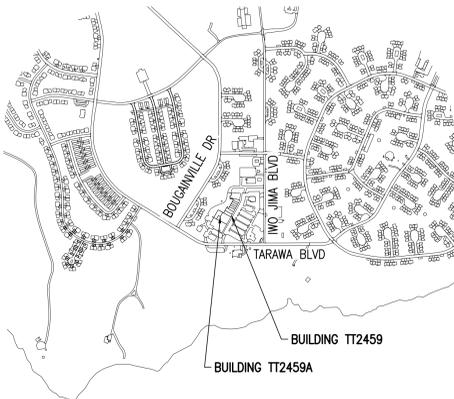
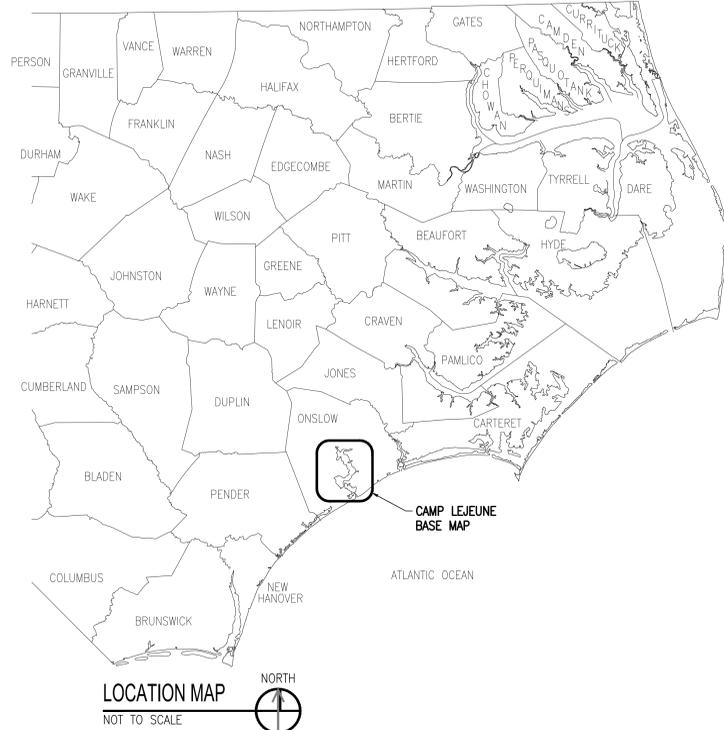


REVISIONS			
SYM		DATE	APPROVED

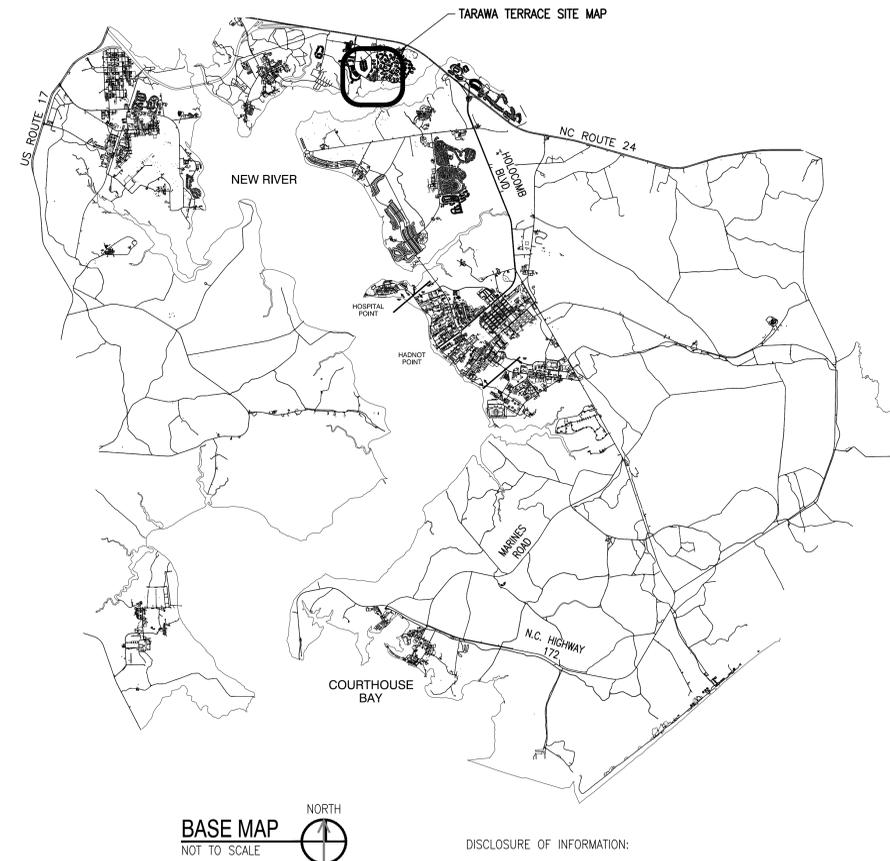


REPLACE HVAC, BUILDINGS TT2459 & TT2459A

FINAL SUBMISSION



NAVFAC DWG. NO.	CONTRACT NO.	SHT. NO.	SHEET TITLE
60022625	17-0113	G-001	COVER SHEET AND DRAWING INDEX
60022626	17-0113	S-001	STRUCTURAL GENERAL NOTES
60022627	17-0113	S-101	STRUCTURAL TT2459A ROOF FRAMING PLAN
60022628	17-0113	S-102	STRUCTURAL TT2459 ROOF FRAMING PLAN
60022629	17-0113	S-501	STRUCTURAL SECTIONS AND DETAILS
60022630	17-0113	AD101	ARCHITECTURAL TT2459 DEMOLITION FLOOR PLAN
60022631	17-0113	AD102	ARCHITECTURAL TT2459 DEMOLITION CEILING PLAN
60022632	17-0113	AD103	ARCHITECTURAL TT2459 DEMOLITION ROOF PLAN
60022633	17-0113	AD104	ARCHITECTURAL TT2459A DEMOLITION FLOOR PLAN
60022634	17-0113	AD105	ARCHITECTURAL TT2459A DEMOLITION CEILING PLAN
60022635	17-0113	AD106	ARCHITECTURAL TT2459A DEMOLITION ROOF PLAN
60022636	17-0113	A-101	ARCHITECTURAL TT2459 FLOOR PLAN
60022637	17-0113	A-102	ARCHITECTURAL TT2459A FLOOR PLAN
60022638	17-0113	A-131	ARCHITECTURAL TT2459 REFLECTED CEILING PLAN
60022639	17-0113	A-132	ARCHITECTURAL TT2459A REFLECTED CEILING PLAN
60022640	17-0113	A-151	ARCHITECTURAL TT2459 ROOF PLAN
60022641	17-0113	A-152	ARCHITECTURAL TT2459A ROOF PLAN
60022642	17-0113	A-521	ARCHITECTURAL TT2459 & TT2459A ROOF DETAILS
60022643	17-0113	A-751	ARCHITECTURAL TT2459A CASEWORK DETAILS
60022644	17-0113	FP001	FIRE PROTECTION LEGEND AND GENERAL NOTES
60022645	17-0113	FP101	FIRE PROTECTION FLOOR PLAN
60022646	17-0113	P-001	PLUMBING LEGEND, ABBREVIATIONS AND NOTES
60022647	17-0113	PD101	PLUMBING TT2459 DEMOLITION FLOOR PLAN
60022648	17-0113	PD102	PLUMBING TT2459A DEMOLITION FLOOR PLAN
60022649	17-0113	P-101	PLUMBING TT2459 PLANS
60022650	17-0113	P-102	PLUMBING TT2459A PLANS
60022651	17-0113	P-501	PLUMBING RISER DIAGRAM, DETAILS AND SCHEDULE
60022652	17-0113	M-001	MECHANICAL LEGEND, ABBREVIATIONS, PIPE LEGEND AND NOTES
60022653	17-0113	MD101	MECHANICAL TT2459 DEMOLITION FLOOR PLAN
60022654	17-0113	MD102	MECHANICAL TT2459A DEMOLITION FLOOR PLAN
60022655	17-0113	MD103	MECHANICAL TT2459 DEMOLITION ROOF PLAN
60022656	17-0113	MD104	MECHANICAL TT2459A DEMOLITION ROOF PLAN
60022657	17-0113	MH101	MECHANICAL TT2459 FLOOR PLAN
60022658	17-0113	MH102	MECHANICAL TT2459A FLOOR PLAN
60022659	17-0113	MH103	MECHANICAL TT2459 ROOF PLAN
60022660	17-0113	MH104	MECHANICAL TT2459A ROOF PLAN
60022661	17-0113	M-501	MECHANICAL DETAILS
60022662	17-0113	M-601	MECHANICAL SCHEDULES
60022663	17-0113	M-602	MECHANICAL SCHEDULES
60022664	17-0113	M-603	MECHANICAL SEQUENCE OF OPERATION AND CONTROL DIAGRAM
60022665	17-0113	E-001	ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES
60022666	17-0113	E-002	ELECTRICAL GENERAL NOTES
60022667	17-0113	ED101	ELECTRICAL TT2459 DEMOLITION FLOOR PLAN
60022668	17-0113	ED102	ELECTRICAL TT2459A DEMOLITION FLOOR PLAN
60022669	17-0113	ED103	ELECTRICAL TT2459 DEMOLITION ROOF PLAN
60022670	17-0113	E-101	ELECTRICAL TT2459 FLOOR PLAN
60022671	17-0113	E-102	ELECTRICAL TT2459A FLOOR PLAN
60022672	17-0113	E-103	ELECTRICAL TT2459 ROOF PLAN
60022673	17-0113	E-104	ELECTRICAL TT2459A ROOF PLAN
60022674	17-0113	E-501	ELECTRICAL DETAILS
60022675	17-0113	E-601	ELECTRICAL TT2459 SCHEDULES
60022676	17-0113	E-602	ELECTRICAL TT2459A SCHEDULES
60022677	17-0113	FA001	FIRE ALARM LEGEND AND GENERAL NOTES
60022678	17-0113	FA101	FIRE ALARM FLOOR PLAN
60022679	17-0113	FA501	FIRE ALARM DETAILS



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FINAL		G-001	
DEPARTMENT OF THE NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A			
DES. GRM		COVER SHEET AND DRAWING INDEX	
DR. GRM		NAVFAC DRAWING NO.	
CHK. DMH		60022625	
SUBMITTED BY:		CONST. CONTR.	
DESIGN DIR. T H BURTON, PE	DATE	SIZE	CODE IDENT. NO
APPROVED: PWO OR OICC	DATE	F	80091
SATISFACTORY TO:	DATE	SCALE: NOTED	SPEC. 05-17-0113
		SHEET 1 OF 55	



DESIGN CRITERIA:

- DESIGN CODE AND STANDARD:
 - 2012 INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS.
 - ASCE/SEI 7-10: MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES
- UNIFIED FACILITIES CRITERIA (UFC) STANDARDS:
 - UFC 1-200-01; GENERAL BUILDING REQUIREMENTS, CHANGE 2 ,20 JUNE 2016
 - UFC 3-301-01; STRUCTURAL ENGINEERING, CHANGE 3, 12 SEPTEMBER 2016
 - UFC 3-310-04; SEISMIC DESIGN FOR BUILDINGS, CHANGE 1, 20 JUNE 2016
- COLLATERAL LOAD – ROOF:

SINGLE-PLY ROOFING	_____	1.0 PSF
3" RIGID INSULATION	_____	4.5 PSF
WOOD SUBDECKING	_____	5.0 PSF
2X RAFTERS/CLG JOISTS	_____	3.4 PSF
MECHANICAL/ELECTRICAL	_____	2.0 PSF
SUSPENDED CEILING	_____	1.8 PSF
SPRINKLERS	_____	2.0 PSF
TOTAL DEAD LOAD	_____	23.1 PSF
- LIVE LOAD:

ROOF:		
ROOF LIVE LOAD	_____	20 PSF (REDUCIBLE)
MECHANICAL (HVAC)	_____	EQUIPMENT WT.
- OCCUPANCY CATEGORY _____ II (TYP)
- SNOW LOAD:

GROUND SNOW LOAD, Pg	_____	10 PSF (TYP)
IMPORTANCE FACTOR, I	_____	1.0 (TYP)
EXPOSURE FACTOR, Ce	_____	1.0 (TYP)
THERMAL FACTOR, Ct	_____	1.2

SNOW DRIFTS IN ACCORDANCE WITH SECTION 7 OF ASCE/SEI 7
- WIND LOAD:

BASIC WIND SPEED (3-SECOND GUST)	_____	138 MPH
RISK CATEGORY	_____	II
EXPOSURE	_____	C
INTERNAL PRESSURE COEFFICIENT, GCpi	_____	+/- 0.18
ENCLOSURE CLASSIFICATION	_____	ENCLOSED
- SEISMIC LOAD:

RISK CATEGORY	_____	II
SITE CLASS	_____	D (ASSUMED)

SPECTRAL RESPONSE ACCELERATIONS:

Ss	_____	0.120g
S1	_____	0.060g
Sds	_____	0.128g
Sd1	_____	0.096g

SEISMIC DESIGN CATEGORY _____ B
ANALYSIS PROCEDURE _____ EQUIVALENT LATERAL FORCE PROCEDURE

MECH COMPONENT – IMPORTANCE FACTOR, Ip	_____	1.0
COMPONENT AMPLIFICATION FACTOR, cp	_____	2.5
COMP. RESPONSE MODIFICATION FACTOR, Rp	_____	6
MECH. HORIZONTAL FORCE COEFFICIENT	_____	0.06

TIMBER:

- ALL TIMBER CONSTRUCTION SHALL CONFORM TO THE RECOMMENDATIONS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION.
- TIMBER SHOWN ON THE DRAWINGS ARE NOMINAL SIZES.
- ALL TIMBER INDICATED ON THE PLANS SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA USE CATEGORY UC2 FOR INTERIOR/DAMP TIMBER CONSTRUCTION, NOT IN CONTRACT WITH GROUND OR FOUNDATIONS BUT MAY BE SUBJECT TO DAMPNESS.
- PROVIDE SOLID SAWN TIMBER OF SOUTHERN PINE WITH A STRESS AS INDICATED BELOW AND AS IDENTIFIED BY THE GRAD MARK OF A RECOGNIZED ASSOCIATION COVERING THE SPECIES USED.
- MATERIAL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE NOTED:
 - A. TIMBER ROOF FRAMING: NO. 2 SOUTHERN YELLOW PINE
- TIMBER FRAMING CONNECTORS (HANGERS, FRAMING ANGLES, ETC.) SHALL BE A MINIMUM OF 18 GAUGE, COLD-FORMED, GALVANIZED TIMBER FRAMING WITH MINIMUM LOAD CAPACITY AS INDICATED. UTILIZE MANUFACTURER'S STANDARD NAILS OR SCREWS FOR ATTACHING CONNECTOR TO EXISTING/NEW TIMBER FRAMING.
- UTILIZE LIGHT GAGE FRAMING CONNECTORS AS MANUFACTURED BY SIMPSON STRONG-TIE, USP STRUCTURAL CONNECTORS, CLEVELAND STEEL SPECIALTY COMPANY OR EQUIVALENT PRODUCT THAT HAS BEEN TESTED AND CONTAINS AN ICC-ES REPORT.

STRUCTURAL ABBREVIATIONS

@	AT	GA	GAGE or GAUGE	R	RISER
>	GREATER THAN	GA	GALVANIZED	RAD	RADIUS
<	LESS THAN	GB	GRADE BEAM	RC	REINFORCED CONCRETE
=	EQUALS	GDRL	GUARDRAIL	RD	ROOF DRAIN
+/-	PLUS OR MINUS	GR	GRADE	RDAA	REBAR DOWEL ADHESIVE ANCHOR
		GRTG	GRATING	RECT	RECTANGULAR
AB	ANCHOR BOLT	HAS	HEADED ANCHOR STUD	REF	REFER TO
ADDL	ADDITIONAL	HDRL	HANDRAIL	REIN	REINFORCEMENT
ALT	ALTERNATE	HK	HOOK	REQD	REQUIRED
ALUM	ALUMINUM	HORIZ	HORIZONTAL	SC	SLIP--CRITICAL
APPD	APPROVED	HP	HIGH POINT	SCHED	SCHEDULE
APPROX	APPROXIMATE	HSS	HOLLOW STRUCTURAL SECTION	SECT	SECTION
ARCH	ARCHITECTURAL	HT	HEIGHT	SHT	SHEET
		I.D.	INSIDE DIAMETER	SIM	SIMILAR
BF	BOTTOM FACE	I.F.	INSIDE FACE	SOC	SLAB ON GRADE
BLDG	BUILDING	IN	INCH	SPA	SPACING
BM	BEAM	INFO	INFORMATION	SPEC	SPECIFICATION
B.O.	BOTTOM OF	INT	INTERIOR	SQ	SQUARE
BOS	BOTTOM OF STEEL	JST	JOIST	STD	STANDARD
BOSD	BOTTOM OF STEEL DECK	JT	JOINT	STGR	STRINGER
BOT	BOTTOM			STIF	STIFFENER
BP	BASE PLATE	K	KIPS	STIR	STIRRUP
BRCC	BRACING	KSF	KIPS PER SQUARE FOOT	STL	STEEL
BRDG	BRIDGING	KSI	KIPS PER SQUARE INCH	STRUCT	STRUCTURAL
BRG	BEARING			SYM	SYMMETRICAL
		L	LENGTH	T	TREAD
C TO C	CENTER TO CENTER	LBS	POUNDS	T&B	TOP AND BOTTOM
CG	CENTER OF GRAVITY	LF	LINEAR FEET	TEMP	TEMPERATURE
CIP	CAST-IN-PLACE	LL	LIVE LOAD	TF	TOP FACE
CTLJ	CONTROL / CONTRACTION JOINT	LLH	LONG LEG HORIZONTAL	THK	THICKNESS
CJP	COMPLETE JOINT PENETRATION	LLV	LONG LEG VERTICAL	T.O.	TOP OF
CL	CENTER LINE	LNTL	LINTEL	TOC	TOP OF CONCRETE
CLG	CEILING	LONG	LONGITUDINAL	TOF	TOP OF FOOTING
CLR	CLEAR	LP	LOW POINT	TOS	TOP OF STEEL
CMU	CONCRETE MASONRY UNIT	LWT	LIGHTWEIGHT	TOW	TOP OF WALL
C.O.	CONTRACTING OFFICER	MAS	MASONRY	TRANS	TRANSVERSE
COL	COLUMN	MAX	MAXIMUM	TYP	TYPICAL
CONC	CONCRETE	MB	MACHINE BOLTS	UNO	UNLESS NOTED OTHERWISE
CONN	CONNECTION	MECH	MECHANICAL	VERT	VERTICAL
CONST	CONSTRUCTION	MFR	MANUFACTURER		
CONT	CONTINUOUS	MIN	MINIMUM	W/	WITH
CTR	CENTER	MISC	MISCELLANEOUS	W/O	WITHOUT
		mm	MILLIMETER(S)	WL	WIND LOAD
D	DEPTH	MTL	METAL	WP	WORK POINT
DBA	DEFORMED BAR ANCHOR	MWFRS	MAIN WIND FORCE RESISTING SYSTEM	WT	WEIGHT
DBL	DOUBLE	N/A	NOT APPLICABLE	WWF	WELDED
DIA	DIAMETER	NO.	NUMBER		WIRE
DIAG	DIAGONAL	NS	NEAR SIDE		FABRIC
DIM	DIMENSION	NTS	NOT TO SCALE		
DL	DEAD LOAD	OC	ON CENTER		
DN	DOWN	OD	OUTSIDE DIAMETER		
DWG	DRAWING	O.F.	OUTSIDE FACE		
DWL	DOWEL	OH	OPPOSITE HAND		
		OPNG	OPENING		
EA	EACH	OPP	OPPOSITE		
EF	EACH FACE	OSL	OUTSTANDING LEG		
EJ	EXPANSION JOINT	PAF	POWDER ACTUATED FASTENER		
EL	ELEVATION	PC	PRECAST		
ELEC	ELECTRICAL	PCF	POUNDS PER CUBIC FOOT		
EMBED	EMBEDMENT	PUF	PREMOLDED JOINT FILLER		
EOD	EDGE OF DECK	PL	PLATE		
EOS	EDGE OF SLAB	PLF	POUNDS PER LINEAR FOOT		
EQ	EQUAL	PROJ	PROJECTION		
EQL SP	EQUALLY SPACED	PSF	POUNDS PER SQUARE FOOT		
EQUIP	EQUIPMENT	PSI	POUNDS PER SQUARE INCH		
EW	EACH WAY	QTY	QUANTITY		
EXIST	EXISTING				
EXT	EXTERIOR				
FD	FLOOR DRAIN				
FDN	FOUNDATION				
FF	FINISHED FLOOR				
FG	FINISHED GRADE				
FL	FLOOR				
FLG	FLANGE				
FS	FAR SIDE				
FT	FEET				
FTG	FOOTING				

GENERAL

- STRUCTURAL DRAWINGS SHALL NOT BE SCALED. REFERENCE SCALES INDICATED ON THE DRAWINGS ARE INTENDED FOR INFORMATION USE ONLY AND SHALL NOT BE USED TO DETERMINE SPECIFIC DIMENSIONS OR QUANTITY OF MATERIALS.
- PRIOR TO FABRICATION AND CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AND DIMENSIONS ASSOCIATED WITH THE WORK. ALL OMISSIONS OR CONFLICTS BETWEEN VARIOUS ELEMENTS OF THE CONTRACT DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE C.O. PRIOR TO PROCEEDING WITH RELATED WORK.
- SPECIFICATIONS SHALL BE USED IN CONJUNCTION WITH THE DRAWINGS FOR PURPOSES OF BIDDING, SCHEDULING, AND CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WITH THE C.O. TO LOCATE ALL EXISTING UNDERGROUND UTILITIES AND BURIED ITEMS PRIOR TO CONSTRUCTING FOUNDATIONS.
- THE STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE AND DO NOT INDICATE THE METHOD OF CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN LIVE LOADS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK RELATED TO CONSTRUCTION, ERECTION METHODS, BRACING, SHORING, RIGGING, GUYS, SCAFFOLDING, FORMWORK, ETC. REQUIRED TO SAFELY PERFORM THE WORK.
- STRUCTURAL MEMBERS SHALL NOT BE CUT (FOR PIPES, DUCTS, ETC.) UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE C.O..
- VERIFY SIZE AND LOCATION OF ALL OPENINGS THROUGH FLOORS, WALLS, SLABS, AND ROOFS WITH MECHANICAL, ELECTRICAL, AND ARCHITECTURAL DRAWINGS, AND WITH EQUIPMENT FURNISHED PRIOR TO PROCEEDING WITH RELATED WORK.
- NOTES AND DETAILS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL STRUCTURAL NOTES AND TYPICAL DETAILS.
- TYPICAL DETAILS AS SHOWN ON THE DRAWINGS APPLY TO SIMILAR SITUATIONS OCCURRING ON THE PROJECT WHETHER OR NOT THEY ARE IDENTIFIED IN EACH LOCATION. COORDINATE WITH THE C.O. FOR INTERPRETATION OF APPLICABILITY OF TYPICAL DETAILS.

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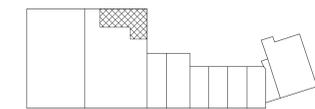
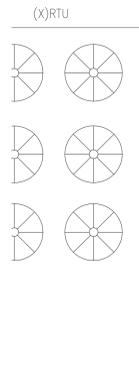
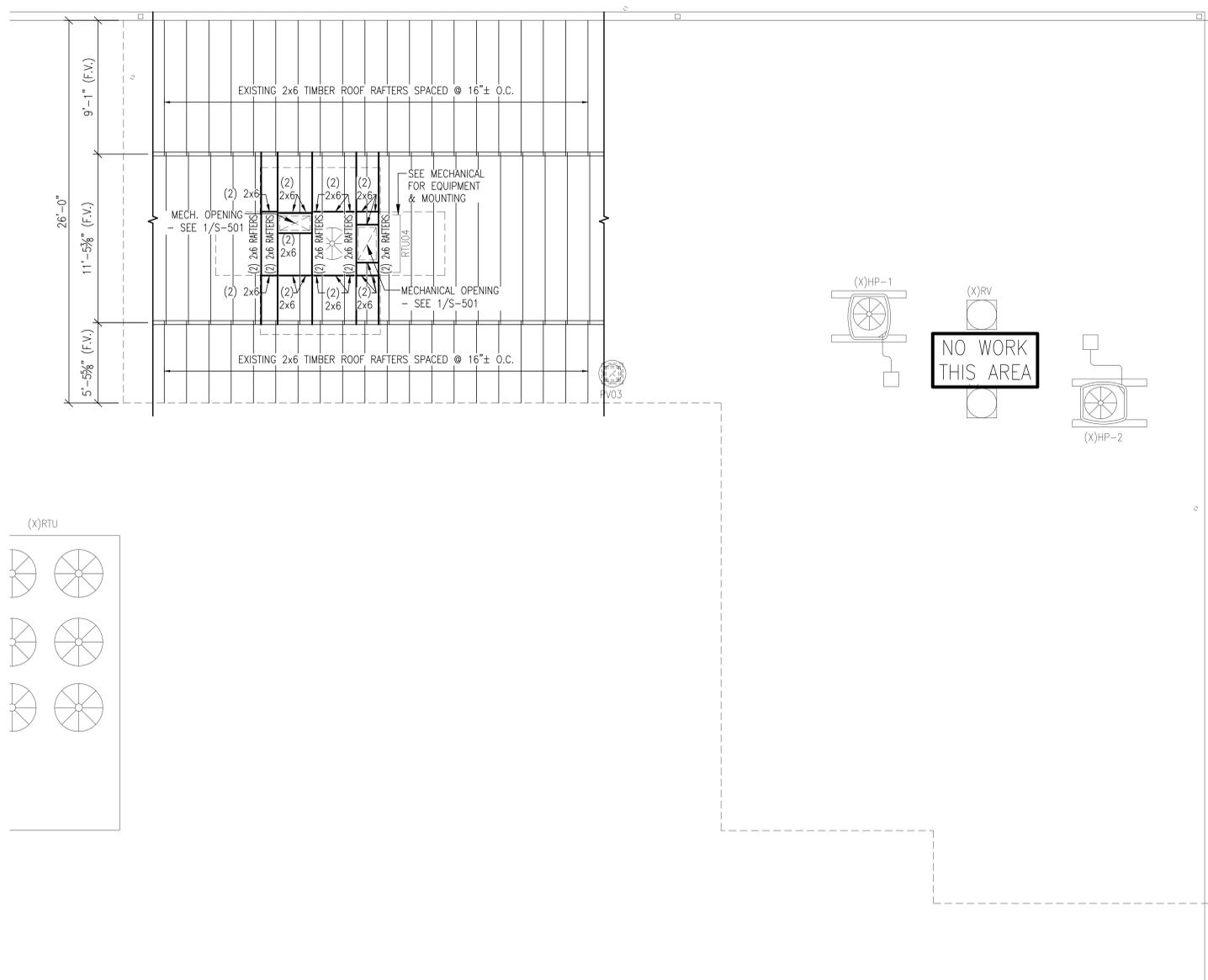
FINAL		S-001	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A STRUCTURAL GENERAL NOTES			
DES.	JRT	DATE	SIZE
DR.	SKS	DATE	SIZE
CHK.	JRT	DATE	SIZE
SUBMITTED BY:		DATE	SIZE
DESIGN DIR.	T H BURTON, PE	DATE	SIZE
APPROVED: PWO OR OICC	DATE	NAVFAC DRAWING NO.	60022626
SATISFACTORY TO:	DATE	CONST. CONTR.	
SCALE: NOTED		SPEC. 05-17-0113	SHEET 2 OF 55



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JOB NO. 7416.16



REVISIONS		
SYM	DATE	APPROVED



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TT2459A - ROOF FRAMING PLAN
1/4"=1'-0"



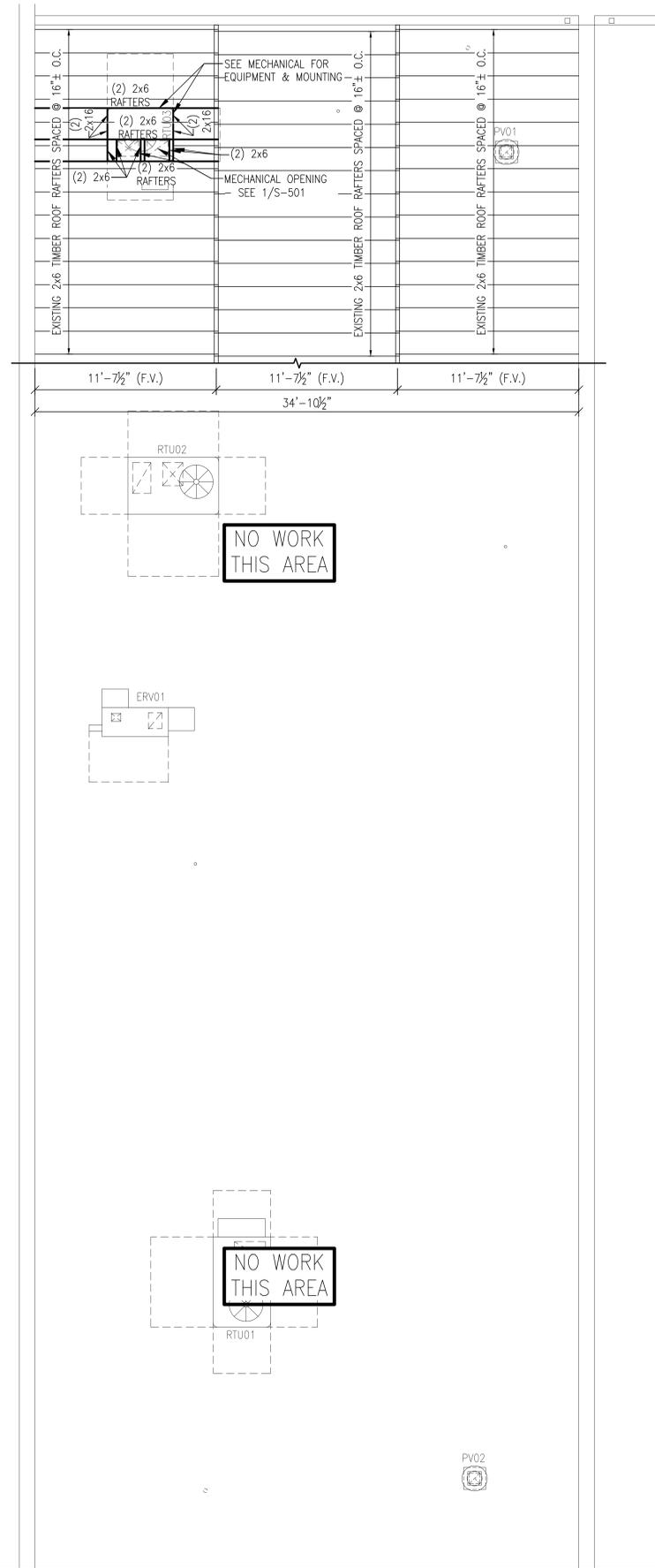
CRISER TROUTMAN TANNER
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910.397.2929 Ph.
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Website: www.ctengineering.com
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17230

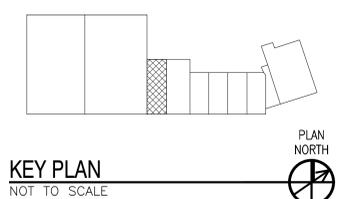
R. TROUTMAN
REGISTERED PROFESSIONAL ENGINEER
STATE OF NORTH CAROLINA
LICENSE NO. 7-11,241B

FINAL		S-101	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A STRUCTURAL TT2459A ROOF FRAMING PLAN			
DES.	JRT	SIZE	CODE IDENT. NO.
DR.	SKS	F	80091
CHK.	JRT	DATE	NAVFAC DRAWING NO.
SUBMITTED BY:		60022627	
DESIGN DIR.	T H BURTON, PE	DATE	CONST. CONTR.
APPROVED:	PWO OR OICC	SCALE:	NOTED
SATISFACTORY TO:		SPEC. 05-17-0113	
		SHEET 3 OF 55	

REVISIONS		
SYM	DATE	APPROVED



TT2459A - ROOF FRAMING PLAN
1/4"=1'-0"



KEY PLAN
NOT TO SCALE

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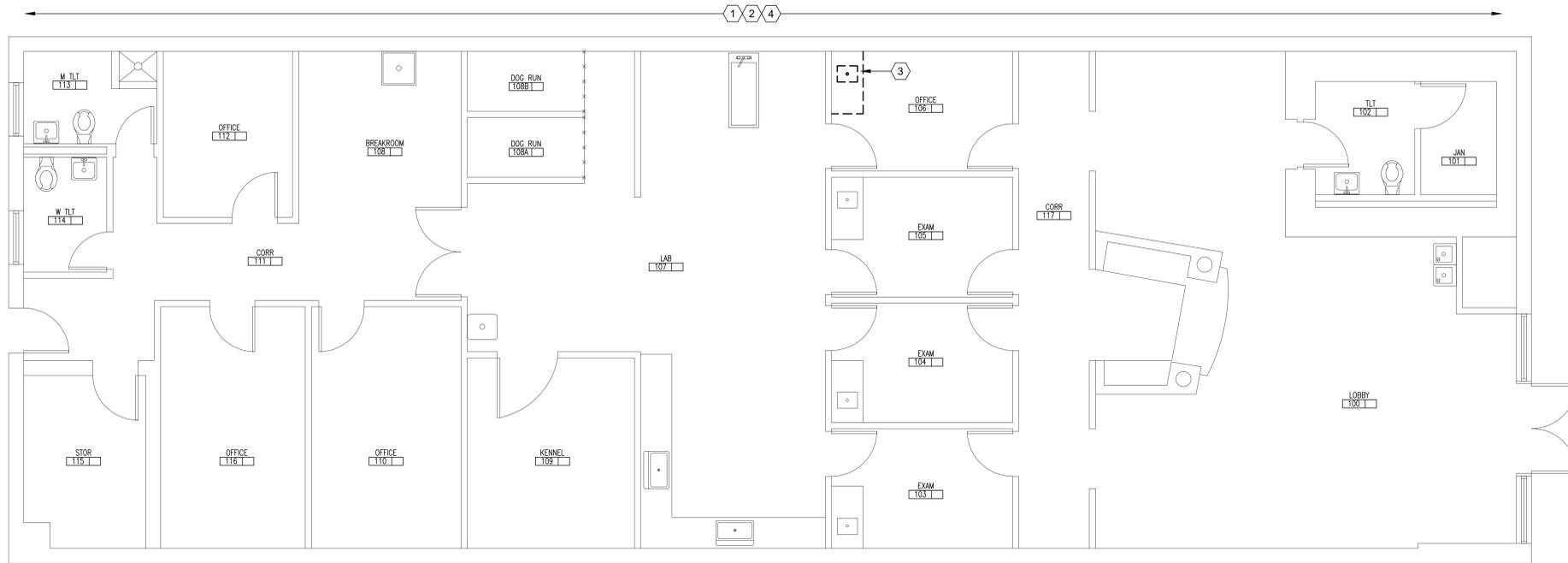
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17230

FINAL		S-102	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A STRUCTURAL TT2459 ROOF FRAMING PLAN			
DES.	JRT	SIZE	CODE IDENT. NO.
DR.	SKS	F	80091
CHK.	JRT	NAVY DRAWING NO.	60022628
SUBMITTED BY:		CONST. CONTR.	
DESIGN DIR.	T H BURTON, PE	SCALE:	NOTED
APPROVED:	PWO OR OICC	DATE	
SATISFACTORY TO:		DATE	
		SPEC.	05-17-0113
		SHEET	4 OF 55

REVISIONS			
SYM		DATE	APPROVED



DEMOLITION KEYED NOTES	
1	COVER AND PROTECT EXISTING FLOORING FROM DAMAGE.
2	PROTECT EXISTING WALLS, BASE, DOORS, WINDOWS, CASEWORK, ETC. FROM DAMAGE.
3	REMOVE AND DISPOSE OF EXISTING COUNTER AND SINK. CAP PLUMBING INSIDE WALL. SEE PLUMBING DRAWINGS.
4	PROVIDE TEMPORARY FILTERS ON EXISTING RETURN AIR INLETS THAT MAY BE OPERATIONAL DURING CONSTRUCTION.

TT2459 DEMOLITION FLOOR PLAN
1/4"=1'-0"



GENERAL CONSTRUCTION NOTES	
1. LIMIT CONSTRUCTION ACTIVITIES TO DESIGNATED AREAS OF WORK.	25. ALL MATERIALS THAT ARE USED IN THE CONSTRUCTION SHALL BE MANUFACTURED IN THE USA AND DELIVERED TO THE SITE WITH PROOF OF SUCH AND SHALL BE STORED WITHIN THE PERIMETER FENCE UNTIL INCORPORATED INTO THE WORK.
2. OWNER SHALL REMOVE ALL FURNISHINGS AND EQUIPMENT PRIOR TO BEGINNING OF CONSTRUCTION.	26. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING FINISHES AND EQUIPMENT DURING CONSTRUCTION.
3. THE CONTRACTOR, SUBCONTRACTORS AND THEIR EMPLOYEES SHALL ABIDE BY ALL BADGING, SECURITY, AND CONDUCT REQUIREMENTS REQUIRED BY THE OWNER.	27. BUILDING FIRE ALARM AND OTHER LIFE SAFETY SYSTEMS SHALL REMAIN OPERATIONAL. PROTECT SYSTEMS AND DEVICES FROM DAMAGE.
4. MAINTAIN CORRIDORS AND PATHS OF EGRESS AT ALL TIMES. DO NOT BLOCK EXITS, STAIRS, RAMP, ETC.	28. COVER ALL EXISTING FLOORING AND PROTECT FROM DAMAGE. PROTECT WALLS, TRIM AND DOORS FROM DAMAGE.
5. CONTRACTOR (WITH ESCORT) SHALL PHOTOGRAPH EXISTING CONDITIONS OF AREAS WHERE DEMOLITION ACTIVITIES OCCUR TO DOCUMENT EXISTING CONDITIONS.	29. COVER ALL SMOKE HEADS IN CONSTRUCTION AREA DURING CONSTRUCTION. REMOVE COVERS AFTER WORK HOURS TO MAINTAIN COVERAGE.
6. CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, FINISHES, PARTITIONS, BUILDING SYSTEMS AND OTHER ELEMENTS THAT REMAIN FROM DAMAGE.	30. EXISTING SECURITY CAMERAS SHALL REMAIN OPERATIONAL IN WORK AREAS.
7. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING BUILDING, STRUCTURE, FINISHES, PARTITIONS, BUILDING SYSTEMS AND OTHER ELEMENTS TO REMAIN.	31. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING FINISHES AND EQUIPMENT DURING CONSTRUCTION.
8. CONTRACTOR SHALL MAKE ALL CUTS TO EXISTING ELEMENTS IN SUCH A WAY AS TO PREVENT DAMAGE TO ADJACENT ELEMENTS AND TO FACILITATE THE PATCHING OF THE EXISTING ELEMENTS AND INTERFACE WITH NEW CONSTRUCTION.	
9. CONTRACTOR SHALL PATCH, REPAIR, AND PREP ALL EXISTING WALL & FLOOR SUBSTRATES FROM DEMOLITION WORK OR EXISTING CONDITIONS TO A LEVEL SUITABLE FOR THE INSTALLATION OF NEW FINISHES.	
10. ALL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES & REGULATIONS.	
11. ALL AREAS OF CONSTRUCTION SHALL BE SECURED SO AS TO LIMIT ACCESS BY UNAUTHORIZED PERSONS.	
12. ALL FACILITIES WHERE CONSTRUCTION OCCURS SHALL BE SECURED DAILY UPON THE COMPLETION OF THE WORK DAY. SECUREMENT METHODS & EMERGENCY ACCESS SHALL BE APPROVED BY THE OWNER.	
13. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND QUANTITIES NECESSARY TO COMPLETE THE WORK AS DESCRIBED OR INTENDED IN THE CONTRACT DOCUMENTS.	
14. WEEKDAY WORK HOURS ARE FROM 0700 TO 1700. WEEKEND WORK HOURS ARE FROM 0600 TO 1800.	
15. THE BUILDING/FACILITY MAY BE PARTIALLY IN USE/OCCUPIED DURING CONSTRUCTION.	
16. PROVIDE OWNER WITH A MINIMUM 72 HOUR NOTICE AND OBTAIN APPROVAL FOR ACTIVITIES THAT COULD INTERRUPT OR IMPACT THE USE OR OPERATION OF THE EXISTING BUILDING/FACILITY.	

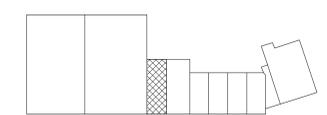
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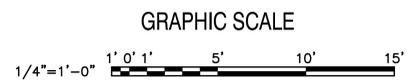
1. THE CONTRACTING OFFICER HAS GIVEN PRIOR WRITTEN APPROVAL;
2. THE INFORMATION IS OTHERWISE IN THE PUBLIC DOMAIN BEFORE THE DATE OF THE RELEASE.

B. REQUESTS FOR APPROVAL SHALL IDENTIFY THE SPECIFIC INFORMATION TO BE RELEASED, THE MEDIUM TO BE USED, AND THE PURPOSE FOR THE RELEASE. THE CONTRACTOR SHALL SUBMIT ITS REQUEST TO THE CONTRACTING OFFICER AT LEAST 45 DAYS BEFORE THE PROPOSED DATE FOR RELEASE.

C. THE CONTRACTOR AGREES TO INCLUDE A SIMILAR REQUIREMENT IN EACH SUBCONTRACT UNDER THIS CONTRACT. SUBCONTRACTORS SHALL SUBMIT REQUESTS FOR AUTHORIZATION TO RELEASE THROUGH THE PRIME CONTRACTOR TO THE CONTRACTING OFFICER.

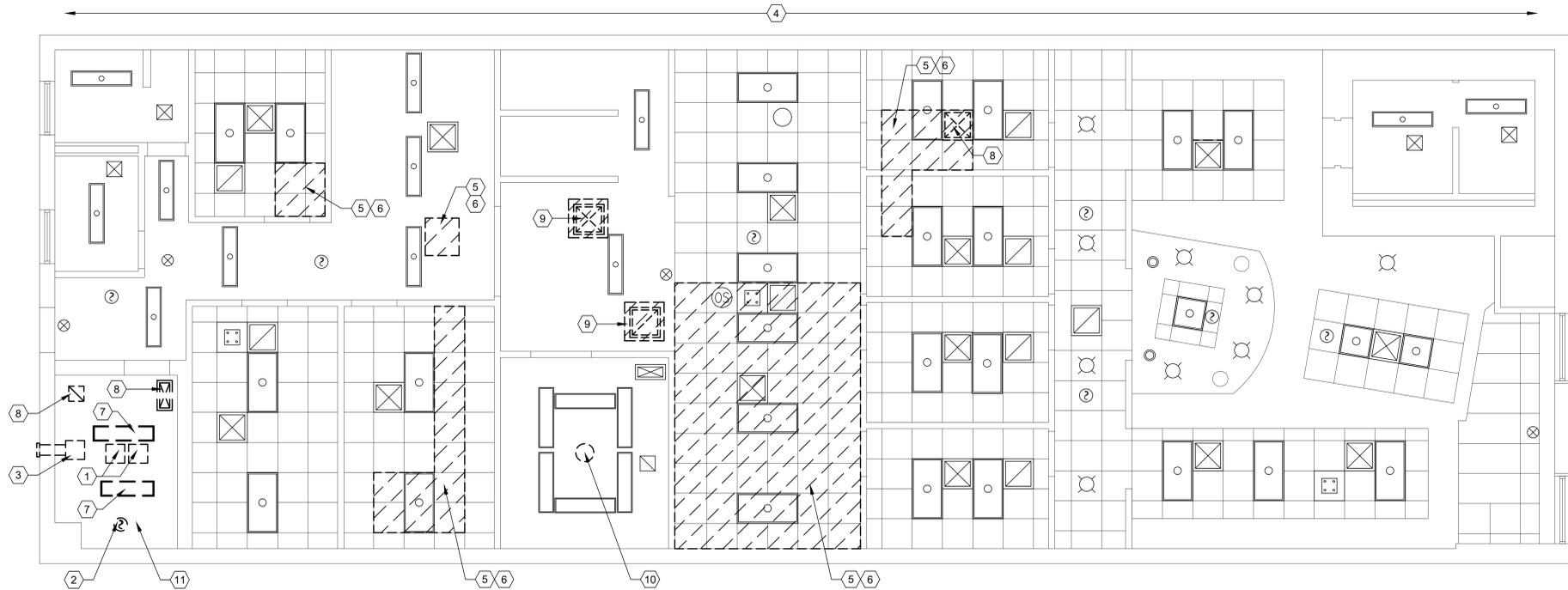


KEY PLAN
NOT TO SCALE



FINAL		AD101	
DEPARTMENT OF THE NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A ARCHITECTURAL DEMOLITION FLOOR PLAN			
DES. RMC	DATE	SIZE	CODE IDENT. NO.
DR. LJR		F	80091
CHK. RMC			
SUBMITTED BY: -			
DESIGN DIR. T H BURTON, PE			
APPROVED: PWO OR OICC	DATE	NAVFAC DRAWING NO.	CONST. CONTR.
		60022630	
SATISFACTORY TO:	DATE	SCALE: NOTED	SPEC. 05-17-0113
			SHEET 6 OF 55

REVISIONS			
SYM		DATE	APPROVED



TT2459 DEMOLITION CEILING PLAN
1/4"=1'-0"



- DEMOLITION KEYED NOTES**
- REMOVE EXISTING ACCESS DOOR.
 - REMOVE EXISTING SMOKE DETECTOR AND SAVE FOR REINSTALLATION.
 - REMOVE EXISTING EXHAUST FAN. SEE MECHANICAL DRAWINGS.
 - PROVIDE TEMPORARY FILTERS ON RETURN AIR INLETS THAT MAY REMAIN OPERATIONAL DURING CONSTRUCTION.
 - REMOVE PORTION OF EXISTING GWB CEILING AS NECESSARY TO INSTALL NEW GRILLES AND/OR DUCTWORK. SEE MECHANICAL DRAWINGS.
 - THE AREA OF CEILING WORK INDICATED ON THE PLAN IS APPROXIMATE. THE CONTRACTOR SHALL REMOVE AS LITTLE OR AS MUCH OF THE EXISTING CEILING AS NEEDED TO PERFORM THE ABOVE CEILING WORK.
 - REMOVE EXISTING LIGHT FIXTURES. SEE ELECTRICAL DRAWINGS.
 - REMOVE EXISTING CEILING DIFFUSERS/GRILLES. SEE MECHANICAL DRAWINGS.
 - REMOVE EXISTING GRILLE AND PATCH GWB CEILING AS NECESSARY TO INSTALL NEW GRILLE/ REGISTER FAN AND DUCTWORK. SEE MECHANICAL DRAWINGS.
 - REMOVE SURGICAL LIGHT AND MOUNTING SUPPORTS UP TO THE STRUCTURE.
 - REMOVE EXISTING GWB CEILING AND SUPPORT FRAMING.

- SYMBOL LEGEND**
- 2'x4' LIGHTING FIXTURE
 - 1'x2' LIGHTING FIXTURE
 - 2'x2' LIGHTING FIXTURE
 - DOWNLIGHT OR PENDANT LIGHT FIXTURE
 - MECHANICAL DIFFUSERS
 - TELEVISION MOUNT
 - OCCUPANCY SENSOR
 - SPEAKER
 - CEILING MOUNTED FIRE ALARM
 - SMOKE DETECTOR
 - WI-FI ANTENNA
 - EXIT SIGN
 - SPRINKLER HEAD
- NOTE: ALL SYMBOLS MAY NOT BE USED

- GENERAL CONSTRUCTION NOTES**
- LIMIT CONSTRUCTION ACTIVITIES TO DESIGNATED AREAS OF WORK.
 - OWNER SHALL REMOVE ALL FURNISHINGS AND EQUIPMENT PRIOR TO BEGINNING OF CONSTRUCTION.
 - THE CONTRACTOR, SUBCONTRACTORS AND THEIR EMPLOYEES SHALL ABIDE BY ALL BADGING, SECURITY, AND CONDUCT REQUIREMENTS REQUIRED BY THE OWNER.
 - MAINTAIN CORRIDORS AND PATHS OF EGRESS AT ALL TIMES. DO NOT BLOCK EXITS, STAIRS, RAMP, ETC.
 - CONTRACTOR (WITH ESCORT) SHALL PHOTOGRAPH EXISTING CONDITIONS OF AREAS WHERE DEMOLITION ACTIVITIES OCCUR TO DOCUMENT EXISTING CONDITIONS.
 - CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, FINISHES, PARTITIONS, BUILDING SYSTEMS AND OTHER ELEMENTS THAT REMAIN FROM DAMAGE.
 - CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING BUILDING, STRUCTURE, FINISHES, PARTITIONS, BUILDING SYSTEMS AND OTHER ELEMENTS TO REMAIN.
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 - WEEKDAY WORK HOURS ARE FROM 0700 TO 1700. WEEKEND WORK HOURS ARE FROM 0600 TO 1800.
 - THE BUILDING/FACILITY WILL REMAIN IN USE/OCCUPIED DURING CONSTRUCTION.
 - PROVIDE OWNER WITH A MINIMUM 48 HOUR NOTICE AND OBTAIN APPROVAL FOR ACTIVITIES THAT COULD INTERRUPT OR IMPACT THE USE OR OPERATION OF THE EXISTING BUILDING/FACILITY.
 - BUILDING FIRE ALARM AND OTHER LIFE SAFETY SYSTEMS SHALL REMAIN OPERATIONAL. PROTECT SYSTEMS AND DEVICES FROM DAMAGE.
 - COVER ALL EXISTING FLOORING AND PROTECT FROM DAMAGE. PROTECT WALLS, TRIM AND DOORS FROM DAMAGE.
 - COVER ALL SMOKE HEADS IN CONSTRUCTION AREA DURING CONSTRUCTION. REMOVE COVERS AFTER WORK HOURS TO MAINTAIN COVERAGE.
 - EXISTING SECURITY CAMERAS SHALL REMAIN OPERATIONAL IN WORK AREAS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING FINISHES AND EQUIPMENT DURING CONSTRUCTION.
 - ALL MATERIALS THAT ARE USED IN THE CONSTRUCTION SHALL BE MANUFACTURED IN THE USA AND DELIVERED TO THE SITE WITH PROOF OF SUCH AND SHALL BE STORED WITHIN THE PERIMETER FENCE UNTIL INCORPORATED INTO THE WORK.

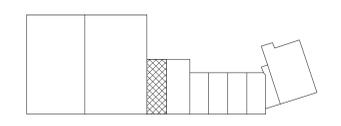
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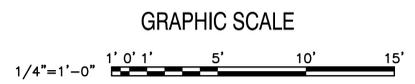
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C. THE CONTRACTOR AGREES TO INCLUDE A SIMILAR REQUIREMENT IN EACH SUBCONTRACT UNDER THIS CONTRACT. SUBCONTRACTORS SHALL SUBMIT REQUESTS FOR AUTHORIZATION TO RELEASE THROUGH THE PRIME CONTRACTOR TO THE CONTRACTING OFFICER.

