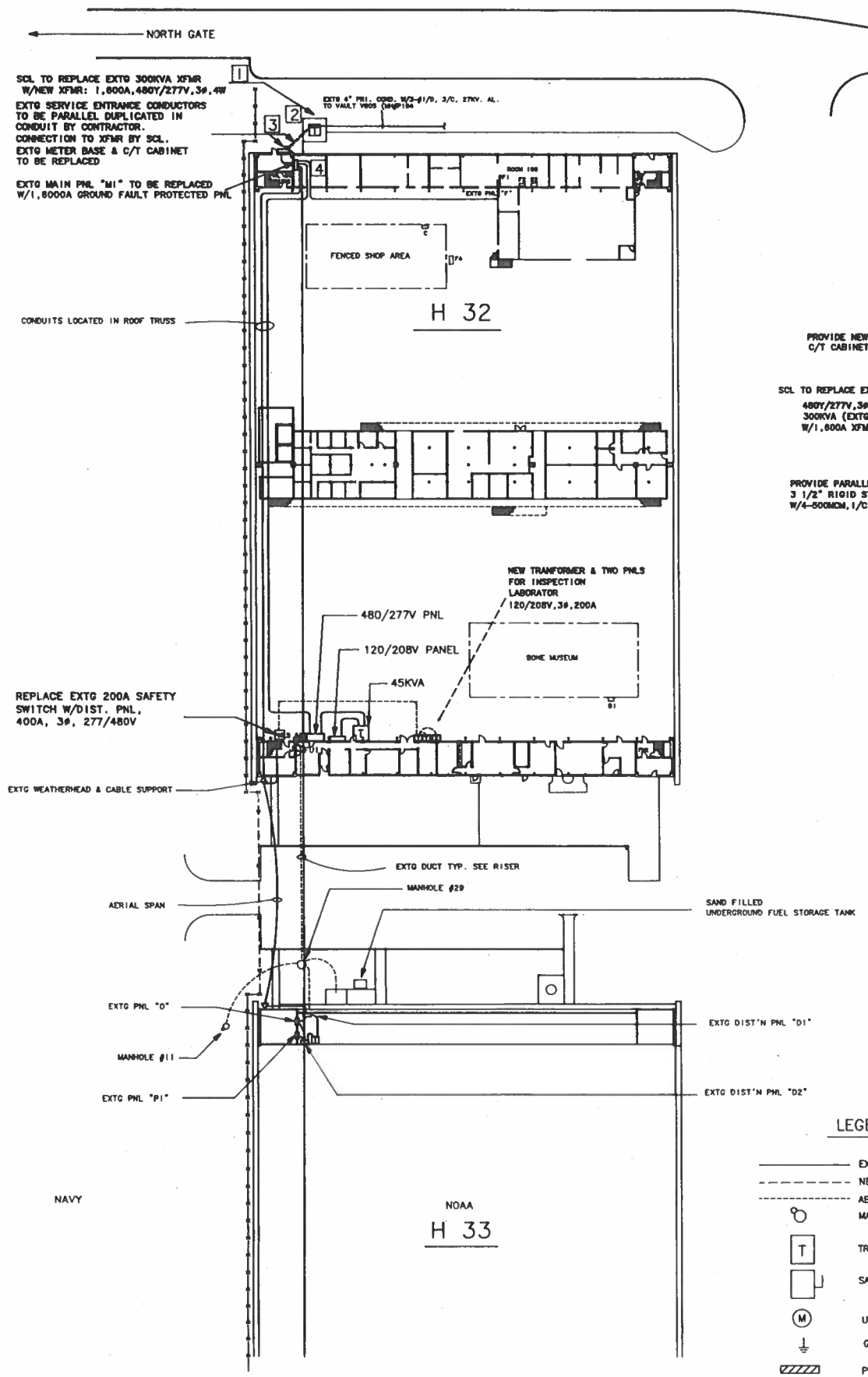
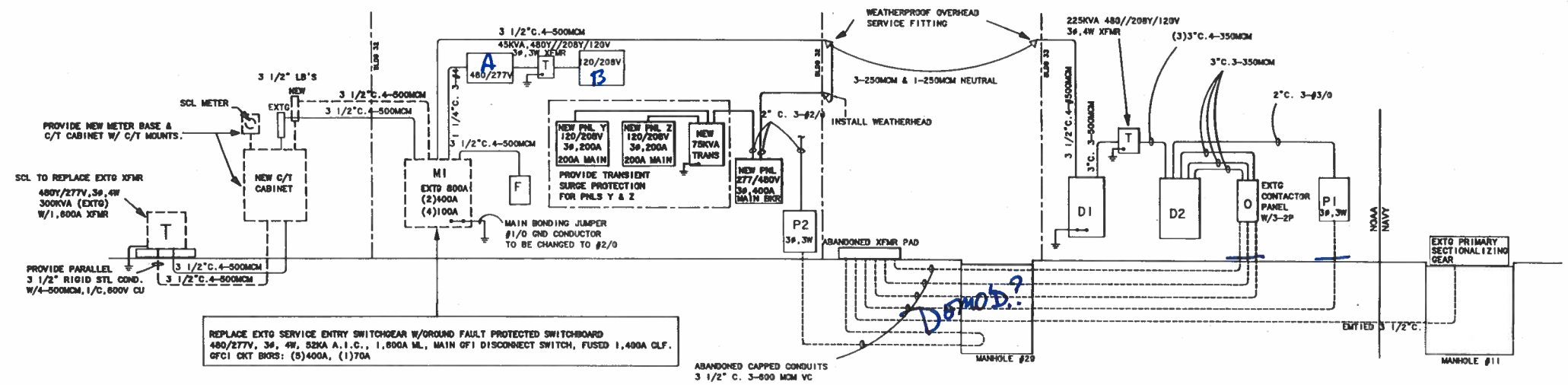


PLOT PLAN

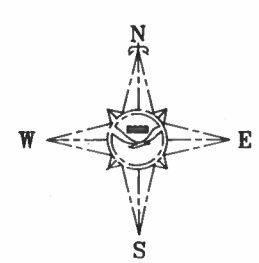
SCALE 1" = 40'



REPLACE EXTG SERVICE ENTRY SWITCHGEAR W/GROUND FAULT PROTECTED SWITCHBOARD 480/277V, 3ø, 4W, 52KA A.I.C., 1,600A ML, MAIN GFI DISCONNECT SWITCH, FUSED 1,400A CLF. GFCI CKT BKRS: (5)400A, (1)70A

NEW INSTALLATION & DEMOLITION RISER DIAGRAM

NOT TO SCALE



LEGEND

- EXTG ABOVE GROUND CONDUCTORS & EQUIPMENT
- NEW CONDUCTORS & EQUIPMENT
- ABANDONED CONDUCTORS & CONDUIT
- MAN HOLE
- TRANSFORMER
- SAFETY SWITCH
- UTILITY METERING
- GROUND
- POWER DISTRIBUTION PANEL
- PANELBOARD SURFACE MOUNTED
- PANELBOARD FLUSH MOUNTED

NOTES

PROVIDE ALL LABOR, MATERIAL AND EQUIPMENT TO PERFORM ALL WORK DISCRIBED BELOW:

1. COORDINATE WITH SEATTLE CITY LIGHT (SCL) TO REPLACE EXTG 300KVA TRANSFORMER W/1600A, 3 PHASE, 277Y/480V, 26,000A FAULT DUTY, ON EXTG PAD. SCL TO CONNECT NEW AND EXTG FEEDERS TO TRANSFORMER & NEW INSTRUMENTATION XFMRS IN CT CABINET.

   REFER TO SCL STANDARDS: U4-4.2, U10-1.3, U12-1.4

2. CONTRACTOR TO PROVIDE UNDERGROUND 4 THWN 500MCM CU & 3-1/2" COND. (INCLUDE TRENCHING & BACKFILL). CONTRACTOR TO PROVIDE SCL APPROVED NEW NEMA 3R RAINTIGHT CT CABINET & NEW METER BASE W/SOCKET. C.T. CABINET TO CONTAIN TRANSFORMER MOUNTING BASE, CIRCLE AW 6067-A, AND 13 JAW METER SOCKET, CIRCLE AW 121413. METER BASE & CT CABINET PROVIDE 8-#12 THHN WIRES FROM METER BASE, COLOR CODED TO SCL REQUIREMENTS.

3. CONNECT NEW CT CABINET TO NEW MAIN DISTRIBUTION PANEL "M1" WITH 4-500MCM CU IN PARALLEL 3 1/2" RIGID STEEL CONDUIT & LB THROUGH ASBESTOS SIDED WALL. GROUND C.T. & METER CABINETS TO NEW 3/4" DIA. 8' COPPER CLAD GROUND ROD & NEARBY WATER PIPE. INCLUDE ASBESTOS SIDING PENETRATION. EXERCISE OSHA PROCEDURES..

4. PROVIDE NEW 1,600A MAIN DISTRIBUTION CENTER M1 PRESENT LOCATION OF EXTG M1. NEW M1 SHALL BE GROUND FAULT PROTECTED GENERAL ELECTRIC AV-2 LINE SWITCHBOARD, 277/480V 3PH 4W, 1,600A, 52KA I.C., 65KA BRACED, BACK FEED, AL BUS, G.E. MAIN GROUND FAULT DISCONNECT SWITCH, 1,400A CLF FUSED. INCLUDE MAIN DIST. SWITCHBOARD MDB. MDB TO CONTAIN 1,600A BUS, 3PH 4W, & GROUND FAULT CIRCUIT BREAKERS AS FOLLOWS:
   - A. 400A - NORTH LEANTO
   - B. 400A - CENTER SECTION
   - C. 400A - SOUTH LEANTO
   - D. 400A - HEAT PUMPS
   - E. 400A - EXTG NORTH WING
   - F. 400A - EXTG H33

   INCLUDE NEW WIREWAYS, GUTTERS & CONDUIT AS NECESSARY. LABEL ALL CKTS ON MAIN DIST. SWITCHBOARD.

THIS DRAWING DERIVED FROM JOHN GRAHAM & CO, CONTRACT #81615.09, BUILDINGS 32 & 33, ELECTRICAL MODS. SITE PLAN, ELECTRICAL, NO. EB 1, WASC-83-76252, DATED 10/30/82 & 3/28/83.

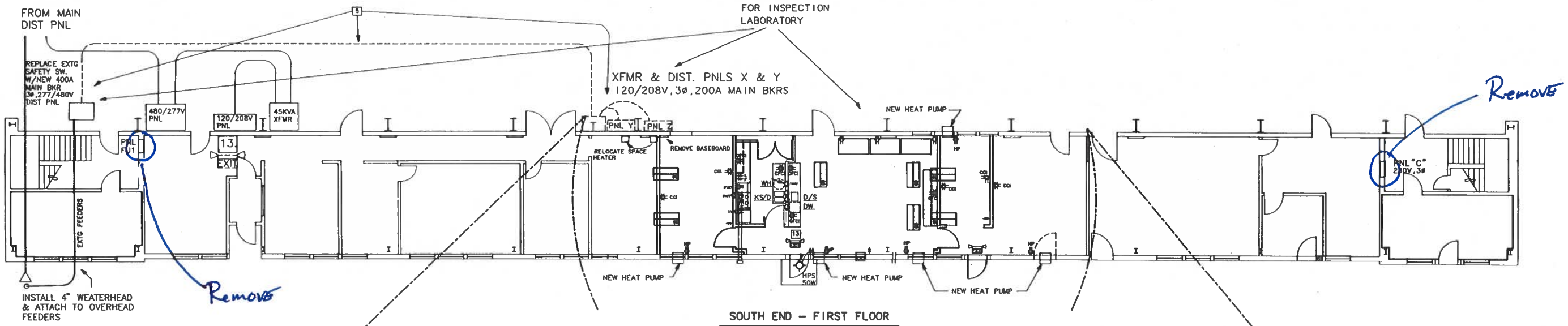
NO.	REVISIONS	DATE
4		
3		
2		
1		

FACILITIES AND LOGISTICS DIVISION
ENGINEERING AND FACILITIES MANAGEMENT
WESTERN ADMINISTRATIVE SUPPORT CENTER
SEATTLE WASHINGTON

PROJECT: NMFS FIO LABORATORY REMODELING
BUILDING: BUILDING 32
7600 SAND POINT WY NE
SEATTLE, WA 98115
DRAWING: ELECT. PLOT & RISER

