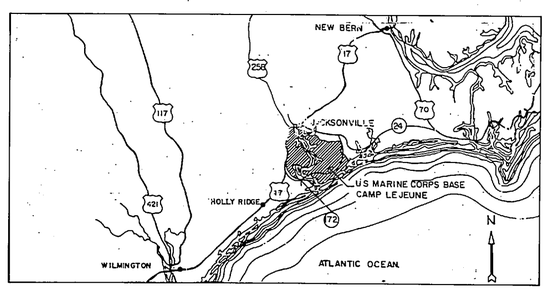
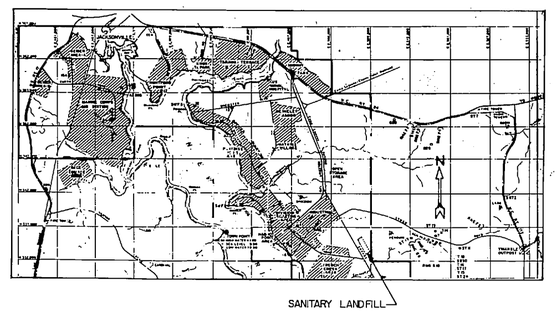
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED

STRUCTURAL, ELECTRICAL AND MECHANICAL RENOVATIONS, BUILDINGS 119, 221, 421

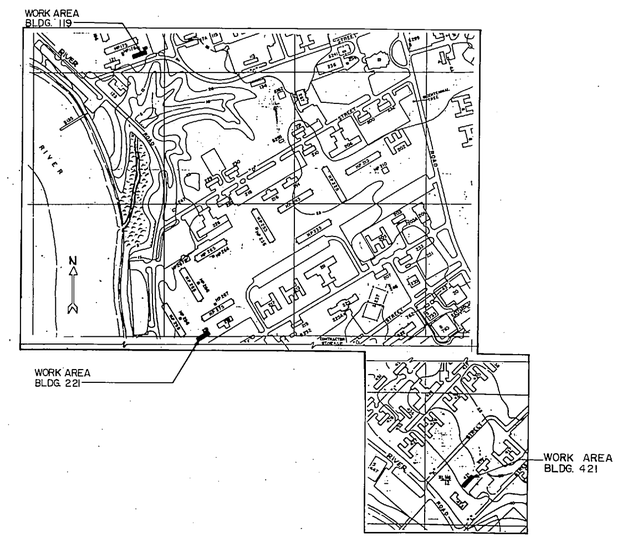
U. S. MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA



LOCATION MAP
SCALE: 1" = 13 MILES



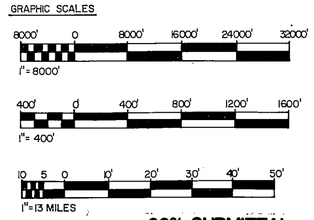
VICINITY MAP
SCALE: 1" = 8000'



AREA MAP
SCALE: 1" = 400'

SCHEDULE OF DRAWINGS		
DRAWING NUMBER	NAVFAC NUMBER	SHEET TITLE
T-1	4152931	TITLE SHEET
A-1	4152932	FLOOR PLAN, NOTES, SCHEDULES
A-2	4152933	ELEVATION, WINDOW SCHEDULES
A-3 A-4	4152934 4152935	DETAILS
P-1	4152936	PLUMPING-DEMOLITION-NEW
P-2	4152937	PLUMPING DETAILS
M-1	4152938	BLDG'S. 119 AND 421 DEMO., NEW WORK AND DETAILS
M-2	4152939	BLDG. 221-DEMO.-BLDG'S 119, 221, 421 NEW WORK
M-3	4152940	BLDG'S 119, 221, 421 - STEAM PIT-DEMOLITION
E-1	4152941	SITE - BLDG 119
E-2	4152942	SITE-BLDG 221
E-3	4152943	SITE-BLDG 421
E-4	4152944	LEGEND AND SCHEDULE
E-5	4152945	DEMOLITION - BUILDING
E-6	4152946	NEW WORK - BLDGS 119, 221 AND 421

GRAPHIC SCALES



90% SUBMITTAL

T-1

McKIM & CREED ENGINEERS P.A.
243 N. FRONT STREET
WILMINGTON, NORTH CAROLINA

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

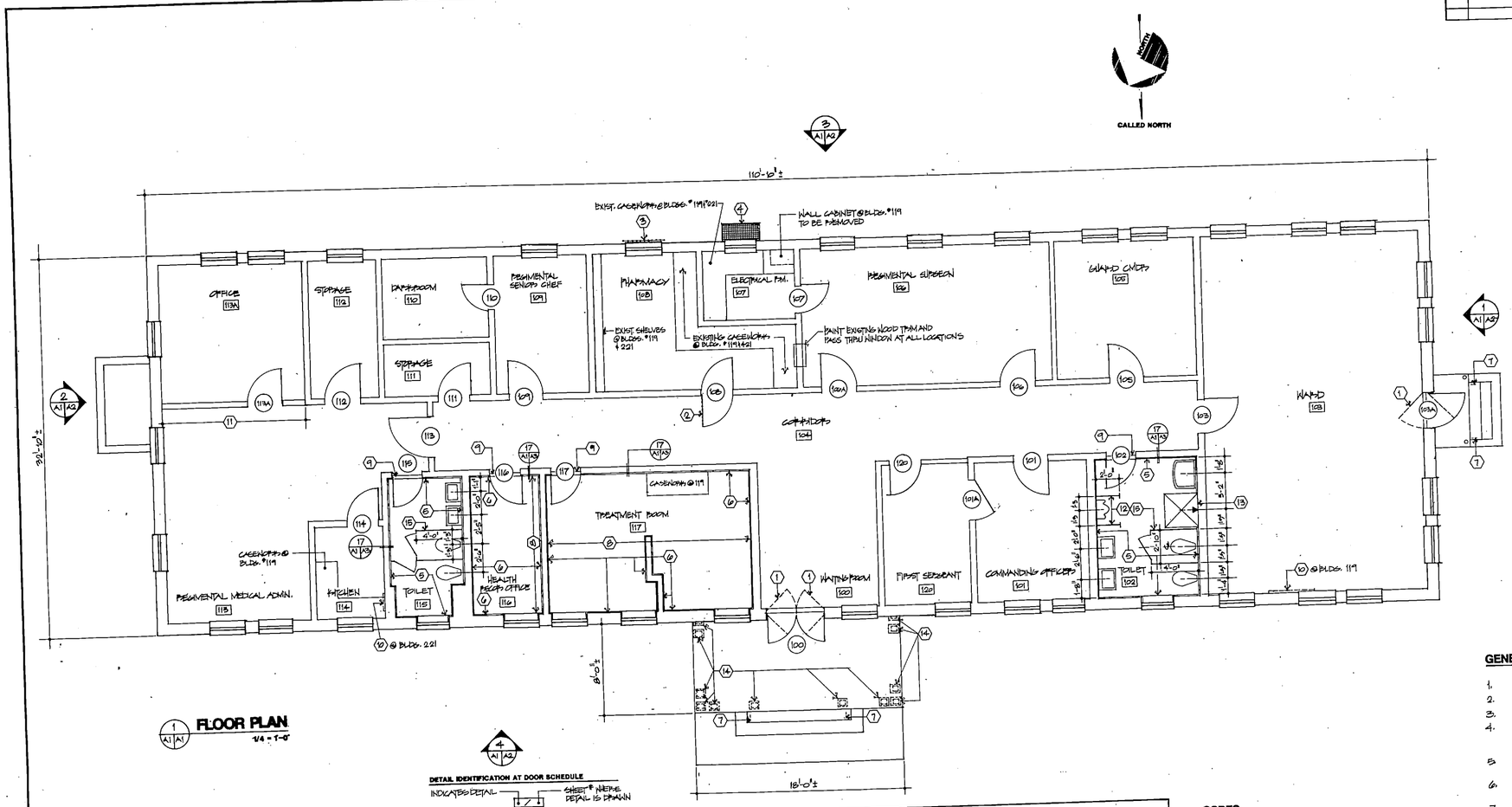
DES. T.F.C.
DR. B.P.R.
CHK. D.H.T.
SUBMITTED BY: H.P. McKIM JR.
DESIGN DIR. [signature]
APPROVED: PWO OR OICC [signature] DATE 6-16-87
SATISFACTORY TO: DATE

STRUCTURAL, ELECTRICAL AND MECHANICAL RENOVATIONS, BUILDINGS 119, 221, 421

TITLE SHEET

SIZE F | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 4152931
CONSTR. CONTR. NO. N62470-86-B-5438
SCALE: NOTED | SPEC. 05-86-5438 | SHEET 1 OF 16

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED



FLOOR PLAN

1/4 = 1'-0"

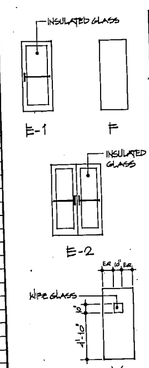
DETAIL IDENTIFICATION AT DOOR SCHEDULE

INDICATES DETAIL — SHEET # WHERE DETAIL IS DRAWN

NOTE: VERIFY ALL DOOR AND FRAME SIZES IN FIELD.

DOOR SCHEDULE

DOOR NO #	Type	DOOR Width	DOOR Height	DOOR Thick	DOOR Mat	HDW SET #	DOOR FRAME - Details Head	Jamb	Mat	Width	SILL	LABEL	REMARKS
100	B2	(2) 2'-0"	7'-0"	1¾"	ALUM.	HW 7	9/A3	9/A3	ALUM.	4½"	10/A3	–	
101(a,b)	F	2'-8"	7'-0"	3/4"	WOOD	HW 2	16/A3	16/A3	STEEL	6⅝"	–	–	
101(c)	F	2'-8"	7'-0"	1¾"	WOOD	HW 2	14/A3	14/A3	STEEL	7½"	–	–	
101-A(a,b)	F	2'-8"	7'-0"	1¾"	WOOD	HW 3	16/A3	16/A3	STEEL	6⅝"	–	–	
101-A(c)	F	2'-8"	7'-0"	1¾"	WOOD	HW 3	9/A4	9/A4	9/A4	8½"	–	–	
102	F	2'-6"	7'-0"	1¾"	WOOD	HW 5	16/A3	16/A3	STEEL	6⅝"	12/A3	–	
103	F	3'-0"	7'-0"	1¾"	WOOD	HW 2	16/A3	16/A3	STEEL	6⅝"	–	–	
103-A	E-1	3'-0"	7'-0"	1¾"	ALUM.	HW 6	9/A3	9/A3	9/A3	ALUM.	4½"	10/A3	–
105(a)	F	2'-8"	7'-0"	1¾"	WOOD	HW 2	6/A4	6/A4	6/A4	STEEL	6⅝"	–	–
105(b,c)	F	2'-8"	7'-0"	1¾"	WOOD	HW 2	16/A3	16/A3	16/A3	STEEL	6⅝"	–	–
106(a)	F	2'-8"	7'-0"	1¾"	WOOD	HW 2	6/A4	6/A4	6/A4	STEEL	6⅝"	–	–
106(b,c)	F	2'-8"	7'-0"	1¾"	WOOD	HW 2	16/A3	16/A3	16/A3	STEEL	6⅝"	–	–
107-A(a)	F	2'-8"	7'-0"	1¾"	WOOD	HW 2	6/A4	6/A4	6/A4	STEEL	6⅝"	–	–
107-A(b,c)	F	2'-8"	7'-0"	1¾"	WOOD	HW 2	16/A3	16/A3	16/A3	STEEL	6⅝"	–	–
107(a)	F	2'-8"	7'-0"	1¾"	WOOD	HW 4	6/A4	6/A4	6/A4	STEEL	6⅝"	–	C
107(b,c)	F	2'-8"	7'-0"	1¾"	WOOD	HW 4	16/A3	16/A3	16/A3	STEEL	6⅝"	–	C
108	V	3'-0"	7'-0"	1¾"	WOOD	HW 3	16/A3	16/A3	16/A3	STEEL	6⅝"	–	–
109	F	3'-0"	7'-0"	1¾"	WOOD	HW 1	16/A3	16/A3	16/A3	STEEL	6⅝"	–	–
110	F	2'-6"	7'-0"	1¾"	WOOD	HW 4	16/A3	16/A3	16/A3	STEEL	6⅝"	–	–
111	F	2'-6"	7'-0"	1¾"	WOOD	HW 4	16/A3	16/A3	16/A3	STEEL	6⅝"	–	–
112(a,b)	F	2'-6"	7'-0"	1¾"	WOOD	HW 4	16/A3	16/A3	16/A3	STEEL	6⅝"	–	–
112(c)	F	2'-6"	7'-0"	1¾"	WOOD	HW 4	14/A3	14/A3	14/A3	STEEL	7¼"	–	–
113	F	3'-0"	7'-0"	1¾"	WOOD	HW 2	16/A3	16/A3	16/A3	STEEL	6⅝"	–	–
113-A(c)	F	3'-0"	7'-0"	1¾"	WOOD	HW 4	8/A4	8/A4	8/A4	STEEL	4⅝"	–	–
114	F	2'-6"	7'-0"	1¾"	WOOD	HW 5	16/A3	16/A3	16/A3	STEEL	6⅝"	–	–
115	F	2'-6"	7'-0"	1¾"	WOOD	HW 8	16/A3	16/A3	16/A3	STEEL	6⅝"	12/A3	–
116	F	2'-6"	7'-0"	1¾"	WOOD	HW 2	16/A3	16/A3	16/A3	STEEL	6⅝"	23/A3	–
117	F	2'-8"	7'-0"	1¾"	WOOD	HW 1	16/A3	16/A3	16/A3	STEEL	6⅝"	23/A3	–
120(a,b)	F	2'-8"	7'-0"	1¾"	WOOD	HW 1	8/A4	8/A4	8/A4	STEEL	4⅝"	–	–
120(c)	F	2'-8"	7'-0"	1¾"	WOOD	HW 1	8/A4	8/A4	8/A4	STEEL	4⅝"	–	–



* DOOR/DOOR NO

(a) DENOTES BLDG. #119

(b) DENOTES BLDG. #221

(c) DENOTES BLDG. #421

NO LETTER DENOTES ALL BUILDINGS

FINISH AND COLOR SCHEDULE

ROOM NO *	** ROOM NAME	FLOOR Fin.	BASE Fin.	N WALL Mat	N WALL Fin.	E WALL Mat	E WALL Fin.	S WALL Mat	S WALL Fin.	W WALL Mat	W WALL Fin.	CEILING Mat	CEILING Fin.	CEILING Height	REMARKS
100	WAITING ROOM	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	–	–	EX 2	PT 1	AC 1	–	8'-0"	
101(a,b)	COMMAND. OFFICERS	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	AC 1	–	8'-0"	
101(c)	COMMAND. OFFICERS	VT 1	EX 4	EX 3	–	EX 3	–	EX 3	–	EX 3	–	AC 1	–	8'-0"	
102	TOILET	CT 1	CT 2	EX 1	PT 1/EX 3	EX 1	PT 1/EX 3	EX 1	PT 1/EX 3	EX 1	PT 1/EX 3	EX 1	PT 2	8'-11	1,2,3
103	WARD	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	AC 1	–	8'-0"	
104	COMMONS	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	AC 1	–	8'-0"	
105(a)	GUARD CHIEF	VT 1	EX 4	EX 1/EX 3	PT 1/–	EX 1/EX 3	PT 1/–	EX 1/EX 3	PT 1/–	EX 1/EX 3	PT 1/–	AC 1	–	8'-0"	
105(b,c)	GUARD CHIEF	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	AC 1	–	8'-0"	4
106(a)	REG. SURGEON	VT 1	EX 4	EX 1/EX 3	PT 1/–	EX 1/EX 3	PT 1/–	EX 1/EX 3	PT 1/–	EX 1/EX 3	PT 1/–	AC 1	–	8'-0"	
106(b,c)	REG. SURGEON	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 2	8'-11"	5
107	ELECTRICAL ROOM	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	AC 1	–	8'-0"	5
108	PHARMACY	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	AC 1	–	8'-0"	
109	REG. SENIOR CHIEF	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 2	8'-11"	
110	BATH ROOM *	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1				
111	STORAGE	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 2	8'-11"	
112(a,b)	STORAGE	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 2	8'-11"	
112(c)	STORAGE	VT 1	EX 4	EX 3	–	EX 3	–	EX 3	–	EX 3	–	AC 1	–	8'-0"	
113(a,b)	REG. MED. ADMIN.	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	AC 1	–	8'-0"	
113(c)	REG. MED. ADMIN.	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	EX 2	PT 1	EX 1	PT 1	AC 1	–	8'-0"	6
113-A	OFFICE	VT 1	EX 4	EX 3	–	EX 3	–	EX 3	–	EX 3	–	AC 1	–	8'-0"	5
114	KITCHEN	VT 1	PT 4	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 2	8'-11"	1,2,3
115	TOILET	CT 1	CT 2	EX 1	PT 1/EX 3	EX 1	PT 1/EX 3	EX 1	PT 1/EX 3	EX 1	PT 1/EX 3	EX 1	PT 2	8'-11"	7
116	HEALTH PROM. OFC.	VT 1	VB 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	AC 1	–	8'-0"	5,7
117	TREATMENT ROOM	VT 1	VB 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	EX 1	PT 1	AC 1	–	8'-0"	
120(a,b)	FIRST SERGEANT	VT 1	PT 4	EX 1	PT 1	EX 2	PT 1	EX 2	PT 1	EX 1	PT 1	AC 1	–	8'-0"	
120(c)	FIRST SERGEANT	VT 1	EX 4	EX 3	–	EX 3	–	EX 3	–	EX 3	–	AC 1	–	8'-0"	

REMARKS

1. CERAMIC TILE WAINSCOT TO 4'-2" A.F.F.
2. CERAMIC FLOOR TILE ON EXIST. CERAMIC TILE.
3. REMOVE EXISTING AND PROVIDE NEW TOILET ACCESSORIES.
4. PANELED WAINSCOT 4'-7" A.F.F.
5. PAINT BUILT-IN CASEWORK (PT 3)
6. ROOM 113-A EXISTS @ BLDG. 421 ONLY.
7. VINYL FLOORING IN BUILDINGS 119 & 221 SHALL COVER ENTIRE CERAMIC TILE FLOOR AREA. VINYL FLOORING IN BUILDING 421 SHALL BE PATCHED IN AT WALL LINE.

