

**SINGLE LINES**

LOW VOLTAGE MOLDED CASE CIRCUIT BREAKER  
X = FRAME SIZE  
Y = TRIP  
M = MODIFIER

SPACE FOR FUTURE CIRCUIT BREAKER  
X = FRAME SIZE

LOW VOLTAGE DRAW OUT POWER CIRCUIT BREAKER  
X = FRAME SIZE  
Y = TRIP  
M = MODIFIER

MEDIUM VOLTAGE LOAD INTERRUPTER SWITCH  
X = AMPERE RATING  
M = MODIFIER

TRANSFER SWITCH  
X = AMPERE RATING  
M = MODIFIER FOR TRANSFER SWITCH  
ATS = ELECTRICALLY OPERATED

MEDIUM VOLTAGE FUSED LOAD INTERRUPTER SWITCH  
X = AMPERE RATING  
Y = FUSE RATING  
M = MODIFIER

FUSE  
X = AMPERE RATING  
M = MODIFIER

MEDIUM VOLTAGE TERMINATION  
X = AMPERE RATING

TRANSFORMER  
AA = SIZE OF TRANSFORMER (KVA)  
XX = PRIMARY VOLTAGE  
YY = SECONDARY VOLTAGE, PHASE, WIRE  
BB = IMPEDANCE (%)  
M = MODIFIER

MAGNETIC CONTACTS  
X = AMPERE RATING

MOTOR  
XX = HORSEPOWER  
YY = MOTOR TAG

AMMETER

VOLTMETER

WATTMETER

CURRENT TRANSFORMER

POTENTIAL TRANSFORMER WITH PRIMARY FUSE

GROUND FAULT INTERRUPTER

**SINGLE LINES (CONT'D)**

**PANELBOARD**  
X = PANELBOARD  
YZ = PANELBOARD  
X = POWER PANEL  
LP = LIGHTING PANEL  
AP = LABORATORY PANEL  
RP = RECEPTACLE OR MISC. POWER PANEL  
EQ = EMERGENCY  
Y = FLOOR  
Z = AREA

**DISTRIBUTION PANEL**  
X = DISTRIBUTION PANEL  
YZ = DISTRIBUTION PANEL  
PDP = 480/277V, DISTRIBUTION PANEL  
EDP = EMERGENCY DISTRIBUTION PANEL  
Y = FLOOR  
Z = AREA

**MOTOR AND POWER**

DISCONNECT SWITCH  
X = SWITCH RATING  
Y = NUMBER OF POLES  
Z = FUSE SIZE  
F = FUSED

MANUAL STARTER  
(3)THREE POLE MAGNETIC STARTER  
(3)THREE POLE MAGNETIC STARTER AND MCP

MOTOR WITH FLEXIBLE CONNECTION

CONTACTOR

FLEXIBLE CONNECTION

DRY TYPE TRANSFORMER  
M = MODIFIER

**RECEPTACLES**

SINGLE RECEPTACLE 20AMPS, 125 VOLTS, 3W, GRD., NEMA 5-20R; W/CAST DEVICE ASSEMBLY SPRING LOADED HINGED WATER-PROOF COVER "CLASS 1, DIVISION 1, GROUP D" HAZARDOUS, MT. 18" ABOVE FLOOR.  
X = NEMA CONFIGURATION

SINGLE RECEPTACLE OUTLET 120V, 20A, WALL MOUNTED  
X = CIRCUIT NUMBER

DUPLEX RECEPTACLE OUTLET 120V, 20A, WALL MOUNTED  
X = CIRCUIT NUMBER

SINGLE RECEPTACLE OUTLET 120V, 20A, IN POKE THUR SERVICE FITTING  
X = CIRCUIT NUMBER

DUPLEX RECEPTACLE OUTLET 120V, 20A, IN POKE THUR SERVICE FITTING  
X = CIRCUIT NUMBER

QUADRUPLUX RECEPTACLE OUTLET 120V, 20A, WALL MOUNTED  
X = CIRCUIT NUMBER

DUPLEX RECEPTACLE, MOUNTED ABOVE COUNTER

JUNCTION BOX  
W/FLEXIBLE CONNECTION TO EQUIPMENT

PROJECTOR OUTLET 120V, 1ø SEPARATE CIRCUIT

WELDING OUTLET, 60A, 480, 3ø

30A, 208V, 3ø RECEPTACLE FOR BANDSAW OUTLET TO MATCH PLUG.

**SWITCHES**

MULTI-GANG SWITCH PANEL  
X = NUMBER OF SWITCHES

SINGLE POLE SWITCH, 120V, 20A  
X = CIRCUIT NUMBER  
Y = SWITCH LEG

SWITCH, 120V, 20A  
X = CIRCUIT NUMBER  
Y = SWITCH LEG

**MODIFIERS FOR SWITCHES**  
2P = DOUBLE POLE  
3W = THREE-WAY  
4W = FOUR-WAY  
K = KEY OPERATED  
P = W/PLOT LAMP  
WP = WEATHER-PROOF

DIMMER SWITCH FOR LIGHTING

ELECTRIC WATER COOLER J-BOX WITH THERMAL OVERLOAD SWITCH

TIME SWITCH

PHOTOCELL

(1)SINGLE POLE SWITCH WITH THERMAL OVERLOAD OR MANUAL STARTER

**TELEPHONE**

W/D/P  
TELEPHONE OUTLET IN 4"X4" J-BOX  
W = WALL MOUNTED - 54" A.F.F.  
D = DEDICATED  
P = PUBLIC, COIN OPERATED  
COMBINATION TELEPHONE  
AND DATA SERVICE FITTING

2"X4" JUNCTION BOX WITH 3/4" DIA. GROMMETED OPENING IVORY COVER PLATE FOR FUTURE DATA SYSTEM

DATA/COMPUTER OUTLET FLOOR MOUNTED

**FIRE ALARM**

HEAT DETECTOR, 135° FIXED TEMPERATURE

SMOKE DETECTOR

HVAC DUCT SMOKE DETECTOR

MANUAL PULL STATION

SPRINKLER PRESSURE SWITCH

SPRINKLER WATER FLOW SWITCH

HORN

VISUAL ALARM DEVICE

SPRINKLER VALVE SUPERVISORY TAMPER SWITCH

MAGNETIC DOOR HOLD-OPEN DEVICE

FIRE ALARM CONTROL PANEL

FIRE ALARM ANNUNCIATOR PANEL

DUCT SMOKE DETECTOR REMOTE LIGHT INDICATOR, CEILING MOUNTED

**OUTDOOR LIGHTING**

SINGLE LUMINAIRE POLE MOUNTED FIXTURE

DOUBLE LUMINAIRE POLE MOUNTED FIXTURE

**NORMAL LIGHTING**

X = FIXTURE TYPE (SEE SCHEDULE)  
Y = CIRCUIT NUMBER  
Z = SWITCHING

FLUORESCENT FIXTURE, TYPE AS INDICATED

STRIP FLUORESCENT FIXTURE

INCANDESCENT OR HID FIXTURE

**EMERGENCY LIGHTING**

FLUORESCENT FIXTURE ON EMERGENCY 2'x4', CEILING RECESSED

FLUORESCENT STRIP FIXTURE ON EMERGENCY SURFACE MOUNTED

INCANDESCENT CEILING TYPE FIXTURE ON EMERGENCY CIRCUIT

**EXIT SIGNS**

EXIT SIGNS DIRECTION AS INDICATED WITH ARROW, SHADED AREA INDICATES ILLUMINATED FACE.

**SECURITY**

DOOR CONTACT, TO BE FIT FOR STANDARD ANSI DOOR CUT-OUTS TO HAVE RHODIUM PLATED CONTACTS.

RECESSED OUTLET BOX FOR FUTURE KEYPAD. PROVIDE COVER PLATE.

