# NAVAL FACILITIES ENGINEERING COMMAND
# NAVFAC WASHINGTON

Contract # N62470-09-D-9044 FY-13

Contract Drawings for:

# P125 TEMPORARY MEDICAL FACILITIES

## PACKAGE 2 - CLINIC BUILDING

# VOLUME 3

## WRNMMC Bethesda, Maryland

## FINAL CORRECTED SET

## MARCH 26, 2014

HDR Architecture, Inc.

1101 KING ST. ALEXANDRIA,VA 22314 66062 I P: 703.518.8500

**STANTON ENGINEERING SERVICES, LLC**

10280 Old Columbia Road, Columbia, MD 21046 | P: (410) 290-9301

**R.I.B. U.S. COST**

201 12th Street, Suite 502, Arlington VA, 22202 | P: (800) 624-4307

**HALEY & ALDRICH**

7926 Jones Branch Drive Suite 870 McLean, VA 22102 | P: (703) 336-6200


| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMISSION | 04/26/13 |

COMMONWEALTH OF VIRGINIA
PAUL G. HEFLIN
012267
3/26/2014
ARCHITECT

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC

ACTIVITY
SATISFACTORY TO DATE

| DES | SW | DRW | GB | CHK | HE |
|---|---|---|---|---|---|
| PM/DM | CHEMENJU/HILL | | | | |
| BRANCH MANAGER | N/A | | | | |
| CHIEF ENG/ARCH | TOM COX | | | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
ATLANTIC
NAVAL FACILITIES ENGINEERING COMMAND – NAVFAC WASHINGTON
Walter Reed National Military Medical Center - Bethesda, Maryland
NSA/Bethesda
BETHESDA, MD
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
GENERAL - COVER SHEET

SCALE: 12" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065975
SHEET 0 OF 0

G-020

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| 13065803 | A-102-B3 | ARCHITECTURAL - FLOOR PLAN - SECOND FLOOR AREA B3 |
| 13065804 | A-102-B4 | ARCHITECTURAL - FLOOR PLAN - SECOND FLOOR AREA B4 |
| 13065805 | A-102-C1 | ARCHITECTURAL - FLOOR PLAN - SECOND FLOOR AREA C1 |
| 13065806 | A-102-C2 | ARCHITECTURAL - FLOOR PLAN - SECOND FLOOR AREA C2 |
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| 13065812 | AC-101-C | ARCHITECTURAL - REFLECTED CEILING PLAN - FIRST FLOOR AREA C |
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Grand total: 133

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| 13065864 | G-011 | GENERAL - INDEX OF DRAWINGS |
| 13065865 | G-011A | GENERAL - INDEX OF DRAWINGS CONTINUED |
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| 13065868 | AG-101-B | WAYFINDING - ROOM_REG LOCATION PLAN - FIRST FLOOR AREA B |
| 13065869 | AG-101-C | WAYFINDING - ROOM_REG LOCATION PLAN - FIRST FLOOR AREA C |
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| 13065873 | AG-111-C | WAYFINDING - LIFE SAFETY LOCATION PLAN - FIRST FLOOR AREA C |
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| 13065875 | AG-102-A | WAYFINDING - ROOM_REG LOCATION PLAN - SECOND FLOOR AREA A |
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| 13065888 | AG-506 | WAYFINDING - SIGN TYPE 9 |
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| 13065890 | AG-508 | WAYFINDING - SIGN TYPE 11 |
| 13065891 | AG-509 | WAYFINDING - SIGN TYPE 13 |
| 13065892 | AG-510 | WAYFINDING - SIGN TYPE 19 |
| 13065893 | AG-511 | WAYFINDING - SIGN TYPE 21 |
| 13065894 | AG-512 | WAYFINDING - SIGN TYPE 22 |
| 13065895 | AG-513 | WAYFINDING - SIGN TYPE 23 |
| 13065896 | AG-514 | WAYFINDING - SIGN TYPE 26 |
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| 13065909 | IN-101-B | INTERIORS - FLOOR PATTERN PLAN - FIRST FLOOR, AREA B |
| 13065910 | IN-101-C | INTERIORS - FLOOR PATTERN PLAN - FIRST FLOOR, AREA C |
| 13065911 | IN-101-D | INTERIORS - FLOOR PATTERN PLAN - FIRST FLOOR, AREA D |
| 13065912 | IN-102-A | INTERIORS - FLOOR PATTERN PLAN - SECOND FLOOR, AREA A |
| 13065913 | IN-102-B | INTERIORS - FLOOR PATTERN PLAN - SECOND FLOOR, AREA B |
| 13065914 | IN-102-C | INTERIORS - FLOOR PATTERN PLAN - SECOND FLOOR, AREA C |
| 13065915 | IP-101-A | INTERIORS - WALL PROTECTION PLAN - FIRST FLOOR, AREA A |
| 13065916 | IP-101-B | INTERIORS - WALL PROTECTION PLAN - FIRST FLOOR, AREA B |
| 13065917 | IP-101-C | INTERIORS - WALL PROTECTION PLAN - FIRST FLOOR, AREA C |
| 13065918 | IP-101-D | INTERIORS - WALL PROTECTION PLAN - FIRST FLOOR, AREA D |
| 13065919 | IP-102-A | INTERIORS - WALL PROTECTION PLAN - SECOND FLOOR, AREA A |
| 13065920 | IP-102-B | INTERIORS - WALL PROTECTION PLAN - SECOND FLOOR, AREA B |
| 13065921 | IP-102-C | INTERIORS - WALL PROTECTION PLAN - SECOND FLOOR, AREA C |
| 13065922 | I-601 | INTERIORS - ROOM FINISH SCHEDULE - FIRST FLOOR |
| 13065923 | I-602 | INTERIORS - ROOM FINISH SCHEDULE - FIRST FLOOR CONT. |
| 13065924 | I-603 | INTERIORS - ROOM FINISH SCHEDULE - SECOND FLOOR |
| 13065925 | I-604 | INTERIORS - ROOM FINISH SCHEDULE - SECOND FLOOR CONT. |

Grand total: 62

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 11/04/15 |
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMISSION | 04/26/13 |
| | 35% SUBMISSION | 03/08/13 |
| | 20% SUBMISSION | 01/18/13 |

NAVFAC

9070 REGISTERED ARCHITECT
11/4/2015
JORDI MACK
STATE OF WASHINGTON

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
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ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES SW | DRW GB | CHK HE
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NAVFAC WASHINGTON
ATLANTIC
Walter Reed National Military Medical Center - Bethesda, Maryland
NSA/Bethesda BETHESDA, MD
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
GENERAL - INDEX OF DRAWINGS

SCALE:
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065722
SHEET OF 0

G-021

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| 13065927 | Q-101-A2 | EQUIPMENT - FLOOR PLAN - FIRST FLOOR AREA A2 |
| 13065928 | Q-101-A3 | EQUIPMENT - FLOOR PLAN - FIRST FLOOR AREA A3 |
| 13065929 | Q-101-A4 | EQUIPMENT - FLOOR PLAN - FIRST FLOOR AREA A4 |
| 13065930 | Q-101-B1 | EQUIPMENT - FLOOR PLAN - FIRST FLOOR AREA B1 |
| 13065931 | Q-101-B2 | EQUIPMENT - FLOOR PLAN - FIRST FLOOR AREA B2 |
| 13065932 | Q-101-B3 | EQUIPMENT - FLOOR PLAN - FIRST FLOOR AREA B3 |
| 13065933 | Q-101-B4 | EQUIPMENT - FLOOR PLAN - FIRST FLOOR AREA B4 |
| 13065934 | Q-101-C1 | EQUIPMENT - FLOOR PLAN - FIRST FLOOR AREA C1 |
| 13065935 | Q-101-C2 | EQUIPMENT - FLOOR PLAN - FIRST FLOOR AREA C2 |
| 13065936 | Q-101-C3 | EQUIPMENT - FLOOR PLAN - FIRST FLOOR AREA C3 |
| 13065937 | Q-101-C4 | EQUIPMENT - FLOOR PLAN - FIRST FLOOR AREA C4 |
| 13065938 | Q-101-D1 | EQUIPMENT - FLOOR PLAN - FIRST FLOOR AREA D1 |
| 13065939 | Q-101-D2 | EQUIPMENT - FLOOR PLAN - FIRST FLOOR AREA D2 |
| 13065940 | Q-102-A1 | EQUIPMENT - FLOOR PLAN - SECOND FLOOR AREA A1 |
| 13065941 | Q-102-A2 | EQUIPMENT - FLOOR PLAN - SECOND FLOOR AREA A2 |
| 13065942 | Q-102-A3 | EQUIPMENT - FLOOR PLAN - SECOND FLOOR AREA A3 |
| 13065943 | Q-102-A4 | EQUIPMENT - FLOOR PLAN - SECOND FLOOR AREA A4 |
| 13065944 | Q-102-A1.1 | EQUIPMENT - FLOOR PLAN - SECOND FLOOR AREA A1.1 - PHASE 2 |
| 13065945 | Q-102-A2.1 | EQUIPMENT - FLOOR PLAN - SECOND FLOOR AREA A2.1 - PHASE 2 |
| 13065946 | Q-102-A3.1 | EQUIPMENT - FLOOR PLAN - SECOND FLOOR AREA A3.1 - PHASE 2 |
| 13065947 | Q-102-A4.1 | EQUIPMENT - FLOOR PLAN - SECOND FLOOR AREA A4.1 - PHASE 2 |
| 13065948 | Q-102-B1 | EQUIPMENT - FLOOR PLAN - SECOND FLOOR AREA B1 |
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| 13065950 | Q-102-B3 | EQUIPMENT - FLOOR PLAN - SECOND FLOOR AREA B3 |
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Grand total: 153

