ALL DIMENSIONS ARE TO BE FIELD VERIFIED, ANY DISCREPANCIES SHOWN IN THE DRAWINGS THE ARCHITECT MUST BE INFORMED.</p> <p>3. ALL PLUMBING WORKS INCLUDED HEREIN SHALL BE EXECUTED IN ACCORDANCE TO THE PROVISIONS OF THE LATEST EDITION OF THE INTERNATIONAL PLUMBING CODE - 2008, AND THE RULES AND REGULATIONS OF THE AUTHORITY HAVING JURISDICTION.</p> <p>4. DRAWINGS ARE DIAGRAMATIC AND DO NOT SHOW ALL OFFSETS, BENDS, ELBOWS, ETC. WHICH ALSO BE REQUIRED FOR PROPER INSTALLATION OF WORK, SUCH WORK SHALL BE VERIFIED AT THE BUILDING SITE, PROVIDED ADDITIONAL BENDS AND OFFSETS ARE NECESSARY.</p> <p>5. POTABLE WATER PIPES AND FITTINGS SHALL BE PVC SCH. 80, SOCKET TYPE. PIPES JOINTS SHALL BE SOLVENT WELD AND SOLVENT CEMENT.</p> <p>6. INSULATION FOR HOT WATER PIPES SHALL BE 25mm THICK RIGID POLYURETHANE.</p> <p>7. EXPOSED PIPES SHALL BE PROVIDED WITH GALVANIZED ALUMINUM CLADDING.</p> <p>8. GATE VALVES SHALL BE CLASS 125 CAST BRONZE, BRONZE BODY, CHEMISE PLATED STEEL BALL, TEFLOM SEALS AND STUFFING BOX RING, BAND WORK, AND THREADED ENDS. PROVIDED WITH COLOR CODING:</p> <p>a. RED - FOR HOT WATER b. BLUE - FOR COLD WATER</p> <p>9. CHECK VALVES SHALL BE CLASS 1504 CAST BRONZE, BRONZE BODY, SWING TYPE WITH BRONZE ROTATING SWING DISC, COMPOSITION DISC, NON-SHOCK AND SCREWED ENDS.</p> <p>10. WATER HAMMER ARRESTOR SHALL BE PRE-CHARGED.</p> <p>11. ALL WATER LINES SHALL BE HYDROSTATICALLY TESTED @ 150 PSI FOR A PERIOD OF TWO(2) HOURS BEFORE BURIED OR COVERED.</p> <p>12. PERINEAL HOSE SPRAY SHALL BE SUPPLIED WITH VACUUM BREAKER.</p> <p>13. THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES @ SITE AND COORDINATE THE WORK WITH THE SEWER AND STORM DRAINAGE LINES EFFLUENT DISPOSAL POINT AND WATERLINES SERVICE CONNECTION/TAPPING POINT.</p>	<p>1. ALL SEWER DRAINAGE TO BE 100mm UNO</p> <p>2. ALL RW PIPE WORK TO BE 150mm UNO</p> <p>3. ALL SUB-SOIL PIPES WORK TO BE 90mm UNO</p> <p>4. ALL CP TO BE 150mm UNO</p> <p>5. ALL SW TO BE 600/400 PRECAST CONCRETE UNO</p> <p>ALL SW TO BE 600/400 PRECAST CONCRETE UNO</p> <p>6. ALL SW TO BE 600/400 PRECAST CONCRETE UNO</p> <p>7. PROVIDE STEP BENCH TO FITS DEEPER THAN 1000mm</p> <p>8. ALL COVERS, GRATES AND FRAMES TO BE CLASS C DUTY WHERE SUBJECT TO VEHICULAR TRAFFIC</p> <p>9. ALL COVERS, GRATES AND FRAMES TO BE CLASS A DUTY WHERE SUBJECT TO PEDESTRIAN TRAFFIC OR LANDSCAPED AREAS</p> <p>10. ALL STORMWATER PIPES TO GRADE AT 1% MIN UNO</p> <p>11. ALL SEWER DRAINAGES SHALL HAVE THE FOLLOWING MINIMUM GRADES:</p> <p>2.40% (1.40) FOR 60mm 1.60% (1.40) FOR 90mm 1.60% (1.40) FOR 100mm 1.20% (1.40) FOR 150mm</p> <p>12. ALL DRAINAGE TO MAINTAIN A MINIMUM COVER OF:</p> <p>60mm - UNDER ROADWAYS 40mm - UNDER DRIVEWAYS &amp; CARPARKS 30mm - UNDER OTHER AREAS</p> <p>13. PIPEWORK TO CONNECT TO EXISTING SEWER MAIN TO LOCAL REQUIREMENTS &amp; APPROVAL.</p> <p>14. PIPEWORK TO CONNECT TO EXISTING STORMWATER PIT TO LOCAL REQUIREMENTS &amp; APPROVAL.</p> <p>15. CONFIRM EXISTING STORMWATER PIPE SIZE, LOCATION AND LEVELS PRIOR TO COMMENCEMENT OF WORK</p> <p>16. ALL WORK TO BE CARRIED OUT TO LOCAL REQUIREMENTS &amp; APPROVAL.</p> <p>17. PIPE SIZES FOR SANITARY PLUMBING TO BE A MIN OF:</p> <p>B - 40mm EK - 50mm VB - 40mm TD - 50mm WC - 100mm SES - 50mm</p> <p>18. ALL VENT PIPES TO TERMINATE TO ATMOSPHERE ABOVE ROOF</p> <p>19. CONNECT TO THE WATER MAIN TO LOCAL REQUIREMENTS &amp; APPROVAL</p> <p>20. ALLOW TO SUPPLY &amp; INSTALL WATER METER TO LOCAL REQUIREMENTS &amp; APPROVAL</p> <p>21. ALLOW TO SUPPLY &amp; INSTALL FIRE HYDRANT BOOSTER CONNECTION TO FIRE BRIGADE &amp; LOCAL REQUIREMENTS &amp; APPROVAL.