**CONDUIT AND WIREWAYS**

CONDUIT RUN EXPOSED

CONDUIT RUN CONCEALED IN WALL OR CEILING

CONDUIT RUN CONCEALED IN OR BELOW FLOOR SLAB

D = COMPUTER DATA SYSTEM  
EM = EMERGENCY/EQUIPMENT  
F = FIRE ALARM SYSTEM  
G = GROUNDING SYSTEM  
S = SECURITY SYSTEM  
T = TELEPHONE SYSTEM  
TSP = TWISTED SHIELDED PAIR

CAPPED CONDUIT

CONDUIT TURNED OR STUBBED UP

CONDUIT TURNED OR STUBBED DOWN

NO SLASHES INDICATES 2#12 + 1#12 GREEN GRD CONDUCTOR IN 3/4" CONDUIT (UNLESS OTHERWISE NOTED)

RP3-1 8,10,12 PANEL DESIGNATIONS UTILIZED CIRCUITS

PHASE CONDUCTORS  
NEUTRAL CONDUCTOR

SLASHES INDICATE NUMBER OF #12 CONDUCTORS CONDUCTOR IN 3/4" CONDUIT (UNLESS OTHERWISE NOTED)

RP3-1 8,10,12 PANEL DESIGNATIONS UTILIZED CIRCUITS

GROUND CONDUCTOR

**GROUNDING**

SYSTEM GROUND

TEST WELL WITH GROUND ROD

GROUND ROD

GROUND CONNECTION WITHIN 1APBOX

EXOTHERMIC GROUND CONNECTION

BOLTED GROUND CONNECTION

COMPRESSION TYPE GROUND CONNECTION

BUILDING GROUNDING SYSTEM

UNDERGROUND BUILDING GROUND GRID SYSTEM

**LIGHTNING PROTECTION**

LIGHTNING PROTECTION CONDUCTOR

LIGHTNING AIR TERMINAL  
X = TERMINAL TYPE

LIGHTNING CONDUCTOR CONNECTION  
X = CONNECTION TYPE

LIGHTNING BONDING PLATE

LIGHTNING CONDUCTOR THROUGH ROOF CONNECTOR

**GENERAL NOTES**

- SOME SYMBOLS MAY NOT BE USED. CONTRACTOR SHALL BECOME FAMILIAR WITH DRAWINGS, SYMBOLS AND SYMBOL DEFINITIONS.
- FINAL DEVICE LOCATIONS (MECHANICAL, ELECTRICAL, ARCHITECTURAL) SHALL BE COORDINATED IN THE FIELD.

**MISCELLANEOUS SYMBOLS**

OUTLET FOR VOR SIGNAL

MANUAL 120V, STARTER WITHOUT OVERLOAD PROTECTION

SURFACE MOUNTED RACEWAY WITH RECEPTACLES MOUNTED 18" O.C.

OUTLET FOR SIGNAL CABLE TO TELEVISION MONITOR

OUTLET FOR SIGNAL CABLE TO OVERHEAD PROJECTOR

UNDERGROUND ELECTRIC DUCTBANK

PROPANE LEAKAGE SENSOR

CARBON DIOXIDE SENSOR

OVERHEAD 2.4 KV CABLE

DIRECT BURIED CONDUIT, SIZE AND TYPE AS INDICATED ON PLAN.

PROPANE ALARM SIREN

START-STOP PUSHBUTTON FOR OVERHEAD DOOR

**RECORD DRAWING DATE 06108198**

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NAVY FACILITIES ENGINEERING COMMAND  
SOUTHERN DIVISION  
CHARLESTON, S.C.

NAVAL TRAINING CENTER  
GREAT LAKES, ILLINOIS

DAMAGE CONTROL SCHOOL  
ELECTRICAL SYMBOL LIST

APPROVED: [Signature]  
DATE: 8/17/98

OFFICE IN CHARGE: [Signature]  
DATE: 8/17/98

SCALE: NONE

SIZE: F  
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CONSTR. CONTR. NO.: NS2467-93-C-1143  
SPEC: 06-93-1143  
SHEET: 107 OF 114

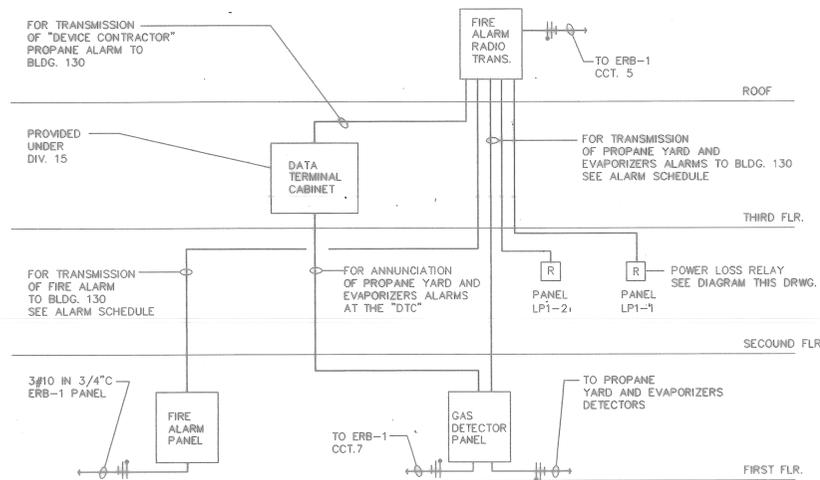
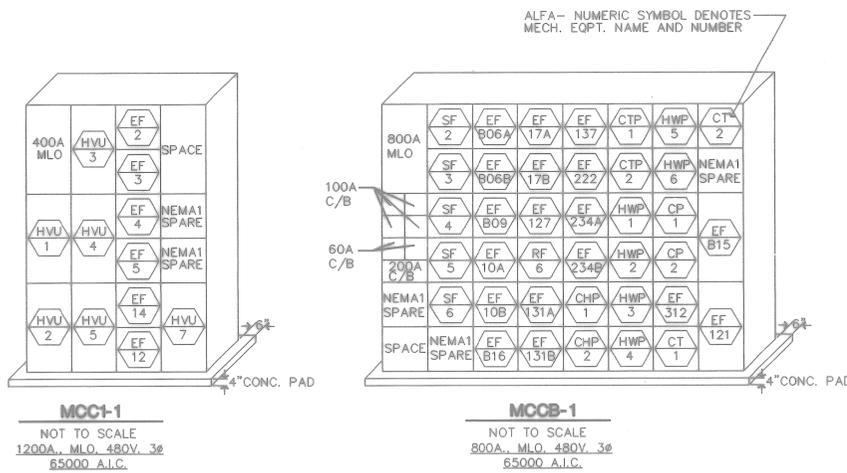
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### GENERAL NOTES

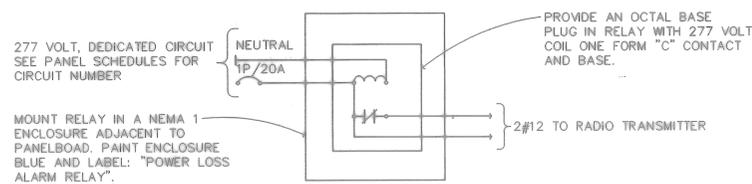
- ALL MATERIALS AND DEVICES INSTALLED IN THE STAGING AREAS OF THE FIRE FIGHTING TRAINER SHALL BE WATERPROOF.
- AVOID RUNNING CONDUITS THROUGH AND ON THE FIRE COMPARTMENT IN THE TRAINER. WHERE CONDUIT MUST BE INSTALLED IN THE WALLS OF THE BURN AREA, CONDUITS, WIRING, AND ITS ASSOCIATED DEVICES SHALL BE SUITABLE FOR HIGH TEMPERATURE APPLICATION.
- WIRING AND ELECTRICAL DEVICES WITHIN THE STAIR COMPARTMENTS, STAGING AREAS AND CRAWL SPACES OF THE FIRE FIGHTING TRAINER SHALL BE WATERPROOF.
- FURNISH AND INSTALL 1/2" CONDUIT FROM EACH J. BOX FOR DOOR CONTACT AND TERMINATE IN THE SECURITY ROOM.
- FURNISH AND INSTALL CONDUITS AND WIRES FOR TELEPHONE SYSTEM. ALL TELEPHONE CONDUITS SHALL BE HOMERUN BACK TO THE CLOSEST TELEPHONE CLOSET OR ROOM. CONDUIT REQUIREMENT SHALL BE AS FOLLOWS  
3/4" FOR 1 TELEPHONE OUTLETS  
1" FOR 2 TELEPHONE OUTLETS  
1-1/4" FOR 3 TO 4 TELEPHONE OUTLETS  
WIRES SHALL BE AS FOLLOWS 4-PAIR TWISTED UNSHEILD 24-GAUGE COPPER, LEVEL 3 FROM EACH OUTLET AND TERMINATE IN PUNCH BLOCK ON PLYWOOD BOARD IN TEL. CLOSET. PROVIDE PUNCH BLOCK FOR TERMINATION OF WIRES.
- WIRING & CONDUIT FOR LIGHTING, POWER (RECEPTACLE, ETC.) ARE NOT SHOWN. PROVIDE #12 AWG IN 3/4" C. FOR LIGHTING AND POWER (RECEPT., ETC.) UNLESS OTHERWISE NOTED.
- PROVIDE A SEPARATE GREEN GROUND CONDUCTOR FOR EVERY CONDUIT RUN. MINIMUM SIZE OF GROUND CONDUCTOR SHALL BE SIZE #12.
- BRANCH WIRING HOMERUNS SHALL BE LIMITED TO A MAXIMUM OF 4 CIRCUITS PER HOMERUN. UNLESS OTHERWISE NOTED.
- WIRING IN CONCRETE SLAB AND WIRING INSTALLED BELOW GRADE IN THE FIRE FIGHTING TRAINER SHALL BE WATER-PROOF (THREADED JOINTS AND GASKETED CAST BOXES).
- FURNISH AND INSTALL 1/2" EMPTY CONDUIT FROM EACH DOOR CONTACT AND KEYPAD BOX AND TERMINATE IN A PULLBOX MOUNTED IN SECURITY RM. SUSPENDED CEILING. HOMERUN CONDUIT FOR MULTIPLE DOOR CONTACTS WILL BE ACCEPTABLE.
- IN FIRE FIGHTER TRAINER WHERE CONDUITS PENETRATE THE WALLS, FLOORS, OR CEILINGS OF ROOMS DESIGNATED AS ELECTRICAL ROOMS THESE PENETRATIONS SHALL BE SEALED AIR TIGHT IN ACCORDANCE WITH DETAILS 7/E0-2/E8-3 AND 8/E0-2/E8-3. ADDITIONALLY, ALL CONDUITS WHICH ENTER OR EXIT A DESIGNATED ELECTRICAL EQUIPMENT ROOM SHALL HAVE CONDUITS SEALS, WITH THE EXCEPTION THAT CONDUITS WHICH PASS THRU THE CRAWL SPACE AREAS INTO THE EQUIPMENT ROOM THAT DO NOT CONTAIN ANY FITTINGS IN THE CONDUIT PORTION WITHIN THE CRAWL SPACE ARE NOT REQUIRED TO BE SEALED. NO CONDUITS SHALL PENETRATE ELECTRIC ROOM WALLS WHICH DIRECTLY ADJOIN FIREPLACE COMPARTMENTS.
- DEVICES AND EQUIPMENT INSTALLED IN PLENUM SPACE SHALL BE RATED FOR PLENUM USE.
- SUSPEND "F" FIXTURES 8'-0" ABOVE FINISH FLOOR UNLESS OTHERWISE NOTED ON THE PLANS.
- LIGHT FIXTURE WITH SUBSCRIPT "NL" SHALL REMAIN "ON" CONTINUOUSLY.
- REFER TO MOTOR CONTROL SCHEDULE FOR WIRING REQUIREMENTS ON HVAC AND PLUMBING EQUIPMENT.