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 11/04/15 |
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMISSION | 04/26/13 |

9070 REGISTERED ARCHITECT 11/4/2015 JORDI MACK STATE OF WASHINGTON


HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
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703-518-8500


APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES SW | DRW GB | CHK HE

PM/DM CHEMENJU/HILL

BRANCH MANAGER N/A

CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NAVFAC WASHINGTON
ATLANTIC
Walter Reed National Military Medical Center - Bethesda, Maryland

NSA/Bethesda BETHESDA, MD

P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING

GENERAL - INDEX OF DRAWINGS CONTINUED

SCALE:

EPROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13065723

SHEET OF 0

G-021A

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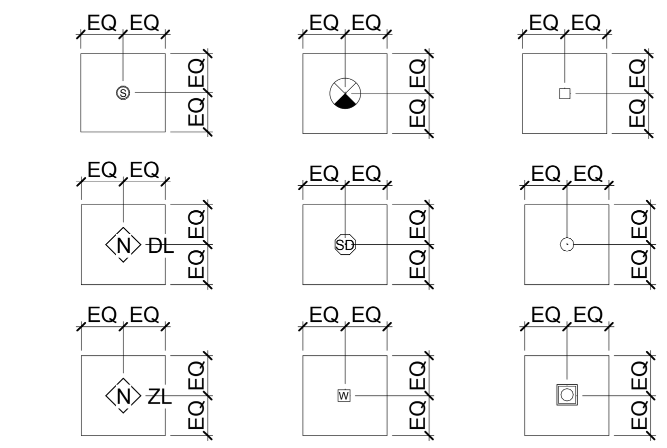
| | |
|---|---|
| A | ALIGN |
| AB | ANCHOR BOLT, AUGER BORING |
| ABS | AIR BREAK SWITCH |
| AC | AIR CONDITIONING, ASBESTOS CEMENT, ACRES |
| A/C | ASPHALTIC CONCRETE |
| ACB | AIR CIRCUIT BREAKER |
| ACSR | ALUMINUM CONDUCTOR STEEL REINFORCED |
| ACST | ACOUSTIC |
| AD | AREA DRAIN, ACCESS DOOR |
| ADJ | ADJUSTABLE |
| AFF | ABOVE FINISHED FLOOR |
| AHU | AIR HANDLING UNIT |
| ALT | ALTERNATE |
| AL | ALUMINUM |
| AM | ACOUSTIC MATERIAL |
| AMP,A | AMPERE |
| AP | ACCESS PANEL APPROX APPROXIMATE |
| ARCH | ARCHITECTURAL |
| ARR | ARRESTOR |
| ASPH | ASPHALT |
| B | BASELINE |
| BO | BOARD |
| BEJ | BRICK EXPANSION JOINT |
| BLDG | BUILDING |
| BLK | BLOCK |
| BM | BEAM |
| B | BOTTOM |
| BRG | BEARING |
| BR | BOTTOM REGISTER |
| BSMT | BASEMENT |
| C | CELSIUS |
| CAP | CAPACITY |
| CB | CIRCUIT BREAKER |
| CD | CEILING DIFFUSER |
| CEM | CEMENT |
| CG | CORNER GUARD |
| C&G | CURB AND GUTTER |
| CH | CHILLER |
| CI | CAST IRON, COURTYARD INLET |
| CIP | CAST IRON PIPE, CAST IN PLACE |
| CIR | CIRCULATING |
| CJ | CONTROL JOINT |
| CKT | CIRCUIT |
| CLG | CEILING |
| C | CENTERLINE |
| CLR | CLEAR |
| CMP | CORRUGATED METAL PIPE |
| CMPA | CORRUGATED METAL PIPE ARCH |
| CMU | CONCRETE MASONRY UNITS |
| CND,C | CONDUIT |
| CNDS | CONDENSATE |
| CO | CLEANOUT |
| CODP | CLEANOUT W/ DECK PLUG |
| COL | COLUMN |
| COMM | COMMUNICATION |
| CONC | CONCRETE |
| COND | CONDUCTOR |
| CONN | CONNECTION |
| CONST | CONSTRUCTION |
| CONT | CONTINUOUS |
| CONV | CONVERTER |
| COP,CU | COPPER |
| CP | NON-REINFORCED CONCRETE PIPE |
| CR | CHAIR, CRASH RAIL |
| CRS | STAINLESS STEEL |
| CS | CONCRETE SEALER/SURFACE |
| CSK | COUNTERSUNK |
| CT | CERAMIC TILE, CURRENT TRANSFORMER, COOLING TOWER |
| CTR | CENTER, COOLING TOWER RETURN |
| CTS | COOLING TOWER SUPPLY |
| CW | COLD WATER |
| CWB | CAPILLARY WATER BARRIER |
| CONTR | CONTRACTION |
| CPT | CARPET |
| D | DEPTH, DEEP, DEGREE OF CURVATURE |
| DB | DRY BULB, DECIBEL, DIRECT BURIAL |
| DD | DIVERSION DIKE |
| DET | DETAIL |
| DH | DRILL HOLE |
| DI | DUCTILE IRON |
| DIA | DIAMETER |
| DIM | DIMENSION |
| DJ | DEFLECTION JOINT |
| DL | DEAD LOAD |
| DMPR | DAMPER |
| DN | DOWN |
| DP | DISTRIBUTION PANEL |
| DS | DOWNSPOUT, STORM DRAINAGE STRUCTURE |
| DW | DOMESTIC WATER |
| DWG | DRAWING |
| DWD | DRINKING WATER DISPENSER |
| E | EAST |
| EA | EACH |
| EAN | EXCEPT AS NOTED |
| EAT | ENTERING AIR TEMPERATURE |
| EC | EMPTY CONDUIT |
| EF | EACH FACE, EXHAUST FAN |
| EG | EXHAUST GRILLE |
| EL | ELEVATION |
| ELEC | ELECTRIC |
| ELEV | ELEVATOR |
| EMT | ELECTRICAL METALLIC TUBING |
| EMER | EMERGENCY |
| E/P | EDGE OF PAVEMENT |
| EQ | EQUAL |
| EQUIP | EQUIPMENT |
| ER | EXHAUST REGISTER |
| EVAP | EVAPORATIVE |
| EW | EACH WAY |
| EWC | ELECTRIC WATER COOLER |
| EXH | EXHAUST |
| EXIST | EXISTING |
| EXP | EXPANSION, EXPOSED |
| EXP JT | EXPANSION JOINT |
| EXT | EXTERIOR |
| F | FIRE, FUSE, FILTER |
| FA | FIRE ALARM FABX FIRE ALARM BOX |
| FD | FLOOR DRAIN, FIRE DAMPER |
| FDN | FOUNDATION |
| FDR | FEEDER |
| FE | FIRE EXTINGUISHER |
| FFE | FINISHED FLOOR ELEVATION |
| FH | FIRE HYDRANT |
| FHC | FIRE HOSE CABINET |
| FIG | FIGURE |
| FIN | FINISH |
| FL | FLOOR, FLASHING, FLOW LINE |
| FLUOR | FLUORESCENT |
| 4 WAY | FOUR WAY |
| FPH | FROST PROOF HYDRANT |
| FR | FRAME |
| FS | FULL SIZE |
| FTG | FOOTING |
| FJ | FELT JOINT |
| FW | FIRE WATER |
| FXTR | FIXTURE |
| G | GROUND, GAS LINE,GRAM |
| GA | GAGE |
| GAL | GALVANIZED |
| GC | GLAZED COATING |
| GFI | GROUND FAULT INTERRUPT |
| GFMU | GROUND FACE MASONRY UNIT |
| GL | GLASS |
| GR | GRADE |
| GRD | GROUND |
| GSU | GLAZED STRUCTURAL UNIT |
| GW | GROUND WATER |
| GWB | GYPSUM WALL BOARD GYP GYPSUM |
| ID | INSIDE DIAMETER, INSIDE DIMENSION |
| IE | INVERT ELEVATION |
| IMC | INTERMEDIATE METAL CONDUIT |
| INT | INTERIOR |
| INSUL | INSULATION, INSULATED |
| INV | INVERT |
| INTX | INTERSECTION |
| IP | INLET PROTECTION |
| IRBF | INDUSTRIAL RESIN BASE FLOORING |
| JB | JUNCTION BOX |
| JC | JANITOR CLOSET |
| JCT | JUNCTION |
| JT | JOINT |
| JST | JOIST |
| K | KILO |
