

1 SECOND FLOOR PLAN-HVAC PIPING LAYOUT  
M508 SCALE = 1:200

Tourism Sector Development Project  
in the Hashemite Kingdom of Jordan

The Government of Jordan  
The Hashemite Kingdom of Jordan  
The Ministry of Tourism and Antiquities  
The Ministry of Planning

Sub-Project:  
**NATIONAL MUSEUM**

Note:  
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**LEGEND**

- CH — CHILLED WATER SUPPLY
- - - - - CR — CHILLED WATER RETURN
- - - - - HCS — HEATING/CHILLED WATER SUPPLY
- - - - - HCR — HEATING/CHILLED WATER RETURN
- HS — HEATING SUPPLY
- - - - - HR — HEATING RETURN
- - - - - C — CONDENSATE PIPE

FAN COIL UNIT

D/D DROP DOWN  
F/A FROM ABOVE  
T/B TO BELOW  
A/A TO ABOVE  
B/B TO BELOW

**NOTES**

- 1- ALL DIM. ARE IN MM UNLESS OTHERWISE STATED
- 2- ALL CONDENSATE PIPES TO BE SLOPED 1%

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Japan International Cooperation Agency (JICA)

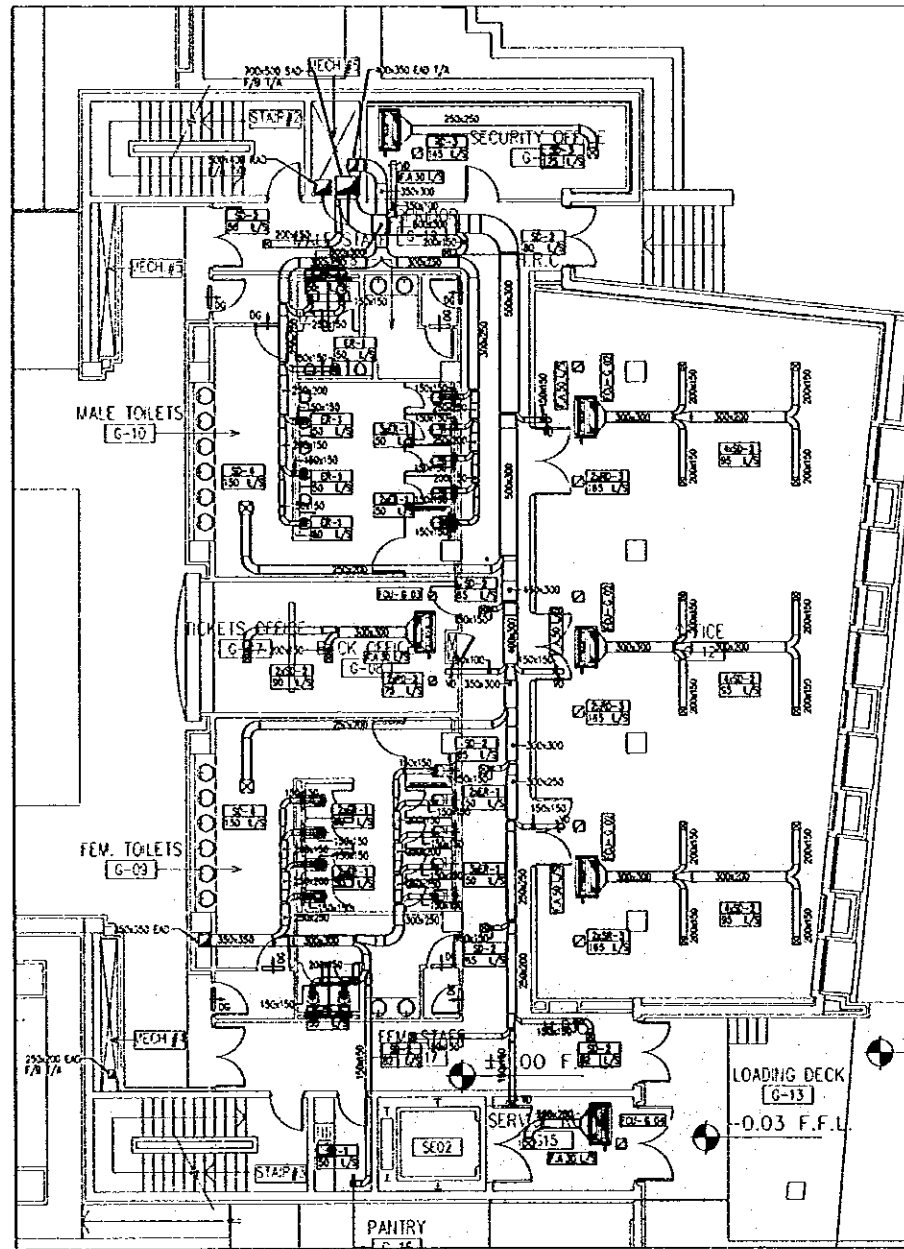
JICA Study Team:  
Joint Venture of Pacific Consultants International and Yamasita Sekkei Inc.

Subcontracted Local Consultant:  
Jafar Tukan and Partners Architects and Engineers

Drawing Title:  
SECOND FLOOR PLAN-HVAC PIPING LAYOUT

Scale: 1:200 Drawing No: M508





1 GROUND FLOOR PLAN OFFICES-DUCTING LAYOUT  
M510 SCALE = 1:100

Tourism Sector Development Project  
In the Hashemite Kingdom of Jordan

The Government of  
The Hashemite Kingdom of Jordan  
The Ministry of Tourism and Antiquities  
The Ministry of Planning

Sub-Project:  
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LEGEND

- SUPPLY DIFFUSER
- RETURN DIFFUSER
- EXHAUST RECESS
- VOLUME DAMPER
- FIRE DAMPER
- FAN COIL UNIT
- SUPPLY AIRPORT
- EXHAUST AIRPORT
- FRESH AIR CAPACITY IN U/A
- EXHAUST ATTENUATOR
- DUCTED TOILE
- EXHAUST FAN
- COOLING DUCT REGR
- DUCT REGR
- TEMPERATURE CONTROL
- ACCESS PANEL
- D.P.
- D.O.
- FRESH AIR DUCT
- FRESH AIR
- FROM ABOVE
- FROM BELOW
- HIGH LEVEL
- LOW LEVEL
- R.O.
- S.O.
- TO ABOVE
- TO BELOW

NOTE -  
1. ALL AIR IS IN PRESSURE SYSTEM  
2. EXHAUST DUCTS SHALL BE PROVIDED WITH THE CORRECT SIZES OF DUCT FLOOR  
LINE TO AVOID THE BUMPED UP SOUND  
3. SUPPLY AIRPORT AND EXHAUST AIRPORT SHALL BE PROVIDED

Designed by:  
Japan International Cooperation  
Agency (JICA)

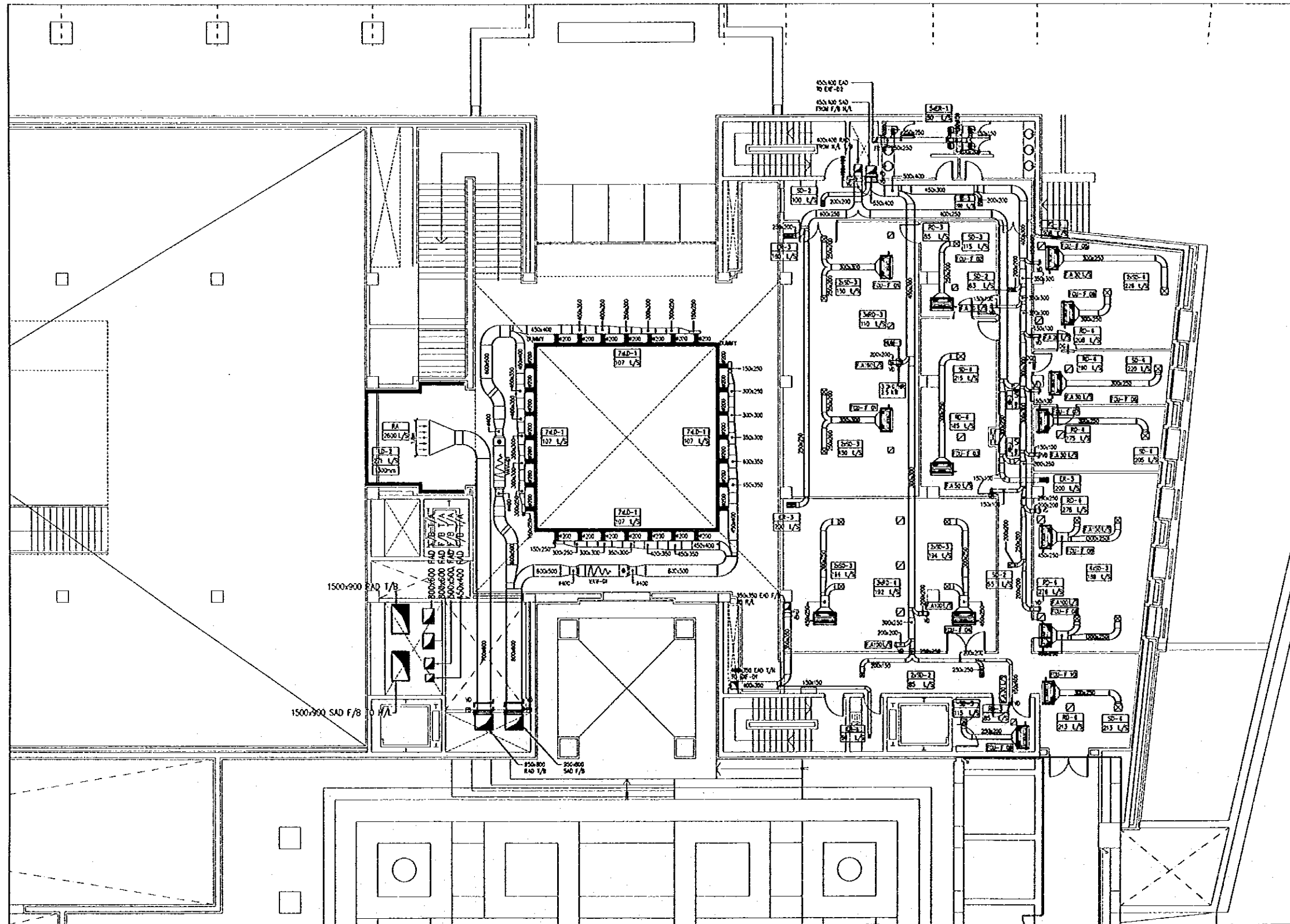
JICA Study Team:  
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Yamasita Seidel Inc.

Subcontracted Local Consultant:  
Jafar Tukan and Partners  
Architects and Engineers

Drawing Title:  
GROUND FLOOR PLAN-  
OFFICES-DUCTING LAYOUT

Scale: 1:100 Drawing No: M510

G:\J0023-JTP\Dwg\Mech\NEW\J0023-M511.dwg Sat Jun 17 17:58:49 2000



1 FIRST FLOOR PLAN-HVAC DUCTING LAYOUT  
M511 SCALE = 1:100

Tourism Sector Development Project  
in the Hashemite Kingdom of Jordan

The Government of  
The Hashemite Kingdom of Jordan  
The Ministry of Tourism and Antiquities  
The Ministry of Planning

Sub-Project:  
NATIONAL MUSEUM

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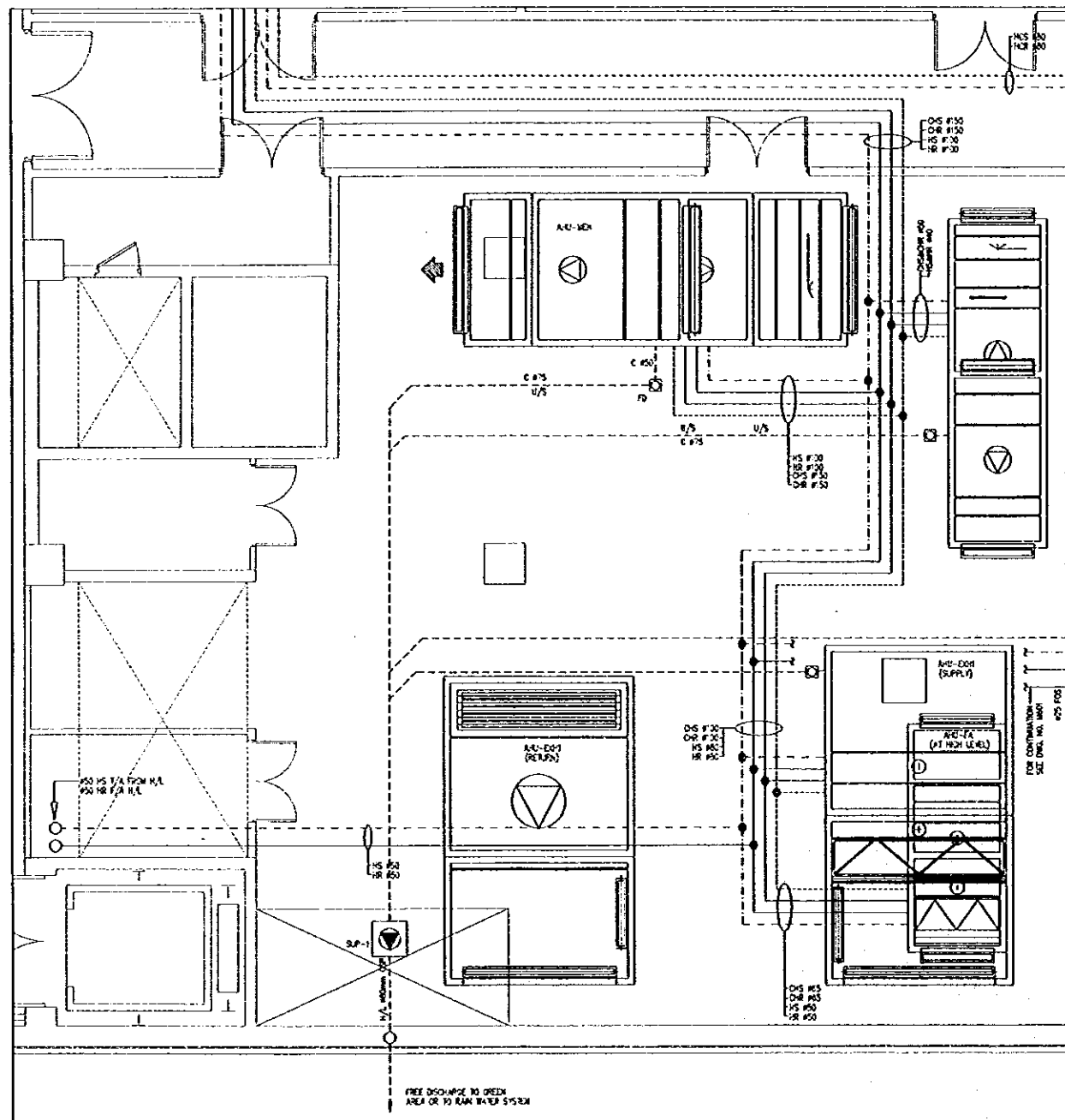
LEGEND

- 30 SUPPLY DIFFUSER
- 30 RETURN DIFFUSER
- 10 EXHAUST RECEPTOR
- 10 VOLUME DAMPER
- 10 FIRE DAMPER
- 10 FAN COIL UNIT
- 10 FRESH AIR CAPACITY IN L/S
- 10 FRESH AIR CAPACITY IN L/S
- 10 SOUND ATTENUATOR
- 10 DUCTED TYPE EXHAUST FAN
- 10 DUCT AIR DUCT REVER
- 10 DUCT RISER
- 10 TEMPERATURE CONTROL
- 10 ACCESS PANEL
- 10 SHIP SIGN
- 10 EXHAUST AIR DUCT
- 10 FRESH AIR FROM ABOVE
- 10 FRESH AIR FROM BELOW
- 10 HIGH LEVEL
- 10 LOW LEVEL
- 10 RETURN AIR DUCT
- 10 SUPPLY AIR DUCT
- 10 TO ABOVE
- 10 TO BELOW

NOTE:-  
1- ALL DIM ARE IN UNLESS OTHERWISE STATED  
2- SPECIAL NOTES REGARDING THIS PLAN SHALL  
BE PROVIDED BY THE CLIENTS OFFICE AT 500 FLOOR  
3- DIMENSIONS SHOWN ARE ONLY TO BE REFERRED

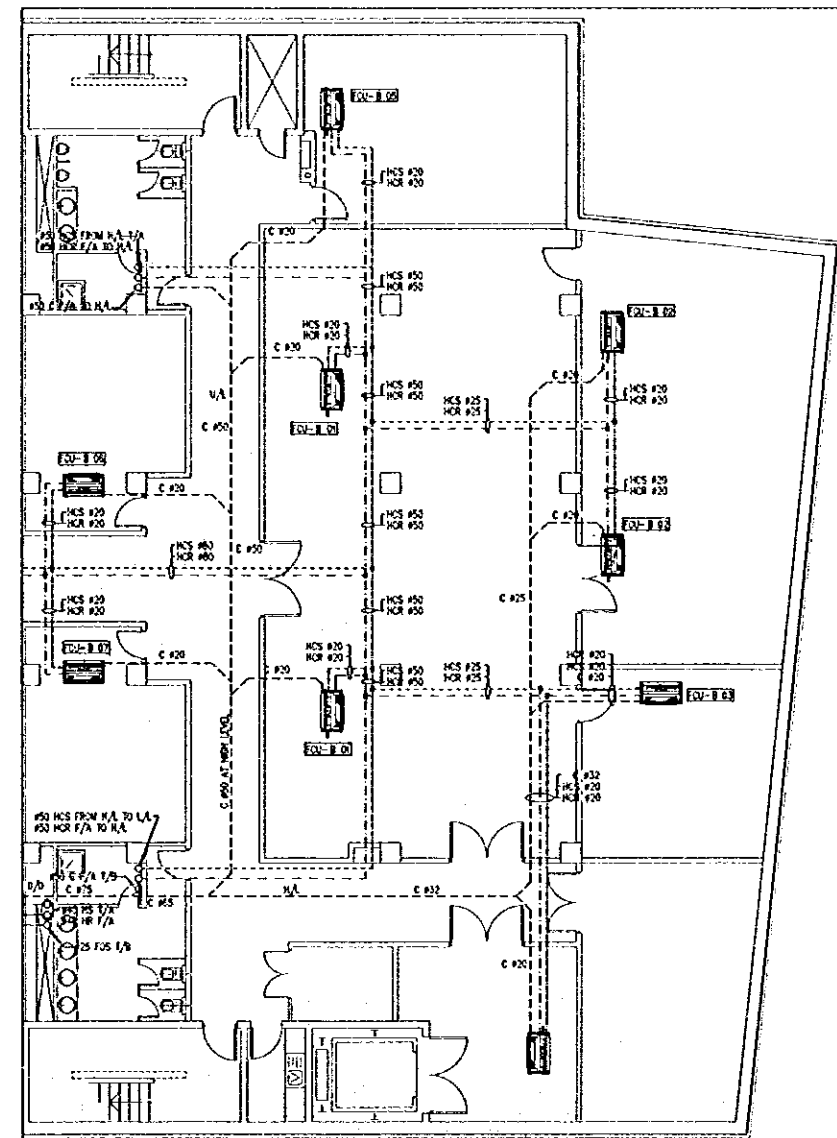
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JICA Study Team:  
Joint Venture of  
Pacific Consultants International and  
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Subcontracted Local Consultant:  
Jafar Tukon and Partners  
Architects and Engineers

Drawing Title:  
FIRST FLOOR PLAN-  
HVAC DUCTING LAYOUT  
  
Scale:  
1:100  
  
Drawing No.:  
M511

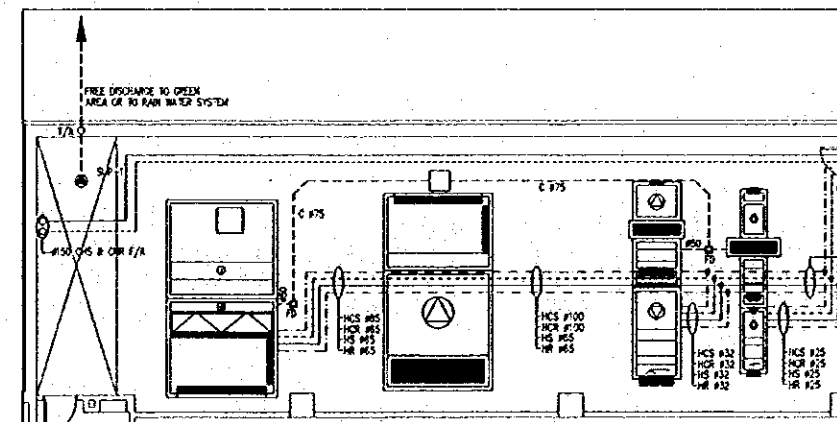


1 DETAIL B  
M512 SCALE = 1:50

2 BASEMENT FLOOR PLAN OFFICES-HVAC PIPING LAYOUT  
M512 SCALE = SHOWN



2 DETAIL A  
M512 SCALE = 1:100



3 DETAIL C  
M512 SCALE = 1:100

Tourism Sector Development Project  
in the Hashemite Kingdom of Jordan

The Government of  
The Hashemite Kingdom of Jordan  
The Ministry of Tourism and Antiquities  
The Ministry of Planning