### ABBREVIATIONS

SYMBOL	DEFINITION	SYMBOL	DEFINITION
2P	(2) TWO POLE	RF I	RADIO FREQUENCY INTERFERENCE
3P	(3) THREE POLE	R	RECEPTACLE
4P	(4) FOUR POLE	R. G.	RIGID GALVANIZED
A/V	AUDIO/VISUAL	RVNR	REDUCED VOLTAGE, NON-REVERSING
A	AMPERE, AMPERAGE	RVR	REDUCED VOLTAGE, REVERSING
AF	AMPERE FRAME	S	SWITCH
AFF	ABOVE FINISHED FLOOR	S/N	SOLID NEUTRAL
AH	AMPERE HOUR	SD	SMOKE DETECTOR
AHC	ABOVE HUNG CEILING	SF	SUPPLY FAN
AIC	AMPERE INTERRUPTING CURRENT	SP	SPARE
AM	AMMETER	SPKR	SPEAKER
AMPL	AMPLIFIER	ST	SHUNT TRIP
ANT	ANTENNA	SW	SWITCH
AT	AMPERE TRIP	SWBD	SWITCHBOARD
ATS	AUTOMATIC TRANSFER SWITCH	SWGR	SWITCHGEAR
AWG	AMERICAN WIRE GAGE	SYM	SYMMETRICAL
BKR, BR	BREAKER	T	TERMOSTAT
BLDG	BUILDING	TL	TWIST LOCK
BP	BYPASS ISOLATION	TTC	TELEPHONE TERMINAL CABINET
C	CONDUIT	TV	TELEVISION
CB	CIRCUIT BREAKER	TYP	TYPICAL
CBTS, CCTS	CIRCUITS	U. O. N.	UNLESS OTHERWISE NOTED
COL	COLUMN	UPS	UNINTERRUPTIBLE POWER SUPPLY
CONN	CONNECTION	V	VOLT, VOLTAGE
CP	CONTROL PANEL	VFD	VARIABLE FREQUENCY DRIVE
CR	CONTROL RELAY	VP	VANDALPROOF
CT	CURRENT TRANSFORMER	W	WATT
Cu	COPPER	WP	WEATHERPROOF (NEMA 3R)
CUR	CURRENT	WPT	WEATHERPROOF W/LOCKABLE, TAMPERPROOF COVER
DIM	DIMMER	XFMR	TRANSFORMER
DISC	DISCONNECT	XP	EXPLOSION PROOF
DPDT	DOUBLE POLE, DOUBLE THROW		
DTC	DATA TERMINAL CABINET		
DCS	DAMAGE CONTROL SCHOOL		
DWG	DRAWING		
EL	ELEVATION		
ELECT	ELECTRIC, ELECTRICAL		
EMER	EMERGENCY		
EMH	ELECTRICAL MANHOLE		
EMI	ELECTROMAGNETIC INTERFERENCE		
EMT	ELECTRICAL METALLIC TUBING		
ENCL	ENCLOSURE		
EOL	END OF LINE DEVICE		
EPO	EMERGENCY POWER-OFF PUSHBUTTON		
ESD	ELECTROSTATIC DISCHARGE		
EW	ELECTRIC WATER COOLER		
EXH	EXHAUST		
FA	FIRE ALARM		
FACP	FIRE ALARM CONTROL PANEL		
FDR	FEDDER		
FIXT	FIXTURE		
FLUOR	FLUORESCENT		
FVNR	FULL VOLTAGE, NON-REVERSING		
FVR	FULL VOLTAGE, REVERSING		
G	GROUND		
GEN	GENERATOR		
GF	GROUND FAULT		
GF I	GROUND FAULT INTERRUPTER		
GRD	GROUND WIRE OR BUS AS INDICATED		
HID	HIGH INTENSITY DISCHARGE		
HOA	HAND-OFF-AUTOMATIC SELECTOR SWITCH		
HP	HORSEPOWER		
HPS	HIGH PRESSURE SODIUM		
HW	HEAVY WALL CONDUIT		
HZ	HERTZ		
IG	ISOLATED GROUND		
INCAND	INCANDESCENT		
INSUL	INSULATION		
JB	JUNCTION BOX		
KV	KILOVOLT		
KVA	KILOVOLT AMPERE		
KW	KILOWATT		
KW-H	KILOWATT HOURS		
LA	LIGHTNING ARRESTER		
LP	LIGHTING PANEL		
LS	LIMIT SWITCH		
LTG, L	LIGHTING		
M	MICROPHONE		
MCB	MAIN CIRCUIT BREAKER		
MCC	MOTOR CONTROL CENTER		
MCP	MOTOR CIRCUIT PROTECTOR		
MCS	MONITORING CONTROL SYSTEM		
MECH	MECHANICAL		
MFR	MANUFACTURER		
MG	MOTOR GENERATOR		
MTG. HT.	MOUNTING HEIGHT		
MH	MANHOLE		
MLO	MAIN LUGS ONLY		
MTR	MOTOR		
N	NEUTRAL		
N/A	NOT APPLICABLE		
N. C.	NORMALLY CLOSED		
N. O.	NORMALLY OPEN		
NATS	NON-AUTOMATIC TRANSFER SWITCH		
NEC	NATIONAL ELECTRICAL CODE		
NF	NOT FUSED		
NIC	NOT IN CONTRACT		
NTS	NOT TO SCALE		
PA	PUBLIC ADDRESS		
PB	PUSHBUTTON STATION		
PF	POWER FACTOR		
PH	PHASE		
PNL, P	PANEL		



**ALARM DIAGRAM**  
SCALE: NOT TO SCALE



**POWER LOSS RELAY WIRING**  
SCALE: NOT TO SCALE

### BLDG. 130 ALARM SCHEDULE

NO.	DESCRIPTION
ZONE 1	FIRE ALARM PANEL SUPERVISORY CIRCUIT
ZONE 2	PULL STATIONS AND SMOKE DETECTORS ALARM-SUPPORT BUILDING
ZONE 3	PULL STATIONS AND SMOKE DETECTORS ALARM-FFTU
ZONE 4	PULL STATIONS AND SMOKE DETECTORS ALARM-WET TRAINER
ZONE 5	DUCT DETECTORS ALARM
ZONE 6	TAMPER SWITCHES ALARM
ZONE 7	FLOW SWITCHES ALARM
ZONE 8	PROPANE DETECTORS ALARM-EXTERIOR
ZONE 9	PROPANE DETECTORS ALARM-DEVICE CONTRACTOR
ZONE 10	CO2 ALARM
ZONE 11	POWER LOSS-FFTU
ZONE 12	POWER LOSS-SUPPORT BUILDING
ZONE 13	SPARE
ZONE 14	SPARE
ZONE 15	SPARE
ZONE 16	SPARE



FOR OFFICIAL USE ONLY

**RECORD DRAWING**  
DATE 06/08/93

02-21-97 **AS-BUILT, NO CORRECTIONS**

EDDY K. ANG  
REGISTERED PROFESSIONAL ENGINEER  
STATE OF ILLINOIS

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
SOUTHERN DIVISION  
CHARLESTON, S.C.