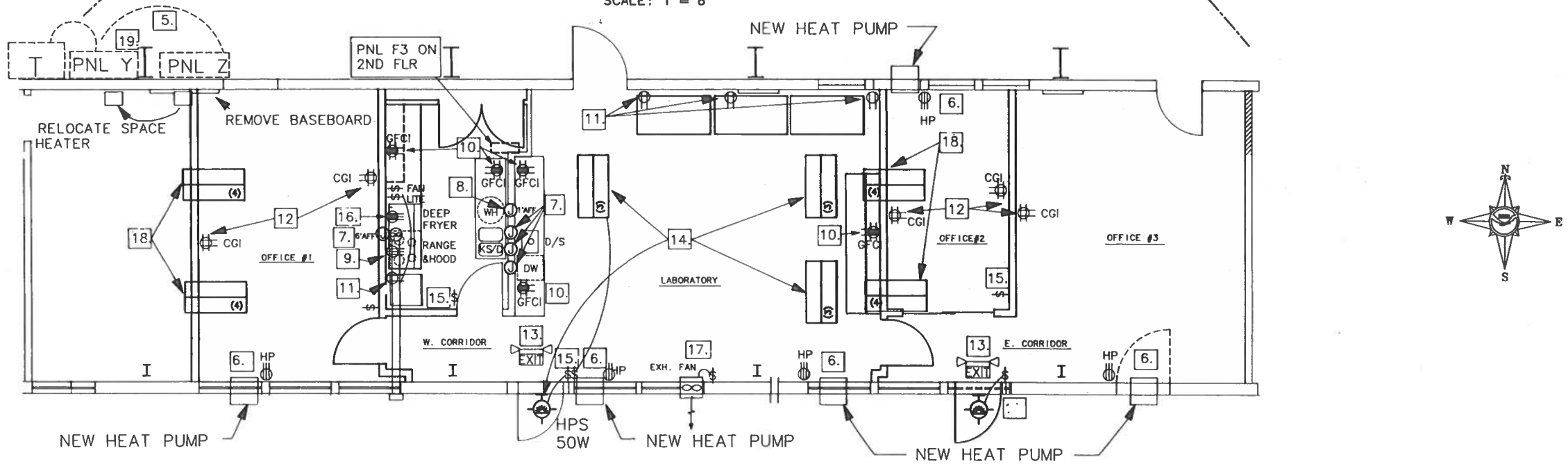
APPROVED	ARCH	STRUC	MECH	ELECT	TYPE	SEQUENCE
					E	2

DRWN DATE 2/26/91 DSGN DATE 2/26/91 DRAWING FILE NO. EWA 90340



SOUTH END – FIRST FLOOR

SCALE: 1"= 8'



PARTIAL 1ST FLOOR PLAN

SCALE: 1"= 4'

LEGEND PLAN DRAWINGS

- 2X4 SURF. MT FLUORES. W/ELECTRONIC BALLASTED (3)T8 C50 FULL SPECTRUM NATURAL COLOR LAMPS, 277V BALLAST WRAP AROUND LENS
- WALL/CEILING MOUNT FLUORESCENT EXIT/EMERG. LIGHT FIXTURE W/BATTERY PAK & EMERGENCY LIGHTS
- HPS — WALL MOUNTED OUTDOOR LIGHT FIXTURE W/50W HIGH PRESSURE SODIUM LAMP & PHOTOCELL CONTROL
- 3 WAY WALL SWITCH
- 4" SQUARE (U.N.O.) JUNCTION BOX WITH K.O. COVER. BRACKET INDICATES WALL MOUNT (FLUSH, HT. AS NOTED)
- CEILING LITE BOX, CKT # & WATTAGE
- DUPLEX GROUNDING RECEPTACLE, 20A, 120VAC CLR 12" A.F.F. (U.N.O.)
- CGI — SAME AS ABOVE, EXCEPT WITH COMPUTER GROUND ISOLATED RECEPT.

LEGEND PLAN DRAWINGS

- TWO DUPLEX GROUNDING RECEPTACLES, 20A,120VAC, IN TWO GANG BOX, CLR 48" A.F.F. (U.N.O.)
- GFCI — SAME AS ABOVE, EXCEPT WITH GFCI & . CLR 6" ABOVE COUNTERTOP
- GROUNDING RECEPTACLE, 30A, 240VAC CLR 12" A.F.F. (U.N.O.)
- DUPLEX GROUNDING RECEPTACLE, 20A, 120VAC CLR 6" ABOVE COUNTER OR BACKSPLASH (U.N.O.)
- GFCI — DUPLEX GROUNDING RECEPTACLE, 20A, 120VAC WITH INTEGRAL GROUND FAULT CIRCUIT INTERRUPTER, CLR 48" A.F.F. (U.N.O.)
- GFCI — SAME AS ABOVE, EXCEPT CLR 6" ABOVE COUNTER OR BACKSPLASH (U.N.O.)
- EXHAUST FAN
- 1. — NOTE CALLOUT

NOTES

PROVIDE ALL LABOR, MATERIAL, AND EQUIPMENT TO PERFORM ALL WORK DESCRIBED BELOW:

5. PROVIDE, ALL 3Ø, 400A MAIN BKR 277/480V 10 CKT DIST. PANEL; 75KVA 120/208V TRANSFORMER; 200A MAIN 120/208V DIST PNLS Y & Z, EACH 32 CKTS. PROVIDE 4" WEATHERHEAD & CONNECT EXTG FEEDERS TO OVERHEAD POWER LINES (TO HANGER 33). INCLUDE ALL SOLID WIRING, CKT BKRS, EMT & COMPRESSION ONLY FITTINGS.

WIRING WITHIN WORK AREA DESCRIBED BELOW TO BE CONCEALED EMT UNLESS NOTED OTHERWISE (U.N.O.). PROVIDE & CONNECT SUBFEEDERS CKTS FOR NEW RECEPTACLES TO NEW PNL Y & HEAT PUMPS TO NEW PNL Z.

6. PROVIDE FIVE 30A, 3Ø, 120/208V DEDICATED CKTS W/RECEPTACLE FOR HEAT PUMPS ON 1ST FLR. INCLUDE 3/4" CONDUIT, FITTINGS, J-BOXES. 4-#10 THHN 90dC. 30A 3P BKRS. CONNECT HEAT PUMPS, CONNECT TO PNL Z.

7. PROVIDE FOUR 20A, 120V DEDICATED CKTS IN 4"X4" J-BOXES FOR RANGE HOOD FAN/LIGHT, DISPOSALS & DISHWASHER, CONSISTING OF 1P CKT BKRS, #12 THHN 90dC WIRING, EMT & FLEXIBLE CONDUITS & FITTINGS. CONNECT RANGE HOOD, DISPOSALS & DISHWASHER, CONNECT TO PNL Z.

8. PROVIDE A NEW 30A, 208V DEDICATED CKT IN J-BOX FOR WATER HEATER. CONSISTING OF 1/2" CONDUIT & FITTINGS, 2-#10 THHN, 30A 2P BKR. CONNECT WATER HEATER & CONNECT TO PNL Y.

9. PROVIDE ONE NEW 60A, 3Ø, 120/208V DEDICATED CKT W/RECEPTACLE FOR RANGE/OVEN, CONSISTING OF 1" CONDUIT & FITTING, 4-#6 THHN, 60A 3P BKR. CONNECT RANGE/OVEN & CONNECT TO PNL Y.

10. PROVIDE FOUR ABOVE COUNTER APPLIANCE CKTS EA W/GFCI PROTECTED DOUBLE DUPLEX RECEPTACLES, 20A, 120V, CONSISTING OF GFCI CKT BKRS, #12 THHN 90dC WIRING & EMT & FLEXIBLE CONDUITS, FITTINGS, J-BOXES. CONNECT TO PNL Y.

11. PROVIDE FOUR NEW 20A, 120V DEDICATED CKTS W/DUPLEX RECEPTACLE FOR REFERS/FRZERS, CONSISTING OF CKT BKRS, #12 THHN 90dC WIRING, EMT & FLEXIBLE CONDUITS & FITTINGS. CONNECT TO PNL Z.

12. PROVIDE THREE 20A, 120V GROUND ISOLATED COMPUTER CKTS, EACH W/TWO WORKSTATIONS. EACH WORKSTATION W/TWO GROUND ISOLATED DUPLEX OUTLETS. INCLUDE CKT BKRS, #12 THHN 90dC WIRING, EMT & FLEXIBLE CONDUITS & FITTINGS. EACH WORKSTATION GROUND CKT WILL HAVE DEDICATED CONTINUOUS INSULATED #12 GREEN WIRE TO GROUND IN PANEL Y.

13. PROVIDE THREE WALL/CEILING MOUNT FLUORES. EXIT/EMERGENCY LIGHT COMBINATION FIXTURES. INTEGRAL RECHARGEABLE BATTERY PACKS INCLUDED. INSTALL IN SOUTH END OF 1ST FLOOR. PROVIDE ONE DEDICATED CKT FROM PNL Y.

14. PROVIDE LIGHT FIXTURES: THREE 3-TUBE 2X4 SURFACE MOUNT FLUORESCENT, FULL COLOR SPECTRUM T-8 LAMPS, 277V ELECTRONIC BALLASTED, WRAP AROUND LENS TO MATCH EXTG. ADD ONE SWITCH. TWO OUTDOOR HIGH PRESSURE SODIUM WALL MOUNT W/SWITCHES & PHOTOCELL CONTROL, 277V. INCLUDE WIRING & SURFACE MOUNT CONDUIT, FITTINGS & J-BOXES. CONNECT TO PNL F3 2ND FLR.

15. PROVIDE THREE NEW LIGHT SWITCHES AT THREE DOORS, SINGLE POLE. INCLUDE WIRING & CONDUIT. INSTALL ON 1ST FLR.

16. PROVIDE ONE 30A 3Ø 120/208V CKT W/ABOVE COUNTER RECEPTACLE FOR DEEP FRYER, CONSISTING OF 30A 3P BKR, 4-#10 THHN 90dC WIRING & EMT & FLEXIBLE CONDUITS, FITTINGS, J-BOXES. CONNECT FRYER, CONNECT TO PNL Y.

17. PROVIDE DEDICATED 120V CKT W/SWITCH FOR THRU WALL EXHAUST FAN, CONSISTING OF 20A BKR, #12 THHN 90dC WIRING, EMT & FLEXIBLE CONDUITS & FITTINGS. CONNECT FAN, CONNECT TO PNL Z.

18. RELOCATE OBSTRUCTING LIGHT FIXTURES, SWITCHES, FIRE DETECTION SENSORS & HEATERS.

19. PROVIDE TRANSIENT SURGE PROTECTION FOR EACH PANEL Y & Z. BRANCH PANEL MOUNT LEVITON MODEL 52120-M3. INCLUDE 30A, 3P BKR IN EACH PANEL & #10 WIRING TO EACH TRANSIENT SUPPRESSOR DEVICE.

