

**EC 가열장치 전원공급설비 설치공사**

**(전 기)**

**2018. 03**

도면 목록표

SCALE : NONE

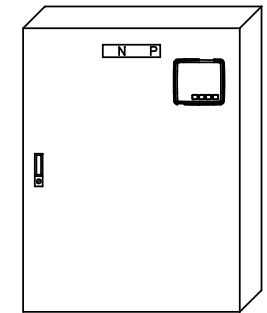
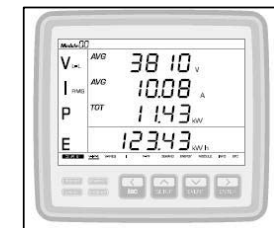
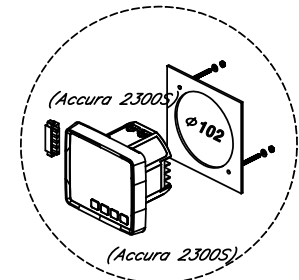
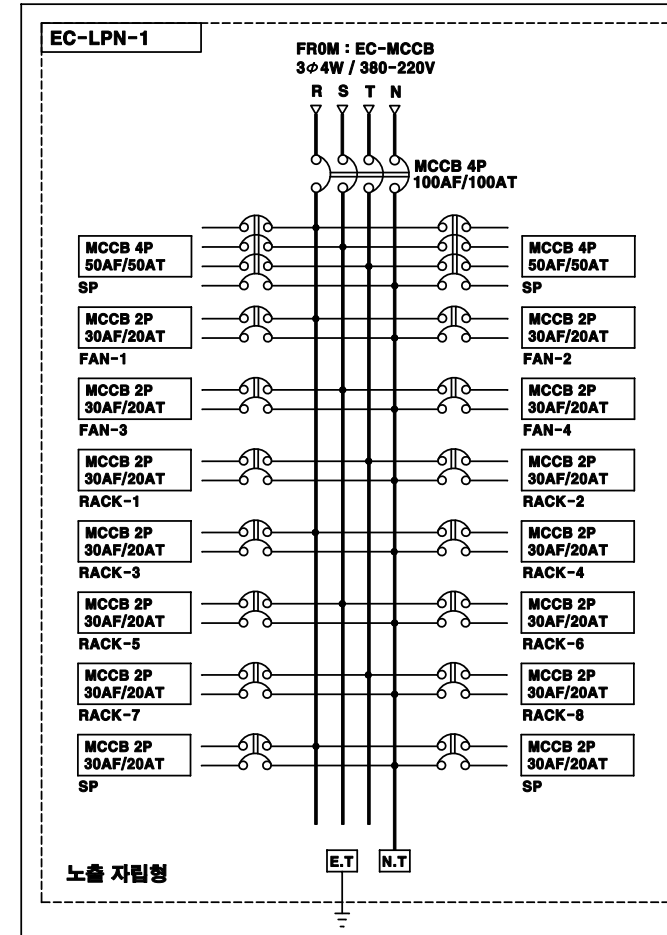
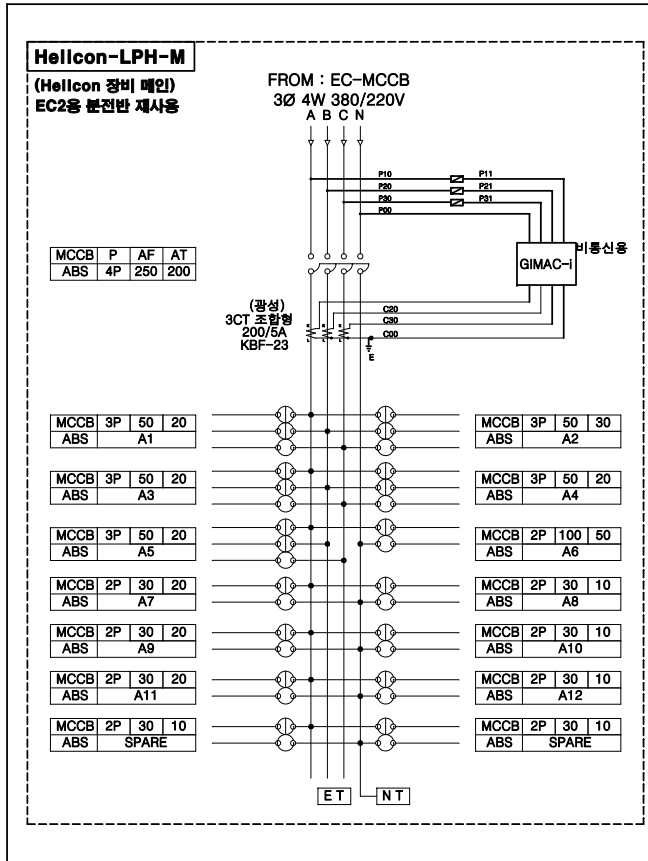
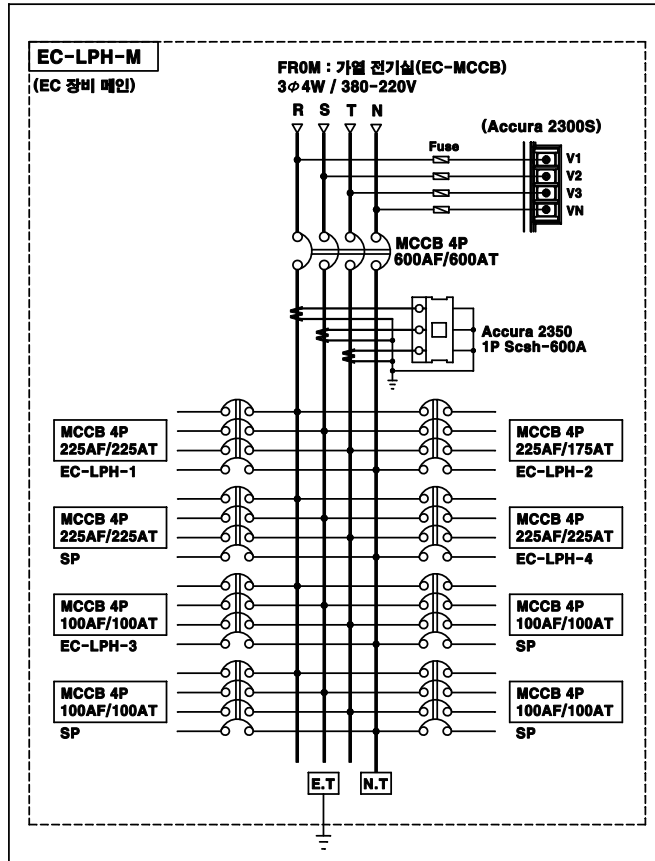
도면번호	도면명	속척
		A1 SIZE / A3 SIZE
EC - E - 00	도면 목록표	NONE
EC - E - 01	EC 가열장치 전벽 단선결선도	NONE
EC - E - 02	EC 가열장치 수배전반 배치도	1/60 / 1/120
EC - E - 03	분전반 결선도-1	NONE
EC - E - 04	분전반 결선도-2	NONE
EC - E - 05	실험동 1층 전력간선설비 평면도	1/200 / 1/400
EC - E - 06	실험동 2층 전력간선설비 평면도	1/200 / 1/400
EC - E - 07	실험동 3층 전력간선설비 평면도	1/200 / 1/400
EC - E - 08	가열장치실 DECK층 전력간선설비 평면도	1/100 / 1/200
EC - E - 09	공동구 전력간선설비 평면도	1/100 / 1/200
EC - E - 10	전기실 1층 전력간선설비 평면도	1/60 / 1/120
EC - E - 11	전기실 2층 전력간선설비 평면도	1/60 / 1/120
EC - E - 12	전기실 3층 전력간선설비 평면도	1/60 / 1/120
EC - E - 13	공동구 케이블 트레이 설치 단면도	1/15 / 1/30
EC - E - 14	EPS실 케이블 트레이 설치 평면 및 단면도	1/15 / 1/30
EC - E - 15	각종 상세도-1	NONE
EC - E - 16	각종 상세도-2	NONE