NAVAL TRAINING CENTER  
GREAT LAKES, ILLINOIS

**DAMAGE CONTROL SCHOOL**

**GENERAL NOTES AND ABBREVIATIONS**

APPROVED: [Signature] DATE: 7/14/93

DESIGNED BY: [Signature] DATE: 7/14/93

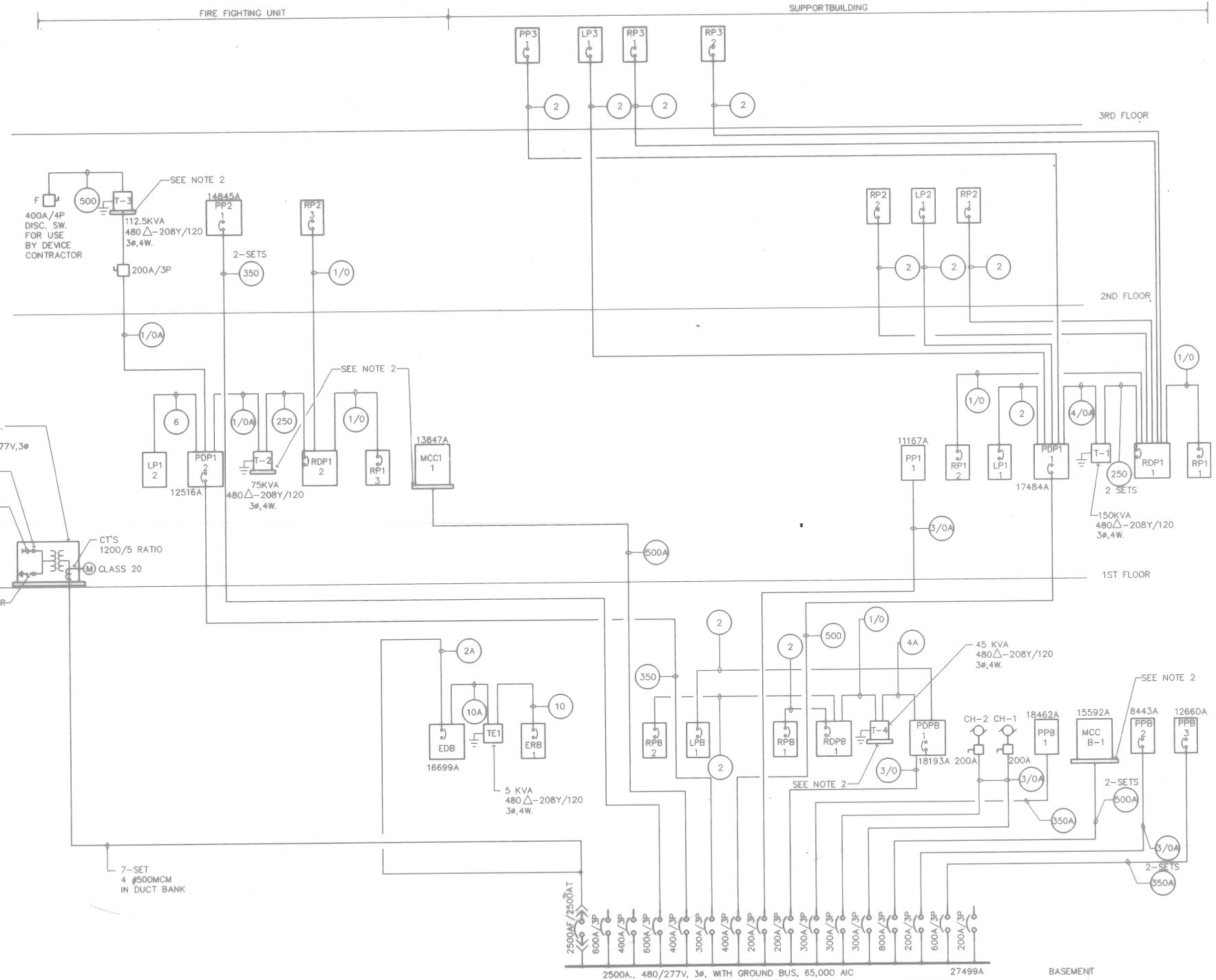
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NAVY DRAWING NO. 5276622  
CONSTR. CENTER NO. 182467-93-C-1143  
SPEC. 08-93-1143

DRAWING NO. EO-2

SHEET 222 OF 222

FEEDER SCHEDULE		
DESIG-NATION	SIZE	REMARKS
10	4 # 10 + 1 # 10 GRD. IN 3/4" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
10A	3 # 10 + 1 # 10 GRD. IN 3/4" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
8	4 # 8 + 1 # 10 GRD. IN 1" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
8A	3 # 8 + 1 # 10 GRD. IN 1" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
6	4 # 6 + 1 # 10 GRD. IN 1-1/4" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
6A	3 # 6 + 1 # 10 GRD. IN 1-1/4" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
4	4 # 4 + 1 # 8 GRD. IN 1-1/4" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
4A	3 # 4 + 1 # 8 GRD. IN 1-1/4" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
2	4 # 2 + 1 # 8 GRD. IN 1-1/2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
2A	3 # 2 + 1 # 8 GRD. IN 1-1/2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
1	4 # 1 + 1 # 6 GRD. IN 2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
1A	3 # 1 + 1 # 6 GRD. IN 2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN



1500 KVA PAD MTD. TRANSFORMER  
34.5KV Δ-480Y/277V, 3Ø

LOADBREAK SEPARABLE CONNECTOR  
3-1/C #1/0 MCM EPR (35KV) IN DUCT BANK TO BLDG.#520 35KV SWGR

CT'S 1200/5 RATIO CLASS 20

LIGHTNING ARRESTER

FEEDER SCHEDULE		
DESIG-NATION	SIZE	REMARKS
1/0	4 # 1/0 + 1 # 6 GRD. IN 2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
1/0A	3 # 1/0 + 1 # 6 GRD. IN 2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
2/0	4 # 2/0 + 1 # 6 GRD. IN 2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
2/0A	3 # 2/0 + 1 # 6 GRD. IN 2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
3/0	4 # 3/0 + 1 # 6 GRD. IN 2-1/2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
3/0A	3 # 3/0 + 1 # 6 GRD. IN 2-1/2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
4/0	4 # 4/0 + 1 # 4 GRD. IN 2-1/2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
4/0A	3 # 4/0 + 1 # 4 GRD. IN 2-1/2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
250	4 # 250 MCM + 1 # 4 GRD. IN 3" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
250A	3 # 250 MCM + 1 # 4 GRD. IN 3" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
350	4 # 350 MCM + 1 # 3 GRD. IN 3-1/2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
350A	3 # 350 MCM + 1 # 3 GRD. IN 3-1/2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
500	4 # 500 MCM + 1 # 3 GRD. IN 3-1/2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN
500A	3 # 500 MCM + 1 # 3 GRD. IN 3-1/2" C.	MULTIPLE SET FEEDERS ARE INDICATED ON THE PLAN

**SWITCHBOARD DCS**

NOTES:  
1. REFER TO FEEDER SCHEDULE THIS DWG. FOR FEEDER SIZE.  
2. MOUNT TRANSFORMER ON 4" CONCRETE PAD.

**SWBD "DCS"**

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RECORD DRAWING  
DATE 06/08/98

REV 97-51-57

EDDY K. ANG  
REGISTERED PROFESSIONAL ENGINEER  
OF ILLINOIS

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
SOUTHERN DIVISION  
CHARLESTON, S.C.