NO.	REVISIONS	DATE
4		
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1		

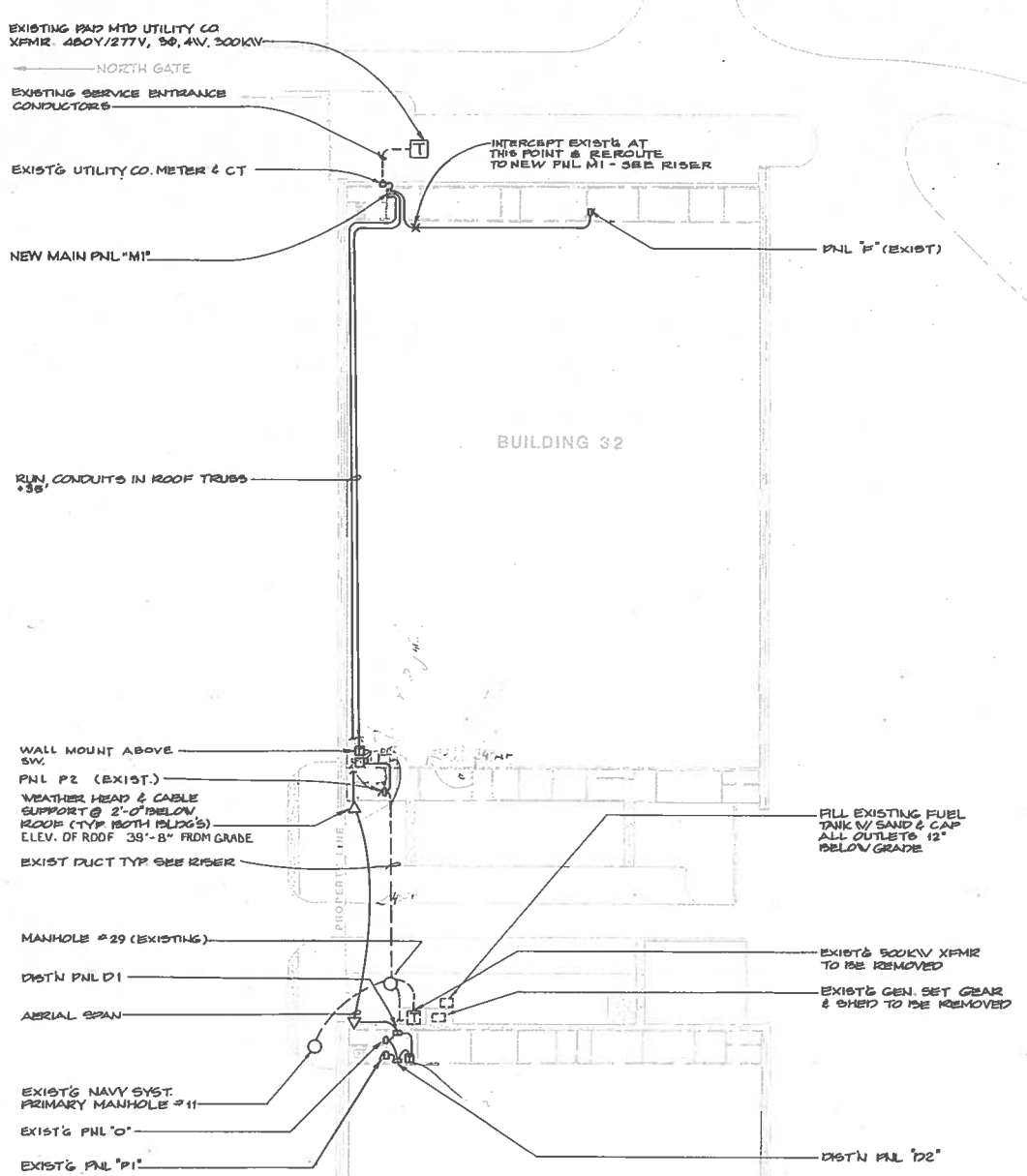
FACILITIES AND LOGISTICS DIVISION
ENGINEERING AND FACILITIES MANAGEMENT
WESTERN ADMINISTRATIVE SUPPORT CENTER
SEATTLE WASHINGTON

PROJECT: NMFS FIO LABORATORY REMODELING
BUILDING: BUILDING 32
7600 SAND POINT WY NE
SEATTLE, WA 98115
DRAWING: ELECTRICAL PLAN

TYPE | SEQUENCE
E-3

APPROVED: ARCH | STRUC | MECH | ELECT

DRWN: HRE DATE 3/20/91
DSGN: HRE DATE 3/20/91
DRAWING FILE NO. EWA 90340

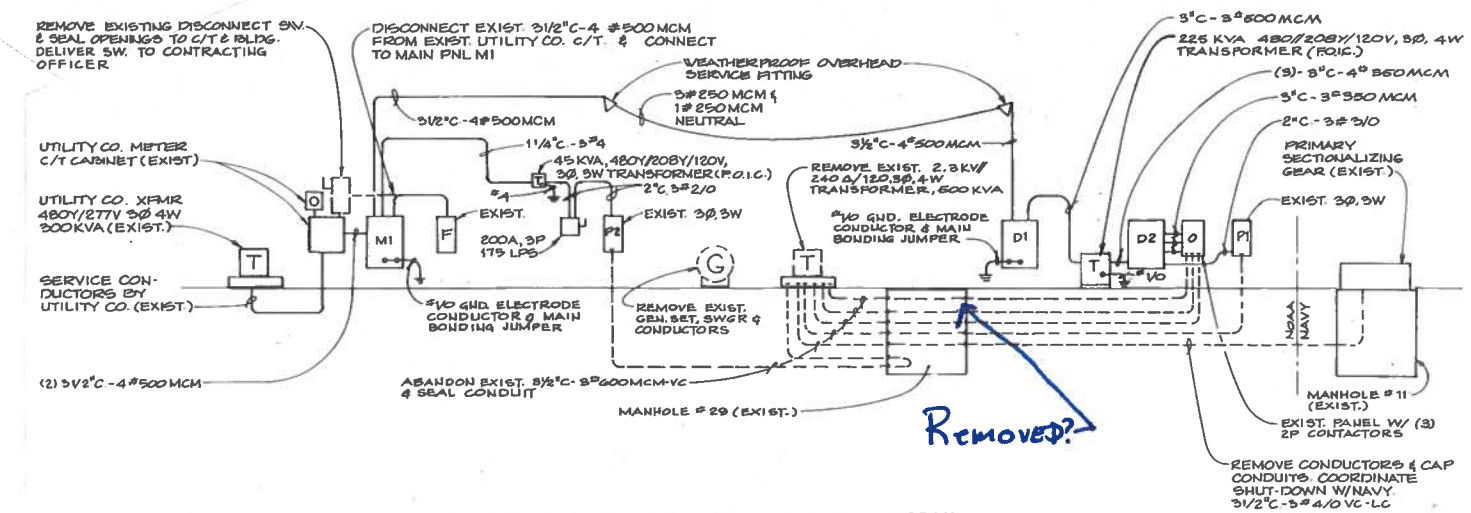


SITE PLAN

SCALE: 1" = 40'

NOTE

1. CONTRACTOR SHALL MAKE FIELD MEASUREMENTS AND VERIFY EQUIPMENT LOCATIONS WITH CONTRACTING OFFICER PRIOR TO ROUGH IN.
2. CONTRACTOR SHALL MAKE CONNECTIONS TO EXISTING PANELS AND CONTACTORS AS REQUIRED TO MAKE A COMPLETE SYSTEM.
3. EXISTING GENERATOR SET AND DISCONNECT SWITCH TO REMAIN PROPERTY OF NOAA. TRANSPORT TO LOCATION DESIGNATED BY CONTRACTING OFFICER.
4. EXISTING 500 KVA TRANSFORMER AND SWITCHGEAR FOR GEN. SET TO BE DISPOSED OF BY CONTRACTOR.
5. CONCRETE PAD FOR 500 KVA TRANSFORMER AND GEN. SET TO REMAIN AS IS EXCEPT ALL BOLTS AND RODS TO BE CUT OFF FLUSH AND CONDUITS SEALED.



NEW INSTALLATION & DEMOLITION RISER DIAGRAM

NOT TO SCALE

SYMBOL LEGEND

———	CONDUCTORS RUN EXPOSED
- - - -	CONDUCTORS RUN BELOW GRADE
	TRANSFORMER
	SAFETY SWITCH
	PANELBOARD, FLUSH MTD.
	PANELBOARD, SURFACE MTD.
	DISTRIBUTION PANELBOARD, SURFACE MTD.
F.O.I.C.	FURNISHED BY OWNER AND INSTALLED BY CONTRACTOR

PANEL SCHEDULE 277/480V-3Ø, 4W

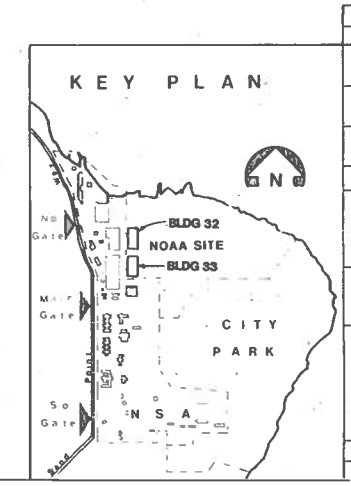
PANEL	TYPE & MTG	SECT NO	MAIN BKR	MAIN LUGS	BRANCH CKTS NO	AMP	POLE	REMARKS
D1	SURF	I		400	1	350	3	PANEL D2 225 KVA TRANSFORMER
					4	100	3	PROVISION ONLY
					1	200	3	PROVISION ONLY
								PANEL SHALL BE LABELED FOR USE AS SERVICE ENTRANCE EQUIPMENT.

PANEL SCHEDULE 120/208V-3Ø, 4W

PANEL	TYPE & MTG	SECT NO	MAIN BKR	MAIN LUGS	BRANCH CKTS NO	AMP	POLE	REMARKS
D2	SURF	I	800		3	300	2	PANEL O
					1	200	3	PANEL P1
					2	200	3	PROVISION ONLY

DISTRIBUTION & POWER PANEL SCHEDULE

PANEL	TYPE & MTG	MAIN LUGS	BRANCH CIRCUITS NO	SWITCH	FUSE	REMARKS
M1	SURF'	800	1	400A	400A LPS	PANEL D1
			1	400A	400A LPS	PANEL F
			1	100A	70A LPS	PANEL P2, 45 KVA TRANSFORMER
			5	100A		PROVISION ONLY
						PANEL SHALL BE LABELED FOR USE AS SERVICE ENTRANCE EQUIPMENT.



REGISTERED ARCHITECT JOHN GRAHAM STATE OF WASHINGTON

NO	REVISION	DATE

John Graham and Company
Architects Planners Engineers
1110 Third Avenue, Seattle, Washington 98101

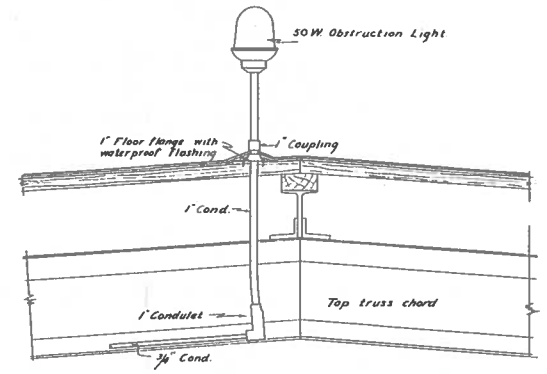
APPROVED

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE SEATTLE WASHINGTON

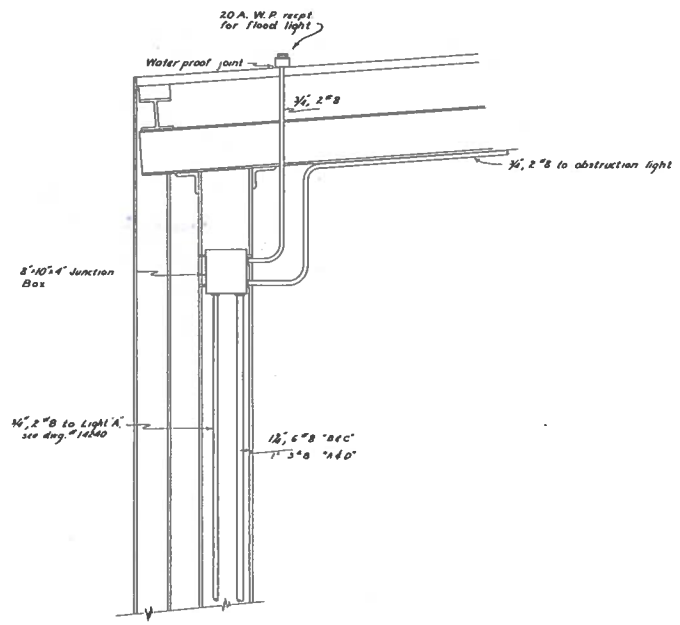
NOAA WESTERN REGIONAL CENTER

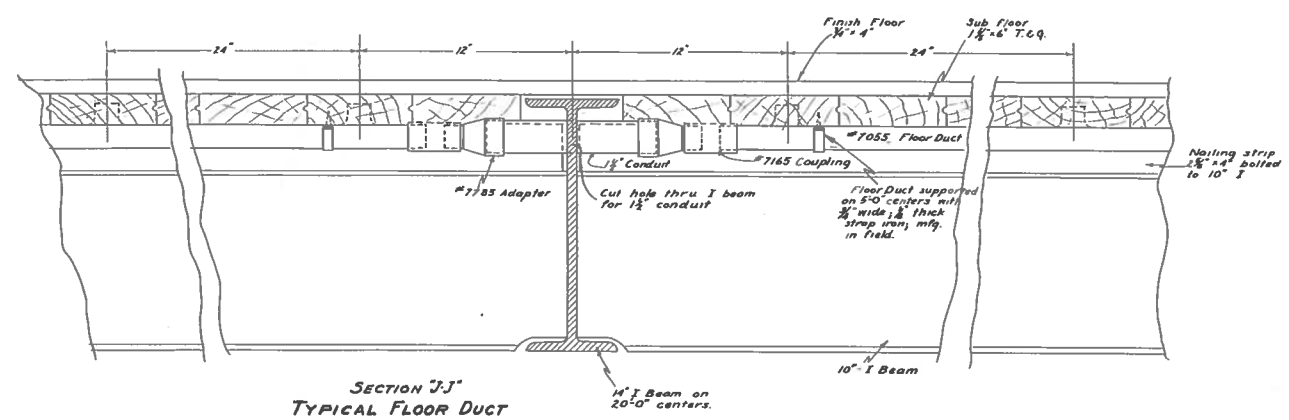
PROJECT LOCATION	NAME	SANDPOINT FACILITY
	ADDRESS	7600 SANDPOINT WAY N.E.
	NUMBER	SEATTLE, WASHINGTON
PROJECT	DESCRIPTION	BUILDINGS 32 & 33 ELECTRICAL MODIFICATIONS
	NUMBER	WASC-83-76253
	DRAWN BY	RH CHK BY RM DATE 3/28/83
DRAWING	TITLE	SITE PLAN
	TYPE	ELECTRICAL
	NUMBER	EB 1A (TYPE / SERIES / SEQUENCE)
AE	CONTRACT NUMBER	83 81615.09
CONSTRUCTION		