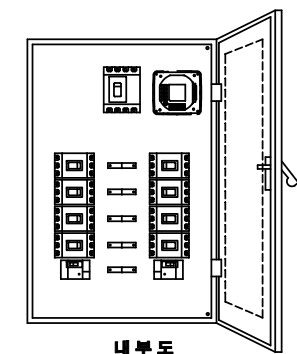


# 분전반 결선도 -1

SCALE : NONE



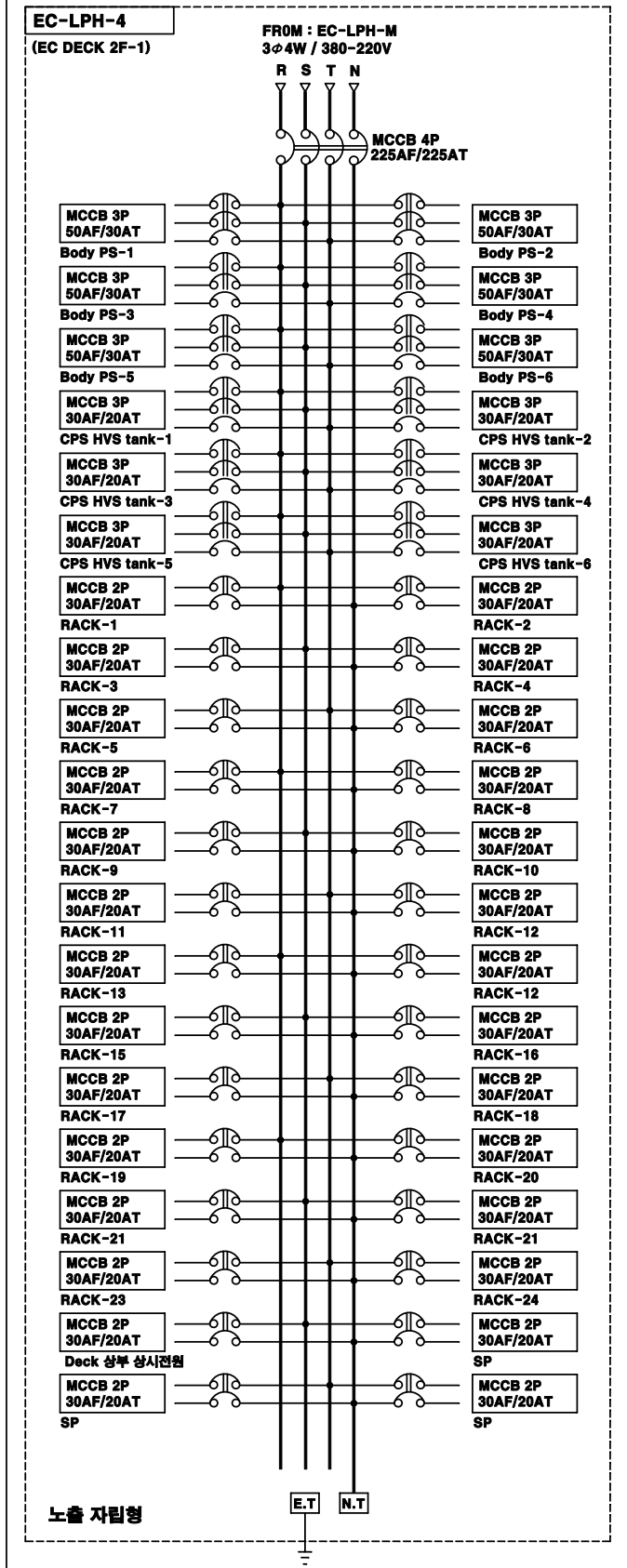
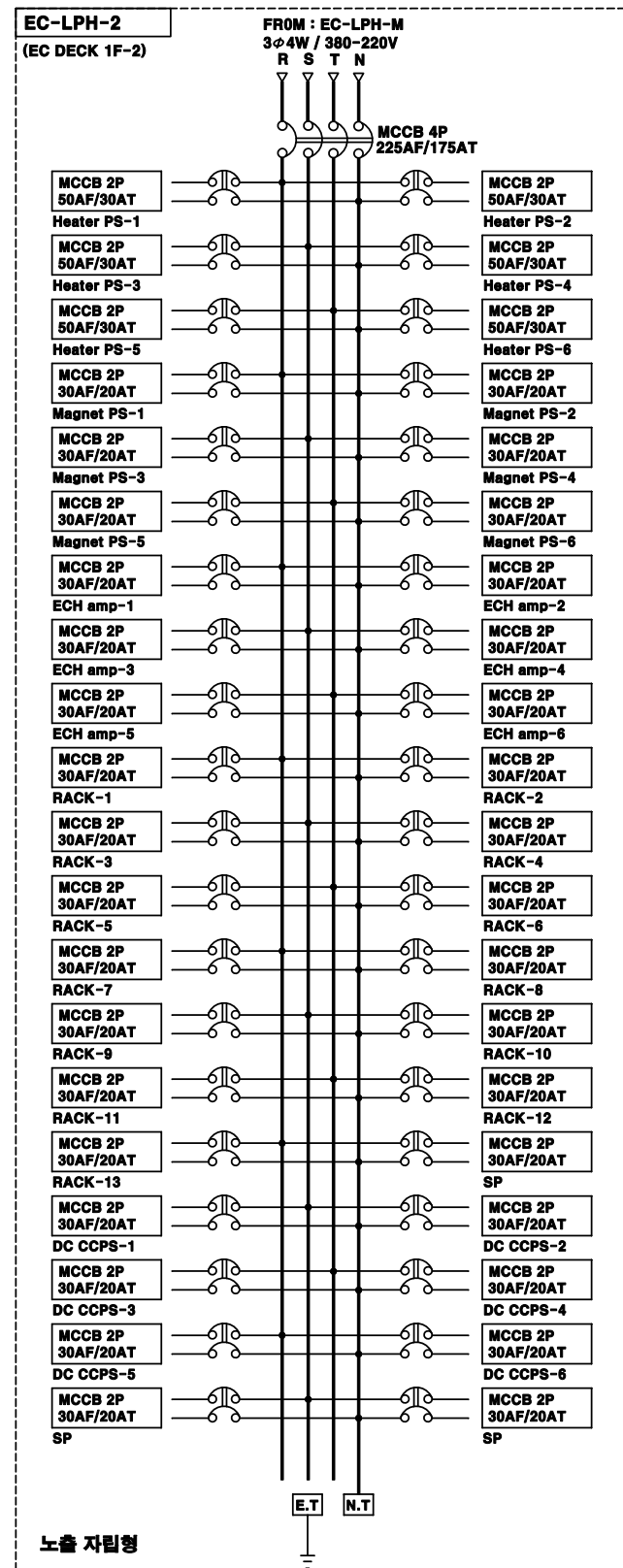
외면도