Sub-Project:  
**NATIONAL MUSEUM**

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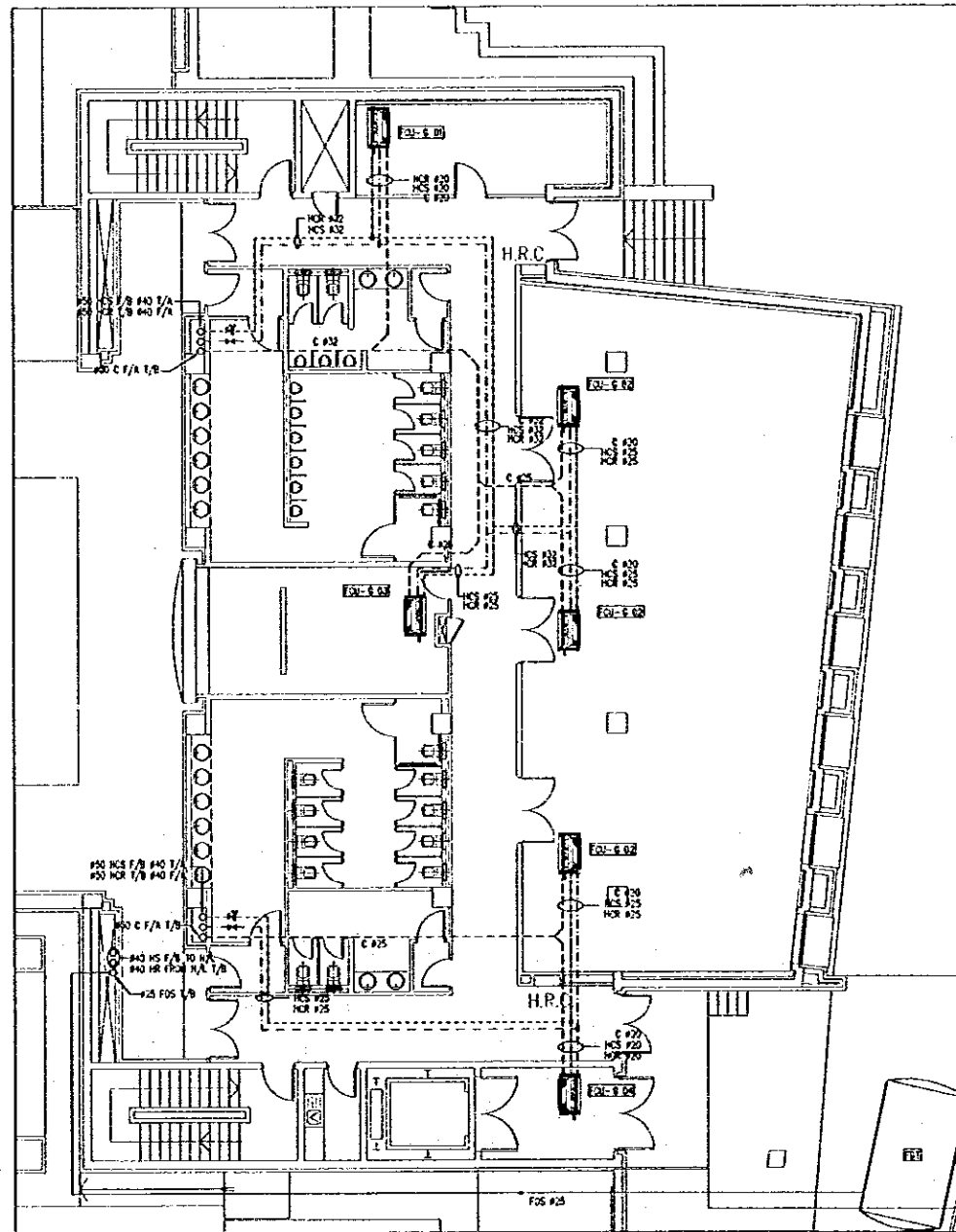
- LEGEND
- OS — CHILLED WATER SUPPLY
  - OR — CHILLED WATER RETURN
  - HCS — HEATING/CHILLED WATER SUPPLY
  - HCR — HEATING/CHILLED WATER RETURN
  - HS — HEATING SUPPLY
  - HR — HEATING RETURN
  - C — CONDENSATE PIPE
- FAN COIL UNIT  
 D/B DROP DOWN  
 F/A FROM ABOVE  
 T/B TO BELOW  
 T/A TO ABOVE

- NOTES
- 1- ALL DIM. ARE IN MM UNLESS OTHERWISE STATED
  - 2- ALL CONDENSATE PIPES TO BE SLOPED 1%

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Agency (JICA)  
  
JICA Study Team:  
Joint Venture of  
Pacific Consultants International and  
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Subcontracted Local Consultant:  
Jafar Tukan and Partners  
Architects and Engineers

Drawing Title:  
BASEMENT FLOOR PLAN-  
OFFICES-HVAC PIPING LAYOUT

Scale: SHOWN Drawing No: **M512**



1 GROUND FLOOR PLAN OFFICES-HVAC PIPING LAYOUT  
M513 SCALE = 1:100

Tourism Sector Development Project  
in the Hashemite Kingdom of Jordan







The Government of  
The Hashemite Kingdom of Jordan  
The Ministry of Tourism and Antiquities  
The Ministry of Planning

Sub-Project:  
NATIONAL MUSEUM

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LEGEND

- CS — CHILLED WATER SUPPLY
- - - - - CR - - - - - CHILLED WATER RETURN
- . - . - HCS - - - HEATING/CHILLED WATER SUPPLY
- . . . . HCR - - - HEATING/CHILLED WATER RETURN
- HS — HEATING SUPPLY
- - - - - HR - - - HEATING RETURN
- - - - - C - - - - - CONDENSATE PIPE
-  FAN COIL UNIT
-  D/D DROP DOWN
-  F/A FROM ABOVE
-  F/B FROM BELOW
-  T/A TO ABOVE
-  T/B TO BELOW

NOTES

- 1- ALL DIM. ARE IN MM UNLESS OTHERWISE STATED
- 2- ALL CONDENSATE PIPES TO BE SLOPED 1%

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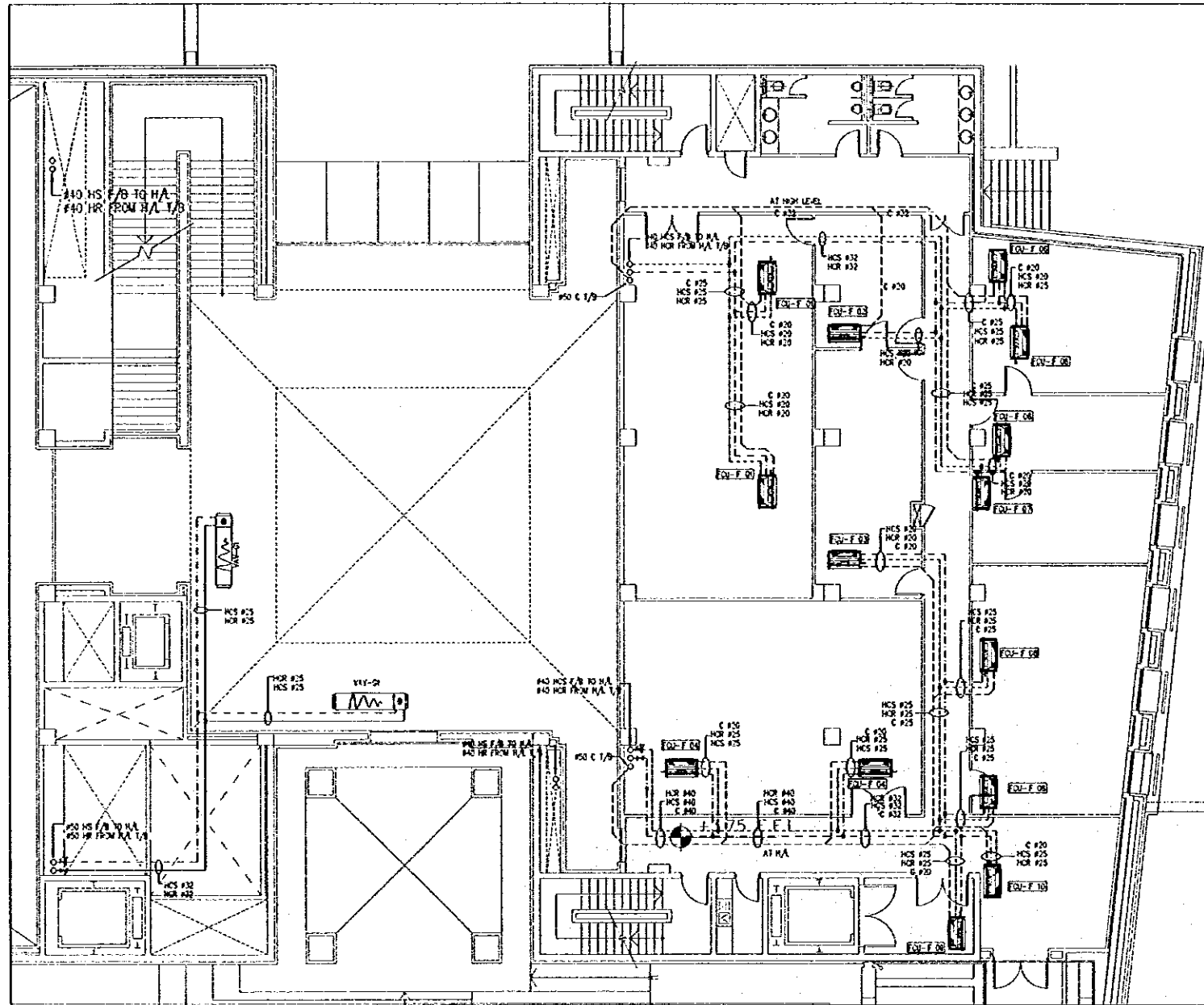
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Yamashita Sekkei Inc.

Subcontracted Local Consultant:  
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Architects and Engineers

Drawing Title:  
GROUND FLOOR PLAN-  
OFFICES-HVAC PIPING LAYOUT

Scale:  
1:100

Drawing No.:  
M513



1 FIRST FLOOR PLAN OFFICES-HVAC PIPING LAYOUT  
 M514 SCALE = 1:100

Tourism Sector Development Project  
 in the Hashemite Kingdom of Jordan

The Government of  
 The Hashemite Kingdom of Jordan  
 The Ministry of Tourism and Antiquities  
 The Ministry of Planning

Sub-Project:  
**NATIONAL MUSEUM**

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**LEGEND**

- CHS — CHILLED WATER SUPPLY
- CHR --- CHILLED WATER RETURN
- - - HRS - - HEATING, CHILLED WATER SUPPLY
- - - HRR - - HEATING, CHILLED WATER RETURN
- HS — HEATING SUPPLY
- - - HR - - HEATING RETURN
- - - C - - CONDENSATE PIPE
- FAN COIL UNIT
- S/P DOWN
- F/A FROM ABOVE
- F/B FROM BELOW
- T/A TO ABOVE
- T/B TO BELOW

- NOTES**
- 1- ALL DIM. ARE IN MM UNLESS OTHERWISE STATED
  - 2- ALL CONDENSATE PIPES TO BE SLOPED 1%

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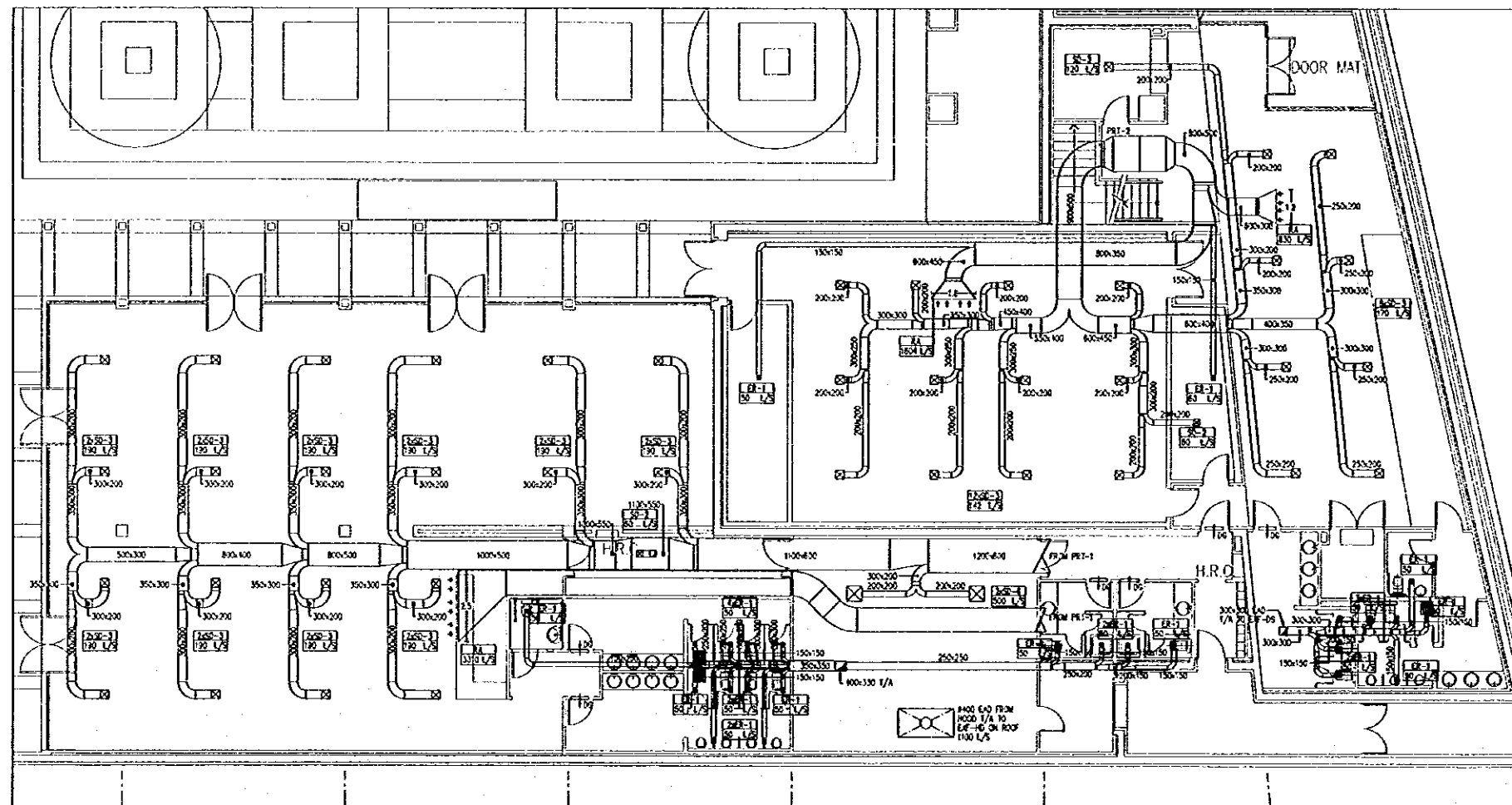
JICA Study Team:  
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 Pacific Consultants International and  
 Yamashita Sekkei Inc.

Subcontracted Local Consultant:  
 Ja'far Tukon and Partners  
 Architects and Engineers

Drawing Title:  
 FIRST FLOOR PLAN -  
 OFFICES-HVAC PIPING LAYOUT

Scale:  
 1:100

Drawing No.:  
**M514**



1 GROUND FLOOR PLAN SEMINAR & CAFETERIA-HVAC DUCTING LAYOUT  
M515 SCALE = 1:100

Tourism Sector Development Project  
in the Hashemite Kingdom of Jordan

The Government of  
The Hashemite Kingdom of Jordan  
The Ministry of Tourism and Antiquities  
The Ministry of Planning

Sub-Project:  
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- LEGEND
- 10 SUPPLY DIFFUSER
  - 10 RETURN DIFFUSER
  - 10 EXHAUST REGISTER
  - 10 VOLUME DAMPER
  - 10 FIRE DAMPER
  - 10 FLEX COIL UNIT
  - 10 FRESH AIR CAPACITY IN L/S
  - 10 SOUND ATTENUATOR
  - 10 SQUARE TYPE EXHAUST FAN
  - 10 CIRCULAR DUCT RISER
  - 10 DUCT RISER
  - 10 TEMPERATURE CONTROL
  - 10 ACCESS PANEL
  - 10 DROP DOWN
  - 10 EXHAUST AIR DUCT
  - 10 FRESH AIR FROM ABOVE
  - 10 FRESH AIR FROM BELOW
  - 10 HIGH LEVEL
  - 10 LOW LEVEL
  - 10 RETURN AIR DUCT TO ROOM
  - 10 SUPPLY AIR DUCT TO ROOM
  - 10 TO ROOM
  - 10 TO ROOM

NOTE:-  
1- ALL DUCTS ARE IN UNLESS OTHERWISE SHOWN  
2- VERTICAL DUCTS SHOULD HAVE THE DUCT SHALL  
BE MARKED WITH THE NUMBER OF EACH FLOOR  
UP TO THE NUMBER OF STORES  
3- THROUGH THE ROOF HOLES SHALL BE MARKED

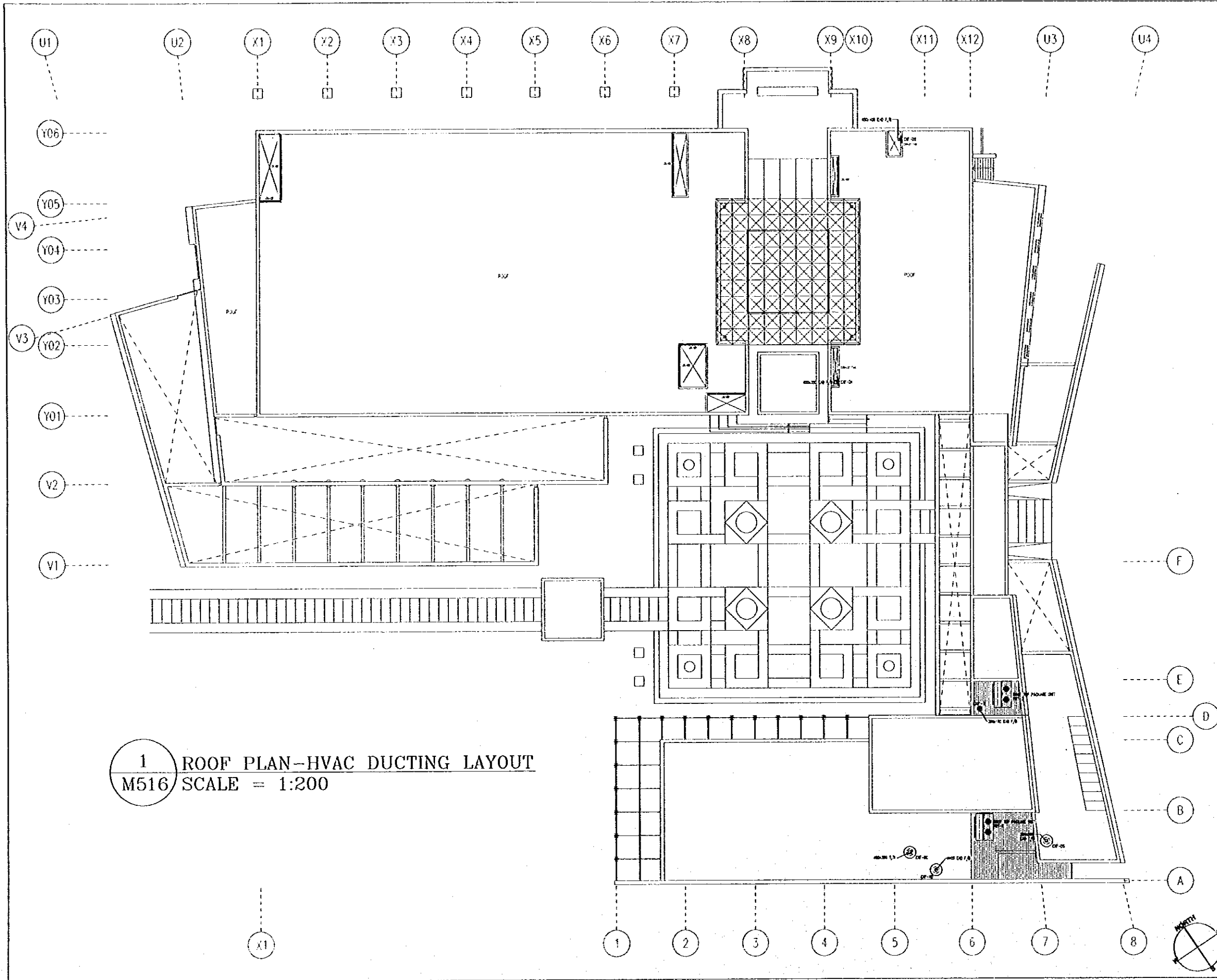
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Subcontracted Local Consultant:  
Jafar Tukan and Partners  
Architects and Engineers