| KIAC | THOUSAND AMP INTERRUPT CAPACITY |
| KCP | KEENE'S CEMENT PLASTER |
| KG | KILOGRAM |
| KN | KILONEWTON |
| KO | KNOCK OUT |
| KV | KILOVOLT |
| KVA | KILOVOLT-AMPERE |
| KW | KILOWATT |
| L/S | LITERS PER SECOND |
| L | LOUVER, LENGTH, LENGTH OF CURVE |
| LA | LIGHTNING ARRESTOR |
| LC | LEAD COVERED |
| LL | LIVE LOAD |
| LLH | LONG LEG HORIZONTAL |
| LLV | LONG LEG VERTICAL |
| LT | LIGHT |
| LAV | LAVATORY VERTICAL |
| LVC | LENGTH OF VERTICAL CURVE |
| M/S | METERS PER SECOND |
| M | METER, MEGA |
| MACH | MACHINE |
| MAS | MASONRY |
| MATL | MATERIAL |
| MAX | MAXIMUM |
| ECH | MECHANICAL |
| MET | METAL |
| MH | MANHOLE |
| MIN | MINIMUM, MINUTE |
| MISC | MISCELLANEOUS |
| MLO | MAIN LUG ONLY |
| MM,mm | MILLIMETER |
| MO | MOTOR OPERATED, MASONRY OPENING, MIDDLE ORDINATE |
| MP | MEDIUM PRESSURE |
| MTD | MOUNTED |
| MTG | MOUNTING |
| MMP | MEMBRANE WATERPROOFING |
| MULL | MULLION |
| N | NORTH |
| NA | NOT APPLICABLE |
| NC | NON CORROSIVE |
| NE | NORTHEAST |
| NDC | NOSE DOWN CURB |
| NEC | NATIONAL ELECTRIC CODE |
| NEUT | NEUTRAL |
| NIC | NOT IN CONTRACT |
| NO | NUMBER |
| NOM | NOMINAL |
| NPS | NOMINAL PIPE SIZE |
| NTS | NOT TO SCALE |
| NW | NORTHWEST |
| OA | OUTSIDE AIR |
| OC | ON CENTER |
| OCB | OIL CIRCUIT BREAKER |
| OD | OUTSIDE DIAMETER OPNG OPENING |
| OPP | OPPOSITE |
| OSD | OPEN SITE DRAIN |
| OVHD,OH | OVERHEAD |
| Pa | PASCALES |
| P | PIPE, POLE |
| PB | PULL BOX |
| PI | POINT OF INTERSECTION |
| PIV | POST INDICATOR VALVE |
| PJF | PREFORMED JOINT FILLER |
| PL | PLATE |
| PLAS | PLASTER |
| PLNJ | PAPER AND LEAD NEOPRENE JACKET |
| PLYWD | PLYWOOD |
| PNL | PANEL |
| PNT | PAINT |
| PRELIM | PRELIMINARY |
| PRESS | PRESSURE |
| PRIM | PRIMARY |
| PRV | PRESSURE RELIEF VALVE |
| PS | PULL SWITCH |
| PT | POINT, POINT OF TANGENT |
| PTN | PARTITION |
| PVC | POINT OF VERTICAL CURVE, POLY VINYL CHLORIDE . |
| PVI | POINT OF VERTICAL INTERSECTION |
| PVT | POINT OF VERTICAL TANGENT PVMT PAVEMENT |
| QT | QUARRY TILE |
| R | RADIUS, RISER, RUBBER SHEATH |
| RA | RETURN AIR |
| RAD | RADIUS |
| RB | RESILIENT VINYL BASE |
| RCP | REINFORCED CONCRETE PIPE |
| RD | ROOF DRAIN, ROAD |
| RECP | RECEPTACLE |
| RED | REDUCING |
| REINF | REINFORCEMENT |
| REG | REGULATOR, REGISTER |
| REQD | REQUIRED |
| REV | REVISION |
| RF | ROOF, RETURN FAN |
| RHC | REHEAT COIL |
| RI | RUBBER INSULATED |
| RGS | RIGID GALVANIZED STEEL |
| RL | RAIN LEADER |
| RM | ROOM |
| RPM | REVOLUTIONS PER MINUTE |
| RVT | RESILIENT VINYL TILE |
| S | SECOND, SOUTH, SANITARY, SEWER, STRUCTURE |
| SAN | SANITARY SEWER |
| SATC | SUSPENDED ACOUSTICAL TILE CEILING |
| SCH | SCHEDULE |
| SD | SPLITTER DAMPER, STORM DRAIN |
| SE | SOUTHEAST |
| SECT | SECTION SERV SERVICE SF SILT FENCE |
| SG | SUPPLY GRILLE |
| SH | SHEET |
| SIM | SIMILAR |
| 1 PH | SINGLE PHASE |
| SKCP | SUSPENDED KEENE'S CEMENT PLASTER |
| SL | SLOPE |
| SMH | SANITARY MODULE |
| SP | STATIC PRESSURE, SINGLE POLE |
| SPC | SUSPENDED PLASTER CEILING |
| SPDT | SINGLE POLE, DOUBLE THROW |
| SPEC | SPECIFICATION |
| SPST | SINGLE POLE, SINGLE THROW |
| SQ | SQUARE |
| SR | SUPPLY REGISTER |
| SS | SANITARY SEWER |
| ST | STEAM, SINGLE THROW, STREET |
| STA | STATION STD STANDARD |
| STL | STEEL SUP SUPPORT |
| SUSP | SUSPENDED |
| SV | SHEET VINYL |
| SW | SWITCH, SIDEWALK |
| SWBD | SWITCHBOARD SWGR SWITCHGEAR |
| T | TILE,TOP,TANGENT |
| T&B | TOP AND BOTTOM |
| TC | TOP OF CURB |
| TEL | TELEPHONE |
| TEMP | TEMPERATURE, TEMPORARY |
| TERM | TERMINAL |
| 3/C | THREE CONDUCTOR |
| 3/P | THREE POLE |
| 3 WAY | THREE WAY |
| TH | TOTAL HEAD (PUMPS) |
| THRSLD | THRESHOLD |
| TO | TOP OF |
| TP | TEST PIT |
| TR | TOP REGISTER |
| TRANS | TRANSITION |
| TS | TOP OF STEEL, TOP OF STONE, TOP OF SLAB |
| TV | TELEVISION |
| TW | TOP OF WALL |
| TYP | TYPICAL |
| UG | UNDERGROUND |
| UCR | UNDER COUNTER REFRIGERATOR |
| UGE | UNDERGROUND ELECTRIC |
| UGT | UNDERGROUND TELEPHONE |
| UH | UNIT HEATER |
| UNO | UNLESS NOTED OTHERWISE |
| V | VENT,VOLT,VALVE |
| VA | VOLT AMPRE |
| VAC | VACUUM |
| VCT | VINYL COMPOSITION TILE |
| V ASB | VINYL ASBESTOS |
| VC | VARNISH CAMBRIC, VITRIFIED CLAY |
| VCP | VITRIFIED CLAY PIPE |
| VENT | VENTILATING |
| VERT | VERTICAL |
| VEST | VESTIBULE |
| VPI | VERTICAL POINT OF INTERSECTION |
| VPOC | VERTICAL POINT OF CURVE |
| VPOT | VERTICAL POINT OF TANGENT |
| VS | VENT STACK |
| VTR | VENT THRU ROOF |
| VWC | VINYL WALL COVERING |
| W | WIDTH,WASTE,WATER,WATT,WEST |
| W | WIRE, WATER LINE STRUCTURE |
| WA | WATT |
| W/ | WITH |
| W/O | WITHOUT |
| WB | WET BULB |
| WC | WATER CLOSET |
| WD | WIDTH, WINDOW DIMENSION |
| WOM | WALK OFF MATT |
| WL | WATER LEVEL WP WATERPROOF, WEATHERPROOF |
| WS | WASTE STACK, WATER SURFACE, WATERSTOP |
| WT | WEIGHT |
| WWF | WELDED WIRE FABRIC |
| XFMR | TRANSFORMER |
| X-STR | UNIT HEATER |
| 2:1 SL | 2 HORIZONTAL TO 1 VERTICAL SLOPE |
| 1 ON 2 | 1 VERTICAL ON 2 HORIZONTAL SLOPE |
| △ | DEFLECTION ANGLE |
| Ø | DIAMETER, PHASE |