NAVAL TRAINING CENTER  
GREAT LAKES, ILLINOIS

DAMAGE CONTROL SCHOOL

ELECTRICAL RISER DIAGRAM

APPROVED: [Signature] DATE: 7/13/98

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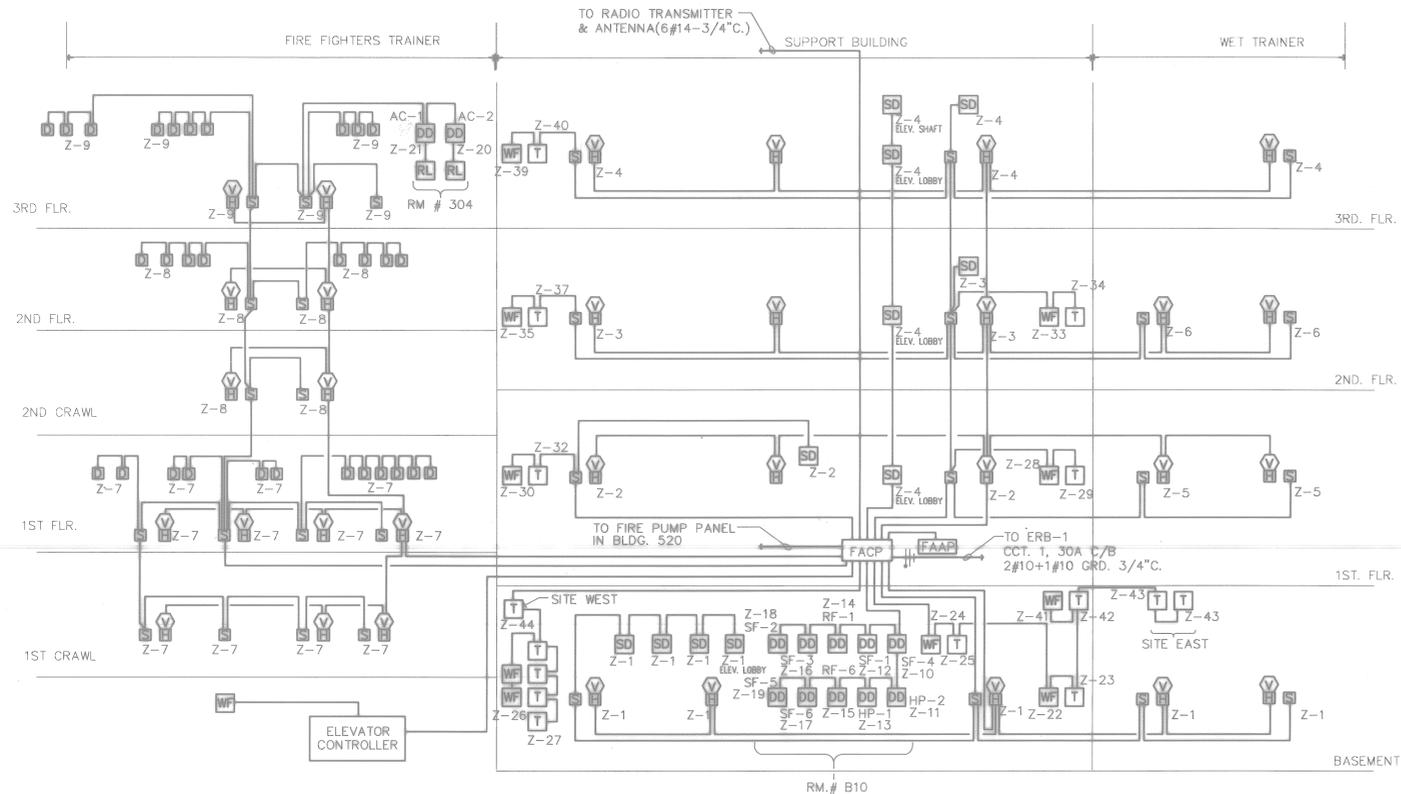
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SPEC: 08-93-1143

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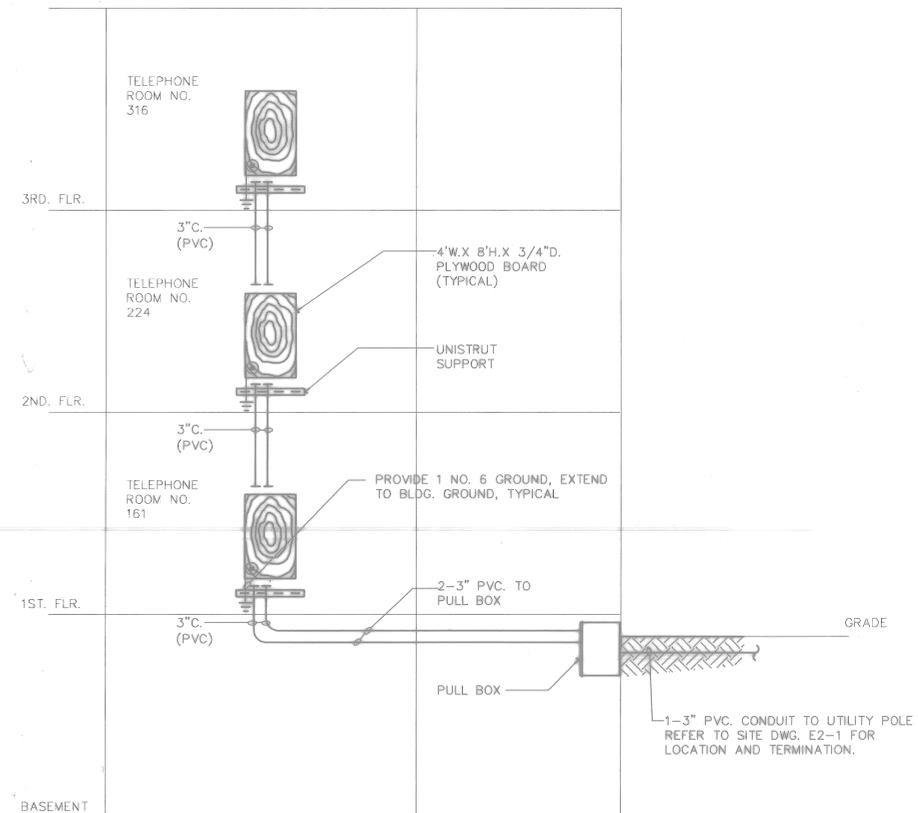


FIRE ALARM RISER DIAGRAM  
N.T.S.

NOTE: ALL SUPERVISORY CIRCUITS, 1AT VALVE TAMPER SWITCHES AND LOW AIR PRESSURE SWITCHES SHALL BE CONNECTED TO MODULES UL LISTED FOR SPRINKLER SUPERVISORY SERVICE.

FIRE ALARM ZONE SCHEDULE

ZONE NO.	DEVICE / LOCATION	ZONE NO.	DEVICE / LOCATION
Z1	PULL STATIONS AND SMOKE DETECTOR / BSMT. SUPPORT BLDG.	Z24	WATER FLOW SWITCH / BSMT. CENTER - SUPPORT BLDG.
Z2	PULL STATIONS AND SMOKE DETECTOR / 1ST FLR. - SUPPORT BLDG.	Z25	TAMPER SWITCH / BSMT. CENTER - SUPPORT BLDG.
Z3	PULL STATIONS AND SMOKE DETECTOR / 2ND FLR. - SUPPORT BLDG.	Z26	WATER FLOW SWITCH / BSMT. NORTH - SUPPORT BLDG.
Z4	PULL STATIONS AND SMOKE DETECTOR / 3RD FLR. - SUPPORT BLDG.	Z27	TAMPER SWITCHES / BSMT. NORTH - SUPPORT BLDG.
Z5	PULL STATIONS / 1ST FLR. - WET TRAINER	Z28	WATER FLOW SWITCH / 1ST FLR. SOUTH - SUPPORT BLDG.
Z6	PULL STATIONS / 2ND FLR. - WET TRAINER	Z29	TAMPER SWITCH / 1ST. FLR. SOUTH - SUPPORT BLDG.
Z7	PULL STATIONS AND HEAT DETECTORS / 1ST. FLR. CRAWL & 1ST. FLR. - FFT	Z30	WATER FLOW SWITCH / 1ST. FLR. NORTH - SUPPORT BLDG.
Z8	PULL STATIONS AND HEAT DETECTORS / 2ND FLR. CRAWL & 2ND FLR -FFT	Z31	PRESURE SWITCH - ALARM 01
Z9	PULL STATIONS AND HEAT DETECTORS / 3RD FLR. - FFT	Z32	TAMPER SWITCHES / 1ST. FLR. NORTH - SUPPORT BLDG.
Z10	DUCT DETECTOR / SF-4	Z33	WATER FLOW SWITCH / 2ND FLR. SOUTH - SUPPORT BLDG.
Z11	DUCT DETECTOR / HP-2	Z34	TAMPER SWITCH / 2ND FLR. SOUTH - SUPPORT BLDG.
Z12	DUCT DETECTOR / SF-1	Z35	WATER FLOW SWITCH / 2ND FLR. NORTH - SUPPORT BLDG.
Z13	DUCT DETECTOR / HP-1	Z36	PRESSURE SWITCH - LOW AIR 01
Z14	DUCT DETECTOR / RF-1	Z37	TAMPER SWITCHES / 2ND FLR. NORTH - SUPPORT BLDG.
Z15	DUCT DETECTOR / RF-6	Z38	DRY TYPE VALVE TAMPER SWITCH - ALARM 01
Z16	DUCT DETECTOR / SF-3	Z39	WATER FLOW SWITCH / 3RD FLR. NORTH - SUPPORT BLDG.
Z17	DUCT DETECTOR / SF-6	Z40	TAMPER SWITCHES / 3RD FLR. NORTH - SUPPORT BLDG.
Z18	DUCT DETECTOR / SF-2	Z41	WATER FLOW SWITCH / MONITORING STATION - SUPPORT BLDG.
Z19	DUCT DETECTOR / SF-5	Z42	TAMPER SWITCH / MONITORING STATION - SUPPORT BLDG.
Z20	DUCT DETECTOR / AC-2	Z43	TAMPER SWITCH / MONITORING STATION - EAST SITE
Z21	DUCT DETECTOR / AC-1	Z44	TAMPER SWITCH / MONITORING STATION - WEST SITE
Z22	WATERFLOW SWITCH / BSMT SOUTH - SUPPORT BLDG.	Z45	SPARE
Z23	TAMPER SWITCH / BSMT SOUTH - SUPPORT BLDG.	Z46	SPARE