Drawing Title:  
GROUND FLOOR PLAN-  
SEMINAR & CAFETERIA-HVAC DUCTING LAYOUT

Scale: 1:100 Drawing No: M515



G:\J0023-JTP\DWG\Mech\NEW\J0023-M516.dwg Sat Jun 17 18:22:27 2000



1 ROOF PLAN-HVAC DUCTING LAYOUT  
 M516 SCALE = 1:200

Tourism Sector Development Project  
 in the Hashemite Kingdom of Jordan

The Government of  
 The Hashemite Kingdom of Jordan  
 The Ministry of Tourism and Antiquities  
 The Ministry of Planning

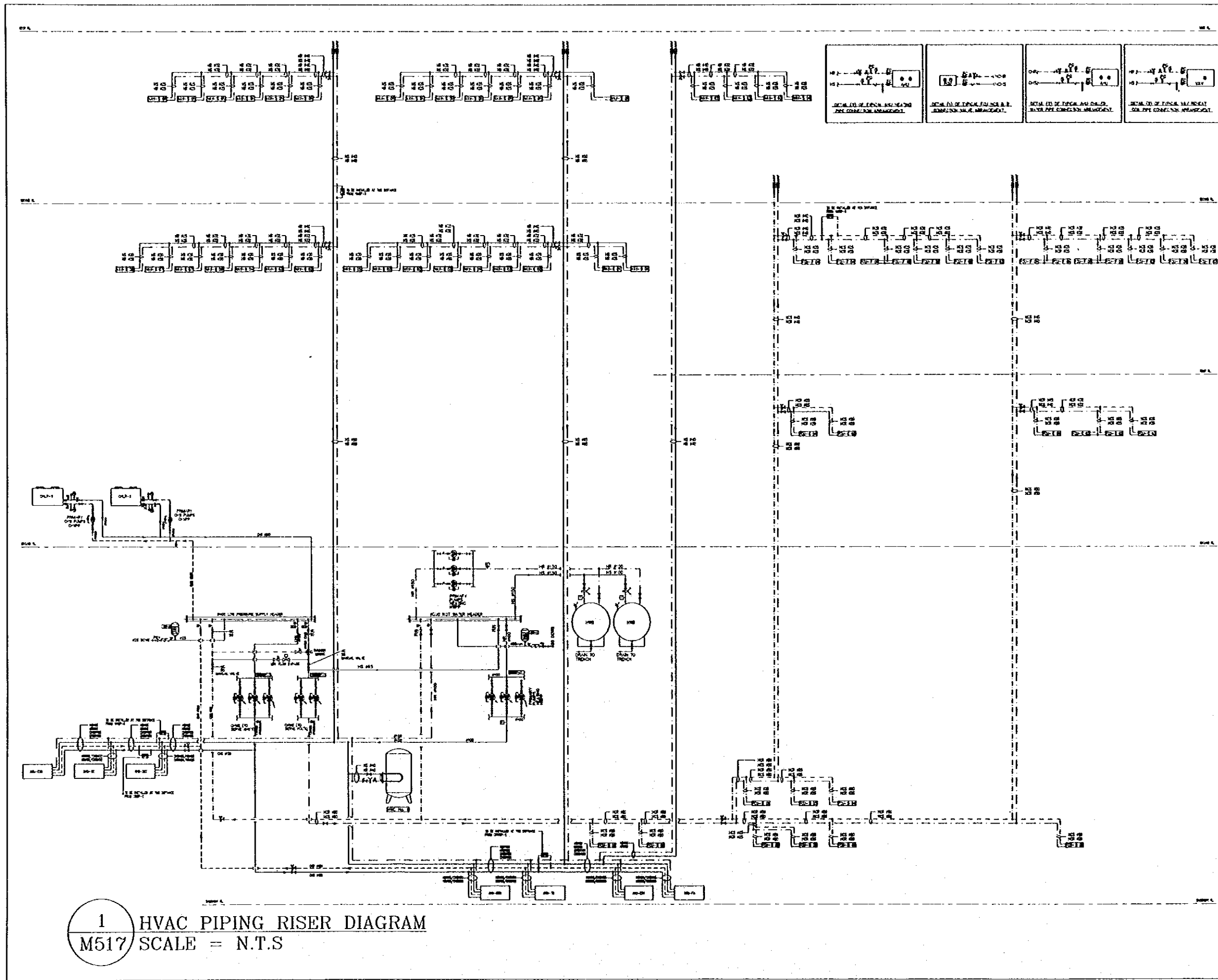
Sub-Project:  
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 Subcontracted Local Consultant:  
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 Architects and Engineers

Drawing Title:  
 ROOF PLAN-  
 HVAC DUCTING LAYOUT

Scale:  
 1:200  
 Drawing No.:  
 M516



1 HVAC PIPING RISER DIAGRAM  
M517 SCALE = N.T.S

Tourism Sector Development Project  
in the Hashemite Kingdom of Jordan

The Government of  
The Hashemite Kingdom of Jordan  
The Ministry of Tourism and Antiquities  
The Ministry of Planning

Sub-Project:  
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- LEGEND
- OS — CHILLED WATER SUPPLY
  - OR — CHILLED WATER RETURN
  - HS — HEATING/CHILLED WATER SUPPLY
  - HR — HEATING/CHILLED WATER RETURN
  - HS — HEATING SUPPLY
  - HR — HEATING RETURN
  - C — CONDENSATE PIPE
- FAN COIL UNIT
  - FLOW SENSOR
  - FLOW SWITCH
  - DIFFERENTIAL PRESSURE SENSOR
  - DROP DOWN
  - FROM ABOVE
  - FROM BELOW
  - SHOWER OPEN
  - SHOWER CLOSE
  - TO ABOVE
  - TO BELOW
  - WATER OPEN
  - WATER CLOSE

- NOTES
- 1- ALL DIM ARE IN MM UNLESS OTHERWISE STATED
  - 2- ALL CONDENSATE PIPES TO BE SLOPED 1%

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Jafar Tukon and Partners  
Architects and Engineers

Drawing Title:  
HVAC PIPING RISER DIAGRAM

Scale: N.T.S. Drawing No: M517

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Tourism Sector Development Project  
In the Hashemite Kingdom of Jordan

The Government of  
The Hashemite Kingdom of Jordan  
The Ministry of Tourism and Antiquities  
The Ministry of Planning

Sub-Project:  
**NATIONAL MUSEUM**

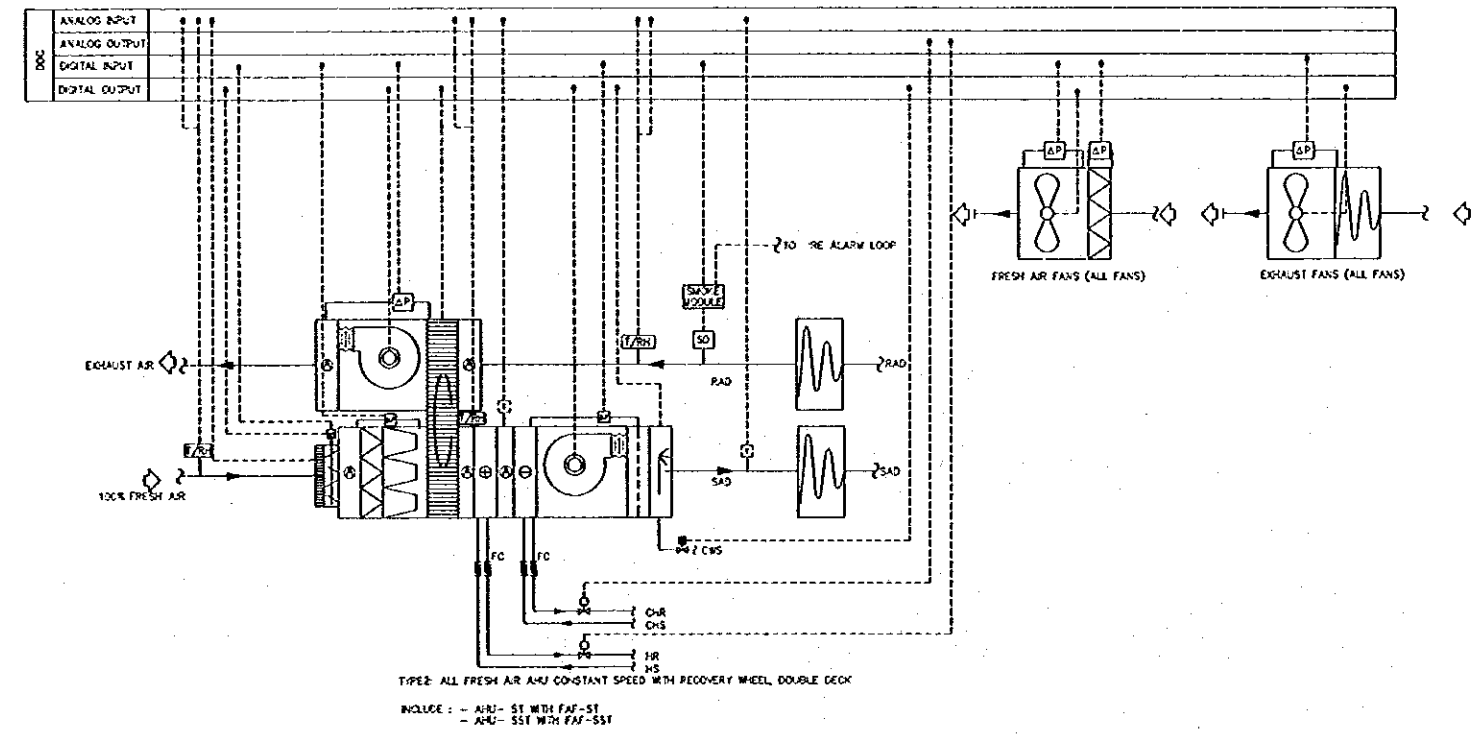
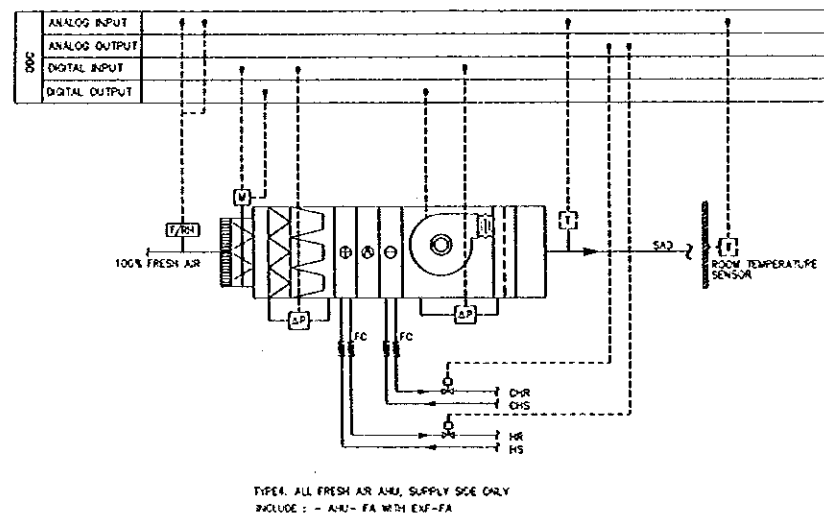
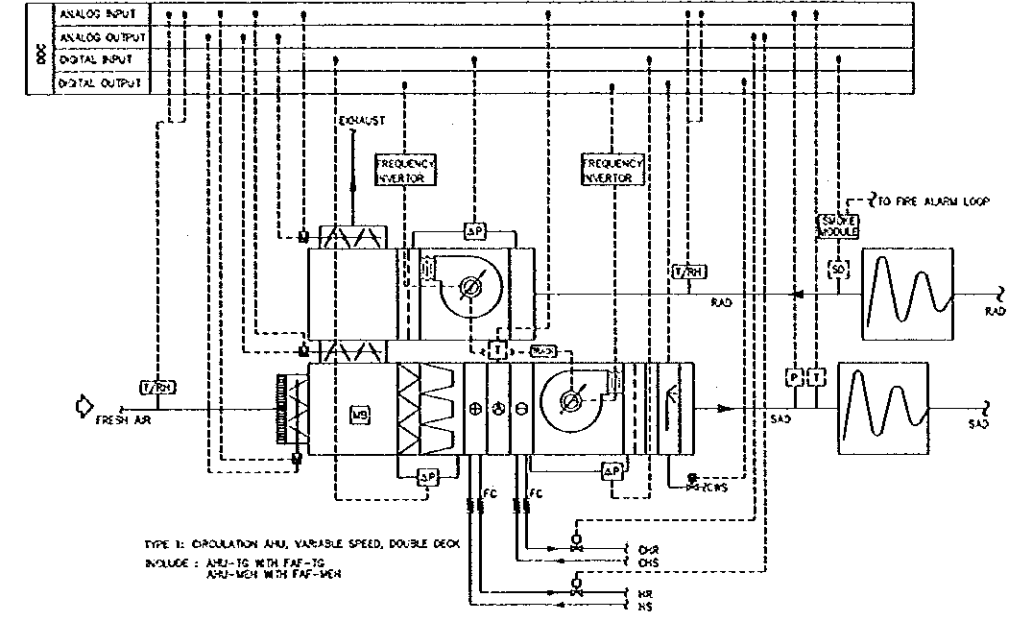
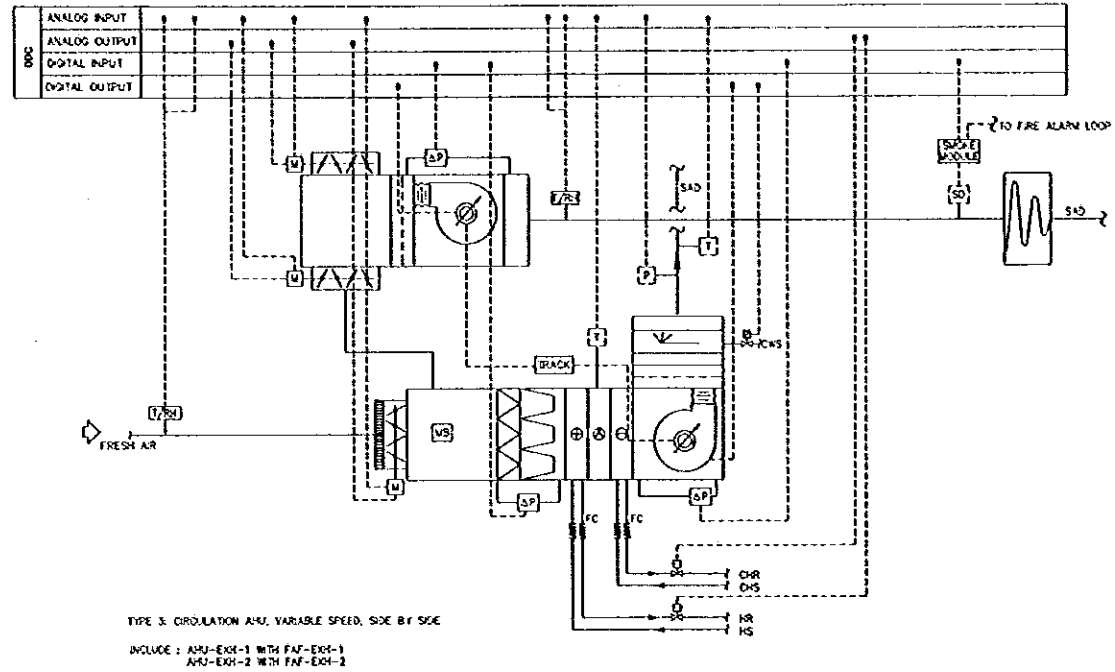
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- LEGEND
- SOUND ATTENUATOR
  - SUPPLY OR RETURN AIR FAN (IDENTICAL BACK BARD CURVED)
  - ACCESS SECTION
  - HEATING COIL
  - COOLING COIL
  - HEAT RECOVERY WHEEL
  - INTAKE SECTION WITH MOTORISED VALVE DAMPER AND SMOKE TRAP LAYER
  - SUPPLY AIR FAN (IDENTICAL BACK WASH CURVED VERTICAL DISCHARGE)
  - BAG FILTER
  - PRE FILTER
  - WING BOX
  - MOTORISED DAMPER
  - TEMPERATURE SENSOR
  - DIFFERENTIAL PRESSURE SENSOR
  - SMOKE DETECTOR
  - HUMIDITY SENSOR
  - PRESSURE SENSOR
  - TEMPERATURE/HUMIDITY SENSOR
  - DIFFERENTIAL PRESSURE SENSOR FOR RAY MODULATING VALVE
  - SOLENOID VALVE
  - INVERTER
- OS CHILLED SUPPLY  
OR CHILLED RETURN  
CWS COLD WATER SUPPLY  
HS HEATING SUPPLY  
HR HEATING RETURN  
RAO RETURN AIR DUCT  
SAO SUPPLY AIR DUCT

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Jafar Tukan and Partners Architects and Engineers

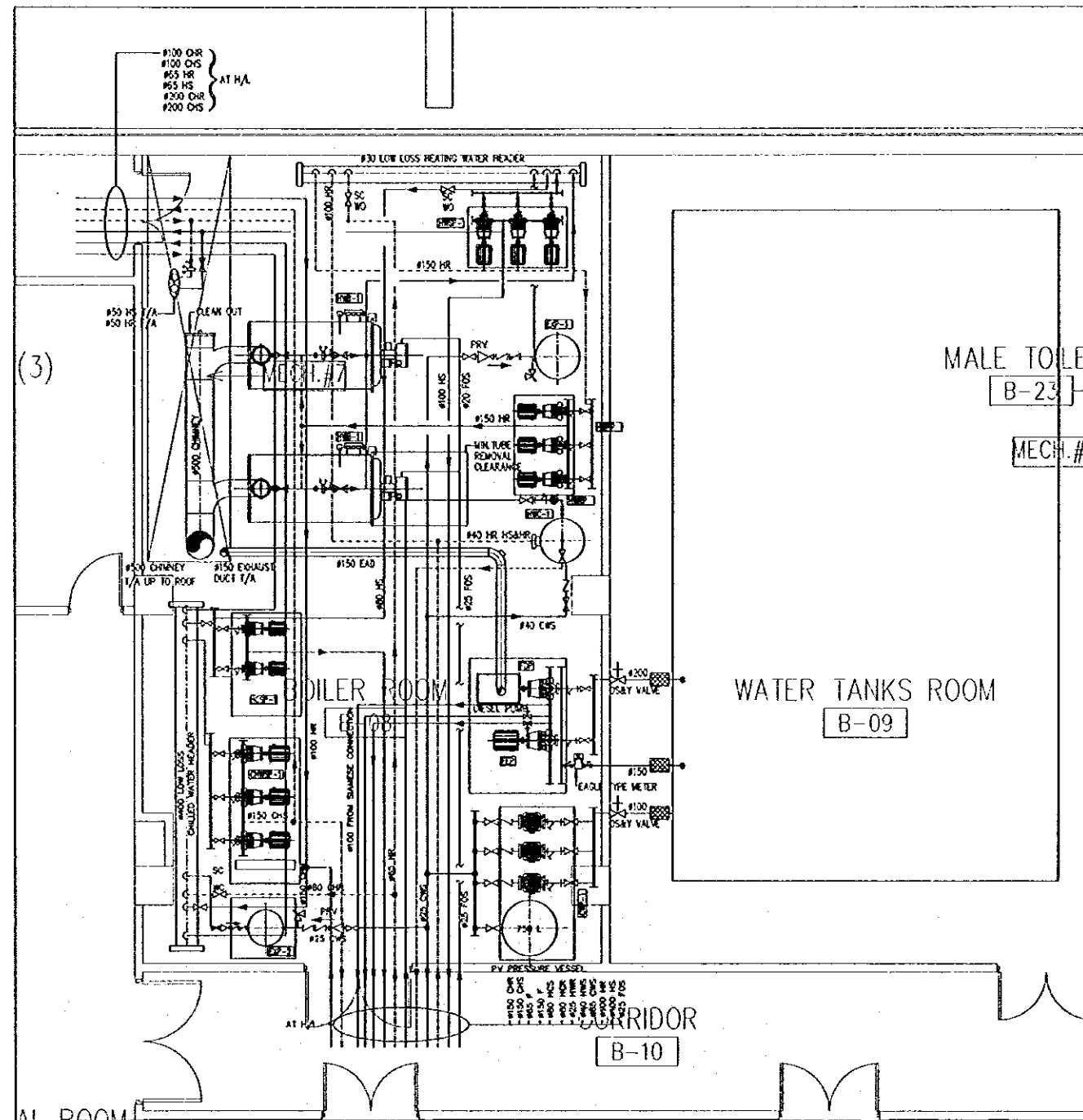
Drawing Title:  
HVAC CONTROL DIAGRAM

Scale: N.T.S. Drawing No: M518



**1** HVAC CONTROL DIAGRAM  
M518 SCALE = N.T.S

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1 BOILER ROOM LAYOUT  
M601 SCALE = 1:50