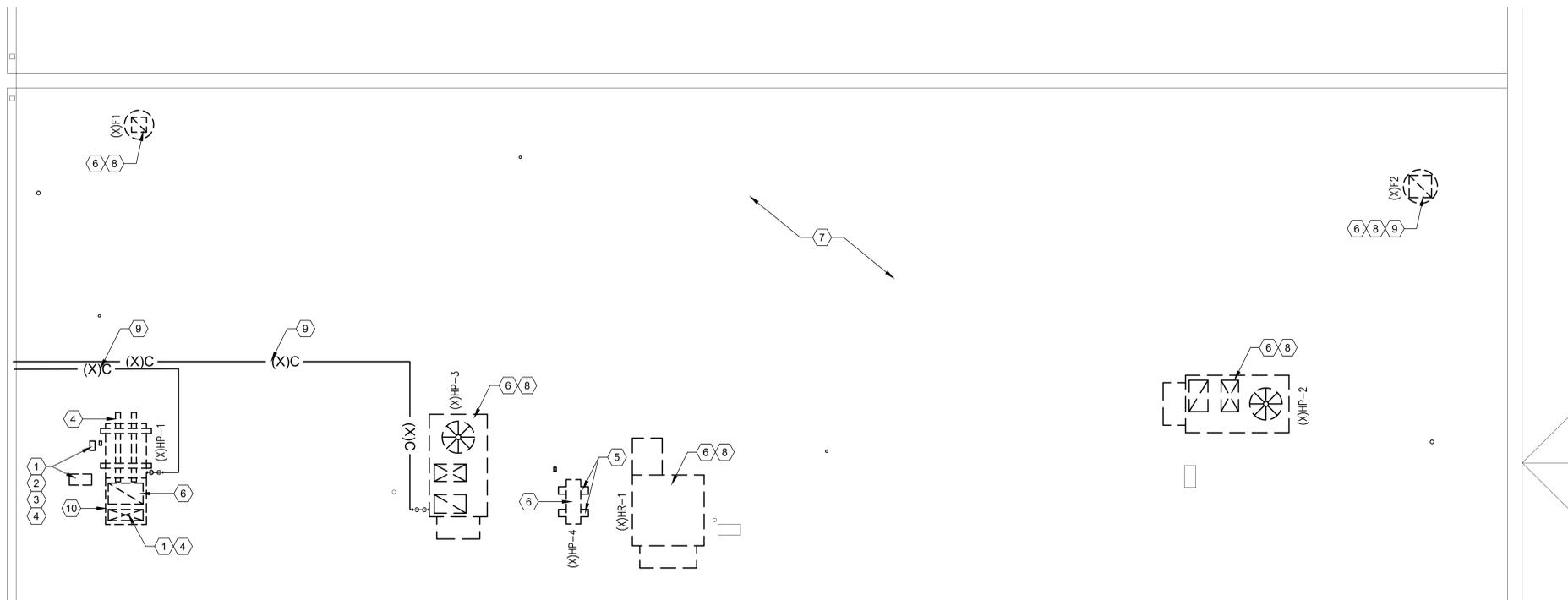


KEY PLAN
NOT TO SCALE



FINAL		AD102	
DEPARTMENT OF THE NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A ARCHITECTURAL DEMOLITION CEILING PLAN			
DES. RMC	DR. LJR	CHK. RMC	SUBMITTED BY: -
DESIGN DIR. T H BURTON, PE		APPROVED: PWO OR OICC	DATE
SATISFACTORY TO:	DATE	SIZE	CODE IDENT. NO.
		F	80091
		SCALE: NOTED	SPEC. 05-17-0113
			SHEET 7 OF 55

REVISIONS		
SYM	DATE	APPROVED



- DEMOLITION KEYED NOTES**
- CONTRACTOR SHALL CUT OUT AND REMOVE ROOF, INSULATION BOARDS AND OTHER ROOFING ITEMS DOWN TO STRUCTURAL ROOF DECK FOR INSTALLATION OF NEW ROOF CURBS. CONTRACTOR IS RESPONSIBLE TO REMOVE AN AREA LARGE ENOUGH TO ALL INSTALLATION OF NEW ROOF CURBS, ANCHORS, PITCH POCKETS, ETC.
 - ALL ROOF CUT OUT LOCATIONS FOR CURBS AND PIPE SUPPORTS MUST BE PATCHED BACK WITHIN THE SAME WORK DAY. IN THE EVENT OF UNEXPECTED PRECIPITATION THE CONTRACTOR SHALL HAVE THE MEANS TO KEEP THE OPEN ROOF CUTOUTS WEATHER TIGHT.
 - REMOVE EXISTING CURB AND 1 PITCH POCKETS. PREP AND PATCH BACK ROOF IN-KIND.
 - REMOVE EXISTING SLEEPERS AND CURB. PREP AND PATCH BACK ROOF IN-KIND.
 - REMOVE P.T. WOOD SLEEPERS.
 - REMOVE EXISTING HVAC EQUIPMENT. SEE MECHANICAL DRAWINGS.
 - PROTECT EXISTING MODIFIED BITUMEN ROOF FROM DAMAGE. CONTRACTOR SHALL REPAIR ANY DAMAGE TO THE ROOF.
 - EXISTING CURBS TO REMAIN. PATCH HOLES AS NEEDED FROM ANY REMOVED CONDUITS. SEE ELECTRICAL DRAWINGS.
 - REMOVE CONDENSATE PIPING AND ALL PIPE SUPPORT SLEEPERS. PREP AND PATCH BACK/REPAIR ROOM IN-KIND.
 - INSTALL NEW CURB. SEE MECHANICAL DRAWINGS.

TT2459 DEMOLITION ROOF PLAN
1/4"=1'-0"

- GENERAL CONSTRUCTION NOTES**
- LIMIT CONSTRUCTION ACTIVITIES TO DESIGNATED AREAS OF WORK.
 - OWNER SHALL REMOVE ALL FURNISHINGS AND EQUIPMENT PRIOR TO BEGINNING OF CONSTRUCTION.
 - THE CONTRACTOR, SUBCONTRACTORS AND THEIR EMPLOYEES SHALL ABIDE BY ALL BADGING, SECURITY, AND CONDUCT REQUIREMENTS REQUIRED BY THE OWNER.
 - MAINTAIN CORRIDORS AND PATHS OF EGRESS AT ALL TIMES. DO NOT BLOCK EXITS, STAIRS, RAMP, ETC.
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 - CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING FINISHES AND EQUIPMENT DURING CONSTRUCTION.
 - ALL MATERIALS THAT ARE USED IN THE CONSTRUCTION SHALL BE MANUFACTURED IN THE USA AND DELIVERED TO THE SITE WITH PROOF OF SUCH AND SHALL BE STORED WITHIN THE PERIMETER FENCE UNTIL INCORPORATED INTO THE WORK.

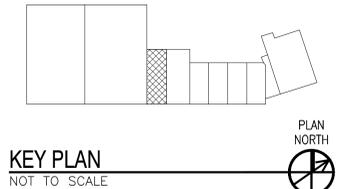
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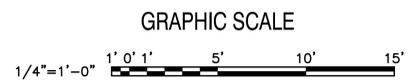
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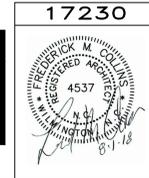
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KEY PLAN
NOT TO SCALE

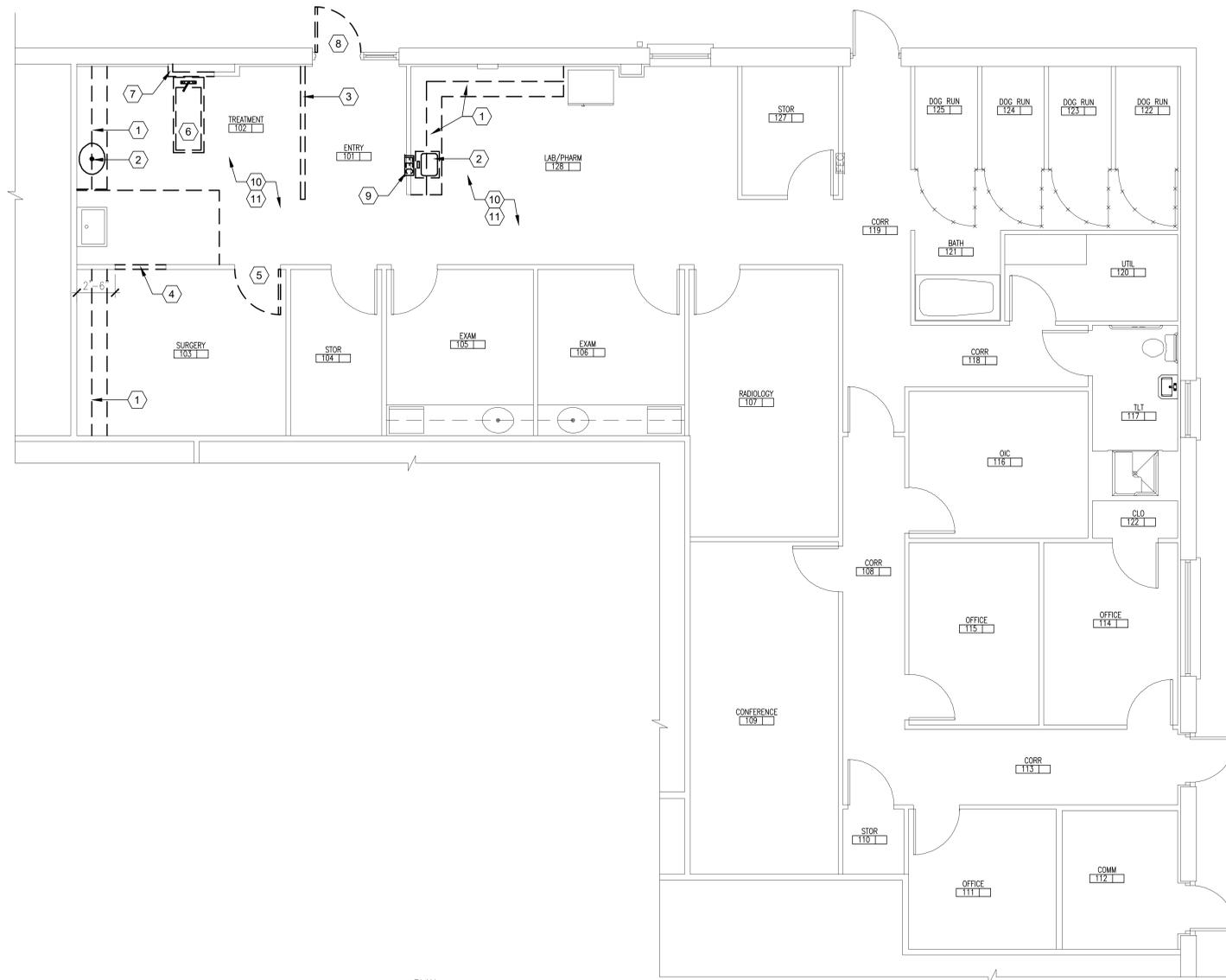


GRAPHIC SCALE



FINAL		AD103	
<small>DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND</small> MARINE CORPS BASE <small>CAMP LEJEUNE, NORTH CAROLINA</small>			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A <small>ARCHITECTURAL DEMOLITION ROOF PLAN</small>			
DES. RMC	DATE	SIZE	CODE IDENT. NO.
DR. LJR		F	80091
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SATISFACTORY TO:	DATE		
		NAVAFAC DRAWING NO. 60022632 CONST. CONTR.	
		SHEET 8 OF 55	

REVISIONS			
SYM		DATE	APPROVED



- DEMOLITION KEYED NOTES**
- ① REMOVE EXISTING UPPER AND LOWER CABINETS AND COUNTERTOP.
 - ② REMOVE EXISTING SINK AND SAVE FOR REINSTALLATION.
 - ③ REMOVE EXISTING PARTITION UP TO EXISTING BULKHEAD.
 - ④ CUT NEW OPENING IN EXISTING STEEL STUD AND GWB PARTITION FOR NEW DOOR.
 - ⑤ REMOVE EXISTING DOOR AND FRAME.
 - ⑥ RELOCATE EXISTING WET TABLE.
 - ⑦ REMOVE EXISTING WET WALL AND CAP PLUMBING LINES ABOVE CEILING AND BELOW SLAB.
 - ⑧ REMOVE EXISTING EXIT SIGNS AND LOCK DOOR SHUT.
 - ⑨ REMOVE AND RELOCATE EXISTING FIRE EXTINGUISHER CABINET.
 - ⑩ COVER AND PROTECT EXISTING FLOORING FROM DAMAGE.
 - ⑪ PROTECT EXISTING WALLS, BASE, DOORS, WINDOWS, CASEWORK, ETC. FROM DAMAGE.

TT2459A DEMOLITION FLOOR PLAN
1/4"=1'-0"



- GENERAL CONSTRUCTION NOTES**
1. LIMIT CONSTRUCTION ACTIVITIES TO DESIGNATED AREAS OF WORK.
 2. OWNER SHALL REMOVE ALL FURNISHINGS AND EQUIPMENT PRIOR TO BEGINNING OF CONSTRUCTION.
 3. THE CONTRACTOR, SUBCONTRACTORS AND THEIR EMPLOYEES SHALL ABIDE BY ALL BADGING, SECURITY, AND CONDUCT REQUIREMENTS REQUIRED BY THE OWNER.
 4. MAINTAIN CORRIDORS AND PATHS OF EGRESS AT ALL TIMES. DO NOT BLOCK EXITS, STAIRS, RAMP, ETC.
 5. CONTRACTOR (WITH ESCORT) SHALL PHOTOGRAPH EXISTING CONDITIONS OF AREAS WHERE DEMOLITION ACTIVITIES OCCUR TO DOCUMENT EXISTING CONDITIONS.
 6. CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, FINISHES, PARTITIONS, BUILDING SYSTEMS AND OTHER ELEMENTS THAT REMAIN FROM DAMAGE.
 7. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING BUILDING, STRUCTURE, FINISHES, PARTITIONS, BUILDING SYSTEMS AND OTHER ELEMENTS TO REMAIN.
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 16. PROVIDE OWNER WITH A MINIMUM 48 HOUR NOTICE AND OBTAIN APPROVAL FOR ACTIVITIES THAT COULD INTERRUPT OR IMPACT THE USE OR OPERATION OF THE EXISTING BUILDING/FACILITY.
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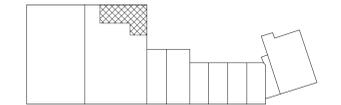
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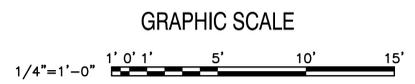
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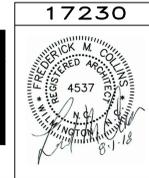
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KEY PLAN
NOT TO SCALE

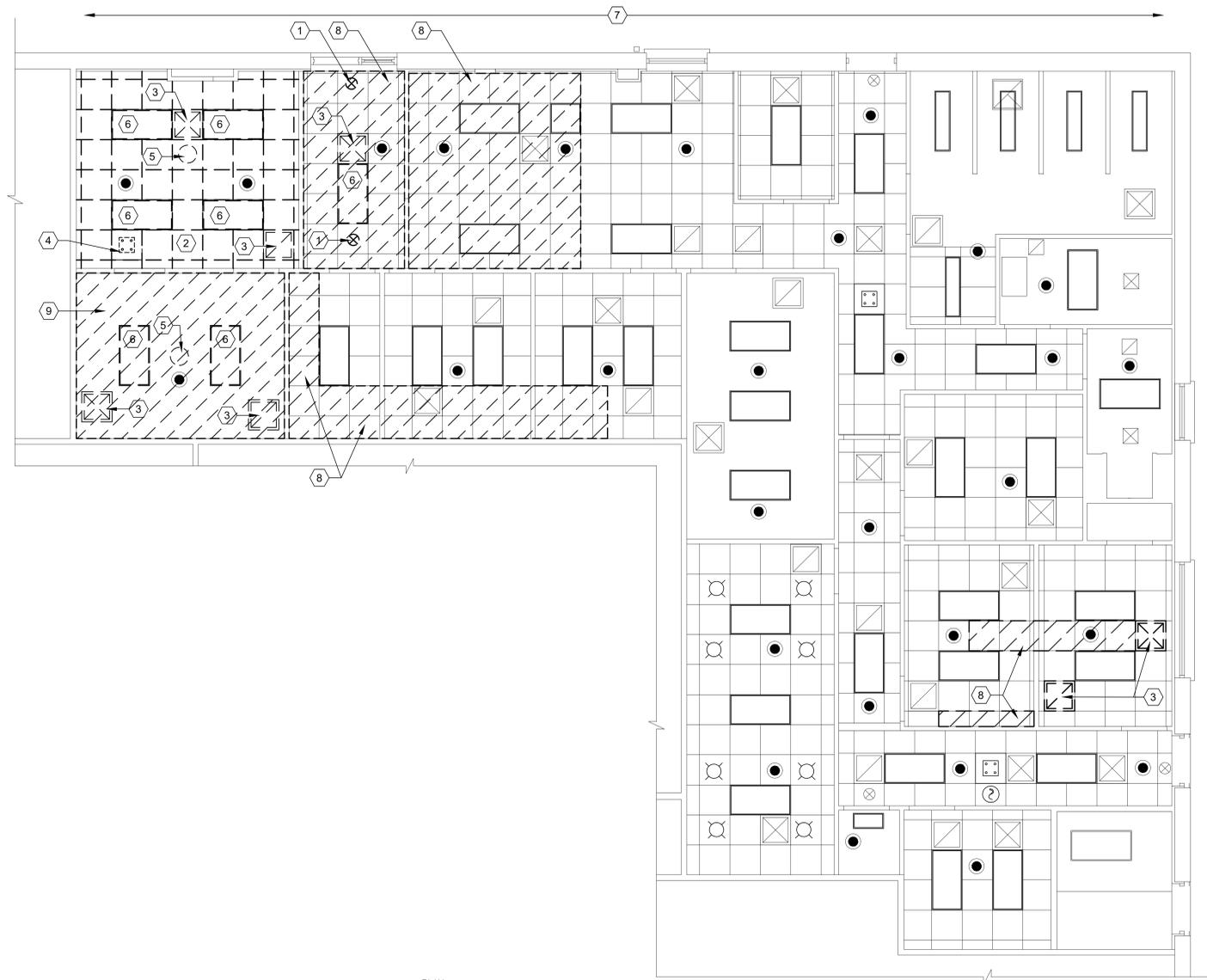


GRAPHIC SCALE



FINAL		AD104	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A ARCHITECTURAL DEMOLITION FLOOR PLAN			
DES. RMC	DR. LJR	CHK. RMC	DESIGN DIR. T H BURTON, PE
APPROVED: PWO OR OICC	DATE	SIZE	CODE IDENT. NO.
		F	80091
SATISFACTORY TO:	DATE	SCALE: NOTED	SPEC. 05-17-0113
		SHEET 9 OF 55	

REVISIONS			
SYM		DATE	APPROVED



- ### DEMOLITION KEYED NOTES
- REMOVE EXISTING EXIT SIGNS AND LOCK DOOR SHUT.
 - REMOVE EXISTING ACOUSTICAL CEILING TILE AND GRID. EXISTING CEILING SUSPENSION WIRES IN GOOD CONDITION AND ATTACHED DIRECTLY TO THE EXISTING ROOF STRUCTURE MAY REMAIN FOR REUSE.
 - REMOVE AND DISPOSE OF EXISTING MECHANICAL DIFFUSER/GRILLE. SEE MECHANICAL DRAWINGS.
 - REMOVE EXISTING WIFI ANTENNA AND SAVE FOR REINSTALLATION. SEE ELECTRICAL DRAWINGS.
 - REMOVE AND DISPOSE OF EXISTING SURGICAL LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS.
 - REMOVE EXISTING LIGHT FIXTURE AND SAVE FOR REINSTALLATION. SEE ELECTRICAL DRAWINGS.
 - PROVIDE DUST BARRIERS AND TEMPORARY FILTERS ON RETURN AIR INLETS IN AREAS WHERE EXISTING CEILINGS ARE REMOVED AND REPLACED TO PREVENT DUST FROM MIGRATING OUT OF THE AREA A WORK. CLEAN AREAS OF WORK DAILY.
 - REMOVE EXISTING ACOUSTIC CEILING TILE AND GRID AS NECESSARY TO INSTALL NEW DUCTWORK. THE AREA OF CEILING WORK INDICATED ON THE PLAN IS APPROXIMATE. THE CONTRACTOR SHALL REMOVE AS LITTLE OR AS MUCH OF THE EXISTING CEILING AS NEEDED TO PERFORM THE ABOVE CEILING WORK. SEE MECHANICAL DRAWINGS.
 - REMOVE EXISTING GWB CEILING.

- ### SYMBOL LEGEND
- 2'x4' LIGHTING FIXTURE
 - 1'x2' LIGHTING FIXTURE
 - 2'x2' LIGHTING FIXTURE
 - DOWNLIGHT OR PENDANT LIGHT FIXTURE
 - MECHANICAL DIFFUSERS
 - TELEVISION MOUNT
 - OCCUPANCY SENSOR
 - SPEAKER
 - CEILING MOUNTED FIRE ALARM
 - SMOKE DETECTOR
 - WI-FI ANTENNA
 - EXIT SIGN
 - SPRINKLER HEAD
- NOTE: ALL SYMBOLS MAY NOT BE USED

TT2459A DEMOLITION CEILING PLAN
1/4"=1'-0"



- ### GENERAL CONSTRUCTION NOTES
- LIMIT CONSTRUCTION ACTIVITIES TO DESIGNATED AREAS OF WORK.
 - OWNER SHALL REMOVE ALL FURNISHINGS AND EQUIPMENT PRIOR TO BEGINNING OF CONSTRUCTION.
 - THE CONTRACTOR, SUBCONTRACTORS AND THEIR EMPLOYEES SHALL ABIDE BY ALL BADGING, SECURITY, AND CONDUCT REQUIREMENTS REQUIRED BY THE OWNER.
 - MAINTAIN CORRIDORS AND PATHS OF EGRESS AT ALL TIMES. DO NOT BLOCK EXITS, STAIRS, RAMP, ETC.
 - CONTRACTOR (WITH ESCORT) SHALL PHOTOGRAPH EXISTING CONDITIONS OF AREAS WHERE DEMOLITION ACTIVITIES OCCUR TO DOCUMENT EXISTING CONDITIONS.
 - CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, FINISHES, PARTITIONS, BUILDING SYSTEMS AND OTHER ELEMENTS THAT REMAIN FROM DAMAGE.
 - CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING BUILDING, STRUCTURE, FINISHES, PARTITIONS, BUILDING SYSTEMS AND OTHER ELEMENTS TO REMAIN.
 - CONTRACTOR SHALL MAKE ALL CUTS TO EXISTING ELEMENTS IN SUCH A WAY AS TO PREVENT DAMAGE TO ADJACENT ELEMENTS AND TO FACILITATE THE PATCHING OF THE EXISTING ELEMENTS AND INTERFACE WITH NEW CONSTRUCTION.
 - CONTRACTOR SHALL PATCH, REPAIR, AND PREP ALL EXISTING WALL & FLOOR SUBSTRATES FROM DEMOLITION WORK OR EXISTING CONDITIONS TO A LEVEL SUITABLE FOR THE INSTALLATION OF NEW FINISHES.
 - ALL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES & REGULATIONS.
 - ALL AREAS OF CONSTRUCTION SHALL BE SECURED SO AS TO LIMIT ACCESS BY UNAUTHORIZED PERSONS.
 - ALL FACILITIES WHERE CONSTRUCTION OCCURS SHALL BE SECURED DAILY UPON THE COMPLETION OF THE WORK DAY. SECUREMENT METHODS & EMERGENCY ACCESS SHALL BE APPROVED BY THE OWNER.
 - CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND QUANTITIES NECESSARY TO COMPLETE THE WORK AS DESCRIBED OR INTENDED IN THE CONTRACT DOCUMENTS.
 - WEEKDAY WORK HOURS ARE FROM 0700 TO 1700. WEEKEND WORK HOURS ARE FROM 0600 TO 1800.
 - THE BUILDING/FACILITY WILL REMAIN IN USE/OCCUPIED DURING CONSTRUCTION.
 - PROVIDE OWNER WITH A MINIMUM 48 HOUR NOTICE AND OBTAIN APPROVAL FOR ACTIVITIES THAT COULD INTERRUPT OR IMPACT THE USE OR OPERATION OF THE EXISTING BUILDING/FACILITY.
 - BUILDING FIRE ALARM AND OTHER LIFE SAFETY SYSTEMS SHALL REMAIN OPERATIONAL. PROTECT SYSTEMS AND DEVICES FROM DAMAGE.
 - COVER ALL EXISTING FLOORING AND PROTECT FROM DAMAGE. PROTECT WALLS, TRIM AND DOORS FROM DAMAGE.
 - COVER ALL SMOKE HEADS IN CONSTRUCTION AREA DURING CONSTRUCTION. REMOVE COVERS AFTER WORK HOURS TO MAINTAIN COVERAGE.
 - EXISTING SECURITY CAMERAS SHALL REMAIN OPERATIONAL IN WORK AREAS.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING FINISHES AND EQUIPMENT DURING CONSTRUCTION.
 - ALL MATERIALS THAT ARE USED IN THE CONSTRUCTION SHALL BE MANUFACTURED IN THE USA AND DELIVERED TO THE SITE WITH PROOF OF SUCH AND SHALL BE STORED WITHIN THE PERIMETER FENCE UNTIL INCORPORATED INTO THE WORK.

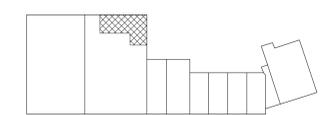
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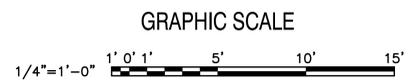
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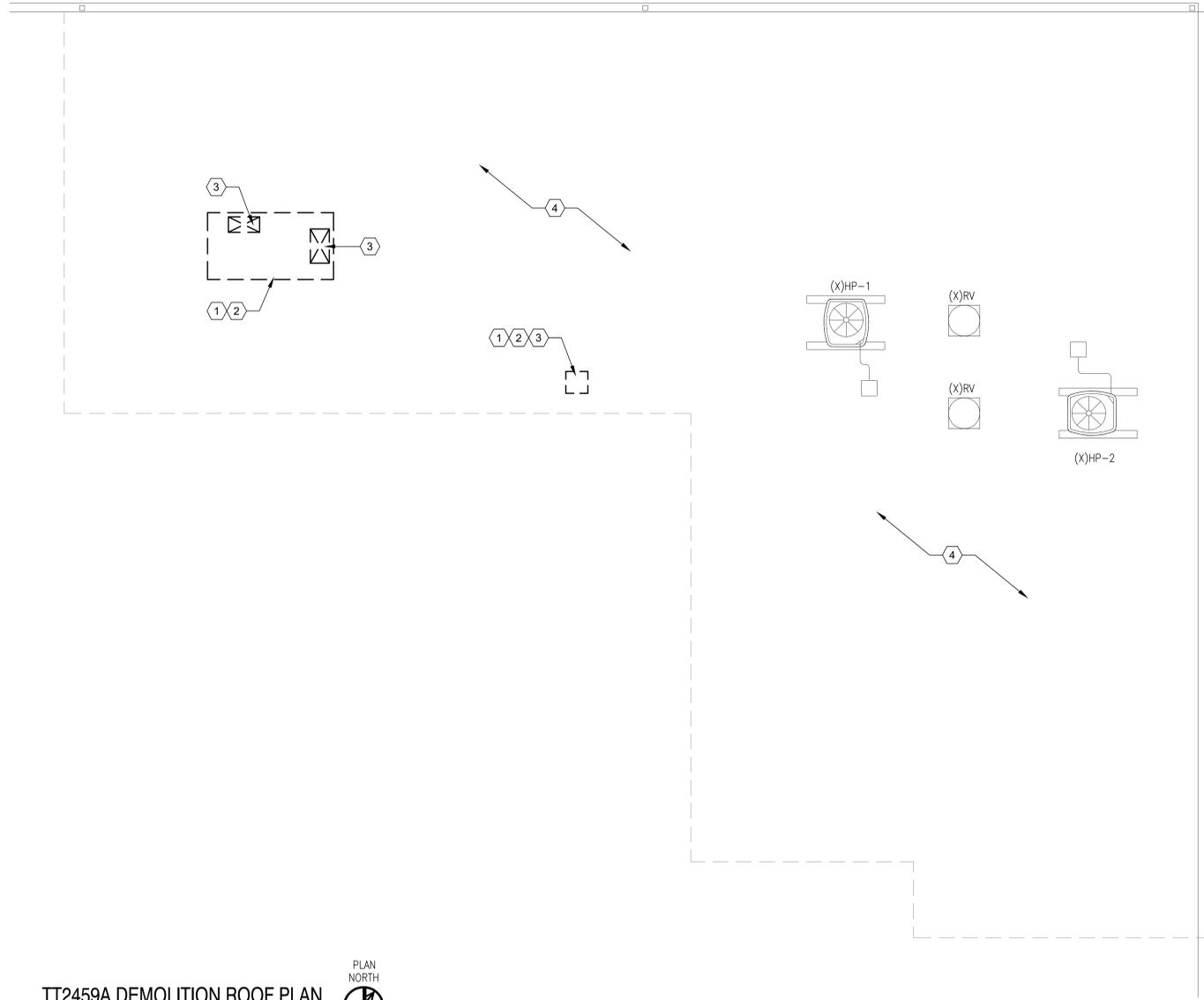


KEY PLAN
NOT TO SCALE



FINAL		AD105	
DEPARTMENT OF THE NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A ARCHITECTURAL DEMOLITION CEILING PLAN			
DES. RMC	DR. LJR	CHK. RMC	17230
SUBMITTED BY: -		DESIGN DIR. T H BURTON, PE	4537
APPROVED: PWO OR OICC	DATE	SIZE	CODE IDENT. NO.
F	80091	NAVAC DRAWING NO.	60022634
SATISFACTORY TO:		DATE	CONST. CONTR.
SCALE: NOTED		SPEC. 05-17-0113	SHEET 10 OF 55

REVISIONS			
SYM		DATE	APPROVED



DEMOLITION KEYED NOTES

- CONTRACTOR SHALL CUT OUT AND REMOVE ROOF, INSULATION BOARDS AND OTHER ROOFING ITEMS DOWN TO STRUCTURAL ROOF DECK FOR INSTALLATION OF NEW ROOF CURBS. CONTRACTOR IS RESPONSIBLE TO REMOVE AN AREA LARGE ENOUGH FOR INSTALLATION OF NEW ROOF CURBS, ANCHORS, PITCH POCKETS, ETC.
- ALL ROOF CUT OUT LOCATIONS FOR CURBS AND PIPE SUPPORTS MUST BE PATCHED BACK WITHIN THE SAME WORK DAY. IN THE EVENT OF UNEXPECTED PRECIPITATION THE CONTRACTOR SHALL HAVE THE MEANS TO KEEP THE OPEN ROOF CUTOUTS WEATHER TIGHT.
- CUT HOLES IN ROOF DECK FOR NEW DUCT PENETRATIONS. SEE MECHANICAL DRAWINGS.
- PROTECT EXISTING MODIFIED BITUMEN ROOF FROM DAMAGE. CONTRACTOR SHALL REPAIR ANY DAMAGE TO THE ROOF.

TT2459A DEMOLITION ROOF PLAN
 1/4"=1'-0" 

GENERAL CONSTRUCTION NOTES

- LIMIT CONSTRUCTION ACTIVITIES TO DESIGNATED AREAS OF WORK.
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- THE CONTRACTOR, SUBCONTRACTORS AND THEIR EMPLOYEES SHALL ABIDE BY ALL BADGING, SECURITY, AND CONDUCT REQUIREMENTS REQUIRED BY THE OWNER.
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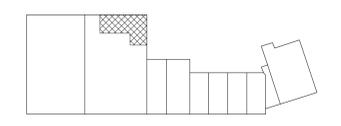
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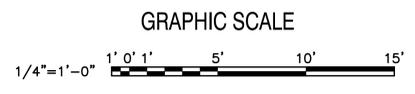
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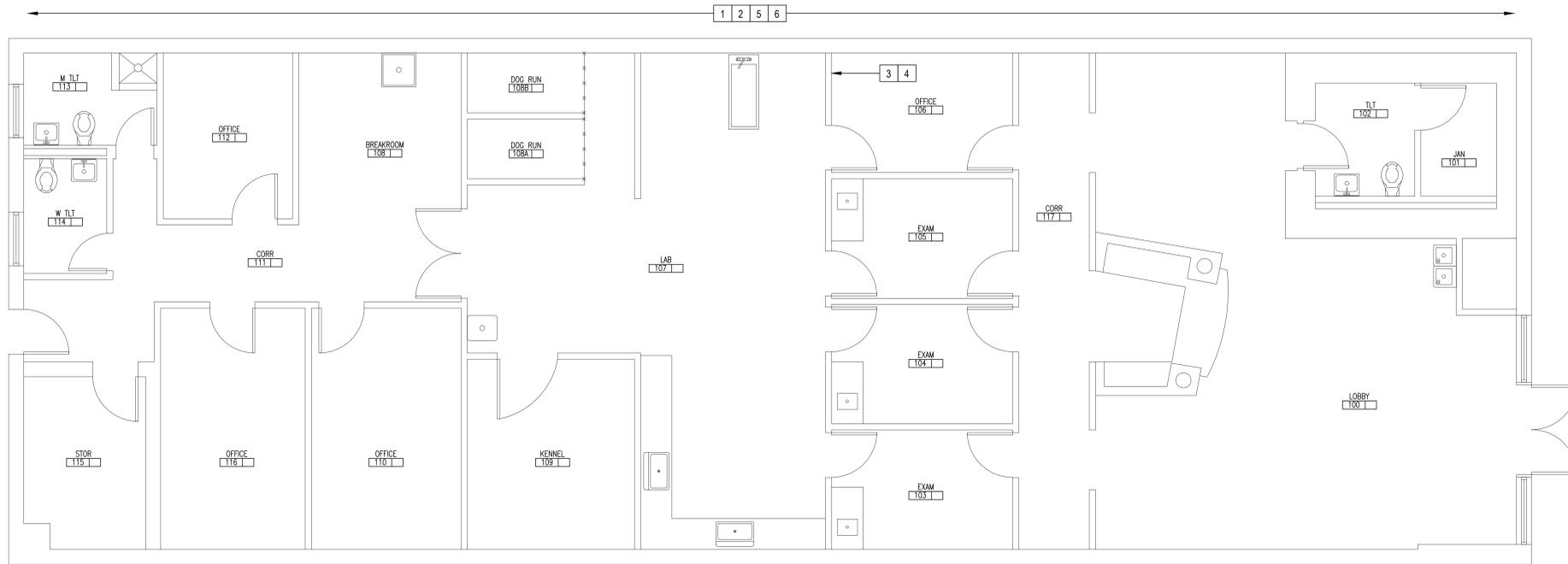


BECKER MORGAN GROUP
ARCHITECTURE PLANNING

17230


FINAL		AD106	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A ARCHITECTURAL DEMOLITION ROOF PLAN			
DES. RMC	DR. LJR	CHK. RMC	DESIGN DIR. T H BURTON, PE
APPROVED: PWO OR OICC	DATE	SIZE F	CODE IDENT. NO. 80091
SATISFACTORY TO:		DATE	NAVFAC DRAWING NO. 60022635
		SCALE: NOTED	SPEC. 05-17-0113
		SHEET 11 OF 55	

REVISIONS			
SYM		DATE	APPROVED



CONSTRUCTION KEYED NOTES	
1	COVER AND PROTECT EXISTING FLOORING FROM DAMAGE.
2	PROTECT EXISTING WALLS, BASE, WINDOWS AND DOORS, CASEWORK, ETC. FROM DAMAGE.
3	PATCH, PREP AND PAINT CWB WALL WHERE BASE CABINET AND PLUMBING LINES HAVE BEEN REMOVED.
4	INSTALL FLOORING AND BASE TO MATCH EXISTING MATERIALS WHERE BASE CABINET HAS BEEN REMOVED.
5	PROVIDE TEMPORARY FILTERS ON RETURN AIR INLETS THAT MAY BE OPERATIONAL DURING CONSTRUCTION.
6	CONTRACTOR SHALL PREP AND PAINT ANY WALLS THAT HAVE BEEN DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE OWNER. MATCH EXISTING PAINT COLORS.

TT2459 FLOOR PLAN
1/4"=1'-0"

GENERAL CONSTRUCTION NOTES	
1. LIMIT CONSTRUCTION ACTIVITIES TO DESIGNATED AREAS OF WORK.	22. ALL MATERIALS THAT ARE USED IN THE CONSTRUCTION SHALL BE MANUFACTURED IN THE USA AND DELIVERED TO THE SITE WITH PROOF OF SUCH AND SHALL BE STORED WITHIN THE PERIMETER FENCE UNTIL INCORPORATED INTO THE WORK.
2. OWNER SHALL REMOVE ALL FURNISHINGS AND EQUIPMENT PRIOR TO BEGINNING OF CONSTRUCTION.	23. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND QUANTITIES NECESSARY TO COMPLETE THE WORK AS DESCRIBED OR INTENDED IN THE CONTRACT DOCUMENTS.
3. THE CONTRACTOR, SUBCONTRACTORS AND THEIR EMPLOYEES SHALL ABIDE BY ALL BADGING, SECURITY, AND CONDUCT REQUIREMENTS REQUIRED BY THE OWNER.	24. WEEKDAY WORK HOURS ARE FROM 0700 TO 1700. WEEKEND WORK HOURS ARE FROM 0600 TO 1800.
4. MAINTAIN CORRIDORS AND PATHS OF EGRESS AT ALL TIMES. DO NOT BLOCK EXITS, STAIRS, RAMP, ETC.	25. THE BUILDING/FACILITY WILL REMAIN IN USE/OCCUPIED DURING CONSTRUCTION.
5. CONTRACTOR (WITH ESCORT) SHALL PHOTOGRAPH EXISTING CONDITIONS OF AREAS WHERE DEMOLITION ACTIVITIES OCCUR TO DOCUMENT EXISTING CONDITIONS.	26. PROVIDE OWNER WITH A MINIMUM 48 HOUR NOTICE AND OBTAIN APPROVAL FOR ACTIVITIES THAT COULD INTERRUPT OR IMPACT THE USE OR OPERATION OF THE EXISTING BUILDING/FACILITY.
6. CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, FINISHES, PARTITIONS, BUILDING SYSTEMS AND OTHER ELEMENTS THAT REMAIN FROM DAMAGE.	27. BUILDING FIRE ALARM AND OTHER LIFE SAFETY SYSTEMS SHALL REMAIN OPERATIONAL. PROTECT SYSTEMS AND DEVICES FROM DAMAGE.
7. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING BUILDING, STRUCTURE, FINISHES, PARTITIONS, BUILDING SYSTEMS AND OTHER ELEMENTS TO REMAIN.	28. COVER ALL EXISTING FLOORING AND PROTECT FROM DAMAGE. PROTECT WALLS, TRIM AND DOORS FROM DAMAGE.
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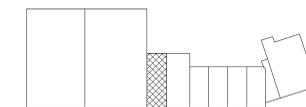
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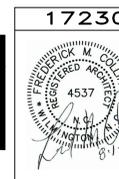
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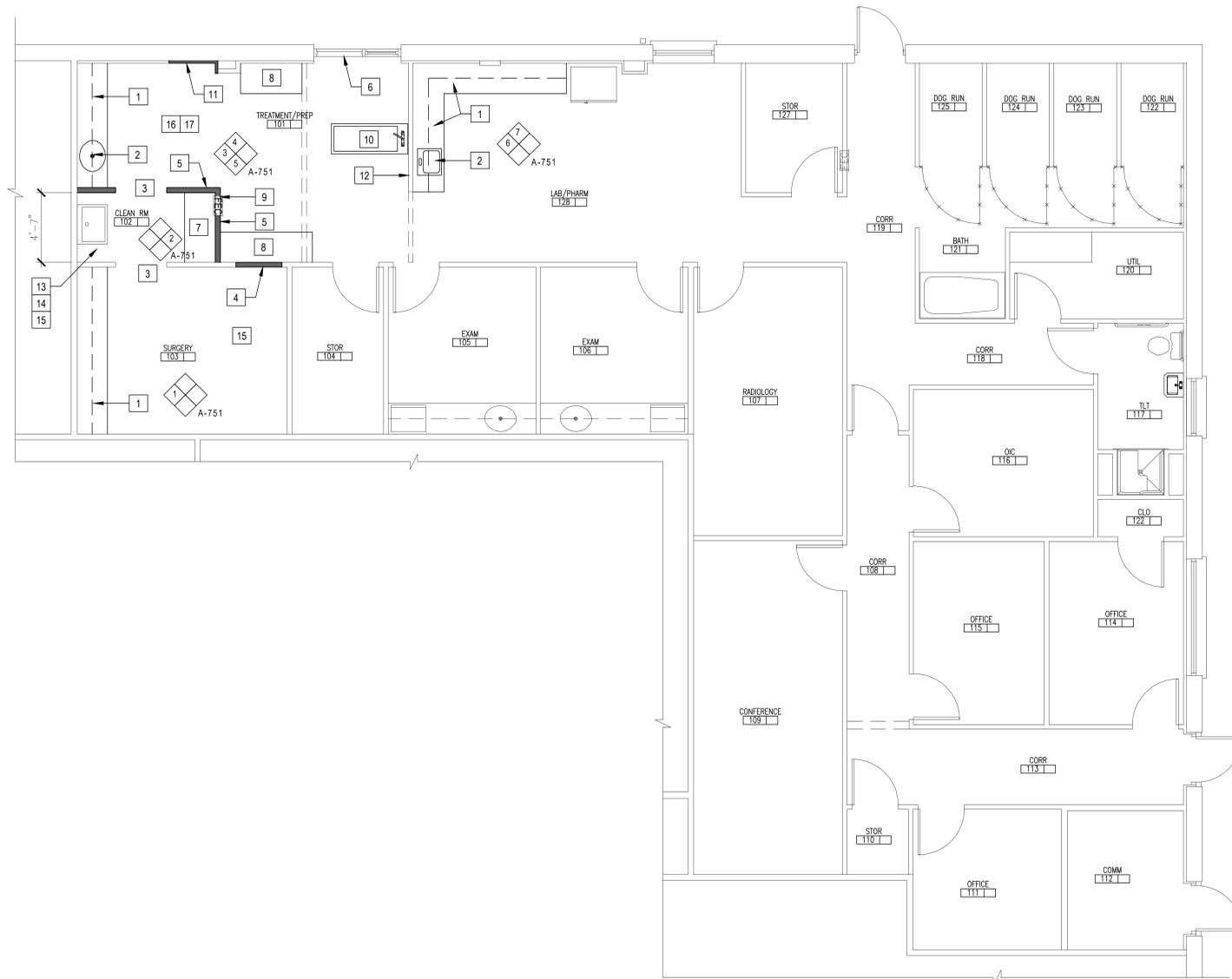


KEY PLAN
NOT TO SCALE



FINAL		A-101	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A ARCHITECTURAL TT2459 FLOOR PLAN			
DES. RMC	DATE	SIZE	CODE IDENT. NO.
DR. LJR		F	80091
CHK. RMC			
SUBMITTED BY: -			
DESIGN DIR. T H BURTON, PE			
APPROVED: PWO OR OICC	DATE	SIZE	CODE IDENT. NO.
		F	80091
SATISFACTORY TO:	DATE		
SCALE: NOTED		SPEC. 05-17-0113	
		SHEET 12 OF 55	

REVISIONS			
SYM		DATE	APPROVED



CONSTRUCTION KEYED NOTES

- 1 NEW FLOOR AND BASE CABINETS AND COUNTERTOP.
- 2 EXISTING SINK RE-USED. SEE PLUMBING DRAWINGS.
- 3 NEW SOLID CORE WOOD DOOR AND HOLLOW METAL FRAME.
- 4 NEW STEEL STUD AND GWB PARTITION INFILL TO MATCH EXISTING.
- 5 NEW 3-5/8" STEEL STUD AND 5/8" GWB PARTITION. EXTEND ABOVE THE EXISTING SUSPENDED ACOUSTICAL TILE CEILING.
- 6 INSTALL NEW WINDOW COVERINGS AT EXISTING DOOR/WINDOW.
- 7 NEW 3'-0" HIGH PLASTIC LAMINATE GOWNING TABLE WITH OPEN SHELVING UNDERNEATH.
- 8 NEW 3'-0" HIGH PLASTIC LAMINATE WORK SURFACE WITH OPEN STORAGE UNDERNEATH.
- 9 RELOCATED FIRE EXTINGUISHER CABINET.
- 10 RELOCATED WET TABLE. SEE PLUMBING DRAWINGS.
- 11 NEW STEEL STUD & GWB WALL TO MATCH EXISTING.
- 12 INSTALL FRP BOARD THIS WALL.
- 13 INSTALL FRP BOARD THIS ROOM.
- 14 INSTALL NEW GYPSUM BOARD CEILING ON 6" LIGHT GAUGE STEEL JOISTS @ 16" O.C.
- 15 PAINT WALLS WITH EPOXY PAINT THIS ROOM.
- 16 PAINT WALLS AS NEEDED IN THIS AREA.
- 17 PATCH VCT FLOORS AND RUBBER COVE BASE TO MATCH THE EXISTING FLOORS AND BASE IN THIS AREA.

TT2459A FLOOR PLAN
1/4"=1'-0"

GENERAL CONSTRUCTION NOTES

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17. BUILDING FIRE ALARM AND OTHER LIFE SAFETY SYSTEMS SHALL REMAIN OPERATIONAL. PROTECT SYSTEMS AND DEVICES FROM DAMAGE.
18. COVER ALL EXISTING FLOORING AND PROTECT FROM DAMAGE. PROTECT WALLS, TRIM AND DOORS FROM DAMAGE.
19. COVER ALL SMOKE HEADS IN CONSTRUCTION AREA DURING CONSTRUCTION. REMOVE COVERS AFTER WORK HOURS TO MAINTAIN COVERAGE.
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22. ALL MATERIALS THAT ARE USED IN THE CONSTRUCTION SHALL BE MANUFACTURED IN THE USA AND DELIVERED TO THE SITE WITH PROOF OF SUCH AND SHALL BE STORED WITHIN THE PERIMETER FENCE UNTIL INCORPORATED INTO THE WORK.

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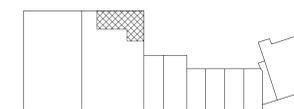
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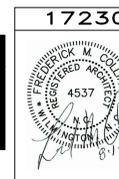
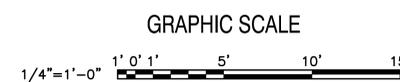
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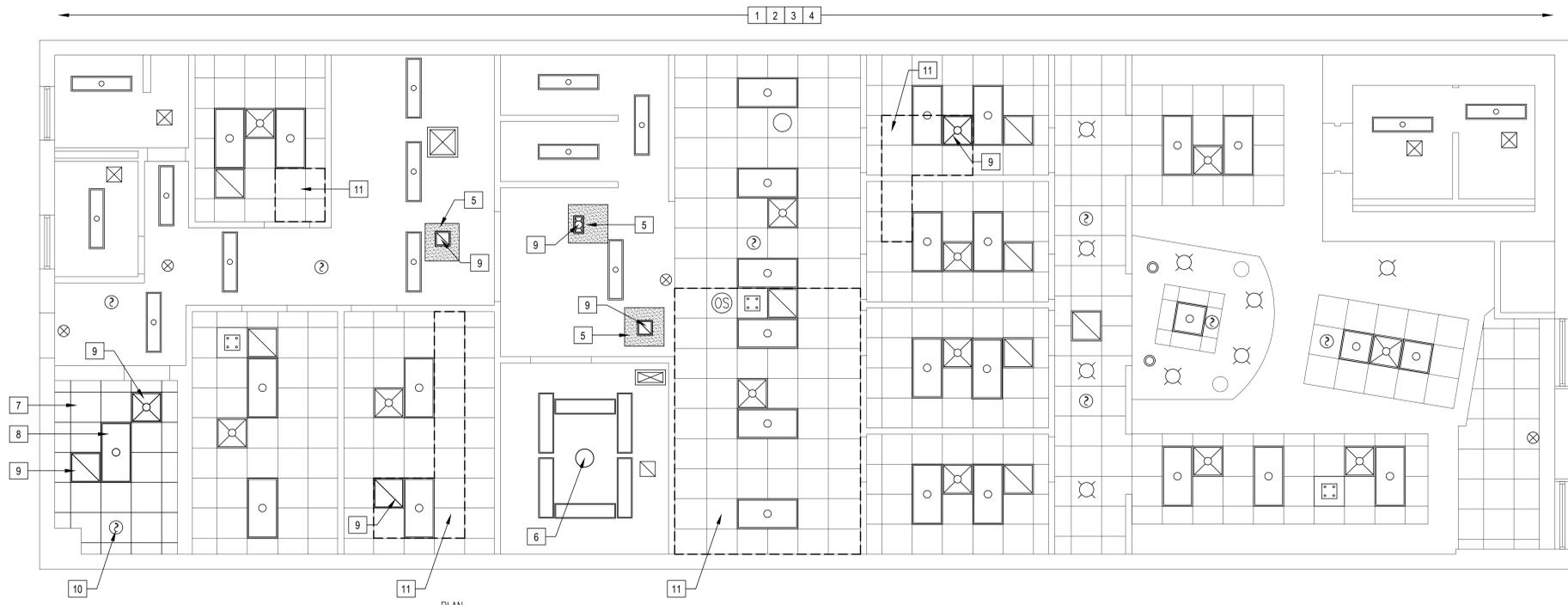


KEY PLAN
NOT TO SCALE



FINAL		A-102	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A ARCHITECTURAL TT2459A FLOOR PLAN			
DES. RMC	DR. LJR	CHK. RMC	DESIGN DIR. T H BURTON, PE
APPROVED: PWO OR OICC	DATE	SIZE F	CODE IDENT. NO. 80091
SATISFACTORY TO:	DATE	NAVFAC DRAWING NO. 60022637	CONST. CONTR.
SCALE: NOTED		SPEC. 05-17-0113	
		SHEET 13 OF 55	

REVISIONS		
SYM	DATE	APPROVED



TT2459 REFLECTED CEILING PLAN
1/4"=1'-0"



- CONSTRUCTION KEYED NOTES**
- COVER AND PROTECT EXISTING FLOORING FROM DAMAGE.
 - PROTECT EXISTING WALLS, BASE, WINDOWS AND DOORS, CASEWORK, ETC. FROM DAMAGE.
 - THE AREA OF CEILING WORK INDICATED ON THE FLOOR PLAN IS APPROXIMATE. THE CONTRACTOR SHALL REMOVE AS LITTLE OR AS MUCH OF THE EXISTING CEILING AS NEEDED TO PERFORM THE ABOVE CEILING WORK.
 - PROVIDE TEMPORARY FILTERS ON RETURN AIR INLETS THAT MAY BE OPERATIONAL DURING CONSTRUCTION.
 - PATCH GWB CEILING IN-KIND. PRIME AND PAINT ENTIRE CEILING.
 - INSTALL BLANK COVER PLATE ON EXISTING BOX WHERE LIGHT FIXTURE WAS REMOVED. SEE ELECTRICAL DRAWINGS.
 - INSTALL NEW SUSPENDED ACOUSTICAL TILE CEILING AND GRID. GRID SUPPORT WIRES SHALL ATTACH DIRECTLY TO THE ROOF STRUCTURE.
 - INSTALL NEW LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS.
 - INSTALL NEW HVAC GRILLES. SEE MECHANICAL DRAWINGS.
 - REINSTALL ALL EXISTING LIFE SAFETY DEVICES.
 - EXISTING ACOUSTIC CEILING TILE AND GRID REINSTALLED.