NOTES

1. REMOVE EXISTING ENTRY DOORS, SCREEN DOORS, AND HARDWARE, AND PROVIDE NEW ENTRY DOORS.
2. AT BUILDING 221, REMOVE EXISTING STEEL GATE AND RE-INSTALL ON NEW METAL DOOR FRAME.
3. REMOVE EXISTING STEEL BARS AND PROVIDE NEW SECURITY BARS AFTER INSTALL. OF NEW WINDOW UNIT.
4. AT BLDG. #221, REMOVE AND RE-INSTALL EXISTING SECURITY SCREEN AFTER INSTALLATION OF NEW WINDOW UNIT.
5. REMOVE EXISTING CERAMIC TILE WAINSCOT AND BASE AND PROVIDE NEW CERAMIC TILE WAINSCOT AND BASE TO MATCH EXIST. (4'-2" HIGH)
6. REMOVE EXISTING CERAMIC TILE WAINSCOT AND BASE AND PATCH PLASTER TO MATCH PLASTER ABOVE WAINSCOT.
7. REMOVE EXISTING METAL SCALLET AND GRIND SMOOTH WITH TOP OF CONCRETE TREAD.
8. REMOVE EXISTING RESILIENT FLOORING TILE AT BUILDING #221 AND VCT TILE WITH, MAXIMUM, AT WALL LINE IN BUILDING #421.
9. PROVIDE NEW MARBLE SADDLE AT BUILDINGS #119 AND #221.
10. REMOVE PLYWOOD WALL PATCH AND PROVIDE PLASTER ON METAL LATH TO MATCH EXISTING WALL SURFACE. PATCH IS APPROXIMATELY 10 SQ.FT. IN SIZE.
11. PARTITION OCCURS AT BLDG. #221 ONLY.
12. REMOVE EXISTING TOILET ROOM PARTITIONS IN ROOM 102 AT BUILDING #221.
13. SET SHOWER STALL PRIOR TO NEW TILE WORK.
14. REMOVE EXISTING WOOD COLUMNS AND PROVIDE NEW WOOD COLUMN – SEE 1/A2
15. PROVIDE NEW TOILET AND/OR URINAL PARTITIONS.

GENERAL NOTES

1. VERIFY ALL DIMENSIONS IN FIELD.
2. REMOVE ALL EXISTING WINDOW UNITS.
3. REMOVE ALL EXTERIOR AND INTERIOR DOOR UNITS.
4. REMOVE EXISTING RESILIENT FLOORING AT BUILDINGS 119 & 221. RESILIENT FLOORING AT BUILDING #421 TO REMAIN, EXCEPT WHERE OTHERWISE INDICATED.
5. ALL INTERIOR WOOD DOORS TO RECEIVE NATURAL FINISH.
6. REMOVE EXISTING SUSPENDED ACOUSTICAL CEILING SYSTEM FROM BUILDING #421.
7. ALL HOLLOW METAL DOOR FRAMES, WOOD WINDOW TRIM AND WOOD CASEWORK TO BE PAINTED TO MATCH PT-3.

CODES

AC 1	SUSPENDED ACOUSTICAL CEILING TILES
CT 1	CERAMIC FLOOR TILE (TO MATCH EXISTING)
CT 2	CERAMIC BASE (TO MATCH EXISTING)
CT 3	CERAMIC WALL TILE (TO MATCH EXISTING)
PT 1	SEMI-GLOSS WALL PAINT (TO MATCH GLIDDEN 73-05)
PT 2	SEMI-GLOSS CEILING PAINT (TO MATCH GLIDDEN 70-22
PT 3	SEMI-GLOSS TRIM PAINT (DOOR FRAMES, CASEWORK & WOOD TRIM) (TO MATCH GLIDDEN 70-95)
PT 4	SEMI-GLOSS BASE PAINT (BLACK) (CEMENT AT BLDGS. 119 & 221, WOOD AT BLDG. 421
VB 1	6" VINYL BASE (COLOR TO MATCH BASE PAINT)
VT 1	VINYL COMPOSITION TILE (COLORS TO BE SELECTED BY THE CONTRACTING OFFICER).
EX 1	EXISTING PLASTER
EX 2	EXISTING HARDBOARD
EX 3	EXISTING WOOD PANELLING – DO NOT PAINT
EX 4	EXISTING WOOD BASE – DO NOT PAINT

** ROOM NAMES REFER TO BLDG. 119. OTHERS SIMILAR.

(a) DENOTES BLDG. #119

(b) DENOTES BLDG. #221

(c) DENOTES BLDG. #421

NO LETTER DENOTES ALL BUILDINGS

EARL ASHER APPLEGATE REGISTERED ARCHITECT 3071 NEW BERN, N.C.

A1

EARL ASHER APPLEGATE
P.O. BOX 399 ARCHITECT
NEW BERN, N.C. 28560

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

RENOV. BLDGS. 119, 221 & 421

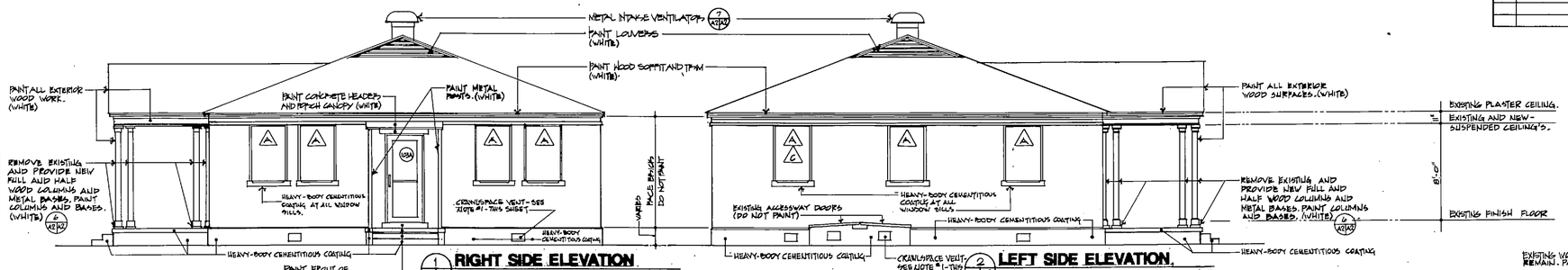
FLOOR PLAN, NOTES, SCHEDULES

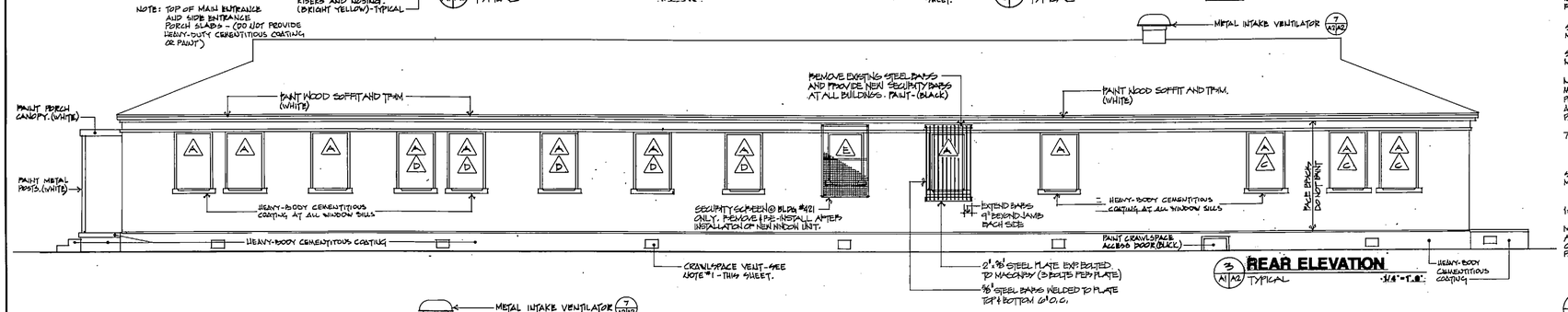
DES. EAA
DR. JJZ
CHK. MEJ
SUBMITTED BY:
DESIGN DIR.
APPROVED: PWO OR BCC — DATE 6-16-87
SATISFACTORY TO: — DATE

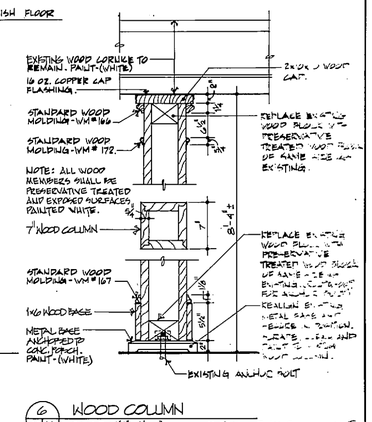
SIZE F | CODE IDENT. NO. 80091 | MAVFAC DRAWING NO. 4152932

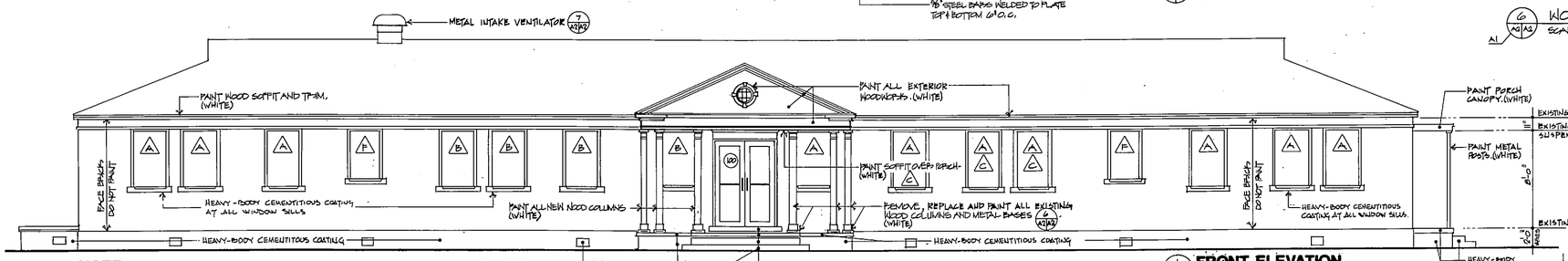
SCALE: NOTED | SPEC. 00-00-0000 | CONSTR. CONTR. NO. N62470-00-0430 | SHEET 2 OF 16

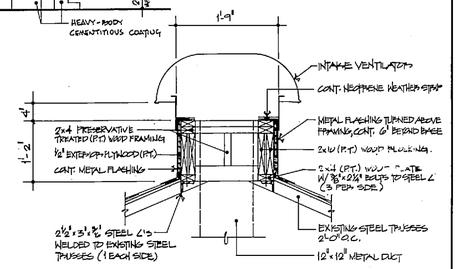
REVISIONS			
SYM.	DESCRIPTION.	DATE	APPROVED











NOTE: (OPTIONAL) - REMOVE EXISTING SHINGLES, UNDER-LAYMENT AND WOOD SHEATHING TO PROVIDE OPENING FOR NEW DUCT AND VENTILATOR.

NOTE #1

CRAWLSPACE VENTS:

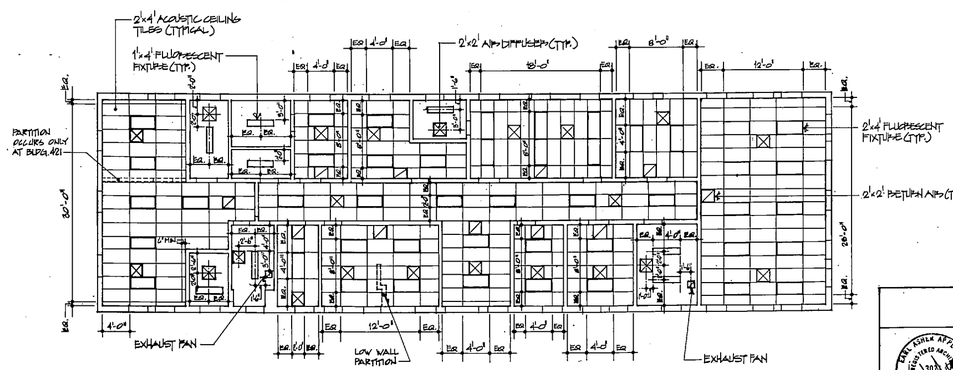
AT ALL CRAWLSPACE VENT LOCATIONS, REMOVE EXISTING CRAWLSPACE VENT AND MORTAR. PROVIDE NEW THERMOSTATIC CONTROLED CRAWLSPACE VENT EQUAL TO "WITTELL, ENERGY-SAVER, AUTOMATIC FOUNDATION VENT (CLOSES AT 40° AND OPENS AT 70°). FRAME AND FACE GRILLE SHALL BE BLACK. LOUVER BLADES SHALL BE MILL FINISH.

WINDOW SCHEDULE

MARK	WINDOW TYPE	WINDOW HEIGHT	WINDOW WIDTH	WINDOW MAT	DETAILS - SEE Sheet A-3 DEMO	HEAD	DEMO	JAMB	DEMO	SILL	REMARKS
A	SINGLE HUNG	4'-8 5/8"	3'-1 1/4"	ALUM	1	6	3	8	2	7	1 & 7
B	SINGLE HUNG	4'-8 5/8"	3'-1 1/4"	ALUM	1	6	3	8	2	7	2 & 7
C	SINGLE HUNG	4'-8 5/8"	3'-1 1/4"	ALUM	13	18	21	22	20	19	3,5 & 7
D	SINGLE HUNG	4'-8 5/8"	3'-1 1/4"	ALUM	1	6	21	22	20	19	4,6 & 7
E	SINGLE HUNG	4'-0 3/8"	3'-1 1/4"	ALUM	1	6	3	8	2	7	1 & 7
F	SINGLE HUNG	4'-0 3/8"	3'-1 1/4"	ALUM	1	6	3	8	2	7	2 & 7

REMARKS

1. PLASTER INTERIOR WALL
2. CERAMIC TILE AND PLASTER INTERIOR WALL
3. WOOD PANELING INTERIOR WALL
4. WOOD PANELING AND PLASTER INTERIOR WALL
5. OCCURS AT BUILDING #421 ONLY.
6. OCCURS AT BUILDING #119 ONLY.
7. VERIFY EXACT HEIGHT AND WIDTH OF EACH WINDOW UNIT IN FIELD.



5 A2 A2 REFLECTED CEILING PLAN
1/8" = 1'-0"

A2

EARL ASHER APPLEGATE ARCHITECT
P.O. BOX 399
NEW BERN, N.C. 28560

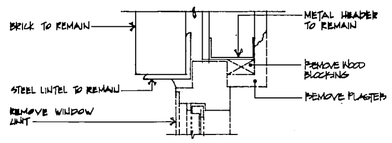
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

RENOV. BLDGS. 119, 221 & 421
ELEVATIONS, WINDOW SCHEDULE

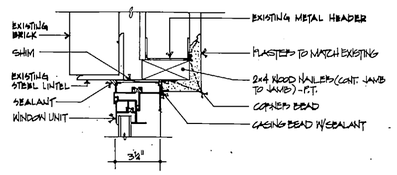
DES. EAA
DR. JMA/JJZ/GAL
CHK. MEJ
SUBMITTED BY:
DESIGN DIR. YEC
APPROVED: PWD OR OICC — YEC — DATE 6-16-87
SATISFACTORY TO: DATE

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
F	80091	4162933
SCALE: NOTED	SPEC. 06-86-5438	CONSTR. CONTR. NO. N62470-86-5438 SHEET 3 OF 16

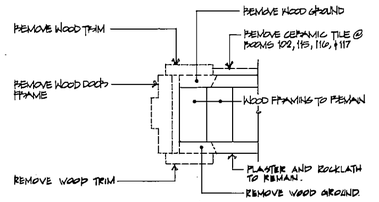
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED



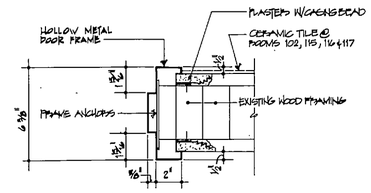
1 (A2/A3) HEAD (DEMOLITION)
SCALE: 3" = 1'-0"



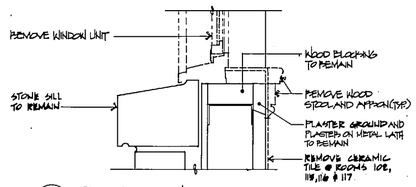
6 (A2/A3) HEAD (CONSTRUCTION) SEE 1 (A2/A3) FOR DEMO.
SCALE: 3" = 1'-0"



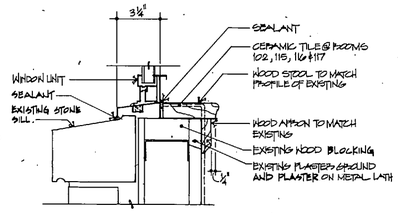
11 (A3/A3) INTERIOR DOOR JAMB/HEAD SIMILAR (DEMOLITION)
SCALE: 3" = 1'-0"



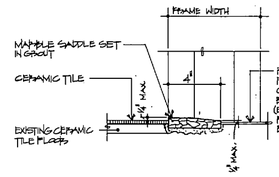
16 (A1/A3) INTERIOR DOOR JAMB/HEAD SIMILAR (CONSTRUCTION) SEE 11 (A3/A3) FOR DEMO.
SCALE: 3" = 1'-0"



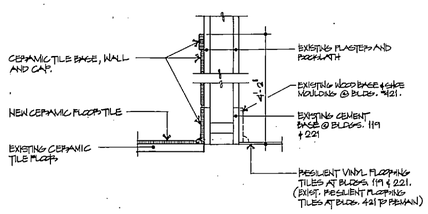
2 (A2/A3) SILL (DEMOLITION)
SCALE: 3" = 1'-0"



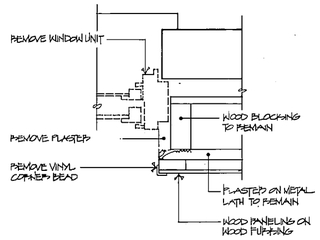
7 (A2/A3) SILL (CONSTRUCTION) SEE 2 (A2/A3) FOR DEMO.
SCALE: 3" = 1'-0"



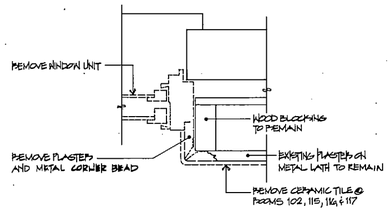
12 (A1/A3) SILL (CONSTRUCTION)
SCALE: 3" = 1'-0"



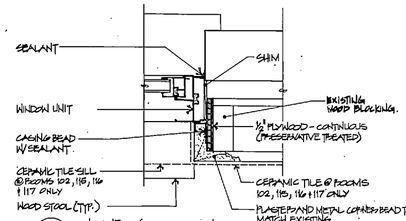
17 (A1/A3) WALL SECTION (CONSTRUCTION)
SCALE: 1½" = 1'-0"



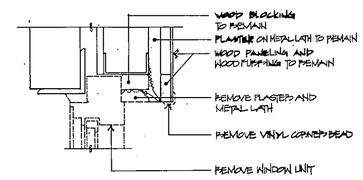
21 (A2/A3) JAMB (DEMOLITION)
SCALE: 3" = 1'-0"