내부도

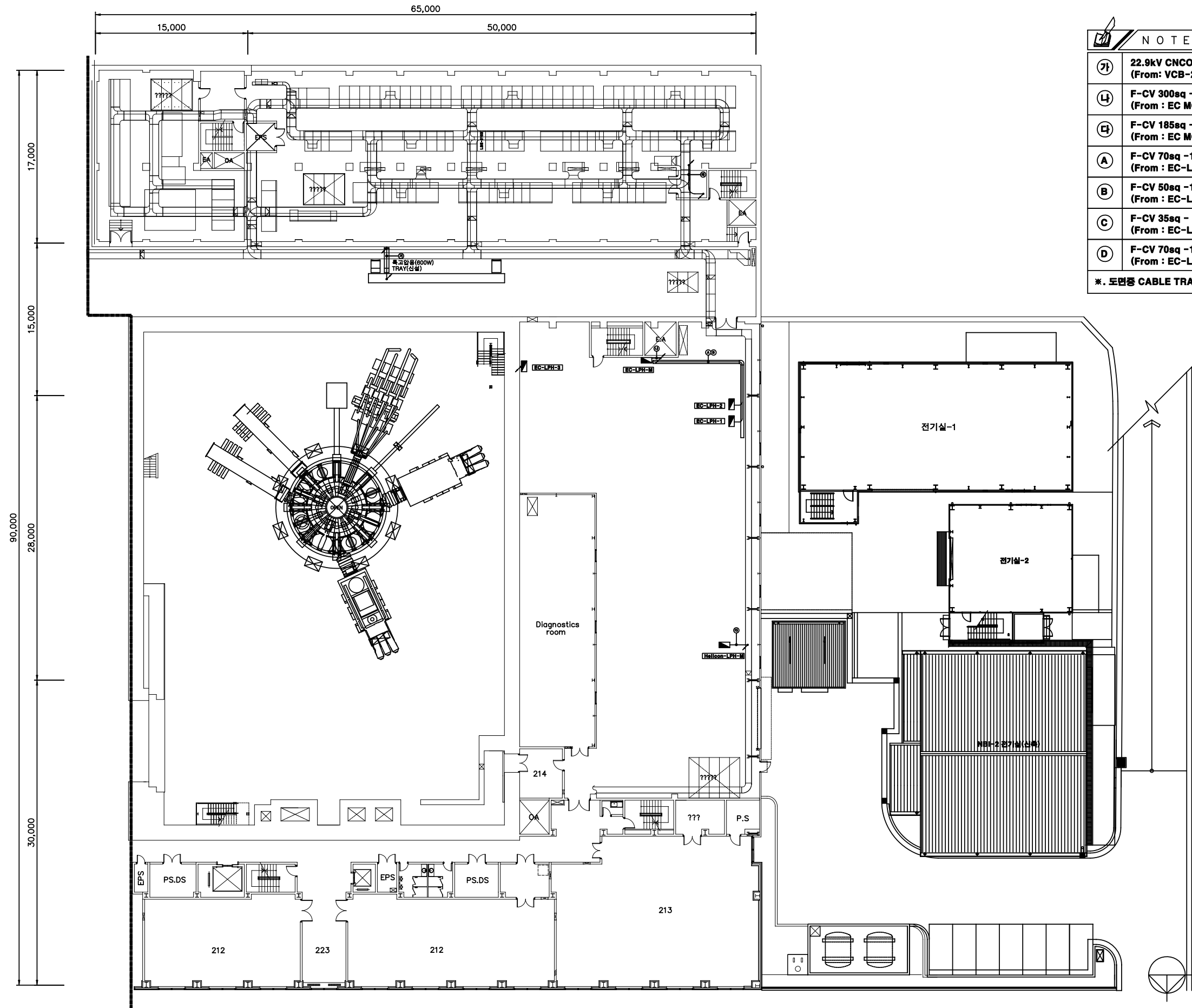
분전반 설치 상세도(노출 벽부형)

**SCALE : NONE**







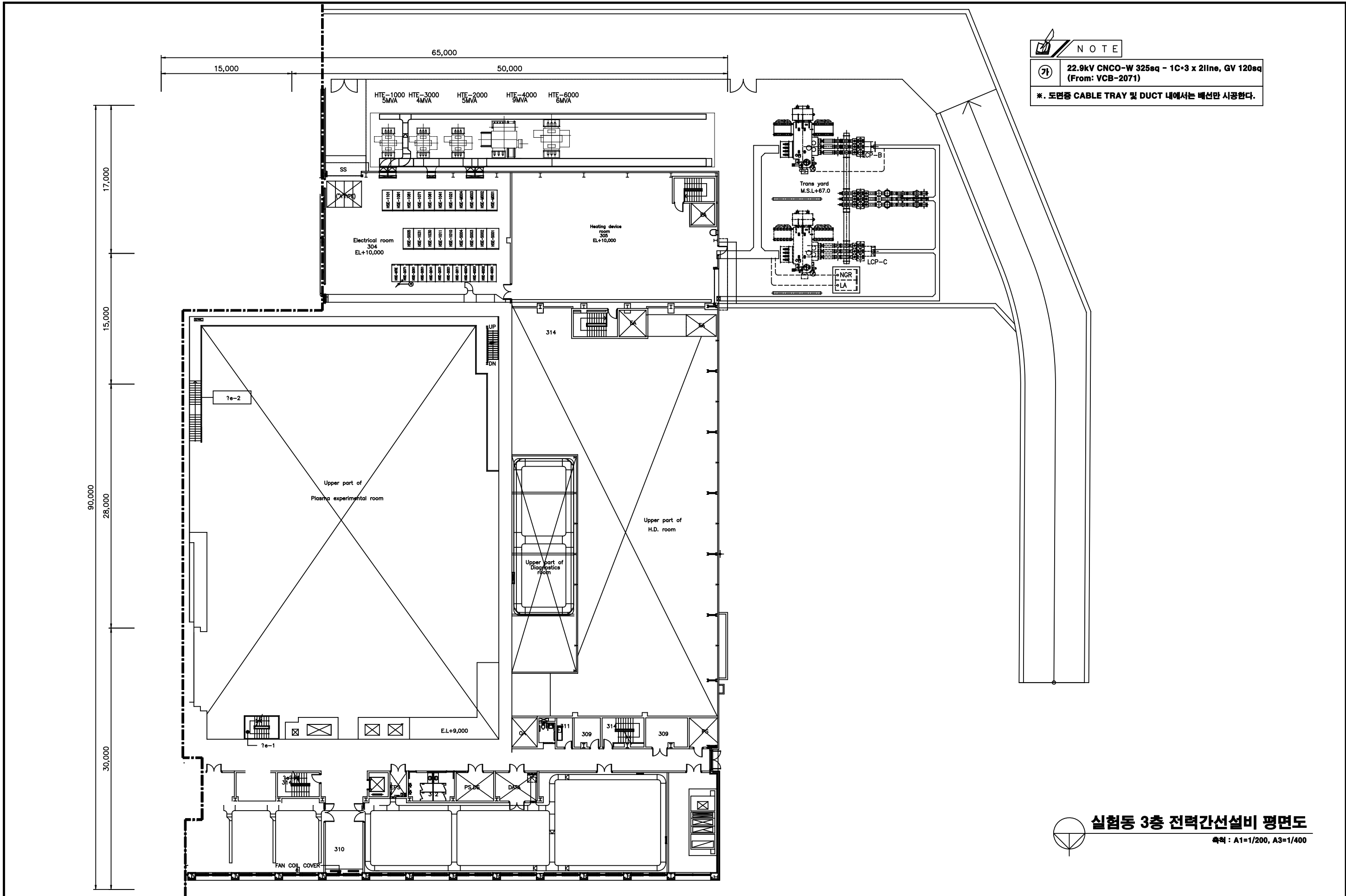


실험동 2층 전력간선설비 평면도

축척 : A1=1/200, A3=1/400

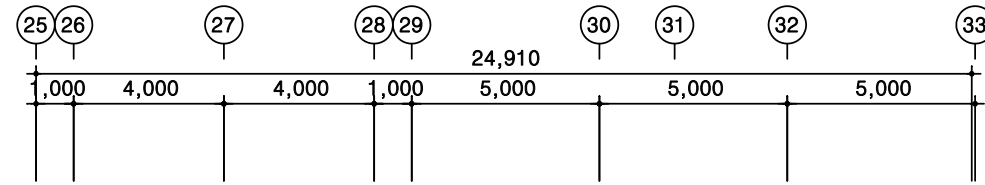
CLIENT <b>NFRI</b> 국가핵융합연구소 National Fusion Research Institute	APPROVED BY	REV.	DATE	REMARK	REVISED BY	NOTE	APPROVED BY	실험동 2층 전력간선설비 평면도				
	CHECKED BY	△					CHECKED BY					
	CHARGED BY	△					DRAWN BY	PROJECT NO.	DATE	SCALE	DRAWING NO.	SHEET NO.
		△							2018.03	A1:1/200 A3:1/400	EC-E-06	REV. NO.
PROJECT TITLE EC 가열장치 전원공급설비 설치공사												





실험동 3층 전력간선설비 평면도  
축척 : A1=1/200, A3=1/400

CLIENT <b>NFRI</b> 국가핵융합연구소 National Fusion Research Institute	APPROVED BY	REV.	DATE	REMARK	REVISED BY	NOTE	APPROVED BY	실험동 3층 전력간선설비 평면도				
	CHECKED BY	△					CHECKED BY	PROJECT NO.	DATE	SCALE	DRAWING NO.	SHEET NO.
	CHARGED BY	△					DRAWN BY	2018.03	A1:1/200 A3:1/400	EC-E-07		REV. NO.