- SYMBOL LEGEND**
- 2'x4' LIGHTING FIXTURE
 - 1'x2' LIGHTING FIXTURE
 - 2'x2' LIGHTING FIXTURE
 - DOWNLIGHT OR PENDANT LIGHT FIXTURE
 - MECHANICAL DIFFUSERS
 - TELEVISION MOUNT
 - OCCUPANCY SENSOR
 - SPEAKER
 - CEILING MOUNTED FIRE ALARM
 - SMOKE DETECTOR
 - WI-FI ANTENNA
 - EXIT SIGN
 - SPRINKLER HEAD
- NOTE: ALL SYMBOLS MAY NOT BE USED

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 - MAINTAIN CORRIDORS AND PATHS OF EGRESS AT ALL TIMES. DO NOT BLOCK EXITS, STAIRS, RAMP, ETC.
 - CONTRACTOR (WITH ESCORT) SHALL PHOTOGRAPH EXISTING CONDITIONS OF AREAS WHERE DEMOLITION ACTIVITIES OCCUR TO DOCUMENT EXISTING CONDITIONS.
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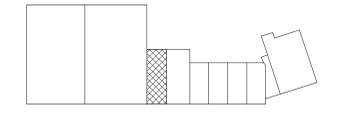
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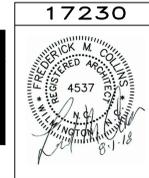
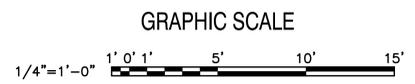
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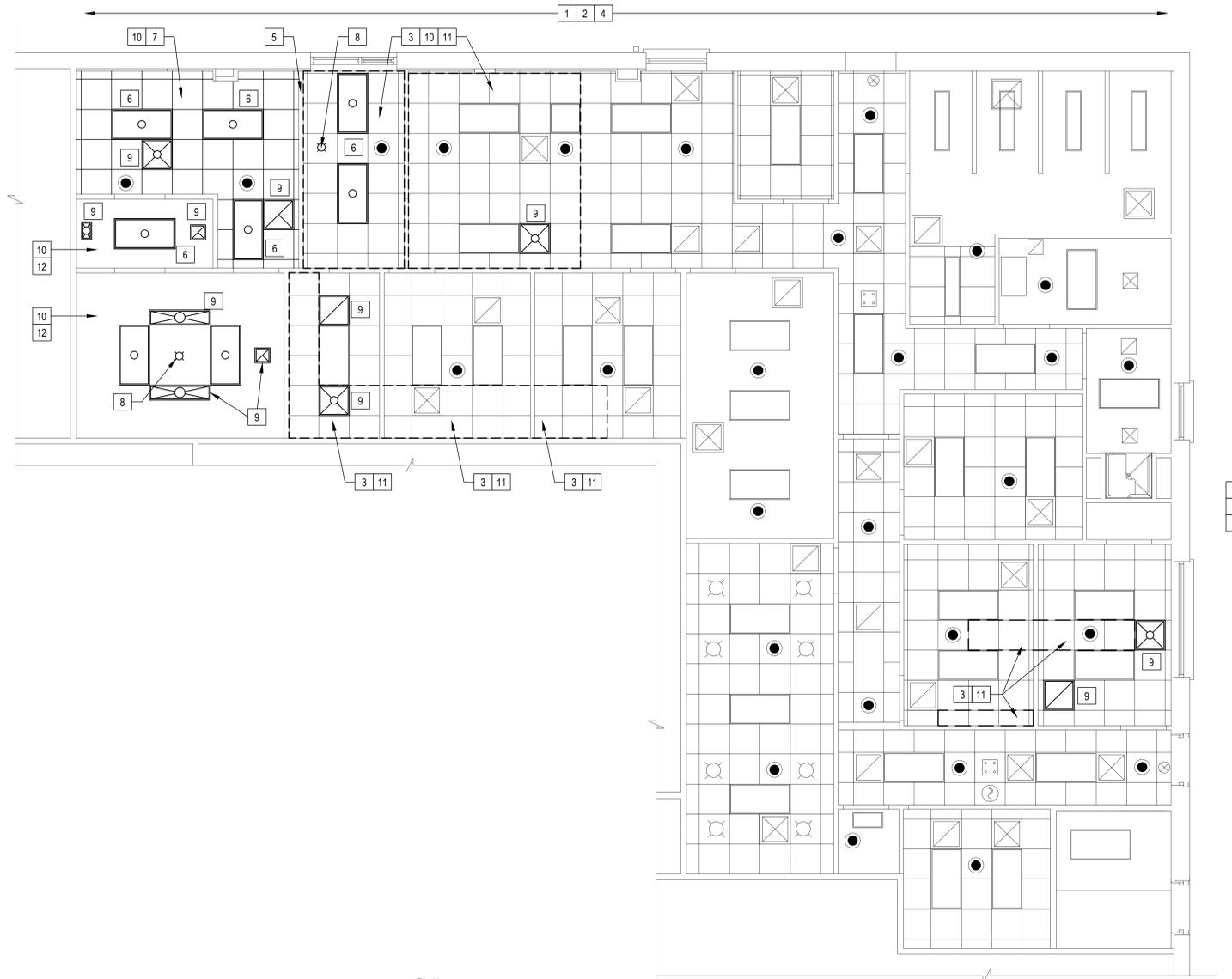


KEY PLAN
NOT TO SCALE



FINAL		A-131	
DEPARTMENT OF THE NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A			
ARCHITECTURAL REFLECTED CEILING PLAN			
DES. RMC	DR. LJR	CHK. RMC	17230
SUBMITTED BY: T H BURTON, PE		DESIGN DIR. T H BURTON, PE	APPROVED: PWO OR OICC
DATE	SIZE F	CODE 80091	IDENT. NO. 60022638
SATISFACTORY TO:	DATE	CONST. CONTR.	NAVYAC DRAWING NO. 60022638
SCALE: NOTED	SPEC. 05-17-0113	SHEET 14 OF 55	

REVISIONS		
SYM	DATE	APPROVED



- ### CONSTRUCTION KEYED NOTES
- COVER AND PROTECT EXISTING FLOORING FROM DAMAGE.
 - PROTECT EXISTING WALLS, BASE, WINDOWS AND DOORS, CASEWORK, ETC. FROM DAMAGE.
 - THE AREA OF CEILING WORK INDICATED ON THE FLOOR PLAN IS APPROXIMATE. THE CONTRACTOR SHALL REMOVE AS LITTLE OR AS MUCH OF THE EXISTING CEILING AS NEEDED TO PERFORM THE ABOVE CEILING WORK.
 - PROVIDE TEMPORARY FILTERS ON RETURN AIR INLETS THAT MAY BE OPERATIONAL DURING CONSTRUCTION.
 - NEW 5/8" GWB BULKHEAD.
 - INSTALL NEW/REUSED LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS.
 - INSTALL NEW SUSPENDED VINYL WRAPPED ACOUSTICAL TILE CEILING AND GRID. GRID SUPPORT WIRES SHALL ATTACH DIRECTLY TO THE ROOF STRUCTURE.
 - INSTALL NEW SURGERY LIGHT FIXTURE. SEE ELECTRICAL DRAWINGS.
 - INSTALL NEW HVAC GRILLES. SEE MECHANICAL DRAWINGS.
 - REINSTALL ALL EXISTING LIFE SAFETY DEVICES IN NEW CEILING TILE OR GWB CEILING.
 - REINSTALL EXISTING ACOUSTICAL CEILING TILE. CONTRACTOR SHALL REPLACE ANY DAMAGED CEILING TILE IN KIND AT NO EXPENSE TO OWNER.
 - INSTALL NEW 5/8" GWB CEILING. FINISH AND PAINT ENTIRE CEILING.

- ### SYMBOL LEGEND
- 2'x4' LIGHTING FIXTURE
 - 1'x2' LIGHTING FIXTURE
 - 2'x2' LIGHTING FIXTURE
 - DOWNLIGHT OR PENDANT LIGHT FIXTURE
 - MECHANICAL DIFFUSERS
 - TELEVISION MOUNT
 - OCCUPANCY SENSOR
 - SPEAKER
 - CEILING MOUNTED FIRE ALARM
 - SMOKE DETECTOR
 - WI-FI ANTENNA
 - EXIT SIGN
 - SPRINKLER HEAD
- NOTE: ALL SYMBOLS MAY NOT BE USED

TT2459A REFLECTED CEILING PLAN
1/4"=1'-0"



- ### GENERAL CONSTRUCTION NOTES
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 - THE CONTRACTOR, SUBCONTRACTORS AND THEIR EMPLOYEES SHALL ABIDE BY ALL BADGING, SECURITY, AND CONDUCT REQUIREMENTS REQUIRED BY THE OWNER.
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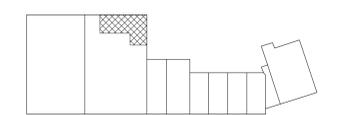
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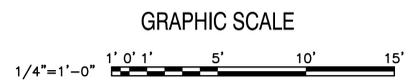
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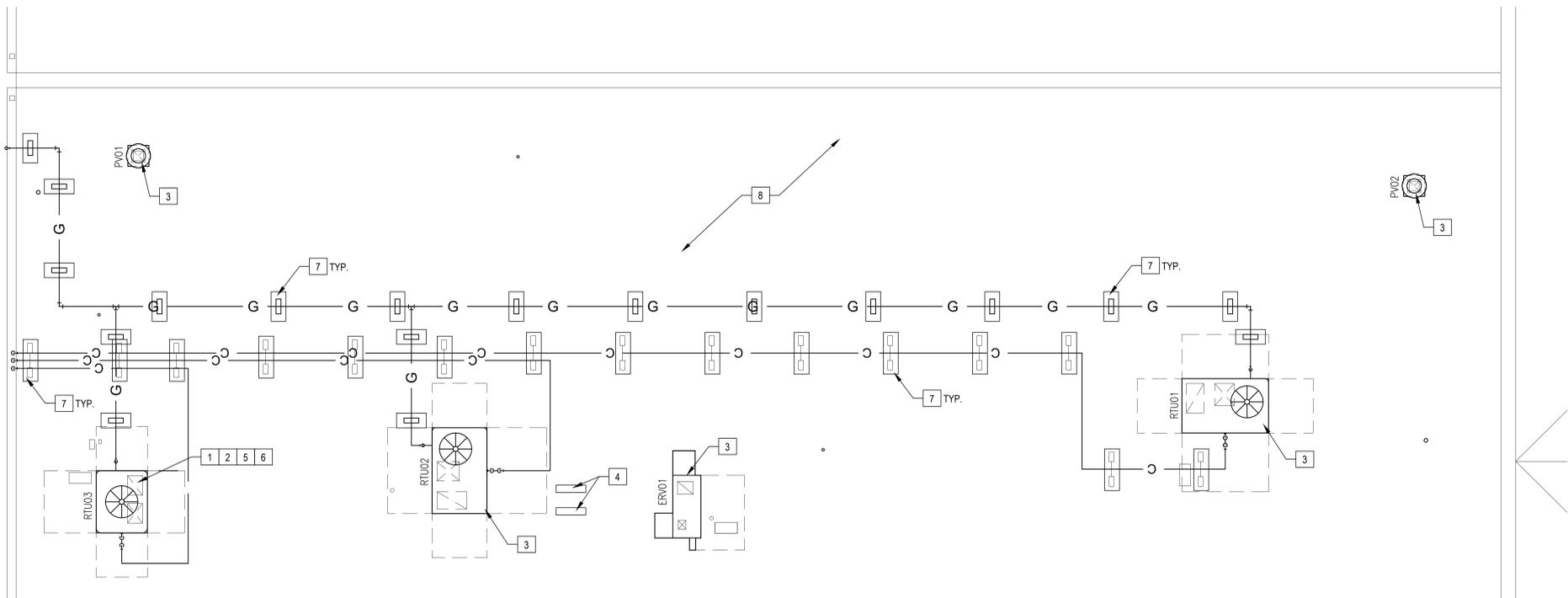


KEY PLAN
NOT TO SCALE



FINAL		A-132	
DEPARTMENT OF THE NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A ARCHITECTURAL REFLECTED CEILING PLAN			
DES. RMC	DR. LJR	CHK. RMC	17230
SUBMITTED BY: -		DESIGN DIR. T H BURTON, PE	
APPROVED: PWO OR OICC	DATE	SIZE	CODE IDENT. NO.
F	80091	F	NAVAC DRAWING NO. 60022639
SATISFACTORY TO:		DATE	CONST. CONTR.
SCALE: NOTED		SPEC. 05-17-0113	SHEET 15 OF 55

REVISIONS		
SYM	DATE	APPROVED



- CONSTRUCTION KEYED NOTES**
- 1 REPLACE, PATCH IN AND FLASH AREAS OF THE EXISTING MODIFIED BITUMEN ROOF. WHERE PATCHING IS REQUIRED OR FOR AREAS REMOVED FOR INSTALLATION OF CURBS, PIPE SUPPORTS AND PIPE PENETRATIONS WITH A MODIFIED BITUMEN ROOFING SYSTEM WITH A FINISHED SURFACE OF GRANULES; MECHANICALLY ATTACH THROUGH THE FIRST MEMBRANE PLY AND THEN TORCH FUSE THE CAP MEMBRANE. INSTALL OVER NEW INSULATION SUBSTRATE TO MATCH THE EXISTING ROOF INSULATION AND APPROVED BY THE MANUFACTURER'S GUIDE AND SPECIFICATIONS AND INSTALLED OVER A COMPATIBLE. THE EXISTING THICKNESS. THE AREA TO BE REMOVED AND REPLACED SHALL BE EQUAL TO IN DESIGN AND MATERIAL AND COMPATIBLE TO THE EXISTING BRAND ROOF. ALL ROOF WORK SHALL COMPLY WITH THE MANUFACTURER'S REQUIREMENTS FOR WARRANTY.
 - 2 NEW ROOF CURB. SEE MECHANICAL DRAWINGS AND DETAIL 2/A-521.
 - 3 NEW HVAC EQUIPMENT INSTALLED ON EXISTING CURB OR ADAPTER CURB. SEE MECHANICAL DRAWINGS.
 - 4 PATCH ROOF AS NEEDED TO COVER ANY DAMAGE OR WORN AREAS IN THE TOP MEMBRANE WHERE SLEEPERS WERE REMOVED. ALL WORK SHALL COMPLY WITH MANUFACTURER'S REQUIREMENTS FOR WARRANTY.
 - 5 CONTRACTOR SHALL CUT OUT AND REMOVE ROOF, INSULATION BOARDS AND OTHER ROOFING ITEMS DOWN TO STRUCTURAL ROOF DECK FOR INSTALLATION OF NEW ROOF CURBS. FOR NEW ROOF CURBS, CONTRACTOR IS RESPONSIBLE TO REMOVE AN AREA LARGE ENOUGH TO ALL INSTALLATION OF NEW ROOF CURBS, ANCHORS, PITCH POCKETS, ETC.
 - 6 ALL ROOF CUT OUT LOCATIONS FOR CURBS AND PIPE SUPPORTS MUST BE PATCHED BACK WITHIN THE SAME WORK DAY. IN THE EVENT OF UNEXPECTED PRECIPITATION THE CONTRACTOR SHALL HAVE THE MEANS TO KEEP THE OPEN ROOF CUTOUTS WEATHER TIGHT.
 - 7 GRANULAR FACED MODIFIED BITUMEN SLEEPER PADS FOR GAS AND CONDENSATE PIPING. FABRICATED FROM WALKING PADS COMPATIBLE TO THE EXISTING BRAND ROOF AND FULLY ADHERED TO THE EXISTING MODIFIED BITUMEN ROOF.
 - 8 PROTECT EXISTING MODIFIED BITUMEN ROOF FROM DAMAGE.

TT2459 ROOF PLAN
1/4"=1'-0"
PLAN NORTH

- GENERAL CONSTRUCTION NOTES**
1. LIMIT CONSTRUCTION ACTIVITIES TO DESIGNATED AREAS OF WORK.
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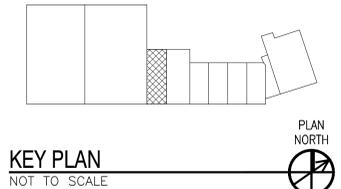
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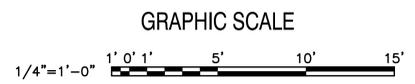
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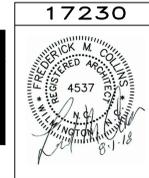
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KEY PLAN
NOT TO SCALE

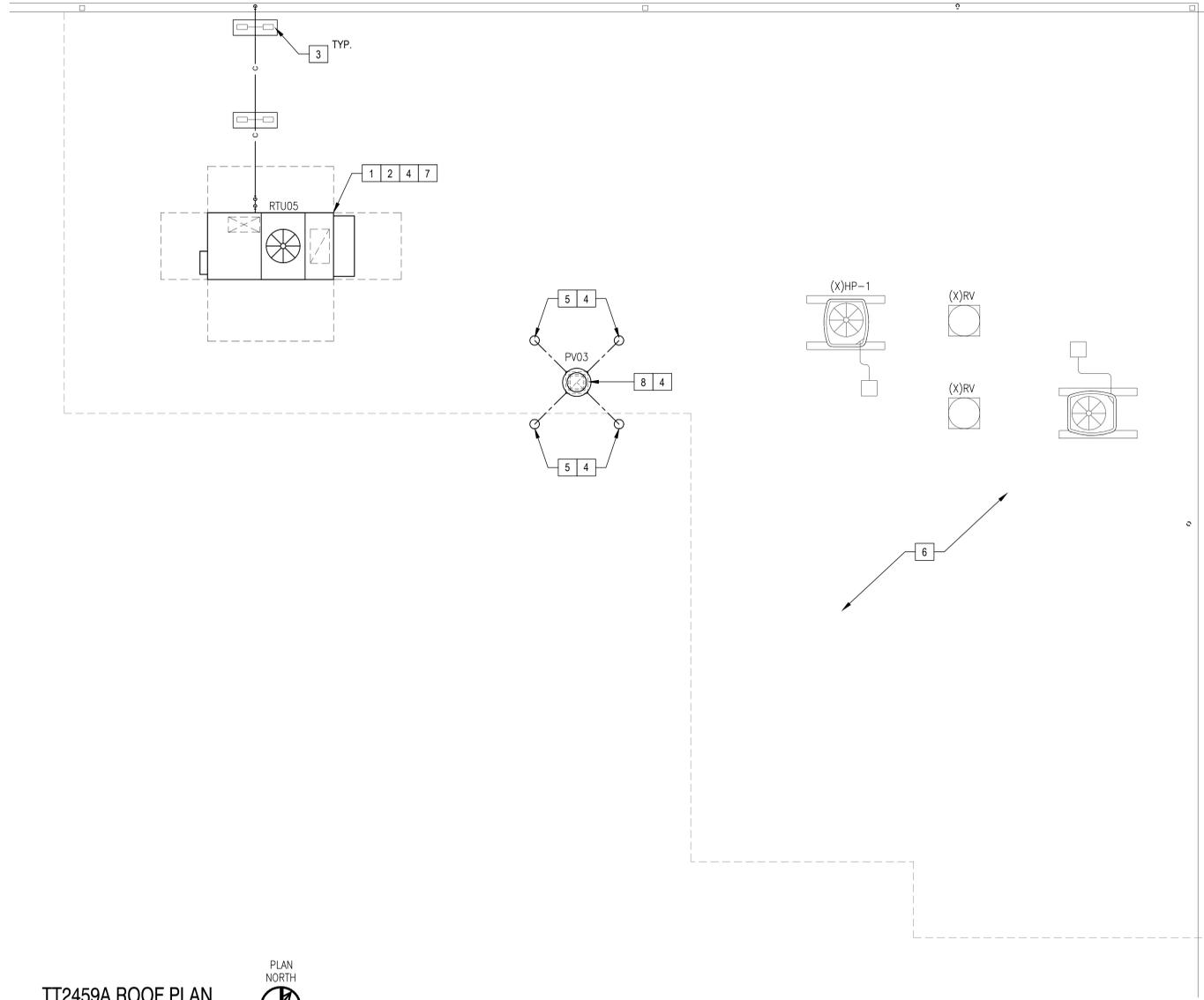


GRAPHIC SCALE
1/4"=1'-0"



FINAL		A-151	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGs TT2459 & TT2459A ARCHITECTURAL TT2459 ROOF PLAN			
DES. RMC	DR. LJR	CHK. RMC	SUBMITTED BY: -
DESIGN DIR. T H BURTON, PE		APPROVED: PWO OR OICC	DATE
SATISFACTORY TO:	DATE	SIZE	CODE IDENT. NO.
		F	80091
		SCALE: NOTED	SPEC. 05-17-0113
		NAVFAC DRAWING NO. 60022640 CONST. CONTR.	
		SHEET 16 OF 55	

REVISIONS			
SYM		DATE	APPROVED



- CONSTRUCTION KEYED NOTES**
- 1 REPLACE, PATCH IN AND FLASH AREAS OF THE EXISTING MODIFIED BITUMEN ROOF WHERE PATCHING IS REQUIRED OR FOR AREAS REMOVED FOR INSTALLATION OF CURBS, PIPE SUPPORTS AND PIPE PENETRATIONS WITH A MODIFIED BITUMEN ROOFING SYSTEM WITH A FINISHED SURFACE OF GRANULES; MECHANICALLY ATTACH THROUGH THE FIRST MEMBRANE PLY AND THEN TORCH FUSE THE CAP MEMBRANE. INSTALL OVER NEW INSULATION SUBSTRATE TO MATCH THE EXISTING ROOF INSULATION AND APPROVED BY THE MANUFACTURER'S GUIDE AND SPECIFICATIONS AND INSTALLED OVER A COMPATIBLE THE EXISTING THICKNESS. THE AREA TO BE REMOVED AND REPLACED SHALL BE EQUAL TO IN DESIGN AND MATERIAL AND COMPATIBLE TO THE EXISTING BRAND ROOF. ALL ROOF WORK SHALL COMPLY WITH THE MANUFACTURER'S REQUIREMENTS FOR WARRANTY.
 - 2 NEW ROOF CURB. SEE MECHANICAL DRAWINGS AND DETAIL 2/A-521.
 - 3 GRANULAR FACED MODIFIED BITUMEN SLEEPER PADS FOR GAS AND CONDENSATE PIPING. FABRICATED FROM WALKING PADS COMPATIBLE TO THE EXISTING BRAND ROOF AND FULLY ADHERED TO THE EXISTING MODIFIED BITUMEN ROOF.
 - 4 ALL ROOF CUT OUT LOCATIONS FOR CURBS AND PIPE SUPPORTS MUST BE PATCHED BACK WITHIN THE SAME WORK DAY. IN THE EVENT OF UNEXPECTED PRECIPITATION THE CONTRACTOR SHALL HAVE THE MEANS TO KEEP THE OPEN ROOF CUTOUTS WEATHER TIGHT.
 - 5 GUY WIRE ANCHORS. SEE DETAIL 3/A-521 AND MECHANICAL DRAWINGS.
 - 6 PROTECT EXISTING MODIFIED BITUMEN ROOF FROM DAMAGE.
 - 7 CONTRACTOR SHALL CUT OUT AND REMOVE ROOF, INSULATION BOARDS AND OTHER ROOFING ITEMS DOWN TO STRUCTURAL ROOF DECK FOR INSTALLATION OF NEW ROOF CURBS. FOR NEW ROOF CURBS, CONTRACTOR IS RESPONSIBLE TO REMOVE AN AREA LARGE ENOUGH TO ALL INSTALLATION OF NEW ROOF CURBS, ANCHORS, PITCH POCKETS, ETC.
 - 8 NEW TALL ROOF CURB WITH GUY WIRES SECURED TO ANCHORS AT ROOF. SEE MECHANICAL DRAWINGS.

- GENERAL CONSTRUCTION NOTES**
1. LIMIT CONSTRUCTION ACTIVITIES TO DESIGNATED AREAS OF WORK.
 2. OWNER SHALL REMOVE ALL FURNISHINGS AND EQUIPMENT PRIOR TO BEGINNING OF CONSTRUCTION.
 3. THE CONTRACTOR, SUBCONTRACTORS AND THEIR EMPLOYEES SHALL ABIDE BY ALL BADGING, SECURITY, AND CONDUCT REQUIREMENTS REQUIRED BY THE OWNER.
 4. MAINTAIN CORRIDORS AND PATHS OF EGRESS AT ALL TIMES. DO NOT BLOCK EXITS, STAIRS, RAMP, ETC.
 5. CONTRACTOR (WITH ESCORT) SHALL PHOTOGRAPH EXISTING CONDITIONS OF AREAS WHERE DEMOLITION ACTIVITIES OCCUR TO DOCUMENT EXISTING CONDITIONS.
 6. CONTRACTOR SHALL PROTECT ALL EXISTING STRUCTURES, FINISHES, PARTITIONS, BUILDING SYSTEMS AND OTHER ELEMENTS THAT REMAIN FROM DAMAGE.
 7. CONTRACTOR IS RESPONSIBLE FOR ANY AND ALL DAMAGE TO EXISTING BUILDING, STRUCTURE, FINISHES, PARTITIONS, BUILDING SYSTEMS AND OTHER ELEMENTS TO REMAIN.
 8. CONTRACTOR SHALL MAKE ALL CUTS TO EXISTING ELEMENTS IN SUCH A WAY AS TO PREVENT DAMAGE TO ADJACENT ELEMENTS AND TO FACILITATE THE PATCHING OF THE EXISTING ELEMENTS AND INTERFACE WITH NEW CONSTRUCTION.
 9. CONTRACTOR SHALL PATCH, REPAIR, AND PREP ALL EXISTING WALL & FLOOR SUBSTRATES FROM DEMOLITION WORK OR EXISTING CONDITIONS TO A LEVEL SUITABLE FOR THE INSTALLATION OF NEW FINISHES.
 10. ALL WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE CODES & REGULATIONS.
 11. ALL AREAS OF CONSTRUCTION SHALL BE SECURED SO AS TO LIMIT ACCESS BY UNAUTHORIZED PERSONS.
 12. ALL FACILITIES WHERE CONSTRUCTION OCCURS SHALL BE SECURED DAILY UPON THE COMPLETION OF THE WORK DAY. SECUREMENT METHODS & EMERGENCY ACCESS SHALL BE APPROVED BY THE OWNER.
 13. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND QUANTITIES NECESSARY TO COMPLETE THE WORK AS DESCRIBED OR INTENDED IN THE CONTRACT DOCUMENTS.
 14. WEEKDAY WORK HOURS ARE FROM 0700 TO 1700. WEEKEND WORK HOURS ARE FROM 0600 TO 1800.
 15. THE BUILDING/FACILITY WILL REMAIN IN USE/OCCUPIED DURING CONSTRUCTION.
 16. PROVIDE OWNER WITH A MINIMUM 48 HOUR NOTICE AND OBTAIN APPROVAL FOR ACTIVITIES THAT COULD INTERRUPT OR IMPACT THE USE OR OPERATION OF THE EXISTING BUILDING/FACILITY.
 17. BUILDING FIRE ALARM AND OTHER LIFE SAFETY SYSTEMS SHALL REMAIN OPERATIONAL. PROTECT SYSTEMS AND DEVICES FROM DAMAGE.
 18. COVER ALL EXISTING FLOORING AND PROTECT FROM DAMAGE. PROTECT WALLS, TRIM AND DOORS FROM DAMAGE.
 19. COVER ALL SMOKE HEADS IN CONSTRUCTION AREA DURING CONSTRUCTION. REMOVE COVERS AFTER WORK HOURS TO MAINTAIN COVERAGE.
 20. EXISTING SECURITY CAMERAS SHALL REMAIN OPERATIONAL IN WORK AREAS.
 21. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGE TO THE EXISTING FINISHES AND EQUIPMENT DURING CONSTRUCTION.
 22. ALL MATERIALS THAT ARE USED IN THE CONSTRUCTION SHALL BE MANUFACTURED IN THE USA AND DELIVERED TO THE SITE WITH PROOF OF SUCH AND SHALL BE STORED WITHIN THE PERIMETER FENCE UNTIL INCORPORATED INTO THE WORK.

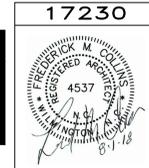
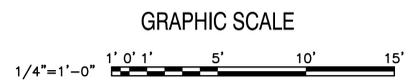
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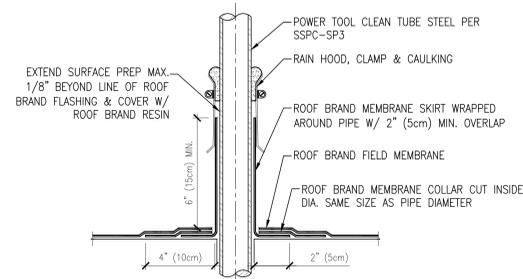
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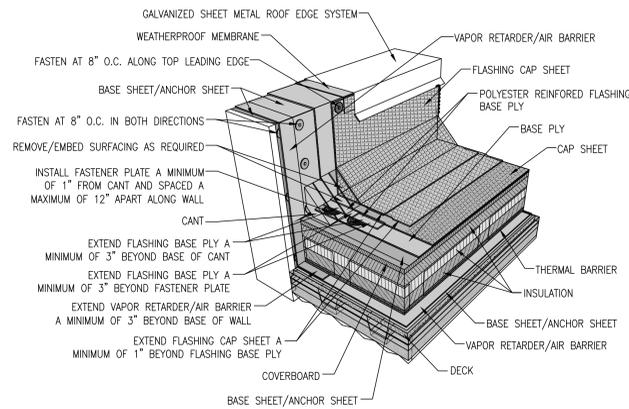
FINAL		A-152	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND			
MARINE CORPS BASE			
CAMP LEJEUNE, NORTH CAROLINA			
17-0113			
REPLACE HVAC			
BLDGS TT2459 & TT2459A			
ARCHITECTURAL			
TT2459A ROOF PLAN			
DES. RMC	DATE	SIZE	CODE IDENT. NO.
DR. LJR		F	80091
CHK. RMC			
SUBMITTED BY: .			
DESIGN DIR. T H BURTON, PE			
APPROVED: PWO OR OICC	DATE		NAVFAC DRAWING NO.
			60022641
SATISFACTORY TO:	DATE		CONST. CONTR.
SCALE: NOTED		SPEC. 05-17-0113	
		SHEET 17 OF 55	

REVISIONS			
SYM		DATE	APPROVED



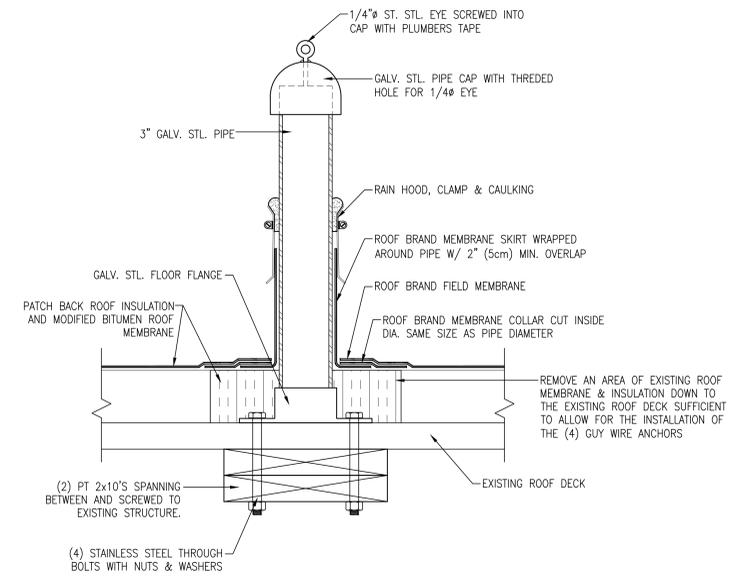
NOTES:
 DETAIL TO BE USED IN CONJUNCTION WITH ROOF MANUFACTURER GENERAL REQUIREMENTS, APPLICATION METHODS AND APPROVED DETAILS.
 CONTRACTOR TO CUT OUT AND REMOVE ROOF AND INSULATION BOARDS DOWN TO STRUCTURAL ROOF DECK. CONTRACTOR IS RESPONSIBLE TO REMOVE AN AREA LARGE ENOUGH TO ALLOW INSTALLATION OF STRUCTURAL SUPPORT BASE PLATES AND HVAC CURBS. SEE MECHANICAL AND STRUCTURAL DRAWINGS.

PIPE PENETRATION FLASHING DETAIL 1
 3" = 1'-0" A-151/A-152

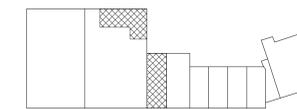


NOTES:
 1. REFER TO ROOF BRAND DETAIL DRAWINGS AND OTHER RELATED PUBLISHED DOCUMENTATION, PRODUCT DATA SHEETS (PDS) AND SAFETY DATA SHEETS (SDS) FOR ADDITIONAL INFORMATION. INSTALL ALL ROOFING AND RELATED MATERIALS IN ACCORDANCE WITH THE ROOF BRAND'S WRITTEN INSTRUCTIONS AND DETAIL DRAWINGS. ALL NEW ROOF WORK SHALL BE PROVIDED WITH A WARRANTY AND ALL NEW WORK SHALL NOT ALTER OR VOID ANY EXISTING ROOF WARRANTIES.
 2. HOT WORK: THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING APPROPRIATE CONDITIONS TO UTILIZE HEAT-WELDING EQUIPMENT. REFER TO THE NRCA CERTA RECOMMENDATIONS, LOCAL CODES AND BUILDING OWNER'S REQUIREMENTS FOR HOT WORK OPERATIONS.
 3. PRIMER: WHERE NOT SHOWN OR INDICATED ON DETAIL DRAWINGS, REFER TO MATERIAL PRODUCT DATA SHEETS FOR PRIMER APPLICATION REQUIREMENTS.
 4. FLASHING PLYS MUST EXTEND VERTICALLY A MINIMUM OF 8" FROM ROOF SURFACE. FLASHING PLYS EXTENDING VERTICALLY MORE THAN 24" FROM ROOF SURFACE MUST BE ADHERED AND MECHANICALLY FASTENED ALONG THE TOP LEADING EDGE. REFER TO PUBLISHED DOCUMENTATION.
 5. FOR 90° TRANSITIONS, FLASHING PLYS MUST MEET THE FOLLOWING REQUIREMENTS: HEAT WELD POLYESTER REINFORCED FLASHING BASE PLYS. HEAT WELD POLYESTER REINFORCED GRANULE FLASHING CAP SHEET, OR HEAT WELD FOIL/FILM CLAD FLASHING CAP SHEET.

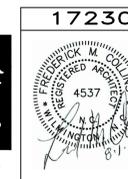
ROOFING DETAIL 2
 NTS A-151/A-152



GUY WIRE ANCHOR DETAIL 3
 3" = 1'-0" A-152



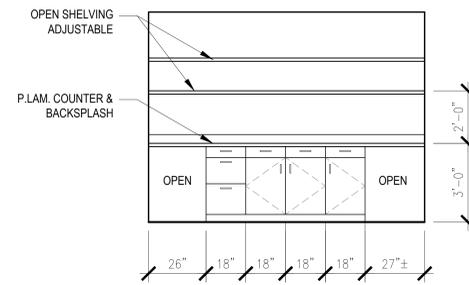
KEY PLAN
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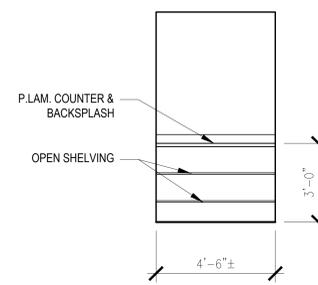
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FINAL		A-521	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A			
ARCHITECTURAL TT2459 & TT2459A ROOF DETAILS			
DES. RMC	DR. LJR	CHK. RMC	SUBMITTED BY: T H BURTON, PE
DESIGN DIR. T H BURTON, PE	APPROVED: PWO OR OICC	DATE	SIZE CODE IDENT. NO. NAVFAC DRAWING NO. 60022642
SATISFACTORY TO:	DATE	F 80091	CONST. CONTR.
SCALE: NOTED		SPEC. 05-17-0113	SHEET 18 OF 55

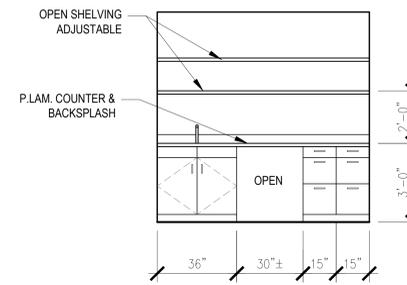
REVISIONS		
SYM	DATE	APPROVED



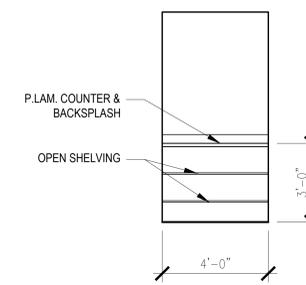
ELEVATION (SURG. 103)
3/8" = 1'-0" A-102 ①



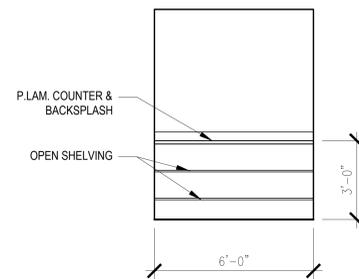
ELEVATION (CLN.RM. 102)
3/8" = 1'-0" A-102 ②



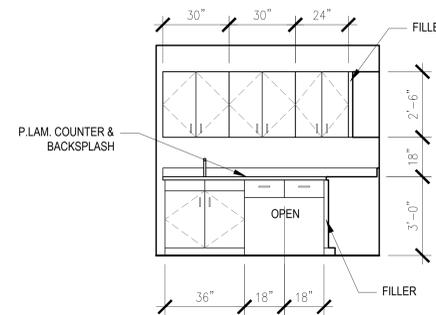
ELEVATION (TRTMT. 101)
3/8" = 1'-0" A-102 ③



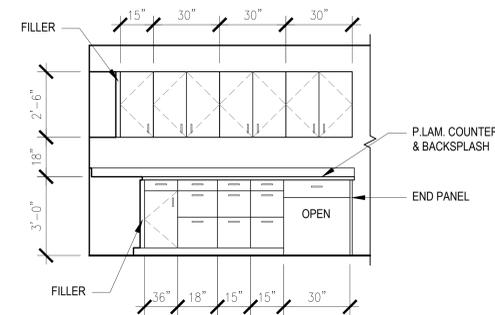
ELEVATION (TRTMT. 101)
3/8" = 1'-0" A-102 ④



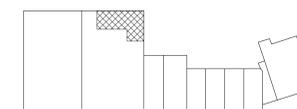
ELEVATION (TRTMT. 101)
3/8" = 1'-0" A-102 ⑤



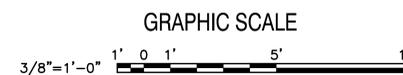
ELEVATION (LAB 128)
3/8" = 1'-0" A-102 ⑥



ELEVATION (LAB 128)
3/8" = 1'-0" A-102 ⑦



KEY PLAN
NOT TO SCALE



GRAPHIC SCALE



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FINAL		A-751	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND			
MARINE CORPS BASE			
CAMP LEJEUNE, NORTH CAROLINA			
17-0113			
REPLACE HVAC			
BLDGS TT2459 & TT2459A			
ARCHITECTURAL			
TT2459A CASEWORK DETAILS			
DES. RMC	DR. LJR	CHK. RMC	17230
SUBMITTED BY: -			
DESIGN DIR. T H BURTON, PE			
APPROVED: PWO OR OICC	DATE	SIZE	CODE IDENT. NO.
F	80091	NAVAC DRAWING NO.	60022643
SATISFACTORY TO:		DATE	CONST. CONTR.
SCALE: NOTED		SPEC. 05-17-0113	SHEET 19 OF 55

REVISIONS			
SYM		DATE	APPROVED

LEGEND

-  ELECTRIC ALARM BELL
-  WATERFLOW SWITCH
-  SPRINKLER RISER ASSEMBLY
-  2.5" SIAMESE FD CONNECTION
-  UPRIGHT SPRINKLER
-  PENDANT SPRINKLER
-  UNDERGROUND FIRE WATER MAINS

SUBSCRIPTS

- (X) EXISTING TO REMAIN
- (N) NEW
- (D) EXISTING TO BE RELOCATED
- (R) EXISTING SPRINKLER HEAD TO BE REPLACED

GENERAL NOTES:

1. SPRINKLER SYSTEM TO BE INSTALLED COMPLETE AND OPERATIVE THROUGHOUT THE MODIFIED AREA OF TT2495A IN ACCORDANCE WITH NFPA 13 AND UFC 3-600-01
2. SPRINKLER CONTRACTOR SHALL REVIEW AND FIELD VERIFY JOB CONDITIONS AND VERIFY ALL MEASUREMENTS, DISTANCES, ELEVATIONS, CLEARANCES, PIPE SIZES, ETC. THAT MAY AFFECT THE SYSTEM INSTALLATION OR COMPLIANCE WITH NFPA 13 BEFORE DEVELOPMENT OF INSTALLATION (SHOP) DRAWINGS.
3. FINAL SPRINKLER PLACEMENT, PIPE ROUTING, AND QUANTITY SHALL BE COORDINATED BETWEEN SPRINKLER CONTRACTOR AND GENERAL CONTRACTOR. PIPE ROUTING SHOWN IS SUGGESTED. FINAL ROUTING TO BE SHOWN AND APPROVED THROUGH THE SHOP DRAWINGS.
4. ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, AND ELECTRICAL BACKGROUND INFORMATION SHOWN IS FOR COORDINATION PURPOSES ONLY. REFER TO THE PROPER DRAWINGS FOR EXACT LOCATIONS, SIZES, AND QUANTITIES OF OTHER TRADES' WORK.
5. PIPE TO BE SCHEDULE 40 BLACK STEEL FOR PIPES 2" AND SMALLER, MINIMUM SCHEDULE 10 FOR PIPE LARGER THAN 2".
6. PIPE TO BE RUN CONCEALED ABOVE CEILINGS.
7. INSULATION PROVIDED ON EXISTING WET PIPE SPRINKLER SYSTEM TO BE MAINTAINED, AND SHOULD ANY ADDITIONAL OR NEEDING OF REPAIR CAUSED BY THE INSTALLATION OF NEW PIPING SHALL BE PROVIDED BY THE SPRINKLER CONTRACTOR.

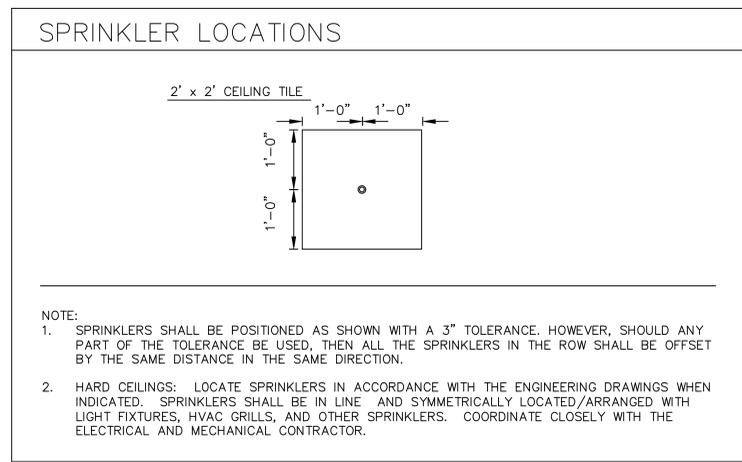
PIPE HANGAR NOTES:

1. ONLY ONE PIPE SHALL BE SUPPORTED FROM A SINGLE TRAPEZE HANGER UNLESS OTHERWISE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD.
2. HANGERS WITH MORE THAN 150 POUNDS OF LOAD SHOULD BE ATTACHED TO THE BAR JOIST AT A PANEL POINT.

SPRINKLERS

PENDANTS: CONCEALED
 FINISH: CHROME
 TEMP: ORDINARY
 K: 5.6

SPRINKLERS NEAR A HEAT SOURCE (UNIT HEATER, DIFFUSER, STEAM MAINS, SKYLIGHT, ETC) SHALL HAVE TEMPERATURE RATING IN ACCORDANCE WITH NFPA 13.



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Lovett Consultants
 4455 Morris Park Dr.
 Suite H
 Mint Hill, NC 28227
 Ph. 704.545.8383 Fax 704.545.2483
 Fire Protection & Building Code Specialists
 NC Firm License No: F-0296



FINAL		FP001	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A FIRE PROTECTION LEGEND AND GENERAL NOTES			
DES. JLL	DR. ANP	CHK. BML	SUBMITTED BY:
DESIGN DIR. T H BURTON, PE	APPROVED: PWO OR OICC	DATE	SIZE CODE IDENT. NO
SATISFACTORY TO:	DATE	F 80091	NAVAFAC DRAWING NO. 60022644
		CONST. CONTR.	SCALE: NOTED SPEC. 05-17-0113 SHEET 20 OF 55

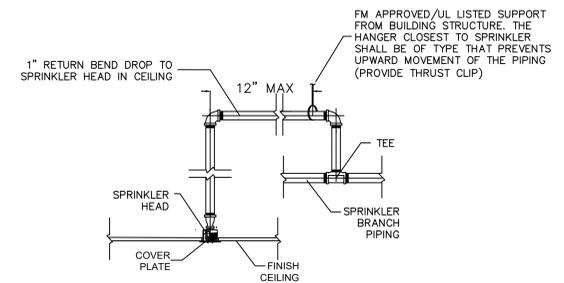
REVISIONS		
SYM	DATE	APPROVED

SHEET NOTES:

- REFERENCE FP001 FOR NOTES AND LEGEND.
- ALL DEVICES SHOWN ARE EXISTING UNLESS NOTED OTHERWISE.

KEY NOTES:

- RELOCATE SPRINKLERS 4" FROM WALLS AND TO PROVIDE PROPER COVERAGE OF RENOVATED ROOM
- ADD SPRINKLER TO EXISTING BRANCH LINE.
- DOOR IS NOT KEYED AS A "P4". ROOM WAS NOT SURVEYED.
- LOCATION OF RISER NOT EXACT, ASSUMED TO BE LOCATED NEAR FDC



DISCLOSURE OF INFORMATION:

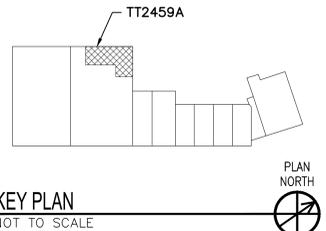
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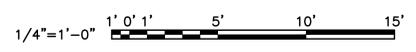
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FIRE PROTECTION FLOOR PLAN
1/4"=1'-0"



Lovett Consultants
4455 Morris Park Dr.
Suite H
Mint Hill, NC 28227
Ph. 704.545.8383 Fax 704.545.2483
Fire Protection & Building Code Specialists
NC Firm License No: F-0296



FINAL		FP101	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND			
MARINE CORPS BASE			
CAMP LEJEUNE, NORTH CAROLINA			
17-0113			
REPLACE HVAC			
BLDGs TT2459 & TT2459A			
FIRE PROTECTION FLOOR PLAN			
DES. JLL	DR. ANP	CHK. BML	SUBMITTED BY:
DESIGN DIR: T H BURTON, PE	APPROVED: PWO OR OICC	DATE	SIZE CODE IDENT. NO.
SATISFACTORY TO:	DATE	F 80091	NAVFAC DRAWING NO. 60022645
SCALE: NOTED		SPEC. 05-17-0113	SHEET 21 OF 55

REVISIONS		
SYM	DATE	APPROVED

PLUMBING GENERAL NOTES	
1.	SCOPE OF WORK: THESE DRAWINGS AND ACCOMPANYING SPECIFICATIONS DESCRIBE SCOPE OF WORK REQUIRED FOR PLUMBING SYSTEMS. LABOR AND MATERIAL SHALL BE PROVIDED AS REQUIRED FOR A COMPLETE, WORKMANLIKE INSTALLATION OF ALL SYSTEMS SHOWN ON DIAGRAMMATIC DRAWINGS AND/OR AS SPECIFIED HEREIN.
2.	CONTRACTOR: THE WORD "CONTRACTOR", "PLUMBING CONTRACTOR", AND "P.C." AS USED HEREIN SHALL MEAN THE PLUMBING INSTALLER UNLESS OTHERWISE QUALIFIED.
3.	DRAWINGS: DRAWINGS ARE DIAGRAMMATIC AND MAY NOT COMPLETELY DESCRIBE EVERY DETAIL OF THE INSTALLATION. HOWEVER, CONTRACTOR IS RESPONSIBLE FOR FURNISHING COMPLETE SYSTEMS INCLUDING ALL REQUIRED EQUIPMENT AND ACCESSORIES TO OBTAIN FULLY FUNCTIONING PLUMBING SYSTEMS.
4.	CODE COMPLIANCE: COMPLY WITH THE LATEST EDITIONS OF THE FOLLOWING STANDARDS AND CODES, INsofar AS THEY APPLY: INTERNATIONAL PLUMBING CODE
5.	SUPERVISION: PROVIDE SKILLED SUPERINTENDENTS TO SUPERVISE THE WORK FROM THE BEGINNING TO COMPLETION AND FINAL INSPECTION.
6.	PROGRESS OF WORK: PERFORM WORK IN ACCORDANCE WITH SCHEDULE AND REQUIREMENTS OF THE CONTRACT. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR DELAY THE OVERALL PROJECT SCHEDULE.
7.	COORDINATION: COORDINATE PLUMBING WORK WITH THE WORK OF OTHER TRADES. LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE UNLESS SPECIFICALLY DIMENSIONED. ARRANGE PLUMBING SO AS NOT TO INTERFERE WITH THE WORK OF OTHER TRADES. VERIFY ACTUAL BUILDING STRUCTURE PRIOR TO DUCT FABRICATION AND ADJUST LAYOUT AS REQUIRED. INCLUDE ALL OFFSETS IN DUCTS, FITTINGS, PIPING, ETC. AS REQUIRED TO PROPERLY INSTALL EQUIPMENT.
8.	EQUIPMENT LOCATIONS: DETERMINE EXACT EQUIPMENT AND MATERIALS LOCATIONS TO PROVIDE BEST ARRANGEMENT AND TO FACILITATE PROPER MAINTENANCE AND SERVICING OF EQUIPMENT.
9.	LISTING AND LABELING: ALL EQUIPMENT SHALL BE LABELED OR LISTED BY UL OR OTHER APPROVED TESTING AGENCY WHERE REQUIRED.
10.	RECORD DRAWINGS: MAINTAIN ONE SET OF "RED-LINED" RECORD DRAWINGS ON SITE AT ALL TIMES.
11.	BUILDINGS AND CONSTRUCTION: A. BUILDING LAYOUT INDICATED IS DEVELOPED FROM EXISTING RECORD DOCUMENTS AND LIMITED FIELD VERIFICATION FOR THE PURPOSES OF DESCRIBING THE WORK. VERIFY ALL EXISTING CONDITIONS AND ADJUST WORK AS REQUIRED TO SUIT ACTUAL FIELD CONDITIONS. B. PERFORM ALL WORK IN ACCORDANCE WITH SAFETY REGULATIONS. C. DO NOT CUT ANY STRUCTURAL MEMBERS WITHOUT EXPRESS WRITTEN INSTRUCTIONS FROM CONTRACTING OFFICER. PROVIDE CUTTING AND PATCHING FOR EXISTING FINISHES AS REQUIRED. D. COORDINATE INSTALLATION OF NEW PLUMBING SYSTEMS WITH EXISTING BUILDING SYSTEMS. ADJUST ARRANGEMENTS AS REQUIRED TO ACCOMMODATE INTERFERENCES.

PLUMBING DEMOLITION NOTES	
1.	THE PLUMBING CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS FOR DEMOLITION REQUIREMENTS AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER. REMOVE ALL FIXTURES, EQUIPMENT, PIPING, SUPPORTS, ACCESSORIES, ETC. MADE OBSOLETE BY THESE ALTERATIONS AS SHOWN IN THE PLUMBING DRAWINGS. ALL ITEMS TO BE REMOVED OR MODIFIED MAY NOT BE SHOWN, HOWEVER, THIS CONTRACTOR SHALL REMOVE ANY PLUMBING WORK AS REQUIRED BY THE CONSTRUCTION OR AS DIRECTED BY THE CONTRACTING OFFICER. SURVEY THE AFFECTED AREAS BEFORE SUBMITTING A BID.
2.	ALL EXISTING PLUMBING FIXTURES, EQUIPMENT AND PIPING SHALL REMAIN UNLESS SPECIFICALLY NOTED TO BE REMOVED.
3.	THESE DRAWINGS ARE DEVELOPED FROM THE OWNER'S AS-BUILT RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE PLUMBING CONTRACTOR SHALL VERIFY ALL PIPING, FIXTURE LOCATIONS, DIMENSIONS, MATERIALS AND ALL FIELD CONDITIONS AFFECTING HIS WORK.
4.	WHERE PLUMBING SYSTEMS PASS THROUGH THE DEMOLITION AREAS TO SERVE OTHER PORTIONS OF THE PREMISES, THEY SHALL REMAIN OR BE SUITABLY RELOCATED AND THE SYSTEM RESTORED TO NORMAL OPERATION. ADVISE THE CONTRACTING OFFICER IMMEDIATELY IF SUCH CONDITIONS ARE UNCOVERED BEFORE PROCEEDING WITH ADDITIONAL WORK.
5.	PROTECT ALL EXISTING LIFE SAFETY SYSTEMS, FIRE ALARM AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE OWNER AND CONTRACTING OFFICER IN WRITING WHEN SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE CONTRACTING OFFICER, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.
6.	SURVEY THE AFFECTED AREAS BEFORE SUBMITTING A BID AS ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DEPICTED ON THE DRAWINGS AND SOME UNUSUAL CONDITIONS MAY EXIST.