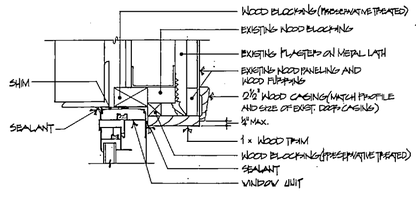
3 (A2/A3) JAMB (DEMOLITION)
SCALE: 3" = 1'-0"



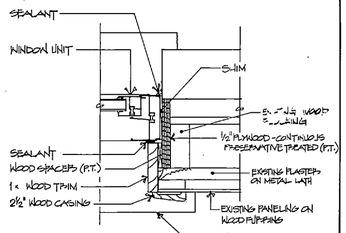
8 (A2/A3) JAMB (CONSTRUCTION) SEE 3 (A2/A3) FOR DEMO.
SCALE: 3" = 1'-0"



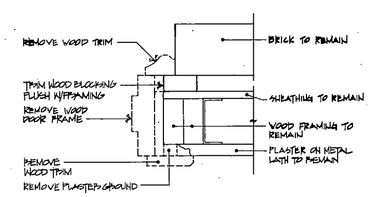
13 (A2/A3) HEAD (DEMOLITION)
SCALE: 3" = 1'-0"



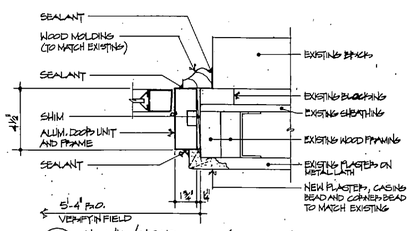
18 (A2/A3) HEAD (CONSTRUCTION) SEE 13 (A2/A3) FOR DEMOLITION
SCALE: 3" = 1'-0"



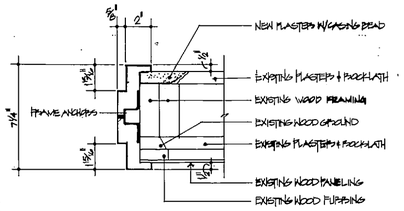
22 (A1/A3) JAMB (CONSTRUCTION)
SCALE: 3" = 1'-0"
SEE 21 (A2/A3) FOR DEMOLITION



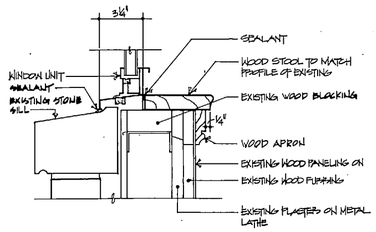
4 (A3/A3) JAMB/HEAD (DEMOLITION)
SCALE: 3" = 1'-0"



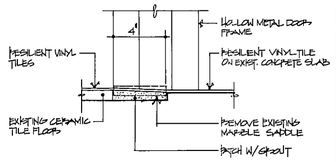
9 (A1/A3) JAMB/HEAD SIMILAR (CONSTRUCTION) SEE 4 (A3/A3) FOR DEMO.
SCALE: 3" = 1'-0"



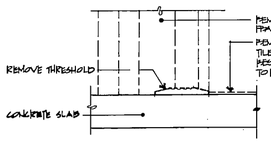
14 (A1/A3) DOOR JAMB/HEAD SIMILAR (CONSTRUCTION) SEE 11 (A3/A3) FOR DEMO.
SCALE: 3" = 1'-0"



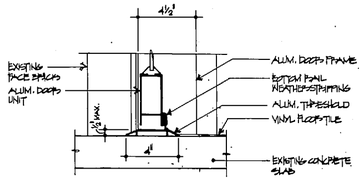
19 (A2/A3) SILL (CONSTRUCTION) SEE 20 (A3/A3) FOR DEMO.
SCALE: 3" = 1'-0"



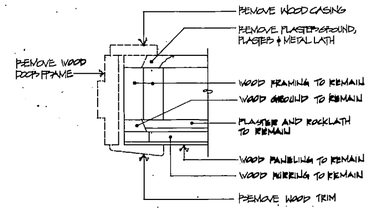
23 (A1/A3) SILL
SCALE: 3" = 1'-0"



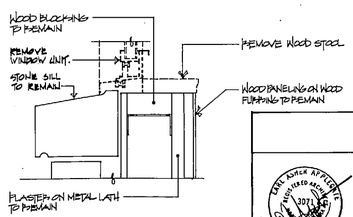
5 (A3/A3) SILL (DEMOLITION)
SCALE: 3" = 1'-0"



10 (A1/A3) SILL (CONSTRUCTION) SEE 2 (A2/A3) FOR DEMO.
SCALE: 3" = 1'-0"



15 (A3/A3) JAMB (DEMOLITION)
SCALE: 3" = 1'-0"



20 (A2/A3) SILL (DEMOLITION)
SCALE: 3" = 1'-0"

A3

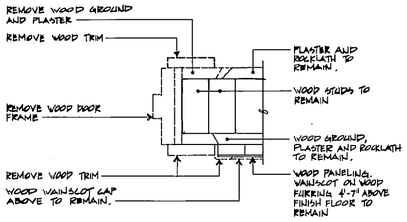
EARL ASHER APPLEGATE
P.O. BOX 399 ARCHITECT
NEW BERN, N.C. 28560

DES. EAA
DR. JJZ/GAL
CHK. MEJ
SUBMITTED BY:
DESIGN BIR. 7/81
APPROVED: PWO OR OICC 6-16-81 DATE
SATISFACTORY TO: DATE

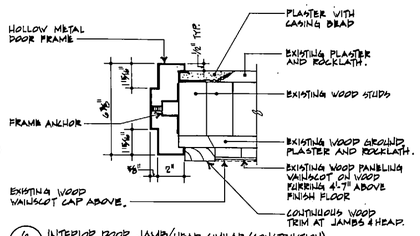
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

RENOV. BLDGS. 119, 221 & 421
DETAILS

SIZE	CODE IDENT. NO.	MAVFAC DRAWING NO.
F	80091	4152934
		CONSTR. CONTR. NO. N62470-82-5438
SCALE: NOTED	SPEC. 82-5438	SHEET 4 OF 16



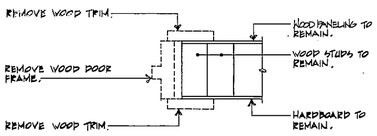
1 / A1 A4 INTERIOR DOOR JAMB/HEAD SIMILAR (DEMOLITION)
SCALE : 3" = 1'-0"



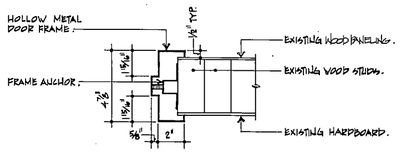
6 / A1 A4 INTERIOR DOOR JAMB/HEAD SIMILAR (CONSTRUCTION)
SCALE : 3" = 1'-0"
SEE 1 / A1 A4 FOR DEMO.

2 / A4 A4 **NOT USED**

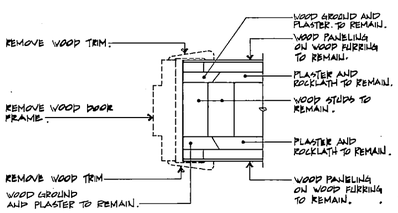
7 / A4 A4 **NOT USED**



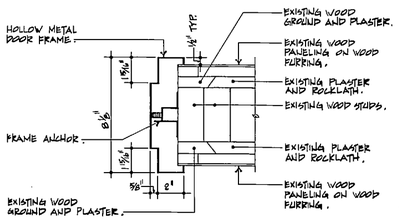
5 / A1 A4 INTERIOR DOOR JAMB/HEAD SIMILAR (DEMOLITION)
SCALE : 3" = 1'-0"



8 / A1 A4 INTERIOR DOOR JAMB/HEAD SIMILAR (CONSTRUCTION)
SCALE : 3" = 1'-0"
SEE 5 / A1 A4 FOR DEMO.



4 / A1 A4 INTERIOR DOOR JAMB/HEAD SIMILAR (DEMOLITION)
SCALE : 3" = 1'-0"



9 / A1 A4 INTERIOR DOOR JAMB/HEAD SIMILAR (CONSTRUCTION)
SCALE : 3" = 1'-0"
SEE 4 / A1 A4 FOR DEMO.

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED

A4

EARL ASHER APPLEGATE
P.O. BOX 399 ARCHITECT
NEW BERN, N.C. 28560

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

DES. EAA
DR. GAL
CHK. MEJ
SUBMITTED BY:
DESIGN DIR.
APPROVED: PWO OR OICC DATE 6-16-87
SATISFACTORY TO: DATE

RENOV. BLDGS. 119, 221 & 421

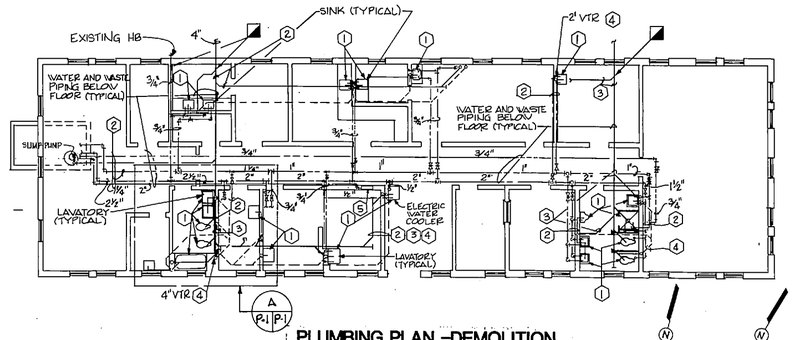
DETAILS

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
F	80091	4152935
		CONSTR. CONTR. NO. N62470-86-5438
SCALE: NOTED	SPEC. 05-88-5438	SHEET 5 OF 16

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED

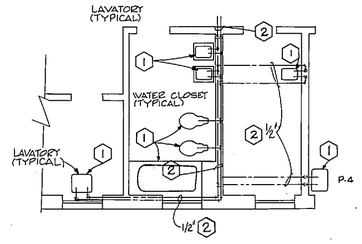
PLUMBING DEMOLITION NOTES

1. REMOVE EXISTING FIXTURE.
2. REMOVE ALL EXISTING WATER PIPING.
3. REMOVE ALL EXISTING WASTE PIPING.
4. REMOVE ALL EXISTING VENT PIPING.
5. REMOVE EXISTING FIRE HOSE CABINET AND PIPING.



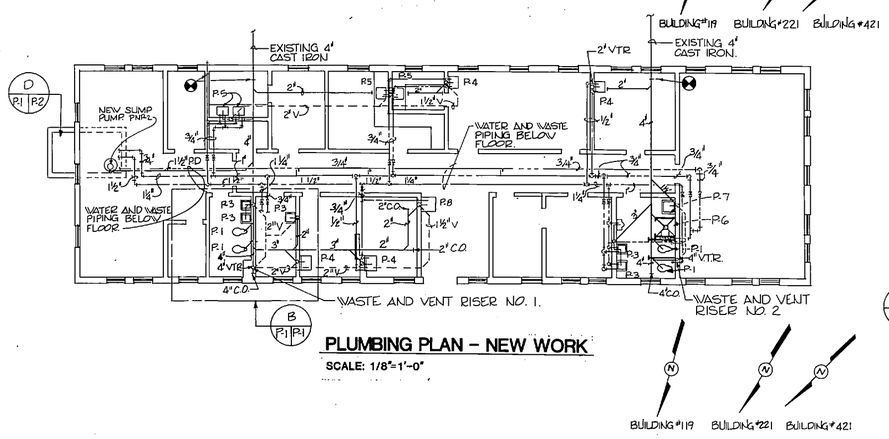
PLUMBING PLAN –DEMOLITION

SCALE: 1/8"=1'-0"



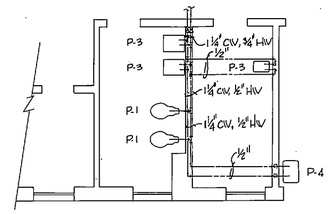
WATER PIPING PLAN – DEMOLITION

SCALE: 1/4"=1'-0"



PLUMBING PLAN – NEW WORK

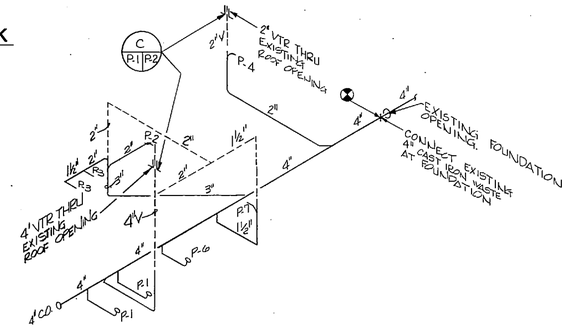
SCALE: 1/8"=1'-0"



WATER PIPING PLAN – NEW WORK

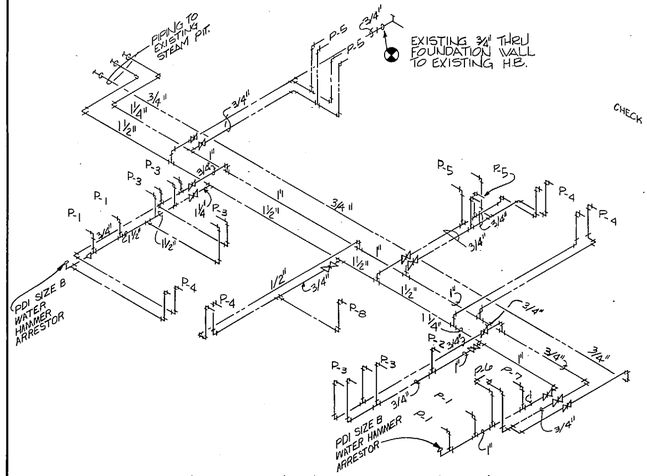
SCALE: 1/4"=1'-0"

PLUMBING FIXTURE SCHEDULE					
MARK ON PLANS	DESCRIPTION	CONNECTION SIZES WASTE	HOT	COLD	REMARKS
P-1	WATER CLOSET	3"		1"	FLOOR MOUNTED
P-2	URINAL	2"		1"	WALL HUNG
P-3	LAVATORY	1½"	½"	½"	WALL HUNG
P-4	LAVATORY	1½"	½"	½"	WALL HUNG
P-5	SINK	1½"	½"	½"	COUNTER-TOP
P-6	SHOWER	2"	½"	½"	PROVIDE NEW STALL, RECEPTOR & DRAIN AS SPECIFIED.
P-7	SERVICE SINK	2"	½"	½"	
P-8	E.W.C.	1½"		½"	ELECTRIC WATER COOLER (EWC)
NOTE: SEE WASTE & VENT RISER - NEW WORK FOR VENT SIZES.					



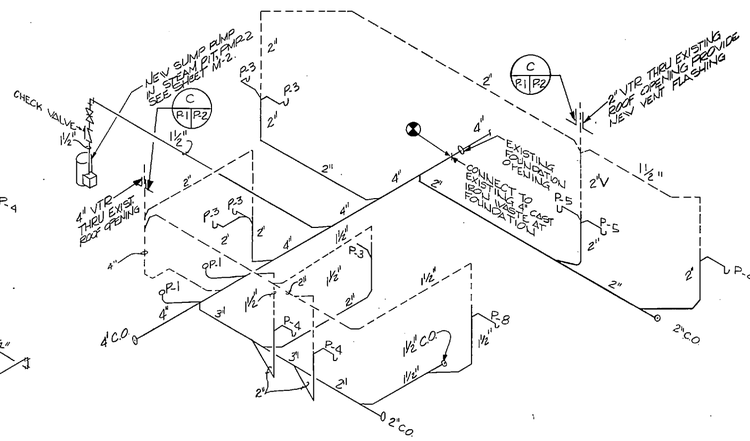
WASTE AND VENT RISER NO. 2 - NEW WORK

NO SCALE



DOMESTIC WATER RISER - NEW WORK

NO SCALE



WASTE AND VENT RISER NO. 1 - NEW WORK

NO SCALE

GENERAL NOTES THIS SHEET

1. SEE P-2 FOR LEGEND.
2. WATER AND WASTE PIPING BELOW FLOOR.
3. VENT ABOVE CEILING.
4. EXISTING WATER PIPING BELOW FLOOR AND IN PIT HAS ASBESTOS CONTAMINATED INSULATION. SEE SPECIFICATION SECTION 02080 REMOVE AND DISPOSAL OF ASBESTOS MATERIALS.
5. SEE ISOMETRIC RISER DIAGRAMS FOR PIPING SIZES.

GRAPHIC SCALE

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

WARNING: ASBESTOS MATERIALS PRESENT, SEE SECTION 02080 OF THE SPECIFICATIONS

P-1

McKIM & CREED ENGINEERS, P.A.
243 N. FRONT STREET
WILMINGTON, NORTH CAROLINA

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

DES. KEF
DR. BPR
CHK. DHT
SUBMITTED BY: H.P.McKIM JR.
DESIGN BIN. [illegible]
APPROVED: PWO OR OICC [illegible] DATE 6-16-87
SATISFACTORY TO: DATE

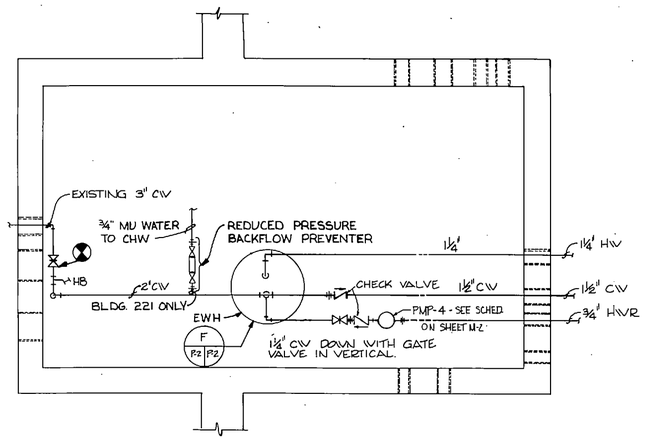
NORTH CAROLINA PROFESSIONAL SEAL No. 13852 ENGINEER DONALD H. TINKLER

STRUCTURAL, ELECTRICAL, & MECHANICAL RENOVATIONS FOR BUILDINGS 119, 221, 421
PLUMBING-DEMOLITION-NEW WORK

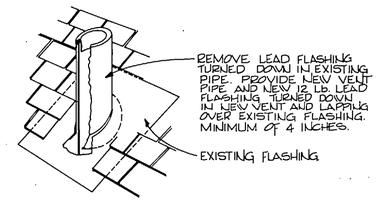
SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
F	80091	4152936
		CONSTR. CONTR. NO. N62470-86-B-5438

SCALE: NOTED | SPEC. 05-86-5438 | SHEET 6 OF 16

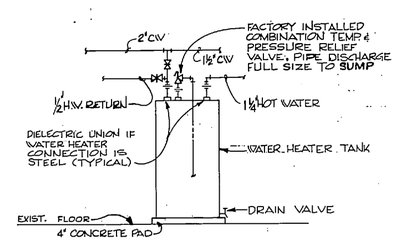
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED



D P-1 P-2 **PIT PLUMBING PLAN – NEW WORK**
SCALE: 3/4"=1'-0"



C P-1 P-2 **VENT THRU ROOF DETAIL**
NO SCALE



E P-2 P-2 **WATER HEATER DETAIL**
NO SCALE

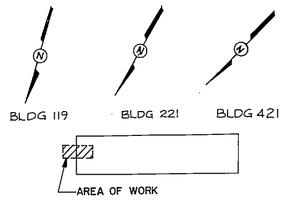
PLUMBING LEGEND	
SYMBOL	DESCRIPTION
———	COLD WATER PIPING (C.W.)
—·—·—	HOT WATER PIPING (H.W.)
- - - - - -	VENT PIPING
———	HOT WATER RECIRCULATING LINE
V.T.R.	VENT THRU ROOF
⋈	GATE VALVE
H.B.	HOSE BIBB
—P.D.—	PUMP DISCHARGE
C.O.	CLEAN OUT
V	VENT
W	WASTE
H.W.	HOT WATER
C.W.	COLD WATER
EWH	ELECTRIC WATER HEATER
MU	MAKE-UP WATER
CHW	CHILLED WATER

PLUMBING EQUIPMENT NOTES

EWH - ELECTRIC WATER HEATER SHALL BE STORAGE TYPE, 120 GALLON CAPACITY, 55 GALLON PER HOUR RECOVERY WITH A 90° TEMPERATURE RISE. WATER HEATER ELECTRICAL REQUIREMENTS SHALL BE 12000 WATTS AT 208 VOLTS, 3 PHASE.