SCREEN VALUE	100	50%	100%
COMPOSITE INSTRUCTIONS	TBH	E1	E2
BASE/OVERLAY NO.	TBH	E1	E2

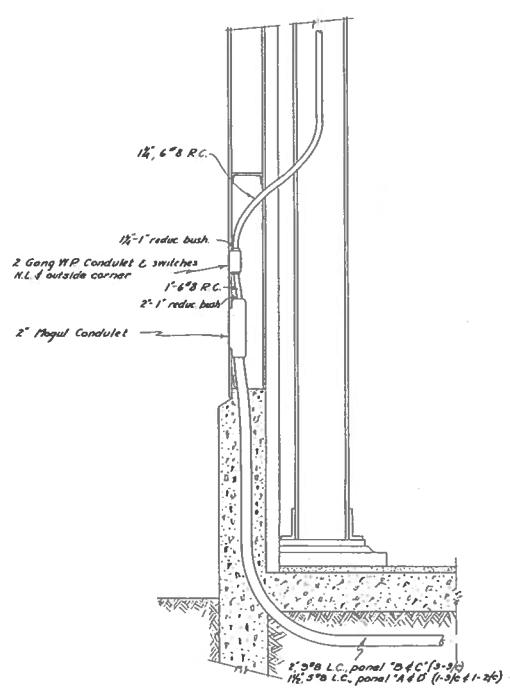


SECTION "H-H"
Scale 1"=1'-0"

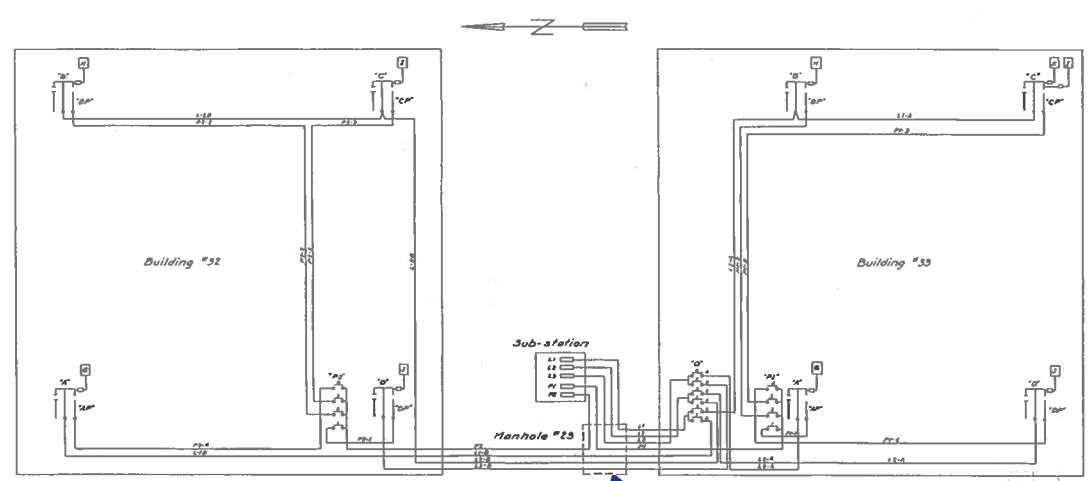




SECTION "J-J"
TYPICAL FLOOR DUCT ASSEMBLY
Scale, 3"=1'-0"



SECTION "G-G"
Scale, 3/4"=1'-0"



FEEDER DIAGRAM
Scale, None

REMOVED. UNDERGROUND CONDUITS SHOULD BE DEAD.

Floor Plan - Dwg. #14240
Feeders & Panel Arrangement Bldg 33 - Dwg. #14250
" " " " 32 - " #14251
Electrical Conduit Distribution " 32 - " #14243
" " " " 33 - " #14244
Sub-station layout - see Dwg. #14255
Manhole #23 - see Dwg. #14255

LIGHTING FEEDERS 230/115 V. 1φ

Feeder L1			Feeder L2			Feeder L3		
Panel	Watts	Total	Panel	Watts	Total	Panel	Watts	Total
A32	48900		A32	29700		C32	49200	
B32	18050		B32	17850		D32	20450	
		66950	C32	29700				69650
			D32	21050				
B33	29700					A33	48900	
D33	20700				97200	B33	19750	
C33	29200		A33	49200				68650
D33	18850		B33	20450				
A33	9400				69650			
		107850						
Total		174800			166850			138300

POWER FEEDERS 230V. 3φ

Feeder P1			Feeder P2		
Panel	Watts	Total	Panel	Watts	Total
AP	25000		AP	25000	
BP	"		BP	"	
CP	"		CP	"	
DP	"		DP	"	
Total		100000	Total		100000

Drawn By	T.L.
Traced By	T.L.
Checked By	Bentley
Chief Drafting	
In Charge	
Scale As Noted	
P.W. Drawing No.	14247

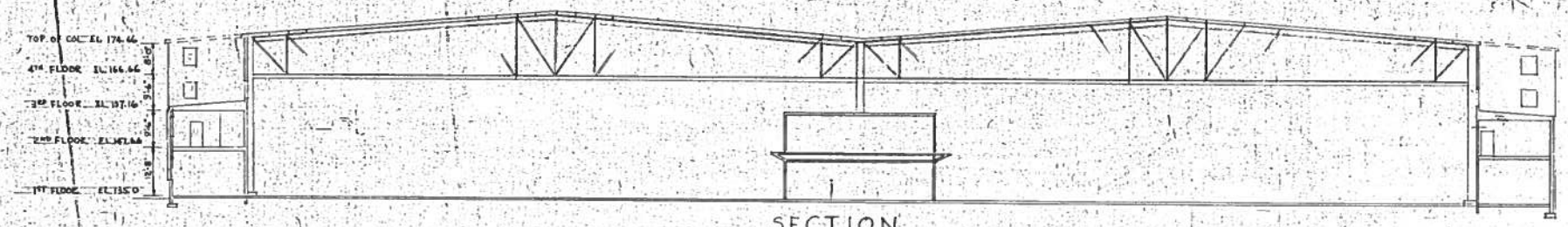
PUGET SOUND NAVY YARD
BREMERTON, WN.
NAVAL AIR STATION
SEATTLE, WASH.

ELECTRICAL SECTIONS OF BUILDINGS No. 32-33

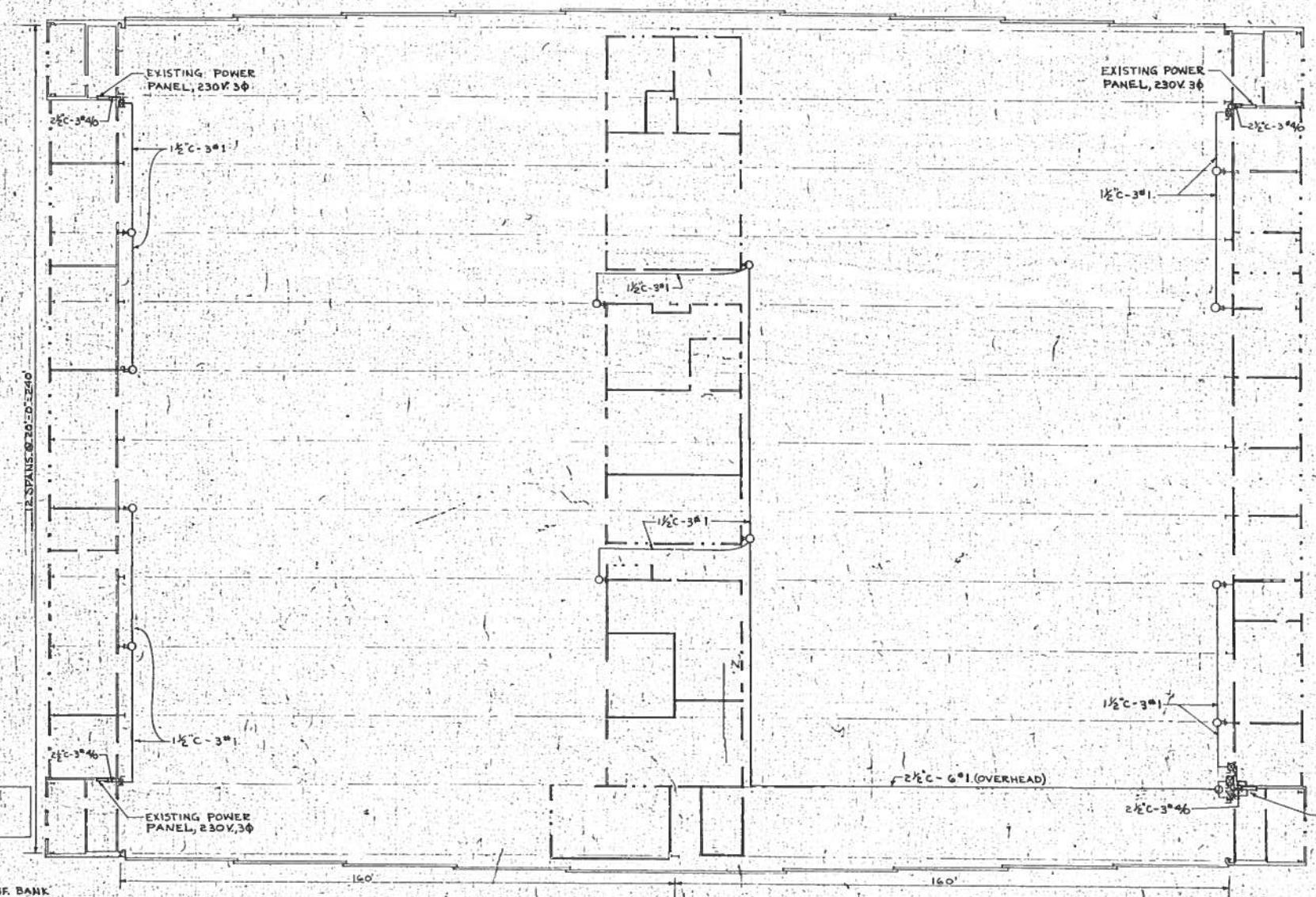
Approved 3/27/34
Public Works Officer

4 NAS 3-9-37
1 PDE "

13-34-238



SECTION



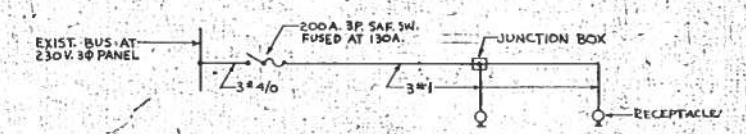
HANGAR BLDG. #32 (BLDG. #33 SIMILAR)
FIRST FLOOR PLAN
SCALE 1/16" = 1'-0"

SYMBOLS FOR THIS SHEET

- ONE 230V, 3-PHASE, 3-WIRE, 4-POLE RECEPTACLE; 100A. RATING, MTD. 5'-0" ABOVE FLOOR
- JUNCTION BOX
- RIGID CONDUIT
- SAFETY SWITCH, 3-P, 200AMP. FUSED

NOTES FOR THIS SHEET

1. THE RECEPTACLES SHALL BE OF THE CIRCUIT BREAKING TYPE CAPABLE OF BREAKING THE FULL RATED LOAD CURRENT AND OF THE TYPE THAT ARE MTD. AT AN ANGLE. A MATCHING PLUG SHALL BE FURNISHED FOR EACH RECEPTACLE.
2. WIRING SHALL BE IN RIGID CONDUIT RUN EXPOSED OVERHEAD.
3. LOCATIONS SHOWN FOR SAFETY SWITCHES ARE TYPICAL ONLY & SHALL BE MTD. IN THE VICINITY OF THE PANELS TO SUIT CONDITIONS.
4. EXISTING 60A. RECEPTACLES OF TYPE SIMILAR TO THE NEW RECEPT. ARE IN PLACE ON THE COLUMNS AT THE NEW RECEPT. LOCATIONS. NEW RECEPTACLES SHALL BE MTD. ON THE COLUMNS TO SUIT CONDITIONS.