PLUMBING ABBREVIATIONS	
(X)	EXISTING
CO	CLEANOUT
DOW	DOMESTIC COLD WATER
DHW	DOMESTIC HOT WATER
FD	FLOOR DRAIN
HB	HOSE BIBB
NAT.	NATURAL GAS
OB	OUTLET BOX
SK	SINK
V	VENT
VTR	VENT THROUGH ROOF
W	WASTE
WCO	WALL CLEANOUT

NOTE: ALL ABBREVIATIONS MAY NOT BE USED IN PROJECT.

PLUMBING LEGEND	
	SANITARY VENT PIPING
	SANITARY WASTE PIPING
	DOMESTIC COLD WATER PIPING
	DOMESTIC HOT WATER PIPING
	NATURAL GAS PIPING
	DOMESTIC WATER WALL FAUCET
	FLOOR DRAIN
	DEMOLITION KEYED NOTE
	NEW WORK KEYED NOTE
	POINT OF CONNECTION - NEW TO EXISTING
	90° ELBOW
	CAP
	PIPE ELBOW DOWN
	INDICATES ITEMS TO BE DEMOLISHED

DISCLOSURE OF INFORMATION:

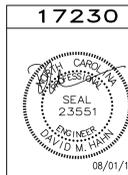
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B. REQUESTS FOR APPROVAL SHALL IDENTIFY THE SPECIFIC INFORMATION TO BE RELEASED, THE MEDIUM TO BE USED, AND THE PURPOSE FOR THE RELEASE. THE CONTRACTOR SHALL SUBMIT ITS REQUEST TO THE CONTRACTING OFFICER AT LEAST 45 DAYS BEFORE THE PROPOSED DATE FOR RELEASE.

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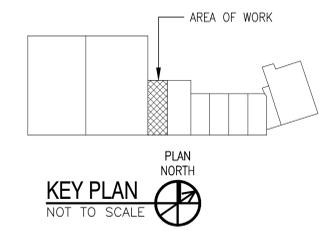
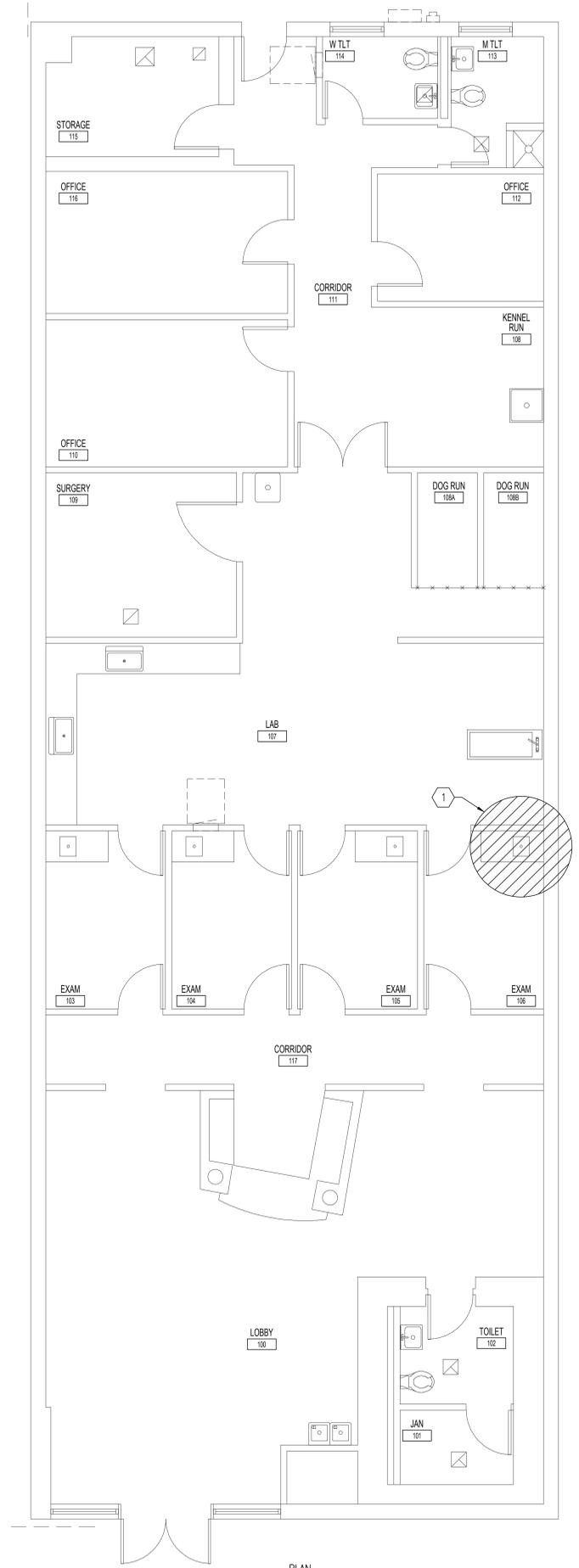
FINAL		P-001	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A			
PLUMBING LEGEND, ABBREVIATIONS AND NOTES			
DES. JBS	DR. SWB	CHK. DMH	SUBMITTED BY:
DESIGN DIR. T H BURTON, PE	APPROVED: PWO OR OICC	DATE	SIZE CODE IDENT. NO.
SATISFACTORY TO:	DATE	F 80091	NAVFAC DRAWING NO. 60022646
		CONST. CONTR.	SCALE: NOTED SPEC. 05-17-0113 SHEET 22 OF 55

REVISIONS

SYM	DATE	APPROVED

DEMOLITION KEYED NOTES

① REMOVE AND DISPOSE OF EXISTING COUNTERTOP SINK AND TRIM. CAP DW AND DHW PIPING INSIDE OF WALL CAVITY. REMOVE TRAP AND ARM. INSTALL CLEANOUT PLUG, STAINLESS STEEL COVER AT ARM CONNECTION TO RISER.



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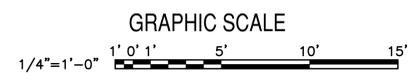
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TT2459 DEMOLITION FLOOR PLAN
 1/4"=1'-0"



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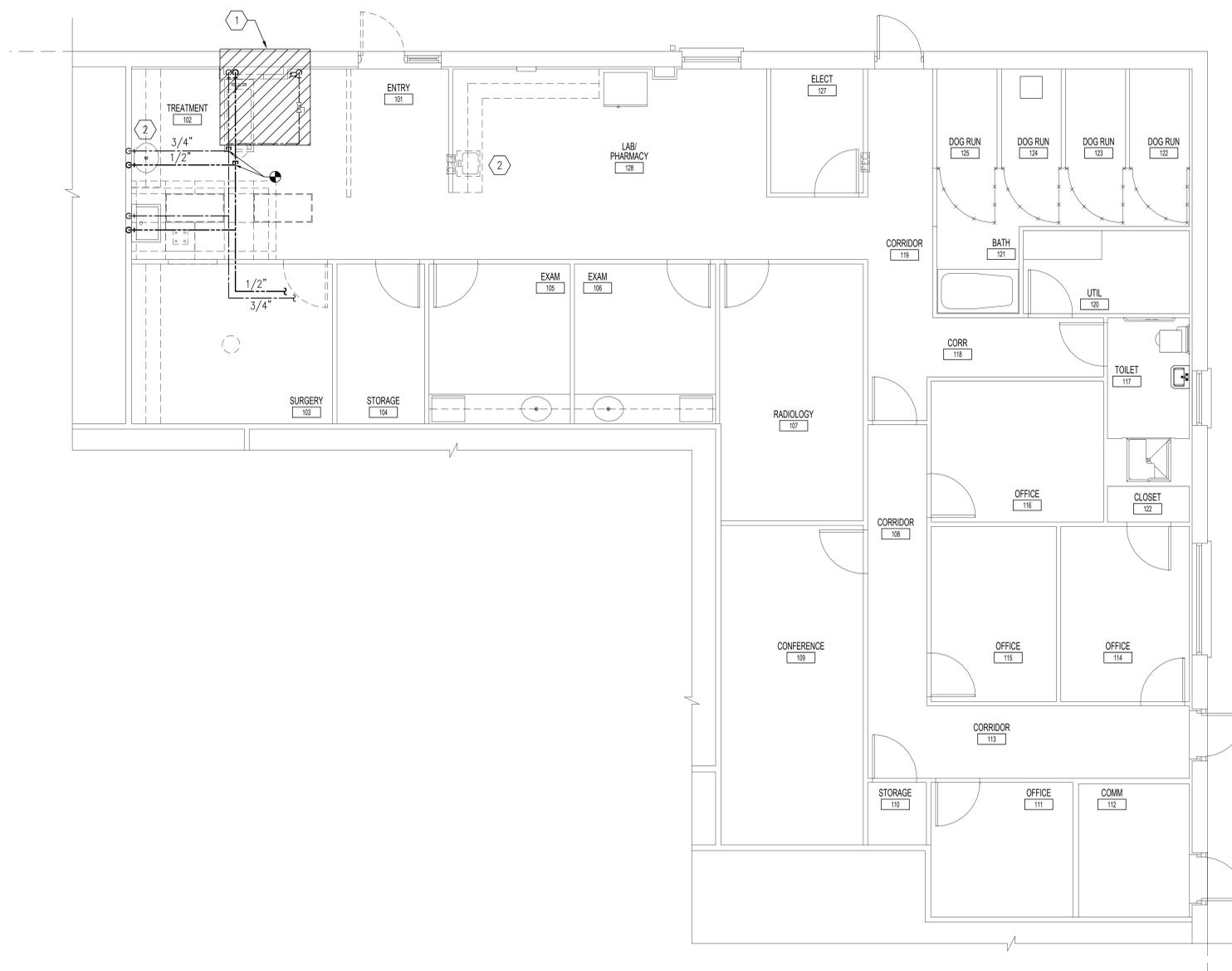
FINAL		PD101	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A PLUMBING			
DES. JBS		TT2459 DEMOLITION FLOOR PLAN	
DR. SWB		NAVFAC DRAWING NO. 60022647	
CHK. DMH		CONST. CONTR.	
SUBMITTED BY:		DATE	
DESIGN DIR. T H BURTON, PE		DATE	
APPROVED: PWO OR OICC		SIZE	CODE IDENT. NO
SATISFACTORY TO:		F	80091
SCALE: NOTED		SPEC. 05-17-0113	
SHEET 23		OF 55	

REVISIONS

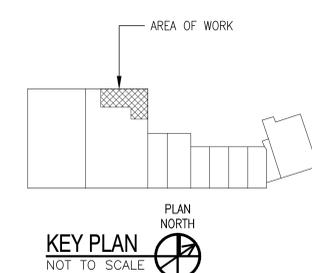
SYM	DATE	APPROVED

DEMOLITION KEYED NOTES

- ① REMOVE AND SALVAGE WET TABLE FOR RELOCATION. PER DRAWING P-102. REMOVE AND DISPOSE OF EXISTING WET TABLE ROUGH-IN AND WALL MOUNTED HOSE BIBB. CAP DCW AND DHW PIPING ABOVE CEILING AS INDICATED ON PLAN. REMOVE TRAP AND ARM. INSTALL CLEANOUT PLUG AND STAINLESS STEEL COVER WHERE ARM CONNECTS TO RISER.
- ② DISCONNECT DOMESTIC WATER AND SANITARY WASTE/VENT, REMOVE AND SALVAGE COUNTERTOP SINK AND TRIM, REINSTALL NEW COUNTERTOP.



TT2459A DEMOLITION FLOOR PLAN
1/4"=1'-0"



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NCP P-006

17230

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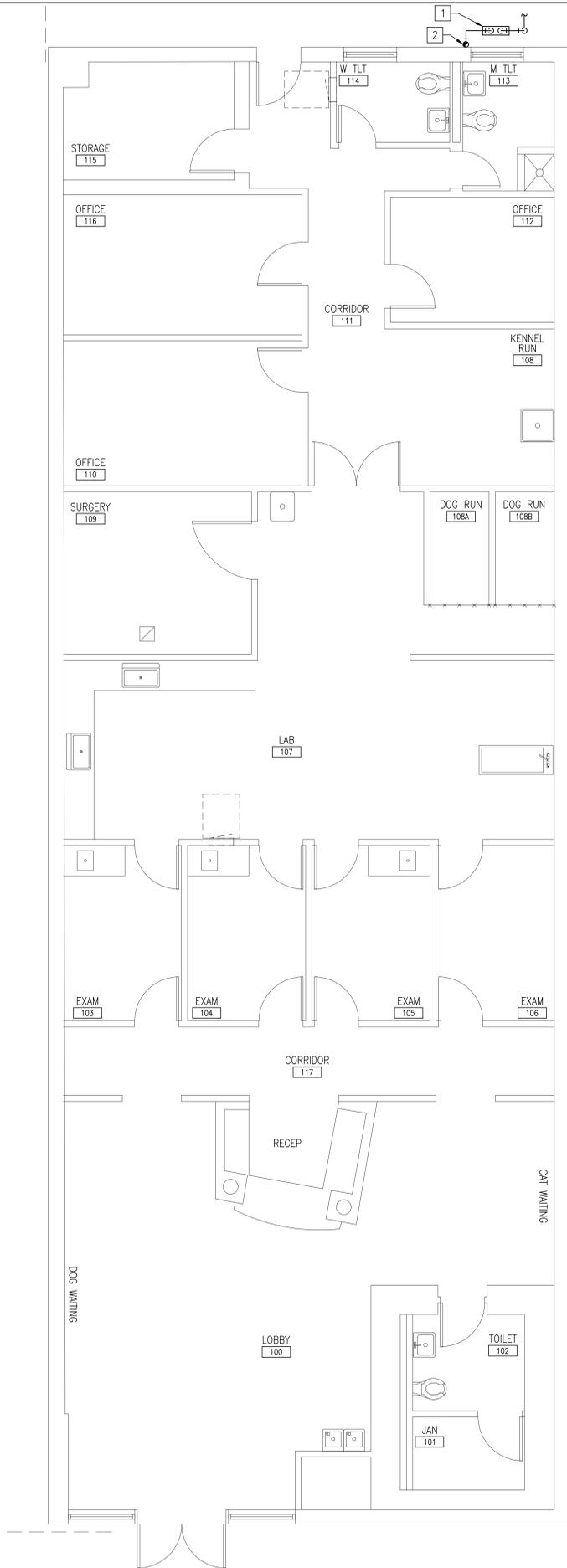
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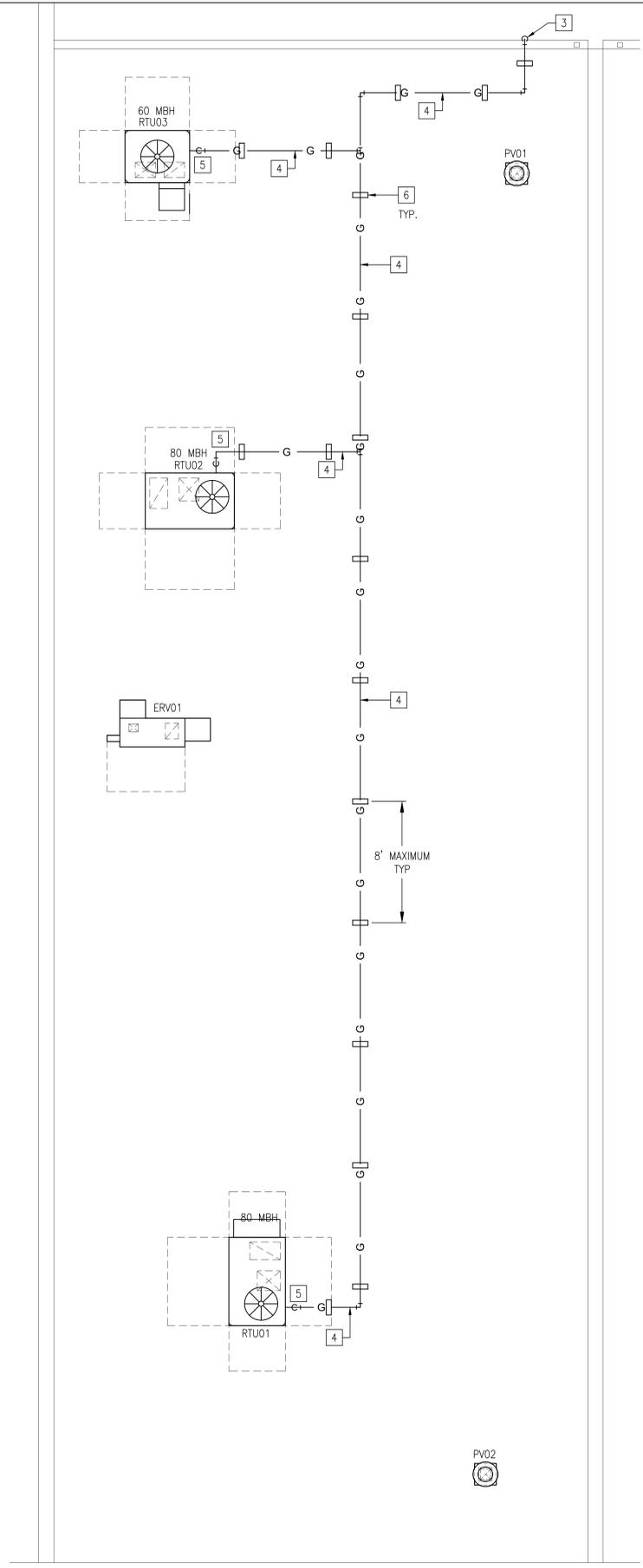
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FINAL		PD102	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A PLUMBING			
TT2459A DEMOLITION FLOOR PLAN			
DES. JBS	DR. SWB	CHK. DMH	APPROVED: PWO OR OICC
SUBMITTED BY: T H BURTON, PE		DATE	SIZE CODE IDENT. NO
APPROVED: PWO OR OICC		DATE	F 80091
SATISFACTORY TO:		DATE	CONST. CONTR. 60022648
SCALE: NOTED		SPEC. 05-17-0113	SHEET 24 OF 55

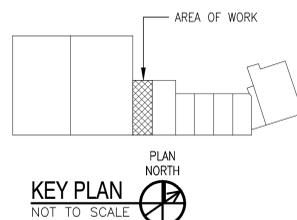
REVISIONS		
SYM	DATE	APPROVED



TT2459 FLOOR PLAN
1/4"=1'-0"



TT2459 ROOF PLAN
1/4"=1'-0"



KEY PLAN
NOT TO SCALE

CONSTRUCTION KEYED NOTES	
1	GAS METER, REGULATOR AND SERVICE PIPING BY GAS COMPANY. SET REGULATOR TO DELIVER GAS AT 2 PSI. TOTAL LOAD TO BE 240 MBH.
2	GAS PIPING UP TO ROOF.
3	GAS PIPING FROM BELOW.
4	REFER TO GAS PIPING RISER DIAGRAM FOR PIPE SIZES NOT SHOWN.
5	REFER TO DETAIL 2/P-501 FOR UNIT CONNECTION DETAIL.
6	MANUFACTURED GAS PIPING ROOF SUPPORTS. REFER TO DETAIL 4/P-501.

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FINAL		P-101	
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17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A PLUMBING			
DES. JBS	DR. SWB	CHK. DMH	17230
SUBMITTED BY:		TT2459 PLANS	
DESIGN DIR. T H BURTON, PE	APPROVED: PWO OR OICC	DATE	SIZE CODE IDENT. NO
SATISFACTORY TO:		DATE	F 80091
SCALE: NOTED		SPEC. 05-17-0113	SHEET 25 OF 55

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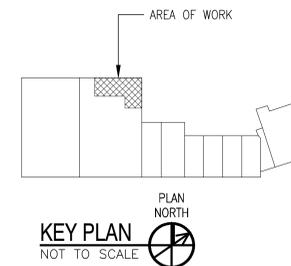
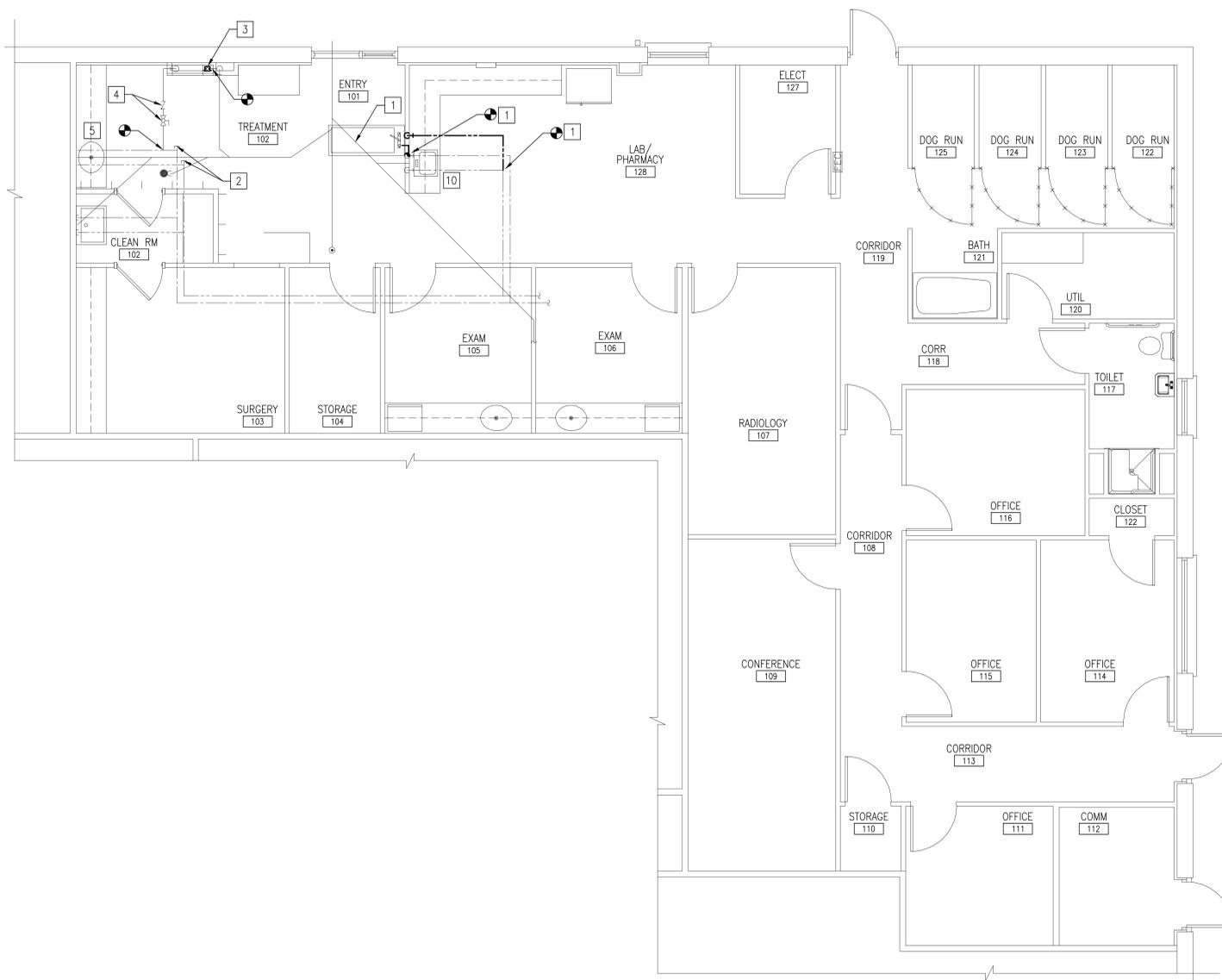
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Fax: 910.791.5266
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NCP 5006



REVISIONS		
SYM	DATE	APPROVED

CONSTRUCTION KEYED NOTES

- 1 RELOCATE EXISTING WET TABLE, CONNECT WASTE PIPING TO EXISTING 2" WASTE RISER OF EXISTING SINK IN WALL. CONNECT DCW TO EXISTING DCW SERVING SINK ON OPPOSITE SIDE OF WALL. ROUTE NEW DHW FROM EXISTING LOCATED ABOVE CEILING AS SHOWN ON DRAWING.
- 2 CAP (X) DCW AND DHW PIPING ABOVE CEILING.
- 3 INSTALL WASHER BOX FOR HUMIDIFIER INDIRECT DRAIN. CONNECT TRAP AND ARM TO EXISTING WASTE RISER IN WALL.
- 4 INSTALL 1/2" DCW LINE. CONNECT TO EXISTING 1/2" DCW ABOVE CEILING AND ROUTE TO HUMIDIFIER HU01. INSTALL BALL VALVE AND DOUBLE CHECK VALVE IN PIPING.
- 5 REINSTALL SINK AND RECONNECT TO DOMESTIC WATER AND SANITARY WASTE/VENT.



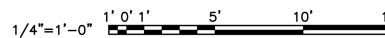
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TT2459A FLOOR PLAN
1/4"=1'-0"

GRAPHIC SCALE



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17230
Professional Engineer Seal for David M. Hines, State of North Carolina, No. 23551, dated 08/01/18.

FINAL		P-102	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A PLUMBING			
DES. JBS	DR. SWB	CHK. DMH	DESIGN DIR. T H BURTON, PE
APPROVED: PWO OR OICC		DATE	TT2459A PLANS
SATISFACTORY TO:		DATE	NAVFAC DRAWING NO. 60022650
SIZE F	CODE 80091	IDENT. NO.	CONST. CONTR.
SCALE: NOTED	SPEC. 05-17-0113	SHEET 26 OF 55	

REVISIONS		
SYM	DATE	APPROVED

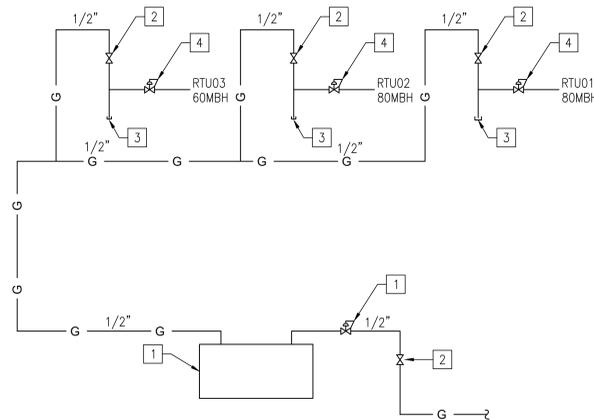
GAS PIPING DIAGRAM KEYED NOTES

- 1 GAS METER, REGULATOR AND SERVICE PIPING BY GAS COMPANY. SET REGULATOR TO DELIVER 220 MBH @ 2 PSIG.
- 2 AGA APPROVED GAS VALVE
- 3 DIRT LEG
- 4 AGA APPROVED 2 PSI - 11" W.C. PRESSURE REGULATOR.

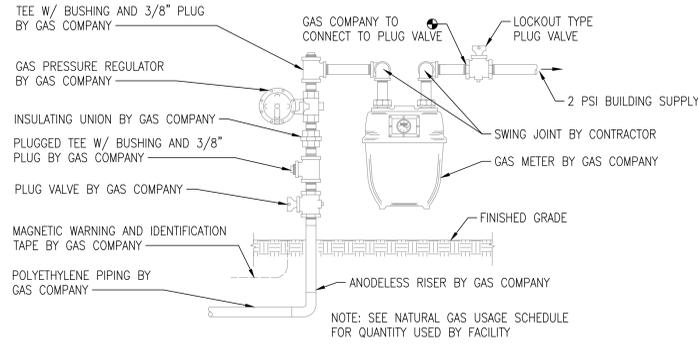
GAS LOAD SCHEDULE (TT2459)

FIXTURE TAG	DESCRIPTION	BTUH RATING	QUANTITY	TOTAL
RTU01	GAS-PACK	80,000	1	80,000
RTU02	GAS-PACK	80,000	1	80,000
RTU03	DUEL-FUEL	60,000	1	60,000
TOTAL LOAD				220,000
BUILDING SERVICE GAS PRESSURE				2 psi

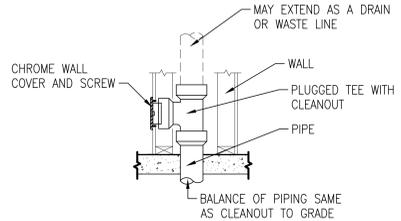
NOTE:
PIPE SIZED PER TABLE 402.4(5) OF THE
INTERNATIONAL FUEL GAS CODE FOR 100 LINEAR FEET OF
SCH. 40 PIPE AT 2PSI



NATURAL GAS PIPING DIAGRAM BLDG TT2459
NOT TO SCALE

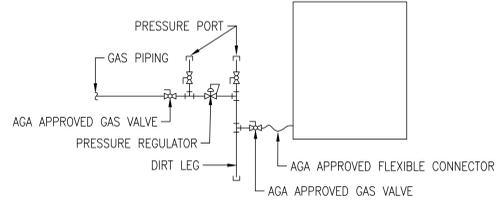


GAS SERVICE DETAIL
NOT TO SCALE

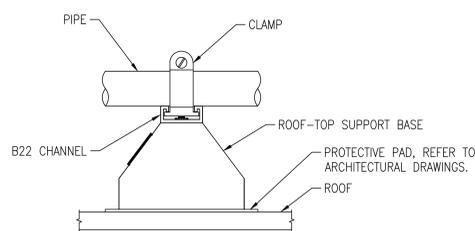


NOTE: CLEANOUT TO BE FLUSH WITH FINISHED WALL

CLEANOUT DETAIL
NOT TO SCALE



GAS APPLIANCE CONNECTION DETAIL
NOT TO SCALE



ROOF-TOP PIPE SUPPORT BASE DETAIL
NOT TO SCALE

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FINAL		P-501	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A PLUMBING RISER DIAGRAM DETAILS AND SCHEDULE			
DES. JBS	DR. SWB	CHK. DMH	DESIGN DIR. T H BURTON, PE
APPROVED: PWO OR OICC	DATE	SIZE CODE IDENT. NO.	NAVFAC DRAWING NO.
		F 80091	60022651
SATISFACTORY TO:	DATE	CONST. CONTR.	
		SCALE: NOTED	SPEC. 05-17-0113
			SHEET 27 OF 55

REVISIONS		
SYM	DATE	APPROVED

MECHANICAL ABBREVIATIONS

(X)	EXISTING	H	HORSEPOWER
AI	ANALOG INPUT	HC	HEATING COIL
AHU	AIR HANDLER UNIT	HFC	HORIZONTAL FAN COIL
ARU	AIR ROTATION UNIT	HHW	HEATING HOT WATER
B	HOT WATER BOILER	HP	HEAT PUMP
BI	BINARY INPUT	HPC	HEAT PUMP COIL
BP	HOT WATER BOILER PUMP	HU	HUMIDIFIER UNIT
BT	BUFFER TANK	HWP	HOT WATER PUMP
CHW	CHILLED WATER	HWR	HEATING WATER RETURN
CHWR	CHILLED WATER RETURN	HWS	HEATING WATER SUPPLY
CHWS	CHILLED WATER SUPPLY	HX	HEAT EXCHANGER
CH	CHILLER	L	LOUVER
CHWP	CHILLED WATER PUMP	LP	LOUVERED PENTHOUSE
CUH	CABINET UNIT HEATER	MAU	MAKE-UP AIR UNIT
CW	CONDENSER WATER	MVD	MANUAL VOLUME DAMPER
CWS	CONDENSER WATER SUPPLY	NG	NATURAL GAS
CWR	CONDENSER WATER RETURN	NIC	NOT IN CONTRACT
DAH	DUCTLESS AIR HANDLER	ODU	OUTDOOR UNIT
DHP	DUCTLESS HEAT PUMP	OA	OUTSIDE AIR
DOAS	DEDICATED OUTDOOR AIR SYSTEM	PD	PRESSURE DROP
DWB	DOMESTIC WATER BOILER	PTAC	PACKAGED TERMINAL AIR CONDITIONER
DWP	DOMESTIC WATER PUMP	PV	POWER VENTILATOR
DEG	DEGREES	RA	RETURN AIR
DDC	DIRECT DIGITAL CONTROL	RTU	ROOF TOP UNIT
EA	EXHAUST AIR	SA	SUPPLY AIR
EDH	ELECTRIC DUCT HEATER	SIM	SIMILAR
ERV	ENERGY RECOVERY VENTILATOR	ST	STORAGE TANK
F	FAN	UH	UNIT HEATER
GM	GAS METER	VAV	VARIABLE AIR VOLUME
GV	GRAVITY VENTILATOR	XP	EXPANSION TANK

MECHANICAL LEGEND

	TEMPERATURE SENSOR
	TEMPERATURE/HUMIDITY SENSOR
	INDICATES TO DEMOLISH
	PRESSURE REGULATOR
	GAS SHUTOFF VALVE
	EXTENT OF DEMOLITION
	POINT OF CONNECTION
	DIFFUSER/ REGISTER/ GRILLE NO. AS SHOWN ON PLAN AND SCHEDULE
	AIRFLOW, CFM

NOTE: ALL ITEMS MAY NOT BE USED IN PROJECT.

MECHANICAL PIPE LEGEND

	C	CONDENSATE PIPING
	LPS	STEAM CONDENSATE PIPING
	R	REFRIGERANT PIPING

MECHANICAL GENERAL NOTES

- SCOPE OF WORK: THESE DRAWINGS AND ACCOMPANYING SPECIFICATIONS DESCRIBE THE SCOPE OF WORK REQUIRED FOR PROJECT MECHANICAL HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS. CONTRACTOR SHALL PROVIDE ALL LABOR AND MATERIAL REQUIRED FOR COMPLETE, FULLY FUNCTIONING MECHANICAL SYSTEMS COMPLYING WITH THE INTENT OF THE DRAWINGS AND SPECIFICATIONS.
- DRAWINGS: DRAWINGS ARE DIAGRAMMATIC AND MAY NOT COMPLETELY DESCRIBE EVERY DETAIL OF THE INSTALLATION. HOWEVER, CONTRACTOR IS RESPONSIBLE FOR FURNISHING COMPLETE SYSTEMS INCLUDING ALL REQUIRED EQUIPMENT AND ACCESSORIES TO OBTAIN FULLY FUNCTIONING HVAC SYSTEMS.
- CODE COMPLIANCE – COMPLY WITH THE LATEST EDITIONS OF THE FOLLOWING STANDARDS AND CODES, INsofar AS THEY APPLY:
 - INTERNATIONAL MECHANICAL CODE, LATEST EDITION AND REVISIONS
 INCLUDE ALL WORK TO COMPLY WITH CODES WHETHER INDICATED ON DRAWINGS OR NOT. NOTIFY CONTRACTING OFFICER OF DISCREPANCIES BETWEEN DRAWINGS AND CODES PRIOR TO BEGINNING WORK.
- MANUFACTURER'S RECOMMENDATIONS – INSTALL ALL EQUIPMENT IN STRICT ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- WORKMANSHIP – UTILIZE SKILLED MECHANICS TO OBTAIN A HIGH QUALITY PROFESSIONAL FINISH INSTALLATION WHEN COMPLETED. WORK OF UNACCEPTABLE QUALITY SHALL BE REMOVED AND REWORKED AT NO ADDITIONAL COST. CONTRACTING OFFICER SHALL BE THE JUDGE OF WORKMANSHIP AND THEIR OPINION WILL BE FINAL. IN ADDITION, ANY EXISTING CONSTRUCTION DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE CONTRACTING OFFICER BY THE CONTRACTOR AT NO ADDITIONAL COST.
- SUPERVISION: PROVIDE SKILLED SUPERINTENDENTS TO SUPERVISE THE WORK FROM THE BEGINNING TO COMPLETION AND FINAL INSPECTION.
- PROGRESS OF WORK: PERFORM WORK IN ACCORDANCE WITH SCHEDULE AND REQUIREMENTS OF THE GOVERNMENT. UNDER NO CIRCUMSTANCES SHALL THIS CONTRACTOR DELAY THE OVERALL PROJECT SCHEDULE.
- COORDINATION: COORDINATE MECHANICAL WORK WITH THE WORK OF OTHER TRADES. LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE UNLESS SPECIFICALLY DIMENSIONED. LAYOUT MECHANICAL WORK SO AS NOT TO INTERFERE WITH THE WORK OF OTHER TRADES. VERIFY ACTUAL BUILDING STRUCTURE PRIOR TO DUCT FABRICATION AND ADJUST ARRANGEMENT AS REQUIRED. INCLUDE ALL OFFSETS IN DUCTS, FITTINGS, PIPING, ETC. AS REQUIRED TO PROPERLY INSTALL EQUIPMENT.
- EQUIPMENT LOCATIONS: DETERMINE EXACT EQUIPMENT AND MATERIALS LOCATIONS TO PROVIDE BEST ARRANGEMENT AND TO FACILITATE PROPER MAINTENANCE AND SERVICING OF EQUIPMENT.
- LISTING AND LABELING: ALL EQUIPMENT SHALL BE LABELED OR LISTED BY UL OR OTHER APPROVED TESTING AGENCY WHERE REQUIRED.

MECHANICAL DEMOLITION NOTES

- THE CONTRACTOR SHALL REVIEW THE DRAWINGS AND SPECIFICATIONS FOR DEMOLITION REQUIREMENTS AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER. REMOVE ALL EQUIPMENT, DUCTWORK, SUPPORTS, CONTROLS, ACCESSORIES, ETC., AND MECHANICAL ITEMS MADE OBSOLETE BY THESE ALTERATIONS AS SHOWN IN THE MECHANICAL DRAWINGS. ALL ITEMS TO BE REMOVED OR MODIFIED MAY NOT BE SHOWN, HOWEVER, THIS CONTRACTOR SHALL REMOVE ANY MECHANICAL WORK AS REQUIRED BY THE CONSTRUCTION OR AS DIRECTED BY THE GOVERNMENT CONTRACTING OFFICER. SURVEY THE AFFECTED AREAS BEFORE SUBMITTING A BID.
- SCHEDULING OF DEMOLITION – COORDINATE SCHEDULING OF MECHANICAL DEMOLITION WORK WITH THE CONTRACTING OFFICER SO AS TO MINIMIZE DISRUPTION OF THE GOVERNMENT'S USE OF THE FACILITIES AND MAINTAIN THE CONSTRUCTION SEQUENCE. SEE DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INSTRUCTIONS CONCERNING PHASING AND SEQUENCE OF WORK.
- EXISTING MECHANICAL SYSTEMS – VERIFY CONDITION OF EXISTING MECHANICAL SYSTEMS TO BE REUSED SO THAT COMPLETE, FULLY OPERATIONAL AND RELIABLE SYSTEMS ARE OBTAINED AT THE COMPLETION OF THE WORK. NOTIFY CONTRACTING OFFICER OF ANY SYSTEMS FOUND TO BE OF QUESTIONABLE CONDITION.
- ALL EXISTING MECHANICAL EQUIPMENT AND DEVICES SHALL REMAIN UNLESS SPECIFICALLY NOTED TO BE REMOVED.
- DEMOLISHED MATERIALS – UNLESS SPECIFICALLY REQUESTED BY THE GOVERNMENT, ALL DEMOLISHED MECHANICAL MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
- CUTTING AND PATCHING – PERFORM CUTTING AND PATCHING FOR MECHANICAL WORK SO AS TO MINIMIZE DAMAGE TO CEILINGS, FLOORS AND WALLS.
- THESE DRAWINGS ARE COMPILED BY THE ENGINEER FROM THE GOVERNMENT'S AS-BUILT RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL DUCTWORK, EQUIPMENT LOCATIONS, DIMENSIONS AND ALL FIELD CONDITIONS AFFECTING HIS WORK.
- WHERE MECHANICAL SYSTEMS PASS THROUGH THE DEMOLITION AREAS TO SERVE OTHER PORTIONS OF THE PREMISES, THEY SHALL REMAIN OR BE SUITABLY RELOCATED AND THE SYSTEM RESTORED TO NORMAL OPERATION. ADVISE THE CONTRACTING OFFICER IMMEDIATELY IF SUCH CONDITIONS ARE UNCOVERED BEFORE PROCEEDING WITH ADDITIONAL WORK.
- PROTECT ALL EXISTING LIFE SAFETY SYSTEMS, FIRE ALARM AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE CONTRACTING OFFICER IN WRITING OF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE GOVERNMENT, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED MAINTAINING SERVICE.
- SURVEY THE AFFECTED AREAS BEFORE STARTING DEMOLITION AS ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DEPICTED ON THE DRAWINGS AND SOME UNUSUAL CONDITIONS EXIST.
- IF ANY UNUSUAL STRUCTURAL OR ARCHITECTURAL CONDITIONS ARE ENCOUNTERED DURING DEMOLITION, CONTACT THE CONTRACTING OFFICER FOR ASSISTANCE.
- REMOVE AIR CONDITIONING, REFRIGERATION, AND OTHER EQUIPMENT CONTAINING REFRIGERANTS WITHOUT RELEASING CHLOROFLUOROCARBON REFRIGERANTS TO THE ATMOSPHERE IN ACCORDANCE WITH THE CLEAN AIR ACT AMENDMENT OF 1990. RECOVER ALL REFRIGERANTS PRIOR TO REMOVING AIR CONDITIONING, REFRIGERATION, AND OTHER EQUIPMENT CONTAINING REFRIGERANTS AND DISPOSE OF IN ACCORDANCE WITH THE PARAGRAPH ENTITLED "DISPOSAL OF OZONE DEPLETING SUBSTANCE (ODS)." TURN IN SALVAGED CLASS I ODS REFRIGERANTS AS SPECIFIED IN PARAGRAPH, "SALVAGED MATERIALS AND EQUIPMENT."

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FINAL

M-001

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

17-0113
REPLACE HVAC
BLDGs TT2459 & TT2459A

MECHANICAL
LEGEND, ABBREVIATIONS, PIPE LEGEND AND NOTES
NAVFAC DRAWING NO.
60022652
CONST. CONTR.

DES.	GRM
DR.	GRM
CHK.	DMH
SUBMITTED BY:	
DESIGN DIR.	T H BURTON, PE
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO:	DATE

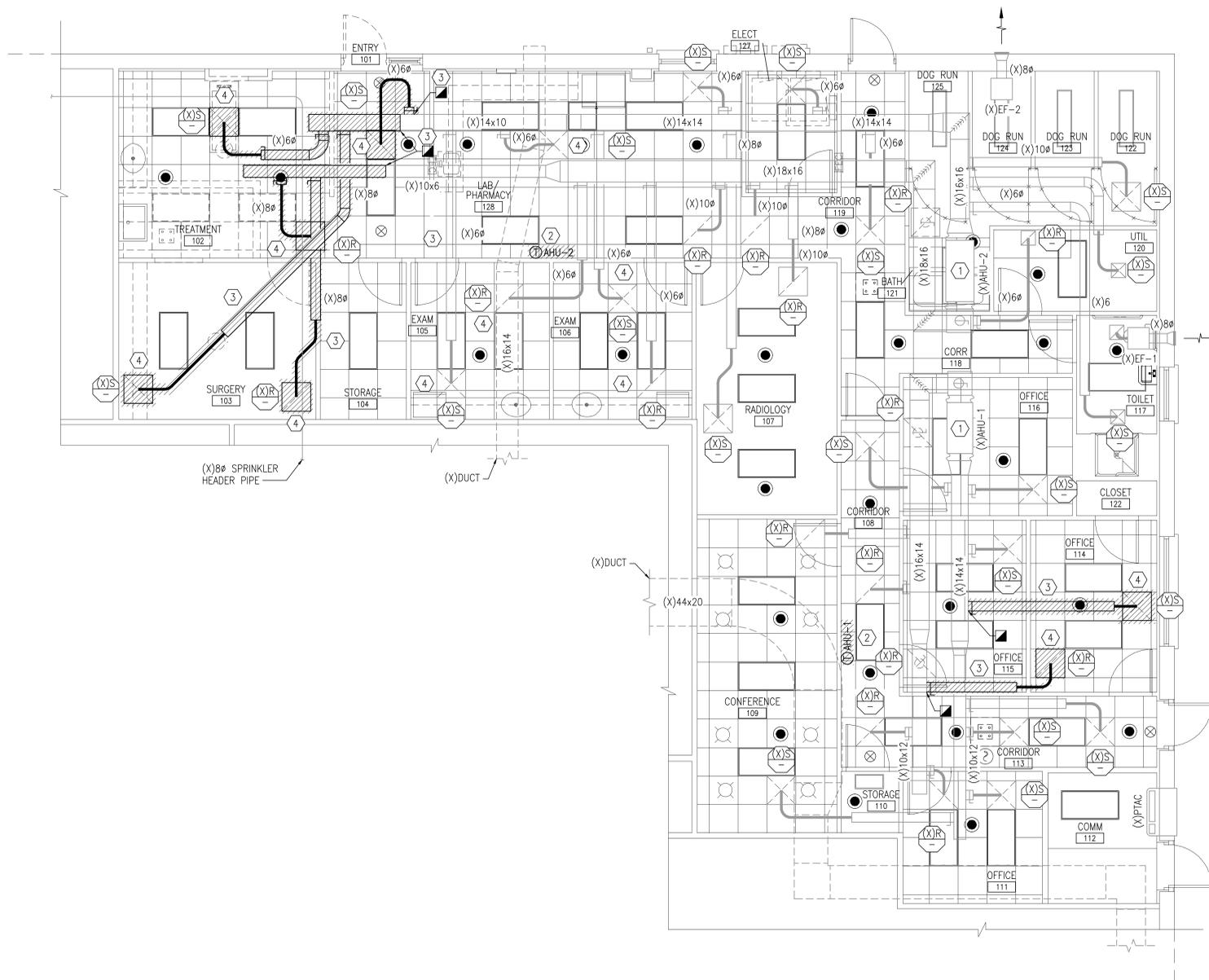
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F		80091	NOTED
SPEC.		05-17-0113	SHEET 28 OF 55

17230



REVISIONS		
SYM	DATE	APPROVED

- DEMOLITION KEYED NOTES**
- ① (X)AHU TO REMAIN IN PLACE. REFER TO NEW WORK FOR MECHANICAL CONTRACTOR'S RESPONSIBILITY TO ENSURE UNITS ARE OPERATING PROPERLY.
 - ② REMOVE AND DISPOSE EXISTING THERMOSTAT CONTROLS INCLUDING BUT NOT LIMITED TO SENSORS, WIRING AND CONDUIT.
 - ③ REMOVE AND DISPOSE EXISTING DUCT TO EXTENT OF DEMOLITION INCLUDING BUT NOT LIMITED TO HANGERS, SUPPORTS, INSULATION AND CONTROLS.
 - ④ REMOVE AND DISPOSE EXISTING DIFFUSER/GRILLE TO EXTENT OF DEMOLITION.



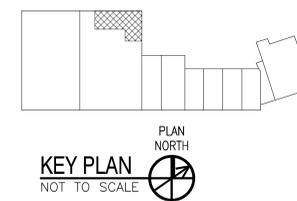
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TT2459A DEMOLITION FLOOR PLAN
 1/4"=1'-0" PLAN NORTH



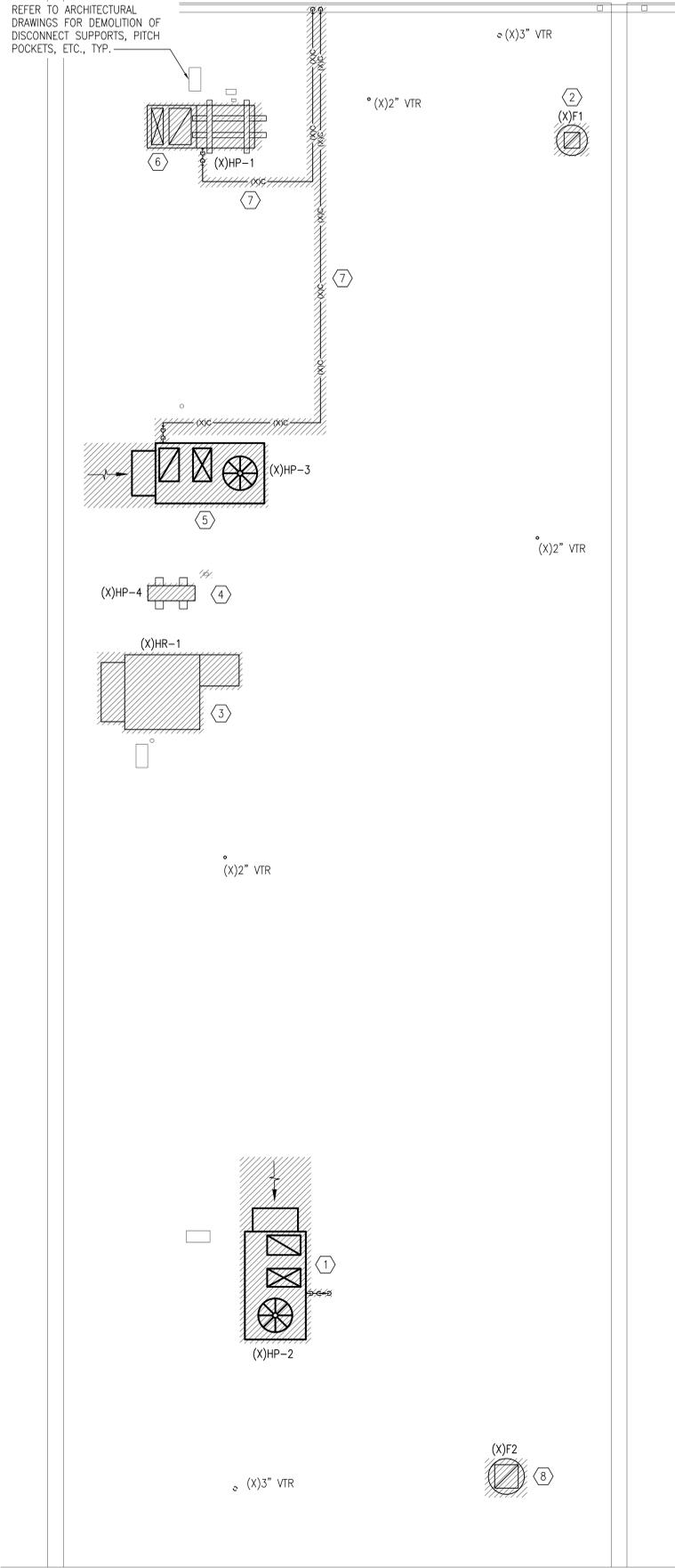
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FINAL		MD102	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND			
MARINE CORPS BASE			
CAMP LEJEUNE, NORTH CAROLINA			
17-0113			
REPLACE HVAC			
BLDGS TT2459 & TT2459A			
DES. GRM		TT2459A MECHANICAL	
DR. GRM		DEMOLITION FLOOR PLAN	
CHK. DMH		NAVFAC DRAWING NO.	
SUBMITTED BY:		60022654	
DESIGN DIR. T H BURTON, PE		CONST. CONTR.	
APPROVED: PWO OR OICC		DATE	SCALE: NOTED SPEC. 05-17-0113
SATISFACTORY TO:		DATE	SHEET 30 OF 55

REVISIONS			
SYM		DATE	APPROVED

REFER TO ARCHITECTURAL DRAWINGS FOR DEMOLITION OF DISCONNECT SUPPORTS, PITCH POCKETS, ETC., TYP.