GRAPHIC SCALES

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



NORTH CAROLINA PROFESSIONAL SEAL No. 13862 ENGINEER DONALD H. TINGLEY

Donald H. Tingley

P-2

McKIM & CREED ENGINEERS P.A.
243 N. FRONT STREET
WILMINGTON, NORTH CAROLINA

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

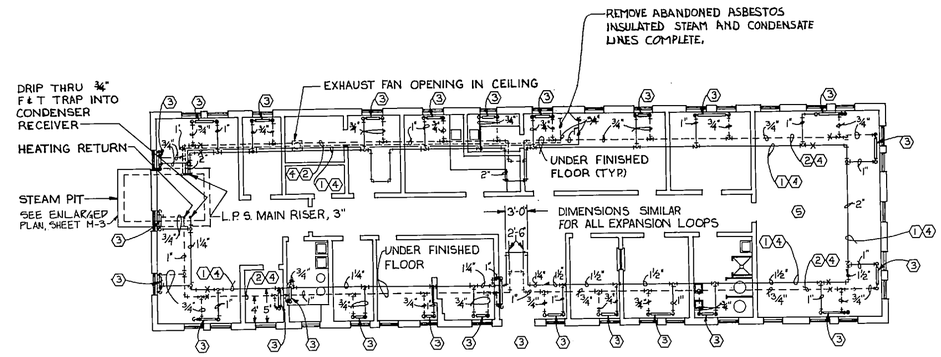
STURUCTURAL, ELECTRICAL & MECHANICAL RENOVATIONS FOR BUILDING 119, 221, 421

PLUMBING, DETAILS

DES. KEF	
DR. BPR	
CHK. DHT	
SUBMITTED BY: HPMCKIM JR.	
DESIGN DIR.	
APPROVED: PWD OR DICC	DATE 6-16-87
SATISFACTORY TO:	DATE

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
F	80091	4152937
		CONSTR. CONTR. NO. N62470-86-B-5438
SCALE: NOTED	SPEC. 05-86-5438	SHEET 7 OF 16

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED

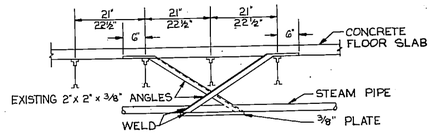


BUILDINGS 119 & 421 FLOOR PLAN – MECHANICAL – DEMOLITION

SCALE: 1/8"=1'-0"

DEMOLITION NOTES

1. REMOVE ALL EXISTING STEAM PIPING.
2. REMOVE ALL EXISTING CONDENSATE PIPING.
3. REMOVE ALL EXISTING STEAM RADIATORS AND ACCESSORIES.
4. PIPING UNDER BUILDINGS IS COVERED WITH ASBESTOS INSULATION. REMOVAL SHALL BE IN ACCORDANCE WITH SPECIFICATION SECTION 02080 AND ALL APPLICABLE CODES.
5. SOIL UNDER BUILDINGS IS CONTAMINED WITH FIRABLE ASBESTOS. COVER CONTAMINED SOIL W/ 6 MIL POLYTHYLENE SHEET (LAP 12" MIN. AT JOINTS) COVER COMPLETELY WITH CLEAN SAND. 2" MIN. DEPTH.



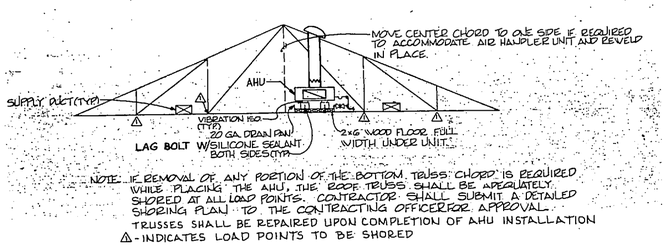
B / M-2 M-1 **ANCHOR DETAIL**

NO SCALE

NOTE: REUSE EXISTING ANCHORS TO EXTENT POSSIBLE.

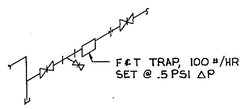
MECHANICAL LEGEND

SYMBOL	DESCRIPTION
	SUPPLY DUCT
	RETURN DUCT
	FLEX DUCT W/SCOOP & DAMPER
	ANCHOR
	ECCENTRIC REDUCER
	GATE VALVE
	CHECK VALVE
	STRAINER
— S —	SUPPLY
— R —	RETURN
- - - -	CONDENSATE
	UNION
	GAUGE COCK
	GAUGE
	PRESSURE REDUCING VALVE
	CONCENTRIC REDUCER
	CONTROL VALVE
	STEAM TRAP
	REMOVE TO THIS POINT
	CONNECT NEW TO EXIST
	RELIEF VALVE
MS	MOTOR STARTER
FS	FIRE - STAT.



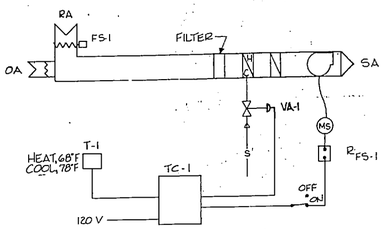
AIR HANDLING UNIT DETAIL – NEW WORK

NO SCALE



C / M-2 M-1 **END OF MAIN DRIP – NEW WORK**

NO SCALE



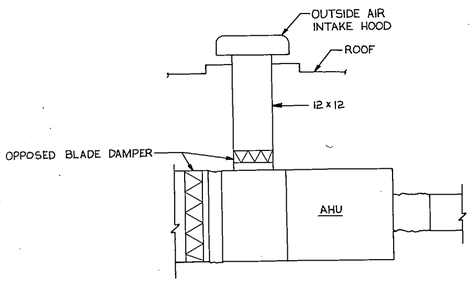
CONTROL SCHEMATIC

SEQUENCE OF OPERATION

COOLING: WHEN THERMOSTAT IS IN "COOL" POSITION WITH FAN SELECTOR SWITCHES IN "ON" POSITION THE COMPRESSOR SHALL CYCLE AND THE FAN SHALL RUN CONTINUOUSLY.

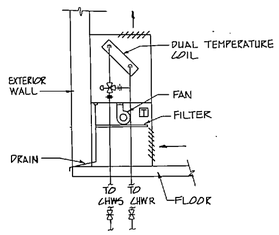
HEATING: WHEN THERMOSTAT T-1 IS IN "HEAT" POSITION WITH FAN SELECTOR SWITCH IN "ON" POSITION, THE STEAM CONTROL VALVE ACTUATOR VA-1 SHALL MODULATE AND THE FAN SHALL RUN CONTINUOUSLY.

FAN: WHEN FAN SELECTOR SWITCH IS IN "ON" POSITION, THE FAN SHALL RUN CONTINUOUSLY. FAN SELECTOR SWITCH SHALL BE LEFT IN THE "ON" POSITION DURING NORMAL OPERATION. FIRESTAT FS-1 SHALL STOP THE FAN UPON SENSING A RETURN AIR TEMPERATURE OF 130°F.



D / M-2 M-1 **OUTSIDE AIR INTAKE DETAIL**

NO SCALE



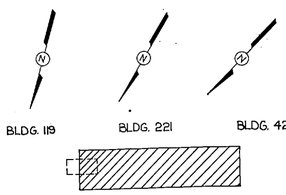
E / M-1 M-1 **FAN COIL DETAIL**

NO SCALE

GRAPHIC SCALE

1/8" = 1'-0"

5' 0' 5' 10' 15' 20' 25' 30'



M-1

McKIM & CREED ENGINEERS, P.A.
243 N. FRONT STREET
WILMINGTON, NORTH CAROLINA

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND

MARINE CORPS BASE

CAMP LEJEUNE, NORTH CAROLINA

STRUCTURAL, ELECTRICAL, & MECHANICAL RENOVATIONS FOR BUILDINGS 119, 221, 421

BLDG. 119 & 421 MECH.-DEMO. & NEW WORK DETAILS

DES. T.F.C.
DR. A.L.F.
CHK. D.H.T.
SUBMITTED BY: H.P. McKIM, JR.
DESIGN DIR. [illegible]
APPROVED: PWO OR OICC [illegible] DATE 6-16-87
SATISFACTORY TO: DATE

NORTH CAROLINA PROFESSIONAL SEAL No. 13052 ENGINEER DONALD H. THIGPEN

SIZE F | CODE IDENT. NO. 80091 | MAYFAC DRAWING NO. 4152938 | CONSTR. CONTR. NO. N62470-86-B-5438

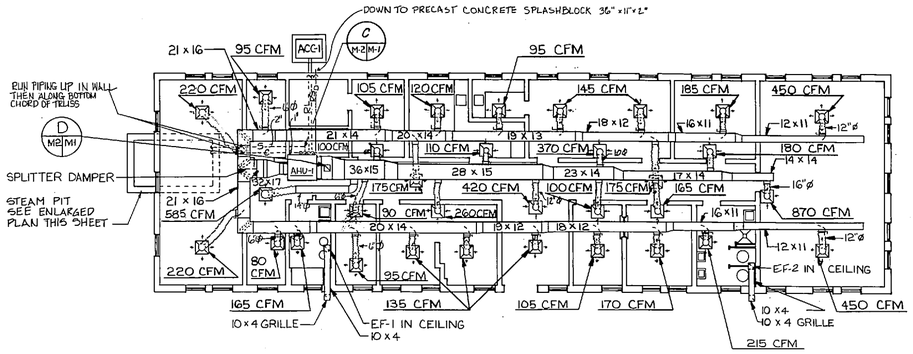
SCALE: NOTED | SPEC. 05-86-5438 | SHEET 8 OF 16

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED

AIR HANDLING UNIT SCHEDULE																
		FAN			COOLING						HEATING					
MARK	SUPPLY CFM	OUTSIDE AIR CFM	TOTAL EXT SP IN HG	TOTAL MBH	SENSIBLE MBH	E.A.T. DB	E.A.T. WB	L.A.T. DB	L.A.T. WB	TOTAL MBH	E.A.T DB	L.A.T DB	ELECTRICAL VOLTS	PHASE
AHU-1	3815	565	0.375	128	92	79.9	66.1	55	55.8	140.9	65	99	208	3

AIR-COOLED CONDENSING UNIT SCHEDULE									
	TOTAL COOLING MBH	CONDENSER FAN HP	COMPRESSOR R.L.AMPS	MIN. EER	REFRIGERANT LINES SUCTION	LIQUID	VOLTS	PHASE
MARK								
ACC-1	128	38.75	23.6	9.7	1-1/8	1/2	208	3

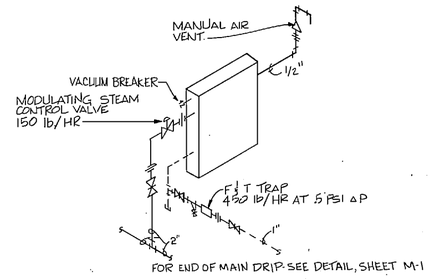
EXHAUST FAN SCHEDULE					
MARK	CFM	SP	HP	VOLTS	PHASE
EF-1	185	0.1	1/35	120	1
EF-2	260	0.1	1/20	120	1



BUILDINGS 119 & 421 FLOOR PLAN – MECHANICAL – NEW WORK

SCALE: 1/8"=1'-0"

NOTE: ALL DIFFUSERS & REGISTERS ARE 24" x 24" W/8"ø NECK UNLESS OTHERWISE NOTED. ALL DUCTWORK LOCATED IN ATTIC SPACE



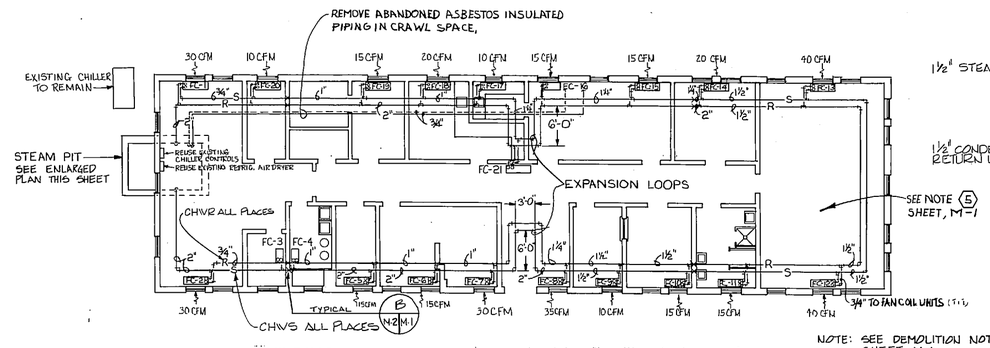
STEAM COIL DETAIL

NO SCALE

FAN COIL UNIT SCHEDULE						
MARK	COOLING SENSIBLE	[MBH] TOTAL	HTG[MBH] TOTAL	GPM	P.D.	TOTAL CFM	O.A. CFM
FC-1	8.3	11	10.8	2.3	4.9	325	30
FC-2	8.3	11	10.8	2.3	4.9	325	30
FC-3	2.7	3	2.4	1.2	1.7	105	
FC-4	3.2	3.3	3.2	1.2	1.7	125	
FC-5	3.2	4.1	3.2	1.2	1.7	125	15
FC-6	4.7	4.1	4.7	1.9	5.8	180	15
FC-7	4.7	5.9	4.7	1.9	5.8	180	30
FC-8	8.5	11.4	9.5	2.3	4.9	330	35
FC-9	3.7	4.7	4	1.2	1.7	145	10
FC-10	5.7	7.1	5.3	1.9	5.8	220	15
FC-11	4.2	5.5	4.8	1.9	5.8	165	15
FC-12	14.7	18	13.5	4.9	12.5	570	40
FC-13	14.7	18	13.5	4.9	12.5	570	40
FC-14	6.4	7.3	6.2	1.9	5.8	250	20
FC-15	5.1	6	5.4	1.9	5.8	200	15
FC-16	5.1	6	5.4	1.9	5.8	200	15
FC-17	3	3.3	2.6	1.2	1.7	115	10
FC-18	4.7	6.2	6.2	1.9	5.8	180	20
FC-19	3.7	4.4	4.1	1.2	1.7	145	15
FC-20	3.3	3.7	3.2	1.2	1.7	125	10
FC-21	8.5	11.4	9.5	2.3	4.9	330	

DATA BASED ON ENTERING WATER TEMP.=45F, LEAVING WATER TEMP.=55F

PUMP SCHEDULE				
MARK	GPM	TDH(FT)	HP	REMARKS
PMP-1	9	80	1	208V.3PHASE,W/14 GAL RECEIVER
PMP-2	10	20	1/3	120V.1PHASE SUBMERSIBLE SUMP PUMP
PMP-3	40	55	2	208V.3PHASE,3500RPM, CIRCULATING PUMP
PMP-4	7	15	1/4	120V 10 CIRC.PUMP

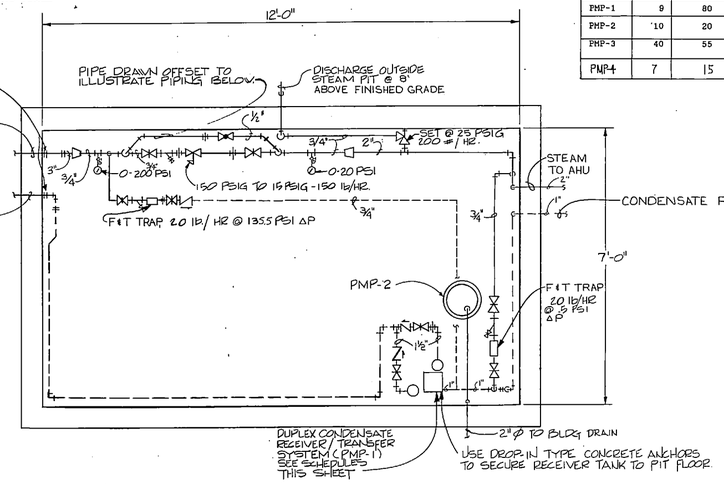


NOTE: SEE DEMOLITION NOTES SHEET M-1.