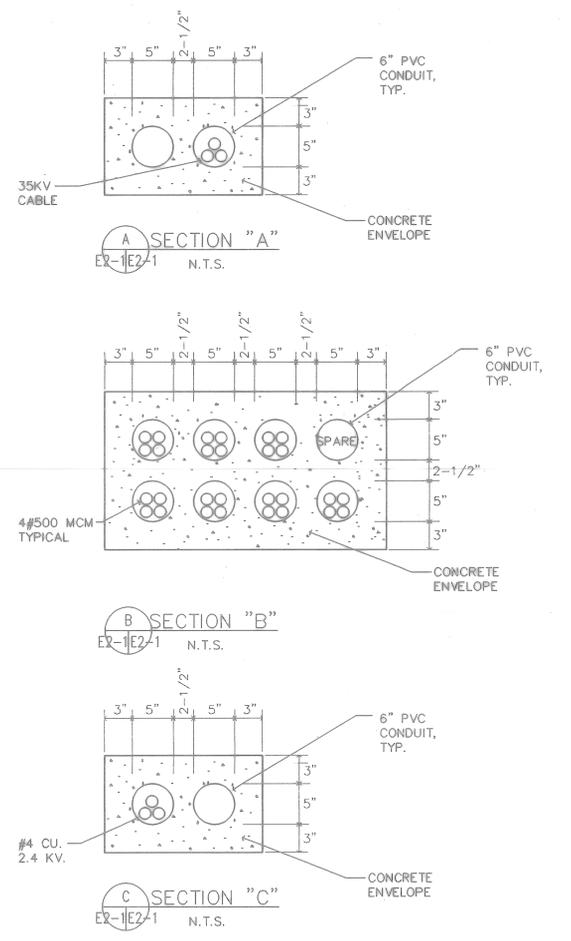
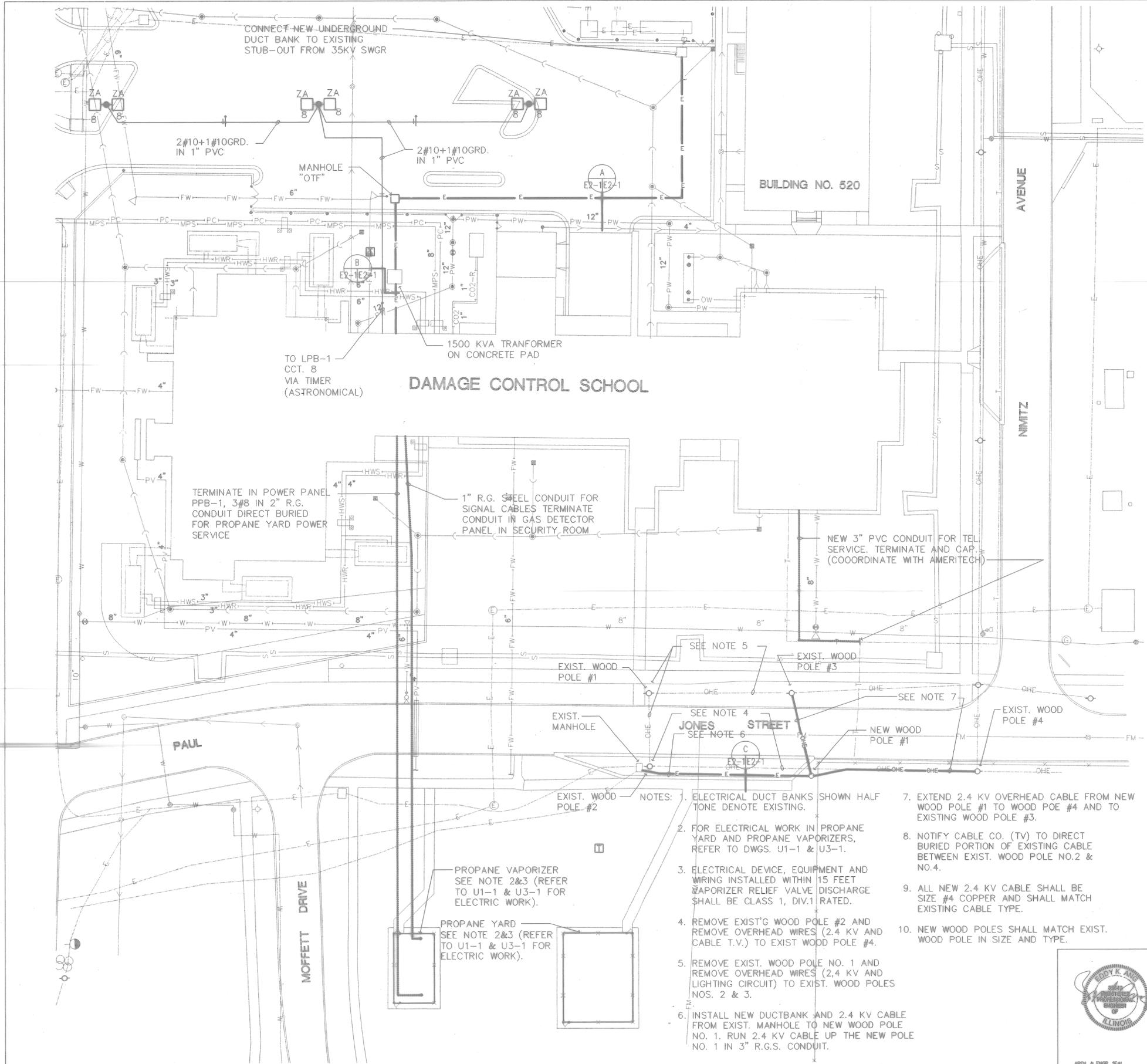


TELEPHONE RISER DIAGRAM  
N.T.S.

NOTE: SEE GENERAL NOTES FOR WIRING REQUIREMENTS.

△ AFFECTS ENTIRE SHEET

FOR OFFICIAL USE ONLY		RECORD DRAWING DATE <u>06/08/98</u>	
DATE <u>07-01-97</u> BY <u>CP</u> CORRECTED TO AS-BUILT		BY <u>LTJ</u> DATE <u>09/24/98</u>	
1015 South Carolina Highway, No. 1 247 West Broadway Street Charleston, S.C. 29401 Contract No. 68000-93-C-1143		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND CHARLESTON, S.C.	
ISSUED BY <u>ANG</u> OR <u>JACONEZ</u> OR <u>SEABORG</u>		NAVAL TRAINING CENTER GREAT LAKES, ILLINOIS	
SUBMITTED BY <u>POPOVIC</u> OR <u>ENGR</u> DATE		DAMAGE CONTROL SCHOOL	
FBI NUMBER TITLE		MISCELLANEOUS SYSTEM DIAGRAMS	
EC _____ OR NO _____		APPROVED _____ DATE	
PFC _____ OR _____		SITE CODE IDENT NO. <u>F 80091</u>	
APPROVED _____ DATE		NAVFAC DRAWING NO. <u>5276624</u>	
OFFICER IN CHARGE _____ DATE		CONSTR CONTR NO. <u>NS2467-93-C-1143</u>	
FOR THE COMMANDER, NAVFAC		SCALE <u>NONE</u>	
		SPEC <u>08-93-1143</u>	
		DRAWING NO. <u>E1-2</u>	
		SHEET <u>210</u> OF _____	

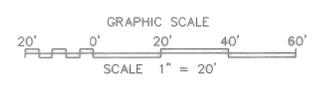


TERMINATE IN POWER PANEL PPB-1, 3#8 IN 2\"/>

1\"/>

NEW 3\"/>

- NOTES:
1. ELECTRICAL DUCT BANKS SHOWN HALF TONE DENOTE EXISTING.
  2. FOR ELECTRICAL WORK IN PROPANE YARD AND PROPANE VAPORIZERS, REFER TO DWGS. U1-1 & U3-1.
  3. ELECTRICAL DEVICE, EQUIPMENT AND WIRING INSTALLED WITHIN 15 FEET VAPORIZER RELIEF VALVE DISCHARGE SHALL BE CLASS 1, DIV.1 RATED.
  4. REMOVE EXIST'G WOOD POLE #2 AND REMOVE OVERHEAD WIRES (2.4 KV AND CABLE T.V.) TO EXIST WOOD POLE #4.
  5. REMOVE EXIST. WOOD POLE NO. 1 AND REMOVE OVERHEAD WIRES (2.4 KV AND LIGHTING CIRCUIT) TO EXIST. WOOD POLES NOS. 2 & 3.
  6. INSTALL NEW DUCTBANK AND 2.4 KV CABLE FROM EXIST. MANHOLE TO NEW WOOD POLE NO. 1. RUN 2.4 KV CABLE UP THE NEW POLE NO. 1 IN 3\"/>
  - 7. EXTEND 2.4 KV OVERHEAD CABLE FROM NEW WOOD POLE #1 TO WOOD POE #4 AND TO EXISTING WOOD POLE #3.
  - 8. NOTIFY CABLE CO. (TV) TO DIRECT BURIED PORTION OF EXISTING CABLE BETWEEN EXIST. WOOD POLE NO.2 & NO.4.
  - 9. ALL NEW 2.4 KV CABLE SHALL BE SIZE #4 COPPER AND SHALL MATCH EXISTING CABLE TYPE.
  - 10. NEW WOOD POLES SHALL MATCH EXIST. WOOD POLE IN SIZE AND TYPE.