Tourism Sector Development Project  
in the Hashemite Kingdom of Jordan

The Government of  
The Hashemite Kingdom of Jordan  
The Ministry of Tourism and Antiquities  
The Ministry of Planning

Sub-project:  
**NATIONAL MUSEUM**

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**LEGEND:-**

- CHR --- CHILLED WATER RETURN
- CHS --- CHILLED WATER SUPPLY
- F --- FIRE FIGHTING PIPE
- HCS --- HEATING/CHILLED WATER SUPPLY
- HCR --- HEATING/CHILLED WATER RETURN
- HR --- HOT WATER RETURN
- HWS --- HOT WATER SUPPLY
- CWS --- COLD WATER SUPPLY
- HR --- HEATING RETURN
- HS --- HEATING SUPPLY

- [B-30] HOT WATER BOILER
  - [B-110] HOT WATER CHILLER
  - [HWRP] HOT WATER RETURN PUMP
  - [FEP] FIRE ELECTRIC PUMP
  - [FJP] FIRE JOCKEY PUMP
  - [FDP] FIRE DIESEL PUMP
  - [CHWSP-2] CHILLED WATER SECONDARY PUMPSET
  - [HCHWSP-1] HEATING/CHILLED SECONDARY PUMPSET
  - [HWPP] HEATING WATER PRIMARY PUMP
  - [HWSPP-1] HEATING/WATER SECONDARY PUMPSET
  - [EXP-1] EXPANSION TANK FOR HEATING
  - [EXP-2] EXPANSION TANK FOR COOLING
  - [IV] ISOLATING VALVE
  - [CS] COMMISSIONING SET
  - [CV] CONTROL VALVE
  - [S] STRAINER
  - [GV] GLOBE VALVE
  - [PV] PRESSURE REDUCING VALVE
  - [OSBYV] O.S. BY VALVE WITH UNDER SAFETY
  - [OV] OVER VALVE
  - [DB] DROP DOWN
  - [FA] FROM ABOVE
  - [FB] FROM BELOW
  - [HL] HIGH LEVEL
  - [LL] LOW LEVEL
  - [TA] TO ABOVE
  - [TB] TO BELOW
  - [UC] UNDER CEILING
  - [UR] UNDER FLOOR
  - [UG] UNDER GROUND
- NOTE:-  
ALL DIM. ARE IN MM UNLESS OTHERWISE STATED

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Japan International Cooperation Agency (JICA)  
JICA Study Team:  
Joint Venture of Pacific Consultants International and Yamashita Sekkel Inc.  
Subcontracted Local Consultant:  
Ja'far Tukon and Partners Architects and Engineers

Drawing Title:

BOILER ROOM LAYOUT

Scale:

1:50

Drawing No.:

M601

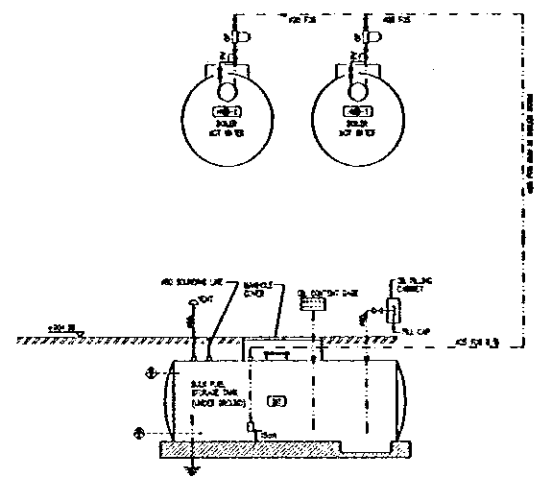
Tourism Sector Development Project  
In the Hashemite Kingdom of Jordan

The Government of  
The Hashemite Kingdom of Jordan  
The Ministry of Tourism and Antiquities  
The Ministry of Planning

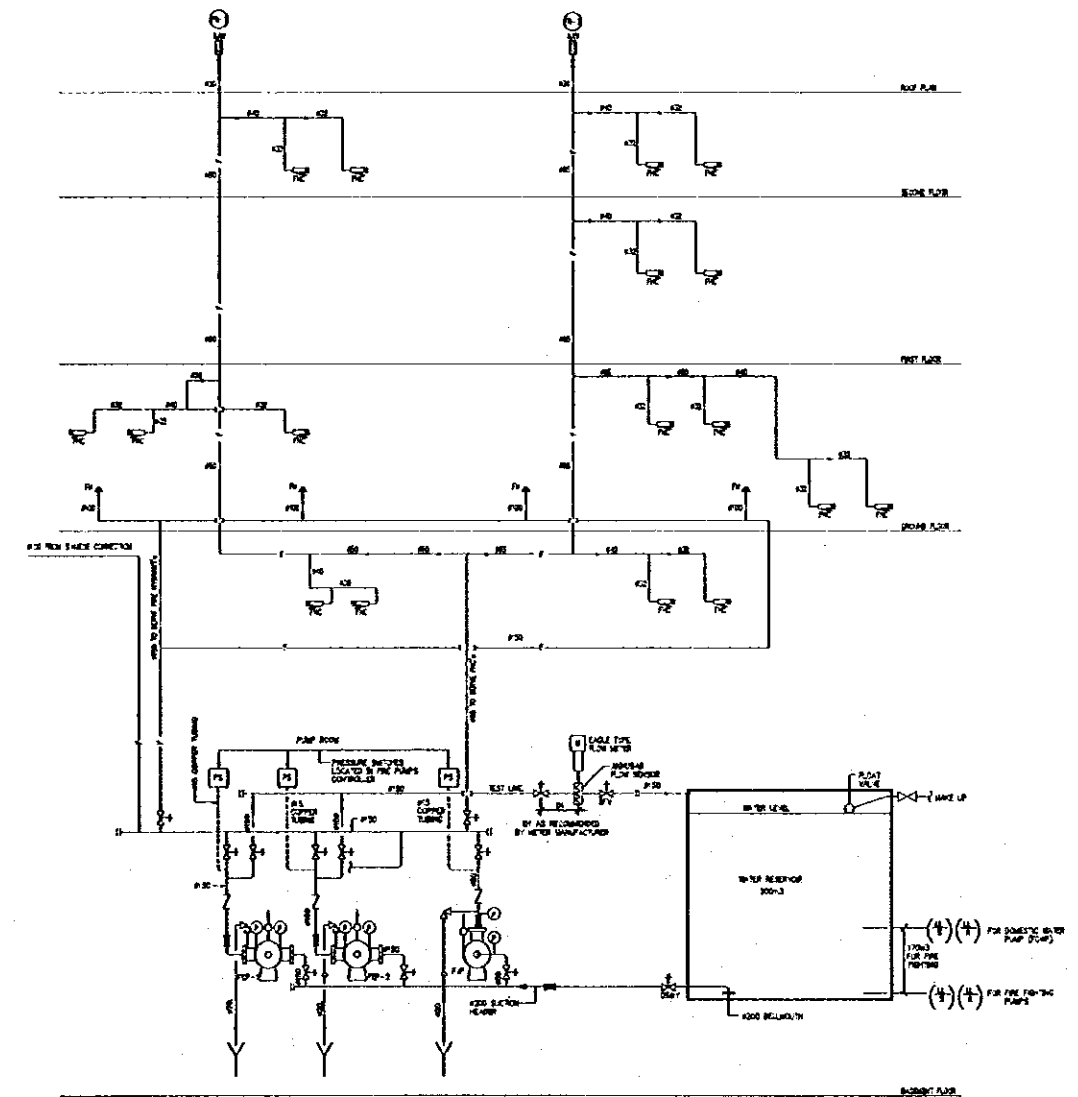
Sub-Project:  
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- LEGEND
- — — — — FIRE SUPPLY
  - — — — — FIRE PUMP LINE
  - — — — — FIRE HOSE CABINET
  - — — — — — FIRE HOSE NO. 1
  - — — — — — FIRE HOSE NO. 2
  - — — — — — FIRE HOSE NO. 3
  - — — — — — FIRE HOSE NO. 4
  - — — — — — FIRE HOSE NO. 5
  - — — — — — FIRE HOSE NO. 6
  - — — — — — FIRE HOSE NO. 7
  - — — — — — FIRE HOSE NO. 8
  - — — — — — FIRE HOSE NO. 9
  - — — — — — FIRE HOSE NO. 10
  - — — — — — FIRE HOSE NO. 11
  - — — — — — FIRE HOSE NO. 12
  - — — — — — FIRE HOSE NO. 13
  - — — — — — FIRE HOSE NO. 14
  - — — — — — FIRE HOSE NO. 15
  - — — — — — FIRE HOSE NO. 16
  - — — — — — FIRE HOSE NO. 17
  - — — — — — FIRE HOSE NO. 18
  - — — — — — FIRE HOSE NO. 19
  - — — — — — FIRE HOSE NO. 20
  - — — — — — FIRE HOSE NO. 21
  - — — — — — FIRE HOSE NO. 22
  - — — — — — FIRE HOSE NO. 23
  - — — — — — FIRE HOSE NO. 24
  - — — — — — FIRE HOSE NO. 25
  - — — — — — FIRE HOSE NO. 26
  - — — — — — FIRE HOSE NO. 27
  - — — — — — FIRE HOSE NO. 28
  - — — — — — FIRE HOSE NO. 29
  - — — — — — FIRE HOSE NO. 30
  - — — — — — FIRE HOSE NO. 31
  - — — — — — FIRE HOSE NO. 32
  - — — — — — FIRE HOSE NO. 33
  - — — — — — FIRE HOSE NO. 34
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  - — — — — — FIRE HOSE NO. 38
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  - — — — — — FIRE HOSE NO. 40
  - — — — — — FIRE HOSE NO. 41
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  - — — — — — FIRE HOSE NO. 43
  - — — — — — FIRE HOSE NO. 44
  - — — — — — FIRE HOSE NO. 45
  - — — — — — FIRE HOSE NO. 46
  - — — — — — FIRE HOSE NO. 47
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  - — — — — — FIRE HOSE NO. 49
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  - — — — — — FIRE HOSE NO. 51
  - — — — — — FIRE HOSE NO. 52
  - — — — — — FIRE HOSE NO. 53
  - — — — — — FIRE HOSE NO. 54
  - — — — — — FIRE HOSE NO. 55
  - — — — — — FIRE HOSE NO. 56
  - — — — — — FIRE HOSE NO. 57
  - — — — — — FIRE HOSE NO. 58
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  - — — — — — FIRE HOSE NO. 61
  - — — — — — FIRE HOSE NO. 62
  - — — — — — FIRE HOSE NO. 63
  - — — — — — FIRE HOSE NO. 64
  - — — — — — FIRE HOSE NO. 65
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  - — — — — — FIRE HOSE NO. 67
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  - — — — — — FIRE HOSE NO. 80
  - — — — — — FIRE HOSE NO. 81
  - — — — — — FIRE HOSE NO. 82
  - — — — — — FIRE HOSE NO. 83
  - — — — — — FIRE HOSE NO. 84
  - — — — — — FIRE HOSE NO. 85
  - — — — — — FIRE HOSE NO. 86
  - — — — — — FIRE HOSE NO. 87
  - — — — — — FIRE HOSE NO. 88
  - — — — — — FIRE HOSE NO. 89
  - — — — — — FIRE HOSE NO. 90
  - — — — — — FIRE HOSE NO. 91
  - — — — — — FIRE HOSE NO. 92
  - — — — — — FIRE HOSE NO. 93
  - — — — — — FIRE HOSE NO. 94
  - — — — — — FIRE HOSE NO. 95
  - — — — — — FIRE HOSE NO. 96
  - — — — — — FIRE HOSE NO. 97
  - — — — — — FIRE HOSE NO. 98
  - — — — — — FIRE HOSE NO. 99
  - — — — — — FIRE HOSE NO. 100



1 FUEL SCHEMATIC DIAGRAM  
M602 SCALE = N.T.S



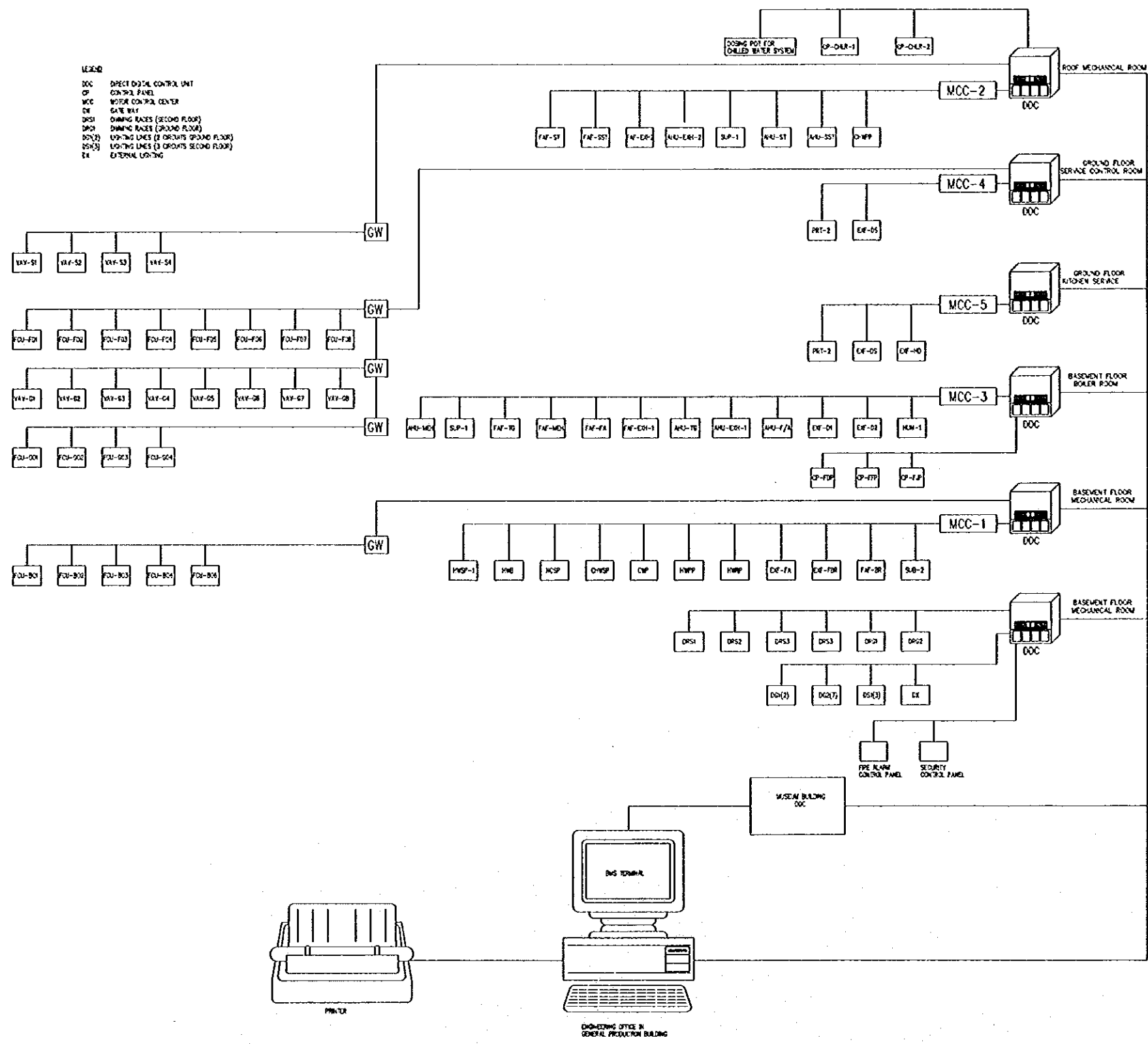
1 FIRE FIGHTING SCHEMATIC DIAGRAM  
M602 SCALE = N.T.S

1 FIRE FIGHTING & FUEL SCHEMATIC DIAGRAM  
M602 SCALE = N.T.S

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Architects and Engineers

Drawing Title:  
FIRE FIGHTING & FUEL SCHEMATIC DIAGRAM

Scale: N.T.S. Drawing No: M602



1 BMS SCHEMATIC DIAGRAM  
M601 SCALE = N.T.S

Tourism Sector Development Project  
in the Hashemite Kingdom of Jordan

The Government of  
The Hashemite Kingdom of Jordan  
The Ministry of Tourism and Antiquities  
The Ministry of Planning

Sub-Project:  
**NATIONAL MUSEUM**

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Drawing Title:  
BMS SCHEMATIC DIAGRAM

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Scale: R.T.S. Drawing No: M603

FAN COIL UNITS SCHEDULE										
FAN COIL UNIT NO.	AIR (L/S)	COOLING CAPACITY			HEATING CAPACITY			EXTERNAL STATIC PRESSURE (Pa)	TYPE	MOTOR DATA
		RD-WHL LOAD (KW)	RD-WHL LOAD (RT)	WTR LOAD (KW)	LOAD (KW)	QTY. REQ.				
F01-B01	250	2.3	4.8	0.19	0.28	2	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-B02	194	2.3	2.4	0.11	0.20	2	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-B03	80	0.9	1.2	0.28	0.85	1	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-B04	155	1.74	1.9	0.28	1.4	1	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-B05	80	0.9	1.1	0.08	0.8	1	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-B06	155	1.75	2.9	0.1	1.3	2	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-B07	175	1.97	2.9	0.11	1.1	1	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-B08	360	4.3	4.7	0.22	1.8	3	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-B09	180	2.0	2.3	0.11	0.7	1	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-B10	80	0.93	1.12	0.08	0.7	1	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-F01	200	2.4	2.8	0.16	0.9	2	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-F02	115	1.3	1.8	0.07	0.2	1	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-F03	210	2.45	2.8	0.13	0.2	1	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-F04	280	4.1	5.2	0.25	0.9	2	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-F05	225	2.50	2.75	0.13	1.3	2	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-F06	230	2.5	2.85	0.13	0.9	1	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-F07	300	2.9	2.5	0.12	1.8	1	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-F08	370	4.35	5.0	0.25	1.4	2	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-F09	115	1.35	1.45	0.07	1.2	1	50	CONCEALED COILING PLUMB DUCTED	0.3	130
F01-F10	215	2.4	2.55	0.12	2.0	1	50	CONCEALED COILING PLUMB DUCTED	0.3	130

**NOTES :-**

- FAN COIL UNIT NOISE CRITERIA SHALL BE LESS THAN NC 35
- FAN COIL UNITS SHALL BE OF 3 SPEED FAN.
- ALL UNITS TO BE CONTROLLED BY ROOM TEMPERATURE CONTROLLER WITH DIGITAL READ-OUT OF TEMPERATURE AND SETPOINTS.
- TEMPERATURE SHALL BE CONTROLLED BY THREE WAY MODULATING CONTROL VALVES.
- SELECTION SHALL BE BASED ON :-
  - A- MEDIUM SPEED.
  - B- ENTERING AIR TEMP. 22°C DB & 18°C WB.
  - C- LEAVING AIR TEMP. 12°C DB & 12°C WB
  - D- ENTERING WATER TEMP. 8°C
  - E- LEAVING WATER TEMP. 14°C
- ROOM NOISE LEVEL TO BE LESS THAN 45dB @ MEDIUM SPEED/NO.30 @ LOW SPEED. INSTALLATION OF ACOUSTIC LINER OR SILENER TO ACHIEVE THIS NOISE CRITERIA SHALL BE PROVIDED.
- WATER FLOW IS BASED ON PRELIMINARY EQUIPMENT SELECTION. CONTRACTOR IS TO VERIFY DATA BASED ON THE FINAL EQUIPMENT SELECTION.