BUILDING 221 FLOOR PLAN – DEMOLITION & NEW WORK*

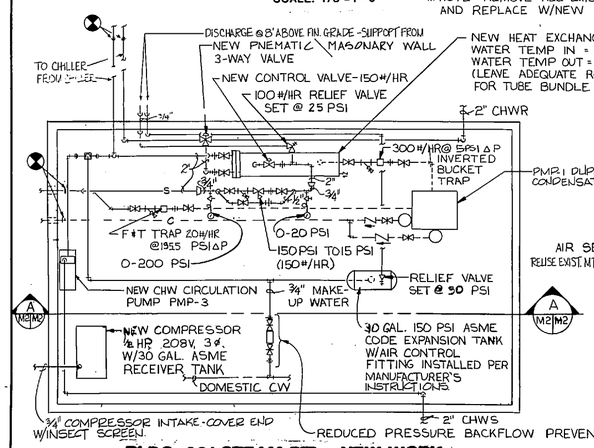
SCALE: 1/8"=1'-0"

* NOTE: REMOVE ALL EXISTING PIPING AND FAN COIL UNITS AND REPLACE W/NEW AS SHOWN. (PIPING IN CRAWL SPACE UNDER BUILDING)



BUILDING 119 AND 421 STEAM PIT – NEW WORK

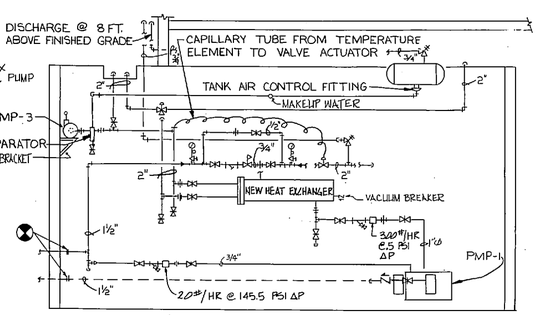
SCALE: 3/4" = 1'-0"



BLDG. 221 STEAM PIT – NEW WORK

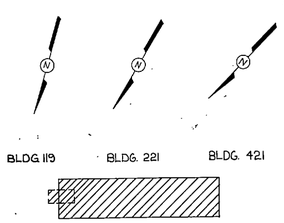
SCALE: 3/4" = 1'-0"

NOTE: REUSE EXISTING MOUNTING BRACKETS PMP PMP-3 & AIR COMPRESSOR.



ELEVATION A

SCALE: 3/4" = 1'-0"



GRAPHIC SCALE

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

3/4" = 1'-0" 0' 6" 1' 2' 3' 4' 5' 6'

M-2

McKIM & CREED ENGINEERS, P.A.
243 N. FRONT STREET
WILMINGTON, NORTH CAROLINA

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

STRUCTURAL, ELECTRICAL, & MECHANICAL RENOVATIONS FOR BUILDINGS 119, 221, 421

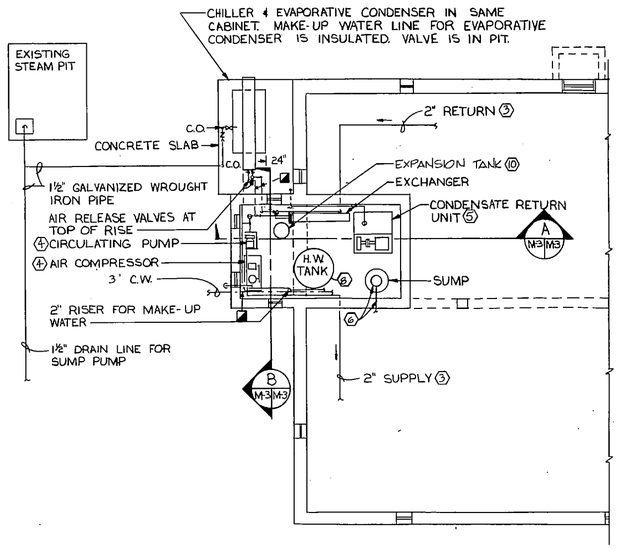
MECH: DEMO-BLDG 221; NEW WORK-BLDGS. 119, 221, 421

DES. T.F.C.
DR. A.L.F, B.P.R.
CHK. D.H.T.
SUBMITTED BY: H.R. McKIM, JR.
REGION BR.
APPROVER: PWD OR OICC — DATE 6-16-87
SATISFACTORY TO: — DATE

NORTH CAROLINA PROFESSIONAL SEAL No. 13852 ENGINEER DONALD H. TINSLEY

SIZE F | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 4152939
CONSTR. CONTR. NO. N62470-86B-5438
SCALE: NOTED | SPEC. 05-86-5438 | SHEET 9 OF 16

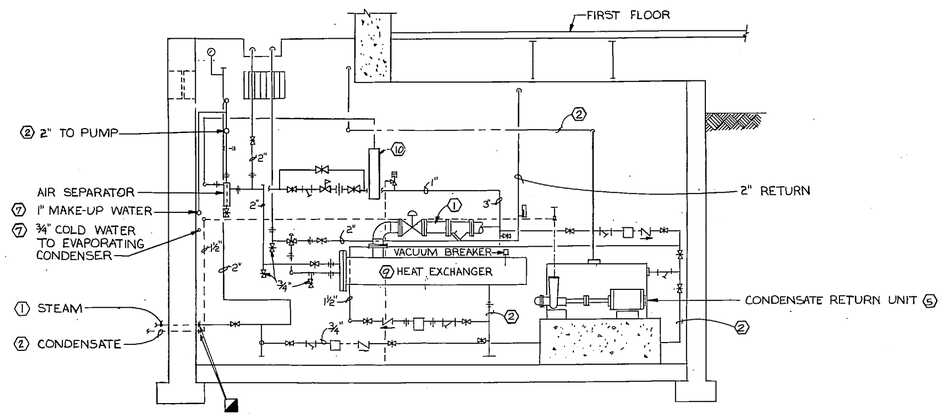
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED



BUILDING 221 STEAM PIT & FOUNDATION PLAN – DEMOLITION *

SCALE: 1/4"=1'-0"

* NOTE: FOR CLARITY, ALL PIPING IS NOT SHOWN. SEE SECTIONS FOR GREATER DETAIL.



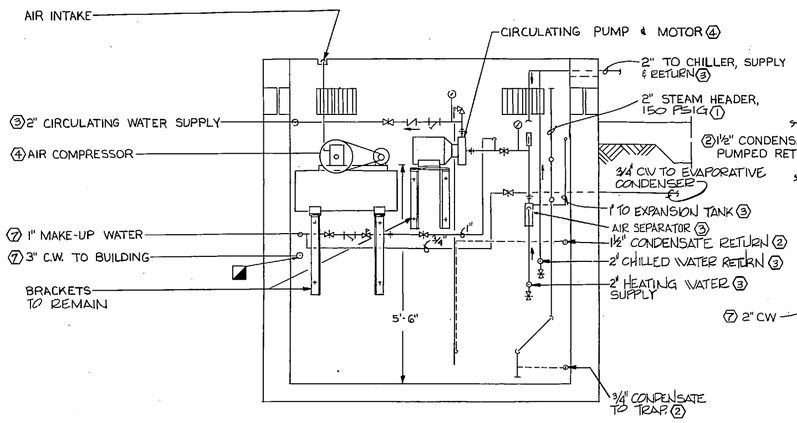
A M3 M3 SECTION A – DEMOLITION

SCALE: 3/4"=1'-0"

DEMOLITION NOTES

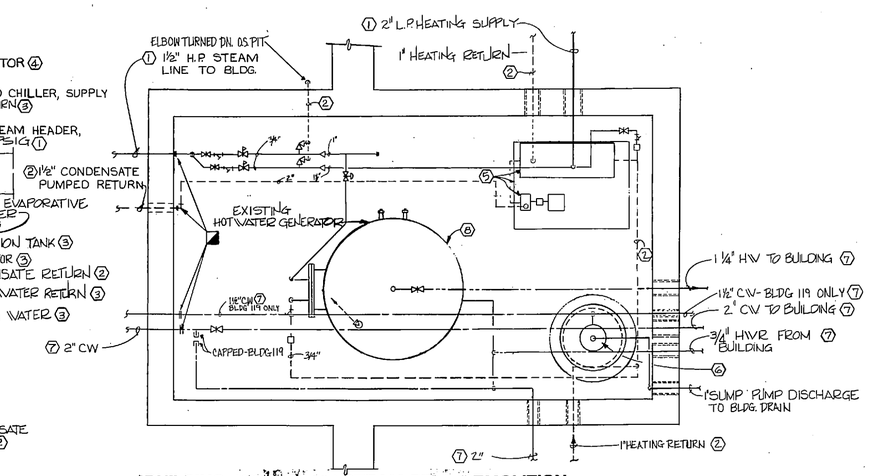
1. REMOVE ALL EXISTING STEAM PIPING
2. REMOVE ALL EXISTING CONDENSATE PIPING.
3. REMOVE ALL EXISTING CHILLED & HOT WATER PIPING.
4. REMOVE EXISTING CIRCULATING PUMP AND AIR COMPRESSOR MOUNTING BRACKETS TO REMAIN.
5. REMOVE EXISTING CONDENSATE RETURN UNIT AND CONCRETE BASE (PATCH FLOOR AS REQUIRED)
6. REMOVE EXISTING SUMP PUMP & DRAIN PIPING.
7. REMOVE EXISTING DOMESTIC WATER PIPING.
8. REMOVE EXISTING HOT WATER GENERATOR TANK.
9. REMOVE EXISTING HEAT EXCHANGER.
10. REMOVE EXISTING EXPANSION TANK.
11. PIPING UNDER BUILDINGS AND PIPING AND EQUIPMENT IN BUILDINGS 119, 221, AND 421 STEAM PITS IS COVERED WITH ASBESTOS CONTAMINATED INSULATION. REMOVE INSULATION IN ACCORDANCE WITH SPECIFICATION SECTION 02080

WARNING:
ASBESTOS MATERIALS PRESENT UNDER BUILDINGS AND IN BUILDINGS 119, 221, & 421 STEAM PITS. REFER TO SPECIFICATION SECTION 02080



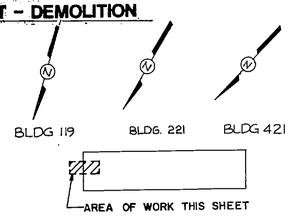
B M3 M3 SECTION B–DEMOLITION

SCALE: 3/4"=1'-0"



BUILDING 119 AND 421 STEAM PIT – DEMOLITION

SCALE: 3/4"=1'-0"



GRAPHIC SCALES

1/4" = 1'-0" : 5' 0' 5' 10' 15' 20'

3/4" = 1'-0" : 1' 0' 1' 2' 3' 4' 5' 6' 7'

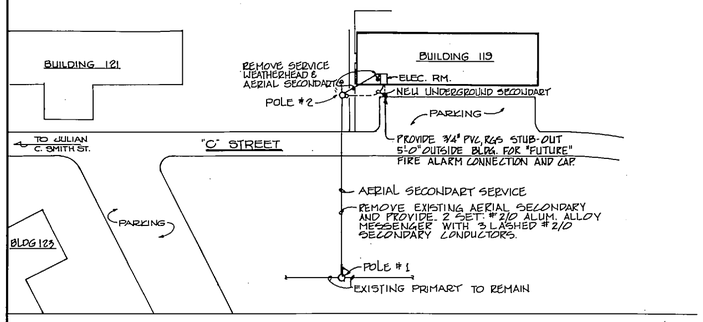
M-3

McKIM & CREED ENGINEERS, PA 243 N. FRONT STREET WILMINGTON, NORTH CAROLINA	DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND **MARINE CORPS BASE** CAMP LEJEUNE, NORTH CAROLINA
DES. T.F.C. DR. A.L.F., T.F.C. CHK. D.H.F. SUBMITTED BY: H.P. McKIM, JR. DESIGN DIR.	STRUCTURAL, ELECTRICAL, & MECHANICAL RENOVATIONS FOR BUILDINGS 119, 221, 421 BLDGS. 119, 221, 421 - STEAM PIT - DEMOLITION
APPROVED: PWO OR OICC DATE 6-16-87 SATISFACTORY TO: DATE	SIZE F; CODE IDENT. NO. 80091; NAVFAC DRAWING NO. 4152940 CONSTR. CONTR. NO. N62470-86-B-5438
	SCALE: NOTED; SPEC. 05-86-5438; SHEET 10 OF 16

NORTH CAROLINA PROFESSIONAL SEAL No. 13852 ENGINEER DONALD H. TINGLEY

AP 34373

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED



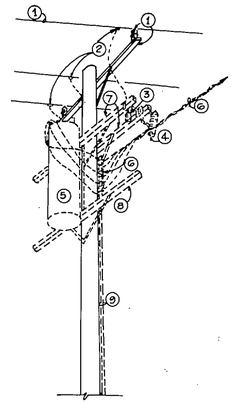
SITE PLAN - BUILDING 119

SCALE: 1"=30'0"

SITE PLAN FOR LOCATION ONLY. ALL DEMOLITION AND NEW WORK SHOWN ON DETAILS THIS SHEET.

EXTERIOR LEGEND

SYMBOL	DESCRIPTION
T	PAD MOUNTED TRANSFORMER
———	AERIAL ELECTRICAL SERVICE
- - - -	UNDERGROUND ELECTRICAL SERVICE
═══	UNDERGROUND DUCTBANK; PRIMARY SERVICE ENCASED IN CONCRETE
	SERVICE WEATHERHEAD
○	POLE
○—○	POLE WITH LUMINAIRE
○⊲	POLE WITH POLE MOUNTED TRANSFORMER
○—▷	POLE WITH DOWN GUY
○▷	POLE WITH CONDUIT RISER



DEMOLITION WORK

BUILDING 119

POLE #1

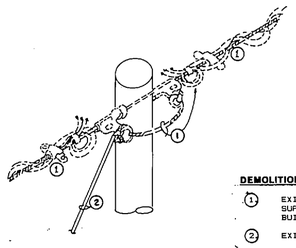
NOT TO SCALE

DEMOLITION NOTES:

1. EXISTING AERIAL PRIMARY SERVICE , PIN INSULATORS AND CROSSARM TO REMAIN.
2. EXISTING T-TAPS TO BE REMOVED.
3. EXISTING LIGHTNING ARRESTORS AND ASSOCIATED GROUNDING WIRE TO BE REMOVED.
4. EXISTING FUSED CUTOUTS TO BE REMOVED.
5. EXISTING 12,470 - 120/208 VOLT, 3 PHASE TRANSFORMER TO BE REMOVED.
6. EXISTING SECONDARY WIRING, SECONDARY RACK AND MESSENGER SUPPORT CABLE TO POLE #2 TO BE REMOVED.
7. EXISTING SECONDARY CROSSARMS WITH ASSOCIATED BRACES AND HARDWARE TO BE REMOVED.
8. EXISTING TRANSFORMER CROSSARM SUPPORT WITH ASSOCIATED HARDWARE TO BE REMOVED.
9. EXISTING EXPOSED CONDUIT RISER TO BE REMOVED AND WIRES PULLED.

DASHED LINES INDICATE EXISTING TO BE REMOVED.

* DELIVER EXISTING TRANSFORMER TO LOT 140. NOTIFY CONTRACTING OFFICER IN WRITING 10 DAYS PRIOR TO DELIVERY.



DEMOLITION WORK

BUILDING 119

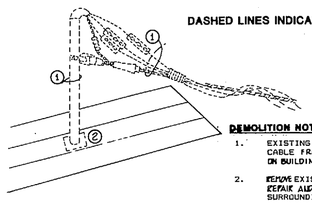
POLE #2

NOT TO SCALE

DEMOLITION NOTES:

1. EXISTING SECONDARY WIRING WITH MESSENGER SUPPORT CABLE TO BE REMOVED FROM POLE #2 TO BUILDING 119 WEATHERHEAD.
2. EXISTING GUY TO REMAIN.

DASHED LINES INDICATE EXISTING TO BE REMOVED.

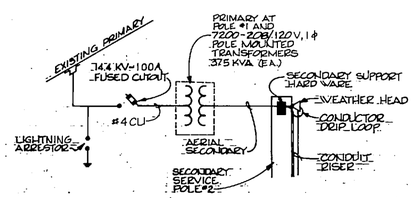


DASHED LINES INDICATE EXISTING TO BE REMOVED.

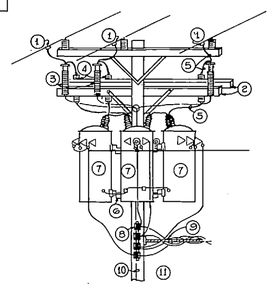
DEMOLITION NOTES

1. EXISTING SECONDARY WIRING AND MESSENGER SUPPORT CABLE FROM POLE #1 TO SERVICE ENTRANCE WEATHERHEAD ON BUILDING 119 TO BE REMOVED.
2. REMOVE EXISTING WEATHERHEAD BELOW ROOFLINE REPAIR AND PATCH ROOF TO MATCH SURROUNDING AREAS.

DEMOLITION WORK FOR EXISTING SERVICE ENTRANCE. (BUILDING 119)



RISER DIAGRAM



NEW WORK

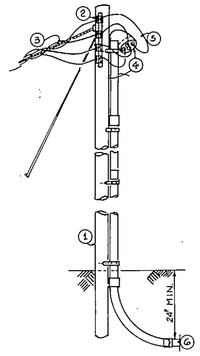
(BUILDING 119)

POLE #1

NOT TO SCALE

NEW WORK NOTES:

1. PROVIDE NEW STIRRUPS & HOT LINE CLAMPS(4).
2. PROVIDE NEW 10'CROSSARMS(2).
3. PROVIDE NEW LIGHTNING ARRESTORS(3).
4. PROVIDE NEW FUSED CUT OUTS, 100A RATED(3).
5. PROVIDE #4 BARE COPPER WIRE, TYPE HF
6. PROVIDE NEW TRANSFORMER SUPPORT BRACKETS, POLE MTD.
7. PROVIDE NEW 37.5 KVA, 12470/7200-208/120V SINGLE PHASE TRANSFORMERS(3). DELTA CONNECTED PRIMARY WYE CONNECTED SECONDARY.
8. PROVIDE NEW DEAD END SECONDARY CONDUCTOR RACK.
9. PROVIDE NEW 2 SETS: #2/0 ALUMINUM-ALLOY MESSENGER WITH 3 LASHED #2/0 SECONDARY CONDUCTORS FROM POLE #1 TO POLE #2.
10. PROVIDE #6 BARE COPPER GROUND WIRE, WIREGUARD, HARDWARE, CONNECTION, ETC.
11. PROVIDE 3/4" X 10' COPPER CLAD GROUND ROD.



NEW WORK

BUILDING 119

POLE #2

NOT TO SCALE

NEW WORK NOTES

1. EXISTING POLE TO REMAIN
2. PROVIDE NEW SECONDARY CONDUCTOR RACK
3. PROVIDE NEW #2/0 ALUMINUM ALLOY MESSENGER SUPPORT CABLE

   PROVIDE NEW SECONDARY CONDUCTORS; 3-#2/0 QUADPLEX
4. PROVIDE 4" SERVICE WEATHERHEAD AND 4" RGS CONDUIT RISER
5. PROVIDE 3-500 MCM, 1-500 MCM N, #1/0 GND TYPE USE IN 4" RGS RISER
6. PROVIDE 4" PVC COATED RGS UNDERGROUND SECONDARY SERVICE ENTRANCE TO BUILDING 119 SERVICE ENTRANCE PANEL (SEE SHEET E-4).