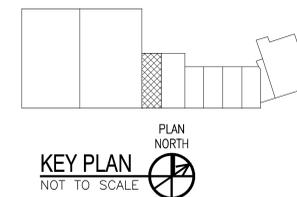


- ### DEMOLITION KEYED NOTES
- REMOVE AND DISPOSE OF ROOFTOP PACKAGED HEAT PUMP (TRANE MODEL WCD036C300BC). RECOVER ALL REFRIGERANTS PER SPECIFICATIONS. PREPARE REMAINING CURB, SUPPLY AND RETURN DUCTWORK CONNECTIONS TO ACCEPT NEW ADAPTOR CURB AND ROOFTOP UNIT RTU01 PER DRAWING MH102 AND SPECIFICATIONS. REPAIR REMAINING CURB AS REQUIRED BY ELECTRICAL DEMOLITION TO MAKE CURB WEATHER-TIGHT.
 - REMOVE AND DISPOSE OF ROOFTOP EXHAUST FAN (COOK MODEL 90C10DH). PREPARE REMAINING CURB AND EXHAUST DUCTWORK CONNECTION TO ACCEPT NEW ADAPTOR CURB AND POWER VENTILATOR PV01 PER DRAWING MH102 AND SPECIFICATIONS.
 - REMOVE AND DISPOSE OF ROOFTOP PACKAGED 1,500 CFM HEAT RECLAIM UNIT (MAKE AND MODEL UNDETERMINED). PREPARE REMAINING CURB, SUPPLY AND RETURN DUCTWORK CONNECTIONS TO ACCEPT NEW ADAPTOR CURB AND ENERGY RECOVERY UNIT ERV01 PER DRAWING MH102 AND SPECIFICATIONS.
 - REMOVE AND DISPOSE OF DUCTLESS SPLIT SYSTEM CONDENSING UNIT (FRIEDRICH MODEL MR18Y30), REFRIGERANT PIPING, PIPING INSULATION, PRESSURE TREATED SLEEPERS AND ACCESSORIES. RECOVER ALL REFRIGERANTS PER SPECIFICATIONS. REPAIR REMAINING PITCH POCKET WEATHER-TIGHT.
 - REMOVE AND DISPOSE OF ROOFTOP PACKAGED HEAT PUMP (TRANE MODEL WCD036C300BC). RECOVER ALL REFRIGERANTS PER SPECIFICATIONS. PREPARE REMAINING CURB, SUPPLY AND RETURN DUCTWORK CONNECTIONS TO ACCEPT NEW ADAPTOR CURB AND ROOFTOP UNIT RTU02 PER DRAWING MH102 AND SPECIFICATIONS. REPAIR REMAINING CURB AS REQUIRED BY ELECTRICAL DEMOLITION TO MAKE CURB WEATHER-TIGHT.
 - REMOVE AND DISPOSE OF ROOFTOP PACKAGED HEAT PUMP (TRANE MODEL UNDETERMINED). RECOVER ALL REFRIGERANTS PER SPECIFICATIONS. REMOVE AND DISPOSE OF PRESSURE TREATED SLEEPERS SUPPORTING RTU AND DUCTWORK HOOD SHIELDING SUPPLY AND RETURN DUCTWORK. REMOVE AND DISPOSE REMAINING CURB. PREPARE REMAINING SUPPLY AND RETURN DUCTWORK CONNECTIONS TO ACCEPT NEW CURB HOOD AND ROOFTOP UNIT RTU03 DUCTWORK PER DRAWING MH102 AND SPECIFICATIONS.
 - REMOVE AND DISPOSE OF EXISTING CONDENSATE PIPING AND SUPPORTS.
 - REMOVE AND DISPOSE OF ROOFTOP EXHAUST FAN (COOK MODEL 90C15DM). PREPARE REMAINING CURB AND EXHAUST DUCTWORK CONNECTION TO ACCEPT NEW ADAPTOR CURB AND POWER VENTILATOR PV02 PER DRAWING MH102 AND SPECIFICATIONS.

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TT2459 DEMOLITION ROOF PLAN

1/4"=1'-0"



GRAPHIC SCALE



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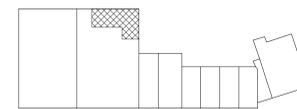
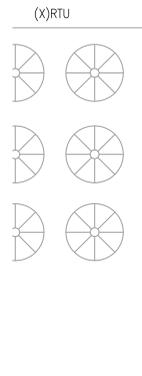
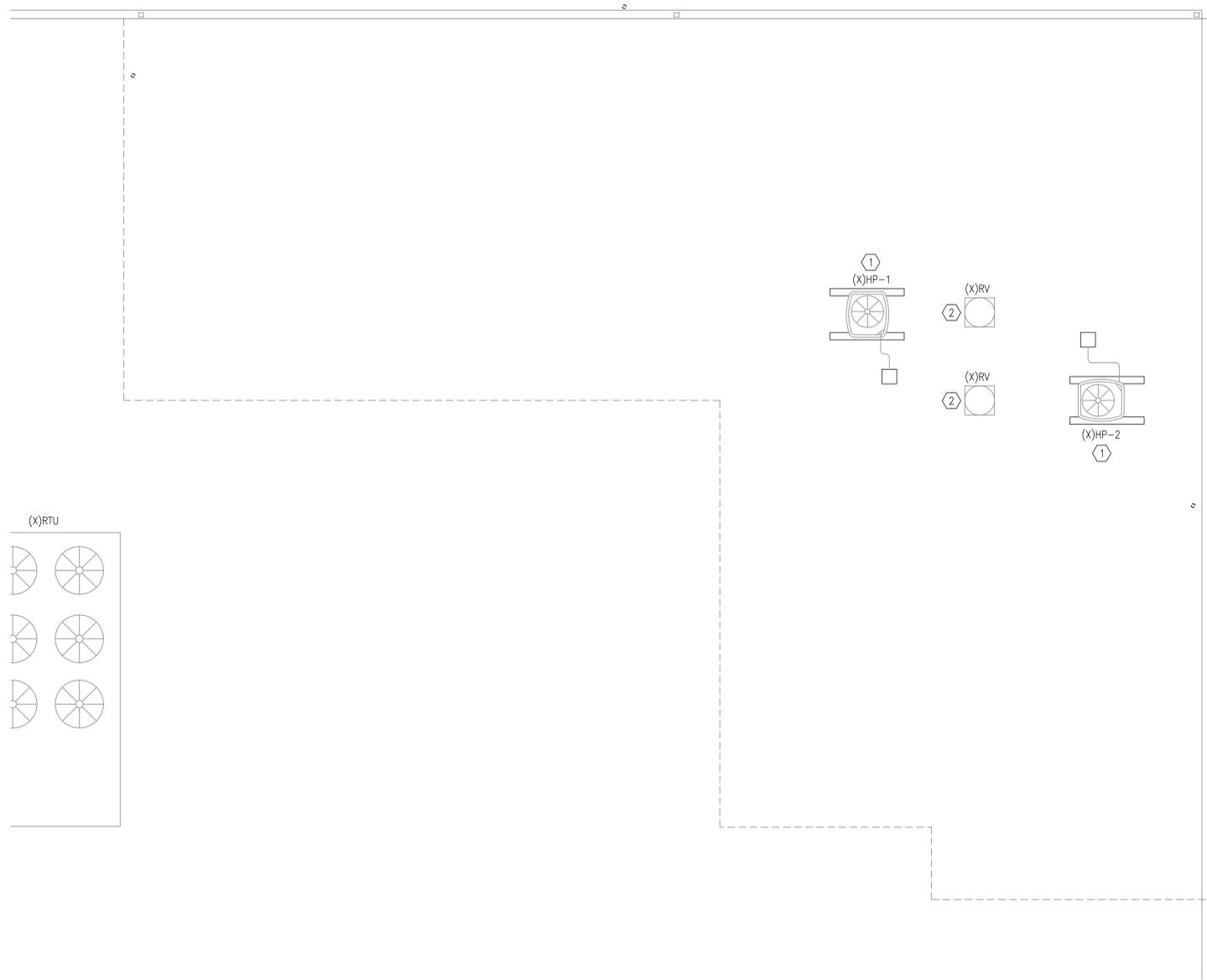
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FINAL		MD103	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGs TT2459 & TT2459A			
MECHANICAL DEMOLITION ROOF PLAN			
DES. GAS	DR. GAS	CHK. DMH	DESIGN DIR. T H BURTON, PE
APPROVED: PWO OR OICC		DATE	SIZE CODE IDENT. NO.
SATISFACTORY TO:		DATE	CONST. CONTR.
F	80091	60022655	SCALE: NOTED SPEC. 05-17-0113

REVISIONS			
SYM		DATE	APPROVED

DEMOLITION KEYED NOTES	
①	(X)HP TO REMAIN IN PLACE. REFER TO NEW WORK FOR MECHANICAL CONTRACTOR'S RESPONSIBILITY TO INSURE UNITS ARE OPERATING PROPERLY.
②	EQUIPMENT TO REMAIN.



KEY PLAN
NOT TO SCALE

TT2459A DEMOLITION ROOF PLAN
1/4"=1'-0"



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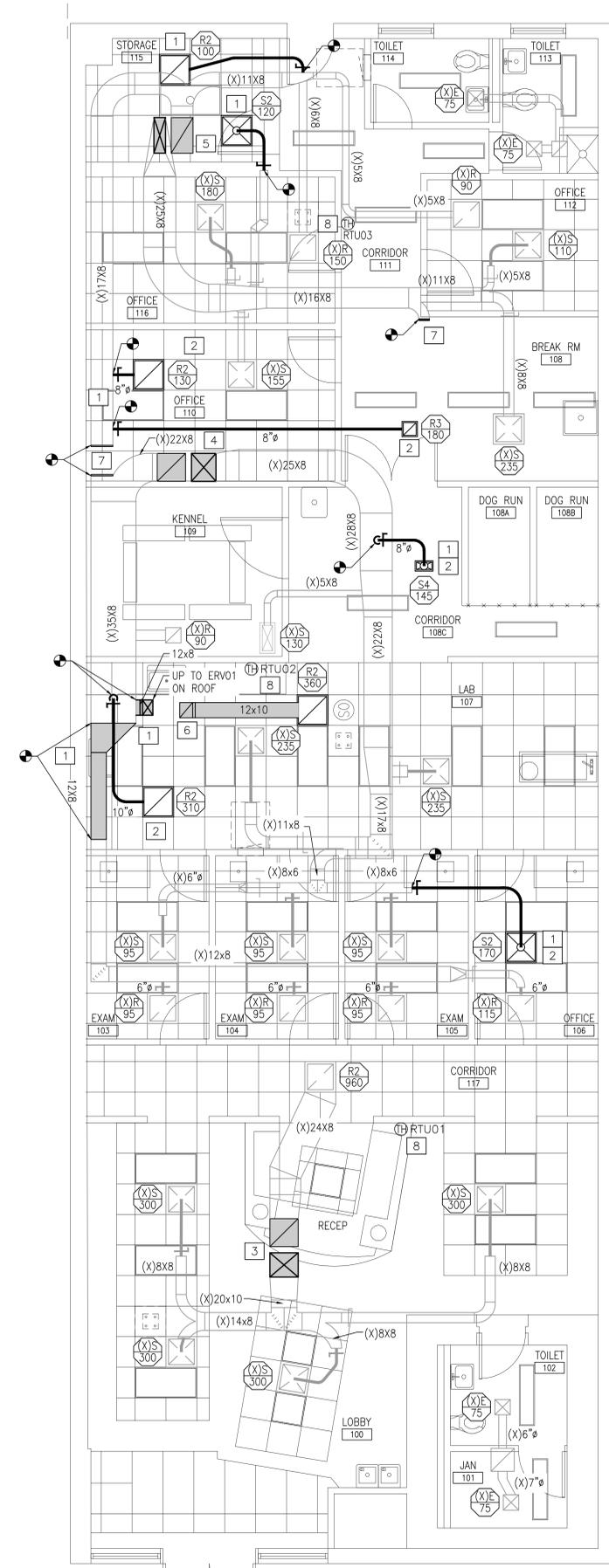
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FINAL		MD104	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A			
DES. GRM		TT2459A MECHANICAL DEMOLITION ROOF PLAN	
DR. GRM		NAVFAC DRAWING NO. 60022656	
CHK. DMH		CONST. CONTR.	
SUBMITTED BY:		F 80091	
DESIGN DIR. T H BURTON, PE		SCALE: NOTED SPEC. 05-17-0113	
APPROVED: PWO OR OICC		DATE	
SATISFACTORY TO:		DATE	

REVISIONS		
SYM	DATE	APPROVED



NOTE: REBALANCE ALL DIFFUSERS/GRILLES AS SHOWN.

- CONSTRUCTION KEYED NOTES**
- 1 PROVIDE NEW SUPPLY AND RETURN DUCT TO POINT OF CONNECTION AS SHOWN.
 - 2 PROVIDE NEW CEILING DIFFUSER/GRILLE AS AS SHOWN.
 - 3 TRANSITION FROM DUCT SIZE TO RTU01 UNIT CONNECTIONS.
 - 4 TRANSITION FROM DUCT SIZE TO RTU02 UNIT CONNECTIONS.
 - 5 TRANSITION FROM DUCT SIZE TO RTU03 UNIT CONNECTIONS.
 - 6 TRANSITION FROM DUCT SIZE TO ERV01 UNIT CONNECTIONS.
 - 7 PROVIDE DUCT CAP TO SEAL OFF DUCT OPENING.
 - 8 PROVIDE THERMOSTAT AND HUMIDISTAT CONTROLS.

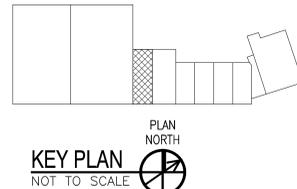
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TT2459 FLOOR PLAN
1/4"=1'-0"



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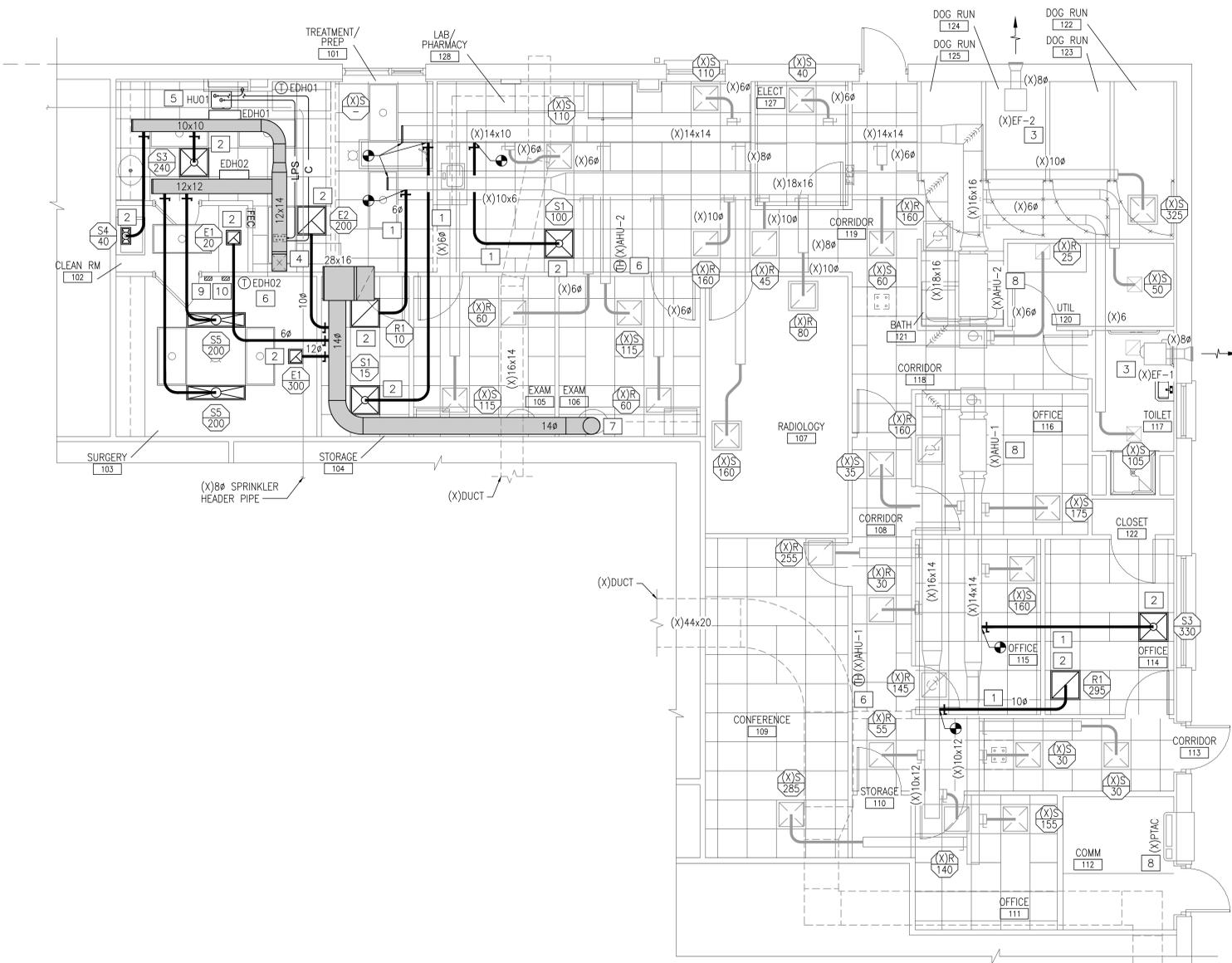
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17230

FINAL		MH101	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA 17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A			
DES. GAS	DR. GAS	CHK. DMH	SUBMITTED BY:
DESIGN DIR. T H BURTON, PE	APPROVED: PWO OR OICC	DATE	SIZE CODE IDENT. NO
SATISFACTORY TO:	DATE	F 80091	TT2459 FLOOR PLAN MECHANICAL NAVFAC DRAWING NO. 60022657 CONST. CONTR.
SCALE: NOTED	SPEC. 05-17-0113	SHEET 33 OF 55	

REVISIONS			
SYM		DATE	APPROVED

- CONSTRUCTION KEYED NOTES**
- 1 PROVIDE NEW SUPPLY AND RETURN DUCT TO POINT OF CONNECTION AS SHOWN.
 - 2 PROVIDE NEW CEILING DIFFUSER/GRILLE AS SHOWN.
 - 3 MECHANICAL CONTRACTOR TO PERFORM YEARLY-LEVEL ROUTINE MAINTENANCE ON (X)EF'S MAKE ANY AND ALL REPAIRS NECESSARY TO ENSURE UNIT IS IN GOOD WORKING CONDITION.
 - 4 TRANSITION FROM DUCT SIZE TO RTU04 UNIT CONNECTION.
 - 5 INSTALL HU01 ON WALL AND INJECTOR IN DUCT AS SHOWN. ROUTE STEAM AND CONDENSATE PIPING PER MANUFACTURERS INSTALLATION INSTRUCTIONS.
 - 6 INSTALL NEW SENSORS AS SHOWN.
 - 7 TRANSITION FROM DUCT SIZE TO PV03 UNIT CONNECTION.
 - 8 MECHANICAL CONTRACTOR TO PERFORM YEARLY-LEVEL ROUTINE MAINTENANCE ON (X)AHU'S AND (X)PTAC. MAKE ANY AND ALL REPAIRS NECESSARY TO ENSURE UNIT IS IN GOOD WORKING CONDITION.
 - 9 SURFACE MOUNTED ROOM PRESSURE CONTROLLER. COORDINATE FINAL LOCATION PER MANUFACTURERS INSTALLATION INSTRUCTIONS.
 - 10 RTU04 INTERFACE AND TOUCH SCREEN CONTROLLER.



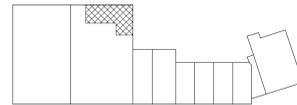
DISCLOSURE OF INFORMATION:
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2. THE INFORMATION IS OTHERWISE IN THE PUBLIC DOMAIN BEFORE THE DATE OF THE RELEASE.

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C. THE CONTRACTOR AGREES TO INCLUDE A SIMILAR REQUIREMENT IN EACH SUBCONTRACT UNDER THIS CONTRACT. SUBCONTRACTORS SHALL SUBMIT REQUESTS FOR AUTHORIZATION TO RELEASE THROUGH THE PRIME CONTRACTOR TO THE CONTRACTING OFFICER.



KEY PLAN
 NOT TO SCALE

TT2459A FLOOR PLAN
 1/4"=1'-0"



CBHF
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 www.cbhfind.com
 NCEP 16000

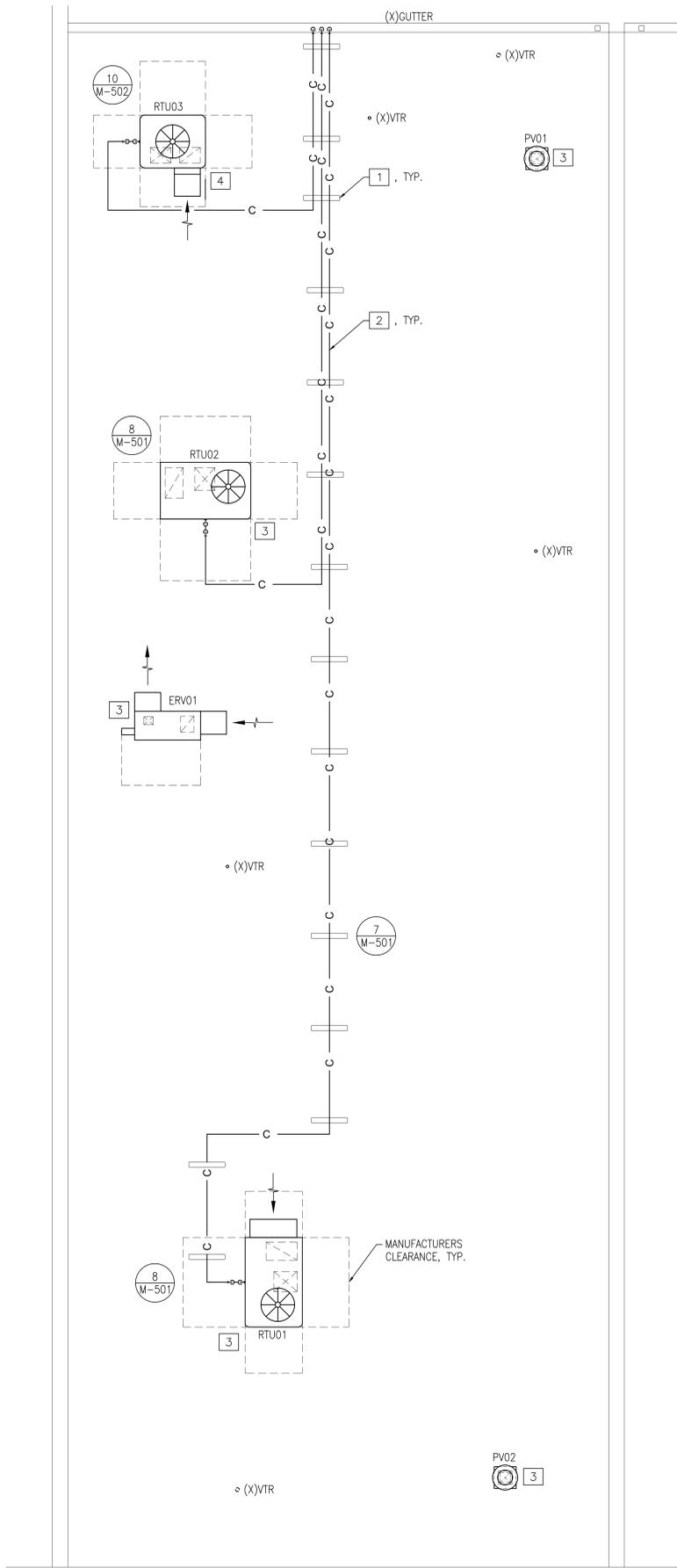
17230

08/01/18

FINAL		MH102	
DEPARTMENT OF THE NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A			
MECHANICAL TT2459A FLOOR PLAN			
DES. GRM	DR. GRM	CHK. DMH	APPROVED: PWO OR OICC
DESIGN DIR: T H BURTON, PE	DATE	SIZE	CODE IDENT. NO.
APPROVED: PWO OR OICC	DATE	F 80091	60022658
SATISFACTORY TO:	DATE	SCALE: NOTED	SPEC. 05-17-0113
			SHEET 34 OF 55

REVISIONS			
SYM		DATE	APPROVED

CONSTRUCTION KEYED NOTES	
1	MANUFACTURED ROOF-TOP SUPPORT BASE WITH B22 CHANNEL, TYP. (MINIMUM SPACING 6'-0" ON CENTER).
2	ROUTE 3/4" TRAPPED CONDENSATE PIPING AND SPILL TO ROOF GUTTER.
3	MOUNT ADAPTOR CURB ON EXISTING CURB. CONNECT TO DUCTWORK BELOW.
4	NEW CURB. REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR FURTHER INFORMATION.



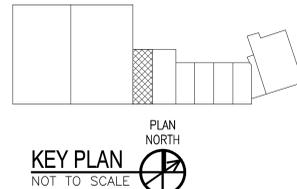
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TT2459 ROOF PLAN

1/4"=1'-0"

PLAN NORTH



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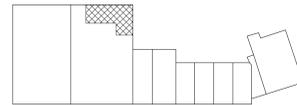
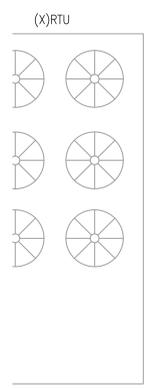
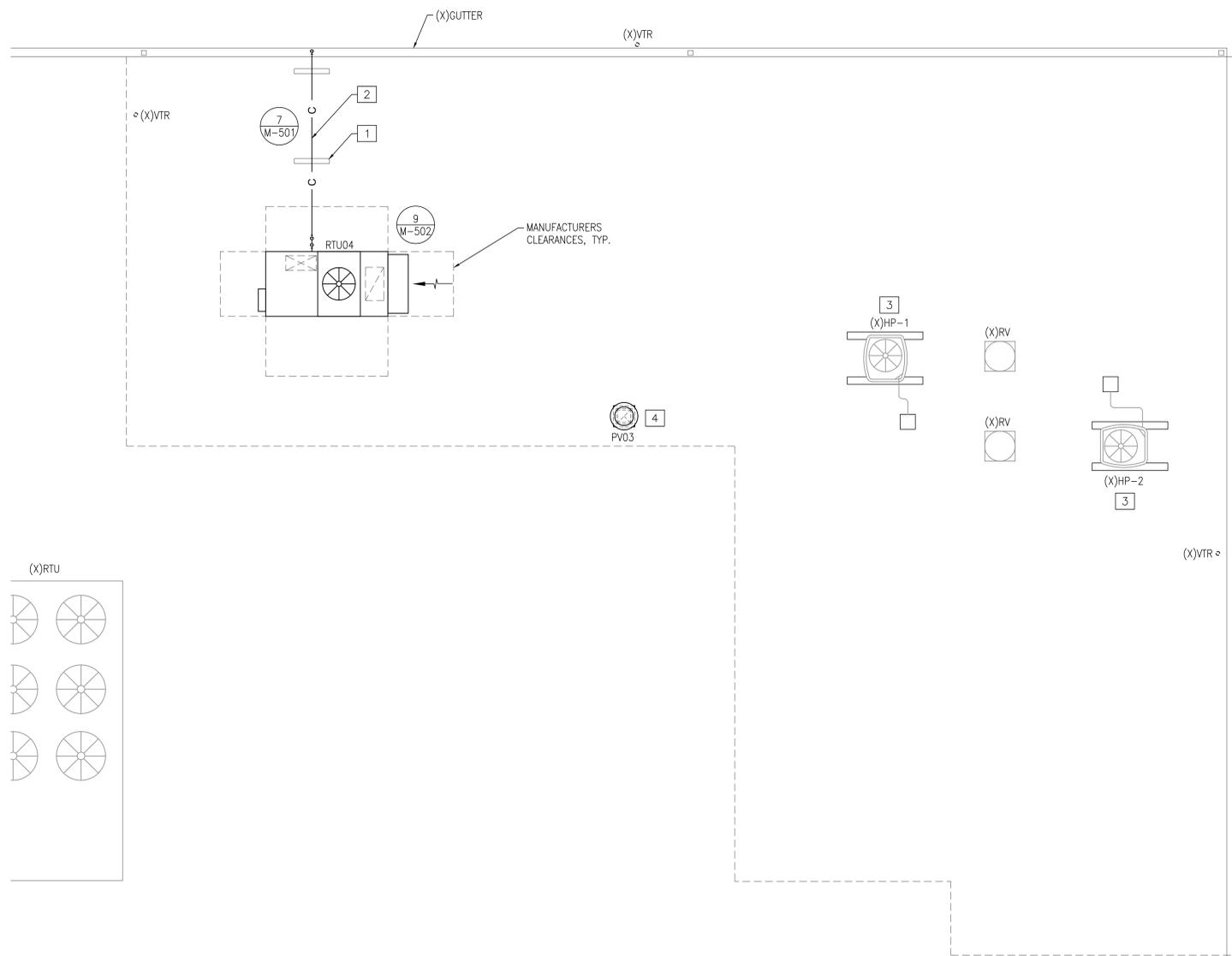
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08/01/18

FINAL		MH103	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND			
MARINE CORPS BASE			
CAMP LEJEUNE, NORTH CAROLINA			
DES. GAS		17-0113	
DR. GAS		REPLACE HVAC	
CHK. DMH		BLDGS TT2459 & TT2459A	
SUBMITTED BY:		MECHANICAL	
DESIGN DIR. T H BURTON, PE		TT2459 ROOF PLAN	
APPROVED: PWO OR OICC		SIZE CODE IDENT. NO	NAVFAC DRAWING NO.
SATISFACTORY TO:		F 80091	60022659
DATE		SCALE: NOTED	SPEC. 05-17-0113
		SHEET 35 OF 55	

REVISIONS		
SYM	DATE	APPROVED

CONSTRUCTION KEYED NOTES	
1	MANUFACTURED ROOF-TOP SUPPORT BASE WITH B22 CHANNEL, TYP. (MINIMUM SPACING 6'-0" ON CENTER).
2	ROUTE 3/4" TRAPPED CONDENSATE PIPING AND SPILL TO ROOF GUTTER.
3	MECHANICAL CONTRACTOR TO PERFORM ROUTINE MAINTENANCE ON (X)HP AND MAKE ANY AND ALL REPAIRS NECESSARY TO ENSURE UNIT IS IN GOOD WORKING CONDITION.
4	MOUNT PV03 ON 36" HIGH ROOF CURB. PROVIDE WIND RESTRAINTS, SEE ARCHITECTURAL.



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TT2459A ROOF PLAN
1/4"=1'-0"

PLAN NORTH



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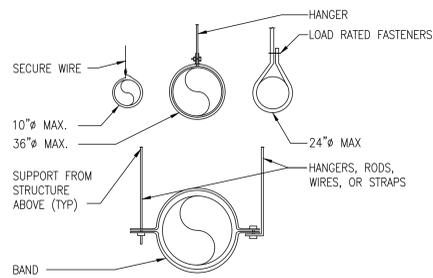
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SEAL
23551

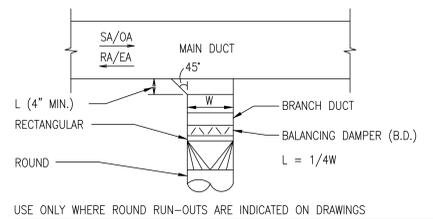
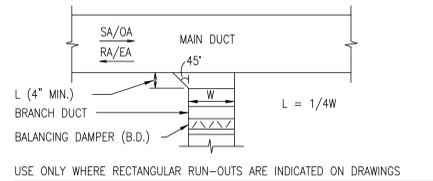
08/01/18

FINAL		MH104	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A			
MECHANICAL TT2459A ROOF PLAN			
DES. GRM	DR. GRM	CHK. DMH	SUBMITTED BY:
DESIGN DIR. T H BURTON, PE	APPROVED: PWO OR OICC	DATE	SIZE CODE IDENT. NO
SATISFACTORY TO:	DATE	F 80091	NAVFAC DRAWING NO. 60022660
SCALE: NOTED		SPEC. 05-17-0113	SHEET 36 OF 55

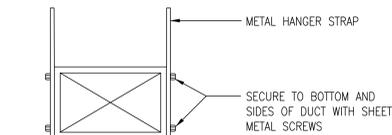
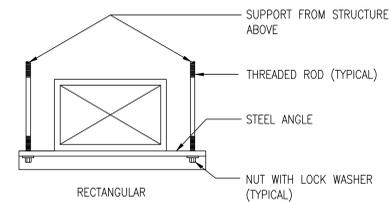
REVISIONS		
SYM	DATE	APPROVED



ROUND DUCT SUPPORT DETAIL 1
NOT TO SCALE

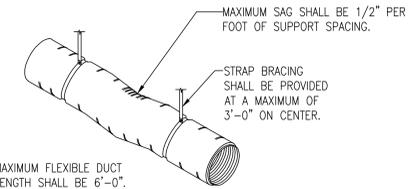


TYPICAL BRANCH / DIFFUSER CONNECTION DETAIL 2
NOT TO SCALE

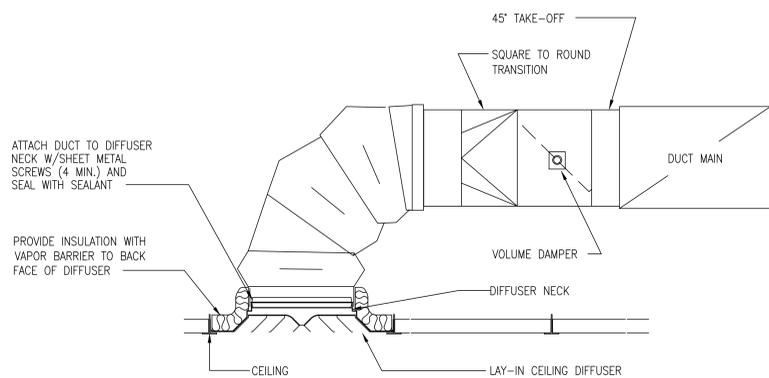


NOTE: FOR ANGLE SIZE AND HANGER STRAP GAUGE, SEE SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARDS.

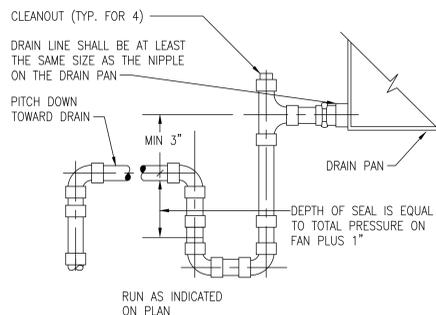
DUCT SUPPORT DETAIL 3
NOT TO SCALE



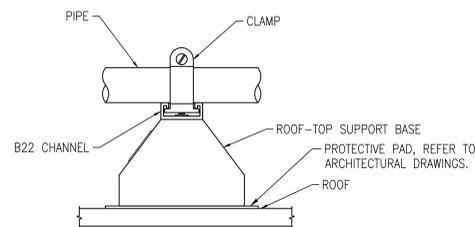
INSULATED FLEXIBLE DUCTWORK DETAIL 4
NOT TO SCALE



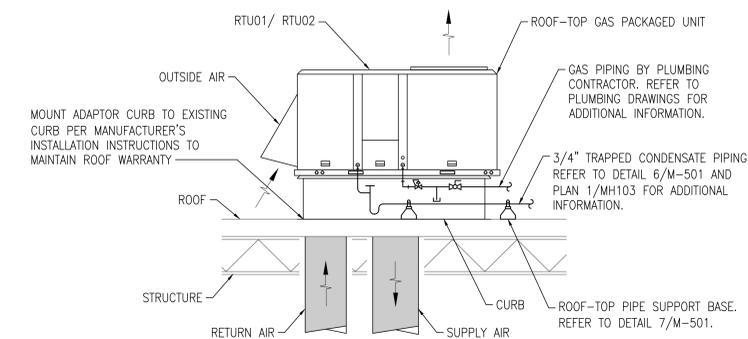
LAY-IN SUPPLY DIFFUSER DETAIL 5
NOT TO SCALE



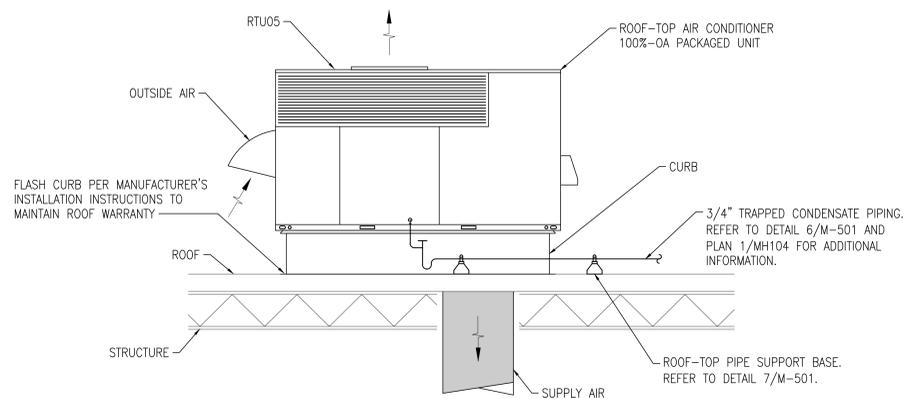
CONDENSATE DRAIN TRAP DETAIL 6
NOT TO SCALE



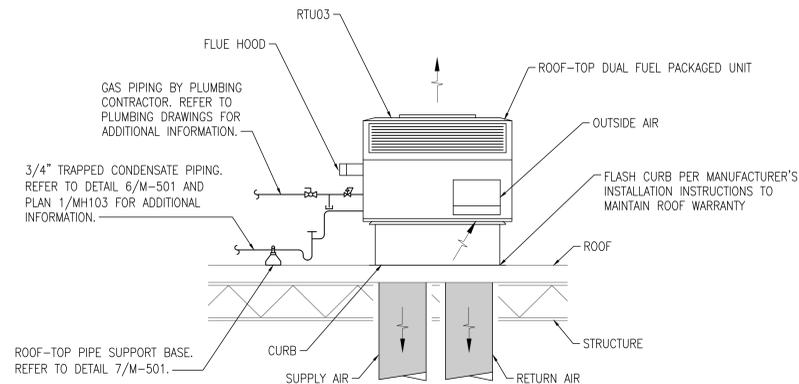
ROOF-TOP PIPE SUPPORT BASE DETAIL 7
NOT TO SCALE



ROOF MOUNTED GAS PACKAGED UNIT DETAIL 8
NOT TO SCALE



ROOF MOUNTED AIR CONDITIONER 100%-OA PACKAGED UNIT DETAIL 9
NOT TO SCALE



ROOF MOUNTED DUAL FUEL PACKAGED UNIT DETAIL 10
NOT TO SCALE

DISCLOSURE OF INFORMATION:

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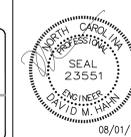
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FINAL		M-501	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGs TT2459 & TT2459A			
MECHANICAL DETAILS			
DES. GRM	DR. GRM	CHK. DMH	17230
SUBMITTED BY:	DESIGN DIR. T H BURTON, PE	APPROVED: PWO OR OICC	DATE
SATISFACTORY TO:	DATE	SIZE	CODE IDENT. NO
		F	80091
		SCALE: NOTED	SPEC. 05-17-0113
			SHEET 37 OF 55



REVISIONS		
SYM	DATE	APPROVED

PACKAGED UNIT SCHEDULE

DRAWING CODE	SYSTEM TYPE	NET COOLING (AHRI STANDARD)						HOT GAS REHEAT		HEATING (AHRI STANDARD)		AUXILIARY HEATER	NATURAL GAS HEATING			EVAPORATOR FAN			ELECTRICAL			WEIGHT (LBS.)	NOTES	ACCESSORIES		
		TOTAL (MBH)	SENSIBLE (MBH)	EAT (F)		LAT (F)		EFFICIENCY	REHEAT CAPACITY (MBH)	COOLING LDB W/ REHEAT (°F)	TOTAL (MBH)	EFFICIENCY	SCR ELECTRIC (KW)	GAS INPUT (MBH)	GAS OUTPUT (MBH)	STAGES	SUPPLY AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	ESP (IN. WG.)	POWER SUPPLY (V/PH/HZ)	MCA				MOCP	
RTU01	GAS-PACK	37.7	24.3	80.2	68.5	60.1	58.2	EER	15.0	22.1	77.1	--	--	--	80.0	64.0	1	1,200	240	0.70	230/3/60	19.6	30	750	1,2	A,B,C,D,E,F,G,H,L
RTU02	GAS-PACK	35.7	24.2	77.1	65.7	57.1	56.0	EER	15.0	23.2	74.9	--	--	--	80.0	64.0	1	1,200	400	0.70	230/3/60	19.6	30	750	1,2,3	A,B,C,D,E,F,G,H,L
RTU03	DUAL FUEL	23.8	18.0	79.4	67.8	59.8	58.8	SEER	14.0	--	22.5	COP	3.7	60.0	48.6	2	800	150	0.50	230/1/60	18.1	25	400	1,2	D,E,F,G,J,K	
RTU04	AIR CONDITIONER	67.8	32.9	93.0	78.0	46.8	46.8	EER	10.2	--	--	--	--	10.0	--	--	680	680	2.50	460/3/60	31.5	50	1,350	1,2	B,C,D,F,G,I,M	

NOTES:

- REFER TO SPECIFICATION SECTION 23 73 33 - HEATING, VENTILATING, AND COOLING SYSTEM FOR FURTHER INFORMATION.
- COILS TO BE COATED FOR EXPOSURE TO ASTM B117-90 3,000 HOUR SALT SPRAY RESISTANCE TEST WITH NO DEGRADATION.
- OUTSIDE AIR PROVIDED BY DECOUPLED ENERGY RECOVERY UNIT (ERV01).

ACCESSORIES:

- HOT GAS RE-HEAT FOR DEHUMIDIFICATION CYCLE.
- HINGED ACCESS DOORS.
- PHASE MONITOR PROTECTION.
- MERV 13 FILTRATION.
- STAINLESS STEEL GAS HEAT EXCHANGER.
- HAIL GUARD.
- MOTORIZED LOW-LEAK OUTSIDE AIR DAMPER.
- ADAPTOR ROOF CURB FOR VERTICAL DOWNFLOW ARRANGEMENT.
- ROOF FILTER ADAPTOR CURB FOR VERTICAL DOWNFLOW ARRANGEMENT. FINAL FILTER MERV 14.
- ROOF CURB FOR VERTICAL DOWNFLOW ARRANGEMENT.
- PROGRAMMABLE THERMOSTAT.
- PROGRAMMABLE ZONE TEMPERATURE SENSOR AND HUMIDISTAT.
- TOUCH SCREEN CONTROLLER.

EXHAUST RECOVERY VENTILATOR

DRAWING CODE	ASSOCIATED RTU	SUPPLY FAN				EXHAUST FAN				ENERGY CORE (SUMMER)			ENERGY CORE (WINTER)			VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOCP (AMPS)	WEIGHT (LBS.)	NOTES	ACCESSORIES
		AIRFLOW (CFM)	E.S.P. (IN. WG.)	DRIVE	MOTOR (HP)	AIRFLOW (CFM)	E.S.P. (IN. WG.)	DRIVE	MOTOR (HP)	OA EAT (°Fdb/°Fwb)	RA EAT (°Fdb/°Fwb)	SA LAT (°Fdb/°Fwb)	OA EAT (°Fdb/°Fwb)	RA EAT (°Fdb/°Fwb)	SA LAT (°Fdb/°Fwb)						
ERV01	RTU02	400	0.5	DIRECT	3/4	360	0.5	DIRECT	3/4	93.0 / 78.0	75.0 / 62.6	79.8 / 69.4	23.0 / 21.0	70.0 / 54.4	57.5 / 46.3	230/3/60	5.2	15	240	1,2	A,B,C

NOTES:

- REFER TO SPECIFICATION SECTION 23 73 33 - HEATING, VENTILATING AND COOLING SYSTEM FOR FURTHER INFORMATION.
- INDIRECT COUPLED PER PLANS.

ACCESSORIES:

- MERV 13 FILTERS.
- ADAPTOR CURB.
- DOUBLE WALL CONSTRUCTION.

POWER VENTILATOR SCHEDULE

DRAWING CODE	FAN TYPE	SERVICE	CAPACITIES				ELECTRICAL							SONES	WEIGHT (LBS.)	NOTES	ACCESSORIES
			AIRFLOW (CFM)	ESP (IN. WG.)	DRIVE ARRANGEMENT	FAN RPM	MOTOR RPM	MOTOR TYPE	MOTOR SIZE (HP)	V/PH/HZ	FLA	MOCP					
PV01	CENTRIFUGAL ROOF VENTILATORS	EXHAUST	150	0.25	DIRECT	1700	1725	ECM	1/10	115/1/60	2.08	15	4.5	50	1,2,4	A,B,D,E	
PV02	CENTRIFUGAL ROOF VENTILATORS	EXHAUST	150	0.25	DIRECT	1700	1725	ECM	1/10	115/1/60	2.08	15	4.5	50	1,2,4	A,B,D,E	
PV03	CENTRIFUGAL ROOF VENTILATORS	EXHAUST	520	0.38	DIRECT	1480	1725	ECM	1/6	115/1/60	4.4	15	8.0	55	1,3	A,B,C,D,F,G,H	

NOTES:

- REFER TO SPECIFICATION SECTION 237333 - HEATING, VENTILATING, AND COOLING SYSTEM FOR FURTHER INFORMATION.
- REUSE EXISTING CURBS. PROVIDE CURB ADAPTOR AS REQUIRED.
- AIRFLOW IS APPROXIMATE. BALANCE TO ACHIEVE PRESSURE DIFFERENTIAL IDENTIFIED IN ROOM EXHAUSTED.
- MAINTAIN FAN CONTROL AS CURRENTLY INSTALLED.

ACCESSORIES:

- BIRDSCREEN.
- GRAVITY DAMPER.
- EQUIPMENT SPECIFIC SEISMIC/WIND RATED CURB, RESTRAINT AND FASTENERS w/ ENGINEER CERTIFICATION.
- CURB SEAL.
- ON/OFF SWITCH LOCATED PER ELECTRICAL PLANS.
- EC MOTOR WITH 0-10VDC INPUT.
- INTERLOCK FAN OPERATION WITH RTU05.
- PROVIDE 36" HIGH ROOF CURB.

DIFFUSERS, REGISTERS AND GRILLES SCHEDULE

DRAWING CODE	TYPE	SERVICE	NECK SIZE (IN.)	MODULE SIZE (IN.)	MATERIAL	FINISH	MOUNTING	NOTES	ACCESSORIES
S1	SQUARE CEILING DIFFUSER	SUPPLY	6ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	--
S2	SQUARE CEILING DIFFUSER	SUPPLY	8ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	--
S3	SQUARE CEILING DIFFUSER	SUPPLY	10ø	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	--
S4	LOUVER FACE DIFFUSER	SUPPLY	12 X 6	12 X 6	ALUMINUM	WHITE	CEILING SURFACE	1,2	--
S5	LAMINAR FLOW DIFFUSER	SUPPLY	8ø	12 X 48	ALUMINUM	WHITE	CEILING SURFACE	1,2	--
R1	PERFORATED RETURN	RETURN	20 X 20	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	--
R2	FIXED FACE GRILLE	RETURN	20 X 20	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	--
R3	FIXED FACE GRILLE	RETURN	10 X 10	12 X 12	ALUMINUM	WHITE	T-BAR	1,2	--
E1	FIXED FACE GRILLE	EXHAUST	10 X 10	12 X 12	ALUMINUM	WHITE	CEILING SURFACE	1,2	--
E2	FIXED FACE GRILLE	EXHAUST	20 X 20	24 X 24	ALUMINUM	WHITE	T-BAR	1,2	--

NOTES:

- REFER TO SPECIFICATION SECTION 233713 - DIFFUSERS, REGISTERS, AND GRILLES FOR FURTHER INFORMATION.

ACCESSORIES:

- NOT USED

ELECTRIC DUCT HEATER SCHEDULE

DRAWING CODE	AREA SERVED	KW	HEATER DIMENSIONS		STEPS	AIR SIDE		ELECTRICAL				NOTES	ACCESSORIES
			HEIGHT (IN)	WIDTH (IN)		FLOW RATE (CFM)	STATIC PRESSURE DROP (IN. WG.)	VOLTAGE (V/PH/HZ)	MCA (AMPS)	MOCP (AMPS)			
EDH01	101 TREATMENT / PREP	4.0	10.0	10.0	SCR	280	0.01	460/3/60	6.3	10.0	1,2	A - J	
EDH02	103 SURGERY	6.0	12.0	12.0	SCR	400	0.02	460/3/60	9.4	15.0	1,2	A - J	

NOTES:

- REFER TO SPECIFICATION SECTION 23 73 33 - HEATING, VENTILATING, AND COOLING SYSTEM FOR ADDITIONAL INFORMATION.
- POSITIVE PRESSURE SYSTEM.

ACCESSORIES:

- AIRFLOW SWITCH.
- CONTROL TRANSFORMER CLASS 2 - 24V.
- DISCONNECTING CONTACTOR.
- MAGNETIC CONTACTOR.
- UNFUSED DOOR INTERLOCKING DISCONNECT.
- 100% SCR CONTROLLER.
- INSULATED CONTROL PANEL.
- STAINLESS STEEL TERMINALS.
- HINGED COVER ON RIGHT SIDE.
- UL LISTED.

DISCLOSURE OF INFORMATION:

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FINAL

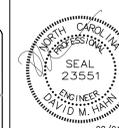
M-601

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

17-0113
REPLACE HVAC
BLDGs TT2459 & TT2459A

MECHANICAL
SCHEDULES

17230



DES. GRM
DR. GRM
CHK. DMH
SUBMITTED BY:
DESIGN DIR: T H BURTON, PE
APPROVED: PWO OR OICC DATE SIZE CODE IDENT. NO. CONST. CONTR.

60022662

SCALE: NOTED SPEC. 05-17-0113 SHEET 38 OF 55

REVISIONS		
SYM	DATE	APPROVED

AIR CHANGE RATE SCHEDULE - TT2459														
ROOM NAME	ROOM FUNCTION	SYSTEM	TOTAL AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	AIRFLOW (CFM)	ROOM AREA (SF)	CEILING HEIGHT (FT)	ROOM VOLUME (CF)	SUPPLY AIR CHANGES (ACH)		OUTSIDE AIR CHANGES (ACH)		NOTES	
									REQUIRED	DESIGN	REQUIRED	DESIGN		
100 LOBBY / RECEPTION	LOB01 LOBBY, SEATING AREA	RTU01	1200	150	1,120	712.0	9.0	6,408	-	-	-	-	1	
101 JANITOR	JANC1 JANITOR'S CLOSET				75	38.0	8.0	304	10.0	14.8	-	-	-	3
102 TOILET	TLTU1 TOILET				75	50.0	8.0	400	10.0	11.3	-	-	-	3
117 CORRIDOR	CORRIDOR	RTU02	1200	400	80	155	9.0	1,395	-	-	-	-	1	
103 EXAM	VEX01 VETERINARY, EXAMINATION/TREATMENT				95	96.0	9.0	864	4.0	6.6	2.0	2.2	2	
104 EXAM	VEX01 VETERINARY, EXAMINATION/TREATMENT				95	96.0	9.0	864	4.0	6.6	2.0	2.2	2	
105 EXAM	VEX01 VETERINARY, EXAMINATION/TREATMENT				95	96.0	9.0	864	4.0	6.6	2.0	2.2	2	
106 OFFICE	OFA05 OFFICE, ADMINISTRATIVE, SHARED, 2-PERSON				170	96.0	9.0	864	-	-	-	-	-	1
107 LAB	VLB01 VETERINARY, LABORATORY				470	406.0	9.0	3,654	6.0	7.7	2.0	2.5	2	
108A DOG RUN	VRUN1 VETERINARY, ANIMAL RUN				60	44.0	9.0	396	6.0	9.1	3.0	3.0	2	
108B DOG RUN	VRUN1 VETERINARY, ANIMAL RUN				60	44.0	9.0	396	6.0	9.1	3.0	3.0	2	
108C CORRIDOR	CORRIDOR				25	129.0	9.0	1,161	-	-	-	-	-	1
109 KENNEL/HOLDING	VHAU1 VETERINARY, HOLDING AREA UTILITY/STR				130	141.0	9.0	1,269	6.0	6.1	2.0	2.0	2	
108 BREAKROOM	SL001 STAFF LOUNGE	RTU03	800	150	155	123.0	9.0	1,107	-	-	-	-	1	
110 OFFICE	OFA05 OFFICE, ADMINISTRATIVE, SHARED, 2-PERSON				155	160.0	9.0	1,440	-	-	-	-	-	1
111 CORRIDOR	CORRIDOR				80	175	9.0	1,575	-	-	-	-	-	1
112 OFFICE	OFA01 OFFICE, ADMINISTRATIVE, PRIVATE				110	95.0	9.0	855	-	-	-	-	-	1
113 TOILET	TLTU1 TOILET				75	53.0	8.0	424	10.0	10.6	-	-	-	3
114 TOILET	TLTU1 TOILET				75	42.0	8.0	336	10.0	13.4	-	-	-	3
115 STORAGE	SRE01 STORAGE ROOM, EQUIPMENT				120	90.0	9.0	810	-	-	-	-	-	1
116 OFFICE	OFA05 OFFICE, ADMINISTRATIVE, SHARED, 2-PERSON				180	154.0	9.0	1,386	-	-	-	-	-	1

NOTES:
1. AIRFLOW RATES TO SATIFY ASHRAE 62.1-2016 VENTILATION.
2. AIRFLOW RATES TO SATIFY UFC 4-510-01 VENTILATION.
3. AIRFLOW REPRESENTS EXHAUST.