SINGLE LINE DIAGRAM
FOR EACH RECEPT. CIRCUIT

GRAPHIC SCALES
1/16" = 1'-0" 0 5' 10' 20' 30' 40' 50' 60' 70' 80'

ISSUE NO.	TO	DATE
3	#3/0	5-1-57

SYMBOL	DESCRIPTION	DATE	APPROVAL
	REVISIONS		

DPWO DRAWING NO. 58-53

DEPARTMENT OF THE NAVY — BUREAU OF YARDS AND DOCKS
DISTRICT PUBLIC WORKS OFFICE
THIRTEENTH NAVAL DISTRICT — SEATTLE, WASHINGTON

DRAWN C.W. CHRISTENSON
TRACED C.W. CHRISTENSON
CHECKED C.H. CLARK
FIELD PROJ. ENGINEER W.E. Nichols
BRANCH MANAGER
DIRECTOR M. C. Falcone
DESIGN CH. M.N. Whitehurst

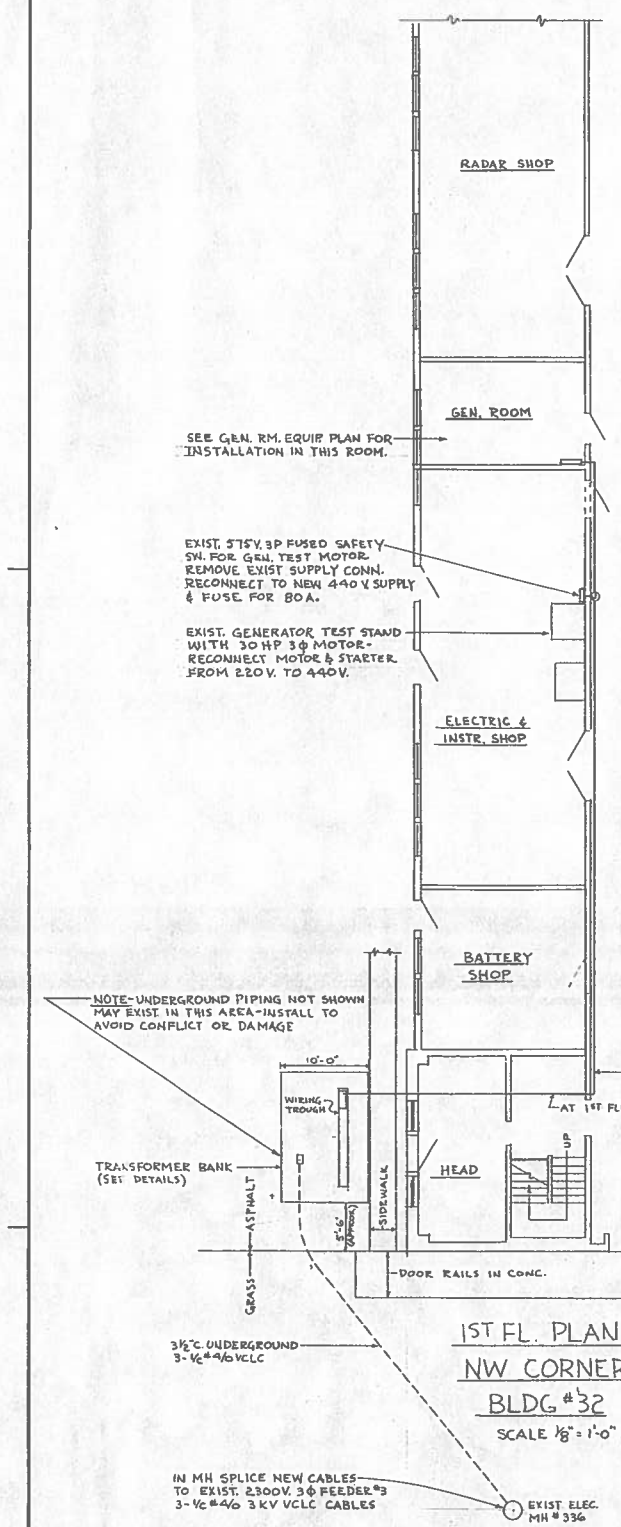
U.S. NAVAL AIR STATION
SEATTLE, WASHINGTON
POWER SERVICES, BLDGS. #32 & 33
230V, 3-PHASE RECEPTACLES
PLAN & DETAILS

APPROVED M.N. Whitehurst FOR DPWO FOR CHIEF OF BUREAU — DATE 2-4-58

SATISFACTORY TO
COMMANDING OFFICER
DATE 6 FEB 1958

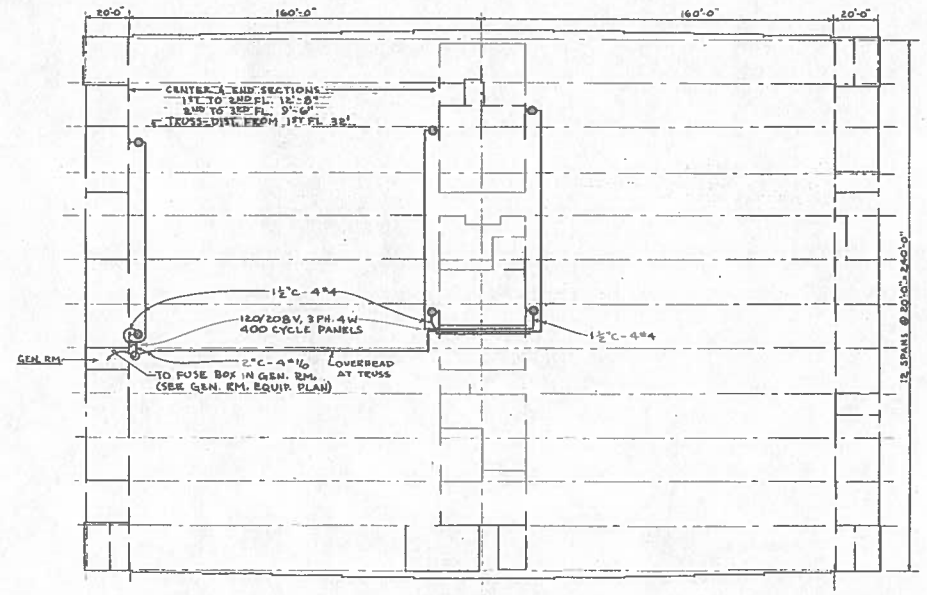
SCALE AS NOTED — SPEC 1231D/58
SHEET 2 OF 2 — No. 12313
Y & D DRAWING NO. 772297

13-3-4-1907



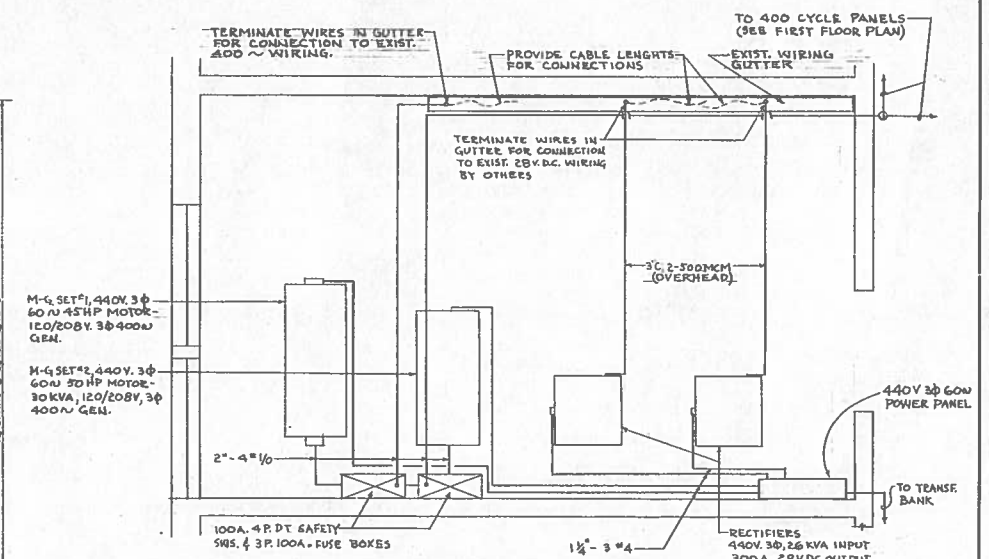
1ST FL. PLAN NW CORNER BLDG #32

SCALE 1/8" = 1'-0"



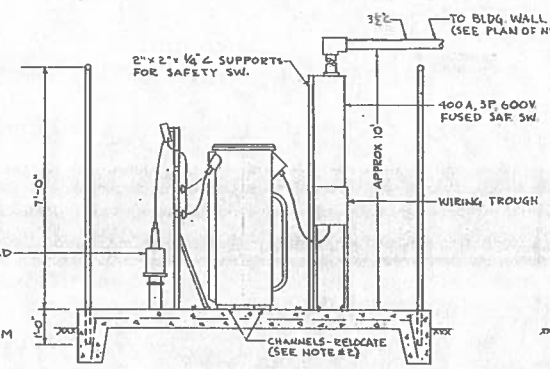
FIRST FLOOR PLAN LANDPLANE HANGAR BLDG. No 32

SCALE 1/32" = 1'-0"

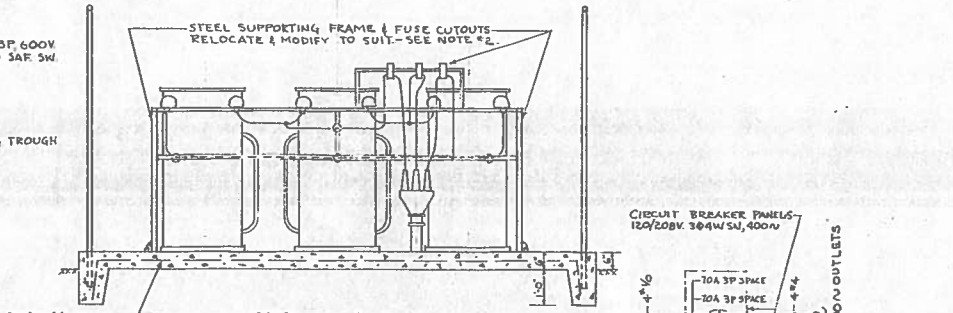


GENERATOR ROOM EQUIP. PLAN

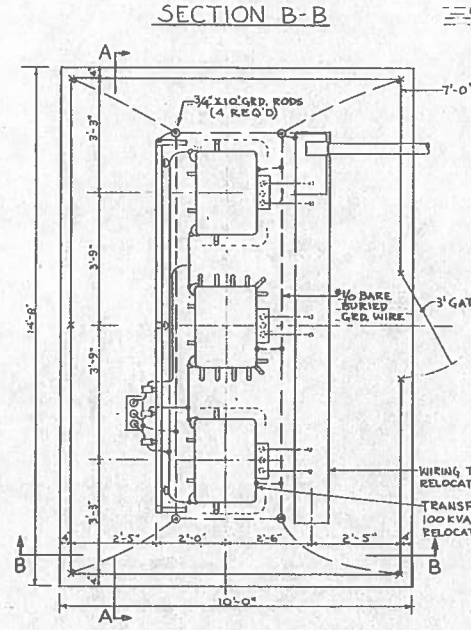
SCALE 1/2" = 1'-0"



SECTION B-B

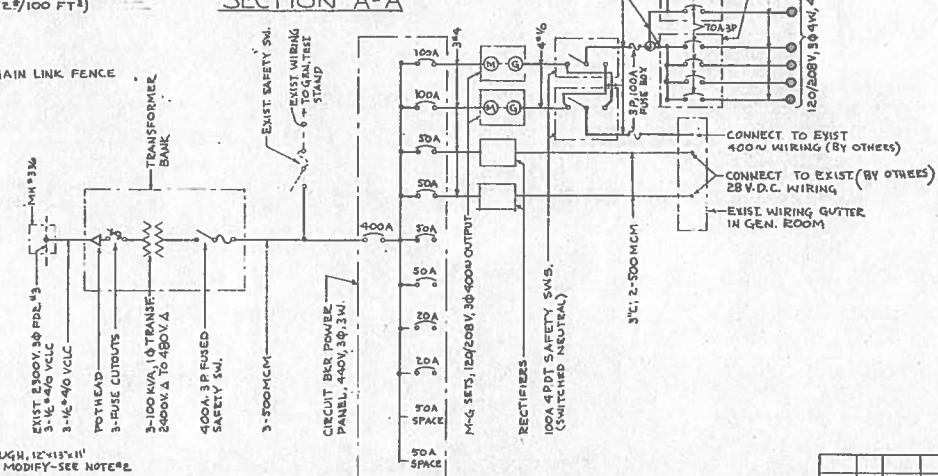


SECTION A-A



PLAN TRANSFORMER BANK

SCALE 1/2" = 1'-0"