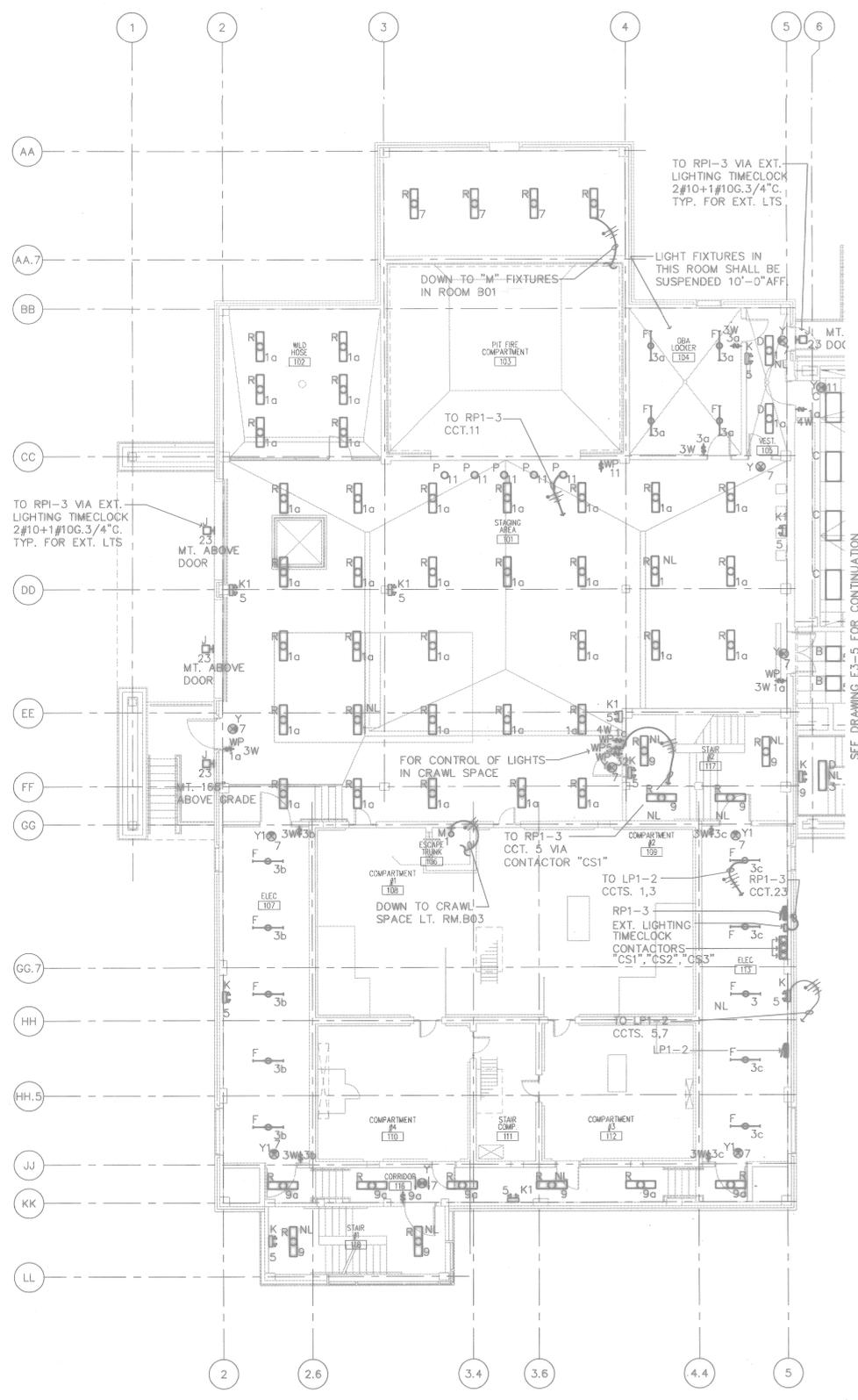


FOR OFFICIAL USE ONLY		RECORD DRAWING DATE <u>06/02/98</u>	
** 07-51-97 ** AS-BUILT, NO CORRECTIONS		DRAWN BY <u>J.M.B.</u>	
<small>         SOUTH BROADBENT ENGINEERING PLANNING, INC.          527 West Hubbard Street          Chicago, IL 60610          (312) 467-1100          A General Contractor/Professional Engineer, Inc.       </small>		<small>         DEPARTMENT OF THE NAVY          NAVAL FACILITIES ENGINEERING COMMAND          SOUTHERN DIVISION          CHARLESTON, S.C.       </small>	
<small>         SUBMITTED BY <u>ANG</u> or <u>JACQUEZ</u> or <u>SEABORG</u>          SUBV. POPOVIC or ENGR          DATE          EIC <u>Stacy, Halls</u> or <u>NO</u> or <u>FILED</u>          FFE       </small>		<small>         NAVAL TRAINING CENTER  <b>DAMAGE CONTROL SCHOOL</b>  <b>SITE PLAN</b> </small>	
APPROVED	DATE	SIZE	CODE (BENT) NO.
<u>[Signature]</u>	<u>11/98</u>	F	80091
OFFICIAL CHARGE	DATE	NAVFAC DESIGN NO.	DRAWING NO.
<u>[Signature]</u>	<u>11/98</u>	5276625	E2-1
<small>         CONSTR. CONTR. NO. NS2467-93-C-1143          SPEC 08-93-1143       </small>	<small>         SHEET <u>211</u> OF       </small>	<small>         SCALE 1" = 20'       </small>	