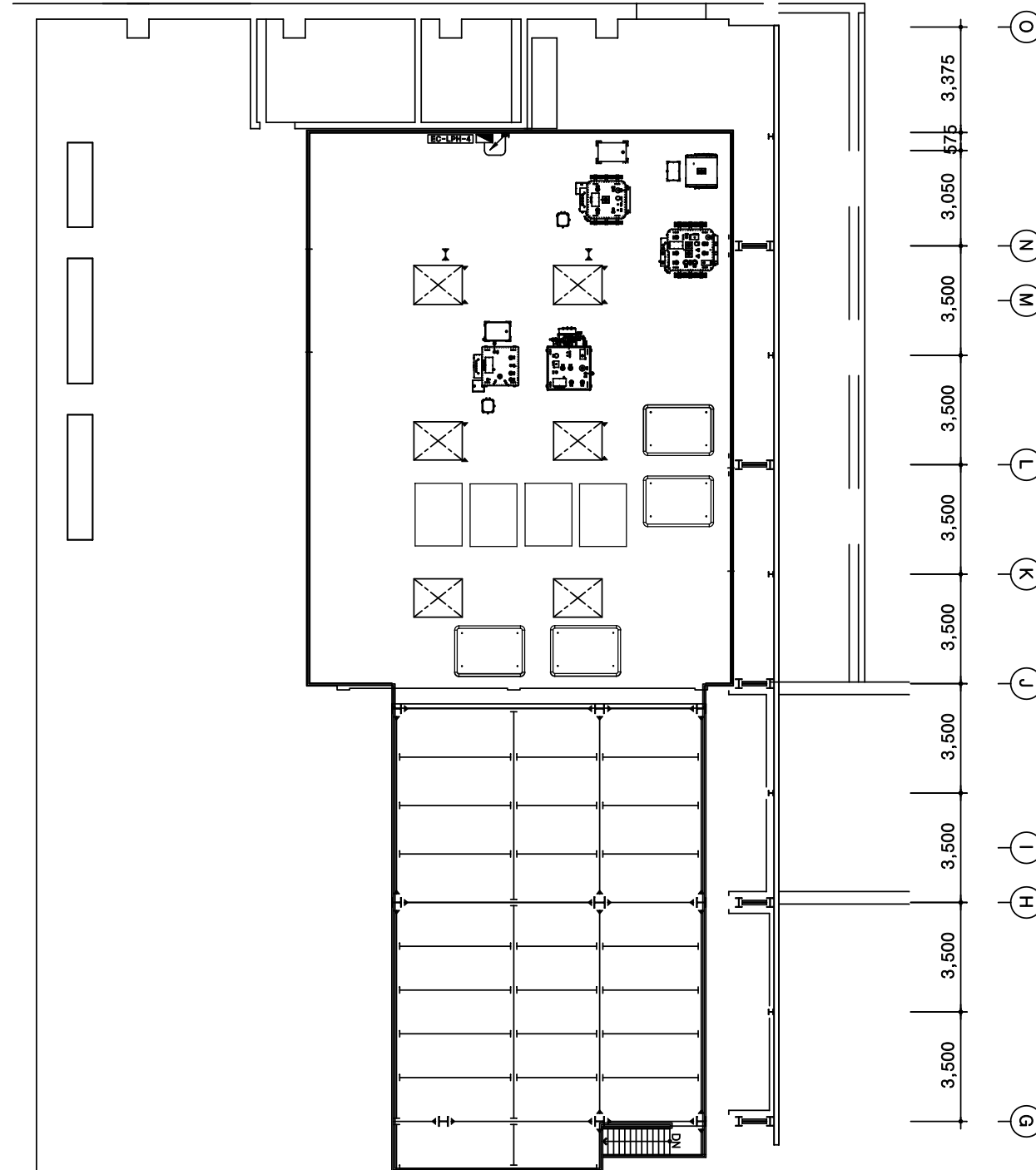


NOTE

D

F-CV 70sq - 1C x 4, GV 50sq (ST 54C)  
(From : EC-LPH-M)

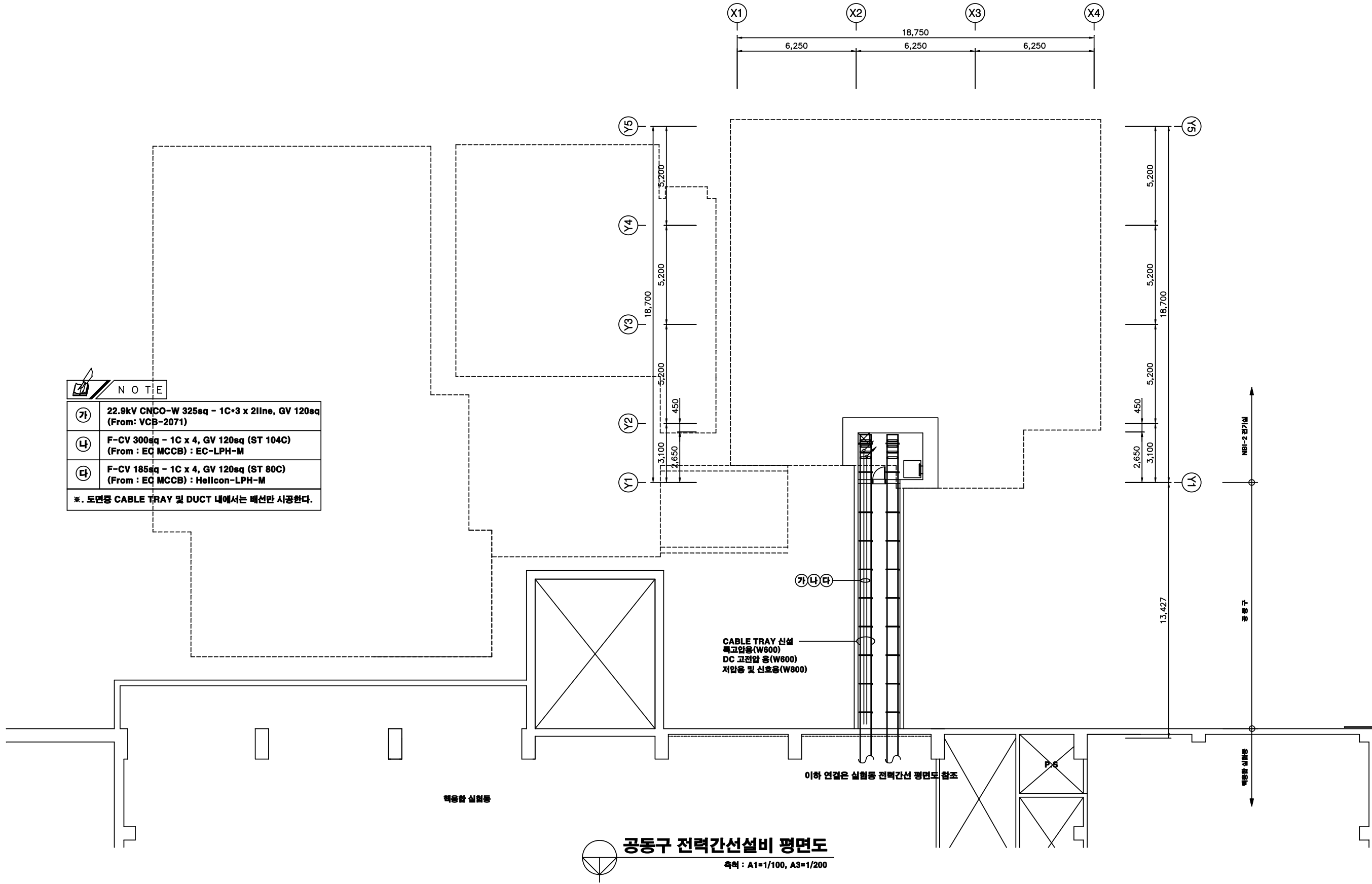
\*. 도면중 CABLE TRAY 및 DUCT 내에서는 배선만 시공한다.