SINGLE LINE DIAGRAM

SYMBOLS FOR THIS SHEET

- OUTLET, 120/208V, 3-PHASE, 4-WIRE, 400 CYCLE, MTD. 5' ABOVE FLOOR (SEE NOTE 4)
- CIRCUIT BREAKERS, 3-POLE
- FUSE
- SWITCH
- FUSE CUTOUT
- (M) (G) MOTOR GENERATOR SET
- JUNCTION BOX
- EXPOSED WIRING
- UNDERGROUND WIRING

NOTES FOR THIS SHEET

1. ALL MATERIAL & EQUIP. REQUIRED FOR THIS PROJECT SHALL BE FURNISHED UNDER THIS CONTRACT, EXCEPT EQUIP. LISTED UNDER NOTES #2, 3, & 4.
2. THE FOLLOWING EQUIP. SHALL BE DISMANTLED AT ABANDONED TRANSF. BANK ACROSS ST. WEST OF BLDG. #32 (APPROX. 200" SW OF NEW LOCATION) & RE-INSTALLED AT NEW TRANSF. BANK
   3-TRANSFORMERS WITH BASE CHANNELS
   3-FUSE CUTOUTS, INSULATORS, & STEEL SUPPORTING FRAME (SHORTEN & MODIFY TO SUIT)
   1-WIRING TROUGH (NOW 13' LONG-REDUCE TO 11')
3. M-G SET #1 IS NOW LOCATED IN GEN. RM. & OPERATED ON 220V SUPPLY, RELOCATE & REWIRE ON 440V.; M-G SET #2 & THE TWO RECTIFIERS ARE STORED IN BLDG. #32 (SECURE EQUIP. TO FLOOR AS REQ'D)
4. THE 400 CYCLE OUTLETS WILL CONSIST OF A RECEPTACLE INSTALLED IN A METAL BOX, ALL FURNISHED BY THE GOV'T. THE MOUNTING OF THE OUTLETS & CONDUIT & WIRING CONNECTIONS SHALL BE DONE UNDER THIS CONTRACT.
5. CONNECTIONS TO THE M-G SETS & RECTIFIERS SHALL BE MADE WITH FLEXIBLE CONDUIT. OTHER WIRING IN THE BLDG. SHALL BE IN RIGID CONDUIT RUN EXPOSED OVERHEAD.

GRAPHIC SCALES

1/32" = 1'-0" 0 20' 40' 60' 80' 100' 120' 140' 160'

1/8" = 1'-0" 0 5' 10' 15' 20' 25' 30' 35' 40'

1/2" = 1'-0" 0 1' 2' 3' 4' 5' 6' 7' 8' 9' 10'

ISSUE	NO.	TO	DATE
	30	30	5-6-58

SYMBOL	DESCRIPTION	DATE	APPROVAL

REVISIONS

DPWO DRAWING NO. 58-52

DEPARTMENT OF THE NAVY — BUREAU OF YARDS AND DOCKS
DISTRICT PUBLIC WORKS OFFICE
THIRTEENTH NAVAL DISTRICT — SEATTLE, WASHINGTON

DRAWN C.W. CHRISTENSEN
TRACED C.W. CHRISTENSEN
CHECKED C.H. CLARK
FIRE PROT. ENGINEER
BRANCH MANAGER
DIRECTOR
DESIGN OFFICER

U.S. NAVAL AIR STATION
SEATTLE, WASHINGTON

POWER SERVICES, BLDGS. #32 & 33
BLDG. #32 - 60 & 400 CYCLE & D.C.
PLAN & DETAILS

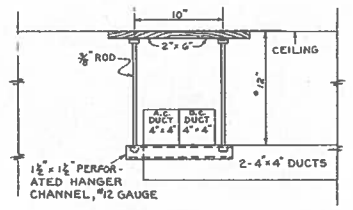
APPROVED M. M. Whitehurst FOR DPWO FOR CHIEF OF BUREAU — DATE 2-11-58

SATISFACTORY TO
COMMANDING OFFICER
DATE 6 FEB. 1958

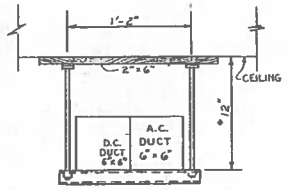
SCALE AS NOTED — SPEC 12313/58
SHEET 1 OF 2 — NBy 12313
Y & D DRAWING NO. 7.72296

13-34-1906

BATT-ARCHITECTS & ENGINEERS SUPPLY CO., SEATTLE, WSH.

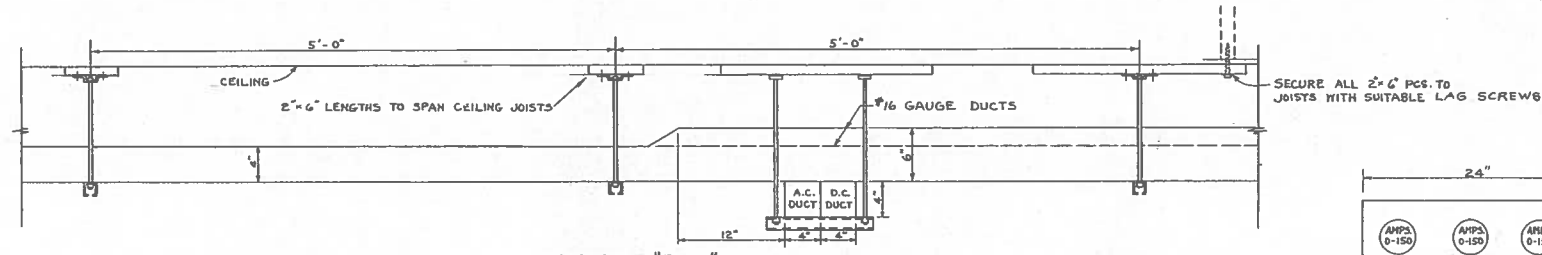


DETAIL "C"
SCALE, 1½"=1'-0"

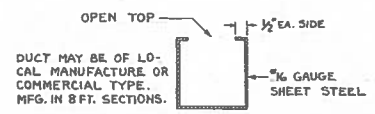


SECTION "C-C"
SCALE, 1½"=1'-0"

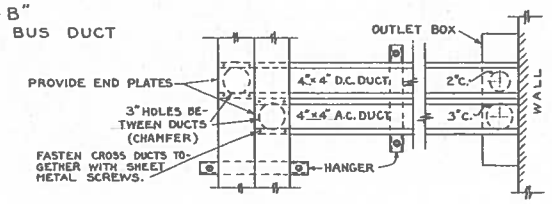
* NOTE. THIS DIMENSION IS MINIMUM & SHALL BE LENGTHENED AS NECESSARY TO CLEAR PIPES OR OTHER OBSTRUCTIONS.



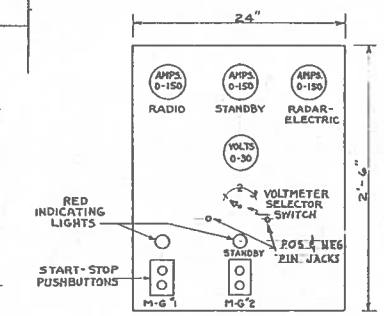
SECTION "B-B"
TYPICAL PORTION OF BUS DUCT
SCALE, 1½"=1'-0"



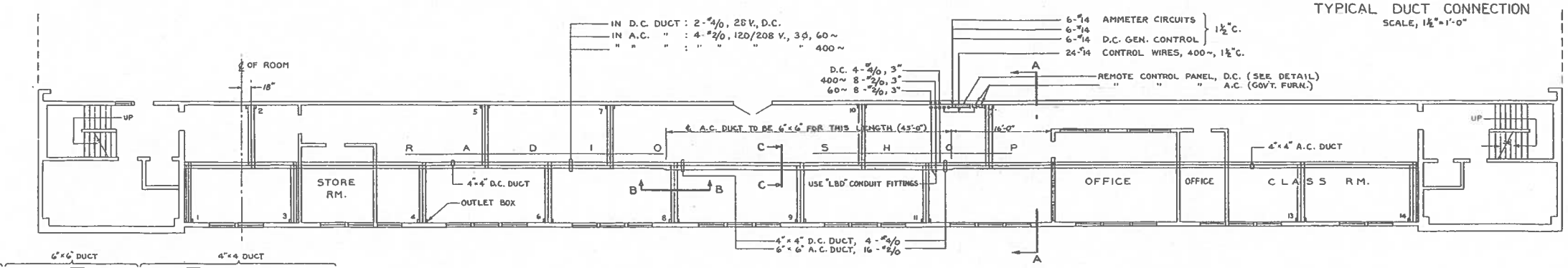
TYPICAL SECTION BUS DUCT
NO SCALE



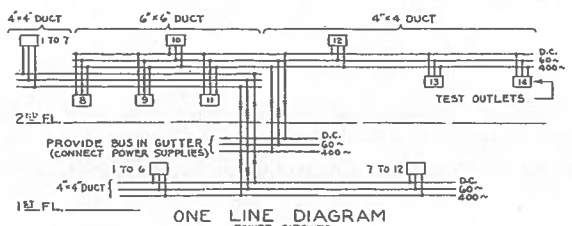
TYPICAL DUCT CONNECTION
SCALE, 1½"=1'-0"



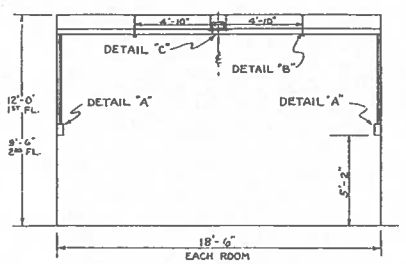
D.C. REMOTE CONTROL PANEL
SCALE, 1½"=1'-0"



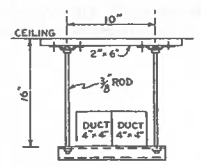
PLAN - 2ND FLOOR - NORTH PORTION BLDG. Nº 32
SCALE, ⅛"=1'-0"



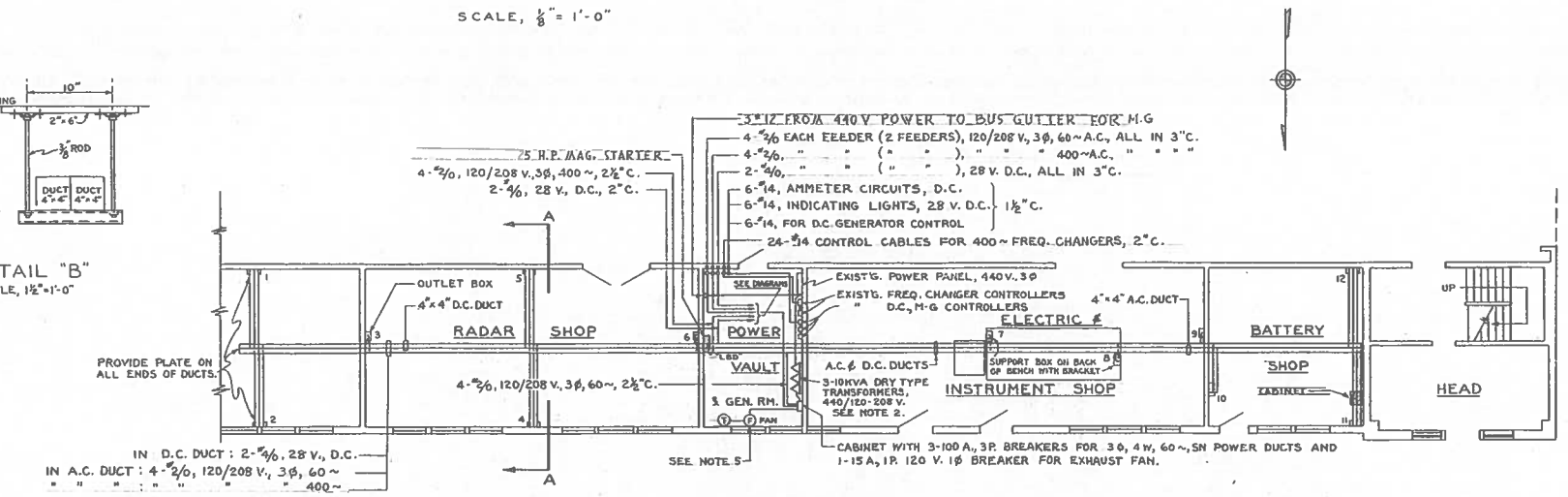
ONE LINE DIAGRAM
POWER CIRCUITS



SECTION A-A
SCALE, ¼"=1'-0"