</p> <p>22. ALL VALVES IN GROUND TO BE PROVIDED WITH PATENT BOX &amp; KEYS.</p> <p>23. PROVIDE LOCKING DEVICE &amp; NOTICE TO ANY CONTROL VALVES TO ANY FIRE HOSE REEL.</p> <p>24. PIPE SIZES FOR COLD WATER TO BE A MIN OF:</p> <p>15mm - TO ONE FIXTURE ONLY 15mm - MAX THREE (3) METERS LONG 20mm - MUST NOT BE USED 25mm - MUST NOT BE USED</p> <p>25. ALL EXTERNAL HOSE COCKS TO BE PROVIDED WITH CONTROL VALVE</p> <p>26. ALL FIRE HOSE REELS TO BE 3M LONG</p> <p>27. ALL CHASIS PIPEWORK TO BE LAGGED</p> <p>28. ALL HOT WATER PIPES WORK TO BE LAGGED</p> <p>29. ALL HOT WATER UNITS SHALL BE 125 LITERS ELECTRIC WITH 3.6 Kw ELEMENTS UNO</p> <p>30. PIPE SIZES FOR HOT WATER TO BE A MIN OF:</p> <p>15mm - MIN 15mm - MAX THREE (3) METERS LONG 20mm - FROM RWU TO FIRST BRANCH</p> <p>31. LOCATION, SIZE, &amp; LEVELS OF EX SERVICES TO BE CHECKED &amp; CONFIRMED PRIOR TO COMMENCEMENT OF WORK</p> <p>32. FOR EXACT LOCATION OF BUILDINGS, WALLS, LEVELS etc REFER TO ARCHITECTURAL DRAWINGS</p> <p>33. FOR ACTUAL LOCATION OF SANITARY FIXTURES OUTLET, ROSE, ETC REFER TO ARCHITECTURAL DRAWINGS</p> <p>34. WHERE FIRE HYDRANTS ARE LOCATED ON EXTERNAL WALLS, WALLS ARE TO HAVE A MIN PSL OF 90/90/90 2.0M SECTION SIDE &amp; 1.0M ABOVE HYDRANT VALVE C.B. AREA OF 5.0M WIDE x 4.0M HIGH</p>	<table border="1"> <thead> <tr> <th>SYMBOLS</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td></td> <td>EWV EASTERN WATER CLOSET</td> </tr> <tr> <td></td> <td>WC WATER CLOSET</td> </tr> <tr> <td></td> <td>B BIDET</td> </tr> <tr> <td></td> <td>LAV. 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<p>GENERAL NOTES - SANITARY SEWER, VENT &amp; DRAINAGE SYSTEM</p> <p>1. WASTE, VENT, DRAINAGE PIPE AND FITTINGS SHALL BE PVC SCH. 40, CLASS 4, SOCKET TYPE. PIPES JOINTS SHALL BE SOLVENT WELD.</p> <p>2. ALL SLOPES FOR HORIZONTAL DRAINAGE SHALL MAINTAIN ONE PERCENT (0.01).</p> <table border="1"> <thead> <tr> <th>ITEM</th> <th>SIZE OF PIPE</th> <th>MIN. SLOPE</th> </tr> </thead> <tbody> <tr> <td>WATER CLOSET</td> <td>100mmØ</td> <td>2%</td> </tr> <tr> <td>FLOOR DRAIN</td> <td>75mmØ</td> <td>2%</td> </tr> <tr> <td>LAVATORY AND SINK</td> <td>50mmØ</td> <td>2%</td> </tr> </tbody> </table> <p>3. PROPOSED SANITARY UTILITIES SHALL CONFORM TO THE ACTUAL LOCATION, DEPTH AND INVERT ELEVATIONS OF ALL EXISTING PIPES AND STRUCTURES AS VERIFIED BY THE CONTRACTOR.</p> <p>4. FLOOR CLEANOUT SHALL BE ADJUSTABLE, DURA-COATED CAST IRON BODY WITH GAS AND WATER TIGHT ABS TAPERED THREADED PLUG AND ROUND SOLEATED BRASS COVER.</p> <p>5. FLOOR DRAINS SHALL BE CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SERRATED SLOTS AND BRASS MEDIUM DUTY SQUARE STRAINER AND HEAD.</p> <p>6. TRAP SEALS SHALL BE PROTECTED FROM SPRINGAGE AND BACK PRESSURE BY MEANS OF VENT SYSTEM, EACH PLUMBING FIXTURE SHALL BE INDIVIDUALLY VENTED UNLESS OTHERWISE SPECIFIED.</p> <p>7. ALL VENT AND BRANCH VENT SHALL BE FREE FROM DROPS OR SAGS AND SUCH VENT SHALL BE GRADED AND CONNECTED AS TO DROP BACK BY GRAVITY TO THE DRAINAGE PIPE THAT SERVE.</p> <p>8. ROOF DECK DRAINS SHALL BE DURA-COATED CAST IRON BODY WITH COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD AND CAST IRON DOME.