AIR CHANGE RATE SCHEDULE - TT2459A														
ROOM NAME	ROOM FUNCTION	SYSTEM	TOTAL AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	AIRFLOW (CFM)	ROOM AREA (SF)	CEILING HEIGHT (FT)	ROOM VOLUME (CF)	SUPPLY AIR CHANGES (ACH)		OUTSIDE AIR CHANGES (ACH)		NOTES	
									REQUIRED	DESIGN	REQUIRED	DESIGN		
108 CORRIDOR	CORRIDOR	SSHP01	800	120	30	108	9.0	972	-	-	-	-	1	
109 CONFERENCE	CRA01 CONFERENCE ROOM, SMALL				190	224	9.0	2,016	-	-	-	-	-	1
110 STORAGE	SRS01 STORAGE, SHELVING				-	20	9.0	180	-	-	-	-	-	1
111 OFFICE	OFA05 OFFICE, ADMINISTRATIVE, SHARED, 2-PERSON				105	96	9.0	864	-	-	-	-	-	1
113 CORRIDOR	CORRIDOR				35	95	9.0	855	-	-	-	-	-	1
114 OFFICE	OFA05 OFFICE, ADMINISTRATIVE, SHARED, 2-PERSON				220	112	9.0	1,008	-	-	-	-	-	1
115 OFFICE	OFA05 OFFICE, ADMINISTRATIVE, SHARED, 2-PERSON				105	110	9.0	990	-	-	-	-	-	1
11 OIC OFFICE	OFA01 OFFICE, ADMINISTRATIVE, PRIVATE				115	121	9.0	1,089	-	-	-	-	-	1
122 CLOSET	SRS01 STORAGE, SHELVING				-	17	9.0	153	-	-	-	-	-	1
104 STORAGE	SRS01 STORAGE, SHELVING				15	72	9.0	648	-	-	-	-	-	1
105 EXAM	VEX01 VETERINARY, EXAMINATION/TREATMENT	RTU04	1280	320	115	113	9.0	1,017	4.0	6.8	2.0	1.7	2,4	
106 EXAM	VEX01 VETERINARY, EXAMINATION/TREATMENT				115	113	9.0	1,017	4.0	6.8	2.0	1.7	2,4	
107 RADIOLOGY	VXER1 VETERINARY, XRAY EXPOSURE				160	181	9.0	1,629	4.0	5.9	2.0	1.5	2,4	
117 TOILET	TLTU1 TOILET				105	69	9.0	621	10.0	10.1	-	-	-	3
118/119 CORRIDOR	CORRIDOR				60	167	9.0	1,503	-	-	-	-	-	1
120 UTILITY	LAUN1 LAUNDRY ROOM, INPATIENT				50	71	9.0	639	4.0	4.7	2.0	1.2	2,4	
121 DOG RUNS	VRUN1 VETERINARY, ANIMAL RUN				325	232	14.0	3,248	6.0	6.0	3.0	1.5	2,4	
127 STORAGE/ELECTRICAL	SRS01 STORAGE, SHELVING				40	59	9.0	531	-	-	-	-	-	1
128 LAB/PHARMACY	VLB01 VETERINARY, LABORATORY				320	324	9.0	2,916	6.0	6.6	3.0	6.6	2,4	
101 TREATMENT/PREP	VSPD1 VETERINARY, SURGERY, PREP / DENTAL				RTU05	680	680	240	239	9.0	2,151	6.0	6.7	2.0
102 CLEAN ROOM	VSSG1 VETERINARY, SURGERY, SCRUB / GOWN	40	41	9.0				369	6.0	6.5	2.0	6.5	2	
103 SURGERY	VS001 VETERINARY, SURGERY	400	151	9.0				1,359	15.0	17.7	7.5	17.7	2	

NOTES:
1. AIRFLOW RATES TO SATIFY ASHRAE 62.1-2016 VENTILATION.
2. AIRFLOW RATES TO SATIFY UFC 4-510-01 VENTILATION.
3. AIRFLOW REPRESENTS EXHAUST.
4. OCCUPANT APPROVED OUTSIDE AIR CHANGE RATES.

ELECTRIC STEAM HUMIDIFIER SCHEDULE														
DRAWING CODE	LOCATION	HUMIDIFICATION RATE		AIR TEMPERATURE AT DISCHARGE	NUMBER OF MANIFOLDS	MAKEUP WATER SUPPLY PRESSURE - MIN / MAX (PSIG)	ELECTRIC RESISTANCE HEATER CONTAINER		ELECTRICAL			WEIGHT (LBS)	NOTES	ACCESSORIES
		(LBS/HR)	(LBS/HR)				(DB'F/WB'F)	POWER INPUT PER CONTAINER - (KW)	NUMBER OF CYLINDERS	VOLTAGE (V/PH/Hz)	MCA (AMP)			
HU01	TREATMENT/PREP 101	15.6	4.0	50.0 / 47.2	1	30 / 80	7.5	1	460/3/60	9.0	15.0	60	1	A,B,C,D,E,F

NOTES:
1. REFER TO SPECIFICATION SECTION 23XXXX - ELECTRIC STEAM HUMIDIFIER FOR FURTHER INFORMATION.

ACCESSORIES:
A. REMOTE FAULT AND INDICATION.
B. 0-10V DUAL DEMAND.
C. HUMIDISTAT, CONTROL, 0-10V, DIG. DUCT.
D. SP SWITCH AIR PROVING, DUCT, MTD..
E. HEADER MINI SAM-E 12", 3" CTR, 0.875" TUBE.
F. STEAM TUBE, MINI SAM-E, 9-IN TYPE MA.

SPLIT SYSTEM SCHEDULE																				
DRAWING CODE (IDU/ODU)	SYSTEM TYPE	COOLING (AHRI STANDARD)				HEATING (AHRI STANDARD)		INDOOR UNIT				ELECTRICAL				NOTES	ACCESSORIES			
		TOTAL (MBH)	SENSIBLE (MBH)	EER	10.0	34.0 COP	-	SUPPLY AIRFLOW (CFM)	OUTSIDE AIRFLOW (CFM)	ESP (IN. WG.)	AUX HEAT CAP (KW)	INDOOR UNIT (V/PH/Hz)	(MCA)	(MOCP)	(V/PH/Hz)			(MCA)	(MOCP)	
(X)AHU-1 / (X)HP-1	HEAT PUMP	33.6	24.6	EER	10.0	34.0	COP	-	1,200	120	0.5	7.5	-	-	-	208/3/60	15.0	25	1,2	A
(X)AHU-2 / (X)HP-2	HEAT PUMP	45.5	33.8	EER	10.0	47.0	COP	-	1,280	320	1.5	9.2	-	-	-	208/3/60	19.0	30	1,2	A

NOTES:
1. EQUIPMENT IS EXISTING TO REMAIN. REBALANCE AIRFLOW ACCORDING TO THIS SCHEDULE, PLANS AND SPECIFICATIONS.
2. DATA ABOVE GATHERED FROM EXISTING EQUIPMENT AND ORIGINAL DESIGN SCHEDULES. CONFIRM ACTUAL CONDITIONS IN THE FIELD.

ACCESSORIES:
A. THERMOSTAT AND HUMIDISTAT WITH HUMIDITY CONTROL MODULE ENERGIZING ELECTRIC REHEAT FOR HUMIDITY CONTROL.

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FINAL		M-602	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGs TT2459 & TT2459A			
MECHANICAL SCHEDULES			
DES. GRM	DR. GRM	CHK. DMH	SUBMITTED BY:
DESIGN DIR. T H BURTON, PE	APPROVED: PWO OR OICC	DATE	SIZE CODE IDENT. NO
SATISFACTORY TO:	DATE	F 80091	60022663
SCALE: NOTED		SPEC. 05-17-0113	
SHEET 39		OF 55	

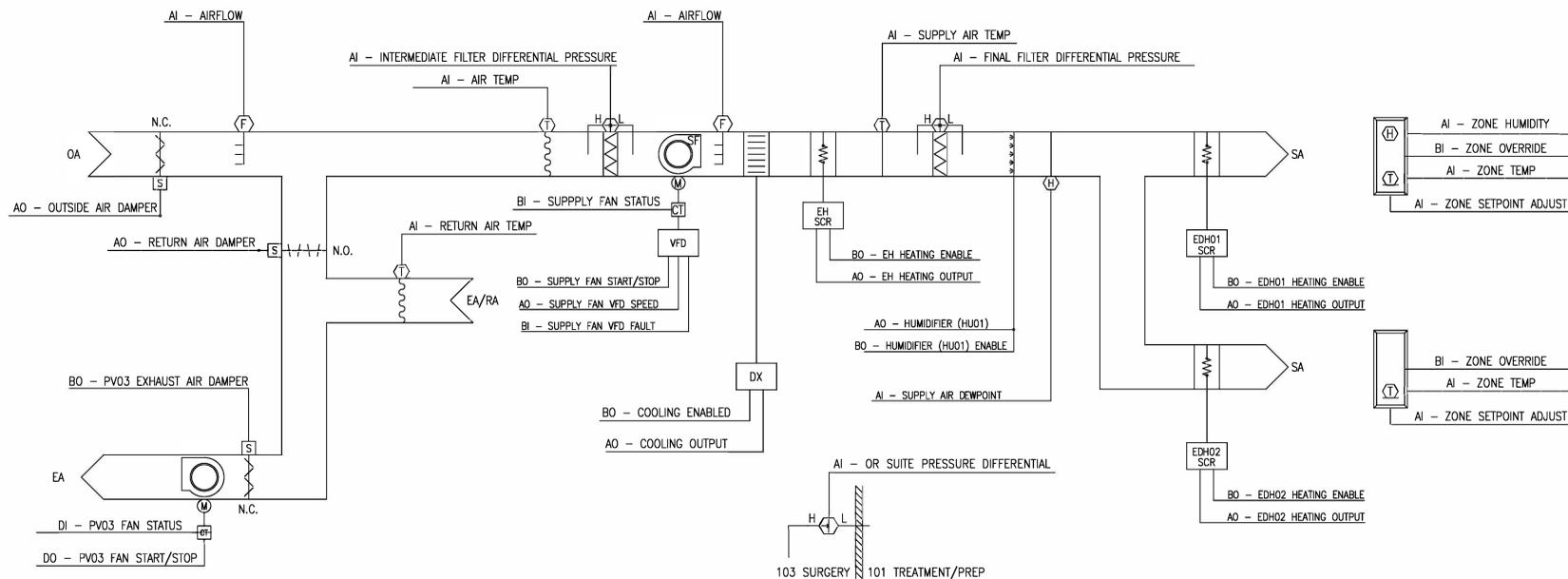
CBHF
Engineers, PLLC

2246 Yaupon Drive
Wilmington, NC 28401

Phone: 910.791.4000
Fax: 910.791.5266
www.cbhfengineers.com
NCEP #1600



REVISIONS			
SYM		DATE	APPROVED



RTU04 / PV03 / EDH01 / EDH02 / HU01 CONTROLS DIAGRAM 1
NOT TO SCALE

SEQUENCE OF OPERATIONS

OCCUPIED (NON-SURGERY) START SEQUENCE:

WHEN UNIT IS POWERED, THE UNIT CONTROLS SHALL BE INITIALIZED. UNIT SHALL BE PLACED IN OCCUPIED (NON-SURGERY) MODE WHEN SIGNALLED VIA UNIT CONTROLLER. WHEN ENABLED IN THE OCCUPIED (NON-SURGERY) MODE, THE OUTDOOR AIR DAMPER SHALL MODULATE CLOSED AND RETURN AIR DAMPER SHALL MODULATE OPEN. THE SUPPLY FAN SHALL BE COMMANDED TO START AND A PRESET SIGNAL OF 50% (50-100% ADJ.) IS SENT AS THE SUPPLY FAN VFD OR ECM TO MAINTAIN SCHEDULED AIRFLOW. A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE INDOOR FAN. IF AFTER 30 SECONDS THE INDOOR FAN PROVING SWITCH DOES NOT PROVE AIR FLOW, THE INDOOR FAN IS COMMAND OFF AND SIGNAL AN ALARM.

OCCUPIED (SURGERY) START SEQUENCE:

WHEN UNIT IS POWERED, THE UNIT CONTROLS SHALL BE INITIALIZED. UNIT SHALL BE PLACED IN OCCUPIED (SURGERY) MODE WHEN SIGNALLED VIA UNIT CONTROLLER. WHEN ENABLED IN THE OCCUPIED (SURGERY) MODE, THE OUTDOOR AIR DAMPER SHALL MODULATE OPEN AND RETURN AIR DAMPER SHALL MODULATE CLOSED. EXHAUST AIR DAMPER SHALL MODULATE OPEN AND ASSOCIATED POWER VENTILATOR SHALL BE ENERGIZED. THE SUPPLY FAN SHALL BE COMMANDED TO START AND A PRESET SIGNAL OF 50% (50-100% ADJ.) IS SENT AS THE SUPPLY FAN VFD OR ECM TO MAINTAIN SCHEDULED AIRFLOW. A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE INDOOR FAN. IF AFTER 30 SECONDS THE INDOOR FAN PROVING SWITCH DOES NOT PROVE AIR FLOW, THE INDOOR FAN IS COMMAND OFF AND SIGNAL AN ALARM.

OCCUPIED (NON-SURGERY) COOLING MODE:

THE COMPRESSOR SHALL MODULATE (LOAD/UNLOAD) CAPACITY TO MAINTAIN THE SUPPLY TEMPERATURE SETPOINT OF 55.0 DEG. F (ADJ.). ELECTRIC DUCT HEATERS WITH SCR SHALL MODULATE TO MAINTAIN OCCUPIED (NON-SURGERY) SPACE TEMPERATURE SETPOINTS.

OCCUPIED (SURGERY) COOLING MODE:

THE COMPRESSOR SHALL MODULATE (LOAD/UNLOAD) CAPACITY TO MAINTAIN THE SUPPLY TEMPERATURE SETPOINT OF 50.0 DEG. F (ADJ.). ELECTRIC DUCT HEATERS WITH SCR SHALL MODULATE TO MAINTAIN OCCUPIED (SURGERY) SPACE TEMPERATURE SETPOINTS.

OCCUPIED (NON-SURGERY) HEATING MODE:

RTU05 ELECTRIC HEATER WITH SCR SHALL MODULATE TO MAINTAIN OCCUPIED (NON-SURGERY) SPACE TEMPERATURE SETPOINTS.

OCCUPIED (SURGERY) HEATING MODE:

OUTSIDE AIR TEMPERATURE MUST BE BELOW SUPPLY AIR TEMPERATURE SETPOINT. ELECTRIC HEATING WITH SCR SHALL MODULATE TO MAINTAIN THE SUPPLY TEMPERATURE SETPOINT OF 55.0 DEG. F (ADJ.). ELECTRIC DUCT HEATERS WITH SCR SHALL MODULATE TO MAINTAIN UNOCCUPIED (SURGERY) SPACE TEMPERATURE SETPOINTS.

UNOCCUPIED MODE:

THE COMPRESSOR SHALL MODULATE (LOAD/UNLOAD) CAPACITY TO MAINTAIN THE SUPPLY TEMPERATURE SETPOINT OF 55.0 DEG. F (ADJ.). ELECTRIC DUCT HEATERS WITH SCR SHALL MODULATE TO MAINTAIN UNOCCUPIED SPACE TEMPERATURE SETPOINTS.

NON-SURGERY VENTILATION MODE:

SYSTEM SHALL BECOME 100% RETURN AIR. RETURN AIR DAMPER OPENS AND OUTSIDE AIR DAMPER CLOSES. EXHAUST AIR DAMPER SHALL CLOSE AND ASSOCIATED POWER VENTILATOR SHALL BE DISABLED.

SURGERY VENTILATION MODE:

SYSTEM SHALL BECOME OCCUPIED AND 100% OUTSIDE AIR. RETURN AIR DAMPER CLOSES AND OUTSIDE AIR DAMPER OPENS EXHAUST AIR DAMPER SHALL OPEN AND ASSOCIATED POWER VENTILATOR SHALL BE ENABLED TO MAINTAIN NEGATIVE PRESSURE IN THE OPERATING SUITE. PRESSURE DIFFERENTIAL BETWEEN SURGERY AND PREP AREA SHALL BE MONITORED. ALARM WHEN SURGERY BECOMES NEGATIVE DURING SURGERY MODE ONLY.

SUPPLY FAN:

THE SUPPLY FAN SHALL BE ENABLED WHILE IN THE OCCUPIED (NON-SURGERY AND SURGERY) MODE AND CYCLED ON DURING THE UNOCCUPIED MODE. A DIFFERENTIAL PRESSURE SWITCH ACROSS THE FAN SHALL MONITOR THE DIFFERENTIAL PRESSURE. AFTER INITIALIZING THE INDOOR FAN, IF THE PRESSURE SWITCH DOES NOT PROVE FLOW WITHIN 60 SECONDS (ADJ.) A FAN FAILURE ALARM SHALL BE ANNUNCIATED AND THE UNIT SHALL BE DISABLED, REQUIRING A MANUAL RESET.

INTERMEDIATE FILTER STATUS:

A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER. IF THE SWITCH CLOSES FOR 2 MINUTES DURING FAN OPERATION A FILTER MAINTENANCE ALARM SHALL BE ANNUNCIATED AT THE CONTROLLER.

FINAL FILTER STATUS:

A DIFFERENTIAL PRESSURE SWITCH SHALL MONITOR THE DIFFERENTIAL PRESSURE ACROSS THE FILTER. IF THE SWITCH CLOSES FOR 2 MINUTES DURING FAN OPERATION A FILTER MAINTENANCE ALARM SHALL BE ANNUNCIATED AT THE CONTROLLER.

103 SURGERY PRESSURE:

MONITOR DIFFERENTIAL PRESSURE WHERE INDICATED. IF 103 SURGERY IS NEGATIVE TO THE ADJACENT SPACE FOR 2 MINUTES DURING OCCUPIED (SURGERY) OPERATION AN ALARM SHALL BE ANNUNCIATED AT THE CONTROLLER.

DISCLOSURE OF INFORMATION:

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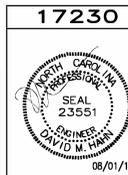
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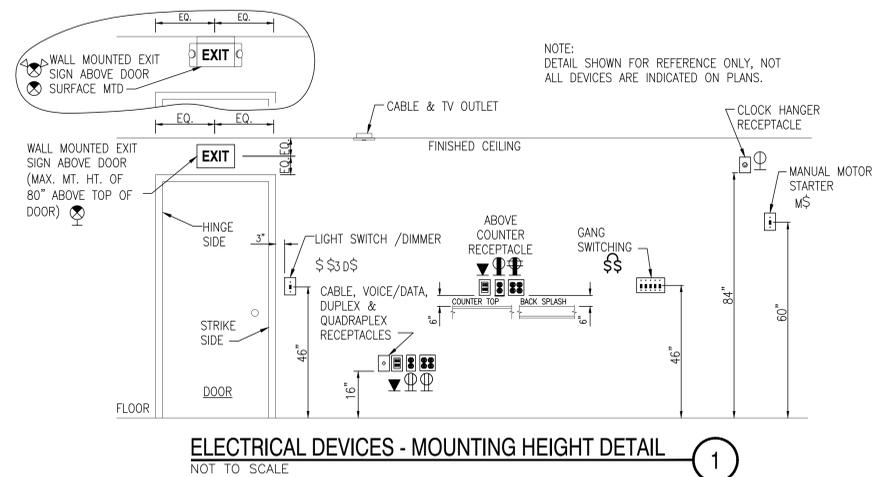
FINAL		M-603	
<small>DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND</small> MARINE CORPS BASE <small>CAMP LEJEUNE, NORTH CAROLINA</small> 17-0113 REPLACE HVAC BLDGs TT2459 & TT2459A			
DES. GRM	DR. GRM	CHK. DMH	SUBMITTED BY:
DESIGN DIR. T H BURTON, PE	APPROVED: PWO OR OICC	DATE	MECHANICAL SEQUENCE OF OPERATION AND CONTROL DIAGRAM
SATISFACTORY D:		DATE	CONST. CONTR.
SCALE: NOTED		SPEC. 05-17-0113	SHEET 40 OF 55



REVISIONS			
SYM		DATE	APPROVED

ELECTRICAL LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	2x4 LIGHT FIXTURE, RECESSED OR SURFACE MOUNTED LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)		RECEPTACLE, DUPLEX, 120VAC, 20A, SURFACE MOUNTED 16" AFF, UNLESS OTHERWISE NOTED. (SEE ELECTRICAL MOUNTING HEIGHT DETAIL THIS SHEET)
	4FT OR 8FT LED LIGHT FIXTURE, SURFACE MOUNTED LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)		WP - LISTED WEATHER-RESISTANT TYPE DEVICE WITH WEATHERPROOF IN USE COVER
	CEILING MOUNTED SPECIALTY LIGHT FIXTURE SEE PLAN NOTE FOR FIXTURE INFORMATION		GFI - GROUND FAULT CIRCUIT INTERRUPTER TYPE, 120VAC, 20A, GOUNTED 24" AFG
	EXIT SIGN W/EMERGENCY LIGHTING UNIT, CEILING MOUNTED, ARROW INDICATES DIRECTION. LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)		DISCONNECT SWITCH, FUSED, HEAVY DUTY, SIZE AS INDICATED ON DRAWINGS (SIZE AS INDICATED IN THE EQUIPMENT CONNECTION SCHEDULE) ##A = DISCONNECT SIZE / # = NUMBER OF POLES / # = NEMA RATING, /##AF = FUSE SIZE
	EXIT SIGN, DOUBLE FACE, CEILING MOUNTED, ARROW INDICATES DIRECTION. LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)		MANUAL MOTOR STARTER, ELECTRICAL CONTRACTOR SHALL COORDINATE POLES AND SIZE WITH EQUIPMENT. SURFACE MOUNTED BOX AND CONDUIT.
	EXIT SIGN, DOUBLE FACE, CEILING MOUNTED, ARROW INDICATES DIRECTION. LETTER INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)		PANEL BOARD, SURFACE MOUNTED, SIZE AND RATINGS AS INDICATED ON PANEL SCHEDULE
	EMERGENCY LIGHTING UNIT, 2-HEAD WITH BATTERY BACK-UP, WALL MOUNTED, "NOT SWITCHED" INDICATES FIXTURE TYPE (SEE FIXTURE SCHEDULE)		PANEL BOARD REQUIRED CLEARANCE IN FRONT OF ELECTRICAL PANEL, SEE NEC TABLE 110.26 WORKING SPACES FOR ADDITIONAL CLEARANCE CONDITIONS
	SWITCH, SINGLE POLE, 120/277VAC, 20A, SURFACE MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED. BOX SHALL BE FERROUS CAST METAL WITH THREADED HUBS. LOWER CASE LETTER INDICATES FIXTURE SWITCHING (WHEN INDICATED)		METER
	3-WAY SWITCH, SINGLE POLE 120/277 VAC, 20A, SURFACE MOUNTED AT 46" AFF UNLESS OTHERWISE NOTED. BOX SHALL BE FERROUS CAST METAL WITH THREADED HUBS.		CONDUIT, HOME RUN TO PANEL BOARD
			HATCHING INDICATES EXISTING ITEMS TO BE DEMOLISHED. REMOVE DEVICE, EQUIPMENT, FIXTURE INDICATED, CIRCUIT, AND CONDUIT BACK TO SOURCE UNLESS OTHERWISE NOTED.
			POWER & SWITCH LEG
			UNSWITCHED LEG

TYPICAL ABBREVIATIONS			
A, AMP	AMPERE	LP	LIGHTING PANEL, LIGHT POLE LIGHTING
AFF	ABOVE FINISHED FLOOR	LTG	LIGHTING
AFG	ABOVE FINISHED GRADE	MCC	MAIN CIRCUIT BREAKER
AHU	AIR HANDLING UNIT	MCC	MOTOR CONTROL CENTER
AIC	AMPERE INTERRUPTING CAPACITY	MCP	MOTOR CIRCUIT PROTECTOR
ATS	AUTOMATIC TRANSFER SWITCH	MDP	MAIN DISTRIBUTION PANEL
AWG	AMERICAN WIRE GAUGE	MFR	MANUFACTURER
BOF	BOTTOM OF FIXTURE	MH	MANHOLE
BRKR	BREAKER	MLO	MAIN LUGS ONLY MOUNTED
C, CND	CONDUIT	MTD	MOUNTING
CAB	CABINET	MTG	MOUNTING
CAT	CATALOG	MTS	MANUAL TRANSFER SWITCH
CL	CHLORINE	MV	MEDIUM VOLTAGE
CB	CIRCUIT BREAKER	N, NEUT	NEUTRAL
CCTV	CLOSED CIRCUIT TELEVISION	NA	NOT APPLICABLE
CKT	CIRCUIT	NC	NORMALLY CLOSED
CLG	CEILING	NEC	NATIONAL ELECTRIC CODE
CP	CONTROL PANEL	NIC	NOT IN CONTRACT
CR	CONTROL RELAY, CORROSION RESISTANT	NL	NIGHT LIGHT
CS	CONTROL SWITCH	NO	NORMALLY OPEN
CV	CONTROL VALVE	NTS	NOT TO SCALE
CT	CURRENT TRANSFORMER	P	POLE
CU	COPPER	PA	PUBLIC ADDRESS
EF	EXHAUST FAN	PB	PULL BOX, PUSH-BUTTON
EMER	EMERGENCY	PF	POWER FACTOR
EMT	ELECTRICAL METALLIC TUBING	PH	PHASE
ENCL	ENCLOSURE	PLC	PROGRAMMABLE LOGIC CONTROLLER
EQUIP	EQUIPMENT	PNL	PANEL
EWC	ELECTRIC WATER COOLER	PP	POWER PANEL, POWER POLE
EWH	ELECTRIC WATER HEATER	PT	POTENTIAL TRANSFORMER
EPRF	EXPLOSION PROOF	PWR	POWER
FA	FIRE ALARM	RECPT, RCP	RECEPTACLE
FAAP	FIRE ALARM ANNUNCIATOR PANEL	REQ'D	REQUIRED
FACP	FIRE ALARM CONTROL PANEL	RGS	RIGID GALVANIZED STEEL CONDUIT
FBO	FURNISHED BY OTHERS	RM	ROOM
FLA	FULL LOAD AMPS	RTU	REMOTE TELEMETRY UNIT
FLUOR	FLUORESCENT	DCM	DC MOTOR DRIVE
FLR	FLOOR	SH	SHEET
FWE	FURNISHED WITH EQUIPMENT	SM	SURFACE MOUNT
GEN	GENERATOR	SPEC	SPECIFICATION
G, GND	GROUND	SS	SELECTOR SWITCH
GFCI	GROUND FAULT CURRENT INTERRUPTER	SST	STAINLESS STEEL
HH	HANDHOLE	SW	SWITCH
HID	HIGH INTENSITY DISCHARGE	SWBD	SWITCHBOARD
HOA	HAND-OFF-AUTO	SWGR	SWITCH GEAR
HP	HORSE POWER	TEL	TELEPHONE
HPF	HIGH POWER FACTOR	TPS	TWISTED PAIR SHIELDED
HPSS	HIGH PRESSURE SODIUM	TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSER
HTR	HEATER	TYP	TYPICAL
HV	HIGH VOLTAGE	UGND	UNDERGROUND
HZ	HERTZ	UH	UNIT HEATER
IMC	INTERMEDIATE METALLIC CONDUIT	UON	UNLESS OTHERWISE NOTED
INCAND	INCANDESCENT	UTIL	UTILITY
JB	JUNCTION BOX	V	VOLTS
K	THOUSAND	VFD	VARIABLE FREQUENCY DRIVE
KCMIL	THOUSAND CIRCULAR MILLS	W	WIRE, WATT
KVA	KILOVOLT AMPERE	WH	WATT-HOUR
KW	KILOWATTS	WP	WEATHERPROOF
KWH	KILOWATT-HOURS	(X)	EXISTING DEVICE
		XFMR	TRANSFORMER



DISCLOSURE OF INFORMATION:

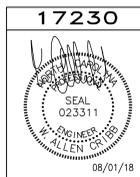
CONTRACTOR SHALL COMPLY AS FOLLOWS:

A. THE CONTRACTOR SHALL NOT RELEASE TO ANYONE OUTSIDE THE CONTRACTOR'S ORGANIZATION ANY UNCLASSIFIED INFORMATION, REGARDLESS OF MEDIUM (E.G. FILM, TAPE, DOCUMENT), PERTAINING TO ANY PART OF THIS CONTRACT OR ANY PROGRAM RELATED TO THIS CONTRACT, UNLESS-

1. THE CONTRACTING OFFICER HAS GIVEN PRIOR WRITTEN APPROVAL; OR
2. THE INFORMATION IS OTHERWISE IN THE PUBLIC DOMAIN BEFORE THE DATE OF THE RELEASE.

B. REQUESTS FOR APPROVAL SHALL IDENTIFY THE SPECIFIC INFORMATION TO BE RELEASED, THE MEDIUM TO BE USED, AND THE PURPOSE FOR THE RELEASE. THE CONTRACTOR SHALL SUBMIT ITS REQUEST TO THE CONTRACTING OFFICER AT LEAST 45 DAYS BEFORE THE PROPOSED DATE FOR RELEASE.

C. THE CONTRACTOR AGREES TO INCLUDE A SIMILAR REQUIREMENT IN EACH SUBCONTRACT UNDER THIS CONTRACT. SUBCONTRACTORS SHALL SUBMIT REQUESTS FOR AUTHORIZATION TO RELEASE THROUGH THE PRIME CONTRACTOR TO THE CONTRACTING OFFICER.



FINAL		E-001	
DEPARTMENT OF THE NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGs TT2459 & TT2459A			
ELECTRICAL LEGEND, ABBREVIATIONS AND NOTES			
DES. JLG	DR. JLG	CHK. WAC	DATE
SUBMITTED BY: T H BURTON, PE		DATE	DATE
APPROVED: PWO OR OICC	DATE	SIZE	CODE IDENT. NO.
F	80091	60022665	CONST. CONTR.
SATISFACTORY TO:		DATE	DATE
SCALE: NOTED		SPEC. 05-17-0113	SHEET 41 OF 55

GENERAL NOTES

- ALL ELECTRICAL WORK SHALL BE IN FULL COMPLIANCE WITH NFPA 70 THE NORTH CAROLINA STATE BUILDING CODE, ALL LOCAL CODES AND ORDINANCES AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.
- ALL EQUIPMENT PROVIDED BY THE CONTRACTOR SHALL BE LISTED AND LABELED BY A NATIONALLY-RECOGNIZED TESTING AGENCY, ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION, FOR THE CONDITIONS OF INSTALLATION. ALL MATERIAL, EQUIPMENT AND DEVICES SHALL BE NEW CURRENT PRODUCTS OF MANUFACTURERS REGULARLY ENGAGED IN THE PRODUCTION OF SUCH PRODUCTS. EQUIPMENT SHALL BE SUITABLE FOR ITS APPLICATION (E.G. WHEN INSTALLED OUTDOORS, IT SHALL BE WEATHERPROOF, ETC.)
- THE CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS FOR WORK REQUIREMENTS, THE AMOUNT OF SPACE AVAILABLE FOR ELECTRICAL EQUIPMENT, AND LAYOUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER.
- THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THOROUGHLY FAMILIARIZING HIMSELF WITH ANY CONTRACTUAL REQUIREMENTS AS MAY BE SET FORTH IN THE OTHER DIVISIONS OF THE PROJECT SPECIFICATIONS.
- UNLESS SPECIFICALLY NOTED OTHERWISE, SYSTEMS PROVIDED OR INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE COMPLETE AND FULLY-FUNCTIONING AFTER INSTALLATION. INCIDENTAL COMPONENTS MAY NOT BE SHOWN, AND ALL WORK WHICH MAY BE REASONABLY IMPLIED AS BEING INCIDENTAL TO THIS WORK, BUT REQUIRED FOR THE PROPER OPERATION OF THE EQUIPMENT OR SYSTEM, SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED IN THE BID. ADDITIONAL CIRCUITS SHALL BE INSTALLED WHEREVER NEEDED TO CONFORM TO THE SPECIFIC REQUIREMENTS OF EQUIPMENT.
- TEMPORARY POWER CONNECTIONS AS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR AND INCLUDED IN THE BID. ALL TEMPORARY EQUIPMENT WIRING SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. THE CONTRACTOR SHALL PROVIDE DETAILS, METHODS, MATERIALS, ETC. FOR REVIEW PRIOR TO MAKING TEMPORARY CONNECTIONS. FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS INCLUDING CONTROL EQUIPMENT, MOTOR STARTERS, BRANCH AND FEEDER CIRCUIT BREAKERS, PANELBOARDS, TRANSFORMERS, ETC. FOR TEMPORARY POWER. COORDINATE WITH THE ELECTRICAL UTILITY COMPANY AS REQUIRED.
- THE WORK SHALL INCLUDE COMPLETE TESTING OF ALL EQUIPMENT AND WIRING AT THE COMPLETION OF WORK AND ANY MINOR CORRECTIONS, CHANGES OR ADJUSTMENTS NECESSARY FOR THE PROPER FUNCTIONING OF THE SYSTEM AND EQUIPMENT.
- ALL EQUIPMENT SHOWN DOTTED OR DASHED IS BY OTHERS OR IS EXISTING, AS NOTED.
- ALL ELECTRICAL EQUIPMENT SHALL, AT ALL TIMES DURING CONSTRUCTION, BE ADEQUATELY PROTECTED AGAINST MECHANICAL INJURY, OR DAMAGE BY WATER AND/OR THE ELEMENTS. ELECTRICAL EQUIPMENT SHALL NOT BE STORED OUT OF DOORS, BUT SHALL BE STORED IN DRY PERMANENT SHELTERS. IF AN APPARATUS HAS BEEN DAMAGED, OR HAS BEEN SUBJECT TO POSSIBLE INJURY BY WATER OR THE ELEMENTS, SUCH DAMAGE SHALL BE REPLACED AT NO ADDITIONAL COST.
- DO NOT SCALE ELECTRICAL DRAWINGS. REFER TO THE ARCHITECTURAL DRAWINGS FOR DIMENSIONS.
- CIRCUIT LAYOUTS ARE NOT INTENDED TO SHOW THE NUMBER OF FITTINGS, OR OTHER INSTALLATION DETAILS. UNLESS NOTED OTHERWISE, THE EXACT ROUTING OF FEEDER AND BRANCH CIRCUIT RACEWAYS AND CABLES IS THE RESPONSIBILITY OF THE CONTRACTOR. RISER AND GENERAL CIRCUIT ARRANGEMENTS ARE SHOWN SCHEMATICALLY/DIAGRAMMATICALLY ONLY. THE CONTRACTOR SHALL ROUTE CONDUITS AS REQUIRED BY THE CONDITIONS OF THE INSTALLATION.
- UNLESS DIMENSIONED, DEVICE LOCATIONS SHOWN ON THE DRAWINGS ARE APPROXIMATE. ADJUST EXACT LOCATIONS AS REQUIRED TO SERVE THE INTENDED PURPOSE AND TO AVOID CONFLICTS AND INTERFERENCES WITH OTHER TRADES. EXACT DEVICE LOCATIONS SHALL BE AS INDICATED ON THE ARCHITECTURAL DRAWINGS OR AS DIMENSIONED. IF NOT SHOWN ON THE ARCHITECTURAL DRAWINGS OR DIMENSIONED ON THE ELECTRICAL DRAWINGS, VERIFY EXACT LOCATION WITH THE CONTRACTING OFFICER PRIOR TO ROUGH-IN.
- CONDUIT TERMINATING IN PRESSED STEEL BOXES SHALL HAVE DOUBLE LOCKNUTS AND INSULATED BUSHINGS. CONDUITS TERMINATING IN GASKETED ENCLOSURES SHALL BE TERMINATED WITH GROUNDING TYPE CONDUIT HUBS.
- BRANCH CIRCUIT HOMERUNS SHOWN ON DRAWINGS INDICATE PHASE CONDUCTORS, NEUTRAL, EQUIPMENT GROUND CONDUCTORS AS REQUIRED. ADDITIONAL CONDUCTORS REQUIRED FOR CONTROL SHALL BE INCLUDED EVEN IF NOT EXPLICITLY SHOWN.
- SEAL ALL CONDUIT OPENINGS THROUGH EXTERIOR BUILDING WALLS WATERTIGHT.
- IN WET LOCATIONS AND EXTERIOR, ALL WIRING DEVICES SHALL BE WEATHER-RESISTANT LISTED WITH WEATHERPROOF WHILE IN USE COVER. LIGHTING FIXTURES SHALL BE APPROPRIATELY RATED AND LISTED FOR THE ENVIRONMENT INCLUDING 0 DEGREE BALLASTS FOR FLUORESCENT.
- RACEWAYS PENETRATING FLOORS, CEILINGS OR WALLS SHALL BE PROPERLY SEALED SMOKE/TIGHT.
- RACEWAYS PENETRATING RATED FLOOR, CEILING OR WALL ASSEMBLIES SHALL BE PROPERLY SEALED IN ACCORDANCE WITH THE CORRESPONDING UNDERWRITERS LABORATORIES (OR OTHER APPROVED THIRD PARTY TESTING AGENCY) APPROVED AND LISTED FIRESTOPPING MATERIALS AND MANUFACTURER APPROVED INSTALLATION TECHNIQUES COMPLYING WITH ALL APPLICABLE CODES. SEE ARCHITECTURAL DRAWINGS FOR IDENTIFICATION OF RATED WALLS AND CEILINGS.
- LIGHTING FIXTURES, DATA DEVICES, ETC. MOUNTED IN FIRE-RATED CEILINGS SHALL BE PROVIDED WITH UL-LISTED, PRE-FABRICATED OR FIELD FABRICATED SHROUDS/ACCESSORIES NECESSARY TO MAINTAIN THE CEILING FIRE RATING.
- ALL RACEWAYS SHALL BE CONCEALED WHERE POSSIBLE IF APPLICABLE, MATCH EXISTING RACEWAY INSTALLATION METHODS AND ROUTINGS AT OR NEAR EXISTING FACILITIES.
- INSTALL EXPOSED RACEWAYS PARALLEL TO OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS, AND FOLLOW THE SURFACE CONTOURS AS MUCH AS POSSIBLE. NO DIAGONAL RUNS WILL BE ALLOWED. ALL CONDUITS SHALL BE RUN STRAIGHT AND TRUE. RUN PARALLEL OR BANKED RACEWAYS TOGETHER ON COMMON SUPPORTS WHERE PRACTICAL. MAKE BENDS IN PARALLEL OR BANKED RUNS FROM SAME CENTERLINE TO MAKE BENDS PARALLEL.
- PATCHING OF WATERPROOFED SURFACES SHALL RENDER THE AREA OF THE PATCHING COMPLETELY WATERPROOF.
- ALL MOTORS, DRY TYPE TRANSFORMERS AND OTHER VIBRATING EQUIPMENT SHALL BE CONNECTED TO THE CONDUIT SYSTEM BY MEANS OF A SHORT SECTION (18 INCH MINIMUM) OF FLEXIBLE CONDUIT UNLESS OTHERWISE INDICATED. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED INSIDE THE FLEXIBLE CONDUIT AND TERMINATE AT THE LOAD END WITH AN APPROVED GROUNDING CLAMP OR LUG.
- SURFACE MOUNTED PANELBOARDS, JUNCTION, OUTLET AND PULL BOXES, RACEWAYS, ETC., INSTALLED ON EXTERIOR SURFACES OR INSIDE ON EXTERIOR WALLS SHALL BE SUPPORTED BY SPACERS TO PROVIDE A 1/4" MINIMUM CLEARANCE BETWEEN THE WALL AND EQUIPMENT.
- CEILING MOUNTED DEVICES INSTALLED IN ACOUSTICAL TILE CEILING AREAS SHALL BE SUPPORTED FROM THE STRUCTURE ABOVE WITH RODS OF SUFFICIENT SIZE TO PREVENT VERTICAL MOVEMENT OF THE OUTLET BOX. BRIDGES ALONE ARE NOT ADEQUATE UNLESS SPECIFICALLY APPROVED. CEILING MOUNTED EXIT LIGHT FIXTURES SHALL BE INSTALLED LEVEL. DO NOT SUPPORT DEVICES FROM ACOUSTICAL CEILING TILE.
- PROVIDE ADHESIVE BACKED RECEPTACLE DEVICE PLATE LABELS IDENTIFYING THE CIRCUIT FEEDING THE DEVICE. LABELS SHALL INDICATE PANEL AND CIRCUIT NUMBER. ALSO PROVIDE IDENTIFICATION FOR MULTI-WIRE BRANCH CIRCUIT PHASE CONDUCTORS IN PANELBOARD.
- FINAL TYPED PANELBOARD DIRECTORIES INSTALLED IN THE PANELBOARD DOOR POCKET SHALL INCLUDE FINAL ACTUAL ROOM NAMES AND NUMBERS IN ADDITION TO THE GENERAL DESCRIPTION SHOWN ON THE PANEL SCHEDULES ON THE DRAWINGS.
- CONDUCTOR SIZING IS BASED ON 75 DEGREE C. COPPER NEC RATINGS, UNLESS NOTED OTHERWISE. THE CONTRACTOR SHALL VERIFY, PRIOR TO INSTALLATION OF CONDUCTORS OR CONDUIT FEEDING ANY EQUIPMENT, THE ELECTRICAL EQUIPMENT IS RATED FOR USE WITH 75 DEGREE C. WIRING. IF ANY EQUIPMENT IS RATED FOR USE WITH LESS THAN 75 DEGREE C. CONDUCTORS, THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER IMMEDIATELY FOR EVALUATION/CORRECTION.
- DO NOT PULL CONDUCTORS UNTIL THE CONDUIT SYSTEM IS COMPLETE IN EVERY DETAIL. IN THE CASE OF CONCEALED WORK, "COMPLETE" MEANS UNTIL ALL ROUGH PLASTERING OR MASONRY HAS BEEN COMPLETED.
- WHERE SIZE IS NOT SHOWN ON THE DRAWINGS, BRANCH CIRCUITS SHALL CONSIST OF #12 OR #10 AWG MINIMUM PHASE, NEUTRAL AND EQUIPMENT GROUND CONDUCTORS IN 3/4" MINIMUM RACEWAY.
- USE #10 AWG CONDUCTORS FOR 20 AMPERE, 120 VOLT BRANCH CIRCUITS WITH A TOTAL INSTALLED LENGTH GREATER THAN 75 FEET AND/OR BRANCH CIRCUIT HOMERUNS LONGER THAN 50 FEET, I.E.; #12 AWG INCREASED TO #10 AWG FOR RECEPTACLE BRANCH CIRCUITS OVER 75 FEET TOTAL LENGTH (INCLUDING THE AWG HOMERUN SEGMENT) AND HOMERUNS OVER 50 FEET.
- COMMON NEUTRAL CONDUCTORS OF MULTIWIRED RECEPTACLE BRANCH CIRCUIT HOMERUNS SHALL BE #10 AWG MINIMUM.
- KEEP CONDUCTOR SPLICES TO A MINIMUM. INSTALL SPLICES AND TAPES THAT POSSESS EQUIVALENT OR BETTER MECHANICAL STRENGTH AND INSULATION RATINGS THAN CONDUCTORS BEING SPLICED. USE SPLICE AND TAP CONNECTORS COMPATIBLE WITH CONDUCTOR MATERIAL. INSTALL CONDUCTORS AT EACH OUTLET WITH AT LEAST 6 INCHES OF SLACK. CONNECT OUTLETS AND COMPONENTS TO WIRING AND TO GROUND AS INDICATED AND INSTRUCTED BY THE MANUFACTURER.
- DO NOT SPLICE BRANCH CIRCUIT HOMERUNS WITHOUT THE PERMISSION OF THE CONTRACTING OFFICER. HOMERUNS SHALL BE CONTINUOUS FROM THE LAST OUTLET BOX TO THE SERVING PANELBOARD.
- DO NOT COMBINE BRANCH CIRCUIT HOMERUNS UNLESS SPECIFICALLY INDICATED ON THE DRAWINGS.
- DO NOT CHANGE CIRCUITING SHOWN WITHOUT PERMISSION OF THE CONTRACTING OFFICER.
- TROUGH TAPS SHALL BE AT SWITCH AMPACITY, UNLESS NOTED OTHERWISE.
- INSTALL WIRING DEVICES AT HEIGHTS AS SHOWN ON THE DRAWINGS. ALSO COORDINATE MOUNTING HEIGHTS WITH THE ARCHITECTURAL DRAWINGS AND CASEWORK DETAILS. IF CONFLICTING, ARCHITECTURAL DRAWINGS AND DETAILS SHALL GOVERN.
- PROVIDE GROUND FAULT CIRCUIT-INTERRUPTER PROTECTION FOR PERSONNEL IN ACCORDANCE WITH THE NEC INCLUDING ALL ELECTRIC WATER COOLERS, EXTERIOR RECEPTACLES AND RECEPTACLES IN AREAS SUBJECT TO POSSIBLE WET CONDITIONS. ALL RECEPTACLES INSTALLED WITHIN 6 FEET OF A SINK SHALL BE GFI PROTECTED. ALL RECEPTACLES IN NON-RESIDENTIAL KITCHENS SHALL BE GFI PROTECTED.
- IN AREAS IN WHICH DUAL LEVEL SWITCHING IS INDICATED (TYPICALLY BY 2 OR MORE ADJACENT, GANGED SWITCHES), PROVIDE THE APPROPRIATE NUMBER OF CONDUCTORS TO FACILITATE THIS FUNCTION (AS TYPICALLY SHOWN).
- CONNECT BATTERY PACK TYPE EMERGENCY AND EXIT LIGHTING FIXTURES TO UN-SWITCHED LIGHTING CIRCUIT SERVING THE SPACE LIGHTED BY THE EMERGENCY AND EXIT FIXTURES. THESE CONNECTIONS ARE INTENTIONALLY NOT SHOWN TO MAINTAIN DRAWING FOR CLARITY.
- COORDINATE LIGHTING FIXTURE LOCATIONS WITH THE ARCHITECTURAL REFLECTED CEILING PLAN. IF CONFLICTS ARE NOTED, REQUEST CLARIFICATION FROM THE CONTRACTING OFFICER BEFORE PROCEEDING.
- ADJACENT SWITCHES SHALL BE GANGED. INSTALL BARRIERS BETWEEN UNLIKE VOLTAGE SECTIONS.
- SEPARATE NEUTRALS ARE REQUIRED FOR ALL DIMMED LIGHTING CIRCUITS.
- WHERE THE DRAWINGS INDICATE A LIGHTING FIXTURE IS TO BE PROVIDED WITH SPECIAL FEATURES/SWITCHING (DIMMING, EMERGENCY BATTERY BALLAST, MULTI-LEVEL, ETC.), THE CONTRACTOR SHALL PROVIDE THESE FIXTURES WITH THE APPROPRIATE BALLASTING TO ACCOMMODATE THE SPECIAL FEATURE. THE CONTRACTOR SHALL PROVIDE THE FIXTURES AS INDICATED IN THE LIGHTING FIXTURE SCHEDULE WITH MODIFICATIONS AS REQUIRED BY DRAWING NOTES.
- COORDINATE LOCATIONS OF PLUMBING, MECHANICAL, DATA AND TELEPHONE AND AUDIO/VISUAL EQUIPMENT AND OF GOVERNMENT-PROVIDED TELECOMMUNICATIONS AND DATA CABLES WILL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. LEAVE PULL WIRES OR ROPES OF ADEQUATE TENSILE STRENGTH IN ALL EMPTY CONDUITS.
- INSTALLATION INFORMATION PACKED WITH LIGHTING FIXTURES, DEVICES AND EQUIPMENT SHALL BE RETAINED FOR INCLUSION IN THE OPERATIONS AND MAINTENANCE MANUALS.
- PROTECT ALL EXISTING POWER, COMMUNICATIONS, DATA, LIFE SAFETY SYSTEMS, FIRE ALARM AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE GOVERNMENT IF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE GOVERNMENT, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.
- THE CONTRACTOR REQUIRES SEVERAL NEW CIRCUITS BE ADDED TO EXISTING PANELBOARDS AND NUMEROUS EXISTING CIRCUITS' LOADING WILL CHANGE AS A RESULT OF THIS WORK. THE CONTRACTOR SHALL ENDEAVOR TO MAINTAIN PHASE BALANCE ON ALL PANELBOARDS AFFECTED BY THIS WORK. RECONNECT/MODIFY/EXTEND EXISTING CIRCUITING AS REQUIRED TO MAINTAIN SAFE CIRCUIT LOADING AND PHASE BALANCE. COORDINATE CONNECTIONS TO THE EXISTING ELECTRICAL DISTRIBUTION SYSTEM WITH THE GOVERNMENT AND ENGINEER. PROVIDE ACCURATE, UPDATED, TYPED PANEL SCHEDULES FOR ALL AFFECTED PANELS. NOTE ALL FINAL CIRCUIT CONFIGURATIONS ON AS-BUILT DRAWINGS.
- THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY TO INSTALL ALL EQUIPMENT AS REQUIRED AND SHALL REESTABLISH ALL FINISHES TO THEIR ORIGINAL CONDITION WHERE CUTTING AND PATCHING OCCUR. ALL CUTTING AND PATCHING SHALL BE DONE IN A THOROUGHLY WORKMANSHIP MANNER. SAW CUT CONCRETE AND MASONRY PRIOR TO BREAKING OUT SECTIONS. ALL PATCHING MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY TRADESMEN EXPERIENCED IN THAT WORK. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE RESPECTIVE SUPPLIERS AND VENDORS AND THE GOVERNMENT BEFORE ROUGH-IN. ADJUST LIGHTING FIXTURES, RECEPTACLES AND ELECTRICAL EQUIPMENT TO ACCOMMODATE THIS EQUIPMENT. ADVISE THE ENGINEER OF CONFLICTS BEFORE ROUGH-IN.
- BEFORE COMMENCING WORK OR ORDERING MATERIALS, THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES AND VERIFY THE NAMEPLATE RATINGS OF ALL EQUIPMENT (MOTORS, HEATERS, COMPRESSORS, ETC.) AND ADJUST THE RATINGS OF THE ELECTRICAL EQUIPMENT (SWITCHES, FUSES, CIRCUIT BREAKERS, FEEDERS, ETC.) AS APPROPRIATE TO SERVE THIS EQUIPMENT.
- ENERGIZE EQUIPMENT ONLY AFTER OBTAINING PERMISSION FROM THE CONTRACTOR PROVIDING THE EQUIPMENT.
- UNLESS SPECIFICALLY NOTED OTHERWISE, THE CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL UTILIZATION EQUIPMENT SHOWN ON THE DRAWINGS. VERIFY THE TYPE OF FINAL CONNECTION AND PROVIDE APPROPRIATE WIRING METHOD. THE CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL AND PLUMBING EQUIPMENT, PRIOR TO ORDERING OR INSTALLATION OF ANY EQUIPMENT, TO VERIFY MECHANICAL AND PLUMBING EQUIPMENT REQUIREMENTS ARE PROVIDED IN THE ELECTRICAL DESIGN. THE CONTRACTOR WILL NOT BE COMPENSATED FOR COSTS ASSOCIATED WITH CHANGING THE ELECTRICAL SYSTEMS TO MATCH UTILIZATION EQUIPMENT, EVEN IF THE ELECTRICAL WORK IS INSTALLED PER THE ELECTRICAL DRAWINGS.
- THE CONTRACTORS SHALL FURNISH ALL STARTERS AND CONTROLS FOR THEIR EQUIPMENT. THE CONTRACTOR SHALL PROVIDE ALL SAFETY SWITCHES, SHALL MOUNT STARTERS AND PROVIDE WIRING AND CONNECTIONS TO LINE SIDE OF STARTERS. THE CONTRACTOR SHALL PROVIDE LOAD SIDE WIRING AND CONNECTIONS TO MECHANICAL AND PLUMBING EQUIPMENT. FOR RESISTANCE TYPE LOADS WHERE STARTERS OR CONTACTORS ARE NOT REQUIRED, THE CONTRACTOR SHALL PROVIDE ALL POWER WIRING AND CONNECTIONS COMPLETE TO EQUIPMENT. THE MECHANICAL AND PLUMBING CONTRACTORS SHALL PROVIDE ALL CONTROL WIRING AND CONNECTIONS AND DEVICES FOR THEIR EQUIPMENT.
- INSTALLATION INFORMATION PACKED WITH LIGHTING FIXTURES, DEVICES AND EQUIPMENT SHALL BE RETAINED FOR INCLUSION IN THE OPERATIONS AND MAINTENANCE MANUALS.
- THE CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING NECESSARY TO INSTALL ALL EQUIPMENT AS REQUIRED AND SHALL REESTABLISH ALL FINISHES TO THEIR ORIGINAL CONDITION WHERE CUTTING AND PATCHING OCCUR. ALL CUTTING AND PATCHING SHALL BE DONE IN A THOROUGHLY WORKMANSHIP MANNER. SAW CUT CONCRETE AND MASONRY PRIOR TO BREAKING OUT SECTIONS. ALL PATCHING MATERIALS AND WORKMANSHIP SHALL BE PERFORMED BY TRADESMEN EXPERIENCED IN THAT WORK. ALL WORK SHALL BE SUBJECT TO THE APPROVAL OF THE CONTRACTING OFFICER.
- CORE DRILL HOLES IN EXISTING CONCRETE WALLS AS REQUIRED.
- INSTALL WORK AT SUCH TIME AS TO REQUIRE THE MINIMUM AMOUNT TO CUTTING AND PATCHING.
- CUT OPENINGS ONLY LARGE ENOUGH TO ALLOW EASY INSTALLATION OF THE CONDUIT.
- EXISTING CIRCUITING WHERE SHOWN IS FOR CONVENIENCE PURPOSES ONLY. VERIFICATION OF EXISTING WIRING DESTINATION, TERMINATION AND ADDITIONS OF NEW LOADS IS THE RESPONSIBILITY OF THE CONTRACTOR.
- MAINTAIN CONTINUITY OF ALL EXISTING CIRCUITS TO REMAIN OR PORTIONS THEREOF AFFECTED BY THIS WORK.
- DESIGN AND ADDITION OF NEW CIRCUITING IS BASED ON THE ENGINEER'S BEST INFORMATION REGARDING EXISTING CONDITIONS AND CURRENT BUILDING DRAWINGS. AVAILABILITY OF ADEQUATE CIRCUIT BREAKER SPACE FOR NEW WORK IN EXISTING PANELBOARDS SHALL BE VERIFIED BY THE CONTRACTOR AFTER DEMOLITION OF THE EXISTING SPACE. IF ADEQUATE SPACE IS NOT AVAILABLE FOR NEW CIRCUIT BREAKERS THE CONTRACTOR SHALL NOTIFY THE CONTRACTING OFFICER FOR RESOLUTION.
- ABANDONED POWER WIRING, RACEWAYS AND CONDUCTORS, SHALL BE REMOVED BACK TO THEIR SOURCE. THE ACCESSIBLE PORTIONS OF ABANDONED CABLES (VOICE, DATA, VIDEO, ALARM, ETC.) SHALL BE REMOVED.
- TRACE OUT EXISTING WIRING THAT IS TO BE RELOCATED, OR REMOVED AND PERFORM THE RELOCATION OR REMOVAL WORK AS REQUIRED FOR A COMPLETE OPERATING AND SAFE SYSTEM.
- INSOFAR AS POSSIBLE, MATCH EXISTING EXPOSED DEVICES IN FINISHED AREAS IN TYPE, COLOR AND FINISH.
- THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING ELECTRICAL SYSTEMS AND THE EXISTING BUILDING. THE SUBMISSION OF THE PROPOSAL BY THE CONTRACTOR SHALL BE CONSIDERED EVIDENCE THAT HE OR HIS REPRESENTATIVE HAS VISITED THE SITE AND BUILDINGS AND NOTED THE LOCATION AND CONDITIONS UNDER WHICH THE WORK WILL BE PERFORMED AND THAT HE TAKES FULL RESPONSIBILITY OF ALL FACTORS GOVERNING HIS WORK. NO EXTRAS WILL BE CONSIDERED BECAUSE OF ADDITIONAL WORK NECESSITATED BY EXISTING JOB CONDITIONS THAT ARE NOT INDICATED ON THE DRAWINGS.
- SOME EXISTING RECEPTACLE, LIGHTING OR OTHER LOADS MAY BE SERVED BY CIRCUITS INDICATED TO BE REMOVED. IF SUCH CONDITIONS ARE DISCOVERED, REQUEST THE ENGINEER PROVIDE NEW CIRCUIT NUMBER FOR THE LOAD. DO NOT INDISCRIMINATELY CONNECT TO THE NEAREST CIRCUIT.
- ALL UNUSED OUTLET BOXES SHALL BE REMOVED OR, WITH SPECIFIC APPROVAL OF THE CONTRACTING OFFICER, SHALL BE BLANKED WITH STAINLESS STEEL PLATES. ALL OPENINGS IN EXISTING WALLS AND CEILINGS MADE BY THIS CONTRACTOR SHALL BE REPAIRED TO AN EQUAL FINISH AS ADJACENT SURFACES.
- PROVIDE ALL ELECTRICAL RELOCATION WORK ASSOCIATED WITH THE RELOCATING OF EQUIPMENT FOR THE EXISTING FACILITIES, INCLUDING DISCONNECTING ALL EXISTING WIRING AND CONDUITS AND PROVIDING NEW WIRING AND CONDUITS TO THE RELOCATED EQUIPMENT.
- SEE "KEYED DEMOLITION NOTES" FOR ADDITIONAL REQUIREMENTS.
- SAFETY
 - COMPLY WITH OSHA AND NEC ARC FLASH PROTECTION REQUIREMENTS.
 - FOR EQUIPMENT BEING REMOVED AND REPLACED, THE CONTRACTOR SHALL DE-ENERGIZE THE EQUIPMENT AND MAKE IT SAFE PRIOR TO REMOVAL AND COMPLY WITH OSHA REQUIREMENTS FOR LOCKING-OUT AND TAGGING EQUIPMENT TO PREVENT INADVERTENT RE-ENERGIZING.
 - WHERE EQUIPMENT IS BEING REMOVED, BUT NOT REPLACED, REMOVE THE CONDUCTORS FEEDING THE EQUIPMENT BACK TO THE POINT WHERE THEY RECEIVE POWER. REMOVE ACCESSIBLE CONDUITS. ABANDON IN PLACE INACCESSIBLE CONDUITS. AFTER REMOVAL OF EQUIPMENT, REPAIR ANY OPENING LEFT TO MATCH SURROUNDING WALLS, CEILINGS, OR FLOORS TO THE CONTRACTING OFFICER SATISFACTION.
 - COORDINATE WITH THE OTHER TRADES, PRIOR TO BID, AND INCLUDE IN THE BASE BID THE ELECTRICAL DISCONNECTION OF ANY EQUIPMENT BEING DEMOLISHED, EVEN IF NOT EXPLICITLY SHOWN. UNLESS NOTED OTHERWISE, REMOVE ALL DEMOLISHED EQUIPMENT FROM THE PROPERTY.