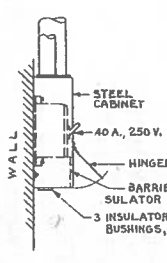
DETAIL "B"
SCALE, 1½"=1'-0"



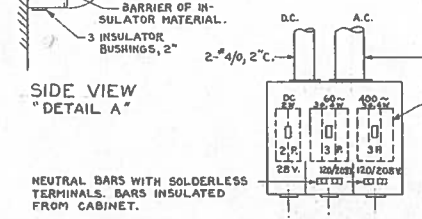
PLAN - 1ST FLOOR - NORTHWEST CORNER BLDG. Nº 32
SCALE, ⅛"=1'-0"

NOTES

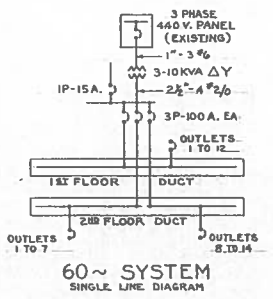
1. THE LOCATION OF DUCTS & OUTLETS SHALL BE APPROVED BY THE O.I.C. AND ADJUSTED TO A MINIMUM OF ALTERATIONS TO EXISTING INSTALLATIONS. METHODS SHOWN FOR HANGING BUS DUCTS ARE TYPICAL.
2. SUPPLY FOR THE 120/208 V., 3φ, 4W, 60~ BUS IN THE NEW DUCTS SHALL BE FURNISHED BY THREE 10 KVA, 440/120-240 V., DRY TYPE TRANSFORMERS CONNECTED DELTA-WYE WITH GROUNDED NEUTRAL AND INSTALLED IN THE POWER VAULT. THEY SHALL BE SUPPLIED THRU A SPARE 40 AMP. CIRCUIT BREAKER IN THE EXISTING 440 V. POWER PANEL IN THE VAULT. MOUNT TRANSFORMERS ON ¾" PLYWOOD BACKING LOCATED IN AVAILABLE SPACE ON WALL OF VAULT.
3. SUPPLY FOR THE 120/208 V., 3φ, 400~ BUS IN THE NEW DUCTS SHALL BE CONNECTED TO THE EXISTING 100 A. FUSES AT THE TRANSFER SWS. FED FROM EITHER OF THE TWO 30 KVA FREQUENCY CHANGERS. 3-3P BKRS ARE REQ'D.
4. SUPPLY FOR THE 28 VOLT D.C. TWO WIRE BUS IN THE NEW DUCTS SHALL BE FURNISHED BY THE EXISTING M-G SETS #1 & #3. M-G SET #2 WILL BE USED AS A STANDBY. A NEW 200 A., DPDT SWITCH SHALL BE PROVIDED TO TRANSFER THE LOAD, WHEN REQUIRED. THE 11 H.P. MOTORS ON M-G SETS #2 & #3 SHALL BE CHANGED FROM 220 V. TO 440 V. OPERATION.
5. A NEW EXHAUST FAN RATED NOT LESS THAN 400 C.F.M. SHALL BE PROVIDED IN THE POWER VAULT. THE MOTOR SHALL OPERATE ON 120 V., SINGLE PHASE, AND SHALL BE CONTROLLED BY AN ADJUSTABLE THERMOSTATIC SWITCH. THE CIRCUIT SHALL HAVE OVERLOAD PROTECTION. FAN SHALL BE INSTALLED IN WINDOW AND SECURED TO ¾" MARINE PLYWOOD REPLACING THE GLASS.
6. EQUIPMENT AND WIRING NOT MARKED "EXISTING" IS NEW.
7. EXISTING D.C. & 400 CYCLE DUCTS AND WIRING SHALL BE REMOVED WHERE REPLACED BY NEW INSTALLATION.
8. DUCTS SHALL BE #16 GA. SHEET STEEL. PLYWOOD, CONDUITS & DUCTS SHALL BE PAINTED TO MATCH EXISTING SURFACES.
9. D.C. AMMETERS SHALL BE CALIBRATED TO COMPENSATE FOR DISTANCE FROM SHUNTS.



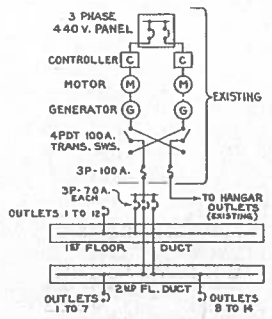
SIDE VIEW
"DETAIL A"



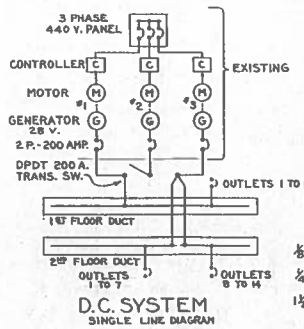
DETAIL "A"
TYPICAL OUTLET
SCALE, 1½"=1'-0"



60~ SYSTEM
SINGLE LINE DIAGRAM



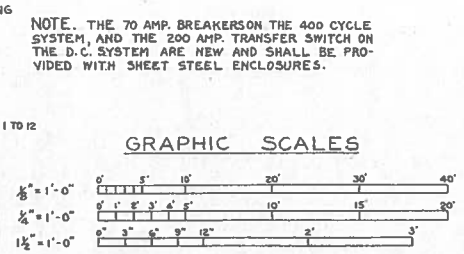
400~ SYSTEM
SINGLE LINE DIAGRAM



D.C. SYSTEM
SINGLE LINE DIAGRAM

NOTE. THE 70 AMP. BREAKERS ON THE 400 CYCLE SYSTEM, AND THE 200 AMP. TRANSFER SWITCH ON THE D.C. SYSTEM ARE NEW AND SHALL BE PROVIDED WITH SHEET STEEL ENCLOSURES.

GRAPHIC SCALES



ISSUE	NO.	TO	DATE
	8	310	3-7-60
	30	310	2-26-60

RECORD DRAWING

AS BUILT CONDITIONS SHOWN

SYMBOL	DESCRIPTION	DATE	APPROVAL
	REVISIONS		

DPWO DRAWING NO.

DEPARTMENT OF THE NAVY — BUREAU OF YARDS AND DOCKS
DISTRICT PUBLIC WORKS OFFICE
THIRTEENTH NAVAL DISTRICT — SEATTLE, WASHINGTON

U. S. NAVAL AIR STATION
SEATTLE, WASHINGTON

ADDITIONAL ELECTRICAL POWER DISTRIBUTION
HANGARS #32 & #33

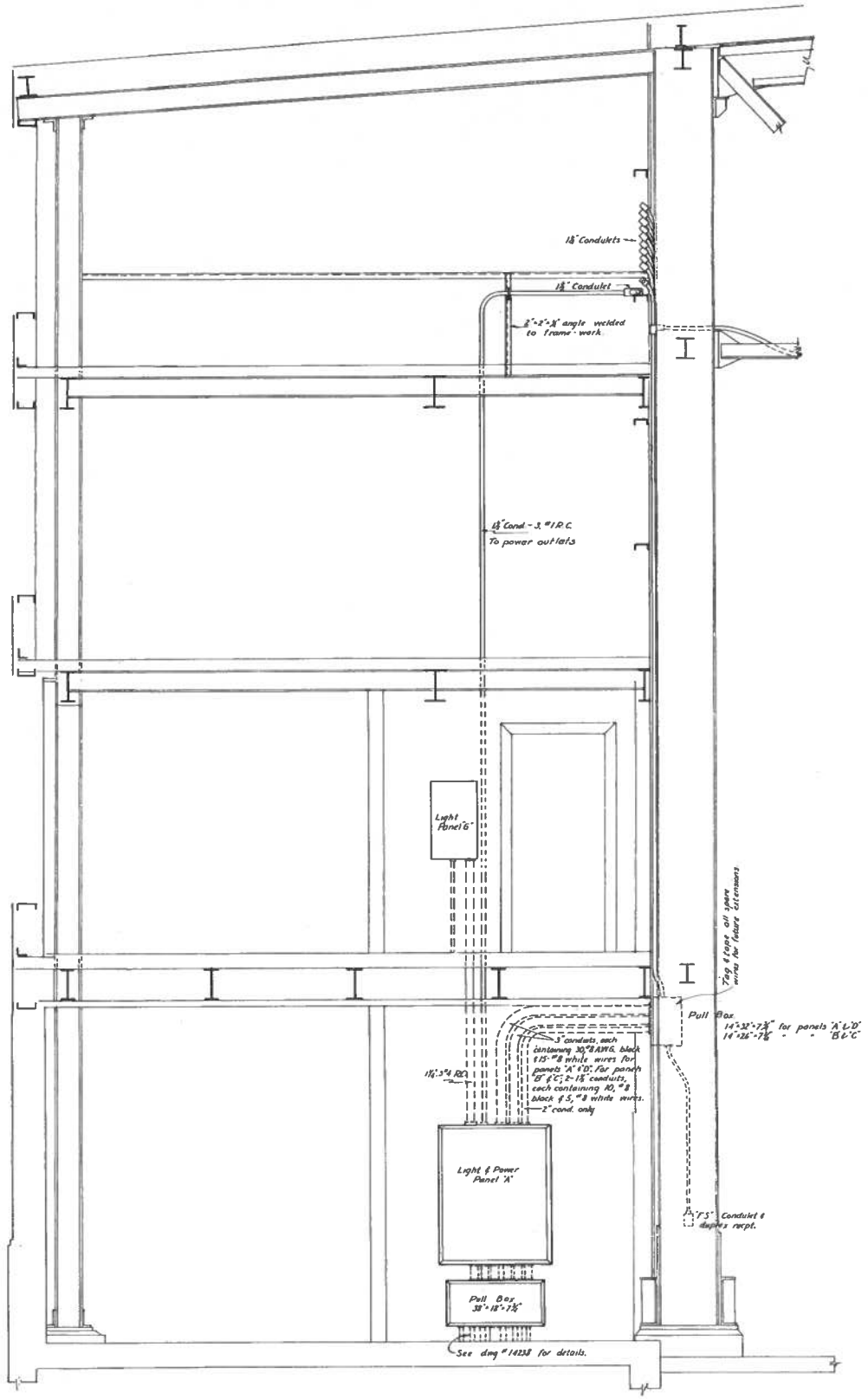
SHOPS, HANGAR #32 - DETAILS

DRAWN J.C. Hall
TRACED
CHECKED C.W. CHESTERMAN
FIRE PROTN. ENGINEER E.G. Welch
BRANCH & MANAGER J.J. Lamm
DIRECTOR Robert Sakowski
APPROVED G. O. McCloney, FOR DPWO FOR CHIEF OF BUREAU
DATE 2/15/60

PWD DWG. NO. 3206

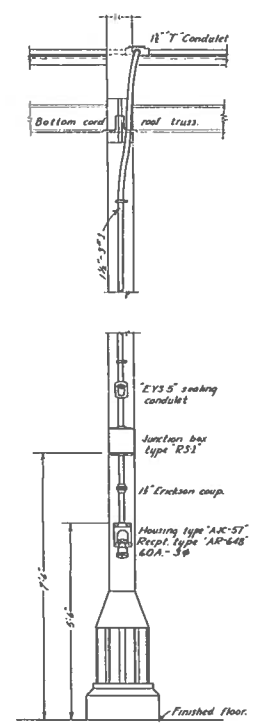
SCALES, AS NOTED — SPEC 28269/59
SHEET 2 OF 2 — NDy 28269
Y & D DRAWING NO. 889,198