GRAPHIC SCALE

1"= 30'-0" 30' 0' 30' 60' 90' 120'

NORTH CAROLINA PROFESSIONAL SEAL No. 13852 ENGINEER DONALD H. TINGLEY

Donald H. Tingley

E-1

McKIM & CREED ENGINEERS, P.A.
243 N. FRONT STREET
WILMINGTON, NORTH CAROLINA

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

STRUCTURAL, ELECTRICAL, & MECHANICAL RENOVATIONS FOR BUILDINGS 119, 221, 421

SITE - BLDG 119

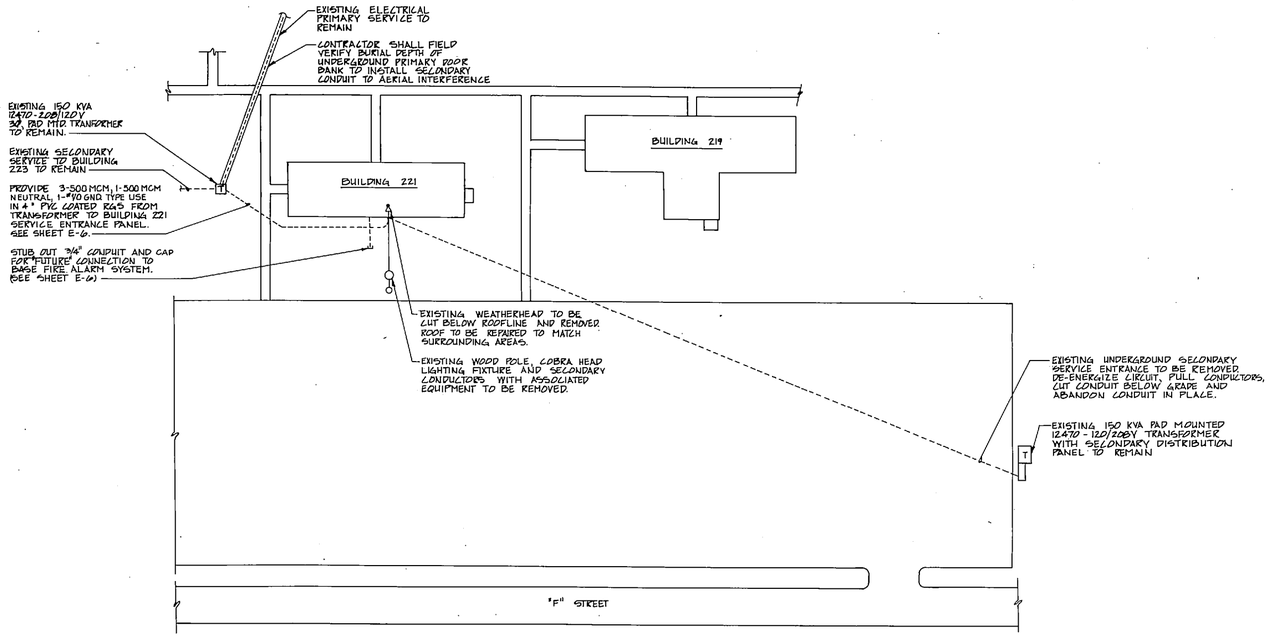
DES.	GBH
DR.	GBH
CHK.	DHT
SUBMITTED BY:	
DESIGN DIR.	
APPROVED: PWO OR OICC	DATE 6-16-87
SATISFACTORY TO:	DATE

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
F	80091	4152941

CONSTR. CONTR. NO. N62470-86-B-5438

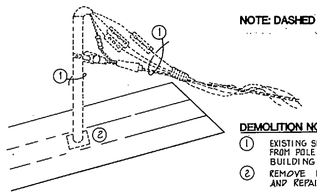
SCALE: NOTED | SPEC. 05-86-5438 | SHEET 11 OF 16

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED



SITE PLAN -BUILDING 221

SCALE: 1"=30'-0"



NOTE: DASHED LINES INDICATE EXISTING TO BE REMOVED

DEMOLITION NOTES:

1. EXISTING SECONDARY WIRING AND MESSENGER SUPPORT CABLE FROM POLE #1 TO SERVICE ENTRANCE WEATHERHEAD ON BUILDING 221 TO BE REMOVED.
2. REMOVE EXISTING WEATHERHEAD BELOW ROOFLINE AND REPAIR AND PATCH ROOF TO MATCH SURROUNDING AREAS.

DEMOLITION WORK FOR EXISTING SERVICE ENTRANCE - BUILDING 221

NOT TO SCALE

GRAPHIC SCALE

1"=30'-0" 30' 0' 30' 60' 90' 120'

E-2

McKIM & CREED ENGINEERS, P.A.
243 N. FRONT STREET
WILMINGTON, NORTH CAROLINA

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

STRUCTURAL, ELECTRICAL, & MECHANICAL RENOVATIONS FOR BUILDINGS 119, 221, 421

SITE - BLDG 221

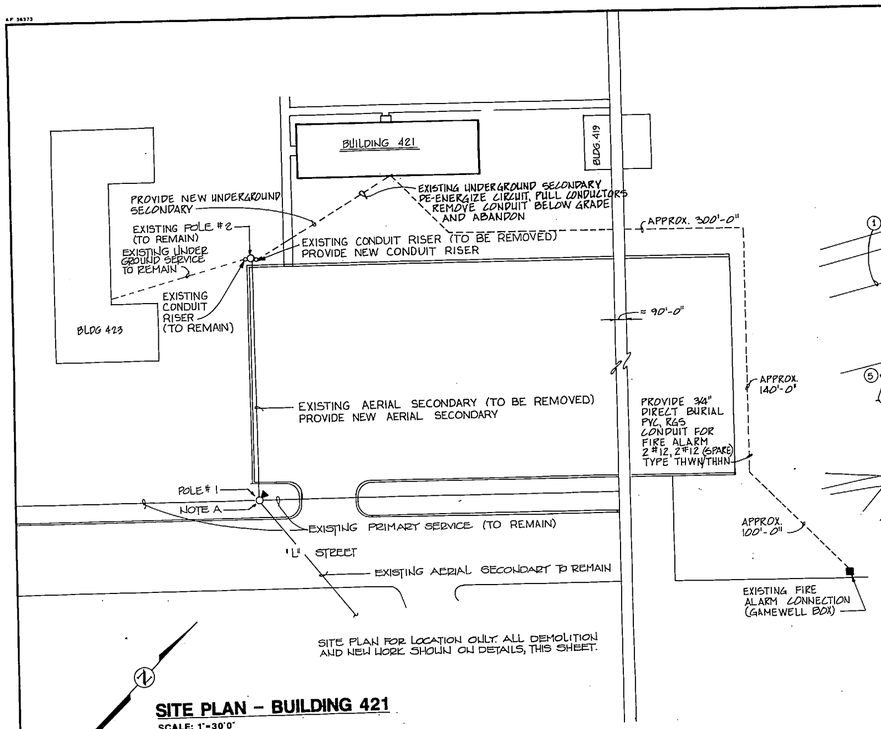
DES. GBH
DR. JLF
CHK. DHT
SUBMITTED BY:
DESIGN DIR. [signature]
APPROVED: PWO OR OICC [signature] DATE 6-16-87
SATISFACTORY TO: DATE

NORTH CAROLINA PROFESSIONAL SEAL No. 13852 ENGINEER DONALD H. TINGLEY

Donald H. Tingley

SIZE F | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 4152942
CONSTR. CONTR. NO. N62470-86-B-5438
SCALE: GRAPHIC | SPEC. 05-86-5438 | SHEET 12 OF 16

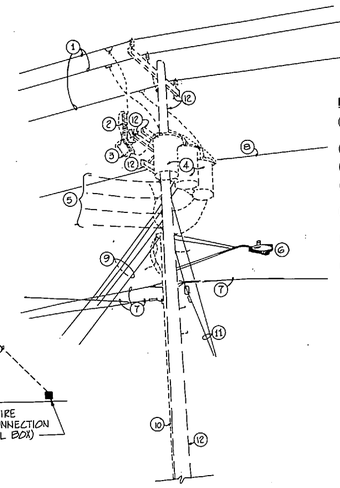
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED



SITE PLAN – BUILDING 421

SCALE: 1"=30'0"

NOTE A:
POLE #1 : NEW POLE TO BE SET NEXT TO EXIST. POLE (TO BE REMOVED). NEW POLE TO BE 40'-0", TYPE 3, CLASS C WOOD POLE.



DEMOLITION WORK

NOTE: DASHED LINES INDICATE EXISTING TO BE REMOVED

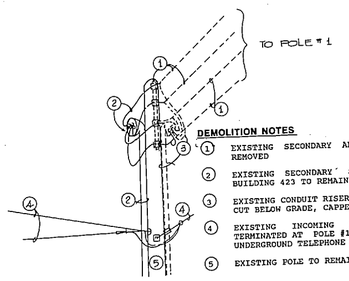
POLE #1

NOT TO SCALE

DEMOLITION NOTES:

1. EXISTING PRIMARY SERVICE TO BE DISCONNECTED. TRANSFER CONNECTION TO NEW POLE.
2. EXISTING LIGHTNING ARRESTORS TO BE REMOVED.
3. EXISTING FUSED CUT OUTS TO BE REMOVED.
4. & EXISTING 15 KVA, SINGLE PHASE, 12470-208/120V TRANSFORMERS TO BE REMOVED.
5. EXISTING SECONDARY.
6. EXISTING COBRA HEAD LIGHTING FIXTURE WITH ASSOCIATED HARDWARE TO BE DISCONNECTED. TRANSFER FIXTURE & CONNECTION TO NEW POLE
7. EXISTING TELEPHONE CABLE TO BE DISCONNECTED. TRANSFER CONNECTION TO NEW POLE.
8. EXISTING NEUTRAL TO BE DISCONNECTED. TRANSFER CONNECTION TO NEW POLE
9. EXISTING SECONDARY CONDUCTORS AND RACK SERVING BUILDINGS 442 AND 443 TO BE DISCONNECTED. SEE NEW WORK FOR CONNECTION TO NEW POLE.
10. EXISTING CONDUIT RISERS TO BE CUT BELOW GRADE, CAPPED AND REMOVED.
11. EXISTING GUY WIRES TO BE REMOVED, TRANSFER TO NEW POLE.
12. EXISTING POLE WITH CROSSARMS, BRACES AND INSULATORS TO BE REMOVED.

* DELIVER EXISTING TRANSFORMER TO LOT 140. NOTIFY CONTRACTING OFFICE IN WRITTING 10 DAYS PRIOR TO DELIVERY



DEMOLITION NOTES

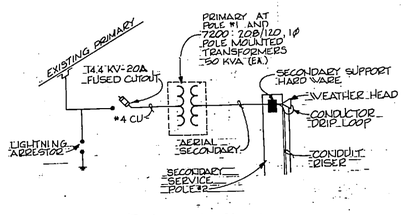
1. EXISTING SECONDARY AND SECONDARY RACK TO BE REMOVED
2. EXISTING SECONDARY SERVICE FROM POLE #1 TO BUILDING 423 TO REMAIN
3. EXISTING CONDUIT RISER SERVING BUILDING 421 TO BE CUT BELOW GRADE, CAPPED AND REMOVED
4. EXISTING INCOMING TELEPHONE SERVICE TO BE TERMINATED AT POLE #1.SEE NEW WORK PLAN FOR NEW UNDERGROUND TELEPHONE SERVICE
5. EXISTING POLE TO REMAIN

DEMOLITION WORK

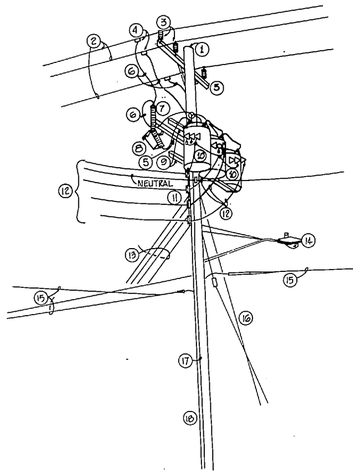
NOTE: DASHED LINES INDICATE EXISTING TO BE REMOVED

POLE #2

NOT TO SCALE



RISER DIAGRAM



NEW WORK

POLE #1

NOT TO SCALE

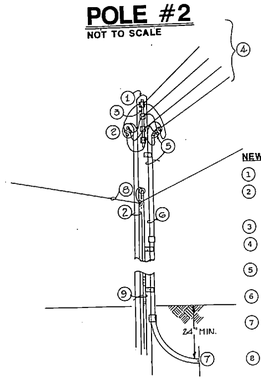
NEW WORK NOTES:

1. PROVIDE NEW WOOD POLE, TYPE 3, CLASS C, 40'
2. EXISTING PRIMARY TO BE RECONNECTED
3. PROVIDE NEW PIN TOP INSULATORS (3).
4. PROVIDE NEW STIRRUPS & HOT LINE CLAMPS(3).
5. PROVIDE 10' WOOD CROSSARM WITH STEEL ANGLE BRACE(2).
6. PROVIDE #4 BARE COPPER WIRE. TYPE HF
7. PROVIDE NEW LIGHTING ARRESTORS (3).
8. PROVIDE NEW FUSED CUTOUTS; 100A RATED (3).
9. PROVIDE TWO NEW 8' WOOD CROSSARMS FOR TRANSFORMER SUPPORT, CLUSTER MTD.
10. PROVIDE NEW 12470/7200-208/120V, 50 KVA SINGLE PHASE TRANSFORMER (3), DELTA CONNECTED PRIMARY, WYE CONNECTED SECONDARY.
11. PROVIDE TWO NEW SECONDARY RACKS.
12. PROVIDE 4-250 MCM CONDUCTORS TO POLE #2.
13. RECONNECT SECONDARY CONDUCTORS TO BUILDINGS 442 AND 443.
14. EXISTING COBRA HEAD LIGHTING FIXTURE TO BE RECONNECTED.
15. EXISTING TELEPHONE CABLE TO BE RECONNECTED.
16. EXISTING GUYS TO BE RECONNECTED.
17. PROVIDE #6 SOFT DRAWN COPPER GROUND WIRE.
18. PROVIDE 3/4" X 10' COPPER GROUND ROD.

GRAPHIC SCALE

30' 0' 30' 60' 90' 120'

1"=30'-0"



NEW WORK

POLE #2

NOT TO SCALE

NEW WORK NOTES

1. EXISTING POLE TO REMAIN
2. EXISTING SERVICE TO BUILDING 423 TO REMAIN.(RECONNECT TO NEW SECONDARY FROM POLE #1)
3. PROVIDE DEAD END SECONDARY RACK
4. PROVIDE 3-250 MCM, 1-250 MCM NEUTRAL
5. PROVIDE 4" SERVICE WEATHERHEAD AND 4" RGS CONDUIT RISER
6. PROVIDE 3-500 MCM, 1-500 MCM NEUTRAL, AND 1 #/0 GND TYPE USE IN 4"RGS.
7. PROVIDE 4" PVC COATED RGS CONDUIT TO BUILDING 421
8. EXISTING TELEPHONE CABLE AND CONNECTION TO BUILDING 423 TO REMAIN
9. PROVIDE 1" SERVICE WEATHERHEAD AND 1" RGS RISER FOR UNDERGROUND TELEPHONE SERVICE TO 5' OUTSIDE OF BUILDING

E-3

McKIM & CREED ENGINEERS, P.A.
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DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

STRUCTURAL, ELECTRICAL, & MECHANICAL RENOVATIONS FOR BUILDINGS 119, 221, 421

SITE - BLDG 421

DES. GBH
DR. JLF
CHK. DHT
SUBMITTED BY:
DESIGN DIR.
APPROVED: PWD OR OICC — DATE 6-16-87
SATISFACTORY TO: — DATE

NORTH CAROLINA PROFESSIONAL SEAL No. 13052 REGISTERED ENGINEER DONALD H. THURLEY

SIZE: F
CODE IDENT. NO.: 80091
MAVFAC DRAWING NO.: 4152943
CONSTR. CONTR. NO. N62470-86-B-5438
SCALE: GRAPHIC
SPEC. 05-86-5438
SHEET 13 OF 16

AF 36973

ELECTRICAL LEGEND - INTERIOR

DEMOLITION SYMBOL	NEW WORK SYMBOL	DESCRIPTION
		CEILING OUTLET WITH 1' X 4' FLUORESCENT FIXTURE (SEE FIXTURE SCHEDULE)
		CEILING OUTLET WITH 1' X 8' FLUORESCENT FIXTURE
		CEILING OUTLET WITH INCANDESCENT FIXTURE
		WALL OUTLET WITH INCANDESCENT FIXTURE
		WALL OUTLET WITH LOW PRESSURE SODIUM LIGHT FIXTURES (SEE FIXTURE SCHEDULE)
		CEILING OUTLET WITH FLUORESCENT LIGHT FIXTURE (SEE FIXTURE SCHEDULE)
		CEILING OUTLET WITH 2' X 4' FLUORESCENT LIGHT FIXTURE (SEE FIXTURE SCHEDULE)
		CEILING OUTLET WITH 2' X 4' FLUORESCENT LIGHT FIXTURE ON 24 HOUR CIRCUIT AND EMERGENCY POWER PACK.
		BATTERY POWERED EMERGENCY EXIT LIGHT - WALL MOUNTED AT 7'-0" ABOVE FINISHED FLOOR
		CEILING OUTLET WITH EMERGENCY BATTERY POWERED EXIT SIGN (SEE FIXTURE SCHEDULE)
		WALL OUTLET WITH EMERGENCY BATTERY POWERED EXIT SIGN (SEE FIXTURE SCHEDULE)
	S	SWITCH, SINGLE POLE, 120 VAC, MOUNTING HEIGHT 48" ABOVE FINISHED FLOOR (UNLESS NOTED OTHERWISE)
		DUPLEX CONVENIENCE RECEPTACLE, 120 VAC, MOUNTING HEIGHT 18" ABOVE FINISHED FLOOR (UNLESS NOTED OTHERWISE)
	F	FAN MOTOR
		RECEPTACLE, 250 VAC, MOUNTING HEIGHT 18" ABOVE FINISHED FLOOR (UNLESS NOTED OTHERWISE)
		TELEPHONE OUTLET, MOUNTING HEIGHT 18" ABOVE FINISHED FLOOR (UNLESS OTHERWISE NOTED)
		TELEPHONE JUNCTION BOX
		DISCONNECT SWITCH, NON-FUSIBLE
		DISCONNECT SWITCH, FUSIBLE
		MOTOR STARTER
	F	FIRE ALARM PULL STATION, MOUNTING HEIGHT 48" ABOVE FINISHED FLOOR (UNLESS NOTED OTHERWISE)
	F	FIRE ALARM AUDIBLE VISIBLE ALARM, MOUNTING HEIGHT 7'-0" ABOVE FINISHED FLOOR (UNLESS NOTED OTHERWISE)
	S	CEILING MOUNTED SMOKE DETECTOR
		WALL MOUNTED CLOCK OUTLET, HEIGHT 7'-0" A.F.F.
	M	ELECTRICAL MOTOR
	J	JUNCTION BOX
		BRANCH CIRCUIT CONCEALED IN WALL, CEILING OR FLOOR WITH HOMERUN BACK TO DISTRIBUTION PANEL
		ELECTRICAL PANELBOARD
		3/4" x 10'-0" COPPERCLAD GROUND ROD
		DENOTES FIXTURE TYPE
		ENERGY MONITORING SYSTEM