REVISIONS		
SYM	DATE	APPROVED

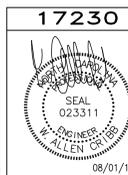
GENERAL DEMOLITION NOTES

- SELECTIVE ELECTRICAL DEMOLITION SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR AS DESCRIBED HEREIN AND AS SHOWN ON THE CONTRACT DRAWINGS. GROSS DEMOLITION WILL BE PROVIDED BY THE GENERAL CONTRACTOR. IDENTIFY ACTIVE UTILITIES, AND AT THE APPROPRIATE TIME, DISCONNECT AND CAP OFF SUCH UTILITIES AND PROVIDE EXPERIENCED PERSONNEL ON SITE DURING GENERAL CONTRACTOR DEMOLITION OPERATIONS TO PERFORM SUCH OPERATIONS AND RESOLVE ISSUES. REMOVE MATERIALS NOTED FOR SALVAGE AND REUSE. IDENTIFY AND MARK WIRING AND DEVICES TO REMAIN FOR THE GENERAL CONTRACTOR.
- THE ELECTRICAL CONTRACTOR SHALL REVIEW THE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS AND SPECIFICATIONS FOR DEMOLITION REQUIREMENTS AND CARRY OUT HIS WORK IN A COMPATIBLE AND COMPLEMENTARY MANNER. REMOVE ALL WIRING DEVICES, BOXES, FIXTURES, EXPOSED ABANDONED RACEWAYS, HANGARS, ETC., AND THOSE MADE OBSOLETE BY THESE ALTERATIONS AND AS SHOWN ON THE ELECTRICAL DRAWINGS. ALL ITEMS TO BE REMOVED OR MODIFIED MAY NOT BE SHOWN, HOWEVER, THIS CONTRACTOR SHALL REMOVE ANY ELECTRICAL WORK AS REQUIRED BY THE CONSTRUCTION OR AS DIRECTED BY THE GOVERNMENT OR CONTRACTING OFFICER. SURVEY THE AFFECTED AREAS BEFORE SUBMITTING A BID AS ALL EXISTING CONDITIONS CANNOT BE COMPLETELY DEPICTED ON THE DRAWINGS AND SOME UNUSUAL CONDITIONS MAY EXIST.
- REMOVE, RELOCATE, AND EXTEND EXISTING INSTALLATIONS TO ACCOMMODATE NEW CONSTRUCTION.
- ALL EXISTING ELECTRICAL EQUIPMENT AND DEVICES SHALL REMAIN UNLESS SPECIFICALLY NOTED TO BE REMOVED.
- VERIFY FIELD MEASUREMENTS AND CIRCUITING ARRANGEMENTS ARE AS SHOWN ON DRAWINGS.
- VERIFY THAT ABANDONED WIRING AND EQUIPMENT SERVE ONLY ABANDONED FACILITIES.
- DISCONNECT AND/OR DE-ENERGIZE ELECTRICAL SYSTEMS IN WALLS, FLOORS, AND CEILINGS SCHEDULED FOR REMOVAL.
- PROVIDE TEMPORARY AND/OR PERMANENT WIRING AND CONNECTIONS AS SHOWN AND/OR AS REQUIRED BY CONDITIONS TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING CONSTRUCTION. WHEN WORK MUST BE PERFORMED ON ENERGIZED EQUIPMENT OR CIRCUITS, AND WHEN SUCH WORK IS SPECIFICALLY APPROVED BY THE GOVERNMENT AND PERMITTED BY REGULATORY AUTHORITIES, USE PERSONNEL EXPERIENCED IN SUCH OPERATIONS.
- CONTINUOUS SERVICE IS REQUIRED ON ALL CIRCUITS AND OUTLETS AFFECTED BY THESE CHANGES, EXCEPT WHERE THE GOVERNMENT WILL PERMIT AN OUTAGE FOR A SPECIFIC TIME. OBTAIN GOVERNMENT CONSENT BEFORE REMOVING ANY CIRCUIT FROM CONTINUOUS SERVICE.
- PROTECT ALL EXISTING TELEPHONE, DATA, LIFE SAFETY SYSTEMS, FIRE ALARM, SECURITY, ACCESS CONTROL AND PUBLIC ADDRESS SYSTEMS AND MAINTAIN THEM IN OPERATION THROUGHOUT THE PROGRESS OF THE WORK. NOTIFY THE GOVERNMENT AND CONTRACTING OFFICER IN WRITING IF SHUTDOWNS ARE REQUIRED PRIOR TO ANY OUTAGE OF SERVICE. WHERE THE DURATION OF A PROPOSED OUTAGE CANNOT BE TOLERATED BY THE GOVERNMENT, PROVIDE TEMPORARY CONNECTIONS AS REQUIRED TO MAINTAIN SERVICE.
- WHERE ELECTRICAL SYSTEMS PASS THROUGH THE DEMOLITION AREAS TO SERVE OTHER PORTIONS OF THE PREMISES, THEY SHALL BE PROTECTED FROM DAMAGE AND REMAIN OR BE SUITABLY RELOCATED UTILIZING MATCHING SIZE AND TYPE MATERIALS AND THE SYSTEM RESTORED TO NORMAL OPERATION. ADVISE THE CONTRACTING OFFICER IMMEDIATELY IF SUCH CONDITIONS ARE UNCOVERED BEFORE PROCEEDING WITH ADDITIONAL WORK.
- MAINTAIN ACCESS TO EXISTING ELECTRICAL INSTALLATIONS WHICH REMAIN ACTIVE. MODIFY INSTALLATION OR PROVIDE ACCESS PANEL AS APPROPRIATE.
- ENDS OF ALL CONDUITS TO REMAIN SHALL BE TIGHTLY PLUGGED TO EXCLUDE DUST AND MOISTURE WHILE THE BUILDING IS UNDER RENOVATION.
- PROTECT EXISTING CIRCUITS TO REMAIN AND EXTEND AS REQUIRED UTILIZING MATCHING CONDUCTORS AND CONDUIT SIZE AND TYPE.
- SECURE ALL CIRCUITS, RACEWAYS, CABLE AND CONDUCTORS THAT, AS A RESULT FROM THIS CONSTRUCTION, ARE ABANDONED OR UNUSED. REMOVE UNUSED EXPOSED CONDUIT AND WIRING BACK TO POINT OF CONCEALMENT INCLUDING ABANDONED CONDUIT ABOVE ACCESSIBLE CEILINGS. REMOVE UNUSED WIRING IN CONCEALED CONDUITS BACK TO SOURCE OR NEAREST POINT OF USAGE. BLANK ABANDONED KNOCKOUTS IN REMAINING BOXES. INSTALL BLANK PLATES FOR ALL UNUSED OUTLETS THAT WILL REMAIN AS A RESULT OF THIS CONSTRUCTION. ALL SUCH WORK SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES AND ORDINANCES.
- TRACE OUT EXISTING WIRING THAT IS TO BE RELOCATED OR REMOVED AND PERFORM THE RELOCATION OR REMOVAL WORK AS REQUIRED FOR A COMPLETE OPERATING AND SAFE SYSTEM.
- RECONNECT EXISTING CIRCUITS SEPARATED AS A RESULT OF THIS CONSTRUCTION.
- EXTEND EXISTING SWITCH LEGS TO NEW SWITCH LOCATIONS AS SHOWN AND/OR REQUIRED.
- DELIVER ALL REMOVED AND SALVAGED LIGHTING FIXTURES, WIRING DEVICES, FIRE ALARM DEVICES, SPEAKERS, ETC., TO THE GOVERNMENT, OR AT THE GOVERNMENT'S OPTION, DISPOSE OF PROPERLY OFF SITE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL ENVIRONMENTAL REGULATIONS. FEES ASSOCIATED WITH DISPOSAL SHALL BE INCLUDED IN THE CONTRACTOR'S BASE BID.
- PROTECT EXISTING CIRCUITS FEEDING LIGHTING FIXTURES FOR EXTENSION TO NEW AND RELOCATED LIGHTING FIXTURES.
- COORDINATE WITH THE OTHER TRADES, PRIOR TO BID, AND INCLUDE IN THE BASE BID THE ELECTRICAL DISCONNECTION OF ANY EQUIPMENT BEING DEMOLISHED, EVEN IF NOT EXPLICITLY SHOWN. UNLESS NOTED OTHERWISE, REMOVE ALL DEMOLISHED EQUIPMENT FROM THE PROPERTY AND IDENTIFIED IN THE ELECTRICAL DRAWINGS.
- THESE DRAWINGS ARE COMPILED BY THE ARCHITECT/ENGINEER FROM THE GOVERNMENT'S RECORD DRAWINGS AND LIMITED FIELD VERIFICATION OF EXISTING CONDITIONS FOR THE PURPOSE OF INDICATING THE WORK REQUIRED AND ARE BELIEVED TO BE CORRECT. NOTWITHSTANDING, THE CONTRACTOR SHALL VERIFY ALL CIRCUITS, WIRING, CONDUIT, DIMENSIONS, POINTS OF ACCESS AND ALL FIELD CONDITIONS AFFECTING HIS WORK. BEGINNING OF DEMOLITION MEANS THE CONTRACTOR ACCEPTS EXISTING CONDITIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR DISPOSAL OF ALL LAMPS CONTAINING MERCURY IN A LINED LANDFILL IN ACCORDANCE WITH NC GEN STATUTE 309.10M.

DISCLOSURE OF INFORMATION:

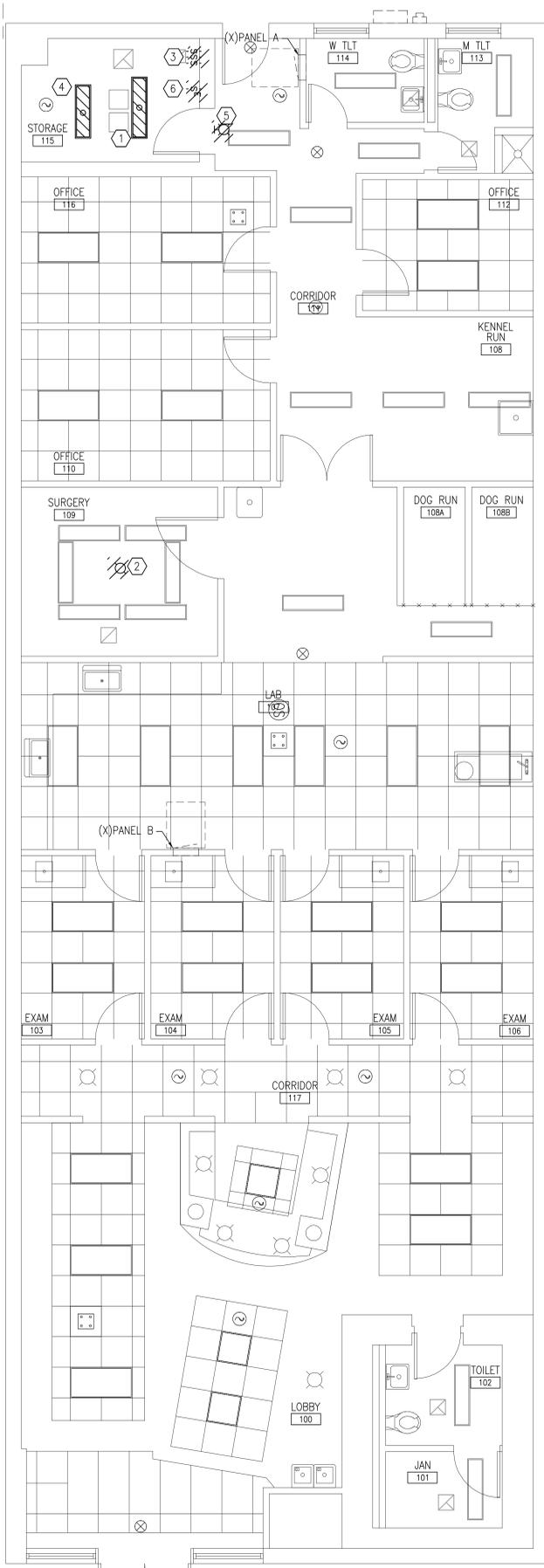
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FINAL		E-002	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA 17-0113 REPLACE HVAC BLDGs TT2459 & TT2459A			
DES.	JLG	SIZE	F
DR.	JLG	CODE	80091
CHK.	WAC	IDENT. NO.	60022666
SUBMITTED BY:		CONST. CONTR.	
DESIGN DIR:	T H BURTON, PE	SCALE:	NOTED
APPROVED:	PWO OR OICC	SPEC:	05-17-0113
SATISFACTORY TO:			SHEET 42 OF 55

REVISIONS		
SYM	DATE	APPROVED



DEMOLITION KEYED NOTES

- ① INTERIOR LIGHT: DISCONNECT AND REMOVE LIGHT FIXTURE AND LAMPS. PROTECT RACEWAY AND CONDUCTORS DURING DEMOLITION AND CONSTRUCTION FOR RE-USE.
- ② INTERIOR LIGHT: REMOVE OPERATING ROOM LIGHT FIXTURE. FIXTURE SHALL BE DELIVERED TO THE GOVERNMENT OR AT GOVERNMENT DIRECTION SHALL DISPOSE OF FIXTURE. CONDUCTORS SHALL BE REMOVED TO SOURCE OR NEAREST JUNCTION POINT. CONTRACTOR SHALL INSTALL A BLANK PLATE COVER ON THE BOX.
- ③ 3 GANG TOGGLE SWITCH BANK. REMOVE PLATE COVER, SWITCHES. CONDUCTORS NOT NEEDED FOR THE INSTALL OF LIGHTING ARE TO BE REMOVED TO SOURCE OR NEAREST JUNCTION POINT. CONTRACTOR SHALL PROVIDE BLANK PLATE COVER ON THE BOX.
- ④ SPECIALTY LIGHT FIXTURE: DISCONNECT AND REMOVE LIGHT FIXTURE AND LAMPS. REMOVE CONDUIT, BOX AND CONDUCTORS TO SOURCE OR NEAREST JUNCTION POINT.
- ⑤ IN-USE LIGHT FIXTURE: REMOVE FIXTURE. CONDUCTORS SHALL BE REMOVED TO SOURCE OR NEAREST JUNCTION POINT. CONTRACTOR SHALL INSTALL A BLANK PLATE COVER ON THE BOX.
- ⑥ EMERGENCY STOP BUTTON: REMOVE BUTTON. CONDUCTORS SHALL BE REMOVED TO SOURCE OR NEAREST JUNCTION POINT. CONTRACTOR SHALL INSTALL A BLANK PLATE COVER ON THE BOX.

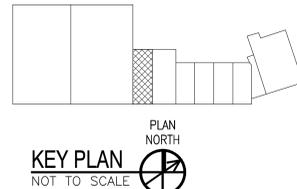
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C. THE CONTRACTOR AGREES TO INCLUDE A SIMILAR REQUIREMENT IN EACH SUBCONTRACT UNDER THIS CONTRACT. SUBCONTRACTORS SHALL SUBMIT REQUESTS FOR AUTHORIZATION TO RELEASE THROUGH THE PRIME CONTRACTOR TO THE CONTRACTING OFFICER.



TT2459 DEMOLITION FLOOR PLAN
 1/4"=1'-0" PLAN NORTH



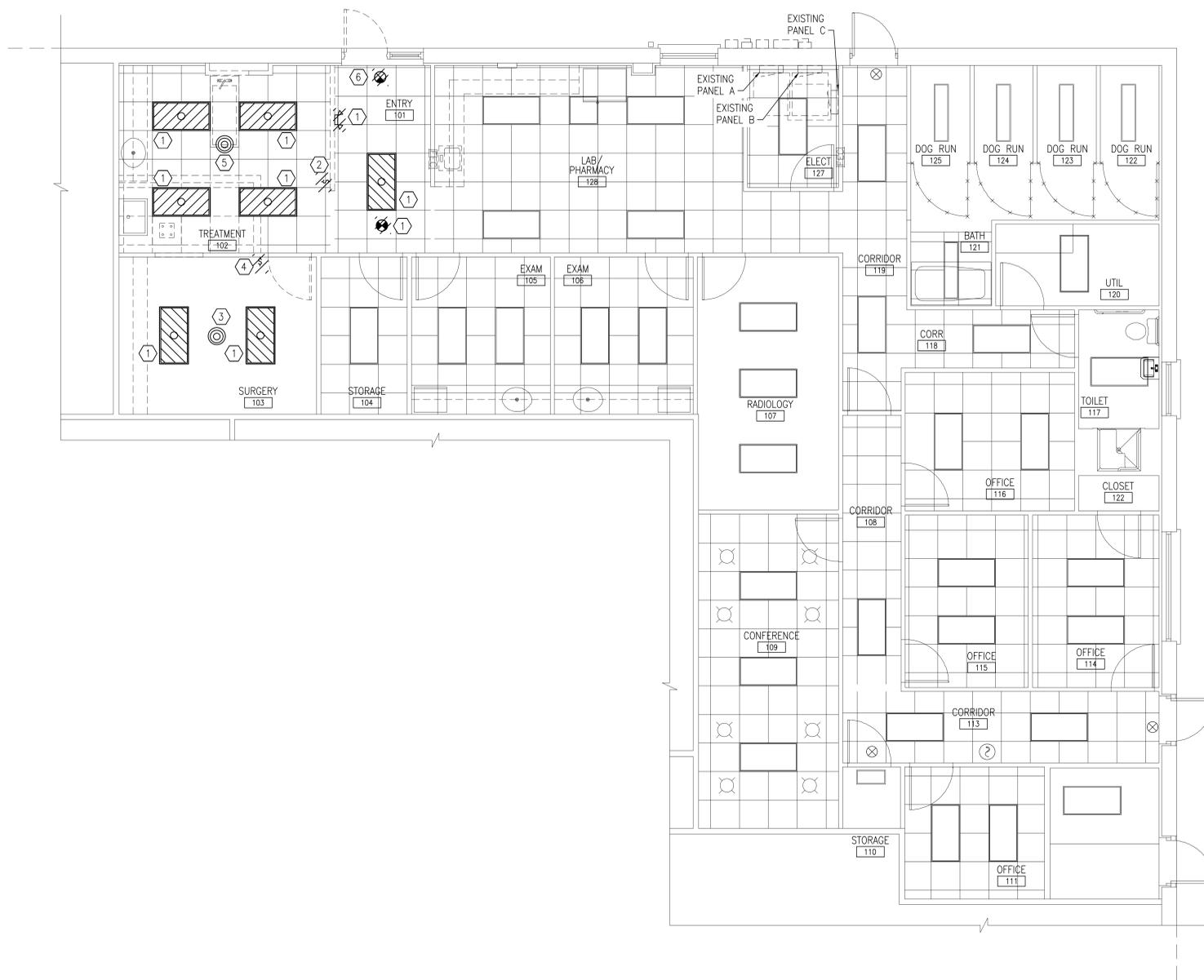
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17230
 SEAL
 02/23/11
 T. H. BURTON
 ENGINEER
 08/01/18

FINAL		ED101	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGs TT2459 & TT2459A			
DES. JLG		ELECTRICAL DEMOLITION FLOOR PLAN	
DR. JLG		NAVFAC DRAWING NO. 60022667	
CHK. WAC		CONST. CONTR.	
SUBMITTED BY:		TT2459	
DESIGN DIR. T H BURTON, PE		SIZE CODE IDENT. NO F 80091	
APPROVED: PWO OR OICC		DATE	
SATISFACTORY TO:		DATE	
SCALE: NOTED		SPEC. 05-17-0113	
		SHEET 43 OF 55	

REVISIONS			
SYM		DATE	APPROVED

- DEMOLITION KEYED NOTES**
- INTERIOR LIGHT/FIXTURE: DISCONNECT AND REMOVE LIGHT FIXTURE AND LAMPS. PROTECT RACEWAY AND CONDUCTORS DURING DEMOLITION AND CONSTRUCTION FOR RE-USE.
 - LIGHT SWITCH: DISCONNECT AND REMOVE PLATE, SWITCH, BOX, RACEWAY AND CONDUCTORS. CONTRACTOR SHALL RE-CONNECT SWITCH LEGS TO KEEP CONTINUITY OF EXISTING SWITCHING.
 - SURGERY LIGHT FIXTURE: DISCONNECT AND REMOVE LIGHT FIXTURE AND LAMPS. PROTECT RACEWAY AND CONDUCTORS DURING DEMOLITION AND CONSTRUCTION FOR RE-USE.
 - LIGHT SWITCH: DISCONNECT AND REMOVE COVER PLATE, DEVICE AND BOX. RACEWAY AND CONDUCTORS ARE TO BE RELOCATED IN NEW WALL. PROTECT CONDUIT AND CONDUCTORS DURING DEMOLITION AND CONSTRUCTION.
 - SURGERY LIGHT FIXTURE: DISCONNECT AND REMOVE LIGHT FIXTURE, RACEWAY AND CONDUCTORS TO BE REMOVED TO THE NEAREST JUNCTION POINT. CONTROL CONDUIT, BOX AND CONDUCTORS TO BE REMOVED IN ITS ENTIRETY.
 - EXIT LIGHT: DISCONNECT AND REMOVE FIXTURE. REMOVE RACEWAY AND CONDUCTORS TO NEAREST JUNCTION POINT.



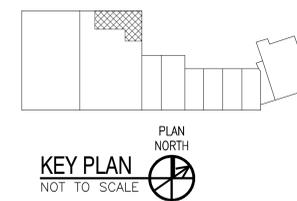
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TT2459A DEMOLITION FLOOR PLAN
 1/4"=1'-0"



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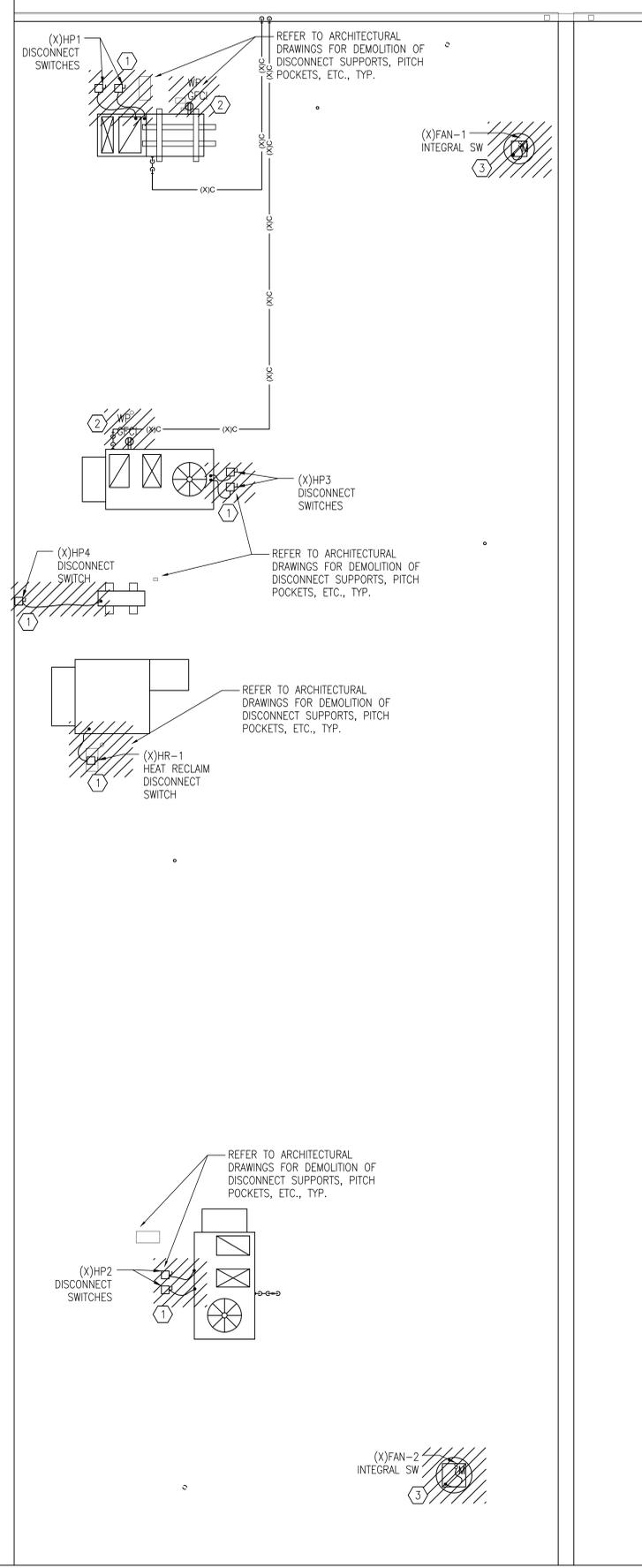
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FINAL		ED102	
DEPARTMENT OF THE NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A			
DES. JLG		ELECTRICAL	
DR. JLG		DEMOLITION FLOOR PLAN	
CHK. WAC		NAVFAC DRAWING NO.	
SUBMITTED BY:		60022668	
DESIGN DIR. T H BURTON, PE		CONST. CONTR.	
APPROVED: PWO OR OICC	DATE	SIZE	CODE IDENT. NO.
		F	80091
SATISFACTORY TO:		SCALE: NOTED	SPEC. 05-17-0113
		SHEET 44 OF 55	

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SYM	DATE	APPROVED

DEMOLITION KEYED NOTES

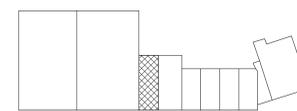
- ① DISCONNECT SWITCH: CONTRACTOR SHALL DISCONNECT CONDUIT AND CONDUCTORS. REMOVE DISCONNECT SWITCH, SUPPORT RACK, CONDUIT AND CONDUCTORS BACK TO SOURCE. LABEL BREAKER AS SPARE AND MAKE ROOF WEATHER TIGHT.
- ② WP GFCI: CONTRACTOR SHALL DISCONNECT BOX AND DEVICE. REMOVE CONDUIT AND CONDUCTORS BACK TO SOURCE.
- ③ EXHAUST FAN: CONTRACTOR SHALL DISCONNECT CONDUIT AND CONDUCTORS FOR FAN REMOVAL. PROTECT CONDUIT AND CONDUCTORS DURING CONSTRUCTION FOR RE-USE.



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TT2459 DEMOLITION ROOF PLAN
1/4"=1'-0"

GRAPHIC SCALE



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Engineers, PLLC

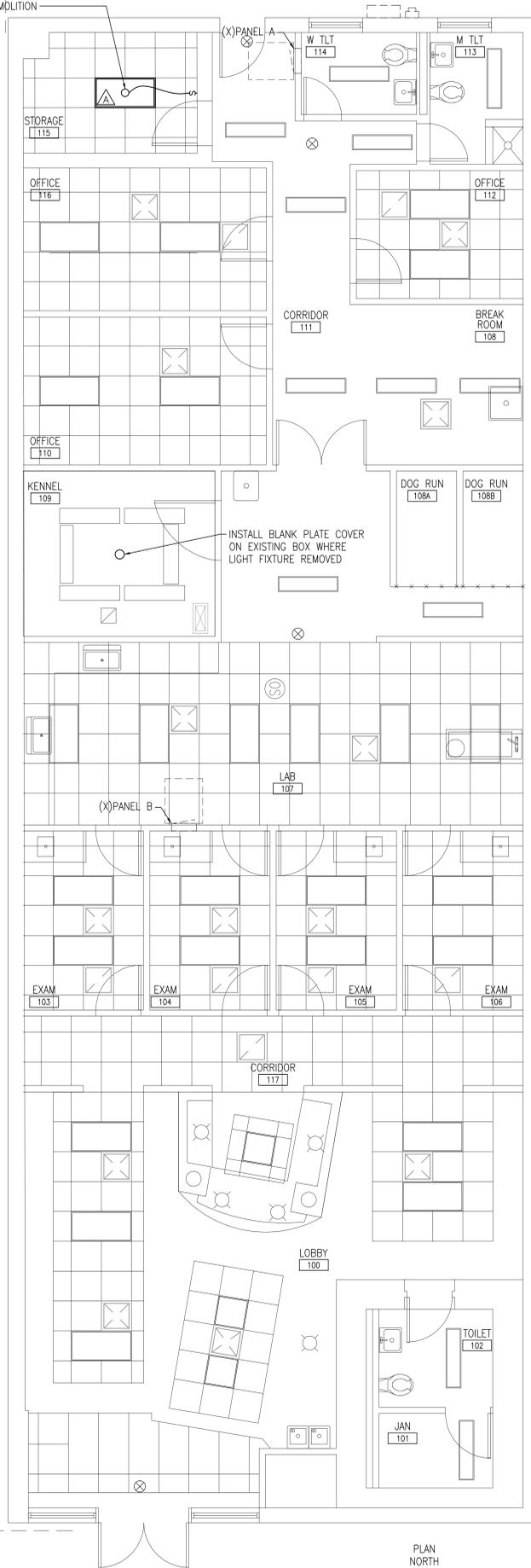
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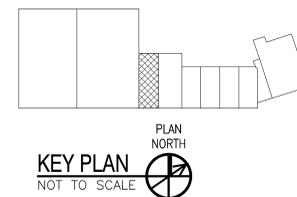
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ENGINEER
W. ALLEN
08/01/18

FINAL		ED103	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND			
MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A			
ELECTRICAL TT2459 DEMOLITION ROOF PLAN			
DES. JLG	DR. JLG	CHK. WAC	NAVFAC DRAWING NO. 60022669
SUBMITTED BY:	DESIGN DIR. T H BURTON, PE	APPROVED: PWO OR OICC	DATE
SIZE F	CODE 80091	IDENT. NO.	CONST. CONTR.
SATISFACTORY TO:	DATE	SCALE: NOTED	SPEC. 05-17-0113
		SHEET 45 OF 55	

CONTRACTOR SHALL PROVIDE CONDUIT, BOX, AND CONDUCTORS UTILIZING THE CIRCUITRY PROTECTED DURING DEMOLITION



TT2459 FLOOR PLAN
1/4"=1'-0"



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08/01/18

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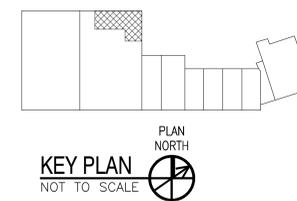
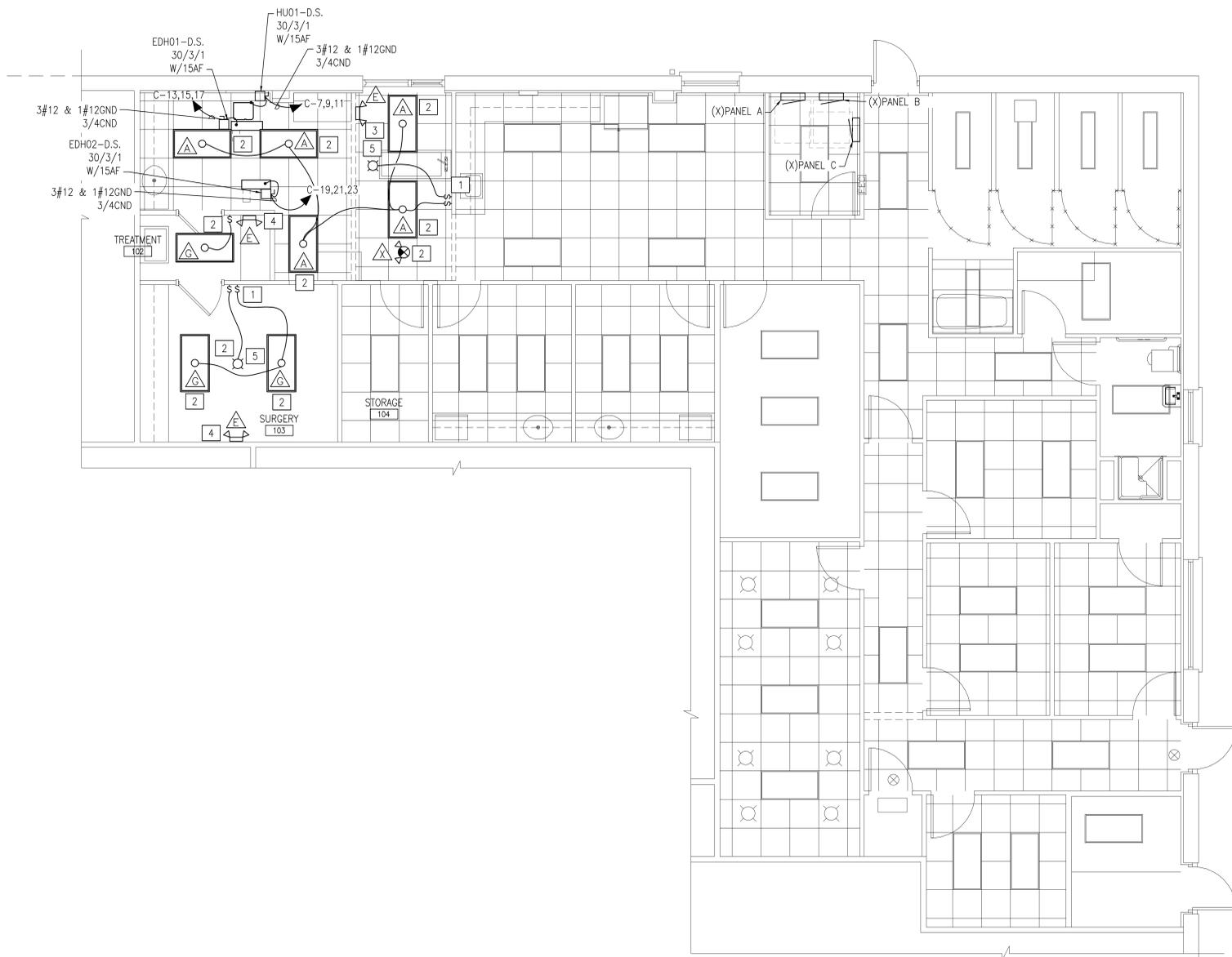
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FINAL		E-101	
<small>DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND</small> MARINE CORPS BASE <small>CAMP LEJEUNE, NORTH CAROLINA</small>			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A		<small>ELECTRICAL</small> TT2459 FLOOR PLAN	
DES. JLG	DR. JLG	CHK. WAC	DATE
SUBMITTED BY:		DESIGN DIR. T H BURTON, PE	
APPROVED: PWO OR OICC	DATE	SIZE	CODE IDENT. NO
F	80091	CONST. CONTR.	60022670
SATISFACTORY TO:		SCALE: NOTED	SPEC. 05-17-0113
		SHEET 46 OF 55	

REVISIONS		
SYM	DATE	APPROVED

- CONSTRUCTION KEYED NOTES**
- CONTRACTOR SHALL PROVIDE BOX, CONDUIT AND CONDUCTORS AND SWITCH FROM EXISTING WIRING PROTECTED DURING DEMOLITION TO FEED FIXTURES SHOWN FROM THIS SWITCH.
 - INTERIOR LIGHTS: PROVIDE AND INSTALL FIXTURES USING THE EXISTING LIGHTING CIRCUIT IN PLACE PRIOR TO DEMOLITION IN EACH AREA.
 - EMERGENCY LIGHT: PROVIDE AND INSTALL FIXTURE USING THE EXISTING LIGHTING CIRCUIT IN PLACE PRIOR TO DEMOLITION.
 - EMERGENCY LIGHT: PROVIDE AND INSTALL FIXTURE, CONNECT TO EXISTING UN-SWITCHED LIGHTING CIRCUIT IN AREA FIXTURE IS LOCATED.
 - SPECIALTY FIXTURE: CONTRACTOR SHALL PROVIDE AND INSTALL AT THIS LOCATION,(2 TOTAL) MEDICAL ILLUMINATION MI-750 DUAL CEILING MOUNT LIGHT FIXTURE.



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TT2459A FLOOR PLAN
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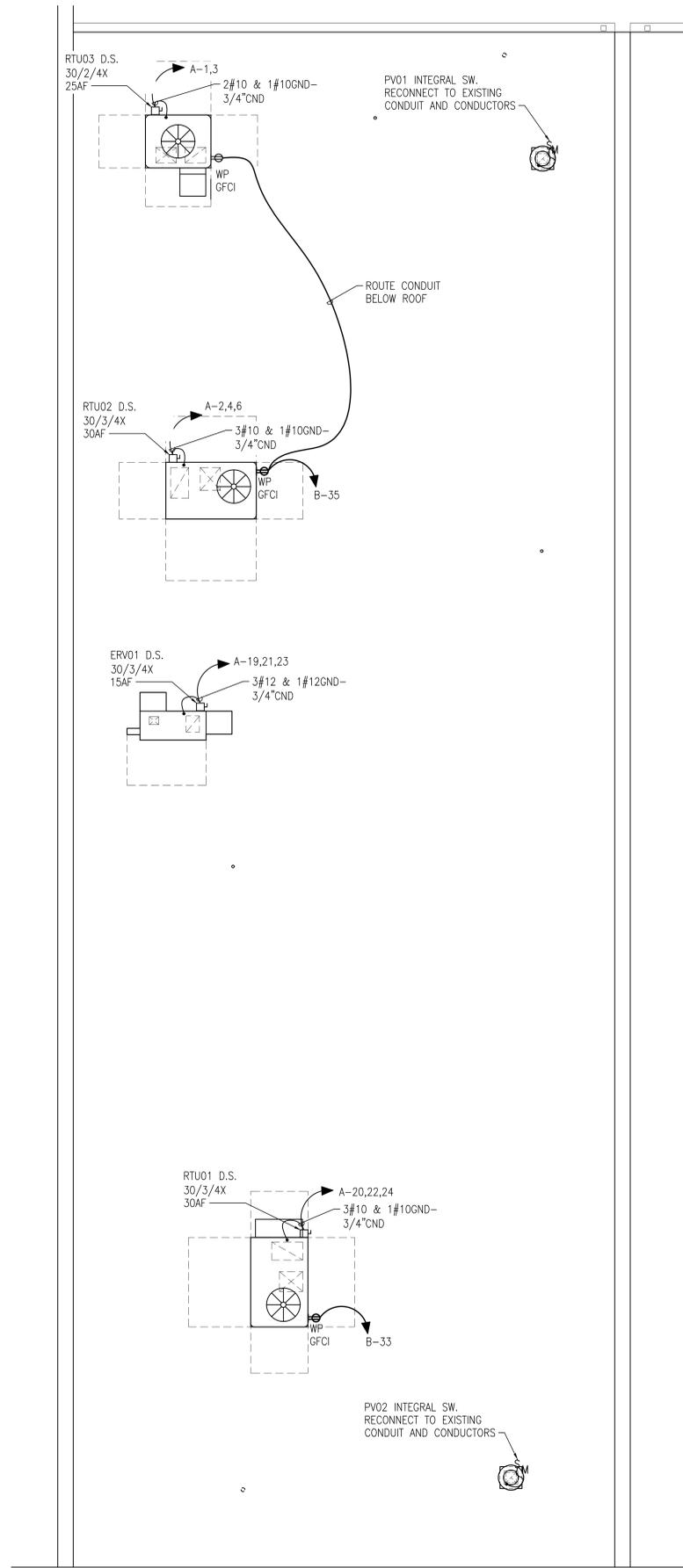
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FINAL		E-102	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A			
ELECTRICAL TT2459A FLOOR PLAN			
DES. JLG	DR. JLG	CHK. WAC	17230
SUBMITTED BY:		DESIGN DIR. T H BURTON, PE	SIZE CODE IDENT. NO
APPROVED: PWO OR OICC		DATE	NAVFAC DRAWING NO.
SATISFACTORY TO:		DATE	60022671
SCALE: NOTED		SPEC. 05-17-0113	SHEET 47 OF 55

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SYM		DATE	APPROVED



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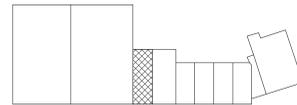
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B. REQUESTS FOR APPROVAL SHALL IDENTIFY THE SPECIFIC INFORMATION TO BE RELEASED, THE MEDIUM TO BE USED, AND THE PURPOSE FOR THE RELEASE. THE CONTRACTOR SHALL SUBMIT ITS REQUEST TO THE CONTRACTING OFFICER AT LEAST 45 DAYS BEFORE THE PROPOSED DATE FOR RELEASE.

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KEY PLAN
NOT TO SCALE

TT2459 ROOF PLAN
1/4"=1'-0"

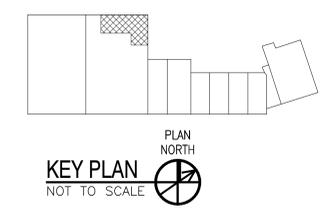
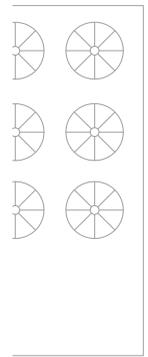
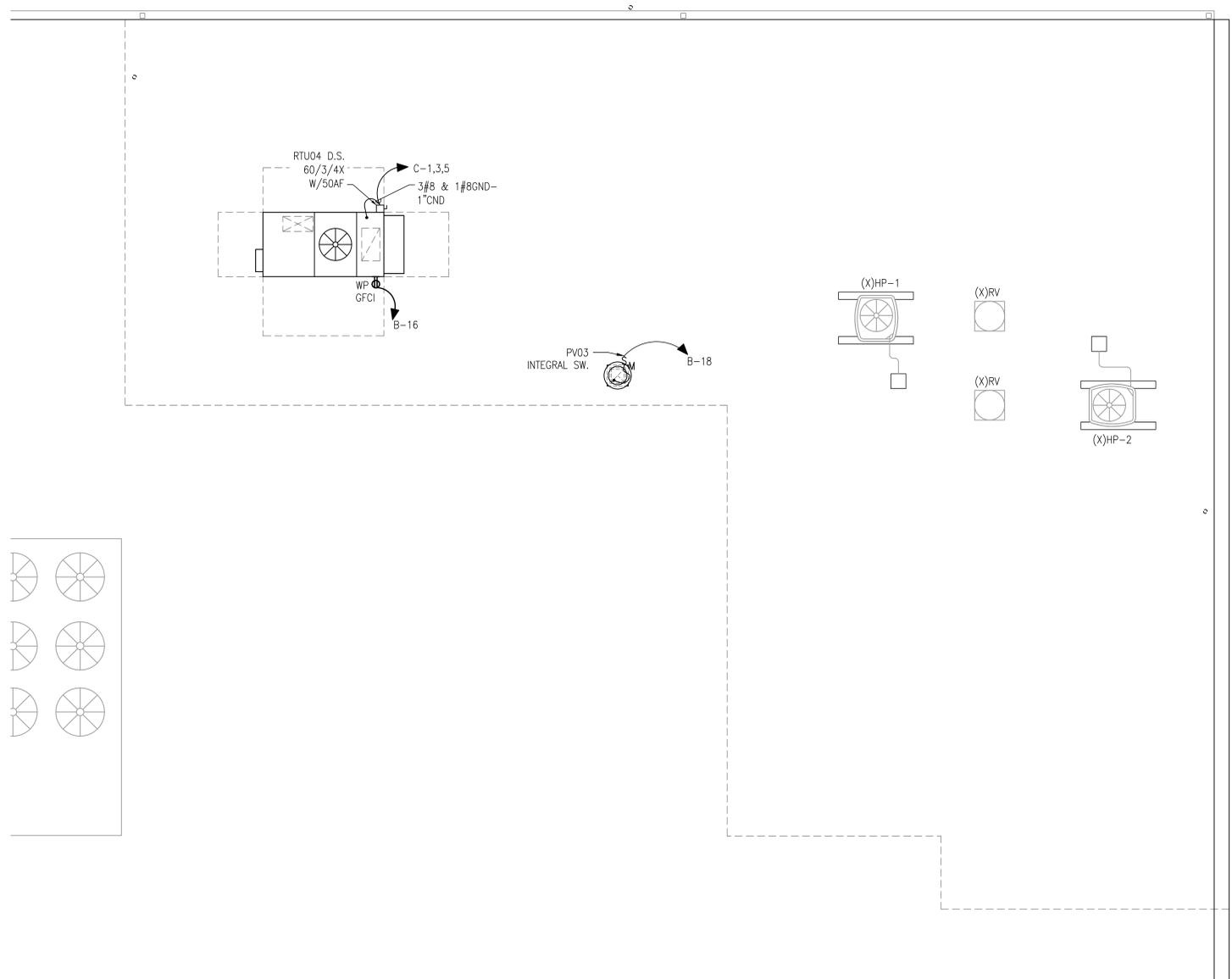


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NCEP 5006

17230
SEAL
023311
ENGINEER
W. ALLEN
08/01/18

FINAL		E-103	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A			
ELECTRICAL TT2459 ROOF PLAN			
DES. JLG	DR. JLG	CHK. WAC	SIZE CODE IDENT. NO
SUBMITTED BY:		DESIGN DIR. T H BURTON, PE	NAVFAC DRAWING NO.
APPROVED: PWO OR OICC	DATE	DATE	60022672
SATISFACTORY TO:		DATE	CONST. CONTR.
SCALE: NOTED		SPEC. 05-17-0113	SHEET 48 OF 55

REVISIONS		
SYM	DATE	APPROVED



DISCLOSURE OF INFORMATION:
 CONTRACTOR SHALL COMPLY AS FOLLOWS:

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TT2459A ROOF PLAN
 1/4"=1'-0"



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17230

FINAL		E-104	
<small>DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND</small> MARINE CORPS BASE <small>CAMP LEJEUNE, NORTH CAROLINA</small>			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A		<small>ELECTRICAL</small> TT2459A ROOF PLAN	
DES. JLG	DR. JLG	CHK. WAC	17230
SUBMITTED BY:		DESIGN DIR. T H BURTON, PE	APPROVED: PWO OR OICC
DATE		SIZE	CODE IDENT. NO.
DATE		F	80091
SATSFACTORY TO:		CONST. CONTR.	60022673
DATE		SCALE: NOTED	SPEC. 05-17-0113
DATE		SHEET 49 OF 55	

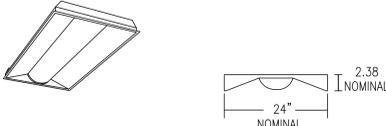
LIGHTING FIXTURE SCHEDULE

MARK	DESCRIPTION	SIZE/APERTURE	VOLTS	LAMPS	WATTS	LENS	COLOR	MOUNTING HEIGHT	BALLAST	REMARKS
A	2 X 4 LED LAY-IN LUMINAIRE	2' X 4'	MVOLT	LED 3500K 5400 LUMENS	49	VOLUMETRIC	WHITE	RECESSED CEILING	LED DRIVER DIMMING	1
C	4' SURFACE/SUPENDED FIXTURE LED UTILITY LIGHT, FIBERGLASS REINFORCED HOUSING, STAINLESS HARDWARE.	46.87"Lx4.75"Wx4"H	MVOLT	LED 3500K 2950 LUMENS	32		WHITE	8'-6" AFF	LED DRIVER	
E	2-HEAD EMERGENCY FIXTURE CONSTRUCTION: INJECTION-MOLDED HIGH-IMPACT THERMOPLASTIC WITH SNAP-FIT COMPONENTS, TRACK AND SWIVEL LAMP ADJUSTMENT	12.5"Wx3.75"Dx3.75"H	MVOLT	2-1.8W LED SQUARE LAMPS	10	N/A	WHITE	WALL MOUNTED 7'-6" ABOVE FINISHED FLOOR TO BOTTOM OF FIXTURE		8
G	2 X 4 LED SURFACE MOUNT LUMINAIRE	2' X 4'	MVOLT	LED 3500K 5400 LUMENS	49	VOLUMETRIC	WHITE	SURFACE CEILING	LED DRIVER DIMMING	1
X	COMBO/EXIT FIXTURE, SINGLE FACE, 6" RED LETTERS, THERMOPLASTIC HOUSING, FULLY ADJUSTABLE TWIN LED LAMP HEADS, TOOL-LESS ACCESS FOR MAINTENANCE	20"Wx9"Hx4.5"D	120V	.78W WHITE LED	4	N/A	WHITE	SURFACE CEILING / 7'-6" AFF WHEN WALL MOUNTED		8

REMARKS:
 1. 0-10V DIMMING DRIVER
 2. DAMP LOCATION
 3. WET LOCATION
 4. WIREGUARD
 5. LED REQUIRED SURGE PROTECTION

6. VERIFY FINAL MOUNTING HEIGHT WITH ARCHITECT
 7. FINAL COLOR SELECTION BY ARCHITECT
 8. 90 MIN BATTERY BACKUP - INTEGRAL
 9. 90 MIN BATTERY BACKUP - EXTERNAL REMOTE MOUNTED
 10. INTEGRAL PHOTOCELL

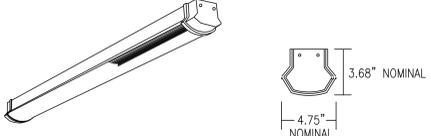
NOTES:
 A. ANY FIXTURE WITH THE TEXT "NL" ADJACENT TO IT SHALL INDICATE THAT THAT FIXTURE IS A NIGHT LIGHT (24HR LIGHT). THE FIXTURE SHALL BE CONNECTED TO THE UNSWITCHED HOT LEG OF THE CIRCUIT.
 B. ACRYLIC PRISMATIC LENSES SHALL BE 0.156" NOMINAL MINIMUM THICKNESS.
 C. ALL EXIT AND EMERGENCY FIXTURES SHALL COMPLY WITH NCSBC STANDARDS AND HAVE AUTOMATIC TESTING DEVICES.
 D. LED EMERGENCY BATTERY SHALL PROVIDE 1400 MINIMUM LUMENS OUTPUT FROM 1 LAMP FOR 90 MINUTES MINIMUM.
 E. LED MODULES SHALL BE REPLACABLE.
 F. PROVIDE MANUFACTURER INSTALLED NEC 2014 ARTICLE 410.130 (G) COMPLIANT DISCONNECTING MEANS FOR ALL APPLICABLE FIXTURES.
 G. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
 H. ELECTRICAL CONTRACTOR SHALL RECEIVE APPROVAL FOR ALL LIGHTING FIXTURES FROM ARCHITECT/OWNER PRIOR TO PURCHASE AND ROUGH-IN.
 J. ALL LIGHTING FIXTURES PENETRATING RATED FLOOR/CEILING ASSEMBLY SHALL BE PROVIDED WITH ACCESSORIES TO MAINTAIN ASSEMBLY FIRE RATING.
 REFER TO ARCHITECTURAL DRAWINGS FOR ADDITIONAL RATINGS.