</p> <p>9. VENT THROUGH ROOF SHALL BE EXTENDED THROUGH ITS FLASHING AND SHALL TERMINATE VERTICALLY NOT LESS THAN 300mm FROM ANY VERTICAL SURFACE.</p>	ITEM	SIZE OF PIPE	MIN. SLOPE	WATER CLOSET	100mmØ	2%	FLOOR DRAIN	75mmØ	2%	LAVATORY AND SINK	50mmØ	2%	<p>13. CONFIRM EXISTING STORMWATER PIPE SIZE, LOCATION AND LEVELS PRIOR TO COMMENCEMENT OF WORK</p> <p>14. ALL WORK TO BE CARRIED OUT TO LOCAL REQUIREMENTS &amp; APPROVAL.</p> <p>17. PIPE SIZES FOR SANITARY PLUMBING TO BE A MIN OF:</p> <p>B - 40mm EK - 50mm VB - 40mm TD - 50mm WC - 100mm SES - 50mm</p> <p>18. ALL VENT PIPES TO TERMINATE TO ATMOSPHERE ABOVE ROOF</p> <p>19. CONNECT TO THE WATER MAIN TO LOCAL REQUIREMENTS &amp; APPROVAL</p> <p>20. ALLOW TO SUPPLY &amp; INSTALL WATER METER TO LOCAL REQUIREMENTS &amp; APPROVAL</p> <p>21. ALLOW TO SUPPLY &amp; INSTALL FIRE HYDRANT BOOSTER CONNECTION TO FIRE BRIGADE &amp; LOCAL REQUIREMENTS &amp; APPROVAL.</p> <p>22. ALL VALVES IN GROUND TO BE PROVIDED WITH PATENT BOX &amp; KEYS.</p> <p>23. PROVIDE LOCKING DEVICE &amp; NOTICE TO ANY CONTROL VALVES TO ANY FIRE HOSE REEL.</p> <p>24. PIPE SIZES FOR COLD WATER TO BE A MIN OF:</p> <p>15mm - TO ONE FIXTURE ONLY 15mm - MAX THREE (3) METERS LONG 20mm - MUST NOT BE USED 25mm - MUST NOT BE USED</p> <p>25. ALL EXTERNAL HOSE COCKS TO BE PROVIDED WITH CONTROL VALVE</p> <p>26. ALL FIRE HOSE REELS TO BE 3M LONG</p> <p>27. ALL CHASIS PIPEWORK TO BE LAGGED</p> <p>28. ALL HOT WATER PIPES WORK TO BE LAGGED</p> <p>29. ALL HOT WATER UNITS SHALL BE 125 LITERS ELECTRIC WITH 3.6 Kw ELEMENTS UNO</p> <p>30. PIPE SIZES FOR HOT WATER TO BE A MIN OF:</p> <p>15mm - MIN 15mm - MAX THREE (3) METERS LONG 20mm - FROM RWU TO FIRST BRANCH</p> <p>31. LOCATION, SIZE, &amp; LEVELS OF EX SERVICES TO BE CHECKED &amp; CONFIRMED PRIOR TO COMMENCEMENT OF WORK</p> <p>32. FOR EXACT LOCATION OF BUILDINGS, WALLS, LEVELS etc REFER TO ARCHITECTURAL DRAWINGS</p> <p>33. FOR ACTUAL LOCATION OF SANITARY FIXTURES OUTLET, ROSE, ETC REFER TO ARCHITECTURAL DRAWINGS</p> <p>34. WHERE FIRE HYDRANTS ARE LOCATED ON EXTERNAL WALLS, WALLS ARE TO HAVE A MIN PSL OF 90/90/90 2.0M SECTION SIDE &amp; 1.0M ABOVE HYDRANT VALVE C.B. AREA OF 5.0M WIDE x 4.0M HIGH</p>	<table border="1"> <thead> <tr> <th>SYMBOLS</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td></td> <td>EWV EASTERN WATER CLOSET</td> </tr> <tr> <td></td> <td>WC WATER CLOSET</td> </tr> <tr> <td></td> <td>B BIDET</td> </tr> <tr> <td></td> <td>LAV. 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	WM WATER METER																																																																																																																																																																																																													
	WP WATER PUMP																																																																																																																																																																																																													
	CWS COLD WATER SUPPLY & RISER																																																																																																																																																																																																													
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BT	BOUNDARY TRAP																																																																																																																																																																																																													