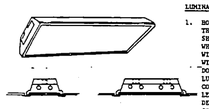
FIXTURE SCHEDULE

FIXTURE SYMBOL	STYLE AND TYPE-SEE SPECS. FOR NAVFAC SKETCH NO.	NUMBER AND TYPE OF LAMPS	VOLTS	MOUNTING	REMARKS
A	NL-47, TYPE C	1-35W HPS	120	WALL	SEE FIXTURE PLATE
B	NL-3, TYPE C	2-F40T12CW	120	LAY IN CEILING	SEE FIXTURE PLATE
C	NL-12, TYPE B	2-F40T12CW	120	SURFACE CEILING	SEE FIXTURE PLATE
AA	NL-70	2-T6 1/2W	120	WALL	SEE FIXTURE PLATE
A	NL-70	2-T 6 1/2W	120	CEILING	SEE FIXTURE PLATE

ABBREVIATIONS

CLG.	CEILING
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
E.R.	EXISTING TO REMAIN
FACP	FIRE ALARM CONTROL PANEL
GFI	GROUND FAULT INTERRUPTER
O.C.	ON CENTER
U.N.O.	UNLESS NOTED OTHERWISE
WP	WEATHERPROOF
PC	PULL CHAIN
AG	ABOVE GRADE
RGS	RIGID GALVANIZED STEEL
RGS/PVC	RIGID GALVANIZED STEEL, PVC COATED CONDUIT

NFGS-16510 (November 1983)
SKETCH DATE: MARCH 1983



LUMINAIRE REQUIREMENTS

1. HOUSING SHALL BE 0.026" MIN. THICKNESS, 3" MAX. HEIGHT AND SHALL NOT PERMANENTLY DEFORM WHEN LIFTED AT ONE CORNER WITH LENS DOOR IN PLACE NOR WITH LENS DOOR REMOVED. LENS DOOR SHALL NOT OPEN WHEN LUMINAIRE IS LIFTED BY ONE CORNER. LUMINAIRE SHALL HAVE LESS THAN THE FOLLOWING DEFLECTION WHEN LIFTED BY ONE CORNER WITH LENS DOOR REMOVED:

TYPE:	A	B	C, D & E
	3"	2 1/2"	4"

2. HOUSING SHALL BE CHEMICALLY TREATED FOR RUST PREVENTION AND HAVE BAKED WHITE ENAMEL FINISH 85% MIN. REFLECTANCE (INTERIOR). ENDS SHALL BE SECURED BY RIVETS OR SCREWS. PAINT ENTIRE HOUSING AND LENS DOOR WHITE, AFTER FABRICATION.
3. LATCHES SHALL BE 0.032" MINIMUM THICKNESS STEEL OR 0.015" MINIMUM THICKNESS SPRING STEEL. DIRECTION OF TRAVEL TO OPEN SHALL BE STAMPED ON LENS FRAME WHEN NOT OBVIOUS.
4. LENS DOOR SHALL BE 0.032" MINIMUM THICKNESS STEEL. SHALL BE ASSEMBLED WITH SCREWS (FOR LENS REPLACEMENT). PROVIDE LIGHT TIGHT FIT WITHOUT MOVABLE BAFFLES. GASKETING SHALL NOT BE A MEANS OF ACHIEVING LIGHT TIGHT DOOR.
5. LENS SHALL BE 0.156" (FOR TYPES A, C, D, E) AND 0.125" (FOR TYPE B) PLUS OR MINUS 10% OVERALL (0.09 MAX, PRISM PENETRATION) CLEAR PRISMATIC 100% ACRYLIC.
6. DOOR SHALL BE CAPABLE OF HINGING AND LATCHING FROM EITHER SIDE OF LUMINAIRE. PROVIDE SAFETY TYPE HINGES.
7. BALLAST SHALL BE HIGH POWER FACTOR ($\geq$ .9) ETL, CBM APPROVED RAPID START CLASS P ENERGY SAVING BALLAST WITH SOUND RATING OF "A". SECURE BALLAST TO HOUSING WITH AT LEAST ONE SCREW AND SLIP-ON BRACKET OR 2 SCREWS ONE AT EACH END. PROVIDE GROUNDING SCREW ON INTERIOR OF HOUSING.
8. PHOTOMETRICS: MINIMUM COEFFICIENT OF UTILIZATION (CU) FOR THE FOLLOWING CAVITY REFLECTANCES: CEILING = 80% WALL = 50% FLOOR = 20%
   LUMINANCE USING 3100L LAMP WITH AVG:MAX RATIO NOT TO EXCEED 1:5

ROOM CAVITY RATIO	TYPE: CU	A	B	C	D	E	AVG. LUMINANCE (fL)
1		0.67	0.50	0.73	0.68	0.67	45° - 2250
2		0.60	0.54	0.66	0.61	0.60	55° - 1605
3		0.54	0.48	0.59	0.55	0.54	65° - 1125
4		0.49	0.44	0.53	0.50	0.49	75° - 750
MIN. S/MH		1.2	1.1	1.3	1.3	1.3	85° - 495

PROVIDE MIN. VISUAL COMFORT PROBABILITY (VCP) OF 65 (ASSUME 30'X30'X10'H ROOM). WHEN "OFFICE TYPE" INDICATED, PROVIDE MIN. VCP OF 70.

9. PROVIDE MOUNTING HARDWARE COMPATIBLE WITH CEILING MATERIAL IN WHICH LUMINAIRE IS TO BE INSTALLED.

TYPE A - 2'X2' 2 LAMP
TYPE B - 1'X4' 2 LAMP
TYPE C - 2'X4' 2 LAMP
TYPE D - 2'X4' 3 LAMP
TYPE E - 2'X4' 4 LAMP

TROFFER
SKETCH No. 16510-3

NL- 3

NFGS-16510 (DEC. 1984)
SKETCH DATE: DEC 1984

SOLID-STATE SELF POWERED EXIT SIGNS USE NORMAL AC POWER FOR ILLUMINATION. UPON FAILURE OF NORMAL AC POWER, THE NICKEL CADMIUM SELF-CONTAINED BATTERY AUTOMATICALLY PROVIDES EMERGENCY ILLUMINATION FOR A MINIMUM OF 2 HOURS UTILIZING HIGH EFFICIENCY FLUORESCENT LAMPS.

SPECIFICATIONS:

EXIT SIGNS TO BE OF ALUMINUM CONSTRUCTION WITH A SCRATCH-RESISTANT, ARCHITECTURAL GRADE FINISH. SIGNS TO HAVE AN ALUMINUM FACE WITH 6" HIGH LETTERS (3/4" STROKE) AND A RED POLMER DIFFUSER. THE SATIN ALUMINUM POWER PACK HOUSING TO CONTAIN BATTERY, CHARGER AND CONTROLS - AND DESIGNED TO BE MOUNTED ON CEILING OR WALL.

EXITS TO HAVE TWO LONG-LIFE FLUORESCENT LAMPS FOR BOTH AC ILLUMINATION AND EMERGENCY LIGHTING. DOWN LIGHT IS STANDARD.

ALL UNITS TO BE FURNISHED WITH A TEST SWITCH FOR TESTING THE DC CIRCUIT OPERATION. FURNISHED AS STANDARD IN EACH UNIT - A SUPERVISORY MONITOR LIGHT INDICATES THE INTEGRITY OF THE ENTIRE ELECTRICAL SYSTEM INCLUDING BATTERY, LAMPS, CHARGER AND CIRCUITRY. IF ANY COMPONENT IN THE CIRCUIT IS NOT OPERATIVE THE MONITOR LIGHT WILL EXTINGUISH.

DURING NORMAL AC OPERATION UL LISTED BALLASTS PROVIDE POWER WHICH OPERATES INDIVIDUAL 6-WATT FLUORESCENT LAMPS. UPON FAILURE OF NORMAL AC POWER, SEMICONDUCTOR BALLASTS ARE SUPPLIED FROM THE NICKEL CADMIUM SELF-CONTAINED BATTERY PACK WHICH MAINTAINS THE EXIT AND DOWNLIGHT ILLUMINATION FOR 2 HOURS. U.L. LISTED TO 924 FOR 1½ HOURS.

UNITS TO BE FURNISHED TO OPERATE ON 120 VOLTS AC INPUT.

BATTERY AND CHARGER: THE SEALED NICKLE CADMIUM BATTERY TO BE MAINTENANCE-FREE AND TO HAVE A LIFE EXPECTANCY IN EXCESS OF 10 YEARS.

CHARGER TO BE COMPLETELY SOLID STATE WITH NO MOVING PARTS, FULLY AUTOMATIC AND TO PROVIDE A HIGH CHARGE RATE IMMEDIATELY AFTER RESTORATION OF AC SERVICE. IT WILL RECHARGE THE BATTERY TO MEET U.L. 924 REQUIREMENTS AND MAINTAIN THIS AT ITS RATED CONSTANT CURRENT.

SKETCH NFGS-16510-56

NL-70

NFGS-16510 (November 1983)
SKETCH DATE: MARCH 1983

LUMINAIRE REQUIREMENTS

1. 0.032" MINIMUM THICKNESS STEEL HOUSING WITH CORNERS WELDED. ALL 4 SIDES SHALL BE SOLID STEEL WITHOUT HOLES OR PANELS. 4-1/2" MAXIMUM FIXTURE HEIGHT. FINISH WITH RUST INHIBITOR AND BAKED WHITE ENAMEL. (PAINT AFTER FABRICATION.) PROVIDE GROUND LUG.
2. 0.032" MINIMUM THICKNESS STEEL OR ALUMINUM DOOR HELD TOGETHER BY SCREWS (FOR LENS REPLACEMENT). THE DOOR SHALL BE LIGHT TIGHT WITHOUT RELYING ON GASKETS. DOORS SHALL BE HELD IN PLACE BY 2 "T" TYPE HINGES AND 2 SLOT HEAD, CAPTIVE SCREWS.
3. LENS SHALL BE 0.156" PLUS OR MINUS 10% OVERALL (0.09 MAXIMUM PRISM PENETRATION) CLEAR PRISMATIC 100% ACRYLIC. WHEN INDICATED, PROVIDE AN ADDITIONAL 1/4" THICK POLYCARBONATE SHEET BELOW AND ATTACHED TO THE ACRYLIC LENS. (REDUCE LENS THICKNESS TO 0.10 MINIMUM.)
4. BALLAST SHALL BE HIGH POWER FACTOR ($\geq$ .9) ETL, CBM APPROVED RAPID START CLASS P ENERGY SAVING BALLAST WITH SOUND RATING OF "A". SECURE BALLAST TO HOUSING WITH AT LEAST ONE SCREW AND SLIP-ON BRACKET OR 2 SCREWS (ONE AT EACH END).

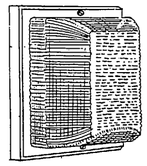
TYPE A - 2' X 2' 2 LAMP
TYPE B - 1' X 4' 2 LAMP
TYPE C - 2' X 4' 2 LAMP
TYPE D - 2' X 4' 3 LAMP
TYPE E - 2' X 4' 4 LAMP

STEEL SIDED SURFACE FLUORESCENT

SKETCH No. 16510-12

NL-12

NFGS-16510 (November 1983)
SKETCH DATE: MARCH 1983



LUMINAIRE REQUIREMENTS

1. 0.034-INCH MINIMUM THICK STEEL TEMPERED ALUMINUM OR POLYCARBONATE BACK PLATE.
2. POLYCARBONATE PRISMATIC DIFFUSER HELD IN PLACE WITH STAINLESS STEEL SCREWS.
3. FULLY GASKETED AROUND LENS AND BETWEEN WALL AND LUMINAIRE WITH DOUBLE BAKED NEOPRENE GASKETS.
4. U.L. LISTED FOR WET LOCATIONS.
5. MOUNT BACKPLATE TO WALL WITH 4-1/4" # SCREWS OR ANCHORS.
6. PROVIDE INTERNAL PROVISIONS FOR GROUNDING.

TYPE A - UP TO 100W INCANDESCENT
MAXIMUM DIMENSIONS 6"WX9"HX5"D

TYPE B - 7, 8, 9, 12, 13W FLUORESCENT LAMP (HOT. STD. FLOOR. LAMP FOR FIXTURE)
MAXIMUM DIMENSIONS 6"WX8"HX5"D
WITHOUT BALLAST

TYPE C - 35W HIGH PRESSURE SODIUM LAMP AS INDICATED
MAXIMUM DIMENSIONS 6-1/2"WX9-1/2"HX7-1/2"D

WALL-MOUNTED
VANDAL-RESISTANT LUMINAIRE

SKETCH No. 16510-47

NL-47

FIXTURE PLATE DETAILS

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED

GENERAL NOTES

1. THE EXISTING ELECTRICAL SYSTEM CONSISTS OF WIRE INSTALLED IN CONCEALED AND EXPOSED RIGID STEEL CONDUIT(RGS), ELECTRICAL METALLIC TUBING(EMT), MNC CABLE, ETC.
2. PROVIDE NEW INSULATED CONDUCTORS IN NEW RACEWAY SYSTEMS. U.N.O.
3. CONCEAL ALL RACEWAY EXCEPT IN STEAM PIT, ATTIC AND CRAWL SPACE AREAS.
4. EXPOSED SURFACE MOUNTED CONDUITS IN THE STEAM PIT SHALL BE PVC COATED RGS.
5. THE CONTRACTOR SHALL REMOVE ALL UNUSED, EXPOSED CONDUIT AND ALL WIRE THAT IS PART OF THE EXISTING ELECTRICAL SYSTEM, UNLESS OTHERWISE INDICATED HEREIN. IF CONDUIT IS EMBEDDED IN THE FLOOR OR CONCEALED IN THE WALLS OR CEILINGS, THE CONTRACTOR SHALL ABANDON IT IN PLACE IF NOT TO BE REUSED. THE CONTRACTOR SHALL CUT THE CONDUIT AT THE FLOOR OR ABOVE THE CEILING SO THAT NO ABANDONED CONDUIT IS LEFT VISIBLE.
6. THE CONTRACTOR SHALL REPAIR AND PATCH ALL WALLS, CEILINGS AND FLOORS DAMAGED IN THE INSTALLATION OR DEMOLITION OF THE ELECTRICAL WORK TO MATCH THE CONDITION OF THE SURROUNDING AND ADJACENT AREAS.
7. THE CONTRACTOR SHALL REPAIR AND/OR REPLACE INSULATION IN WALLS AND CEILINGS(TO A PRE-CONSTRUCTION CONDITION) DISTURBED BY THE WORK.
8. FUSED AND OVERLOAD ELEMENTS SHALL BE PROVIDED AS REQUIRED FOR THE EQUIPMENT SERVED. THE CONTRACTOR SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE REQUIREMENTS BY COORDINATION OF OVERLOAD ELEMENTS WITH MOTOR NAMEPLATE DATA AND MANUFACTURER'S DATA FOR HVAC EQUIPMENT.
9. BRANCH CIRCUITS WITH OVERALL LENGTH GREATER THAN 90 FEET THAT ARE PROTECTED BY 20 AMPERE CIRCUIT BREAKERS SHALL BE PROVIDED WITH AWG #10 WIRE.
10. THE ELECTRICAL RACEWAY SYSTEMS SHALL BE ELECTRICALLY AND MECHANICALLY CONTINUOUS TO PROVIDE A CONTINUOUS GROUND PATH. THE CONTRACTOR SHALL PROVIDE A GREEN COLORED, EQUIPMENT GROUNDING CONDUCTOR FOR ALL CONDUITS.
11. BRANCH CIRCUITS PROTECT BY 20 AMPERE CIRCUIT BREAKERS SHALL BE PROVIDED BY WITH 2#12, 1#12 GND CONDUCTORS. U.N.O. (SEE NOTE 9 ABOVE)

E-4

McKIM & CREED ENGINEERS, P.A.
243 N. FRONT STREET
WILMINGTON, NORTH CAROLINA

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

DES. GBH
DR. JLF, PRS
CHK. DHT
SUBMITTED BY:
DESIGN DIR.
APPROVED: PWO ON OICC DATE 6-16-87
SATISFACTORY TO: DATE

STRUCTURAL, ELECTRICAL, & MECHANICAL RENOVATIONS FOR BLDGS. 119, 221 & 421

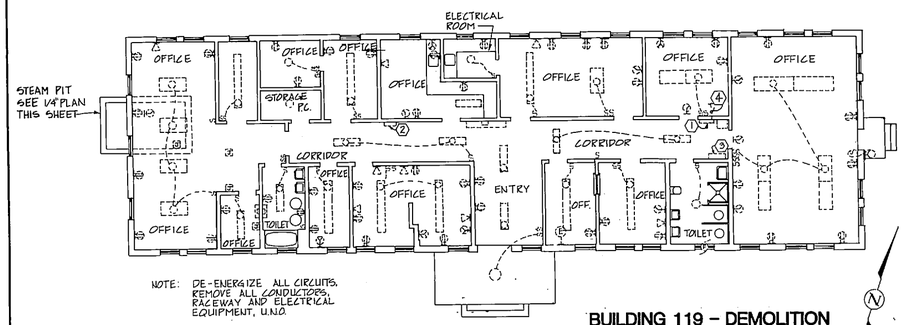
LEGEND AND SCHEDULE

SIZE	CODE IDENT. NO.	NAVFAC DRAWING NO.
F	80091	4152944
		CONSTR. CONTR. NO. N62470-86-B-5438

SCALE: GRAPHIC SPEC. 05-86-5438 SHEET 14 OF 16

NORTH CAROLINA PROFESSIONAL SEAL No. 13852 ENGINEER DONALD H. TINGLEY

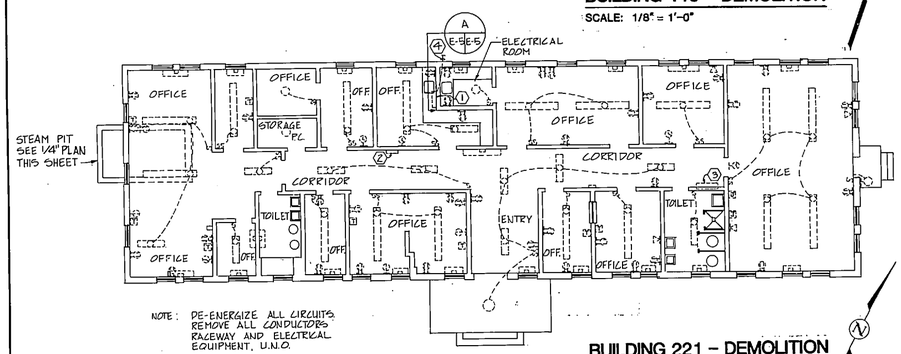
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED



NOTE: DE-ENERGIZE ALL CIRCUITS, REMOVE ALL CONDUCTORS, RACEWAY AND ELECTRICAL EQUIPMENT, U.N.O.