HEAT RECOVERY WHEEL SCHEDULE						
REF. DESIGNATION	UNIT BOX	HEATING SEASON		COOLING SEASON		REMARKS
		ENTERING AIR TEMP. (°C)	LEAVING AIR TEMP. (°C)	ENTERING AIR TEMP. (°C)	LEAVING AIR TEMP. (°C)	
HW-SP	SUPPLY	0.0	13.7	18.0	18.0	
HW-SP	DRAWT	20.8	4.4	18.0	23.9	
HW-EST	SUPPLY	0.0	16.7	20.8	26.5	
HW-EST	DRAWT	20.8	3.3	20.8	26.4	

WATER TANKS SCHEDULE				
REF. NO.	SOURCE	TYPE	CAPACITY (LITERS)	QTY.
WT	DOMESTIC COLD WATER	CHP	12713	210

VAV - TERMINAL BOX (GROUND FLOOR)								
DESIGNATION	SERVED AREA	AIR FLOW (L/S)		RE-HEAT COIL CAPACITY (KW)	WATER FLOW (L/S)	AIR STATIC PRESSURE (Pa)		QUANTITY REQUIRED
		MINIMUM	NOMINAL			UP STREAM	DOWN STREAM	
VAV-01	MAIN ENTRANCE	60	1830	19	0.24	200	120	1
VAV-02	MAIN ENTRANCE HALL GROUND FLOOR	380	878	8.8	0.14	230	80	1
VAV-03	MAIN ENTRANCE HALL GROUND FLOOR	338	830	8.9	0.14	230	80	2
VAV-04	MAIN ENTRANCE HALL GROUND FLOOR	275	684	5.9	0.13	250	80	2
VAV-05	MAIN ENTRANCE HALL GROUND FLOOR	300	738	7.9	0.17	230	80	1
VAV-06	MAIN ENTRANCE HALL GROUND FLOOR	270	620	7.8	0.17	230	80	1
VAV-07	MAIN ENTRANCE HALL GROUND FLOOR	400	884	7.9	0.17	230	80	2
VAV-08	MAIN ENTRANCE HALL GROUND FLOOR	325	806	7.8	0.17	230	80	1

VAV - TERMINAL BOX (SECOND FLOOR)								
DESIGNATION	SERVED AREA	AIR FLOW (L/S)		RE-HEAT COIL CAPACITY (KW)	WATER FLOW (L/S)	AIR STATIC PRESSURE (Pa)		QUANTITY REQUIRED
		MINIMUM	NOMINAL			UP STREAM	DOWN STREAM	
VAV-09	MAIN ENTRANCE HALL SECOND FLOOR	260	878	8.5	0.2	230	80	12
VAV-10	MAIN ENTRANCE HALL SECOND FLOOR	300	1058	14.8	0.36	300	130	2
VAV-11	TEMPORARY GALLERY SECOND FLOOR	260	884	8.1	0.2	230	130	2
VAV-12	TEMPORARY GALLERY SECOND FLOOR	420	1033	10.8	0.28	250	130	1

CHILLERS SCHEDULE																
REF.	TYPE	LOCATION	COOLING CAPACITY (RT)	WATER		CAPACITIES		POWER		QUANTITY						
				IN (°C)	OUT (°C)	L/S	RT	HP	KW	QTY.	COND. IN	COND. OUT	LOG. NO.			
CHL-1	WATER COOLED WATER CHILLER	OUT DOOR	517	7.0	13.3	20.8	-	225	400	5	50	2	-	3	LOCAL	1

**NOTE :-**  
 THE CHILLERS SHALL BE SELECTED BASED ON:  
 1- AIR FLOW = 7778  
 2- ENTERING AIR TEMP. = 27°C  
 3- LEAVING AIR TEMP. = 12°C

1 SCHEDULES OF EQUIPMENT-1  
 M701 SCALE = N.T.S

Tourism Sector Development Project  
 in the Hashemite Kingdom of Jordan

The Government of  
 The Hashemite Kingdom of Jordan  
 The Ministry of Tourism and Antiquities  
 The Ministry of Planning

Sub-Project:  
 NATIONAL MUSEUM

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Drawing Title:  
 SCHEDULES OF EQUIPMENT-1

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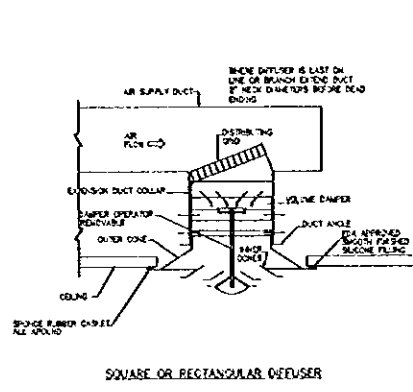


Tourism Sector Development Project  
In the Hashemite Kingdom of Jordan

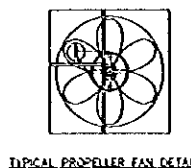
The Government of  
The Hashemite Kingdom of Jordan  
The Ministry of Tourism and Antiquities  
The Ministry of Planning

Sub-Project  
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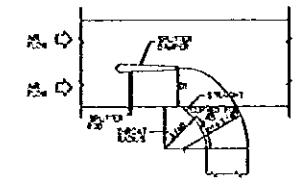
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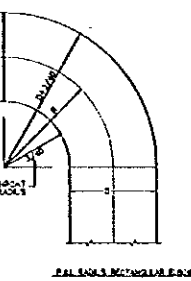
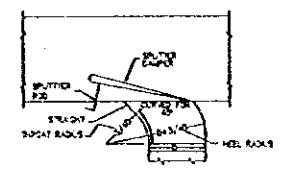
SQUARE OR RECTANGULAR DIFFUSER  
DETAILS OF THE INSTALLATION OF AIR REGISTERS AND DIFFUSERS



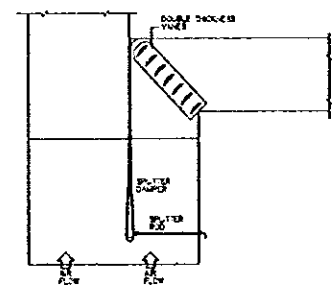
TYPICAL PROPPELLER FAN DETAIL



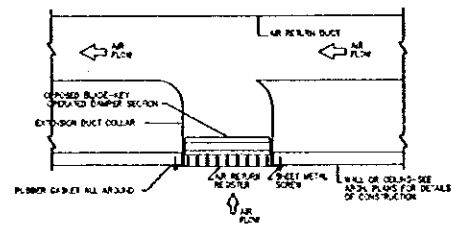
TYPICAL TAKE-OFFS



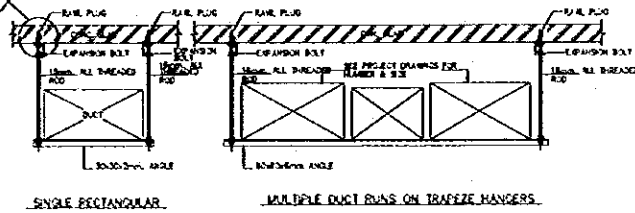
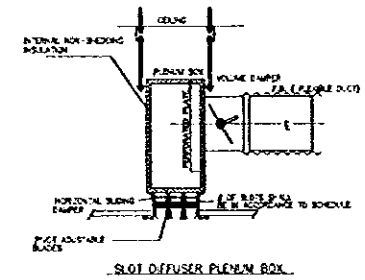
VANED SQUARE ELBOW



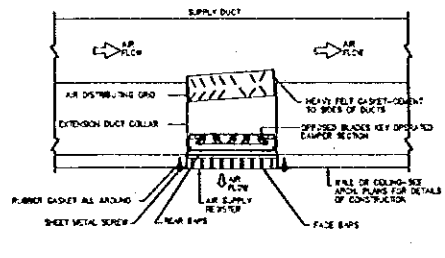
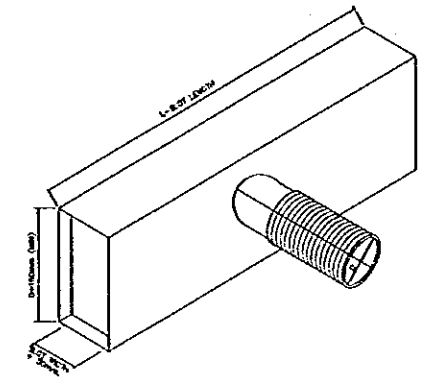
SLOT DIFFUSER PLENUM BOX



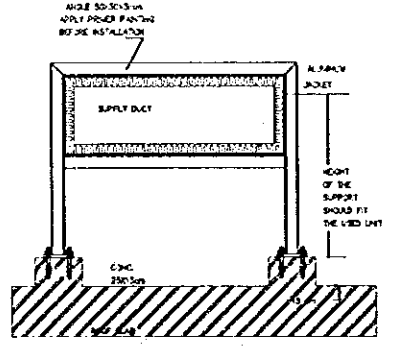
RETURN AIR REGISTER



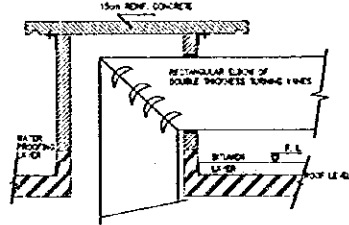
DETAILS OF THE INSTALLATION OF HANGERS AND SUPPORTS FOR DUCTWORK



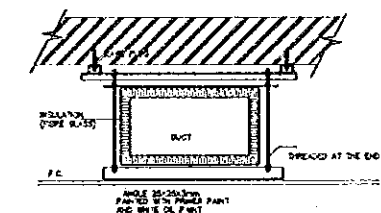
SUPPLY AIR REGISTERS



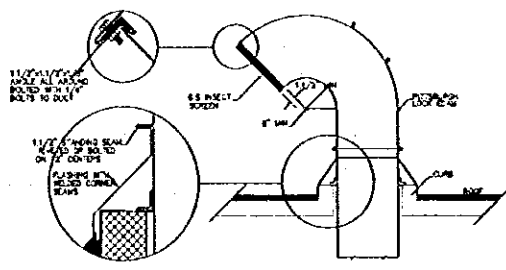
DUCT INSTALLATION ON ROOF



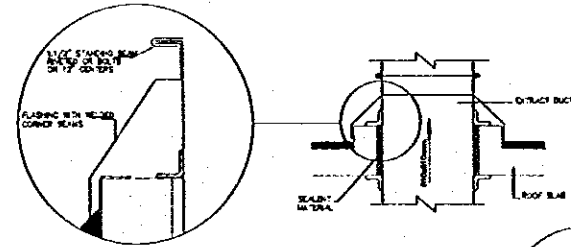
PENETRATION OF DUCTS THROUGH ROOF SLAB



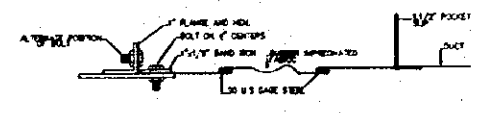
DUCT SUSPENSION FROM CEILING



EXHAUST DUCT THROUGH ROOF



DUCT PENETRATION THROUGH ROOF SLAB



FLEXIBLE CONNECTION DETAIL

1 MISCELLANEOUS DETAILS  
M801 SCALE = N.T.S

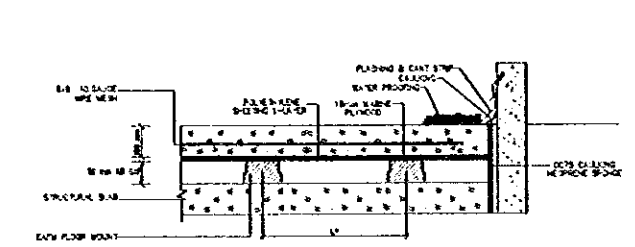
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Scale: N.T.S Drawing No: M801

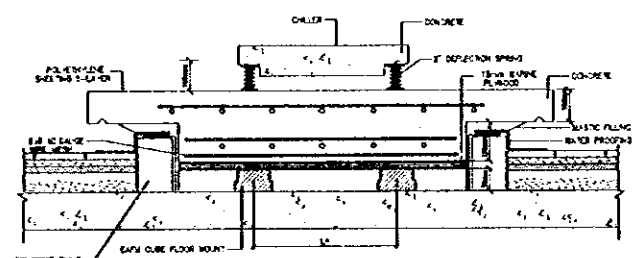
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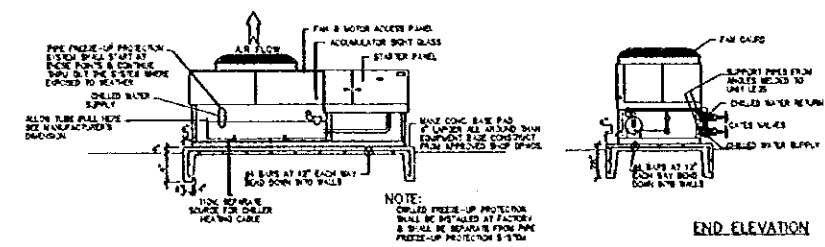
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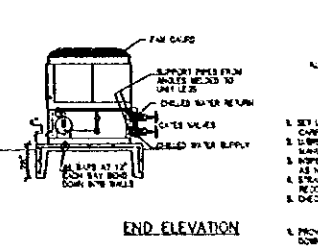
CHILLERS ON KINETIC FLOATING SLAB (TYPICAL)  
AS RECOMMENDED BY THE ROSE & MURPHY CONTROL EQUIPMENT MANUFACTURERS



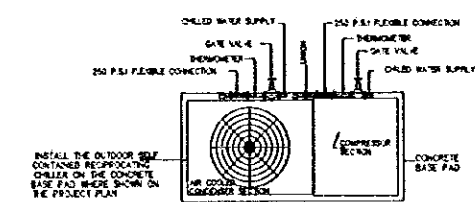
CHILLERS ON KINETIC FLOATING SLAB (TYPICAL)  
AS RECOMMENDED BY THE ROSE & MURPHY CONTROL EQUIPMENT MANUFACTURERS



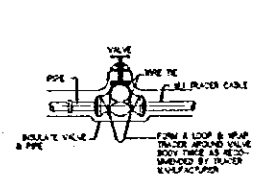
SIDE ELEVATION



END ELEVATION



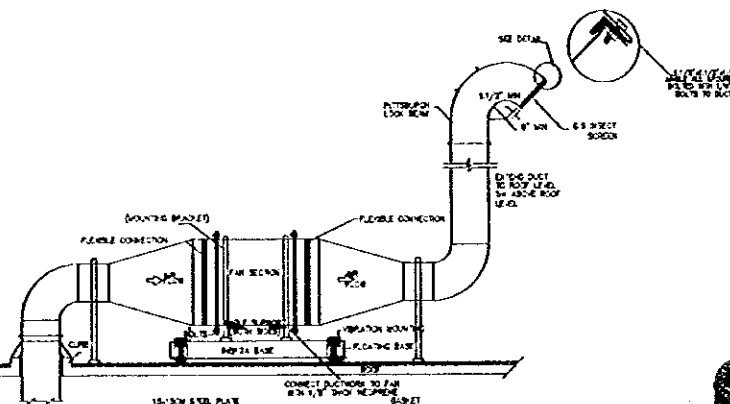
PLAN VIEW



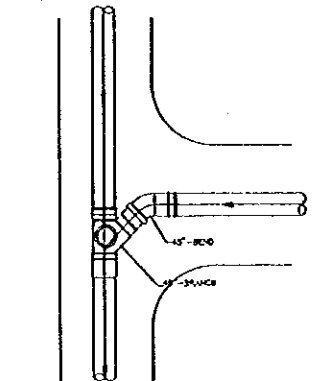
TYPICAL VALVE TRACING PATTERN

DETAILS OF THE INSTALLATION OF THE OUTDOOR SELF RECIPROCATION UNITS.

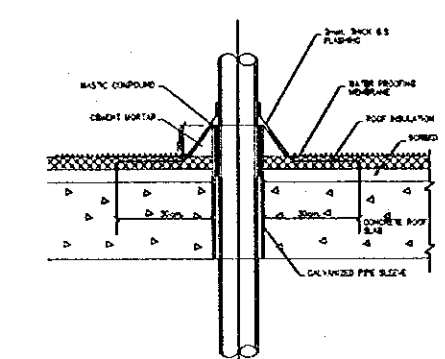
- INSTALLATION INSTRUCTIONS**
1. SET UNIT DEAD LEVEL WITH SPECTRO-CHECK WITH COMPASS TO 1/2" (12.5mm).
  2. SUPPORT PADS & BOLTS AS RECOMMENDED BY THE MANUFACTURER.
  3. INSPECT UNIT CONNECTIONS FOR DAMAGE AND REPAIR AS NECESSARY.
  4. TIGHTEN THE CONDENSER & REFRIG. CONTROL VALVES AS RECOMMENDED BY THE MANUFACTURER.
  5. CHECK OIL ALL CONDENSER AFTER START-UP.
- LOW AMBIENT AND FREEZE-UP PROTECTION NOTES**
1. PROVIDE LOW AMBIENT CONTROL AND FREEZE-UP PROTECTION DOWN TO 3°F.
  2. PROVIDE REPAIRS FOR LOW AMBIENT CONTROL TO HEATER COIL. IN EXISTING COILS, CHECK COIL TYPE.
  3. THE UNIT SHALL BE PROVIDED WITH LOW AMBIENT CONTROL OF THE CONDENSER REFRIG. VALVE TYPE B. THE UNIT SHALL BE COMPLETE WITH FACTORY INSTALLED REFRIG. SERVICE VALVE AROUND THE EXPANSION VALVE TO PERFORM LOW AMBIENT START-UP. VERIFY THE COMPRESSOR CYCLING ON THE LOW PRESSURE CONTROL.
- NOTES:**
1. OUT DOOR ISOLATION SHALL BE 2" THICK GLASS FIBER INSULATION COVERED BY 1/2" OF 1/2" RUST NOT SUPPORTED IN PLACE & POLICE COVERED WITH AN ALUMINUM SHEATH OF 1/8" THICKNESS & ALL PARTS CONNECTED TO THE HEATER SHALL BE INSULATED IN THIS MANNER.
2. INSURE THAT ALL VALVE GASKETS CAPABLE OF 150PSI OF INSTALLED PRESSURE OR A CONTROL PANEL SHALL BE INSTALLED.



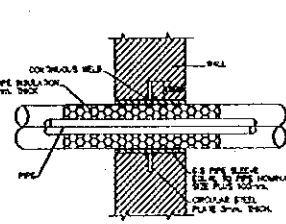
ROOF MOUNTED EXHAUST FAN DETAIL



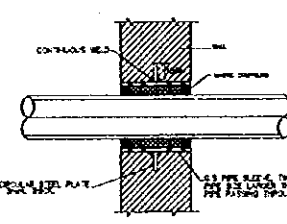
BRANCH CONNECTION OF DRAINAGE PIPE



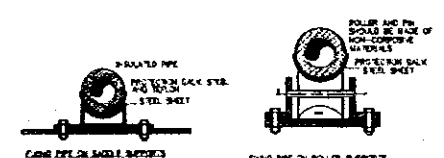
PIPE SLEEVE THROUGH BASE



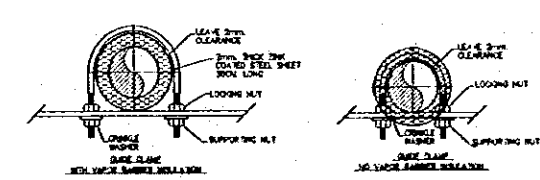
INSULATED PIPE SLEEVE THROUGH WALL



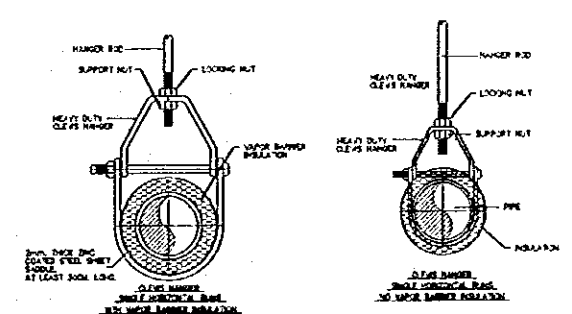
NOT INSULATED PIPE SLEEVE THROUGH WALL



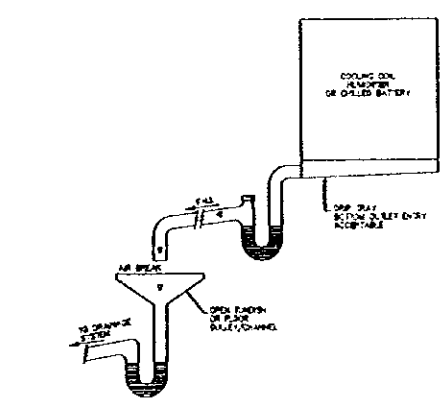
ROLLER AND PIN SHOULD BE MADE OF NON-CORROSIVE MATERIALS PROTECTIVE PAINT SHALL BE USED



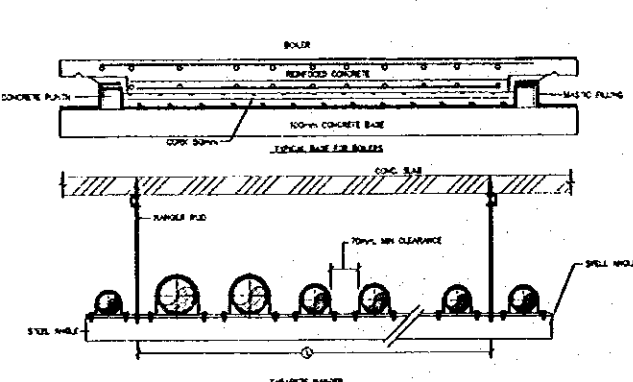
LEAVE 3/8" CLEARANCE BETWEEN THE COATED STEEL SHEET AND THE PIPE. USE THE COATED STEEL SHEET FOR THE HANGER AND SUPPORT HILTS. USE 1/2" LATCH BOLTS FOR HANGERS.