## ARCHITECTURAL SYMBOLS

- COLUMN GRID LINE (NEW) — 0
- CENTERLINE
- DIMENSION LINE TO FACE OF FINISH, FACE OF CONCRETE, COLUMN LINE, OR AS NOTED. — 7'-0"
- DIMENSION TO FINISH FACE, COUNTERTOP EDGE, CLEAR, OR AS NOTED. — 7' - 0"
- WALL LEGEND: EXISTING TO REMAIN; EXISTING TO BE REMOVED; EXISTING TO REMAIN; NEW CONSTRUCTION
- ROOM TAG: ROOM NAME; ROOM NUMBER; AREA OR VOLUME
- DOOR NUMBER SYMBOL AND MINIMUM CLEARANCES — 18" MIN.; 1A101; 12" MIN.; 4" MIN.
- WALL TYPE TAG — A1
- FRAME TYPE - EXTERIOR & LOUVER — XX
- FRAME TYPE - INTERIOR — XX
- CURTAIN PANEL TYPE — 1T
- DRAWING REVISION — X
- KEYNOTE — ?
- NORTH ARROW
- LEVEL DATUM: LEVEL NAME; LEVEL ELEVATION — Name; Elevation
- DETAIL - SECTION: POSITION ON SHEET; SHEET NUMBER — X; X-XXX; SIM
- DETAIL - PLAN/ RCP: POSITION ON SHEET; SHEET NUMBER — X; X-XXX; SIM
- BUILDING SECTION: POSITION ON SHEET; SHEET NUMBER — X; X-XXX; SIM
- WALL SECTION: POSITION ON SHEET; SHEET NUMBER — X; X-XXX; SIM
- EXTERIOR ELEVATION: POSITION ON SHEET; SHEET NUMBER — X; XXXX
- INTERIOR ELEVATION: POSITION ON SHEET; SHEET NUMBER — X; XXXX
- VIEW TITLE: DRAWING NUMBER; DRAWING SCALE — A-1; View Name; 1/8" = 1'-0"
- VIEW TITLE WITH REFERENCE: DRAWING NUMBER; DRAWING SCALE; SHEET NUMBER; REFERENCING SHEET NUMBER — A-1; R101; A101; View Name; 1/8" = 1'-0"
- GRAPHIC SCALE — 0; 4'-0"; 8'-0"; 16'-0"
- PP — PUSH PLATE FOR AUTOMATIC DOOR
- CL — CIPHER LOCK, BATTERY OPERATED

## RCP SYMBOL LEGEND

- ACOUSTICAL 2' X 2' TILE CEILING
- ACOUSTICAL 2' x 4' TILE CEILING
- GWB CEILING
- IMPACT RESISTANT GWB CEILING
- NO CEILING; EXPOSED DECK
- PROJECTION SCREEN (AS SCHEDULED)
- 2' X 4' LIGHT FIXTURE
- RECESSED SLOTLIGHT
- STRIP LIGHT FIXTURE (AS SCHEDULED)
- LINEAR PENDANT STRIP FIXTURE (AS SCHEDULED)
- COVE LIGHT (AS SCHEDULED)
- RECESSED WALL WASH FIXTURE (AS SCHEDULED)
- RECESSED DOWN-LIGHT (AS SCHEDULED)
- WALL MOUNTED LIGHT
- SD — SMOKE DETECTOR
- W — WAP (WIRELESS ACCESS POINT - SEE COMM. DWGS)
- CEILING MOUNTED WIRELESS ACCESS POINT DATA OUTLET
- W — DAS ("WIRELESS" DISTRIBUTED ANTENNA SYSTEM - SEE COMM. DWGS)
- OS — VACANCY SENSOR
- S — SPEAKER
- M, C — MICROPHONE OUTLET CEILING MOUNTED
- EXIT LIGHT
- HVAC SUPPLY DIFFUSER
- HVAC RETURN GRILLE
- HVAC EXHAUST GRILLE
- CEILING ACCESS PANEL
- RADIANT HEAT PANEL
- CAMERA
- GRID START POINT
- BP — BLANK PANEL
- SH-# — WINDOW COVERING
- 8'-0" — CEILING HEIGHT AFF




CEILING EQUIPMENT / LIGHT TILE LAYOUT LOCATION (U.N.O.) FOR 2'X2', 2'X4', 2'X6', 4'X4 ACT

## MATERIALS LEGEND

- EXISTING BITUMINOUS PAVEMENT (SECTION)
- CONCRETE (SECTION)
- GRANULAR FILL
- CONCRETE MASONRY UNITS
- BRICK
- RIGID INSULATION (SECTION)
- ACOUSTIC/THERMAL INSULATION (SECTION)
- STUD WALL (PLAN & SECTION)
- EXISTING WALL TO REMAIN (PLAN & SECTION)
- DEMOLISHED WALL (PLAN & SECTION)
- STEEL (SECTION)
- ALUMINUM (SECTION)
- WOOD FINISH (SECTION)
- DIMENSIONAL LUMBER CONTINUOUS (SECTION)
- DIMENSIONAL LUMBER BLOCKING (SECTION)
- LUMBER FINISH (SECTION)
- EARTHWORK (SECTION)

## DOOR LEGEND

- TYPICAL DOOR
- DOOR WITH FULL-SWING HINGE
- PAIR DOOR
- PAIR DOOR - UNEVEN LEAF
- DOUBLE ACTING DOOR
- DOUBLE EGRESS DOOR
- BI-FOLD DOOR
- SLIDING DOOR
- OVERHEAD ROLLING DOOR
- CASED OPENING
- EXISTING DOOR
- DUTCH DOOR

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMISSION | 04/26/13 |
| | 35% SUBMISSION | 03/08/13 |
| | 20% SUBMISSION | 01/18/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
PAUL G. HEFLIN
012267
3/26/2014
ARCHITECT

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES SW DRW GW CHK HE
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ NAVFAC WASHINGTON
ATLANTIC
Walter Reed National Military Medical Center - Bethesday, Maryland
NSA/Bethesda
BETHESDA, MD
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
GENERAL - GENERAL NOTES, ABBREVIATIONS & LEGENDS

SCALE: As indicated
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065978
SHEET OF 0
G-022

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# PLUMBING SYMBOLS AND ABBREVIATIONS