13-21-1952

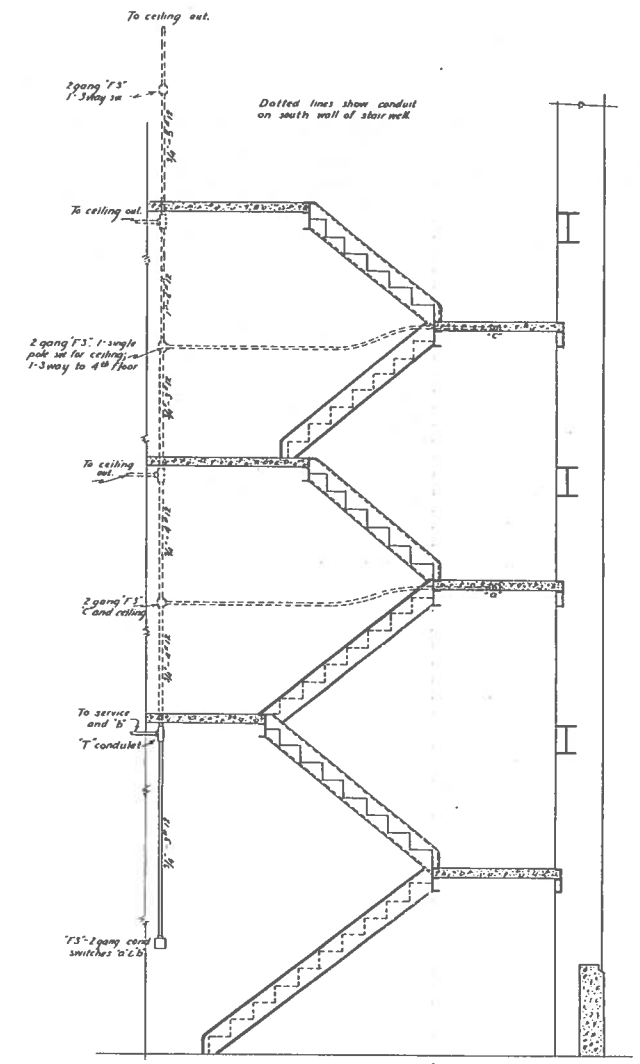


SECTION 'C-C'
Scale - ½"-1'-0"

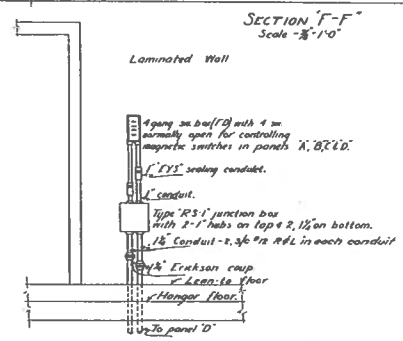
For Floor Plan - See Dwg. #14240



SECTION "D-D"
Scale - ½"-1'-0"



SECTION "F-F"
Scale - ½"-1'-0"



SECTION "E-E"
Scale - ½"-1'-0"

3	NAS	6-12-39	
4	NAS	3-4-39	
1	PDE	"	

SCALE AS NOTED

DRAWN BY TPL
TRACED BY TPL
CHECKED BY
CHIEF DIV'N
IN CHARGE

P.W. DRAWING No. 14246

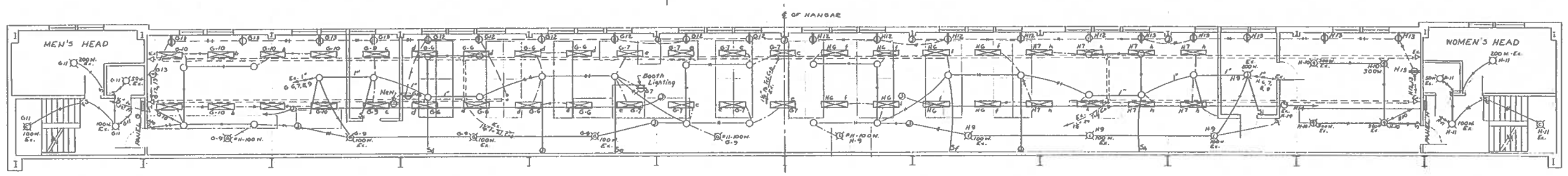
PUGET SOUND NAVY YARD
BREMERTON, WASH.
NAVAL AIR STATION
SEATTLE, WASH.

ELECTRICAL SECTIONS OF BUILDINGS No. 32 & 33

APPROVED 3/7/39
PUBLIC WORKS OFFICER

M

13-34-237



Panel G (#32-2-NW-19) 230/115 V. 1Ø		
Circ.	Watts	Remarks
1		Lights Room 52
2		Lights Room 53
3		Lights Room 57
4	1600	Plugs Rooms 52 & 53
5	1400	Plugs Rooms 56 & 57
6	760	Fluorescent Lights
7	760	Fluorescent Lights
8		Spare
9	690	Passageway & Office
10	760	Fluorescent Lights
11	450	Head & Stair
12		Receptacles
13		Receptacles
14		Spare
15		1st Fl. Head, Stairway & 4th Fl.
16		Lights 3rd Fl. Tower

NOTES

ELECTRIC SHOP LAYOUT PER A & R DWG. #6-76.

EXISTING WIRING PER PONY DWG. #10241. EXISTING WIRE #10 & CONDUIT ¾" UNLESS NOTED.

USE EXISTING CONDUIT, WIRE, & OUTLETS WHERE POSSIBLE. NEW WIRING FOR BRANCH LIGHTING CIRCUITS TO BE #12 AWG IN ½" EMT EXPOSED.

CALCULATED ILLUMINATION IN SHOP AREA: 32 F.C. APPROX.

LIGHTING PLAN

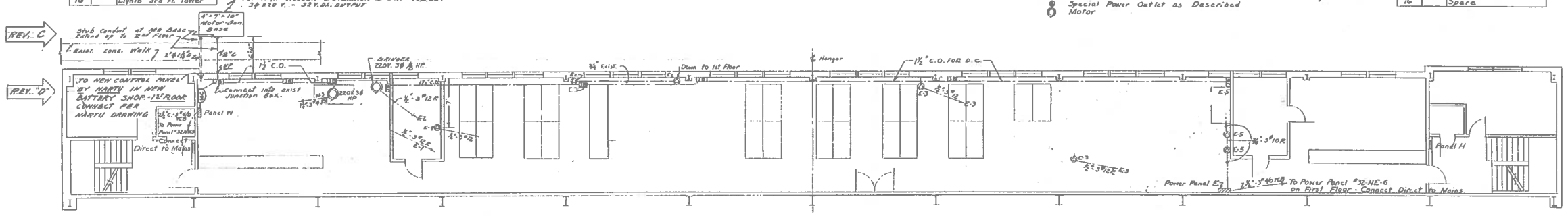
SECOND FLOOR - NORTH LEAN-TO

SCALE: ⅛" = 1'-0"

SYMBOLS

- T Existing Thermostat
- Existing Telephone Outlet
- Duplex 110V. Plug Receptacle - Existing unless noted
- Clock Outlet
- Existing Outlet - Capped - with Extension Ring as Required
- Ceiling Lighting Fixture
- Fluorescent Fixture ZL-40N. Curtis #1606-C or Equiv. Chain Hang 8' Up
- Junction Box - New
- Junction Box 6" x 8" x 3" for D.C. Line
- Conduit Capped - 1" below ceiling or flush with floor
- Existing Conduit Concealed Above
- Existing Conduit Concealed Under Floor
- Conduit Exposed
- Existing Floor Duct for Telephone & Signal Room
- Lighting Panel
- Power Panel
- 220 V. 3Ø 30A. Power Outlet, Hubbelock #20403 or Equiv.
- Special Power Outlet as Described
- Motor

Panel H (#32-2-NE-15) 230/115 V. 1Ø		
Circ.	Watts	Remarks
1		Radio 1st Floor Tower
2		Lights Room 62
3		Lights Room 63
4	1600	Plugs Rooms 58 & 62
5	1200	Plugs Rooms 59 & 63
6	760	Fluorescent Lights
7	760	Fluorescent Lights
8		Spare
9	600	Passageway & Storeroom
10	1200	Office
11	450	Head & Stairway
12		Receptacles
13		Receptacles
14	50	Clock
15		Lights Third Floor
16		Spare



NOTE

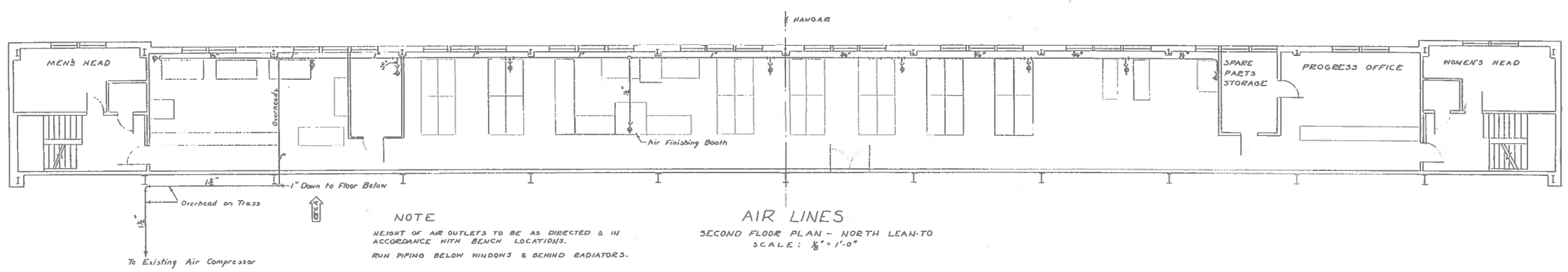
EXISTING MOTOR CONTROL EQUIPMENT FROM EXISTING ELECTRIC SHOP IN A & R BLDG. 2.

POWER CIRCUITS TO BE RUN ON CEILING & HALLS.

POWER PLAN

SECOND FLOOR - NORTH LEAN-TO

SCALE: ⅛" = 1'-0"



NOTE

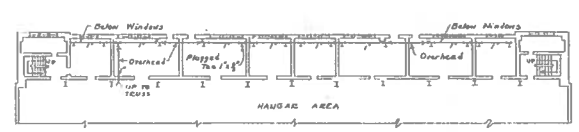
HEIGHT OF AIR OUTLETS TO BE AS DIRECTED & IN ACCORDANCE WITH BENCH LOCATIONS.

RUN PIPING BELOW WINDOWS & BEHIND RADIATORS.

AIR LINES

SECOND FLOOR PLAN - NORTH LEAN-TO

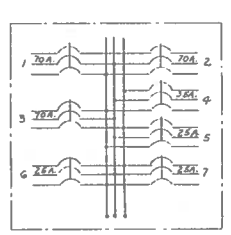
SCALE: ⅛" = 1'-0"



AIR LINES

GROUND FLOOR PLAN

SCALE: ⅛" = 1'-0"

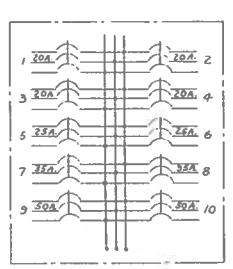


POWER PANEL W

3Ø 250 V.

LUGS IN MAINS

SURFACE MOUNTED



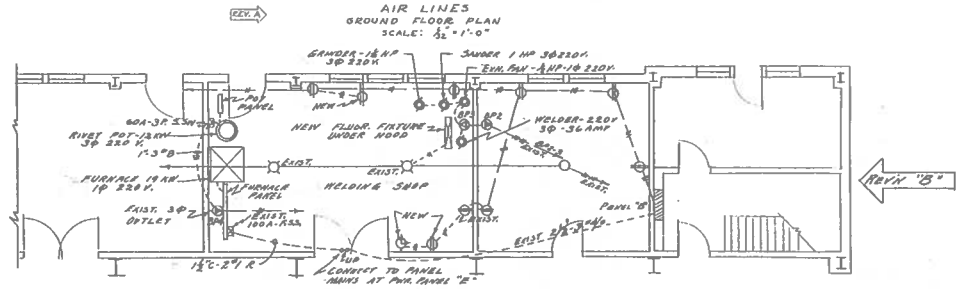
POWER PANEL E

3Ø 250 V. - 225 A. LUGS IN MAINS

SURFACE MOUNTED

WESTINGHOUSE TYPE ABN

CAT. #A3810-3NL225



POWER PLAN

GROUND FLOOR - NORTH LEAN-TO

SCALE: ⅛" = 1'-0"

REVISION	DATE		BY	APPROVED
D	7-18-47	ADDED NARTU WELDER FOR BATTERY SHOP	GMD	
C	9-17-46	ADDED NARTU MOT-GEN. BASE & CONDUIT	GMD	
B	8-23-46	ADDED NARTU WELDING SHOP	GMD	
A	3-1-45	ADDED GROUND FLOOR PLAN FOR AIR SERVICES	L.K.	

NO.	ISSUED TO	DATE
4	RIECK	1-21-47
4	RIECK	9-17-46
4	RIECK	8-23-46
5	RIECK	2-1-45
5	RIECK	2-28-45

PRINTS

FILE NO. N10-1

DRAWN BY L.K.

TRACED BY L.K.

CHECKED BY GMD

IN CHARGE

ENGINEER

P.W. DRAWING No. 2067

NAVAL AIR STATION

SEATTLE WASHINGTON

(NARTU)

A & R ELECTRIC SHOP

HANGAR 32

APPROVED MAR. 1 1945

W. N. Thompson

PUBLIC WORKS OFFICER