LEAVE 3/8" CLEARANCE BETWEEN THE COATED STEEL SHEET AND THE PIPE. USE THE COATED STEEL SHEET FOR THE HANGER AND SUPPORT HILTS. USE 1/2" LATCH BOLTS FOR HANGERS.



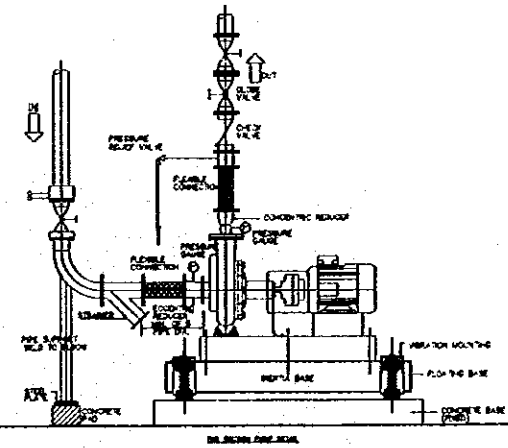
CONDENSATE DRAIN ARRANGEMENT



TRAPEZE HANGER

NOMINAL PIPE SIZE	W/TH (mm)	MINIMUM HANGER ROD AND CLAMP ROD DIA. (mm)
1/2"	15	8
3/4"	18	8
1"	20	10
1 1/4"	24	10
1 1/2"	27	10
2"	36	12
2 1/2"	33	12
3"	36	12
4"	48	18
5"	48	18
6"	50	22
8"	58	22
10"	67	22
12"	70	22

SAFETY LOAD ON THE BEAM	MINIMUM LENGTH (ft)	MINIMUM BEAM SIZE	HANGER ROD SIZE
UP TO 150	1.00	4x10-18	8
150 TO 300	1.50	6x10-18	8
300 TO 500	1.00	6x10-18	10
500 TO 800	1.50	8x10-18	10
800 TO 1000	1.50	8x10-18	12
1000 TO 2000	1.00	10x10-18	18



DETAILS OF THE PIPE SUPPORTS

**1 MISCELLANEOUS DETAILS**  
M802 SCALE = N.T.S

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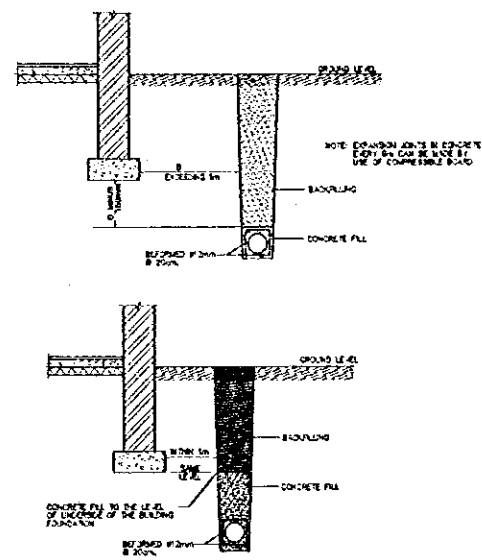
JICA Study Team:  
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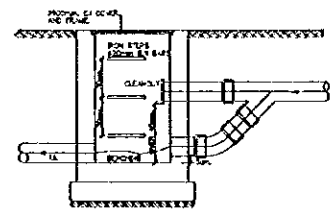
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MISCELLANEOUS DETAILS

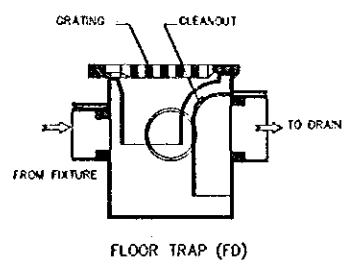
Scale: N.T.S Drawing No: M802



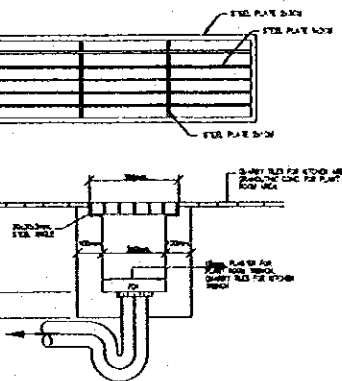
TRENCHES FOR DRAINS OR PRIVATE SEWERS ADJACENT TO BUILDING



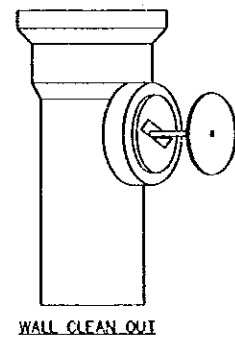
DROP MANHOLE DETAIL



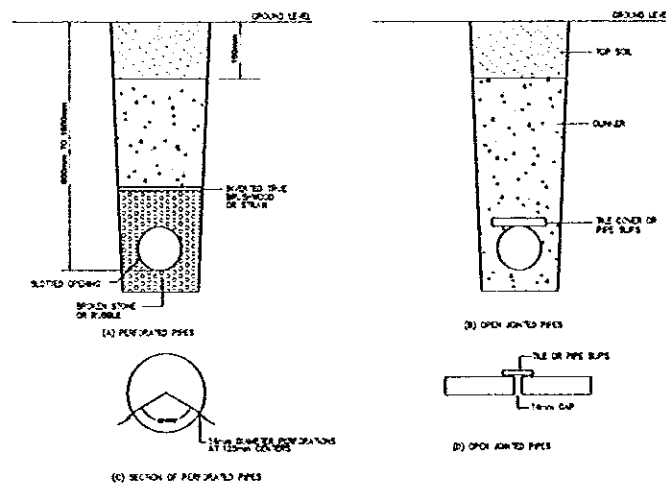
FLOOR TRAP (FT)



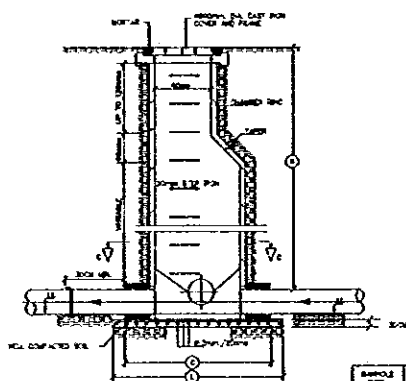
TRENCH & GRATING DETAIL



WALL CLEAN OUT



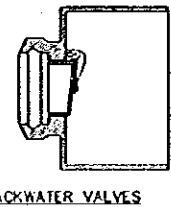
METHODS OF PIPE LAYING



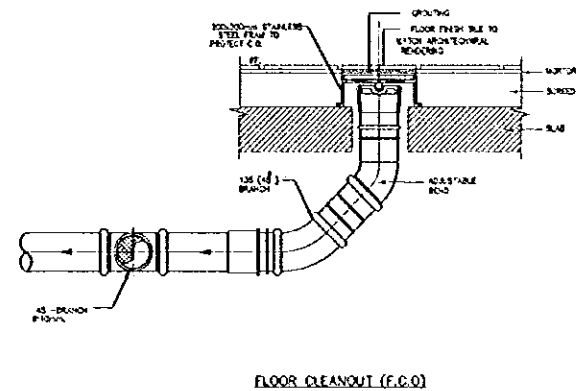
SEWAGE MANHOLE DETAIL

MANHOLE TYPE	Ø1	Ø2	Ø3	Ø4
I	610	675	750	825
II	450	525	600	675
III	375	450	525	600

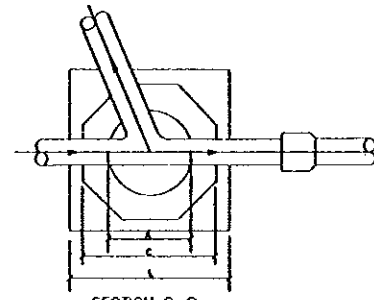
- NOTES:
1. MANHOLE COVER LIDS SHALL BE CONFORMANT WITH THE PIPE TYPE.
  2. ALL JOINTS SHALL BE SEALED WITH AN APPROPRIATE JOINT SEALANT.
  3. THE CONNECTION OF THE MANHOLE TO THE MAIN LINE SHALL BE MADE BY A 90° ELBOW.
  4. ALL MANHOLES SHALL BE PROVIDED WITH A COVER.
  5. ALL MANHOLES SHALL BE PROVIDED WITH A COVER.



BACKWATER VALVES

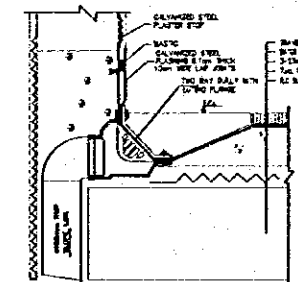


FLOOR CLEANOUT (F.C.O.)



SECTION C-C

- NOTES:
1. MANHOLE COVER LIDS SHALL BE CONFORMANT WITH THE PIPE TYPE.
  2. ALL JOINTS SHALL BE SEALED WITH AN APPROPRIATE JOINT SEALANT.
  3. THE CONNECTION OF THE MANHOLE TO THE MAIN LINE SHALL BE MADE BY A 90° ELBOW.
  4. ALL MANHOLES SHALL BE PROVIDED WITH A COVER.
  5. ALL MANHOLES SHALL BE PROVIDED WITH A COVER.



2-WAY RAIN WATER OUTLET (RWOL)

1 MISCELLANEOUS DETAILS  
M803 SCALE = N.T.S

Tourism Sector Development Project in the Hashemite Kingdom of Jordan

The Government of Jordan  
The Ministry of Tourism and Antiquities  
The Ministry of Planning

Sub-Project:  
NATIONAL MUSEUM

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N.T.S  
Drawing No.:  
M803



# LIST OF ELECTRICAL DRAWINGS

S.NO	DESCRIPTION	DWG. NO.	SCALE
1	ELECTRICAL LIST OF DRAWING	E000	N.T.S
2	ELECTRICAL SYMBOLS LEGEND & LIGHTING FIXTURES SCHEDULE	E001	N.T.S
3	SIT PLAN--EXTERNAL ELECTRICAL WORKS	E101	1:400
4	BASEMENT FLOOR PLAN--LIGHTING LAYOUT	E201	1:200
5	GROUND FLOOR PLAN--LIGHTING LAYOUT	E202	1:200
6	FIRST FLOOR PLAN--LIGHTING LAYOUT	E203	1:200
7	SECOND FLOOR PLAN--LIGHTING LAYOUT	E204	1:200
8	ROOF FLOOR PLAN--LIGHTING & POWER LAYOUT	E205	1:200
9	FIRST FLOOR MAIN EXHIBITION LIGHTING LAYOUT	E206	1:100
10	FIRST FLOOR ENTRANCE LIGHTING LAYOUT	E207	1:100
11	SECOND FLOOR MAIN EXHIBITION LIGHTING LAYOUT	E208	1:100
12	SECOND FLOOR ENTRANCE & TEMPORARY EXHIBITION LIGHTING LAYOUT	E209	1:100
13	BASEMENT FLOOR PLAN--POWER LAYOUT	E301	1:200
14	GROUND FLOOR PLAN--POWER LAYOUT	E302	1:200
15	FIRST FLOOR PLAN--POWER LAYOUT	E303	1:200
16	SECOND FLOOR PLAN--POWER LAYOUT	E304	1:200
17	FIRST FLOOR PLAN--MAIN EXHIBITION POWER LAYOUT	E305	1:100
18	SECOND FLOOR PLAN--MAIN EXHIBITION POWER LAYOUT	E306	1:100
19	SECOND FLOOR TEMPORARY EXHIBITION POWER LAYOUT	E307	1:100
20	BASEMENT FLOOR PLAN--FIRE ALARM & PUBLIC ADDRESS LAYOUT	E401	1:200
21	GROUND FLOOR PLAN--FIRE ALARM & PUBLIC ADDRESS LAYOUT	E402	1:200
22	FIRST FLOOR PLAN--FIRE ALARM & PUBLIC ADDRESS LAYOUT	E403	1:200

S.NO	DESCRIPTION	DWG. NO.	SCALE
23	SECOND FLOOR PLAN--FIRE ALARM & PUBLIC ADDRESS LAYOUT	E404	1:200
24	BASEMENT FLOOR PLAN--TELEPHONE & COMPUTER	E501	1:200
25	GROUND FLOOR PLAN--TELEPHONE & COMPUTER	E502	1:200
26	FIRST FLOOR PLAN--TELEPHONE & COMPUTER	E503	1:200
27	SECOND FLOOR PLAN--TELEPHONE & COMPUTER	E504	1:200
28	BASEMENT FLOOR PLAN--SECURITY, ACCESS CONTROL & CCTV LAYOUT	E601	1:200
29	GROUND FLOOR PLAN--SECURITY, ACCESS CONTROL & CCTV LAYOUT	E602	1:200
30	FIRST FLOOR PLAN--SECURITY, ACCESS CONTROL & CCTV LAYOUT	E603	1:200
31	SECOND FLOOR PLAN--SECURITY, ACCESS CONTROL & CCTV LAYOUT	E604	1:200
32	ROOF FLOOR PLAN--LIGHTNING LAYOUT	E701	1:200
33	DISTRIBUTION BOARD SCHEDULE--SHEET No. 1	E801	N.T.S
34	DISTRIBUTION BOARD SCHEDULE--SHEET No. 2	E802	N.T.S
35	DISTRIBUTION BOARD SCHEDULE--SHEET No. 3	E803	N.T.S
36	DISTRIBUTION BOARD SCHEDULE--SHEET No. 4	E804	N.T.S
37	POWER RISER DIAGRAM	E901	N.T.S
38	TELEPHONE, DATA & PUBLIC ADDRESS RISER DIAGRAMS	E902	N.T.S
39	FIRE ALARM RISER DIAGRAM	E903	N.T.S
40	CCTV RISER DIAGRAM	E904	N.T.S
41	SECURITY SYSTEM & AUDIO VIDEO SCHEMATIC RISER DIAGRAMS	E905	N.T.S
42	SUBSTATION & DIMMING SYSTEM BLOCK DIAGRAM DETAILS	E906	AS SHOWN
43	MISCELLANEOUS DETAILS	E907	N.T.S
44			

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JICA Study Team:

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Drawing Title:

ELECTRICAL LIST OF DRAWING

Scale:  
N.T.S

Drawing No.:  
E000

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**LIGHTING FIXTURES SCHEDULE**

TYPE	DESCRIPTION
A1	20W/20cm, 2.5M Ø, FLUORESCENT LIT-THE FIXTURE WITH PRISMATIC DIFFUSER RECEIVED TYPE, P23
E1A	AS A1 BUT WITH EMERGENCY KIT.
A3	20W/20cm, 2.5M Ø, FLUORESCENT LIT-THE FIXTURE WITH LOWER DIFFUSER RECEIVED TYPE, P23
E1A3	AS A3 BUT WITH EMERGENCY KIT.
D1	30W/20cm, 2.5M Ø, FLUORESCENT LIT-THE FIXTURE WITH PRISMATIC DIFFUSER RECEIVED TYPE, P23
E1D	AS D1 BUT WITH EMERGENCY KIT.
E1	30W/20cm, 2.5M Ø, FLUORESCENT LIT-THE FIXTURE WITH PRISMATIC DIFFUSER RECEIVED TYPE, P23
E2	30W/20cm, 2.5M Ø, FLUORESCENT LIT-THE FIXTURE WITH PRISMATIC DIFFUSER RECEIVED TYPE, P23
E2A	AS E2 BUT WITH EMERGENCY KIT.
E3	30W/20cm, 2.5M Ø, FLUORESCENT LIT-THE FIXTURE WITH PRISMATIC COVER SURFACE TYPE
E2A3	AS E2A BUT WITH EMERGENCY KIT.
E4	30W/20cm, 2.5M Ø, FLUORESCENT LIT-THE FIXTURE WITH PRISMATIC COVER RECESSED POLY CARBONATE, SUSPENDED TYPE, P23
F1	DOWN LIGHT, 20W Ø, COMPACT FLUORESCENT LAMP WITH 2.0 AMPSE REFLECTOR METAL FRAME WITH CARBONATE COATING, RECEIVED TYPE, P23
E1F1	AS F1 BUT WITH EMERGENCY KIT.
F2	DOWN LIGHT, 20W Ø, COMPACT FLUORESCENT LAMP, DE-CAST ALUMINUM COATING, WITH PRISMATIC DIFFUSER, RECEIVED TYPE, P23
E1F2	AS F2 BUT WITH EMERGENCY KIT.
F3	DOWN LIGHT, 20W Ø, COMPACT FLUORESCENT LAMP, DE-CAST ALUMINUM COATING, WITH 2.0 AMPSE REFLECTOR, RECEIVED TYPE, P23
E1F3	AS F3 BUT WITH EMERGENCY KIT.
F4	DOWN LIGHT, 20W Ø, COMPACT FLUORESCENT LAMP, WITH OPTIC DIFFUSER SURFACE, RECEIVED TYPE, P23
E1F4	AS F4 BUT WITH EMERGENCY KIT.
F5	DOWN LIGHT, 20W Ø, COMPACT FLUORESCENT LAMP, ALUMINUM REFLECTOR, DE-CAST ALUMINUM ATTACHMENT COMPLETE WITH STEEL & BRASS PARTS, P23
E1F5	AS F5 BUT WITH EMERGENCY KIT.
F6	20W Ø COMPACT FLUORESCENT LAMP, BALL SOCKET, CAST ALUMINUM BODY, PROTECTIVE GLASS, FINISH & MOUNTING WITH 2.0 AMPSE REFLECTOR BODY, P23
E1F6	AS F6 BUT WITH EMERGENCY KIT.
2001	EMERGENCY LIT-THE FIXTURE, 14W Ø, FLUORESCENT LAMP, CEILING/WALL MOUNTED, WARD-TYPE, SINGLE FACE, P23
2002	EMERGENCY LIT-THE FIXTURE, 14W Ø, FLUORESCENT LAMP, CEILING/WALL MOUNTED, WARD-TYPE, DOUBLE FACE, P23
3002	14W Ø FLUORESCENT LIT-THE FIXTURE WITH DOWN LIGHT FIXTURE LEADING PANEL, SHIELD EFFECT FROM LIGHT & SHIELD FROM SHOCK & OVER HEATING, THE SHIELD EFFECTOR BLOCK IS SEALED & THE SUPPORT WARD-TYPE, P23
F7	DOWN LIGHT, 12W / 75 W HOLLOW LAMP, DE-CAST ALUMINUM & BALANCED STEEL HOLDING RECTANGULAR REFLECTOR, P14
E1F7	AS F7 BUT WITH EMERGENCY KIT.
H1	DOWN LIGHT, 12W / 75 W HOLLOW LAMP, DE-CAST ALUMINUM & BALANCED STEEL HOLDING RECTANGULAR REFLECTOR, P14
103	RECTANGULAR ALUMINUM SURFACE MOUNTED ON SPACE FRAME DOWN LIGHT, 2.0 AMPSE REFLECTOR, P14
M	20W Ø HOLLOW FLOOD LAMP, PRESSURE DE-CAST ALUMINUM BODY, BALANCED ALUMINUM REFLECTOR AND PROTECTIVE GLASS, P14
N	DOWN LIGHT, 12W / 75 W HOLLOW LAMP, DE-CAST ALUMINUM & BALANCED STEEL HOLDING RECTANGULAR REFLECTOR, P14
N1	150/20cm, 1.5M Ø, FLUORESCENT LIT-THE FIXTURE, BAYONET TYPE, SURFACE MOUNTED ON CEILING/WALL, P23
N4	30W/20cm, 1.5M Ø, FLUORESCENT LIT-THE FIXTURE WITH PRISMATIC COVER RECESSED POLY CARBONATE, SUSPENDED TYPE, P23
E1N4	AS N4 BUT WITH EMERGENCY KIT.
O1	Ø130 Ø METAL HALIDE LAMP, STYRE COMPENSATE & GLASS SIDE OF DE-CAST ALUMINUM, A REFLECTOR OF BALANCE ALUMINUM SHEET & GLASS BEARING DE-CAST ALUMINUM PARTS WITH SLOTTED SEALING BARREL WITH SPOT OPTIC, P23
O2	12V / 200 W, WITH DE-CAST ALUMINUM PROTECTIVE GLASS, EQUIPPED WITH PATENTED OPTIC SYSTEM, P.V.E. BEARING COMPONENTS ARE MOUNTED WITH THE ATTING, P23
O3	1.5W Ø METAL HALIDE LAMP, FLUORESCENT MANUFACTURED FROM DE-CAST ALUMINUM WITH BEARING SURFACE ALUMINUM SHEET REFLECTOR, THE FRONT PART HAS A PROTECTIVE GLASS COVERED SPRING WITH SLIDING SEALING BARREL, P23
O4	DE-CAST ALUMINUM BALL SOCKET WITH STYRE COMPENSATE OPTIC SYSTEM BEARING & PROTECTIVE GLASS COVERED SPRING WITH SLIDING SEALING BARREL, P23
P	MOBILE WAPOR LAMP WITH 120 W Ø METAL LAMP GLASS HEAD, CLEAR POLYCARBONATE CHARGER DIFFUSER, OPTIC POLYCARBONATE AIRS - CLAMPING COMPONENTS & MOUNTING, WITH BRASS STEEL COUPLER WITH SHIELD, P23
P1	COMPACT FLUORESCENT LAMP 15 W Ø, BALANCED METAL, CLEAR GLASS DIFFUSER, DIMENSION Ø 270mm, H 230/240mm
Q	RECESSED FLUORESCENT WITH PROTECTIVE GLASS 70 W H-H-LAMP, DIFFUSER RECEIVED TYPE, P23
Q1	AS ABOVE, BUT WITH FRAME FRAME PLATE.
R	LIGHT UP-BROWNS FLUORESCENT-SEMI-INDICATOR OPTIC 70 W H-H-LAMP.
R1	METAL HALIDE FLUORESCENT-SEMI-INDICATOR OPTIC 70 W H-H-LAMP.
S	FLUORESCENT WITH INCORPORATED BALL & TRANSFORMER, 75 W 12V Ø 13 LAMP.
T	100 W METAL HALIDE FLUORESCENT WITH SYMMETRICAL REFLECTOR BODY IN DE-CAST ALUMINUM.
T1	AS ABOVE BUT ON 5m-STEEL POLE.