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CP	CHEMISE PLATED																																																																																																																																																																																																													
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EK	EXISTING																																																																																																																																																																																																													
FFL	FINISHED FLOOR LEVEL																																																																																																																																																																																																													
FGL	FINISHED GROUND LEVEL																																																																																																																																																																																																													
FR	FIRE HOSE REEL																																																																																																																																																																																																													
FE	FIRE HYDRANT																																																																																																																																																																																																													
FW	FLOOR WASTE																																																																																																																																																																																																													
GMS	GALVANISED MILD STEEL																																																																																																																																																																																																													
GFV	GARAGE FLOOR WASTE																																																																																																																																																																																																													
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HW	HOT WATER																																																																																																																																																																																																													
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IL	INVERT LEVEL																																																																																																																																																																																																													
EW	ELCOWAST																																																																																																																																																																																																													
LT	LAUNDRY TUB																																																																																																																																																																																																													
LD	LIGHT DUTY																																																																																																																																																																																																													
L	LITER																																																																																																																																																																																																													
LL	LOW LEVEL																																																																																																																																																																																																													
MD	MEDIUM DUTY																																																																																																																																																																																																													
MJ	MISCELLANEOUS																																																																																																																																																																																																													
MM	MILLIMETRES																																																																																																																																																																																																													
NO.	NUMBER																																																																																																																																																																																																													
NP	NON PORTABLE																																																																																																																																																																																																													
PVC	PLY VINYL CHLORIDE																																																																																																																																																																																																													
FR	FIRE RESISTANT & TEMP. RESIST																																																																																																																																																																																																													
RL	RELATIVE LEVEL																																																																																																																																																																																																													
RCP	REINFORCED CONCRETE PIPE																																																																																																																																																																																																													
SMR	SEWER MANHOLE																																																																																																																																																																																																													
SK	SHOWER																																																																																																																																																																																																													
SK	SINK																																																																																																																																																																																																													
SW	STORMWATER																																																																																																																																																																																																													