BUILDING 119 – DEMOLITION

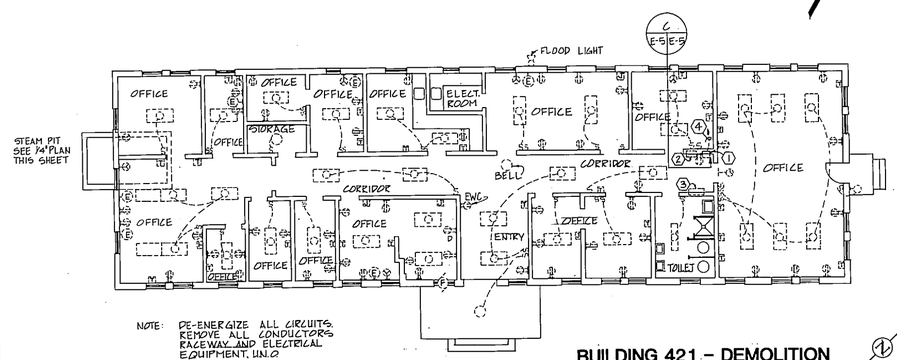
SCALE: 1/8" = 1'-0"



NOTE: DE-ENERGIZE ALL CIRCUITS REMOVE ALL CONDUCTORS RACEWAY AND ELECTRICAL EQUIPMENT, U.N.O.

BUILDING 221 – DEMOLITION

SCALE: 1/8" = 1'-0"



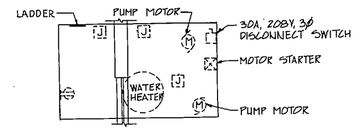
NOTE: DE-ENERGIZE ALL CIRCUITS REMOVE ALL CONDUCTORS RACEWAY AND ELECTRICAL EQUIPMENT, U.N.O.

BUILDING 421 – DEMOLITION

SCALE: 1/8" = 1'-0"

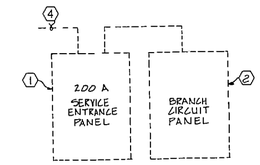
DEMOLITION NOTES THIS SHEET

1. REMOVE EXISTING MAIN DISTRIBUTION PANELBOARD. SEE DEMOLITION RISER THIS SHEET.
2. REMOVE EXISTING BRANCH CIRCUIT PANELBOARD. SEE DEMOLITION RISER THIS SHEET.
3. REMOVE TELEPHONE MAIN DISTRIBUTION CABINET(S).
4. REMOVE EXISTING SECONDARY SERVICE. SEE SITE PLAN FOR CONTINUATION.



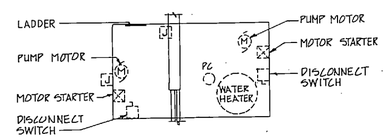
BUILDING 119 STEAM PIT DEMOLITION

SCALE: 1/4" = 1'-0"



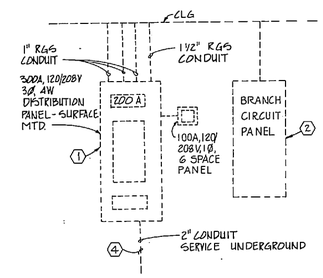
BUILDING 119 RISER DIAGRAM DEMOLITION

NOT TO SCALE



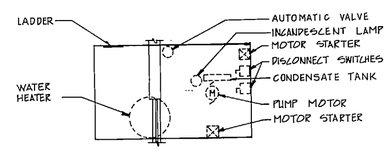
BUILDING 221 STEAM PIT DEMOLITION

SCALE: 1/4" = 1'-0"



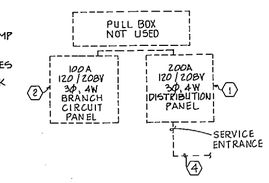
A E-5 E-5 **ELEVATION**

NOT TO SCALE



BUILDING 421 STEAM PIT DEMOLITION

SCALE: 1/4" = 1'-0"



C E-5 E-5 **ELEVATION**

NOT TO SCALE

GRAPHIC SCALE

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

1/4"=1'-0" 5' 0' 5' 10'

E-5

McKIM & CREED ENGINEERS, P.A.
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MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

STRUCTURAL, ELECTRICAL, & MECHANICAL RENOVATIONS FOR BLDGS. 119, 221 & 421

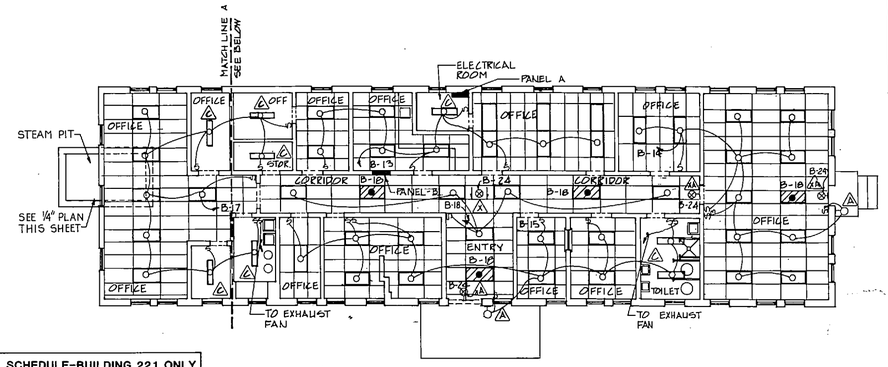
DEMOLITION - BLDGS. 119, 221 & 421

DES. GBH
DR. JLF, PRS
CHK. DTH
SUBMITTED BY:
DESIGN DIR. JLF
APPROVED: PWO OR OICC — DATE 6-16-87
SATISFACTORY TO: — DATE

NORTH CAROLINA PROFESSIONAL SEAL No. 13852 ENGINEER DONALD H. THRALL

SIZE F | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 4152945
CONSTR. CONTR. NO. N62470-86-B-5438
SCALE: GRAPHIC | SPEC. 05-86-5438 | SHEET 15 OF 16

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED



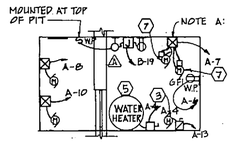
BUILDING 119, 221, 421 – NEW WORK – LIGHTING

SCALE: 1/8" = 1'-0"

NOTE: ALL 2'x4' LIGHTING FIXTURES ARE 2 LAMP. SEE LIGHTING SCHEDULE, FIXTURE (A) U.N.O. TAP EMERGENCY FIXTURES AHEAD OF SWITCH.

SEE SITE PLAN E-1, E-2, E-3 FOR NORTH ARROW

FAN COIL SCHEDULE-BUILDING 221 ONLY	
FAN COIL	AMPERE
9, 17, 19, 20, 3, 4, 5	1.2
1, 2, 6, 7, 8, 10, 11, 12, 13, 14, 15, 16, 18, 21	1.6

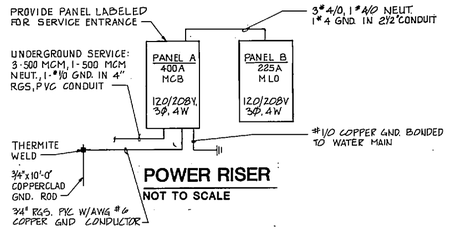


NOTE A: CONTRACT TO WIRE TO DUPLEX CONTROLLER BY PUMP MANUFACTURE

BUILDING 119, 221, 421 STEAM PIT

SCALE: 1/4 = 1'-0"

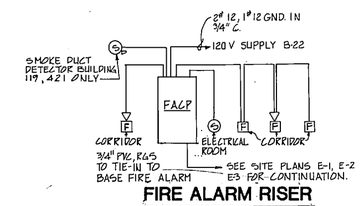
A PANEL SCHEDULE BUILDING 119, 221, 421 (SERVICE ENTRANCE RATED)											
TYPE BOLT-ON MOUNTING SURFACE ENCLOSURE NEMA-1 3Ø 4W											
VOLTS 120/208V MAIN 400 MCB SHORT CKT. RATING 22,000 A RMS SYM											
CKT NO	CKT BRKR TRIP	DESCRIPTION	PHASE LOADING A	B	C	CKT NO	CKT BRKR TRIP	DESCRIPTION	PHASE LOADING A	B	C
1	225/3	PANEL B	7827			2	20/3	AIR HANDLING UNIT	687		
				6975						687	
					7560						687
3	90/3	*CONDENSER	4203			4	50/3	WATER HEATER	4000		
				4203						4000	
					4203						4000
5	20/1	TOILET FAN (BLDGS 119, 221)	120			6	20/1	SUMP PUMP	864		
7	50/3	CONDENSATE		951		8	20/3	*CIRCULATION		900	
		PUMP MOTORS			951			PUMP (2 H.P.)			900
			951						900		
9	20/1	**HVAC CONTROLS				10	20/3	**COMPRESSOR MOTOR		265	
11	20/1	TOILET, SHOWER FAN			276			1/2 H.P.			265
13	20/1	CIRCULATING PUMP	696						265		
15		S/O				12		SPARE			
17						14					
19						16					
21						18					
23						20					
25						22		S/O			
27						24					
29						26					
SUBTOTAL			13797	12129	12792	SUBTOTAL			6716	5852	5852
TOTAL PANEL LOAD: AØ 172.9A BØ 149.8A CØ 155A											
NOTES * ALL FOR BUILDINGS 119 AND 421. CHILLER LOAD FOR BUILDING 221 IS 8755VA PER PHASE WITH 100A/3P CIRCUIT BREAKER									NEUTRAL TERMINAL BAR ☒ GROUND TERMINAL BAR ☒		
** BUILDING 221 ONLY											



POWER RISER

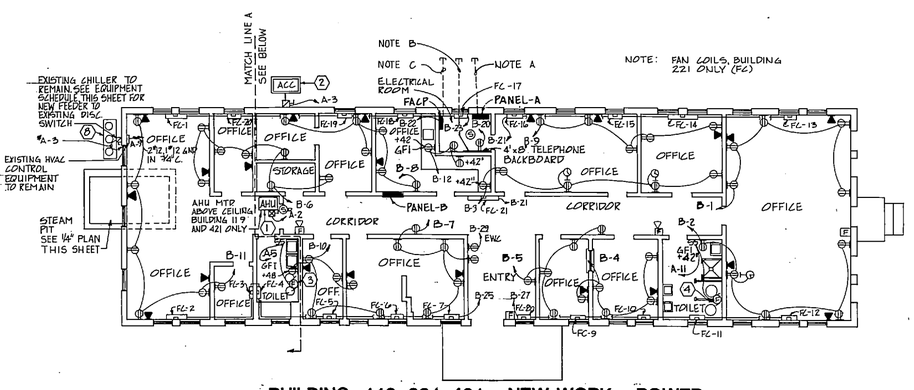
NOT TO SCALE

B PANEL SCHEDULE BUILDING 119, 221, 421											
TYPE BOLT-ON MOUNTING SURFACE ENCLOSURE NEMA-1 3Ø 4W											
VOLTS 120/208 MAIN 225 MLO SHORT CKT. RATING 22,000 A RMS SYM											
CKT NO	CKT BRKR TRIP	DESCRIPTION	PHASE LOADING A	B	C	CKT NO.	CKT BRKR TRIP	DESCRIPTION	PHASE LOADING A	B	C
1	20/1	RECEPTS -	900			2	20/1	RECEPTS	900		
3				900		4				900	
5					900	6					1260
7			1080			8			1080		
9				900		10				1080	
11					1080	12					540
13		LTS -	1200			14		LTS.	1135		
15		LTS -		1135		16		SPARE			
17		LTS -			1100	18		LTS - CORR., 24HR. & EMER.			900
19		LTS & REC. IN PIT	560			20		TELEPHONE	200		
21		* FC - 13, 14, 15, 16, 21		960		22		FIRE ALARM CONTROL PANEL		200	
23		* FC - 17, 18, 19, 20			780	24		EMERGENCY LTS			200
25		* FC - 2, 3, 4, 5, 6, 7	972			26		S/O			
27		* FC - 8, 9, 10, 11, 12		900		28					
29		E.W.C.			600	30					
31		S/O				32					
33						34					
35						36					
37						38					
39						40					
41						42					
SUBTOTAL			4512	4795	4460	SUBTOTAL			3315	2180	2900
TOTAL PANEL LOAD: AØ 45A BØ 58A CØ 61.3 A											
NOTES * FAN COIL UNITS ARE FOR BUILDING 221 ONLY OTHERWISE SPARE									NEUTRAL TERMINAL BAR ☒ GROUND TERMINAL BAR ☒		



FIRE ALARM RISER

NOT TO SCALE



NOTE: FAN COILS, BUILDING 221 ONLY (FC)

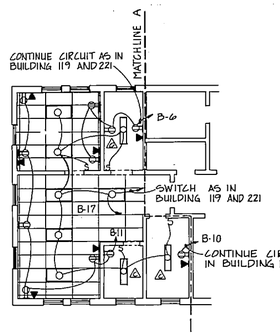
BUILDING 119, 221, 421 – NEW WORK – POWER

SCALE: 1/8" = 1'-0"

NOTE A: SEE SITE PLANS E-1 E-2 AND E-3 FOR CONTINUATION.

NOTE B: STUB-OUT 2" CONDUIT FOR TELEPHONE SERVICE TO 5'-0" OUTSIDE OF BUILDING. GROUND TELEPHONE EQUIPMENT WITH #2 BARE CU BOND AWG TO ELECTRICAL GROUNDING SYSTEM

NOTE C: STUB-OUT 3/4" CONDUIT TO TIE-IN TO BASE FIRE ALARM SYSTEM TO 5'-0" OUTSIDE OF BUILDING FOR "FUTURE" CONNECTION TO BASE FIRE ALARM FOR BLDGS. 119 & 221. SEE SITE PLAN E-3 FOR FIRE ALARM TIE-IN FOR BLDG 421.



BUILDING 421-NEW WORK POWER AND LIGHTING

SCALE: 1/8" = 1'-0"

SCHEDULE OF ELECTRICAL CONNECTIONS

NO	DESCRIPTION	HP	KW	AMPERES	PHASE	VOLTS	WIRE & CONDUIT	DISC. SWITCH	REMARKS
1	AIR HANDLING UNIT (AHU) BLD. 119 AND 421	1 1/2			3	208	3 #12, 1 #12 GND IN 3/4" C	COMBINATION STARTER 30A/3P, 240 V FUSE ACCORDING TO MFG. SPECS	COMB. STARTER - SIZE 0 AND DISCONNECT SWITCH MTD. ON UNIT IN ATTIC
2	CONDENSER (ALL) BLD. 119 AND 421 CONDENSER / FANS (3)	3/4		23.6	3	208	3 #3, 1 #8 GND IN 1 1/4" C	100A/3P, 240V WITH 90A FUSES	DISCONNECT SWITCH MTD. ON OUTSIDE WALL AT 3' AG
3	EXHAUST FAN (TOILET) EF-1			1	1	120	2 #12, 1 #12 GND IN 3/4" C	WALL SWITCH	INTERNALLY PROTECTED. MTD. IN CLG
4	EXHAUST FAN (SHOWER) EF-2			2.3	1	120	2 #12, 1 #12 GND IN 3/4" C	WALL SWITCH	INTERNALLY PROTECTED. MTD. IN CLG
5	WATER HEATER		12	33.3	3	208	3 #8, 1 #10 GND IN 1" C	60A/3P, 240V-30A/2P	DISCONNECT SWITCH MTD ON WALL (NEMA 4X)
6	CIRCULATING PUMP FOR HOT WATER	1/4			1	120	2 #12, 1 #12 GND IN 3/4" C		
7	CONDENSATE PUMPS (EA.) (PMP-1)	1		4.2	3	208	3 #10, 1 #12N, 1 #10 GND IN 1" C	SEE STEAM PIT PLAN	CONTROLS BY PUMP MFG.
8	EXISTING CHILLER BLD. 221 ONLY			72.9	3	208	3 #3, 1 #8 GND IN 1 1/4" C	EXISTING 100A/3P, 240V DISC. SW. TO REMAIN	EXISTING DISCONNECT MTD. ON OUTSIDE WALL TO REMAIN
9	CIRC. PUMP MOTOR (BLD. 221) (PMP-3)	2		6.8	3	208	3 #12, 1 #12 GND IN 3/4" C	20A/3P DISC. SWITCH / SIZE 0 STARTER - HAND-OFF-AUTO SELECTOR SWITCH	PUMP CONTROLLER IN NEMA 4X ENCLOSURE MTD WITHIN SIGHT OF MOTOR
10	COMPRESSOR MOTOR (BLD. 221)	1/2		2	3	208	3 #12, 1 #12 GND IN 3/4" C		
11	SUMP PUMP (PMP-2)	1/3		7.2	1	120	2 #12, 1 #12 GND IN 3/4" C	PLUG IN	-
12	FAN COILS (BLD. 221)	AS SHOWN			1	120	2 #12, 1 #12 GND IN 3/4" C	INTEGRAL TO MECH EQUIP	USE WIRE TYPE XHHW

GRAPHIC SCALE

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

1/4" = 1'-0" 5' 0' 5' 10' 15'

E-6

McKIM & CREED ENGINEERS, P.A.
243 N. FRONT STREET
WILMINGTON, NORTH CAROLINA

DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA

STRUCTURAL, ELECTRICAL, & MECHANICAL RENOVATIONS FOR BLDGS. 119, 221 & 421

NEW WORK-BLDGS. 119, 221 & 421

DES. ZFK
DR. JLF, PRS
CHK. DHT.
SUBMITTED BY:
DESIGN DIR. JLF
APPROVED: PWO OR OICC — DATE 6-16-87
SATISFACTORY TO: — DATE

NORTH CAROLINA PROFESSIONAL SEAL No. 13052 ENGINEER DONALD H. TINGLEY

SIZE F | CODE IDENT. NO. 80091 | NAVFAC DRAWING NO. 4152946
CONSTR. CONTR. NO. N62470-86-B-5438
SCALE: GRAPHIC | SPEC. 05-86-5438 | SHEET 16 OF 16