| | ABBR. | SYMBOL | REMARKS |
|---|---|---|---|
| SUPPLY SYSTEMS | CW | | DOMESTIC COLD WATER |
| | CW(HP) | | DOMESTIC COLD WATER - HIGH PRESSURE |
| | CW(LP) | | DOMESTIC COLD WATER - LOW PRESSURE |
| | HW | | DOMESTIC HOT WATER |
| | HWC | | DOMESTIC HOT WATER RECIRCULATING |
| | | TEMP | DOMESTIC HOT WATER (SEE PLANS FOR WATER TEMPERATURE) |
| | | TEMP | DOMESTIC HOT WATER RECIRCULATING (SEE PLANS FOR WATER TEMPERATURE) |
| | NPW | NPW | NON POTABLE WATER (SEE PLANS FOR WATER SYSTEM TYPE) |
| | SCW | SCW | DOMESTIC SOFT COLD WATER |
| | DI | DI | DEIONIZED WATER |
| | DIC | DIC | DEIONIZED WATER RECIRCULATING |
| | ROS | ROS | REVERSE OSMOSIS SUPPLY |
| | ROR | ROR | REVERSE OSMOSIS RECIRCULATING |
| | FW | FW | FILTERED WATER |
| | | X" XX | (SIZE AND SYSTEM DESIGNATION) *SUPPLY SYSTEMS |
| DRAINAGE SYSTEMS | SR | SR | SILVER RECOVERY |
| | SS | SS | SOIL OR WASTE (BELOW FLOOR/BELOW GRADE) |
| | SS | SS | SOIL OR WASTE PIPE (INSIDE BUILDING) |
| | AW | AW | ACID WASTE (BELOW FLOOR) |
| | AW | AW | ACID WASTE |
| | SD | SD | STORM DRAIN ABOVE FLOOR |
| | SD | SD | STORM DRAIN (BELOW FLOOR/GRADE) |
| | DT | DT | DRAIN TILE |
| | PDP | PDP | PRESSURE DRAINAGE PIPING |
| | AV | AV | ACID VENT |
| | V | V | VENT PIPING |
| | OD | ORD | OVERFLOW STORM DRAIN |
| | OF | OF | OVER FLOW |
| | RV | RV | RELIEF VENT |
| | | X" XX | (SIZE AND SYSTEM DESIGNATION) *DRAINAGE SYSTEMS |
| FIRE PROTECTION SYSTEMS | F | F | FIRE PROTECTION PIPING |
| | S | S | SPRINKLER PIPING |
| | | X" XX | (SIZE AND SYSTEM DESIGNATION) *FIRE PROTECTION SYSTEMS |
| MEDICAL GAS SYSTEMS | O | O | MEDICAL OXYGEN |
| | N | N | NITROGEN |
| | NO | NO | NITROUS OXIDE |
| | MA | MA | MEDICAL COMPRESSED AIR |
| | WAGD | WAGD | WASTE ANESTHESIA GAS DISPOSAL |
| | MV | MV | MEDICAL-SURGICAL VACUUM |
| | CO2 | CO2 | CARBON DIOXIDE |
| | DA | DA | DENTAL COMPRESSED AIR |
| | DSV | DSV | DENTAL-SURGICAL VACUUM |
| | OE | OE | DENTAL ORAL EVACUATION |
| | CA | CA | COMPRESSED AIR |
| | PA | PA | PROCESS COMPRESSED AIR (SUPPLY PRESSURE) |
| | | X" XX | (SIZE AND SYSTEM DESIGNATION) *MEDICAL GAS/ AIR SYSTEMS |
| MECHANICAL SYSTEMS | SV | SV | STEAM VENT |
| | BF | BF | BOILER FEED |
| | CPD | CPD | CONDENSATE PUMP DISCHARGE |
| | BBD | BBD | BOILER BLOW DOWN |
| | LPS | LPS | LOW PRESSURE STEAM SUPPLY |
| | LPR | LPR | LOW PRESSURE STEAM RETURN |
| | MPS | MPS | MEDIUM PRESSURE STEAM SUPPLY |
| | MPR | MPR | MEDIUM PRESSURE STEAM RETURN |
| | HPS | HPS | HIGH PRESSURE STEAM SUPPLY |
| | HPR | HPR | HIGH PRESSURE STEAM RETURN |
| | HWS | HWS | HEATING HOT WATER SUPPLY |
| | HWR | HWR | HEATING HOT WATER RETURN |
| | HCWS | HCWS | HOT - CHILLED WATER SUPPLY |
| | HCWR | HCWR | HOT - CHILLED WATER RETURN |
| | CWS | CWS | CHILLED WATER SUPPLY |
| | CWR | CWR | CHILLED WATER RETURN |
| | *HWS | *HWS | HEATING HOT WATER SUPPLY (* SEE PLANS FOR ZONE DESIGNATION) |
| | *HWR | *HWR | HEATING HOT WATER RETURN (* SEE PLANS FOR ZONE DESIGNATION) |
| | HPWS | HPWS | HEAT PUMP WATER SUPPLY |
| | HPWR | HPWR | HEAT PUMP WATER RETURN |
| | GHS | GHS | GLYCOL HEATING HOT WATER SUPPLY |
| | GHR | GHR | GLYCOL HEATING HOT WATER RETURN |
| | GCS | GCS | GLYCOL CHILLED WATER SUPPLY |
| | RW | RW | RECLAIMED WATER |
| | GCR | GCR | GLYCOL CHILLED WATER RETURN |
| | CS | CS | CONDENSER WATER SUPPLY |
| | CR | CR | CONDENSER WATER RETURN |
| | CD | CD | CONDENSATE DRAIN |
| | | X" XX | (SIZE AND SYSTEM DESIGNATION) *MECHANICAL SYSTEMS |

# PLUMBING SYMBOLS AND ABBREVIATIONS

| ABBR. | 2-LINE SYMBOL | 1-LINE SYMBOL | REMARKS |
|---|---|---|---|
| | | | DETAIL OR SECTION DESIGNATION (* DETAIL OR SECTION REFERENCE ) (* * SHEET NUMBER DETAIL OR SECTION DRAWN ON) |
| | | N E | NEW TO EXISTING DESIGNATION |
| | | * | EQUIPMENT DESIGNATION ( * EQUIPMENT MARK NUMBER ) |
| | | * | REFERENCE DESIGNATION ( * NOTE NUMBER ) |
| | | * | REFERENCE DESIGNATION ( * RISER NUMBER ) |
| | | H | HUMIDISTAT OR HUMIDITY SENSOR |
| | | T | THERMOSTAT OR TEMPERATURE SENSOR |
| | | P | PRESSURE SWITCH OR PRESSURE SENSOR |
| | | | ISOLATION VALVE ( BALL/ BUTTERFLY/ GATE - SEE SPECIFICATIONS) *MECHANICAL/ SUPPLY SYSTEMS |
| | | | BALL VALVE *SUPPLY SYSTEMS |
| | | | BUTTERFLY VALVE *SUPPLY SYSTEMS |
| | | | GATE VALVE *SUPPLY SYSTEMS |
| | | | GLOBE VALVE *SUPPLY SYSTEMS |
| PLV | | | PLUG VALVE *MECHANICAL SYSTEMS |
| GV | | | CHECK VALVE (ARROW INDICATES DIRECTION OF FLOW) *SUPPLY SYSTEMS |
| | | | GAS VALVE |
| | | | BALANCING VALVE |
| PRV | | | PRESSURE REDUCING VALVE *SUPPLY SYSTEMS |
| | | | CIRCUIT SETTER *SUPPLY SYSTEMS |
| VB | | VB | VACUUM BREAKER *SUPPLY SYSTEMS |
| | | | FLOW MEASURING DEVICE |
| | | | PIPE UNION OR FLANGE *SUPPLY SYSTEMS |
| | | | "Y" STRAINER *DRAINAGE SYSTEMS |
| | | | RELIEF VALVE |
| | | | THERMOMETER |
| | | | PRESSURE GAGE WITH GAGE COCK |
| | | | ARROW INDICATES DOWNWARD PITCH OF PIPE |
| | | | ARROW INDICATES DIRECTION OF FLOW |
| | | | PIPE ECCENTRIC REDUCER |
| | | | PIPE CONCENTRIC REDUCER |
| | | | CAPPED END |
| | | | PIPE ELBOW UP |
| | | | PIPE ELBOW DOWN |
| | | | PIPE TEE UP |
| | | | PIPE TEE DOWN |
| | | | FLEXIBLE CONNECTOR |
| | | | EXPANSION JOINT |
| | | | AUTOMATIC FLOW CONTROL VALVE |
| | | | THERMOSTATIC EXPANSION VALVE |
| | | | AUTOMATIC AIR VENT |
| | | | MANUAL AIR VENT |
| | | | AUTOMATIC TWO-WAY VALVE |
| | | | AUTOMATIC THREE-WAY VALVE |
| WHA | | | WATER HAMMER ARRESTOR |

# PLUMBING SYMBOLS AND ABBREVIATIONS

| ABBR. | 2-LINE SYMBOL | 1-LINE SYMBOL | REMARKS |
|---|---|---|---|
| | | | STEAM TRAP |
| | | | PIPE ALIGNMENT GUIDE |
| | | | PIPE ANCHOR |
| HCO | | HCO | HORIZONTAL CLEAN-OUT |
| FCO | | FCO | FLOOR CLEAN-OUT |
| WCO | | WCO | WALL CLEAN-OUT |
| FS | * FS- * | * FS- * | FLOOR SINK - ( * SIZE ) FS- ( * TYPE ) |
| FD | * FD- * | * FD- * | FLOOR DRAIN - ( * SIZE ) FD- ( * TYPE ) |
| AD | * AD- * | * AD- * | AREA DRAIN - ( * SIZE ) AD- ( * TYPE ) |
| RD | * RD- * | * RD- * | ROOF DRAIN - ( * SIZE ) RD- ( * TYPE ) |
| ORD | * ORD- * | * ORD- * | OVERFLOW ROOF DRAIN - ( * SIZE ) RD- ( * TYPE ) |
| RD | | | ROOF DRAIN - ( * SIZE ) RD- ( * TYPE ) DIAGRAM |
| ORD | | | |
| WH | | WH- * | WALL HYDRANT - WH- ( * TYPE ) |
| YH | | YH- * | YARD HYDRANT - YH- ( * TYPE ) |
| HB | | HB- * | HOSE BIBB - HB- ( * TYPE ) |
| | | | HOSE END DRAIN VALVE BACKFLOW PREVENTER (ARROW INDICATES DIR. OF FLOW) |
| BFP | | | |
| | | CVA | CENTRAL VACUUM INLET - HOUSEKEEPING |
| | | | |
| | O | O | MEDICAL OXYGEN OUTLET |
| | A | A | MEDICAL COMPRESSED AIR OUTLET |
| | V | V | MEDICAL VACUUM INLET |
| | N | N | MEDICAL NITROGEN OUTLET |
| | NO | NO | MEDICAL NITROUS OXIDE OUTLET |
| | E | E | MEDICAL ANESTHESIA EVACUATION INLET |
| | A | A | COMPRESSED AIR OUTLET |
| | P | P | PROCESS COMPRESSED AIR OUTLET |
| | CO2 | CO2 | CARBON DIOXIDE OUTLET |
| | DA | DA | DENTAL COMPRESSED AIR OUTLET |
| | DSV | DSV | DENTAL-SURGICAL VACUUM OUTLET |
| | | | |
| | G | G | LABORATORY NATURAL GAS OUTLET |
| | W | W | HIGH PURITY WATER OUTLET |
| | | | |
| | | | UPRIGHT SPRINKLER |
| | | | SIDEWALL SPRINKLER HEAD |
| | | | PENDANT SPRINKLER HEAD |
| | | F | WATER FLOW DETECTOR |
| | | | FIRE DEPARTMENT (SIAMESE) CONNECTION |
| | | | BALL CHECK OR DRIP VALVE |
| | | | WALL TYPE INDICATOR ASSEMBLY |
| | | | HOSE VALVE MANIFOLD (PUMP FLOW TEST CONNECTION) |
| O S & Y | | | OUTSIDE SCREW AND YOKE VALVE |