가열장치실 DECK층 전력간선 평면도

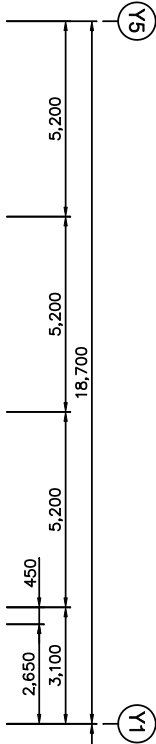
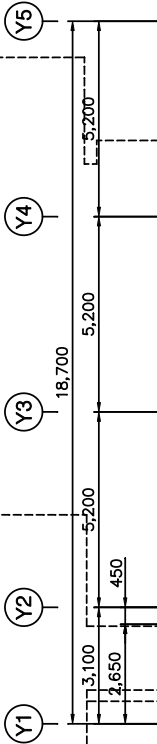
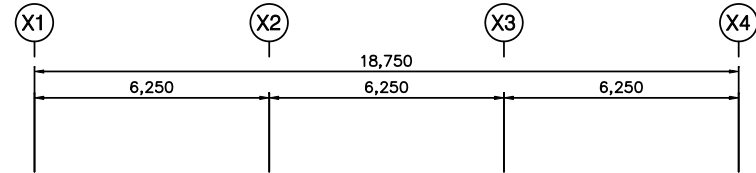
축척 : A1=1/100, A3=1/200

CLIENT <div>NFRI 국가핵융합연구소 National Fusion Research Institute</div>	APPROVED BY	REV.	DATE	REMARK	REVISED BY	NOTE		APPROVED BY	가열장치실 DECK층 전력간선 평면도					
	CHECKED BY	△						CHECKED BY						
	PROJECT TITLE EC 가열장치 전원공급설비 설치공사	CHARGED BY	△						DRAWN BY	PROJECT NO.	DATE 2018.03	SCALE A1:1/100 A1:1/200	DRAWING NO. EC-E-08	SHEET NO.



NOTE

가	22.9kV CNGO-W 325sq - 1C*3 x 2line, GV 120sq (From: VCB-2071)
나	F-CV 300sq - 1C x 4, GV 120sq (ST 104C) (From : EQ MCCB) : EC-LPH-M
다	F-CV 185sq - 1C x 4, GV 120sq (ST 80C) (From : EQ MCCB) : Helicon-LPH-M
※. 도면중 CABLE TRAY 및 DUCT 내에서는 배선만 시공한다.	



CABLE TRAY 산설  
특고압용(W600)  
DC 고전압 용(W600)  
저압용 및 신호용(W800)

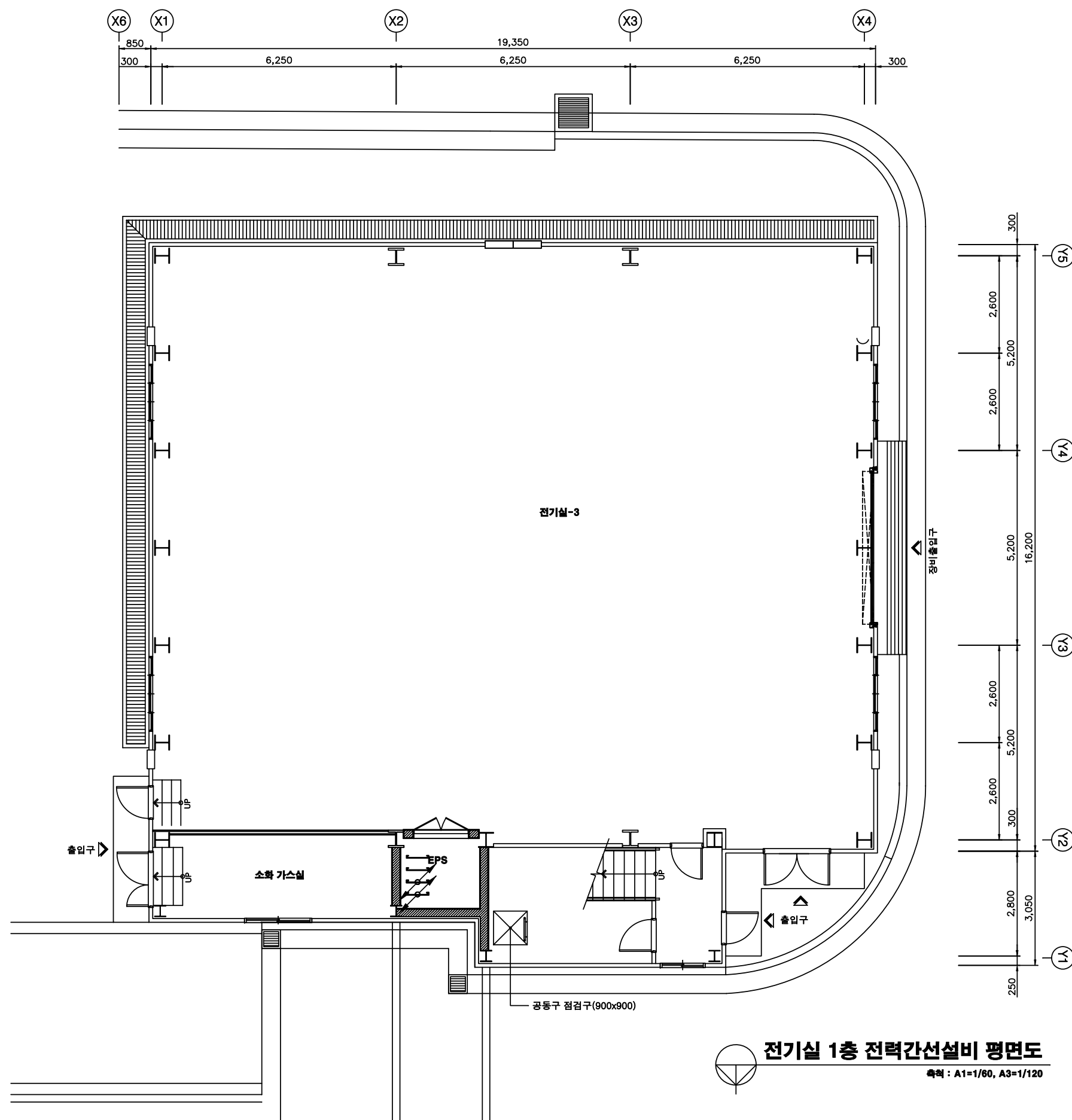
이하 연결은 실험동 전력간선 평면도 참조



공동구 전력간선설비 평면도

축척 : A1=1/100, A3=1/200

CLIENT <b>NFRI</b> 국가핵융합연구소 National Fusion Research Institute	APPROVED BY	REV.	DATE	REMARK	REVISED BY	NOTE	APPROVED BY	공동구 전력간선설비 평면도					
	CHECKED BY	△					CHECKED BY						
	CHARGED BY	△					DRAWN BY	PROJECT NO.	DATE	SCALE	DRAWING NO.	SHEET NO.	REV. NO.
		△							2018.03	A1:1/100 A1:1/200	EC-E-09		



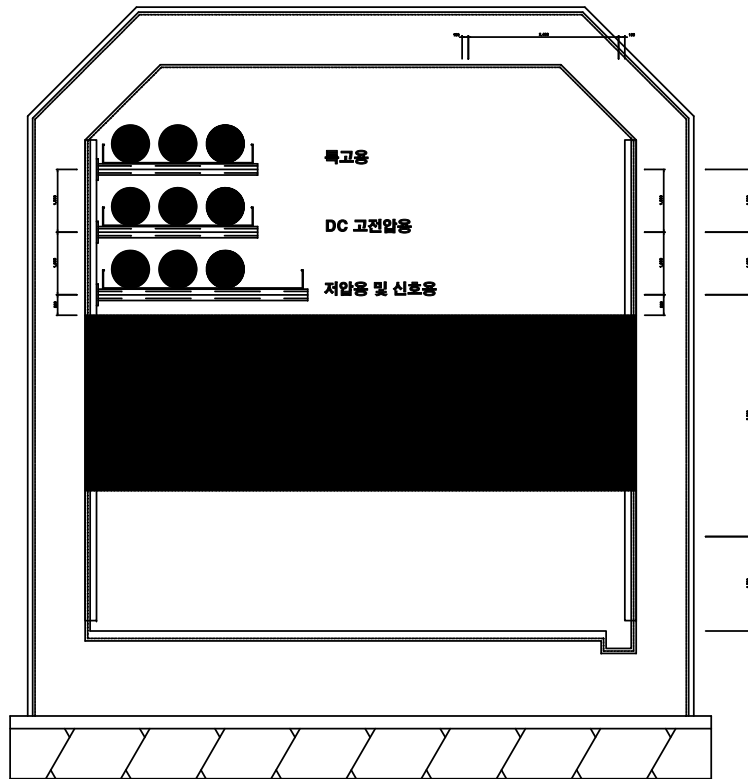
**전기실 1층 전력간선설비 평면도**  
축척 : A1=1/60, A3=1/120