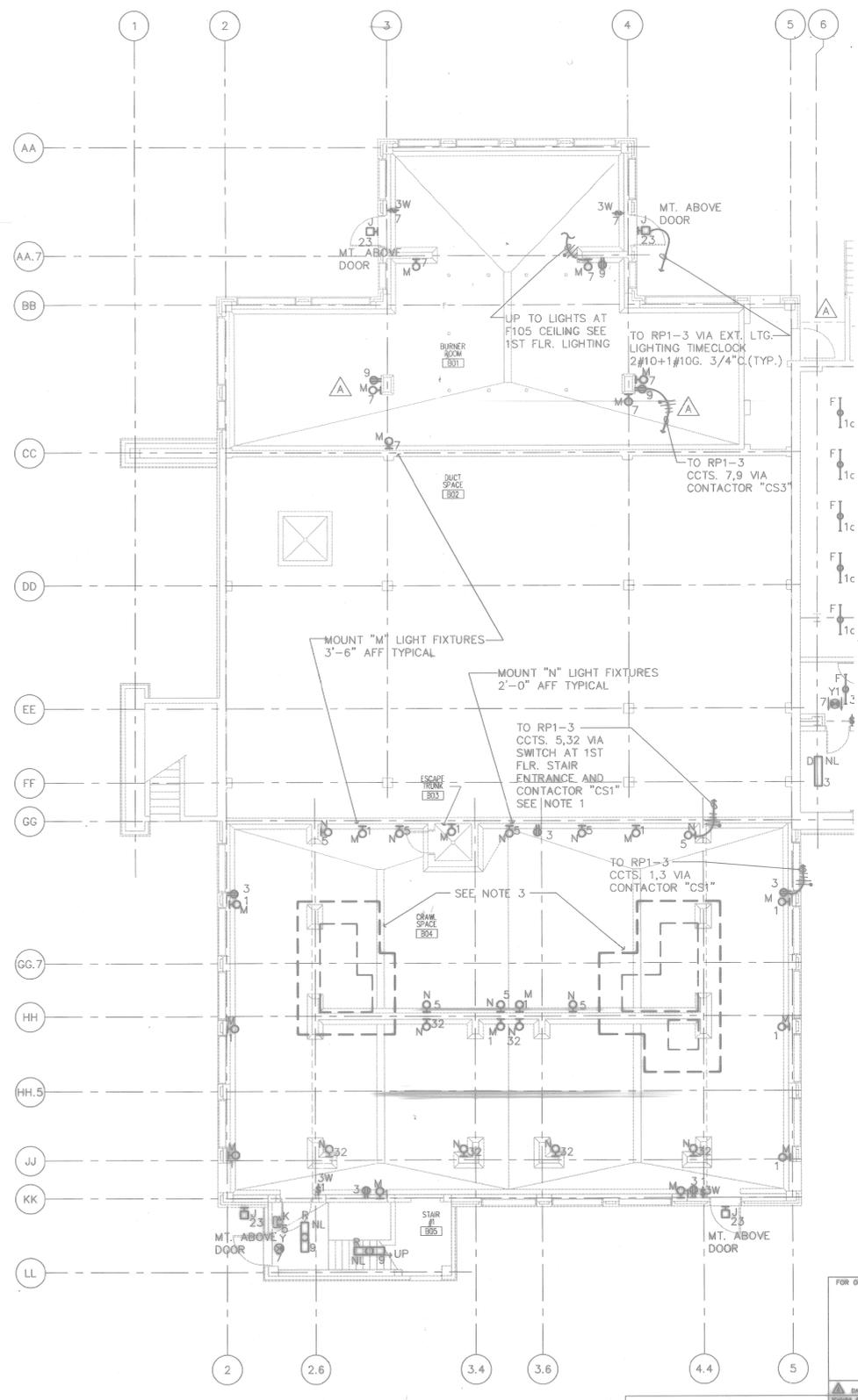


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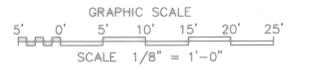
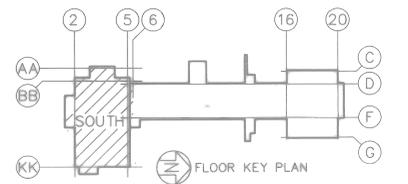
- NOTES: 1. CONTACTOR "CS1" SHALL OVERRIDE SWITCH FOR LIGHTS IN CRAWL SPACE.
2. RECEPTACLES IN CRAWL SPACE SHALL BE INSTALLED IN CAST BOX WITH SPRING LOADED HINGED WATER-PROOF COVER.
3. DENOTES THE LIMITS OF AN EXTREME HIGH TEMPERATURE AREA WITHIN THE CRAWL SPACE. DO NOT INSTALL ANY WIRING, CONDUIT, OR DEVICE WITHIN THIS BOUNDARY.
4. SEE GENERAL NOTES 3.6 & 9.



2 FIRST FLOOR-SOUTH LIGHTING  
E3-1 SCALE: 1/8" = 1'-0"



1 FIRST FLOOR CRAWL SPACE-SOUTH LIGHTING  
E3-1 SCALE: 1/8" = 1'-0"

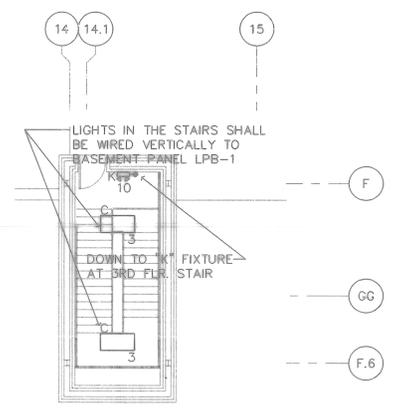
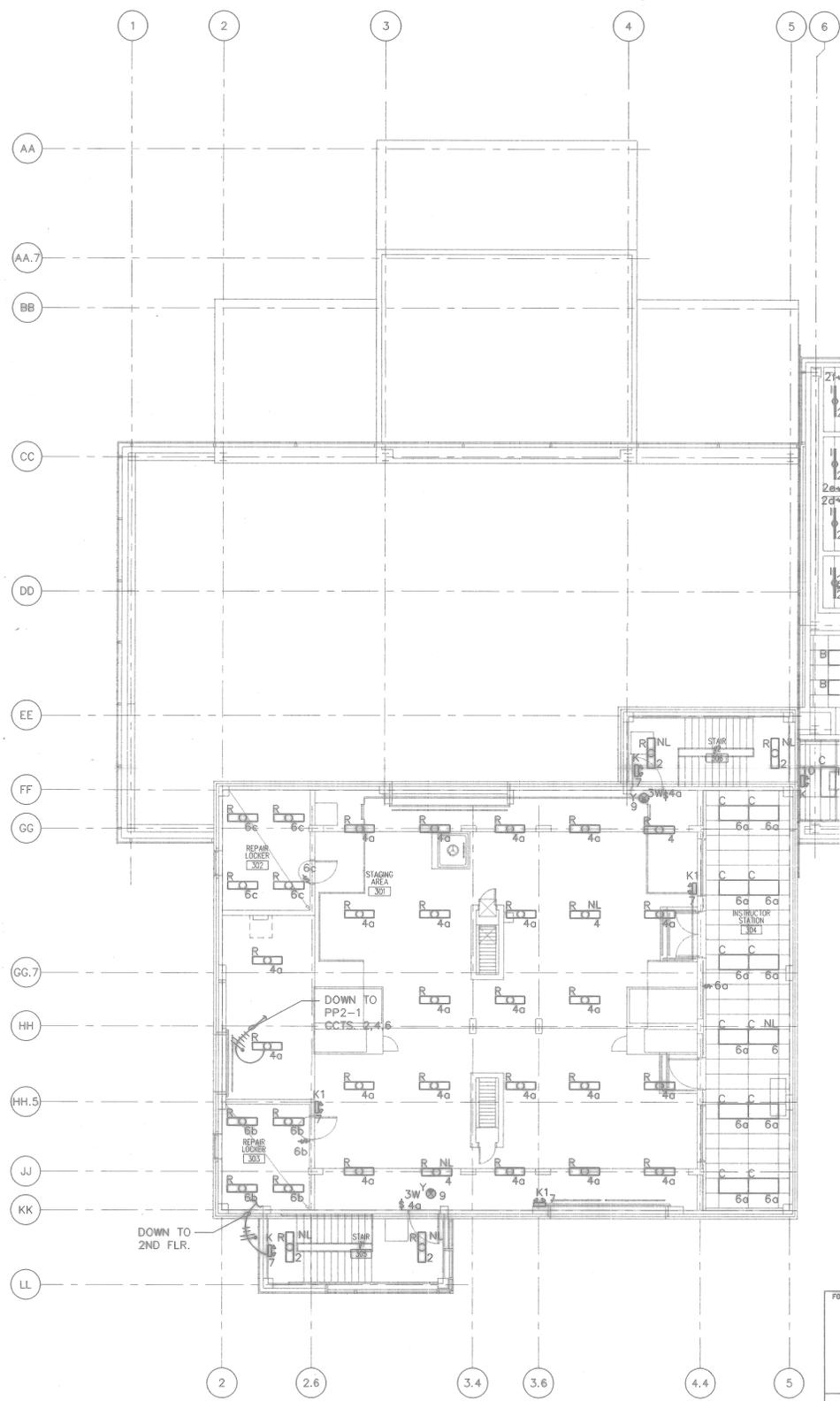


FOR OFFICIAL USE ONLY		RECORD DRAWING DATE 06/08/98	
DATE 07-01-97		CORRECTED TO AS-BUILT	
ENGINEER: [Signature] ARCHITECT: [Signature]		DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND SOUTHERN DIVISION CHARLESTON, S.C.	
PROJECT: ANG SUBMITTED BY: [Signature] DATE:		NAVAL TRAINING CENTER GREAT LAKES, ILLINOIS	
DRAWING NO. 80091 SHEET NO. 212 OF 212		DRAWING NO. E3-1 SHEET NO. 212 OF 212	

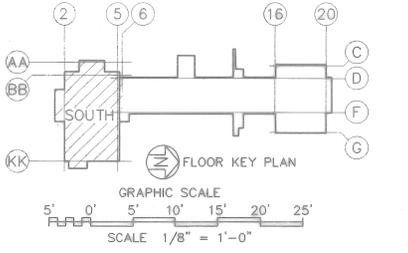
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NOTES: 1. SEE GENERAL NOTES 3 & 9.



1 STAIR TOWER PLAN  
E3-3 SCALE: 1/8" = 1'-0"



2 THIRD FLOOR-SOUTH LIGHTING  
E3-3 SCALE: 1/8" = 1'-0"

FOR OFFICIAL USE ONLY

RECORD DRAWING  
DATE 06/08/98

07-31-97 AS-BUILT, NO CORRECTIONS

EDDY K. ANG  
REGISTERED PROFESSIONAL ARCHITECT  
STATE OF ILLINOIS

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
SOUTHERN DIVISION  
CHARLESTON, S.C.

NAVY TRAINING CENTER  
GREAT LAKES, ILLINOIS

DAMAGE CONTROL SCHOOL  
THIRD FLOOR-SOUTH LIGHTING

APPROVED	DATE	SIZE	CODE IDENT NO.	NAVFAC DRAWING NO.	DRAWING NO.
CHARGE	DATE	F	80091	5276628	E3-3
CONTR. CONTR. NO.	DATE	SCALE 1/8" = 1'-0"		SPEC 09-93-1143	SHEET 144 OF 144



ARCH. & ENGR. SEAL

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