# PLUMBING ABBREVIATIONS

| ABBR. | REMARKS | ABBR. | REMARKS |
|---|---|---|---|
| AAP | AREA ALARM PANEL | I/O | INPUT/OUTPUT |
| ADJ | ADJUSTABLE | KEC | KITCHEN EQUIPMENT CONTRACTOR |
| AFD | ADJUSTABLE FREQUENCY DRIVE | KW | KILOWATT(S) |
| AFF | ABOVE FINISHED FLOOR | LAT | LEAVING AIR TEMPERATURE |
| ALT | ALTERNATE | #LBS | POUNDS |
| AP | ACCESS PANEL | LF | LINEAR FOOT, LINEAR FEET |
| APD | AIR PRESSURE DROP | LWT | LEAVING WATER TEMPERATURE |
| AVG | AVERAGE | MAP | MASTER ALARM PANEL |
| BAS | BUILDING AUTOMATION SYSTEM | MAX | MAXIMUM |
| BDD | GRAVITY BACKDRAFT DAMPER | MBH | THOUSANDS BTU/HR |
| BTUH | BRITISH THERMAL UNITS PER HOUR | MCC | MOTOR CONTROL CENTER |
| BV | BALANCING VALVE | MFR | MANUFACTURER |
| CAP | CAPACITY | MISC | MISCELLANEOUS |
| CFH | CUBIC FEET PER HOUR | MIN | MINUTE(S), MINIMUM |
| CFM | CUBIC FEET PER MINUTE | MTD | MOUNTED |
| CI | CAST IRON | NC | NORMALLY CLOSED, NOISE CRITERIA |
| CLG | CEILING, COOLING | NO | NORMALLY OPEN, NUMBER |
| CM | COFFEEMAKER | NR | NOISE REDUCTION |
| COND | CONDENSER, CONDENSATE | NRC | NOISE REDUCTION COEFFICIENT |
| CONN | CONNECTION | NTS | NOT TO SCALE |
| DB | DRY BULB | OD | OUTSIDE DIAMETER |
| DB | DECIBEL(S) | OI | OIL INTERCEPTOR |
| DCA | DENTAL COMPRESSED AIR | O S & Y | OUTSIDE SCREW AND YOKE VALVE |
| DDC | DIRECT DIGITAL CONTROL | PD | PRESSURE DROP |
| DIA | DIAMETER | PH | PHASE |
| DLV | DENTAL LAB VACUUM | PLBG | PLUMBING |
| DN | DOWN | PSI | POUND(S) PER SQUARE INCH |
| DX | DIRECT EXPANSION | PSIA | POUND(S) PER SQUARE INCH ABSOLUTE |
| EAT | ENTERING AIR TEMPERATURE | PSIG | POUND(S) PER SQUARE INCH GAGE |
| EFF | EFFICIENCY | QTY | QUANTITY |
| ESP | EXTERNAL STATIC PRESSURE | REQD | REQUIRED |
| EVP | EVAC PUMP | RH | RELATIVE HUMIDITY |
| EWT | ENTERING WATER TEMPERATURE | RL | REFRIGERANT LIQUID |
| EL | ELEVATION | RPM | REVOLUTIONS PER MINUTE |
| EXH | EXHAUST | RM | ROOM |
| EXST | EXISTING | RS | REFRIGERANT SUCTION |
| F | FAHRENHEIT | SAT | SATURATION |
| FL | FLOOR | SCFM | STANDARD CFM |
| FLA | FULL LOAD AMPS | SHT | SHEET |
| FLEX | FLEXIBLE | SIM | SIMILAR |
| FPM | FEET PER MINUTE | SP | SUMP PUMP, STATIC PRESSURE |
| FUT | FUTURE | TD | TEMPERATURE DIFFERENTIAL |
| FXTR | FIXTURE | TEMP | TEMPERATURE |
| GAL | GALLON(S) | TP | TRAP PRIMER PIPE |
| GPH | GALLON(S) PER HOUR | TPV | TRAP PRIMER VALVE |
| GPM | GALLON(S) PER MINUTE | TSP | TOTAL STATIC PRESSURE |
| HG | HOT GAS | UNO | UNLESS NOTED OTHERWISE |
| HP | HORSEPOWER | V | SANITARY VENT |
| HR | HOUR | VB | VACUUM BREAKER |
| HTG | HEATING HOT | VAV | VARIABLE AIR VOLUME |
| HZ | HERTZ | VEL | VELOCITY |
| ID | INSIDE DIAMETER | VTR | VENT THRU ROOF |
| IE | INVERT ELEVATION | W | WATT (S) |
| IN | INCH (ES) | WG | WATER GAUGE |
| INV | INVERT | WPD | WATER PRESSURE DROP |
| SQ | SQUARE | ZVB | ZONE VALVE BOX |

NOTE: ALL SYMBOLS AND ABBREVIATIONS INDICATED MAY NOT BE APPLICABLE TO THIS PROJECT.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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COMMONWEALTH OF VIRGINIA
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Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER


HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500


APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| | | | |
|---|---|---|---|
| DES | CBH | DRW CBH | CHK AB |
| PM/DM | CHEMENJU/HILL | | |
| BRANCH MANAGER | N/A | | |
| CHIEF ENG/ARCH | TOM COX | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE, CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING SYMBOLS AND ABBREVIATIONS

SCALE: 3/32" = 1'-0"
EPROJECT NO: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065979
SHEET P-001 OF 0

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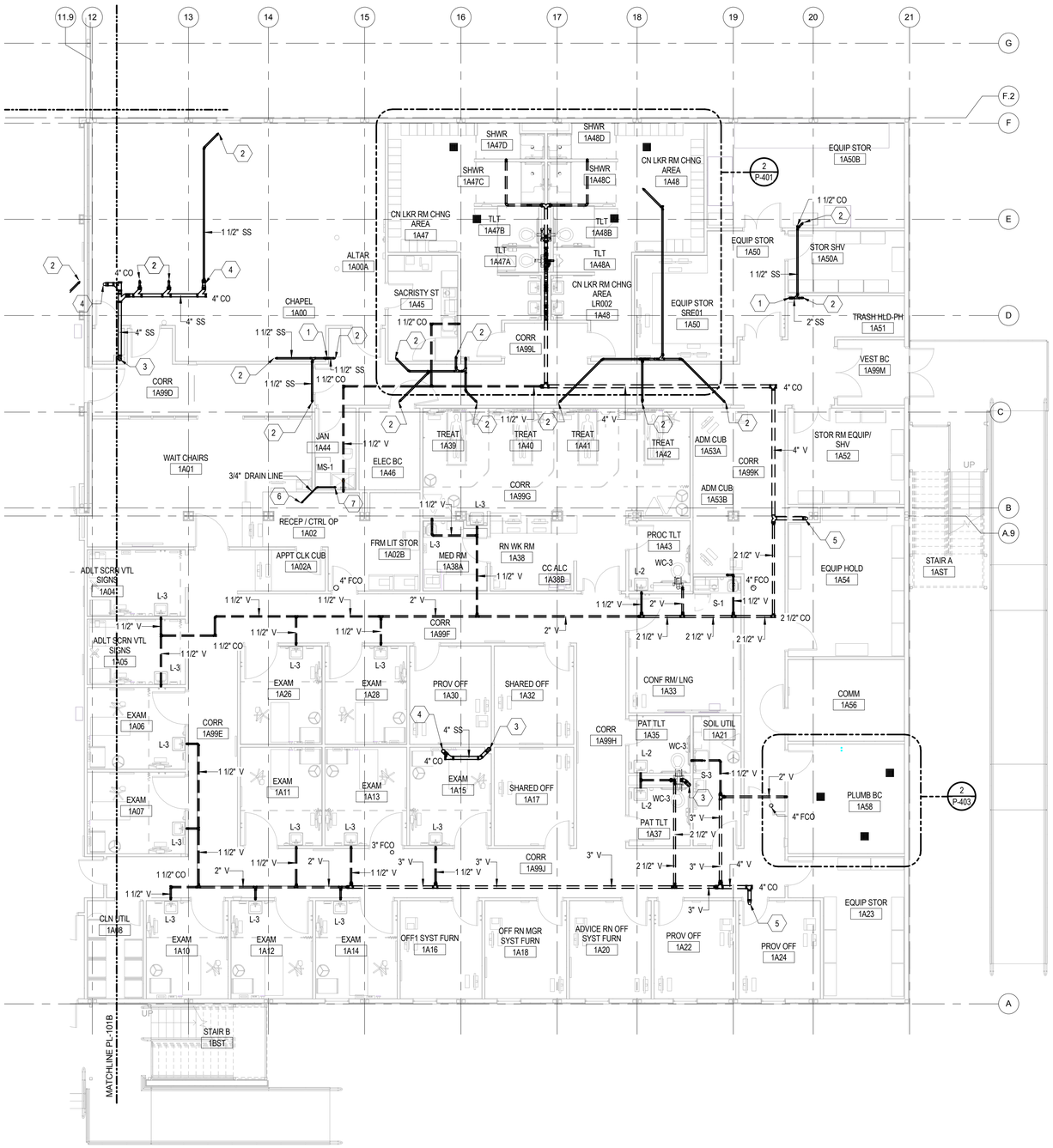