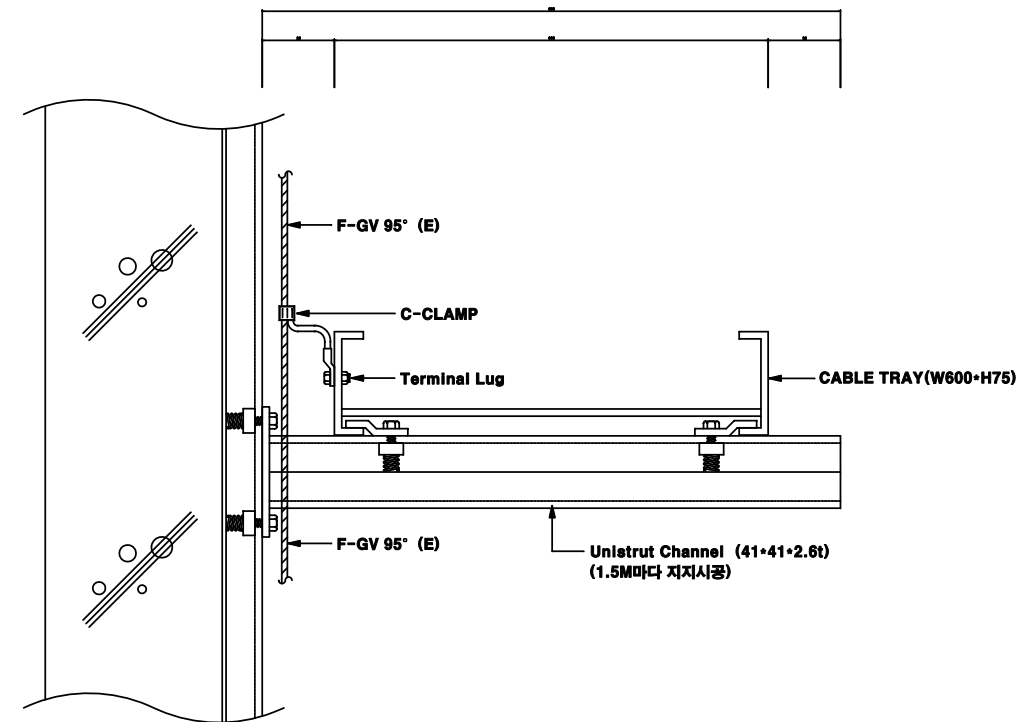
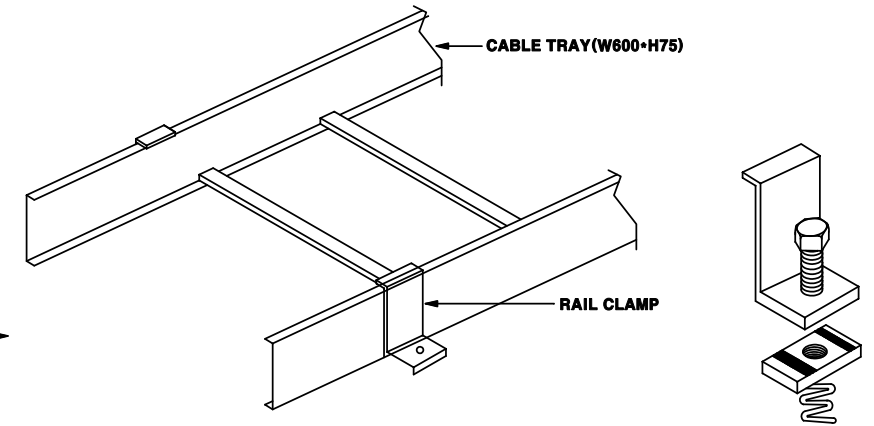
2층 바닥 기준선  
(EL. +5000)  
▽

1층 바닥 기준선  
(EL. +3000)  
▽

공동구 바닥 기준선  
(EL. +1700)  
▽



Unistrut Channel (41×41×2.6t)  
(1.5M마다 지지시공)