SW2	STORMWATER PIT & NO.																																																																																																																																																																																																													
SW3	STORMWATER PUMP & NO.																																																																																																																																																																																																													
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VB	VANITY BASIN																																																																																																																																																																																																													
VP	VENT PIPE																																																																																																																																																																																																													
WC	WATER CLOSET																																																																																																																																																																																																													
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F/A	FROM ABOVE																																																																																																																																																																																																													
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T/B	TO BELOW																																																																																																																																																																																																													

**PL** PLUMBING NOTES, SYMBOL & ABBREVIATIONS  
PL-01 SCALE 1:100

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6-ALL EXTERIOR WALLS SHALL BE 0.20 M THK. THERMOBLOCKS.

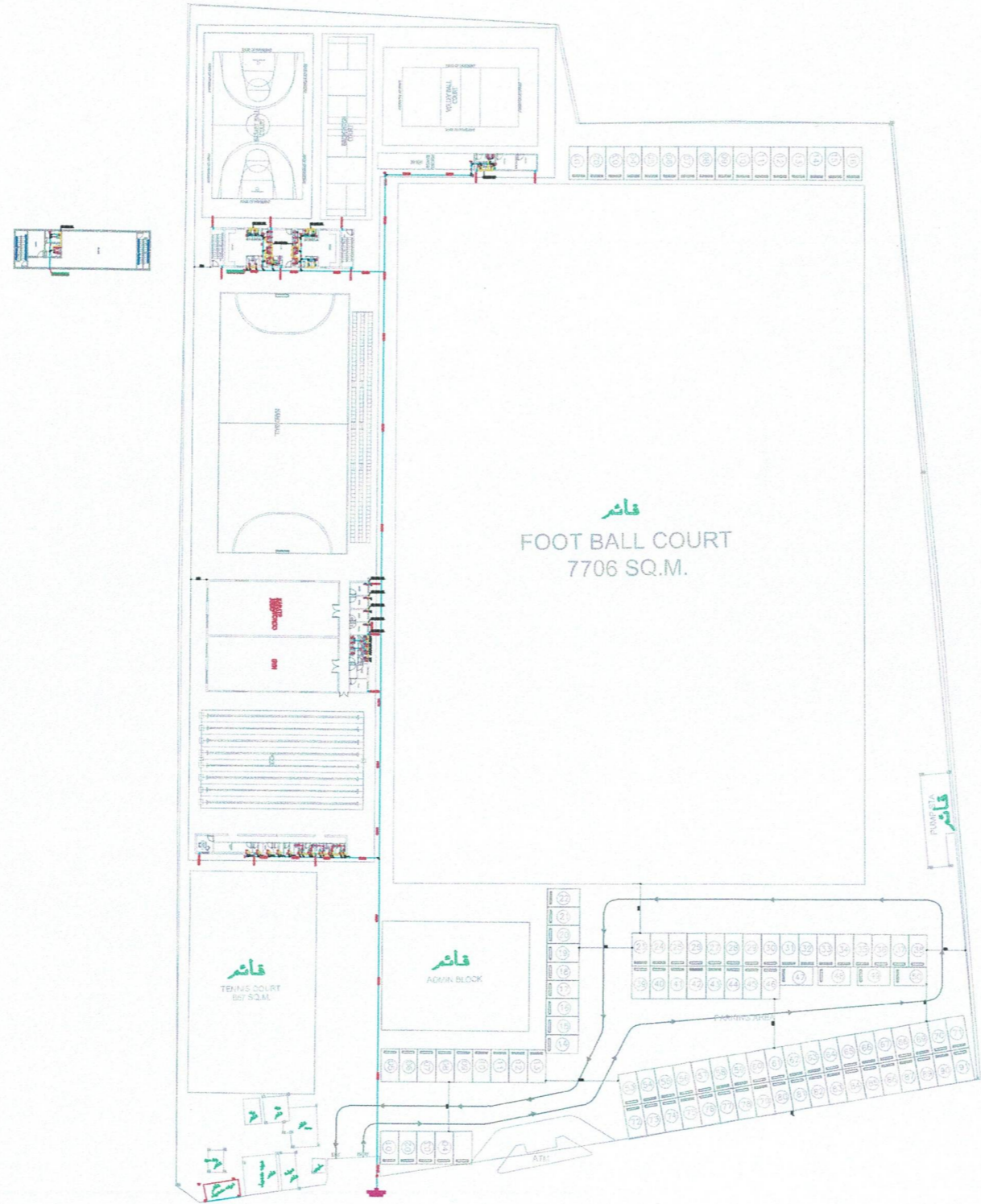
مهندس / حسين عبدالله الناصر  
ENG. HUSSEIN AL-NASSER  
ر.ت. 2053117346  
Golden Triangle Eng. Consulting Office  
SIGNED: يعتمد:

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المشروع : نادي المحيط  
المالك : رعاية الشباب نادي المحيط  
الموقع : القطيف حي الجارودية  
رقم القطعة : .....  
رقم المخطط : .....

Architect Designer:	ABDULAL 197836	Arch.
Structure Engr:	HUSSEN 460607	Sheet NO.
Electrical Engr:	.....	Date:
Drawn By:	ABDULAL 197836	Reference: 2022
Revised By:	ABDULAL 197836	Drawing Title:
Scale: As Shown		



**DR DRAINAGE GROUND FLOOR PLAN**  
 WS-01 SCALE 1:100

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**ENG. HUSSEIN AL-NASSER**  
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Project Title :	نادى المحيط	اسم المشروع :
Owner :	رعاية الشباب نادى المحيط	المالك :
Site :	القطيف حى الجارودية	الموقع :
Lot No. :	.....	رقم القطعة :
Block No. :	.....	رقم المخطط :

Architect Designer:	ABDULAAL 197836	Arch.
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WATER PUMPS SCHEDULE									
UNIT TAG	FLOW (GPM)	HEAD (M)	ESTM. (KW)*	ELEC. DETAILS V/Hz/Ph	DESIGNATION	QUANTITY			REMARKS
						DUTY	STAND BY	TOTAL	
B.P-01	57	23	1.8	220/60/1	GROUND	1	1	2	BOOSTER PUMP - GROUND

**WS** PUMP SCHEDULE & GENERAL DETAIL LAYOUT  
WS-06 SCALE 1:100

- NOTES**
- ALL PLUMBING WORKS, METHODS OF INSTALLATION, LOCATION AND QUALITY SHALL BE SUBJECT TO THE RECOMMENDATION AND APPROVAL OF THE SUPERVISING ENGINEER.  