LUMINAIRE REQUIREMENTS:

- CONSTRUCTION - COMPONENTS ARE DIE-FORMED FOR DIMENSIONAL CONSISTENCY AND PAINTED AFTER FABRICATION WITH A POLYESTER POWDER PAINT FOR IMPROVED PERFORMANCE AND PROTECTION. THE REFLECTOR IS FINISHED WITH A HIGH REFLECTIVE MATTE WHITE POWDER PAINT FOR IMPROVED AESTHETICS AND INCREASED LIGHT DIFFUSION. END PLATES CONTAIN EASY-TO-POSITION INTEGRAL T-BAR CLIPS FOR SECURELY ATTACHING THE LUMINAIRE TO THE T-GRID. FOR ADDITIONAL T-GRID SECURITY, OPTIONAL SCREW ON T-BAR CLIPS ARE AVAILABLE. DIFFUSERS ARE EXTRUDED FROM IMPACT MODIFIED ACRYLIC FOR INCREASED DURABILITY. LED BOARDS AND DRIVERS ARE ACCESSIBLE FROM THE PLENUM.
- OPTICS - VOLUMETRIC ILLUMINATION IS ACHIEVED BY CREATING AN OPTIMAL MIX OF LIGHT TO WALLS, PARTITIONS AND VERTICAL AND HORIZONTAL WORK SURFACES - RENDERING THE INTERIOR SPACE, OBJECTS AND OCCUPANTS IN A MORE BALANCED, COMPLIMENTARY LUMINOUS ENVIRONMENT. HIGH PERFORMANCE EXTRUDED ACRYLIC DIFFUSERS CONCEAL LEDS AND EFFERENTLY DELIVER LIGHT IN A VOLUMETRIC DISTRIBUTION. FOUR DIFFUSER CHOICES AVAILABLE - CURVED AND SQUARE DESIGNS WITH LINEAR PRISMS OR A SMOOTH FROSTED FINISH.
- ELECTRICAL - LONG-LIFE LEDS, COUPLED WITH HIGH-EFFICIENCY DRIVERS, PROVIDE SUPERIOR QUANTITY AND QUALITY OF ILLUMINATION FOR EXTENDED SERVICE LIFE. FIXTURE SHALL BE RATED TO DELIVER L80 PERFORMANCE FOR 50,000 HOURS.
- LED DRIVER - DRIVER DELIVERS FULL RANGE DIMMING FROM 0 - 10V CONTROL SIGNAL.
- INSTALLATION - GRID INTERFACING ARRANGEMENT PROVIDES MOUNTING INTO STADARD 1" AND 9/16" TEE BAR OR SCREW SLOT GRIDS. 9/16" ALLOWS FIXTURE TRIM TO HANG LEVEL WITH ARCHITECTURAL CEILING TILES. DRYWALL CEILING ADAPTORES AVAILABLE. SUITABLE FOR DAMP LOCATION.
- LISTINGS - CSA CERTIFIED TO MEET US AND CANADIAN STANDARDS. PATENTS PENDING. DLC CERTIFIED TEST TO LM80 STANDARDS.
- SEE SCHEDULE FOR DELIVERED LUMEN PACKAGE, 3500K

DIRECT/INDIRECT RECESSED 2' X 4' LED

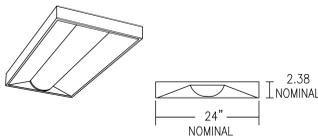


LUMINAIRE REQUIREMENTS:

- HOUSING - NOMINAL 1 1/4" X 1 3/4" RECTANGULAR HOUSING FORMED FROM COLD-ROLLED STEEL.
- END CAPS - DIE-CAST END CAPS ARE MECHANICALLY ATTACHED WITH NO EXPOSED FASTENERS. FLAT END CAPS STANDARD, SCULPTURED END CAPS OPTIONAL.
- COLOR - HOUSING AND END CAPS IS WHITE, BLACK OR PAINTED ALUMINUM.
- LUMINAIRE LENGTH - 4' LENGTH IS A SINGLE SECTION FOR EXACT SUSPENSION SPACING OF 4' OR 8'. FOR TOTAL LUMINAIRE LENGTH, ADD 5/8" FOR EACH FLAT END CAP AND 4" FOR EACH SCULPTURED END CAP. USING INTERNAL JOINERS, 4' AND 8' SECTIONS CAN BE JOINED TO FOR LONGER ROWS.
- SOURCE - TWO LED LUMEN PACKAGES AND THREE AVAILABLE COLOR TEMPERATURE OPTIONS (3000K, 3500K, AND 4000K) - ALL WITHIN 2.5 MACADAM ELLIPSE.
- OPTICS - HIGH PERFORMANCE LENS, DIFFUSERS AND METAL REFLECTORS.
- DIMMING DRIVER - SMOOTH CONTINUOUS AND FLICKER-FREE DIMMING TO DARK (0.1%). SYNCING FOR CONTROLS: 2mA MAX. THD<20%. INSIGNIFICANT INRUSH CURRENT AT 120 AND 277VAC. FCC CLASS A AND B TESTED FOR EMI AND RFI.
- ELECTRICAL - LED LIGHT ENGINE - CONSISTING OF MODULAR LED BOARDS AND ELDOLED DIMMING DRIVER - RATED FOR 50,000 HOURS (L80) AT 25°C AMBIENT TEMPERATURE. SPECIFY 120V OR 277V. PRE-WIRED WITH 16WAG FIXTURE WIRE. PLUG-IN ELECTRICAL CONNECTORS INCLUDED.

LED 4' SURFACE/SUPENDED DIRECT/INDIRECT FIXTURE

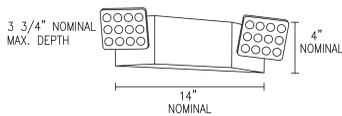
REVISIONS		
SYM	DATE	APPROVED



LUMINAIRE REQUIREMENTS:

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- OPTICS - VOLUMETRIC ILLUMINATION IS ACHIEVED BY CREATING AN OPTIMAL MIX OF LIGHT TO WALLS, PARTITIONS AND VERTICAL AND HORIZONTAL WORK SURFACES - RENDERING THE INTERIOR SPACE, OBJECTS AND OCCUPANTS IN A MORE BALANCED, COMPLIMENTARY LUMINOUS ENVIRONMENT. HIGH PERFORMANCE EXTRUDED ACRYLIC DIFFUSERS CONCEAL LEDS AND EFFERENTLY DELIVER LIGHT IN A VOLUMETRIC DISTRIBUTION. FOUR DIFFUSER CHOICES AVAILABLE - CURVED AND SQUARE DESIGNS WITH LINEAR PRISMS OR A SMOOTH FROSTED FINISH.
- ELECTRICAL - LONG-LIFE LEDS, COUPLED WITH HIGH-EFFICIENCY DRIVERS, PROVIDE SUPERIOR QUANTITY AND QUALITY OF ILLUMINATION FOR EXTENDED SERVICE LIFE. FIXTURE SHALL BE RATED TO DELIVER L80 PERFORMANCE FOR 50,000 HOURS.
- LED DRIVER - DRIVER DELIVERS FULL RANGE DIMMING FROM 0 - 10V CONTROL SIGNAL.
- SUITABLE FOR DAMP LOCATION.
- LISTINGS - CSA CERTIFIED TO MEET US AND CANADIAN STANDARDS. PATENTS PENDING. DLC CERTIFIED TEST TO LM80 STANDARDS.
- SEE SCHEDULE FOR DELIVERED LUMEN PACKAGE, 3500K

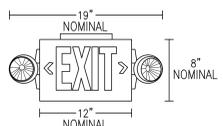
DIRECT/INDIRECT SURFACE 2' X 4' LED



LUMINAIRE REQUIREMENTS:

- HOUSING - INJECTION-MOLDED, FAME-RETARDANT, HIGH-IMPACT, THERMOPLASTIC HOUSING WITH SNAP-FIT DESIGN COMPONENTS. TRACK AND SWIVEL ARRANGEMENT PERMITS FULL RANGE OF LAMP ADJUSTMENT.
- OPTICS - TWO 1.8W LED LAMPS FOR EMERGENCY LIGHT.
- ELECTRICAL - DUAL-VOLTAGE INPUT 120V OR 277V AC. EMERGENCY UNIT PROVIDED WITH TEST SWITCH, STATUS INDICATOR AND RECHARGEABLE BATTERY. MAINTENANCE-FREE NICKEL-CADMIUM BATTERY, 90 MINUTES OF EMERGENCY POWER.
- LISTINGS - UL LISTED. MEETS UL 924, NFPA 101, NFPA 70-NEC AND OSHA ILLUMINATION STANDARDS. DAMP LOCATION 32°F TO 122°F (0°C TO 50°C) LISTED STANDARD.

DECORATIVE EMERGENCY LIGHTING UNIT



LUMINAIRE REQUIREMENTS:

- THERMOPLASTIC HOUSING, IMPACT-RESISTANT, SCRATCH-RESISTANT AND CORROSION-PROOF. UL94V-0 FLAME RATING. UV-STABLE RESIN. RUGGED UNIBODY HOUSING SNAPS TOGETHER WITH NO ADDITIONAL FASTENERS. UNIVERSAL, DIRECTIONAL CHEVRON INSERTS ARE EASILY REMOVED AND REINSERTED. LETTERS ARE 6" HIGH WITH 3/4" STROKE, WITH 100 FT. VIEWING DISTANCE RATING BASED UPON UL924 STANDARD. LEDS MOUNTED ON PRIMARY CIRCUIT BOARDS FOR SIGN ILLUMINATION. LOW-ENERGY LED LAMP IN SIGN OPERATES IN NORMAL (AC INPUT) AND EMERGENCY (DC INPUT) MODES. LOW-PROFILE, INTEGRATED TEST SWITCH/PILOT LIGHT. RED STATUS INDICATOR. UNIQUE TRACK-AND-SWIVEL ARRANGEMENT PERMITS FULL RANGE OF DIRECTION OF LAMP HEAD ADJUSTMENT. TOOL-LESS ACCESS FOR MAINTENANCE.
- OPTICS - TWIN LED LAMP HEADS OPERATE IN EMERGENCY (DC INPUT) MODE WITH 12 SERIES-PARALLEL WHITE LEDS IN EACH HEAD.
- ELECTRICAL - DUAL-VOLTAGE INPUT CAPABILITY (120/277V). CURRENT-LIMITING CHARGER. SHORT-CIRCUIT PROTECTION. SINGLE MULTI-COLOR LED INDICATOR TO DISPLAY TWO-STATE CHARGING, TEST ACTIVATION AND THREE-STATE DIAGNOSTIC TEST. TEST SWITCH. SELF-DIAGNOSTIC TESTING FOR 30 SECONDS EVERY 30 DAYS, 30 MINUTES AT 180-DAY INTERVAL, AND 90 MINUTES ANNUALLY. DIAGNOSTIC EVALUATION OF LED LIGHT SOURCE, AC-TO-DC TRANSFER, CHARGING AND BATTERY CONDITION. BATTERY: SEALED, MAINTENANCE-FREE NICKEL-CADMIUM BATTERY. DELIVERS 90-MINUTE CAPACITY TO EMERGENCY LAMPS.
- INSTALLATION - TOP, END OR BACK MOUNTING. HOUSING SNAPS TO CANOPY WITH POSITIVE-LOCKING TABS. CAM LOCKING PIN SECURES HOUSING TO CANOPY.
- LISTINGS - UL DAMP LOCATION LISTED STANDARD 50°-104°F (10°-40°C). MEETS UL 924, NFPA 101 (CURRENT LIFE SAFETY CODE), NEC AND OSHA ILLUMINATION STANDARDS.

LED COMBO/EXIT SIGN

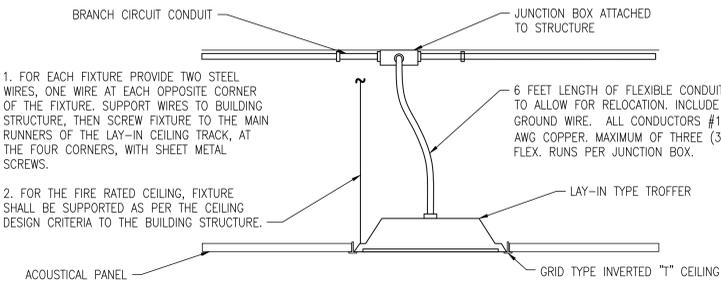
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LIGHT FIXTURE MOUNTING DETAIL
 NOT TO SCALE

FINAL		E-501	
DEPARTMENT OF THE NAVY MARINE CORPS BASE CAMP LEJUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGs TT2459 & TT2459A			
ELECTRICAL DETAILS			
DES. JLG	DR. JLG	CHK. WAC	DATE
SUBMITTED BY:		DATE	
DESIGN DIR: T H BURTON, PE	APPROVED: PWO OR OICC	DATE	DATE
SATISFACTORY TO:		DATE	DATE
SCALE: NOTED		SPEC. 05-17-0113	SHEET 50 OF 55

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 NCEP P-0500

17230



08/01/18

REVISIONS		
SYM	DATE	APPROVED

EXISTING PANEL A TT2459

TYPE: NEMA 1 BOLT-ON (EXITING HI-LEG)	240 MOUNT:	120 FLUSH	V.	3	PH.	4	WIRE	PROVIDE IF CHECKED:	XX XX	EQUIP. GROUND BUS NEUTRAL BUS GUTTER TAPS SUB-FEED LUGS
LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA			CKT #	CKT BKR	LOAD VA	LOAD SERVED
RTU03 (NOTE 4)	1,738	25/2	1	3,621			2	30/3	1,883	RTU02 (NOTE 4)
	1,738		3		3,621		4		1,883	
SPACE (NOTE 5)			5			1,883	6		1,883	
SPARE (NOTE 5)		30/3	7				8	30/3		SPARE (NOTE 5)
			9				10			
			11				12			
SPARE (NOTE 5)		20/3	13	3,300			14	30/3	3,300	WATER HEATER
			15		3,300		16		3,300	
			17			3,300	18		3,300	
ERV01 (NOTE 3)	500	15/3	19	2,383			20	30/3	1,883	RTU01 (NOTE 4)
	500		21		2,383		22		1,883	
	500		23			2,383	24		1,883	
FIRE ALARM (NOTE 2)	200	20/1	25	200			26	100/3		X-RAY MACHINE(NO LONGER IN USE)
SPACE			27				28			
SPACE			29				30			
SPACE			31	1,400			32	20/1	1,400	EWC
SPACE			33				34	20/1		SHUNT TRIP FOR 26,28,30
SPACE			35				36			SPACE
SPACE			37				38			SPACE
SPACE			39				40			SPACE
SPACE			41				42			SPACE
PANEL B		200/3		12,780						NOT USABLE SPACE
					13,474					
NOTES:				23,684	22,778	7,566	TOTAL VOLT AMPS		400 A. BUS (COPPER)	
1. HVAC & REFRIGERATION EQUIPMENT SHALL USE TYPE HACR BREAKERS.				197	190	63	CONN. AMPS		300 A. MAIN CIRCUIT BREAKER	
2. PROVIDE CIRCUIT BREAKER LOCKING DEVICE FOR FACU ALONG WITH										
3. RE-USE BREAKER										
4. REPLACE WITH BREAKER INDICATED. BREAKER SHALL MATCH PANEL AIC RATING.										
5. BREAKER MADE SPARE/SPACE DUE TO REMOVAL OF EXISTING EQUIPMENT.										

EXISTING PANEL B TT2459

TYPE: NEMA 1 BOLT-ON DOOR-IN-DOOR WITH-IN HINGED TRIM FRONT COVER	240 MOUNT:	120 FLUSH	V.	1	PH.	3	WIRE	PROVIDE IF CHECKED:	XX XX	EQUIP. GROUND BUS NEUTRAL BUS GUTTER TAPS SUB-FEED LUGS
LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA			CKT #	CKT BKR	LOAD VA	LOAD SERVED
SIGN	500	20/1	1	1,300			2	20/1	800	RCP RM 109
LIGHTS RM 100, 101, 102, BATH & RECEPTION	1,200	20/1	3		1,800		4	20/1	600	RCP RM 107
LIGHTS RM 112	1,400	20/1	5	1,800			6	20/1	400	RCP RM 107
LIGHTS RM 103-106	1,600	20/1	7		2,400		8	20/1	800	RCP RM 107/LAB GFCI
MED REFRIGERATOR	1,600	20/1	9	2,400			10	20/1	800	RCP RM 107
RCP RM 115, ROOFTOP GFCI	800	20/1	11		2,100		12	20/1	1,300	RCP RM 105, 106
RCP RM 113, 114, REAR HEADS	900	20/1	13	2,000			14	20/1	1,100	RCP RM 103, 104
RCP RM 116	900	20/1	15		1,300		16	20/1	400	EWC
RCP RM 112	800	20/1	17	1,400			18	20/1	600	RCP RECEPTION DESK
RCP RM 110B, ROOFTOP GFCI	700	20/1	19		1,600		20	20/1	900	REC TOILET, JANITOR, ROOFTOP GFCI
RCP RM 110	700	20/1	21	1,500			22	20/1	800	RCP RECEPTION DESK
SPARE (NOTE 2)		15/2	23		500		24	20/1	500	REFRIGERATOR RM 103, 104
			25		500		26	20/1	500	REFRIGERATOR RM 105, 106
SPARE (NOTE 2)		30/2	27		500		28	20/1	500	SMALL MED FRIDGE
			29		300		30	20/1	300	TELEPHONE
LIGHTS RM 107	600	20/1	31		2,000		32	20/1	1,400	LIGHTS RM 109
ROOFTOP GFCI (NOTE 3)	180	20/1	33	1,580			34	20/1	1,400	LIGHTS RM 110, 111, 116
ROOFTOP GFCI (NOTE 4)	360	20/1	35		1,274		36	20/1	914	LIGHTS RM 112, 113, 114, 115
SPACE			37				38			SPACE
SPACE			39				40			SPACE
SPACE			41				42			SPACE
NOTE:				12,780	13,474		TOTAL VOLT AMPS		225 A. BUS (COPPER)	
1. HVAC & REFRIGERATION EQUIPMENT SHALL USE TYPE HACR BREAKERS.				107	112		CONN. AMPS		225 A. MAIN LUGS	
2. BREAKER MADE SPARE DUE TO REMOVAL OF EXISTING EQUIPMENT										
3. USE SPARE BREAKER										
4. PROVIDE BREAKER AS INDICATED. BREAKER TO MATCH PANEL AIC RATING.										

LOAD SUMMARY PANELS A&B TT2459

VOLTAGE	PHASE
240	3
LOADS REMOVED THIS PROJECT	
HVAC EQUIPMENT	
HP1	23,400 VA
HP2	11,700 VA
HP3	12,900 VA
HRI	1,500 VA
HP4	3,800 VA
TOTAL HVAC EQUIPMENT REMOVED THIS PROJECT	53,300 VA
TOTAL HVAC EQUIPMENT REMOVED THIS PROJECT	128 AMPS
LOADS ADDED THIS PROJECT	
HVAC	
RTU01-RTU03	16,512 VA
ERV01	1,500 VA
PV01-PV02	500 VA
SUB-TOTAL HVAC DEMAND	18,512 VA
SUB-TOTAL HVAC DEMAND	45 AMPS
LIGHTING	
LIGHTS (INTERIOR)	2,308 VA
LIGHTS (EXTERIOR)	16 VA
TOTAL LIGHTING LOAD	2,324 VA
LIGHTING LOAD x 1.25	2,905 VA
TOTAL DEMAND FOR LIGHTING	7 AMPS
RECEPTACLES	
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	540 VA
	3 AMPS
TOTAL LOAD ADDED THIS PROJECT	55 AMPS
TOTAL LOAD ADDED THIS PROJECT	22,664 VA
NET LOAD CHANGED BY THIS PROJECT	-74 AMPS

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FINAL

E-601

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

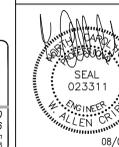
17-0113
REPLACE HVAC
BLDG'S TT2459 & TT2459A

ELECTRICAL
TT2459 SCHEDULES

NAVFAC DRAWING NO.
60022675

CONST. CONTR.

17230



DES.	JLG
DR.	JLG
CHK.	WAC
SUBMITTED BY:	
DESIGN DIR.	T H BURTON, PE
APPROVED: PWO OR OICC	DATE
SATISFACTORY TO:	DATE

SIZE	CODE	IDENT. NO.	
F		80091	
SCALE:	NOTED	SPEC.	05-17-0113

REVISIONS		
SYM	DATE	APPROVED

LOAD SUMMARY PANELS A&B TT2459A

VOLTAGE	PHASE
208	3
LOADS REMOVED THIS PROJECT	
LIGHTING	
TOTAL LIGHTING LOAD	968 VA
LIGHTING LOAD x 1.25	1,210 VA
TOTAL LIGHTING REMOVED THIS PROJECT	3 AMPS
TOTAL LOAD REMOVED THIS PROJECT	3 AMPS
TOTAL LOAD REMOVED THIS PROJECT	1,210 VA
LOADS ADDED THIS PROJECT	
EQUIPMENT	
PV03	528 VA
SUB-TOTAL EQUIPMENT DEMAND	528 VA
SUB-TOTAL EQUIPMENT DEMAND	1 AMPS
LIGHTING	
LIGHTS (INTERIOR)	606 VA
TOTAL LIGHTING LOAD	606 VA
LIGHTING LOAD x 1.25	758 VA
TOTAL DEMAND FOR LIGHTING	2 AMPS
RECEPTACLES	
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	540 VA
TOTAL DEMAND FOR RECEPTACLE/POWER PANELS	3 AMPS
TOTAL LOAD ADDED THIS PROJECT	7 AMPS
TOTAL LOAD ADDED THIS PROJECT	2,366 VA
NET LOAD CHANGED BY THIS PROJECT	3 AMPS

EXISTING PANEL A TT2459A

TYPE: NEMA 1	208 MOUNT:	120 SURFACE	V _L	3 PH.	4 WIRE	PROVIDE IF CHECKED:	XX	EQUIP. GROUND BUS		
BOLT-ON							XX	NEUTRAL BUS		
DOOR-IN-DOOR WITH-IN HINGED TRIM FRONT COVER								GUTTER TAPS		
								SUB-FEED LUGS		
LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA			CKT #	CKT BKR	LOAD VA	LOAD SERVED
AHU-1	2,740	45/3	1	5,240			2	30/2	2,500	DRYER
	2,740		3		5,240		4		2,500	
	2,740		5			3,740	6	20/2	1,000	X-RAY
AHU-02	3,353	45/3	7	4,353			8		1,000	
	3,353		9		4,853		10	20/2	1,500	AUTOCLAVE
	3,353		11			4,853	12		1,500	
HP-1	1,800	30/3	13	1,800			14	100/3		XRAY
	1,800		15		1,800		16			
	1,800		17			1,800	18			
HP-2	2,266	35/3	19	2,266			20	20/1		XRAY SHUNT (120V)
	2,266		21		2,266		22			SPACE
	2,266		23			2,266	24			SPACE
EWH-1	2,250	30/2	25	2,250			26			SPACE
	2,250		27		2,250		28			SPACE
SPACE			29			0	30			SPACE
SPACE			31	0			32			SPACE
SPACE			33		2,000		34	60/2	2,000	PANEL PHONE ROOM 112
SPACE			35			2,000	36		2,000	
TVSS	100	30/3	37	8,620			38	100/3	8,520	PANEL B
	100		39		6,500		40		6,400	
	100		41			6,168	42		6,068	
NOTES:				24,529	24,909	20,827	TOTAL VOLT AMPS		225	A. BUS (COPPER)
1. HVAC & REFRIGERATION EQUIPMENT SHALL USE TYPE HACR BREAKERS.				204	208	174	CONN. AMPS		225	A. MAIN LUGS
2. SURELOGIC SO-D SPD INTEGRAL MOUNT										
3. BREAKER MADE SPARE DUE TO REMOVAL OF EQUIPMENT										

EXISTING PANEL B TT2459A

TYPE: NEMA 1	208 MOUNT:	120 SURFACE	V _L	3 PH.	4 WIRE	PROVIDE IF CHECKED:	XX	EQUIP. GROUND BUS		
BOLT-ON							XX	NEUTRAL BUS		
DOOR-IN-DOOR WITH-IN HINGED TRIM FRONT COVER								GUTTER TAPS		
								SUB-FEED LUGS		
LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA			CKT #	CKT BKR	LOAD VA	LOAD SERVED
RCP RM 101, 102	900	20/1	1	1,980			2	20/1	1,080	LIGHTS RM 101,108,113,118-119,128, EM EXIT LIT
RCP RM 103	900	20/1	3		1,890		4	20/1	990	LIGHTS RM 102-106
RCP RM 105	900	20/1	5			2,220	6	20/1	1,320	LIGHTS RM 107,109
RCP RM 106	720	20/1	7	2,160			8	20/1	1,440	LIGHTS 110, 111, 114, 117
RCP RM 116, 107	1,080	20/1	9		2,350		10	20/1	1,270	LIGHTS RM 120, 122-128
RCP RM 109	1,080	20/1	11			1,280	12	20/1	200	SURGICAL LIGHT RM 103
RCP RM 111	840	20/1	13	2,040			14	20/1	1,200	COPIER
RCP RM 114	840	20/1	15		1,020		16	20/1	180	ROOF TOP GFCI (NOTE 2)
RCP RM 115	840	20/1	17			1,368	18	20/1	528	PV03 (NOTE 2)
RCP RM 116, 107	840	20/1	19	1,740			20	20/1	900	GFCI BELOW THIS PANEL
RCP RM 117, 120, 121	540	20/1	21		540		22	20/1		SPARE
RCP RM 120	600	20/1	23			600	24			SPACE
RCP RM 128	600	20/1	25	600			26			SPACE
RCP RM 128	600	20/1	27		600		28			SPACE
WASHER	600	20/1	29			600	30			SPACE
NOTES:				8,520	6,400	6,068	TOTAL VOLT AMPS		100	A. BUS (COPPER)
1. HVAC & REFRIGERATION EQUIPMENT SHALL USE TYPE HACR BREAKERS.				71	53	51	CONN. AMPS		100	A. MAIN LUGS
2. USE SPARE BREAKER										

LOAD SUMMARY PANEL C TT2459A

VOLTAGE	PHASE
480	3
LARGEST MOTOR APPROX. AMPS	
	4 AMPS
LARGEST MOTOR APPROX. AMPS x .25	
	1 AMPS
HVAC	
RTU04	20,951 VA
EDH01-EDH02	10,436 VA
HU-01	5,986 VA
SUB-TOTAL HVAC DEMAND	37,373 VA
SUB-TOTAL HVAC DEMAND	45 AMPS
ADD FOR LARGEST MOTOR	1 AMPS
TOTAL EQUIPMENT DEMAND	1 AMPS
TOTAL DEMAND BUILDING AMPS	46 AMPS
TOTAL DEMAND BUILDING AMPS	38,100 VA
TOTAL BUILDING CONNECTED LOAD	37,373 VA

EXISTING PANEL C TT2459A

TYPE: NEMA 1	480 MOUNT:	277 SURFACE	V _L	3 PH.	4 WIRE	PROVIDE IF CHECKED:	XX	EQUIP. GROUND BUS		
BOLT-ON							XX	NEUTRAL BUS		
DOOR-IN-DOOR WITH-IN HINGED TRIM FRONT COVER								GUTTER TAPS		
								SUB-FEED LUGS		
LOAD SERVED	LOAD VA	CKT BKR	CKT #	LOAD VA			CKT #	CKT BKR	LOAD VA	LOAD SERVED
RTU04 (NOTE 2)	6,984	50/3	1	6,984			2			SPACE
	6,984		3		6,984		4			SPACE
	6,984		5			6,984	6			SPACE
HU01 (NOTE 2)	1,995	15/3	7	1,995			8			SPACE
	1,995		9		1,995		10			SPACE
	1,995		11			1,995	12			SPACE
EDH01 (NOTE 2)	1,392	15/3	13	1,392			14	100/3		SPACE
	1,392		15		1,392		16			
	1,392		17			1,392	18			
EDH02 (NOTE 2)	2,086	15/3	19	2,086			20	SHUNT		120V COIL
	2,086		21		2,086		22			SPACE
	2,086		23			2,086	24			SPACE
SPACE			25	0			26			SPACE
SPACE			27		0		28			SPACE
SPACE			29			0	30			SPACE
NOTES:				12,457	12,457	12,457	TOTAL VOLT AMPS		250	A. BUS (COPPER)
1. HVAC & REFRIGERATION EQUIPMENT SHALL USE TYPE HACR BREAKERS.				45	45	45	CONN. AMPS		200	A. MAIN CIRCUIT BREAKER
2. PROVIDE BREAKER INDICATED. BREAKER SHALL MATCH PANEL AIC RATING										

DISCLOSURE OF INFORMATION:

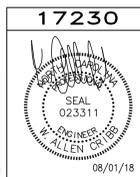
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FINAL		E-602	
DEPARTMENT OF THE NAVY MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGs TT2459 & TT2459A			
ELECTRICAL TT2459A SCHEDULES			
DES. JLG	DR. JLG	CHK. WAC	DATE
SUBMITTED BY:		DATE	
DESIGN DIR. T H BURTON, PE	APPROVED: PWO OR OICC	DATE	DATE
SATISFACTORY TO:		DATE	DATE
SIZE CODE IDENT. NO		SCALE: NOTED	SPEC. 05-17-0113
F 80091		SHEET 52 OF 55	

REVISIONS		
SYM	DATE	APPROVED

GENERAL NOTES:

- ALL DEVICES ARE NEW UNLESS NOTED OTHERWISE.
- RUN ALL WIRE IN METAL CONDUIT. ALL NEW CONDUIT, WIRE, AND CABLES SHALL BE CONCEALED IN WALLS, CEILING, SPACES, ELECTRICAL SHAFTS, OR CLOSETS WHERE FEASIBLE. NEW CONDUIT MAY BE EXPOSED IN UNFINISHED AREAS. PAINTED SURFACE WIRE MOLD MAY BE USED ON MASONRY WALLS IN FINISHED AREAS.
- ALL NEW DEVICES SHALL BE INSTALLED PER NFPA 70, NFPA 72, NFPA 720, THEIR LISTING AND MANUFACTURERS RECOMMENDATIONS.
- DO NOT LOCATE CO DETECTORS IN PATH OF HVAC SUPPLY VENTS AND AVOID DEAD AIR SPACES.
- LOCATE CO DETECTORS NEAR CENTER OF CEILING TILE.
- DEVICE LOCATIONS ARE APPROXIMATE AND CONTRACTOR IS RESPONSIBLE FOR FINAL PLACEMENT MEETING DEVICE'S LISTING AND APPLICABLE CODE REQUIREMENTS.
- PROVIDE PRE AND POST SYSTEM TESTING IN ACCORDANCE WITH THE SPECIFICATION SECTION 28 31 63.00 20.
- CO DETECTORS SHALL BE POWERED FROM THE FIRE ALARM CONTROL PANEL. IF DETECTORS ARE NOT LISTED FOR USE WITH THE EXISTING FACP, A SEPARATE POWER SUPPLY MUST BE PROVIDED.
- FIRE ALARM DEVICES LOCATED IN AREA OF CEILING REMOVAL, MUST BE DETACHED FROM THE TILES AND PROTECTED FROM DAMAGE DURING CONSTRUCTION
- NO PROGRAMMING OTHER THAN THE INPUTS/OUTPUTS FOR THE CO DETECTION SYSTEM ARE REQUIRED. SEE OPERATIONAL MATRIX DETAIL 3/FA501. EXISTING FUNCTIONS OF FIRE ALARM SYSTEM TO BE MAINTAINED
- ALL CO DETECTORS SHALL ALARM WHEN CO IS DETECTED.
- CO DETECTION SHALL ACTIVATE THE BUILDING FIRE ALARM AUDIBLE AND VISUAL DEVICES, BROADCAST A TEMPORAL FOUR ALARM SIGNAL AND TRANSMIT A DISTINCT CO ALARM SIGNAL TO THE SUPERVISING STATION.
- THE EXISTING FIRE ALARM PANEL IS AN ADDRESSABLE SIMPLEX 4010 WITH A DACT. FACP IS LOCATED IN TT2459, CORRIDOR 117.
- THE PANEL DOES NOT HAVE VOICE MESSAGES.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WORK WITH ALL OTHER DISCIPLINES.
- CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING LOCATIONS AND CONDITIONS OF ITEMS RELATED TO THIS PROJECT PRIOR TO START OF CONSTRUCTION.
- THE CONTRACTOR SHALL BECOME FAMILIAR WITH THE DETAILS OF WORK, VERIFY DIMENSIONS IN THE FIELD, AND ADVISE THE CONTRACTING OFFICER OF ANY DISCREPANCY BEFORE PERFORMING ANY WORK.
- THE FOLLOWING CODES AND STANDARDS SHALL APPLY:
 NFPA 70 – 2017 EDITION – NATIONAL ELECTRIC CODE
 NFPA 72 – 2016 EDITION – NATIONAL FIRE ALARM AND SIGNALING CODE
 NFPA 101 – 2018 EDITION – LIFE SAFETY CODE
 NFPA 720 – 2015 EDITION – STANDARD FOR THE INSTALLATION OF CARBON MONOXIDE (CO) DETECTION AND WARNING EQUIPMENT
- CO DETECTORS TO BE ADDRESSABLE AND COMPATIBLE WITH EXISTING FACP. IN LIEU OF ADDRESSABLE CO DETECTORS, THE CO SLC CIRCUIT CAN BE MONITORED BY A MONITORING MODULE.

WIRING, CONDUIT:

- ALL CONDUCTORS TO BE RUN IN 3/4" MINIMUM RIGID METAL CONDUIT (EMT). PROVIDE CONDUIT SIZES, QUANTITIES, AND CONFIGURATION IN ACCORDANCE WITH LISTED DESIGN CRITERIA AND MANUFACTURER'S APPROVED SHOP DRAWINGS.
- ALL CONDUCTORS SHALL BE EITHER STRANDED OR SOLID COPPER. 18 Awg MIN FOR SLC AND 16 Awg MIN. FOR IDC AND NAC CIRCUITS
- ALL CONDUIT, WIRES, AND CABLES IN FINISHED SPACES SHALL BE CONCEALED IN WALLS, CEILING SPACES, AND SIMILAR SPACES.
- ALL CONDUCTORS TO RUN SPLICE FREE FROM DEVICE TO DEVICE. WIRE NUTS, CRIMPED CONNECTORS, OR TWISTING OF CONDUCTORS IS PROHIBITED.
- RUN ALL WIRING TO AND WITHIN THE CONTROL PANELS IN THE VERTICAL OR HORIZONTAL PLANE, MAKE ALL TURNS AT 90 DEGREES ANGLES, AND TIGHTLY BUNDLED AND WRAPPED. IDENTIFY ALL CONDUCTORS INDIVIDUALLY WITH PERMANENT PRINTED LABELS AFFIXED WITH SHRINK WRAP.
- DEVICE CONNECTIONS SHALL BE THE DEVICE SCREW TERMINALS OR TERMINAL STRIPS MOUNTED WITHIN THE JUNCTION BOX.
- ALL CONDUIT, JUNCTION/BACK BOXES, COVERS, AND COUPLINGS ARE TO BE FACTORY PAINTED RED IN UNFINISHED AREAS (E.G. ABOVE CEILINGS, IN MECHANICAL ROOMS, ETC).
- ALL CONDUIT, JUNCTION/BACK BOXES, COVERS AND COUPLINGS ARE PERMITTED TO BE PAINTED TO MATCH ROOM FINISH. THE INSIDE COVER OF JUNCTION BOXES TO BE IDENTIFIED AS "FIRE ALARM". CONDUIT TO HAVE 3/4" RED BANDS EVERY 20 FT AND BOTH SIDES OF ALL FLOORS, WALLS, AND CEILING PENETRATIONS.

LEGEND

-  MANUAL PULL STATION
-  CARBON MONOXIDE DETECTOR
-  SMOKE DETECTOR
-  FIRE DEPARTMENT KNOX BOX
-  HORN STROBE; # INDICATES CANDELA RATING
-  FIRE ALARM CONTROL PANEL
-  FIRE ALARM TRANSCIEVER
-  MONITORING MODULE
-  END OF LINE RESISTOR
-  HVAC ZONE

SUBSCRIPTS

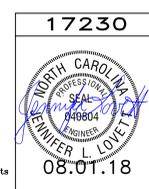
- (X) EXISTING TO BE REINSTALLED
- (N) NEW

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 Fire Protection & Building Code Specialists
 NC Firm License No: F-0296



FINAL		FA001	
<small>DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND</small> MARINE CORPS BASE <small>CAMP LEJEUNE, NORTH CAROLINA</small>			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A <small>FIRE ALARM</small>			
LEGEND AND GENERAL NOTES			
DES. JLL	DR. ANP	CHK. BML	SUBMITTED BY:
DESIGN DIR. T H BURTON, PE	APPROVED: PWO OR OICC	DATE	SIZE CODE IDENT. NO
SATISFACTORY TO:	DATE	F 80091	NAVAFAC DRAWING NO. 60022677
		CONST. CONTR.	SCALE: NOTED SPEC. 05-17-0113
		SHEET 53 OF 55	

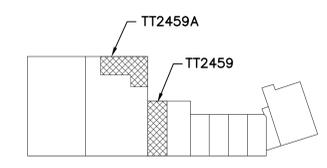
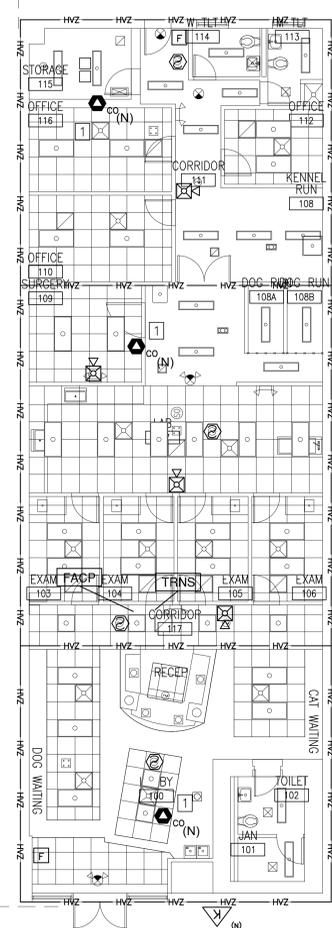
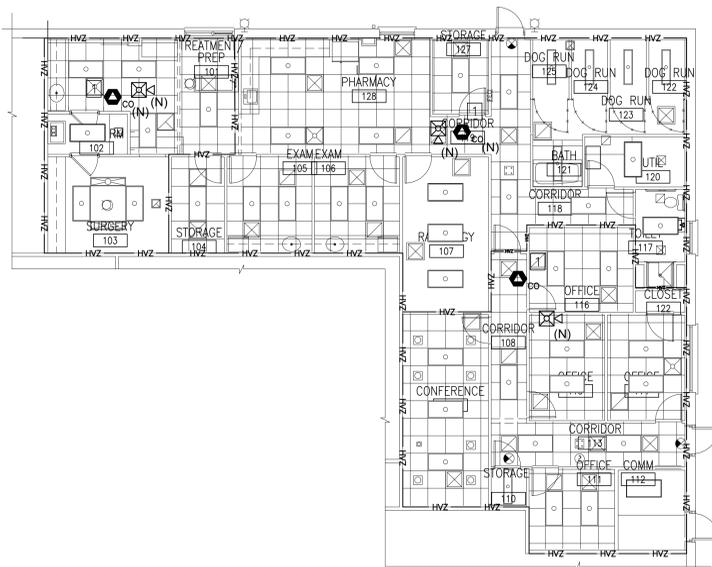
REVISIONS			
SYM		DATE	APPROVED

SHEET NOTES:

1. REFERENCE FA001 FOR NOTES AND LEGEND
2. REFERENCE FA501 FOR RISER DIAGRAM AND OPERATIONAL MATRIX
3. ALL DEVICES SHOWN ARE NEW UNLESS NOTED OTHERWISE

KEY NOTES:

- 1 CO DETECTORS MUST BE INSTALLED IN THE SAME ROOM AS THE FIRST SUPPLY REGISTER DOWNSTREAM OF THE AHU.



KEY PLAN
NOT TO SCALE

DISCLOSURE OF INFORMATION:
CONTRACTOR SHALL COMPLY AS FOLLOWS:

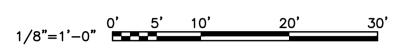
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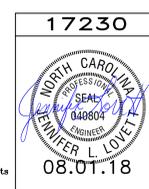
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FIRE ALARM FLOOR PLAN
1/8"=1'-0"



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NC Firm License No: F-0296



FINAL		FA101	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
17-0113 REPLACE HVAC BLDGS TT2459 & TT2459A FIRE ALARM FLOOR PLAN			
DES. JLL	DR. ANP	CHK. BML	DATE
SUBMITTED BY: T H BURTON, PE		DATE	DATE
APPROVED: PWO OR OICC	DATE	SIZE	CODE IDENT. NO.
SATISFACTORY TO:		DATE	CONST. CONTR.
SCALE: NOTED		SPEC. 05-17-0113	SHEET 54 OF 55

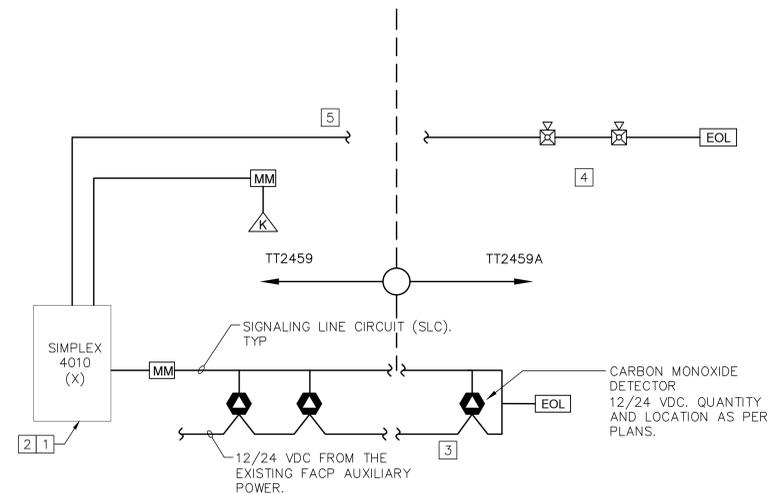
REVISIONS			
SYM		DATE	APPROVED

SHEET NOTES:

- REFERENCE FA001 FOR NOTES AND LEGEND
- REFERENCE FA101 FOR FLOOR PLAN

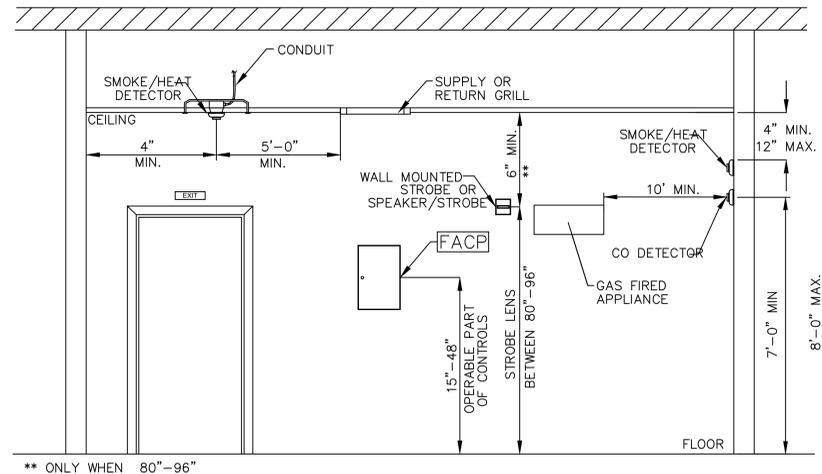
KEY NOTES:

- FACP SHALL BE RECONFIGURED TO TRANSMIT A DISTINCT CO ALARM SIGNAL TO THE FIRE DEPARTMENT.
- ONLY NEW DEVICES AND CONNECTIONS SHOWN.
- SIGNALING LINE BETWEEN CO DETECTORS SO WHEN ONE ALARMS, ALL DETECTORS WILL SOUND.
- COORDINATE NUMBER AND LOCATION WITH FLOOR PLAN
- NEW NAC CIRCUIT RUNS TO TT2459A



ADDRESSABLE FIRE ALARM RISER
NOT TO SCALE

1



MOUNTING HEIGHTS
NOT TO SCALE

2

ACTION TO BE INITIATED	ACTION TO BE INITIATED				
	TRANSMIT DISTINCT CO ALARM TO SUPERVISING STATION	TRANSMIT TEMPORAL FOUR ALARM TONE THROUGHOUT BUILDING	TRANSMIT TROUBLE SIGNAL TO SUPERVISING STATION	ACTUATE AUDIBLE/VISIBLE SUPERVISORY INDICATOR @ CONTROL UNIT	ACTUATE AUDIBLE/VISIBLE TROUBLE INDICATOR @ CONTROL UNIT
CARBON MONOXIDE DETECTOR	X	X		X	
SHORT CIRCUIT			X		X
GROUND FAULT			X		X
OPEN CIRCUIT			X		X
KNOX BOX			X		

OPERATIONAL MATRIX
NOT TO SCALE

3

DISCLOSURE OF INFORMATION:

CONTRACTOR SHALL COMPLY AS FOLLOWS:

A. THE CONTRACTOR SHALL NOT RELEASE TO ANYONE OUTSIDE THE CONTRACTOR'S ORGANIZATION ANY UNCLASSIFIED INFORMATION, REGARDLESS OF MEDIUM (E.G. FILM, TAPE, DOCUMENT), PERTAINING TO ANY PART OF THIS CONTRACT OR ANY PROGRAM RELATED TO THIS CONTRACT, UNLESS-

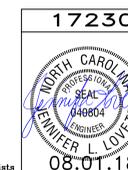
- THE CONTRACTING OFFICER HAS GIVEN PRIOR WRITTEN APPROVAL; OR
- THE INFORMATION IS OTHERWISE IN THE PUBLIC DOMAIN BEFORE THE DATE OF THE RELEASE.

B. REQUESTS FOR APPROVAL SHALL IDENTIFY THE SPECIFIC INFORMATION TO BE RELEASED, THE MEDIUM TO BE USED, AND THE PURPOSE FOR THE RELEASE. THE CONTRACTOR SHALL SUBMIT ITS REQUEST TO THE CONTRACTING OFFICER AT LEAST 45 DAYS BEFORE THE PROPOSED DATE FOR RELEASE.

C. THE CONTRACTOR AGREES TO INCLUDE A SIMILAR REQUIREMENT IN EACH SUBCONTRACT UNDER THIS CONTRACT. SUBCONTRACTORS SHALL SUBMIT REQUESTS FOR AUTHORIZATION TO RELEASE THROUGH THE PRIME CONTRACTOR TO THE CONTRACTING OFFICER.

Lovett Consultants

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Fire Protection & Building Code Specialists
NC Firm License No: F-0296



FINAL		FA501	
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND MARINE CORPS BASE CAMP LEJEUNE, NORTH CAROLINA			
DES. JLL			
DR. ANP			
CHK. BML			
SUBMITTED BY:			
DESIGN DIR. T H BURTON, PE			
APPROVED: PWO OR OICC	DATE	SIZE	CODE IDENT. NO.
		F	80091
SATISFACTORY TO:		DATE	NAVFAC DRAWING NO.
			60022679
		SCALE: NOTED	SPEC. 05-17-0113
		SHEET 55 OF 55	