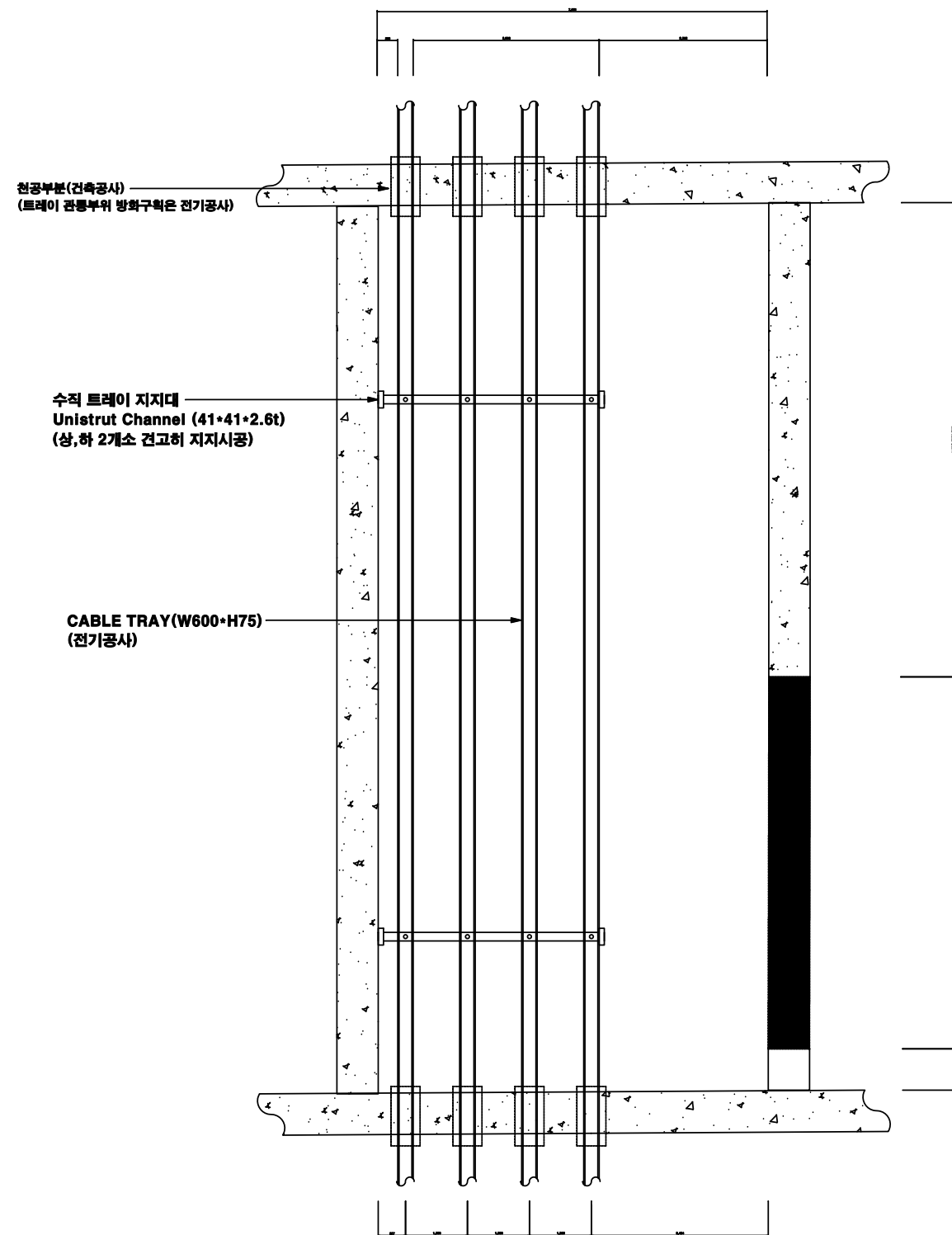
### 공동구 케이블 트레이 설치 단면도

축척 : A1=1/15, A3=1/30

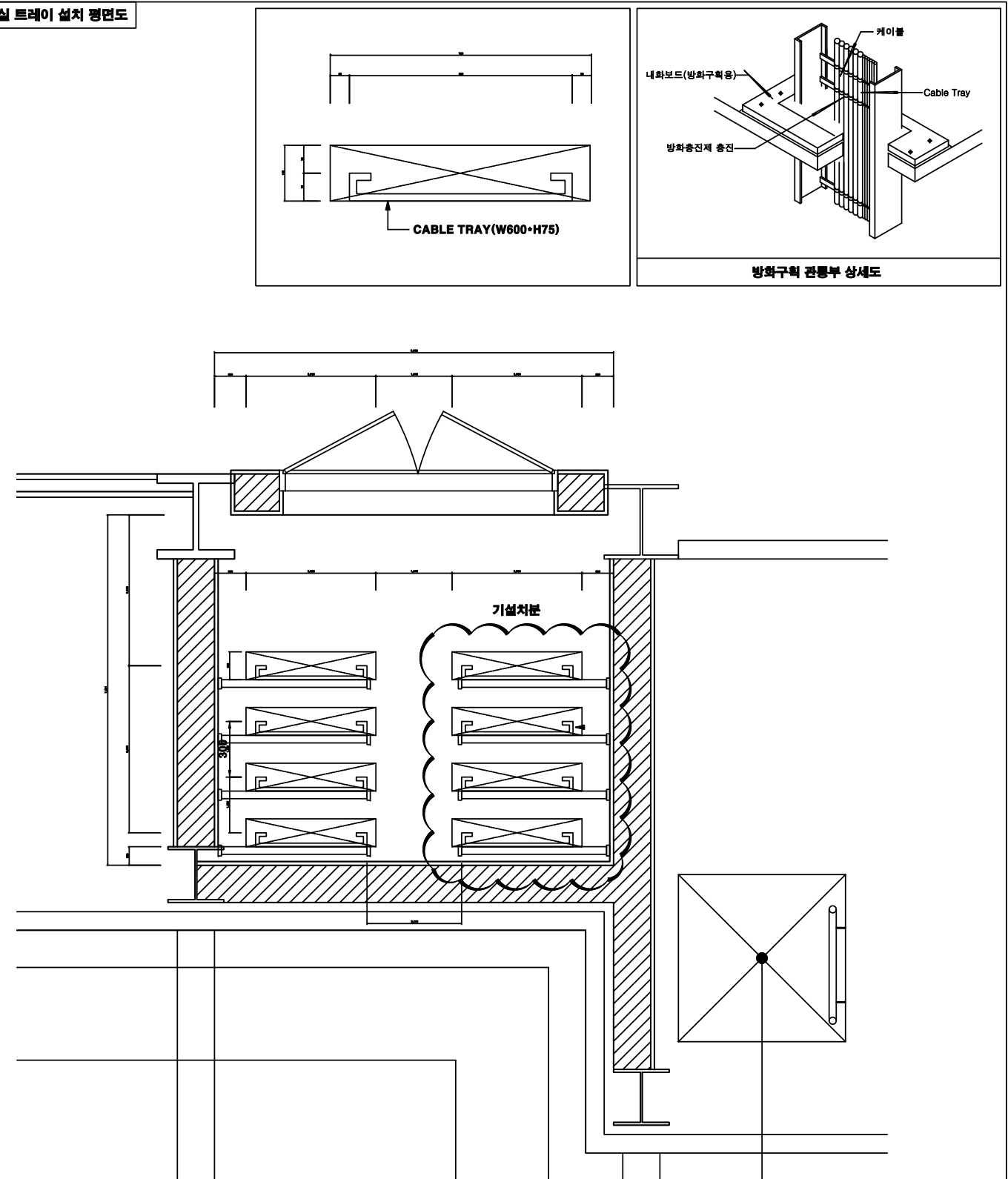
CLIENT <b>NFRI</b> 국가핵융합연구소 National Fusion Research Institute	APPROVED BY	REV.	DATE	REMARK	REVISED BY	NOTE	APPROVED BY	공동구 케이블 트레이 설치 단면도				
	CHECKED BY	△					CHECKED BY					
PROJECT TITLE EC 가열장치 전원공급설비 설치공사	CHARGED BY	△					DRAWN BY	PROJECT NO.	DATE	SCALE	DRAWING NO.	SHEET NO.
		△							2018.03	A1:1/15 A3:1/30	EC-E-13	REV. NO.



**EPS실 트레이 지지 단면도**



**EPS실 트레이 설치 평면도**



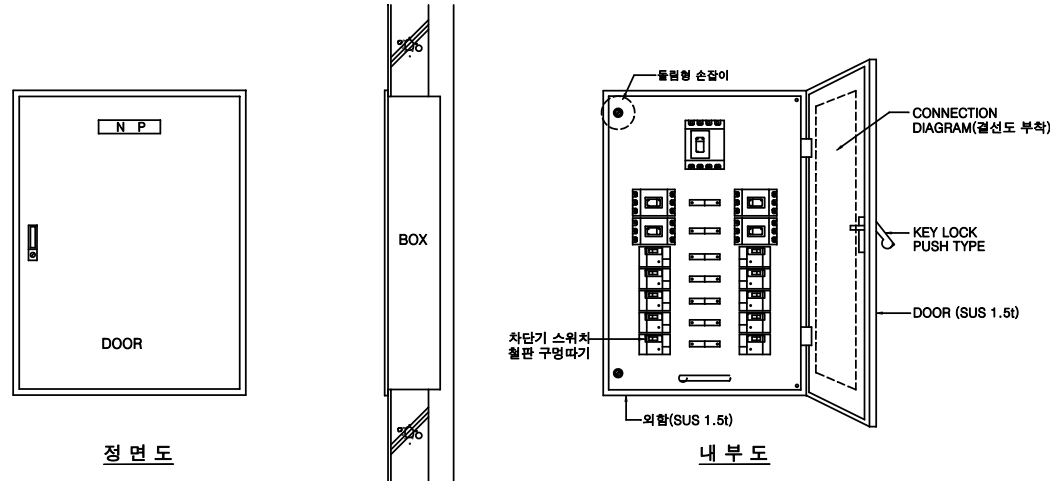
### EPS실 케이블 트레이 설치 평면 및 단면도

**축척 : A1=1/15, A3=1/30**

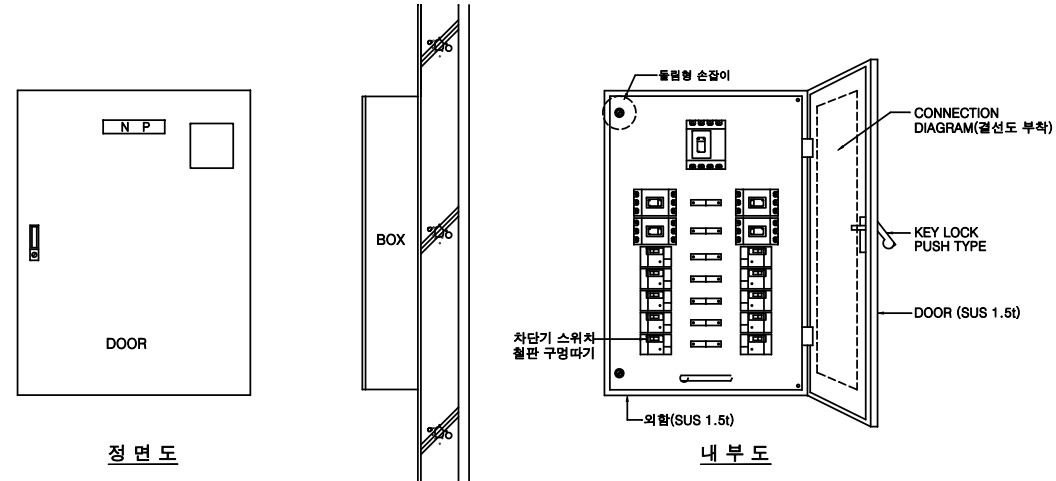
<div>CLIENT</div> <div><div><div>NFRI</div><div>국가핵융합연구소</div><div>National Fusion Research Institute</div></div></div>	APPROVED BY	REV.	DATE	REMARK	REVISED BY	NOTE		APPROVED BY	EPS실 케이블 트레이 설치 평면 및 단면도						
	CHECKED BY	△						CHECKED BY							
	PROJECT TITLE		△						DRAWN BY	PROJECT NO.	DATE	SCALE	DRAWING NO.	SHEET NO.	REV. NO.
	EC 가열장치 전원공급설비 설치공사	CHARGED BY	△							2018.03	A1:1/15 A3:1/30	EC-E-14			