**ELECTRICAL SYMBOLS LEGEND**

SYMBOL	DESCRIPTION
[Symbol]	FLUORESCENT LIGHT FIXTURE, LETTER ON PLATE INDICATES TYPE.
[Symbol]	FLUORESCENT LIGHT FIXTURE, LETTER ON PLATE INDICATES TYPE.
[Symbol]	FLUORESCENT LIGHT FIXTURE, LETTER ON PLATE INDICATES TYPE.
[Symbol]	1.0L CONTACT FLUORESCENT OR INCANDESCENT LIGHT FIXTURE - LETTER ON PLATE INDICATES TYPE.
[Symbol]	BRACKET MOUNTED FIXTURE AS SHOWN ABOVE.
[Symbol]	FARMING LIGHT FIXTURE WITH THE LIGHTING FIXTURE.
[Symbol]	HO FLOOD LIGHT
[Symbol]	ONE GANG, ONE WAY SWITCH
[Symbol]	TWO GANG, ONE WAY SWITCH
[Symbol]	THREE GANG, ONE WAY SWITCH
[Symbol]	DOUBLE POLE SWITCH WITH PLY LAMP.
[Symbol]	ONE GANG, THREE-WAY SWITCH
[Symbol]	ONE GANG, TWO-WAY SWITCH
[Symbol]	INTERMEDIATE SWITCH
[Symbol]	SWITCH
[Symbol]	DIMMER SWITCH PANEL
[Symbol]	DIMMER CONTROL PANEL
[Symbol]	DIMMER RACK
[Symbol]	CONDUIT SOME DOWN
[Symbol]	CONDUIT SOME UP
[Symbol]	CONDUIT CAPPED OFF
[Symbol]	CONDUIT'S EMERGENCY CONDUIT BAR OR BILLE
[Symbol]	CONDUIT'S RUN IN FLOOR SOLE
[Symbol]	GROUND
[Symbol]	KEYED WIRE, NUMBER THREE SQUARE INDICATES KEYS NOTICE NO.
[Symbol]	FLOOR MOUNTED SINGLE PHASE, DUPLEX RECEPTACLE 15A, UN SWITCHED
[Symbol]	WALL MOUNTED SINGLE PHASE, DUPLEX RECEPTACLE 15A, UN SWITCHED
[Symbol]	WALL MOUNTED SINGLE PHASE, DUPLEX RECEPTACLE 15A, UN SWITCHED, WATER PROOF
[Symbol]	WALL MOUNTED SINGLE PHASE, DUPLEX RECEPTACLE 15A, UN SWITCHED
[Symbol]	SINGLE PHASE SOCKET OUTLET, INDUSTRIAL TYPE, 15A, WITH EARTHING POLE.
[Symbol]	THREE PHASE SOCKET OUTLET, INDUSTRIAL TYPE, 32A, WITH EARTHING POLE.
[Symbol]	SWITCHED SOUP OUTLET, WITH MOUNTED ON WALL OR ABOVE CEILING, MOUNTING HEIGHT AS NOTED ON PLANS.
[Symbol]	SWITCHED SOUP OUTLET, WITH MOUNTED ON WALL OR ABOVE CEILING, MOUNTING HEIGHT AS NOTED ON PLANS.
[Symbol]	THREE PHASE HEATING PANEL, RATING AS INDICATED ON PLANS.
[Symbol]	THREE PHASE ISOLATING SWITCH, WATER PROOF, RATING AS INDICATED ON PLANS.

SYMBOL	DESCRIPTION
[Symbol]	SINGLE PHASE ISOLATING SWITCH, RATING AS INDICATED ON PLANS.
[Symbol]	SINGLE PHASE ISOLATING SWITCH, WATER PROOF, RATING AS INDICATED ON PLANS.
[Symbol]	SUBSTATION/TRANSFORMER, DESCRIPTION AND RATING AS INDICATED ON PLANS.
[Symbol]	MOUNTED GEAR CROUZE BROWN, THREE PHASE (VICO)
[Symbol]	DRUM OUT TYPE AIR CROUZE BREAKER, THREE PHASE, FOUR POLE
[Symbol]	MINIATURE CROUZE BREAKER, THREE PHASE (VICO)
[Symbol]	BRANCH CROUZE PANEL BOARD
[Symbol]	SUBMAIN DISTRIBUTION BOARD
[Symbol]	LOCAL CONTROL CENTER
[Symbol]	MAIN DISTRIBUTION BOARD
[Symbol]	WALL MOUNTED DATA OUTLET 60cm AT, UNLESS NOTED OTHERWISE
[Symbol]	MAIN DATA PATCH PANEL
[Symbol]	DATA PATCH PANEL
[Symbol]	GROUND ROD IN INSPECTION PIT
[Symbol]	GROUND ROD
[Symbol]	FIRE ALARM CONTROL PANEL
[Symbol]	FIRE ALARM MANUAL PULL STATION, WITH BATTERY STOPPER COVER
[Symbol]	FIRE ALARM HOLOGIC INDICATOR
[Symbol]	BURST DETECTOR PHOTO OPTICAL BURST DETECTOR
[Symbol]	FIRE ALARM HEAT DETECTOR
[Symbol]	FIRE ALARM PHOTO/SMALL, 2.0m AT WALL
[Symbol]	FIRE ALARM BELL
[Symbol]	FIRE-ALARM TELEPHONE
[Symbol]	MAIN PUBLIC ADDRESS SYSTEM BACK
[Symbol]	80 OHMS MOUNTED LOUIS SPEAKER
[Symbol]	80 OHMS MOUNTED LOUIS SPEAKER, CONTROLLED BY LOCAL VOLUME CONTROLLER
[Symbol]	100 WATT MOUNTED HORN LOUIS SPEAKER, 2.0m AT WALL
[Symbol]	LOCAL AMPLIFIER
[Symbol]	VOLUME CONTROLLER
[Symbol]	GUYTON MOUNTED MICROPHONE OUTLET, 60cm AT, UNLESS NOTED OTHERWISE
[Symbol]	WALL MOUNTED TELEPHONE OUTLET 15cm AT, UNLESS NOTED OTHERWISE
[Symbol]	WALL MOUNTED COIN OPERATED TELEPHONE OUTLET 110cm AT, UNLESS NOTED OTHERWISE
[Symbol]	FLOOR MOUNTED DATA OUTLET
[Symbol]	FLOOR MOUNTED TELEPHONE OUTLET
[Symbol]	TELEPHONE TERMINAL BOARD
[Symbol]	MAIN TELEPHONE TERMINAL BOARD
[Symbol]	TELEPHONE CONNECTION BOX
[Symbol]	PRIVATE AUTOMATIC BRANCH EXCHANGE
[Symbol]	SECURITY BREAK GLASS DETECTOR
[Symbol]	MAGNETIC CONTACT
[Symbol]	COILING MOUNTED PAPER DETECTOR
[Symbol]	WALL MOUNTED PAPER DETECTOR
[Symbol]	NAME PLATE STATION
[Symbol]	POWER SUPPLY UNIT
[Symbol]	SECURITY CONTROL PANEL
[Symbol]	PROXIMITY READER
[Symbol]	ELECTRIC LOCK
[Symbol]	ACCESS CONTROL SYSTEM CONTROLLER
[Symbol]	CITY CAMERA, FIXED TYPE
[Symbol]	CITY MOUNTING & BRACKET
[Symbol]	DOOR BELL
[Symbol]	DOOR BELL SUBSTITUTION
[Symbol]	EXPOSED MOUNTED CABLE ON SPACE FRAME

**ABBREVIATIONS**

LETTER	DESCRIPTION
F	FAN COIL UNIT
AT	ABOVE FINISHED FLOOR LEVEL
MB	MURBER
HA	HANBER
EB	GROUPT BREAKER
T	TRANSFORMER
BC	BURST DETECTOR CENTER
EF	EARTH FAULT
ACB	AIR CROUZE BREAKER
A	AMPERE
P	POLE
CB	COIN OPERATED BREAKER
NO	NORMALLY OPEN
NC	NORMALLY CLOSE
PHV	THREE PHASE & NEUTRAL & EARTH
M	METER
BCB	BURST CROUZE BREAKER

1 ELECTRICAL SYMBOLS LEGEND & LIGHTING FIXTURES SCHEDULE  
E001 SCALE = N.T.S

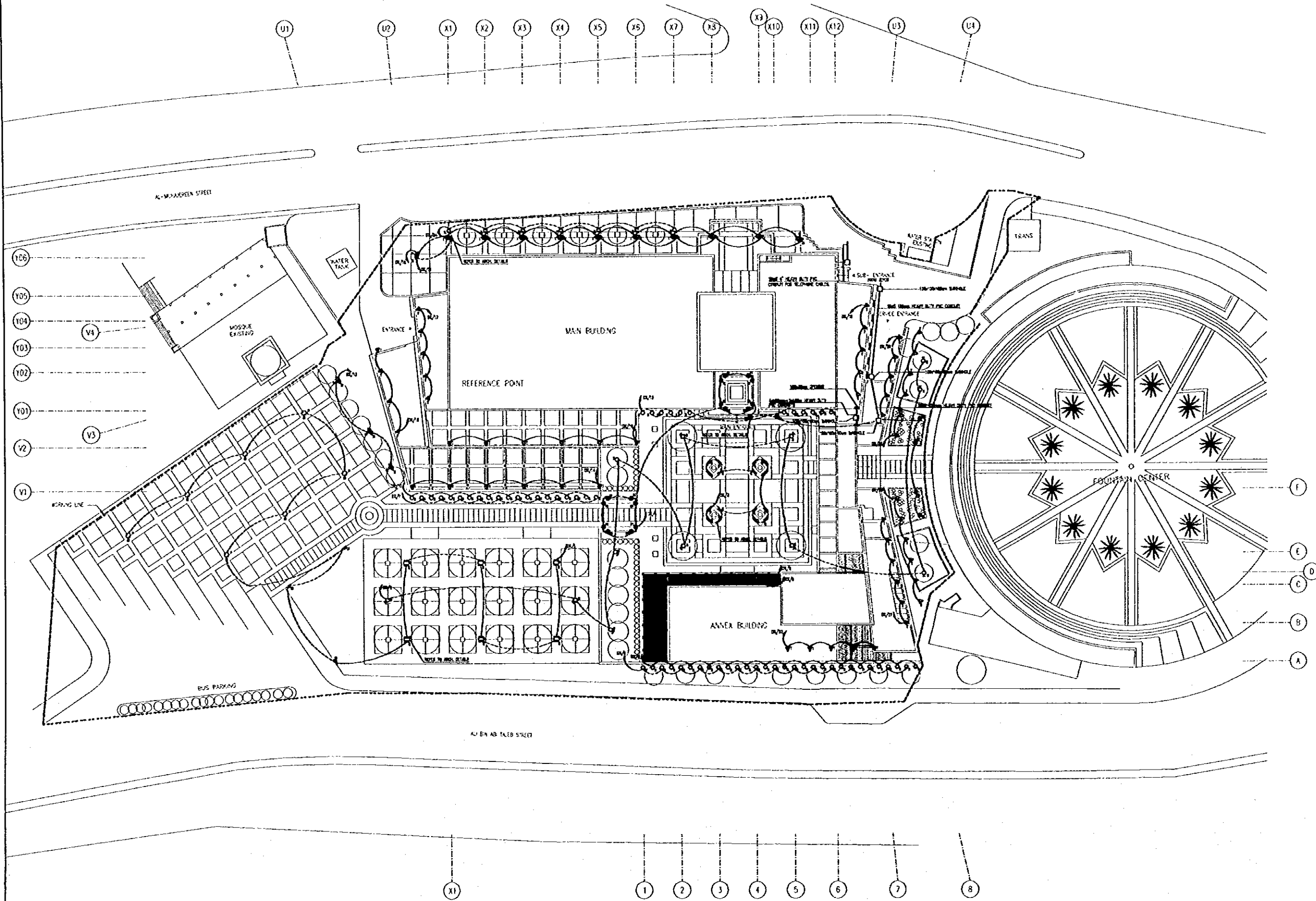
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**Subcontracted Local Consultant:**  
**Jafar Tulan and Partners Architects and Engineers**

Drawing Title:  
**ELECTRICAL SYMBOLS LEGEND & LIGHTING FIXTURES SCHEDULE**

Scale:  
N.T.S  
Drawing No.:  
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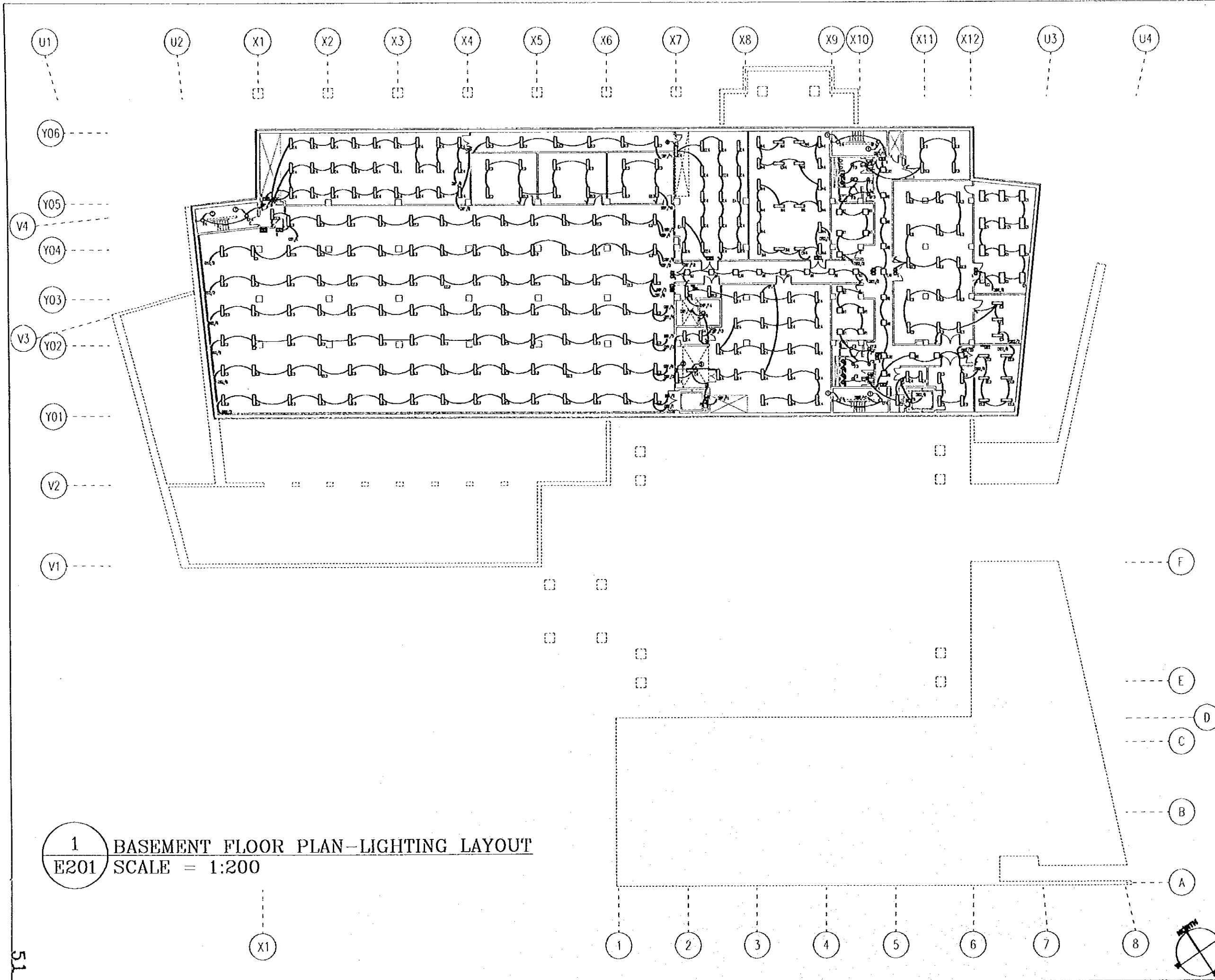
Drawing Title:  
**SITE PLAN-LIGHTING LAYOUT**

Scale:  
1:400  
Drawing No.:  
**E101**

**1** SITE PLAN-LIGHTING LAYOUT  
**E101** SCALE = 1:400

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KEYED NOTES:  
① LIGHTING FIXTURE TO REMAIN UNCHANGED.  
② BALL MOUNTED FIXTURES TO BE AT 2500mm HT.