كل الاعمال السمية من طرق التركيب والاماكن والجودة سوف تكون تبعا لتوصيات وموافقة المهندس المشرف
  - PIPING SHOULD RUN STRAIGHT AND DIRECT AS POSSIBLE. NO PIPING SHOULD RUN WITHIN 1500mm LATERALLY OF ELECTRICAL APPARATUS AS PANELS OR SWITCHBOARDS.  
يجب ان تسير المواسير في خط مستقيم ومباشرة على قدر الامكان ولا يجب ان تسير المواسير بالقرب من اجهزة كهربائية مثل اللوحات
  - UNDERGROUND PIPES & FITTINGS SHALL BE BURIED TO A MINIMUM DEPTH OF 300 mm BELOW THE SURFACE OF THE GROUND, 600mm BELOW THE ROAD AND A MINIMUM DISTANCE OF 600 mm FROM THE BUILDING.  
كل المواسير تحت الارض يجب ان تدفن تحت عمق 300 مم على الاقل تحت سطح الارض و600 مم في حالة الاسفلت, ومسافة 600 مم عن المبنى
  - HORIZONTAL DRAINAGE PIPING SHALL BE RUN IN PRACTICAL ALIGNMENT AND UNIFORM BE SLOPED AT MAXIMUM OF 2.0% AND MINIMUM OF 0.5% SLOPE UNLESS OTHERWISE STATED.  
مواسير الصرف الافقية يجب ان تسير في ثبات وميول منتظم من 2٪ الى 0.5٪ ما لم ينص على ذلك
  - CLEAN OUT SHALL BE PLACED AT ALL CHANGE IN DIRECTION AS SHOWN ON THE PLAN OR AS REQUIRED.  
طبقات التسليك يجب ان توضع عند كل تغيير في الاتجاه كما موضح في المخطط او كلما تطلب ذلك
  - ALL SOIL, WASTE PIPES & VENT THRU ROOF PIPES SHALL BE OF PVC PIPE SCHEDULE 40 AND FITTED AS PER MANUFACTURERS SPECIFICATION.  
كل مواسير الصرف الثقيل او الخفيف او التعوية يجب ان تكون جدول PVC 40
  - VENT THRU ROOF SHALL BE 300 mm ABOVE FINISHED ROOF LINE.  
التعوية عبر السقف يجب ان تكون فوق السقف ب 300 مم
  - SCHEDULE 80 PVC PIPES AND FITTINGS SHALL BE USED FOR ALL WATER SUPPLY SYSTEM. PIPES INSTALLED AT ROOF SHOULD BE INSULATED.  
مواسير التغذية بالمياه يجب ان تكون جدول 80 والمواسير المركبة على السطح يجب عزلها.
  - ALL EXPOSED PIPES INCLUDING THOSE ABOVE FALSE CEILING SHOULD HAVE COLORS CODES WITH CLEARLY PRINTED LEGEND IDENTIFYING CONTENTS OF PIPE.  
كل المواسير المكشوفة بما فيهم المواسير فوق السقف الساقط يجب ان تعلم بكون اللون يبين محتواها.
  - SUPPLY WATER PIPING SYSTEMS SHALL BE TESTED AFTER INSTALLATION TO 1.5 TIMES WORKING PRESSURE FOR 4 HOURS. AND DRAINAGE PIPING SYSTEMS SHALL BE TESTED AT 3 METER HEAD نظام تغذية المياه يختبر بعد التركيب بضغط اكبر من ضغط التشغيل ب 1.5 لمدة 4 ساعات ويختبر نظام الصرف بضغط المياه بارتفاع 3 متر.
  - SUPPLY WATER FITTINGS SHALL BE PROTECTED BY THRUST BLOCK AND DRAINAGE AND WATER PIPES SHALL BE PROTECTED BY CONCRETE BLOCKS.  
كل توصيلات المياه يجب ان تحمي ببلوك خرساني ومواسير المياه ومواسير المياه والصرف بالخرسانة

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