# 각종 상세도 - 1

SCALE : NONE



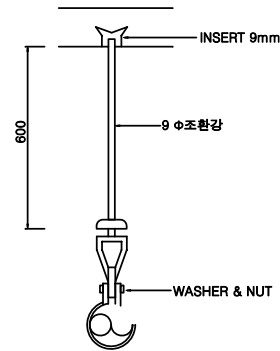
정면도  
DOOR : SUS(#27番) PLATE 1.5t  
B O X : STEEL PLATE 1.6t  
속 DOOR : STEEL PLATE 1.6t



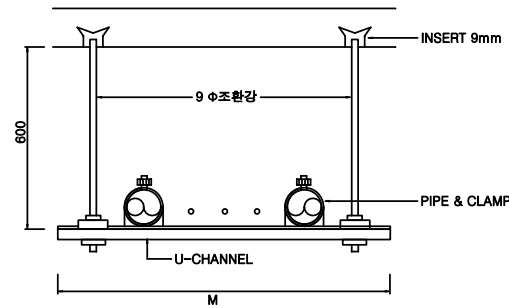
정면도  
DOOR : SUS PLATE 1.5t  
B O X : SUS PLATE 1.5t  
속 DOOR : STEEL PLATE 1.6t

분전반 설치 상세도(매입형)-2중 문짝

분전반 설치 상세도(노출형)-2중 문짝

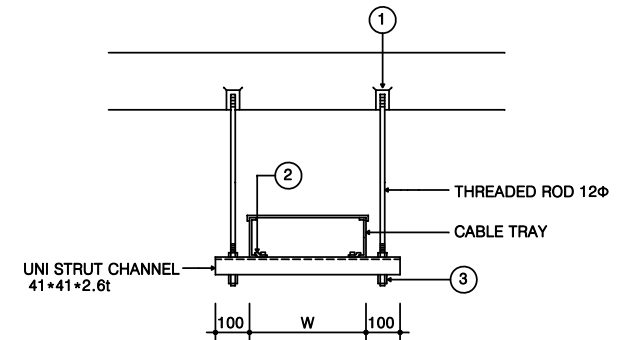


HANGER DETAIL-1



TYPE	단 수	U-CHANNEL
B-A	1	200 mm
B-B	1	300 mm
B-C	1	400 mm
B-1	1	500 mm
B-2	2	500 mm
B-3	3	500 mm

HANGER DETAIL-2

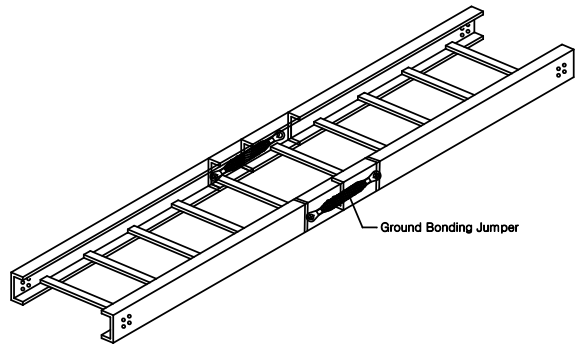


NO	ITEM	SIZE	Q'TY
1	STRONG ANCHOR	Φ10	2
2	SIDE RAIL CLAMP		2
3	HEX NUT W/WASHER	Φ10	2

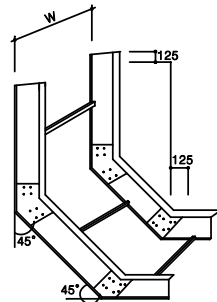
CABLE TRAY 지지 상세도

## 각종 상세도 - 2

SCALE : NONE



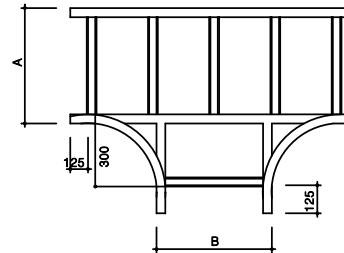
CABLE TRAY



NOTE

- 규격표시는 RV9 - X로 표시하여  
X = W / 10mm 일  
예시) RV9 - 40은 W는 400mm일

VERTICAL ELBOW

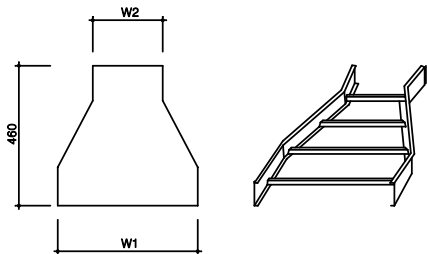


NOTE

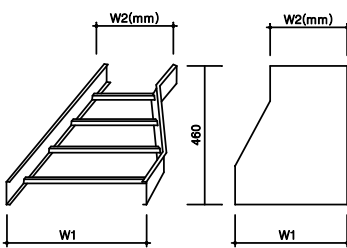
- 규격표시는 RT - X1 X2 로 표시하여  
X1 = A x 10mm , X2 = B x 10mm 일  
예시) RT - 4530은 A는 450 B는 300mm일

"T" ELBOW

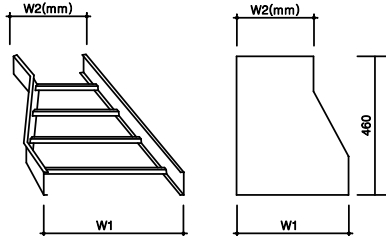
STRAIGHT



RIGHT HAND



LEFT HAND

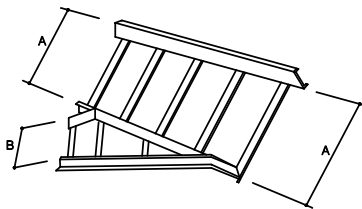


NOTE

- 규격표시는 R-R-Y-X1,X2로 표시하여  
X1 = W1x10, X2 = W2 x 10mm일  
예시) R-R-S-8025은 W1는 800 W2는 250mm일

TYPE	적 용
R - R - S	STRAIGHT
R - R - L	LEFT HAND
R - R - R	RIGHT HAND

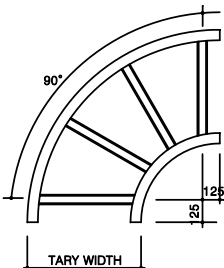
REDUCER



NOTE

- 규격표시는 RHQ-X1,X2로 표시하여  
X1 = Ax10, X2 = B x 10mm일  
예시) RHQ-4530은 A는 450 B는 300mm일

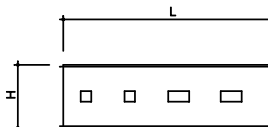
HORIZONTAL WYE



NOTE

- 규격표시는 RH9-40로 표시하여  
X = W / 10mm일  
예시) RH9-40은 W는 400mm일

HORIZONTAL ELBOW



H	W	L	T	비 고
60	8	160	1.6	R-35 이하에 적용
90	13	2.0	2.5	R-40 이상에 적용

TRAY JOINT CONNECTOR

• 아연도 강판(STEEL) CABLE TRAY

1. 재질 : 표기없는 TRAY 재질은 아연도 강판임(STEEL)  
입출형제 A6063 S-T5 (KSD 6759)
2. 마감 : 표기없는 양극산화 피막처리 (KSD 8301)
3. SIDE RAIL RUNG 규격

TYPE	H	W	T	
SIDE RAIL	70	20	2.0	R-35 이하에 적용
RUNG	15	30	1.5	
SIDE RAIL	100	30	2.5	R-40 이상에 적용
RUNG	15	30	2.0	

4. SIDE RAIL과 RUNG의 결합은 WELDING, TAPPING SCREW, RIVETING 및 압축점속으로 하여 외입 및 출격등으로 인한 결합부위의 돌림 및 뒤틀림이 없도록 제작한다.
5. 케이블의 절연 피복을 손상시키는 날카로운 날, 돌출면이 없도록 가공한다.
6. 운반시 제품이 손상이 없도록 견고하게 포장별로 포장한다.

CLIENT

**NFRI** 국가핵융합연구소  
National Fusion Research Institute

PROJECT TITLE

EC 가열장치 전원공급설비 설치공사

APPROVED BY

CHECKED BY

CHARGED BY

REV.

DATE

REMARK

REVISED BY

NOTE

APPROVED BY

CHECKED BY

DRAWN BY

각종 상세도-2

PROJECT NO.

DATE

SCALE

DRAWING NO.

SHEET NO.

REV. NO.

2018.03

NONE

EC-E-16