**1** BASEMENT FLOOR PLAN-LIGHTING LAYOUT  
E201 SCALE = 1:200

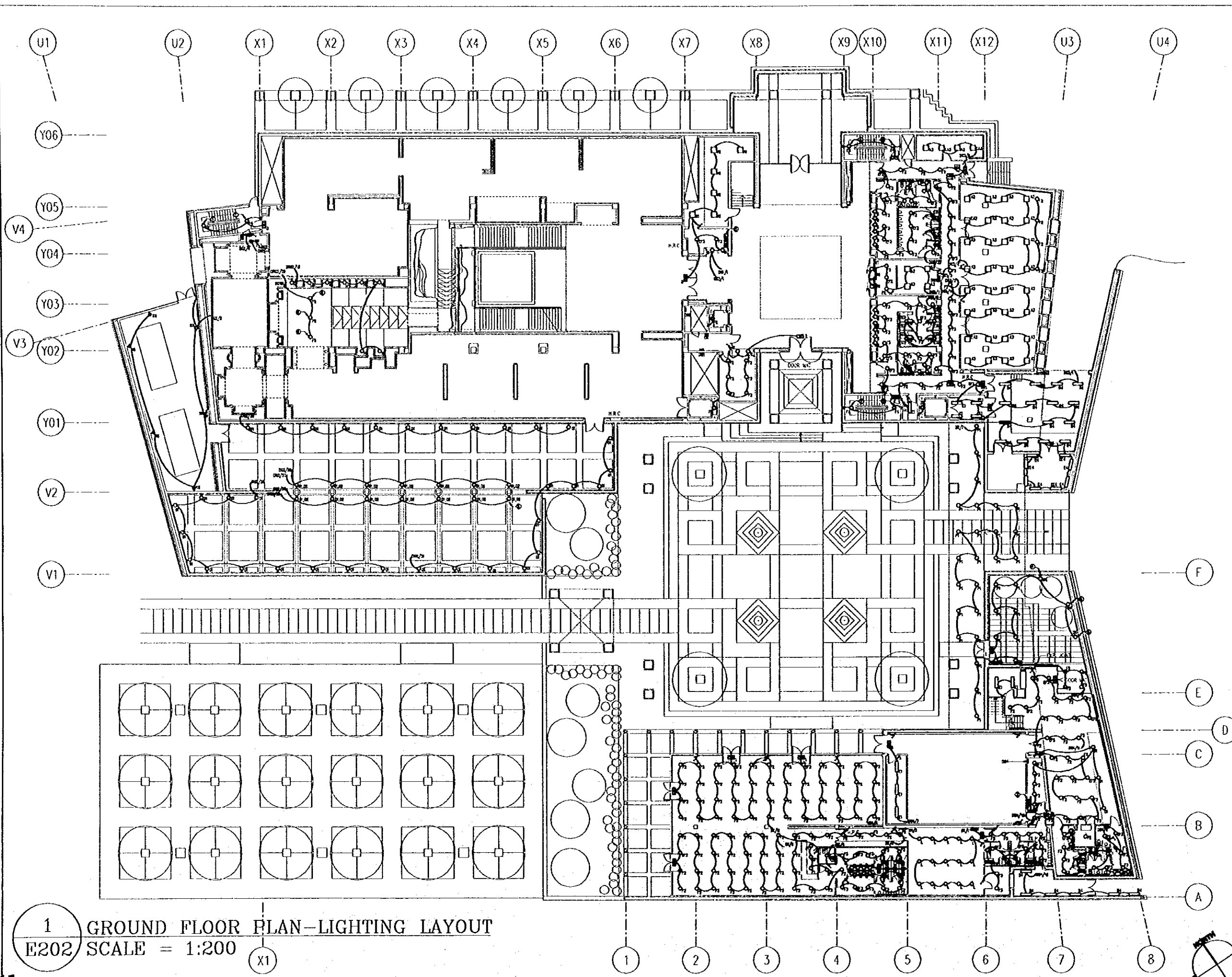
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Drawing Title:  
BASEMENT FLOOR PLAN-LIGHTING LAYOUT



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- KEYED NOTES:
- LIGHTING FIXTURE TO BE USED AS SHOWN.
  - A. INDICATE HEAVY FIXTURE TYPES IN B. IN SHALL BE AT 1000 MM TO 1200 MM SPECIFICALLY.
  - B. INDICATE LIGHT FIXTURE TO BE USED IN THE FUTURE.
  - C. INDICATE 8 AND 2000MM SPACES.
  - D. SHALL BE USED IN THE FUTURE TO BE AT 1000MM SP.
  - E. WITH IN 1000MM SPACES 8 AND 2000MM.
  - USE THE FIXTURE WITH CIRCULAR SHAPE.



1 GROUND FLOOR PLAN-LIGHTING LAYOUT  
E202 SCALE = 1:200

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Architects and Engineers

Drawing Title:  
GROUND FLOOR PLAN-  
LIGHTING LAYOUT  
Scale:  
1:200  
Drawing No.:  
E202

Sub-Project:

**NATIONAL MUSEUM**

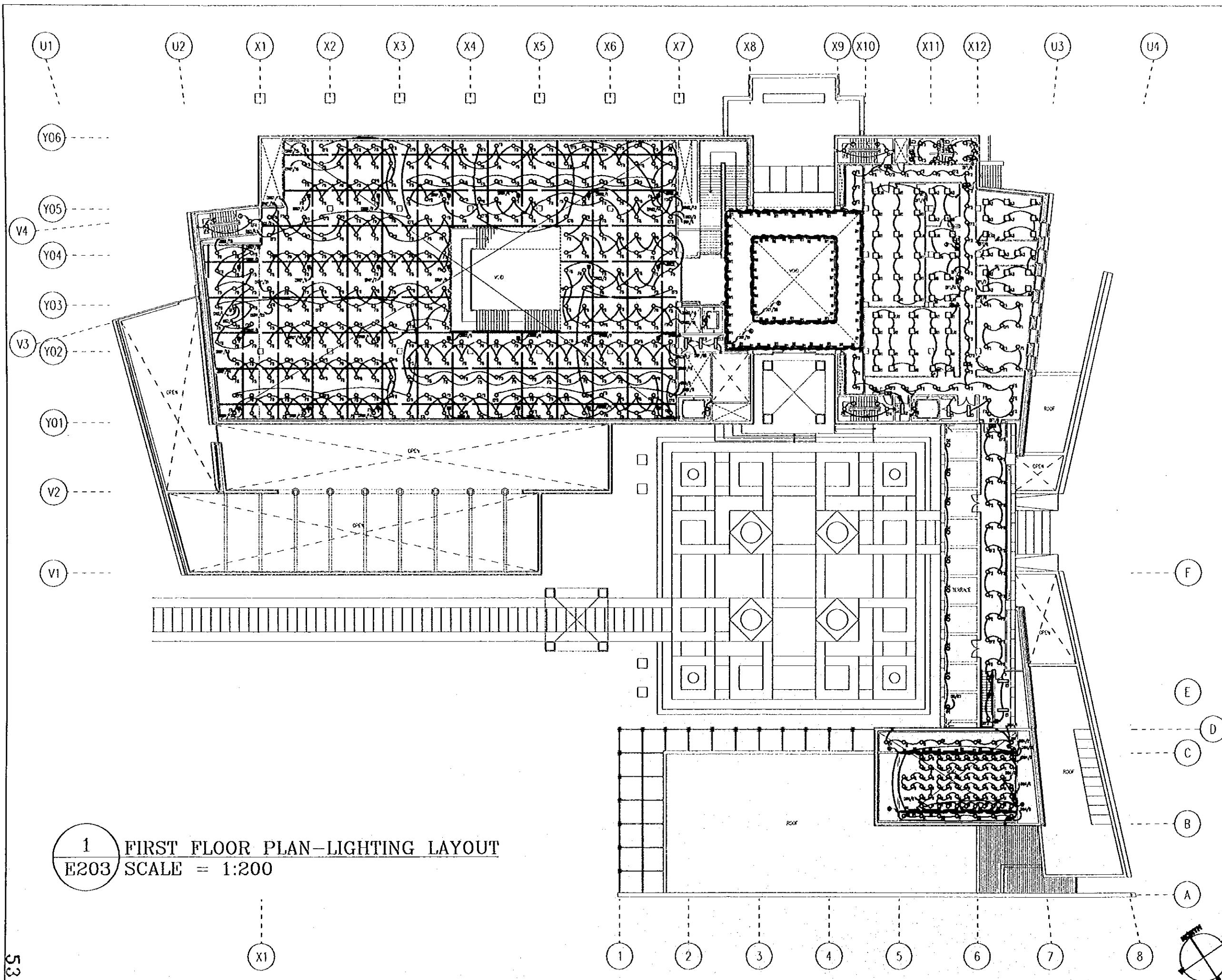
Note:

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KEY TO NOTES:

- ① LIGHTING FIXTURE TO REMAIN UN-SWITCHED.
- ② SWITCHING IS AS SHOWN VIA BUS SYSTEM.
- ③ REFER TO DRAWING SYSTEM BLOCK DIAGRAM.
- ④ VERTICAL LIGHT IS RECESSED LIGHT FLUORESCENT LIGHT.



**1** FIRST FLOOR PLAN-LIGHTING LAYOUT  
E203 SCALE = 1:200

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Japan International Cooperation Agency (JICA)

JICA Study Team:

Joint Venture of Pacific Consultants International and Yamashita Sekidai Inc.

Subcontracted Local Consultant:  
Jafar Tulan and Partners  
Architects and Engineers

Drawing Title:

FIRST FLOOR PLAN-LIGHTING LAYOUT

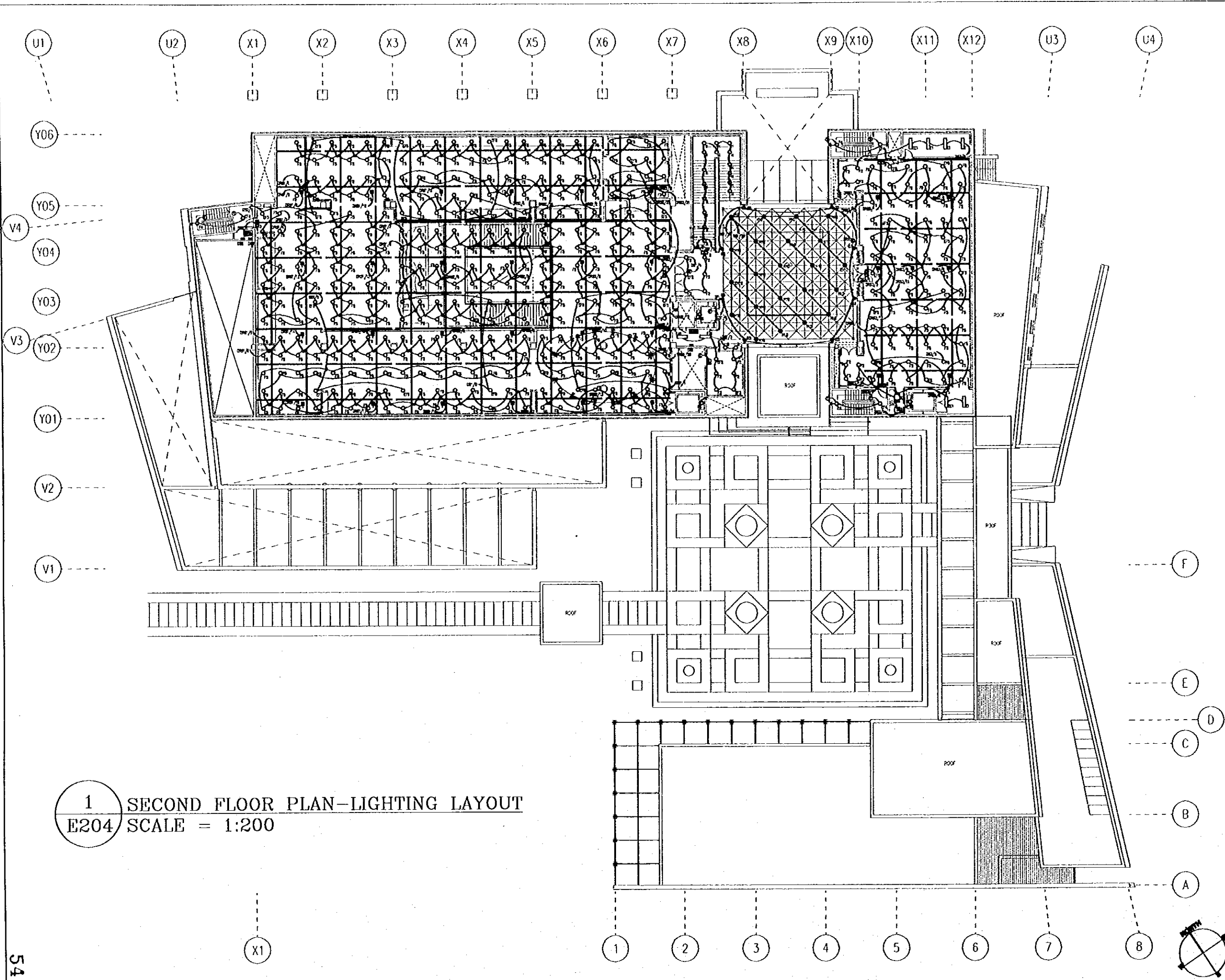
Scale: 1:200

Drawing No.:

**E203**

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KEY TO SYMBOLS:  
○ LIGHT FIXTURE IN ROOM OR RECESS  
□ RECESS IN ARCHITECTURAL FINISH  
○ TO BE IN SHOWN FIELD BOX SYMBOL



1 SECOND FLOOR PLAN-LIGHTING LAYOUT  
E204 SCALE = 1:200

Designed by:  
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Drawing Title:  
SECOND FLOOR PLAN-LIGHTING LAYOUT

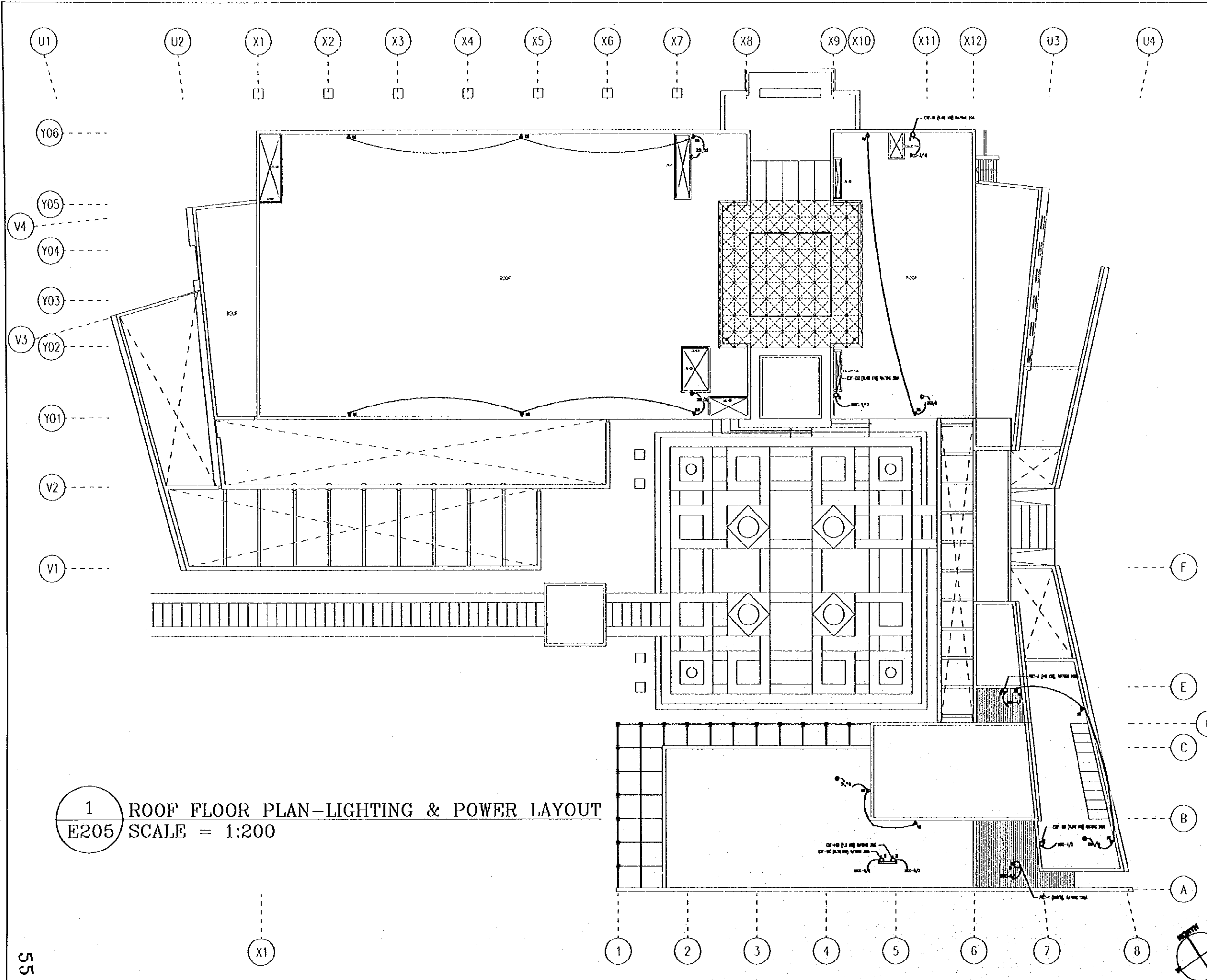
Scale: 1:200  
Drawing No.: E204

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REVISIONS

① 10-10 10:00 AM 10/10/00  
② 10-10 10:00 AM 10/10/00



1 ROOF FLOOR PLAN-LIGHTING & POWER LAYOUT  
E205 SCALE = 1:200

Designed by:

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JICA Study Team:

Joint Venture of Pacific Consultants International and Yamashita Sekai Inc.

Subcontracted Local Consultant:

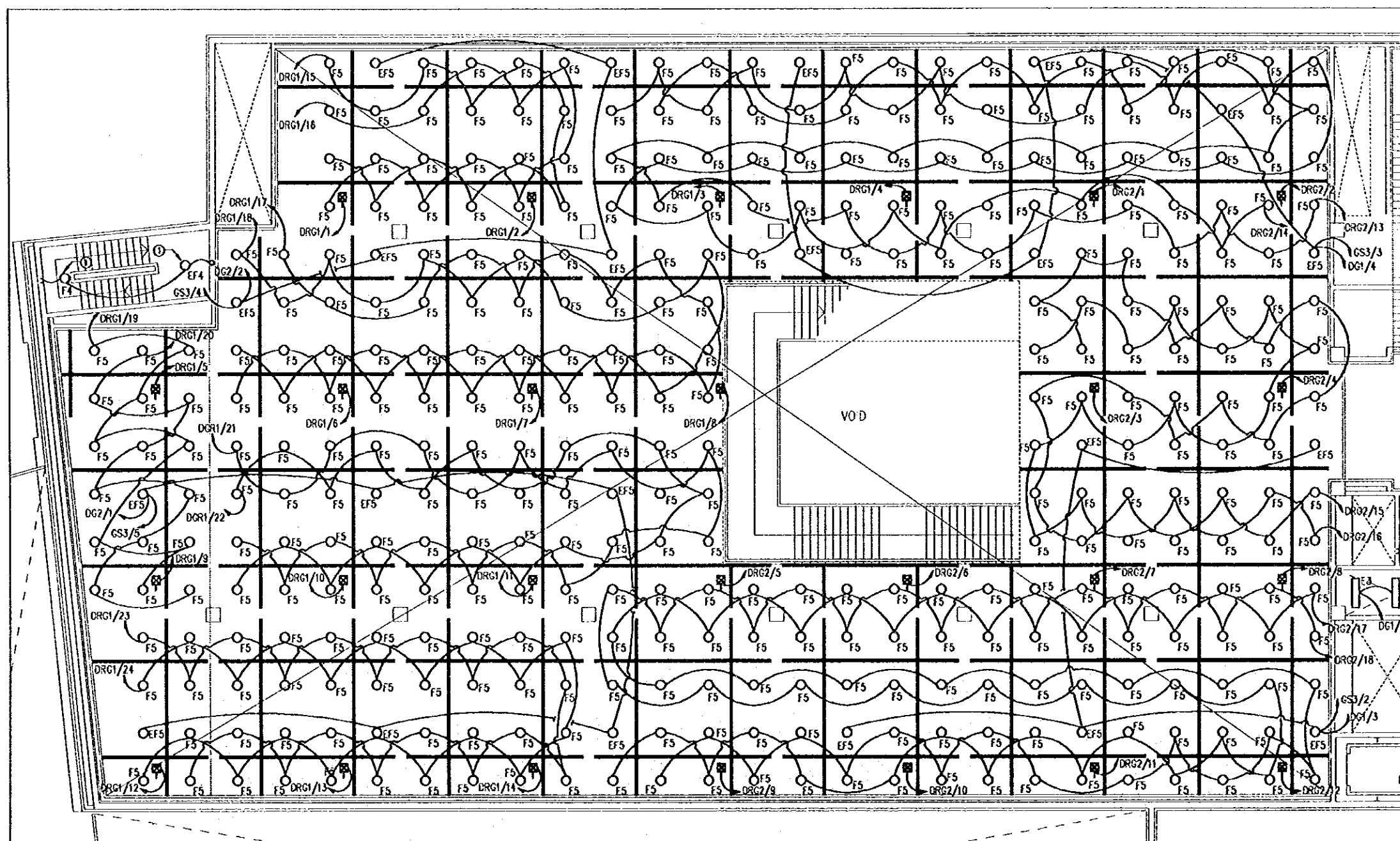
Jafar Tulan and Partners Architects and Engineers

Drawing Title:

ROOF FLOOR PLAN-LIGHTING & POWER LAYOUT

Scale:  
1:200

Drawing No.:  
E205



1 FIRST FLOOR PLAN MAIN-EXHIBITION LIGHTING LAYOUT  
E206 SCALE = 1:100

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JICA Study Team:

Joint Venture of Pacific Consultants International and Yamashita Sekizai Inc.

Subcontracted Local Consultant:

Jafar Tulkan and Partners Architects and Engineers

Drawing Title:

FIRST FLOOR PLAN -  
MAIN EXHIBITION LIGHTING LAYOUT

Scale:  
1:100

Drawing No.:  
E206