1 PLUMBING - GRAVITY PIPING PLAN - FIRST FLOOR - AREA A

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. 2" SS DN
2. 1 ½" SS FROM ABOVE
3. 4" SS DN
4. 4" SS FROM ABOVE
5. 4" VENT UP
6. 3/4" DRAIN LINE FROM ROOF HYDRANT ABOVE
7. 3/4" DRAIN LINE TO SPILL DOWN TO MOP SINK

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
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ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| DES | CBH | DRW | CBH | CHK | AB |
|---|---|---|---|---|---|
| PMDM | CHEMENJU/HILL | | | | |
| BRANCH MANAGER | N/A | | | | |
| CHIEF ENG/ARCH | TOM COX | | | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE: BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - GRAVITY PIPING PLAN - FIRST FLOOR - AREA A

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065995
SHEET 0 OF 0

PL-101A

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KEY PLAN

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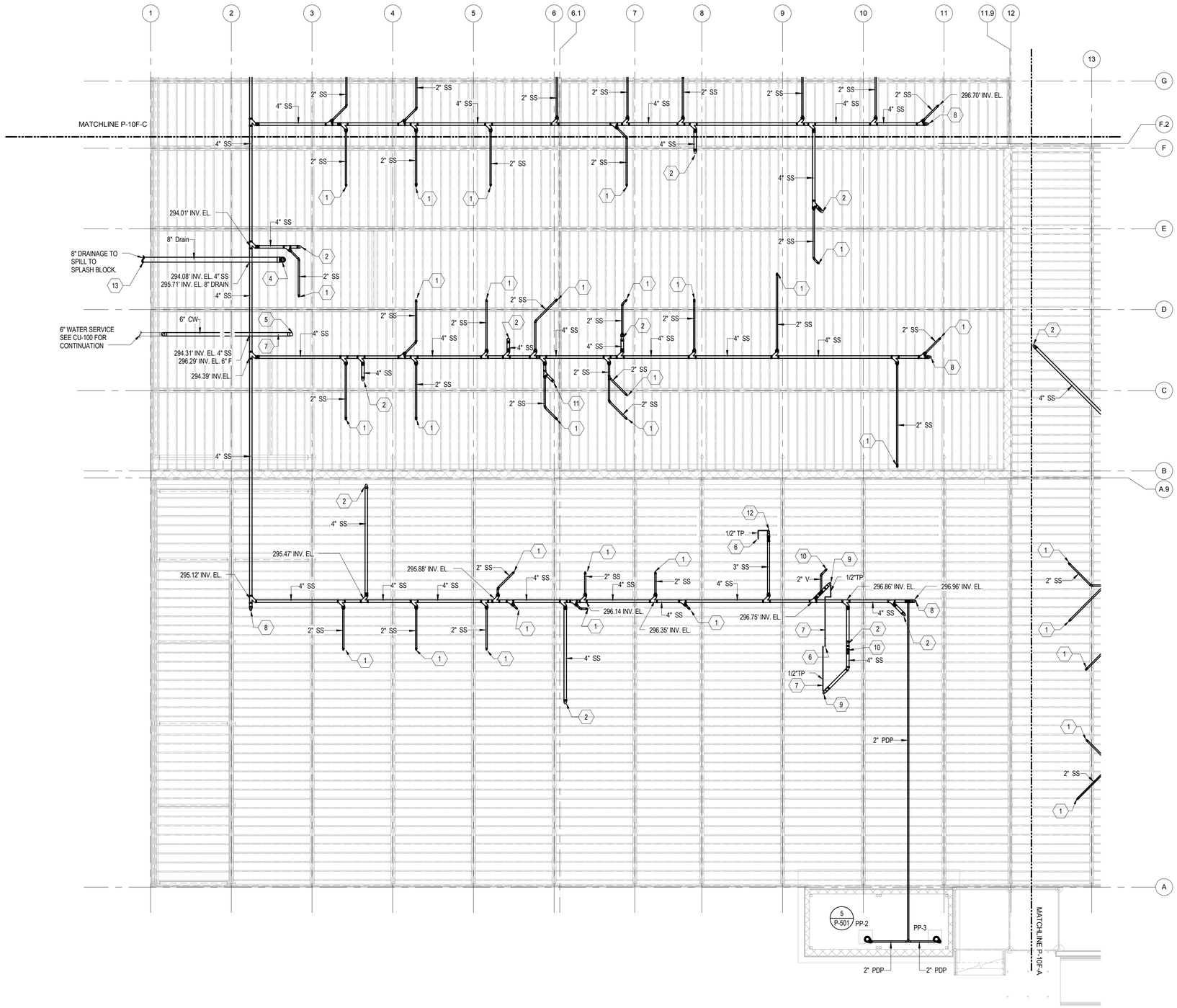


1 PLUMBING - SUPPLY & DRAINAGE PLAN - FOUNDATION - AREA B

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

1. ALL PIPING LOCATED IN THE UNHEATED CRAWL SPACE SHALL BE INSULATED.
2. ALL P- TRAPS IN THE UNHEATED CRAWL SPACE SHALL BE INSULATED AND HEAT TRACED.
3. ALL EXPOSED WATER PIPING IN UNHEATED CRAWLSPACE SHALL BE INSULATED AND HEAT TRACED.
4. ALL DRAIN PIPING TO BE SLOPED AT 1/4" PER FOOT

## KEYED NOTES:

1. 2" SS FROM ABOVE
2. 4" SS FROM ABOVE
3. 1 ½" SS FROM ABOVE
4. 8" DRAINAGE FROM ABOVE
5. 6" WATER SERVICE INTO BUILDING.
6. 1/2" TP FROM ABOVE.
7. PROVIDE 5 WATTS LF HEAT TRACING CABLE ON ALL EXPOSED DOMESTIC WATER, FIRE, & TRAP PRIMER PIPING IN UNHEATED CRAWL SPACE, TYPICAL. REFER TO SPECIFICATION 23 05 15 FOR HEAT TRACING CABLE.
8. 4" SS FROM CO ABOVE
9. 4" SS FROM FS ABOVE; PROVIDE 5 WATTS LF HEAT TRACING CABLE TO SANITARY P-TRAPS IN UNHEATED CRAWL SPACE, TYPICAL. REFER TO SPECIFICATION 23 05 15 FOR HEAT TRACE CABLE.
10. 2" VENT UP
11. 3" SS FROM ABOVE
12. 3" SS FROM MS ABOVE; PROVIDE 5 WATTS LF HEAT TRACING CABLE TO SANITARY P-TRAPS IN UNHEATED CRAWL SPACE, TYPICAL. REFER TO SPECIFICATION 23 05 15 FOR HEAT TRACE CABLE.
13. PROVIDE RODENT SCREEN ON END OF DRAIN LINE.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR


ARCHITECTURE | ENGINEERING & CONSULTING

1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500


APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | CBH | DRW | CBH | CHK | AB |
|---|---|---|---|---|---|

PM/DM: CHEMENJU/HILL

BRANCH MANAGER: N/A

CHIEF ENG/ARCH: TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE, CITY, STATE: BETHESDA, MD

PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING

PLUMBING - SUPPLY AND DRAINAGE PLAN - FOUNDATION - AREA B

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

EPROJECT NO.: 1151333

CONSTR. CONTR. NO.: N62470-09-D-9044

NAVFAC DRAWING NO.: 13065981

SHEET 0 OF 0

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KEY PLAN

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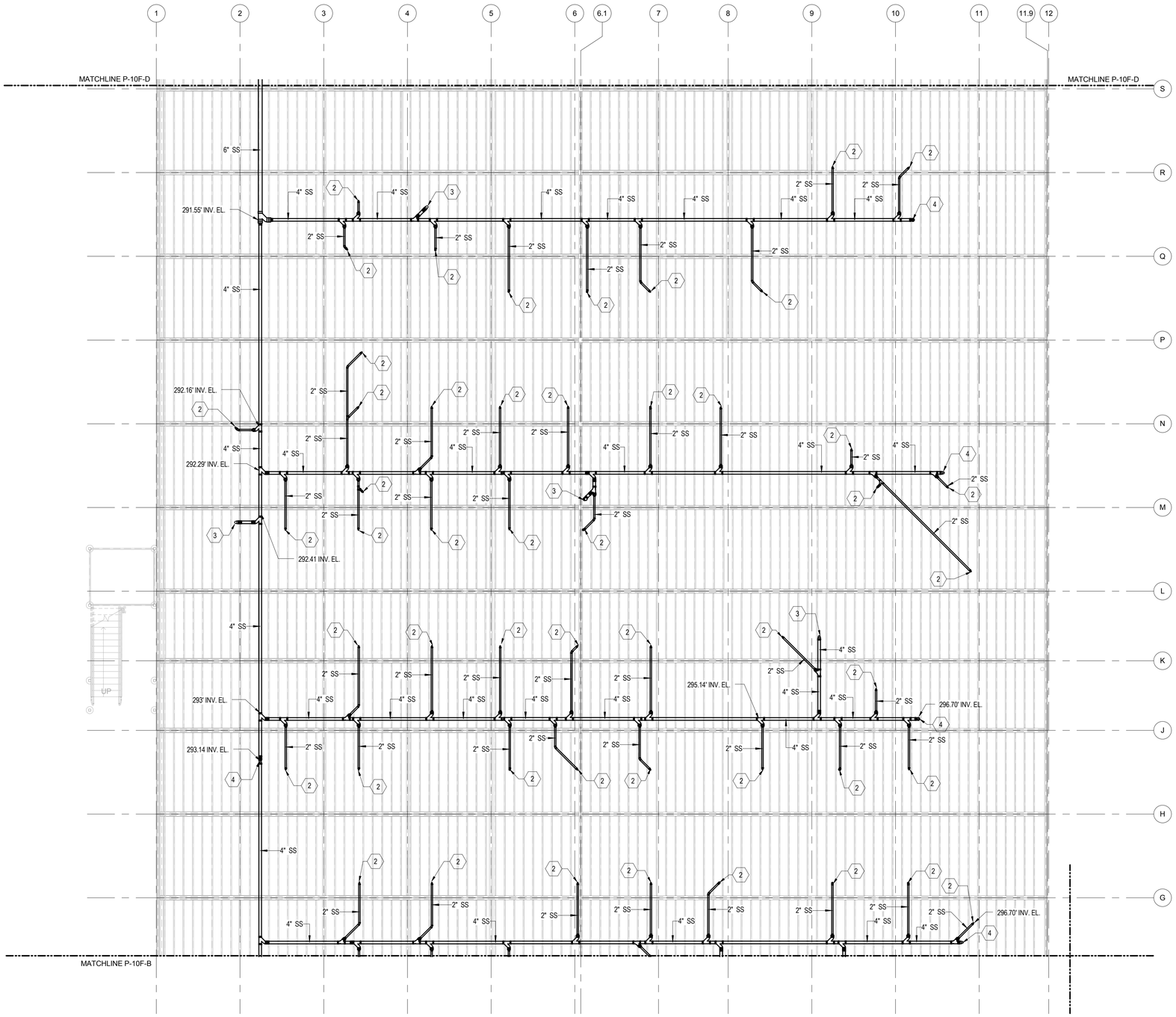


1 PLUMBING - SUPPLY & DRAINAGE PLAN - FOUNDATION - AREA C

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

1. ALL PIPING LOCATED IN THE UNHEATED CRAWL SPACE SHALL BE INSULATED.
2. ALL P- TRAPS IN THE UNHEATED CRAWL SPACE SHALL BE INSULATED AND HEAT TRACED.
3. ALL EXPOSED WATER PIPING IN UNHEATED CRAWLSPACE SHALL BE INSULATED AND HEAT TRACED.
4. ALL DRAIN PIPING TO BE SLOPED AT 1/4" PER FOOT

## KEYED NOTES:

1. 1 ½" SS FROM ABOVE
2. 2" SS FROM ABOVE
3. 4" SS FROM ABOVE
4. 4" SS FROM CO ABOVE

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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COMMONWEALTH OF VIRGINIA
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Lic. No. 0402042516
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PROFESSIONAL ENGINEER

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SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE : CITY STATE
PROJECT STATION/INSTALLATION
BETHESDA, MD
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - SUPPLY AND DRAINAGE PLAN - FOUNDATION - AREA C

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065983
SHEET OF 0

P-10F-C

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KEY PLAN

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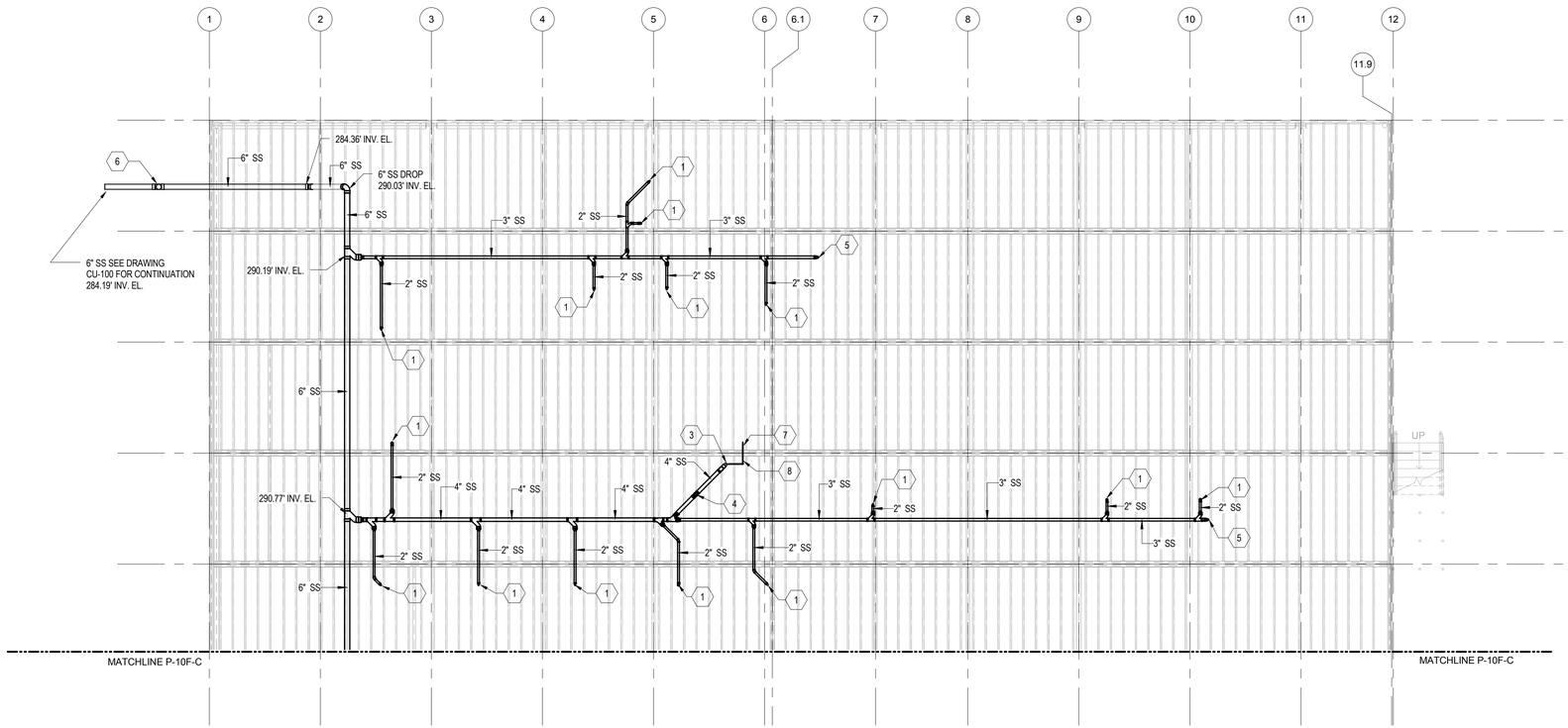


## 1 PLUMBING - SUPPLY & DRAINAGE PLAN - FOUNDATION - AREA D

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

1. ALL PIPING LOCATED IN THE UNHEATED CRAWL SPACE SHALL BE INSULATED.
2. ALL P- TRAPS IN THE UNHEATED CRAWL SPACE SHALL BE INSULATED AND HEAT TRACED.
3. ALL EXPOSED WATER PIPING IN UNHEATED CRAWLSPACE SHALL BE INSULATED AND HEAT TRACED.
4. ALL DRAIN PIPING TO BE SLOPED AT 1/4" PER FOOT

## KEYED NOTES:

1. 2" SS FROM ABOVE
2. 1 ½" SS FROM ABOVE
3. 4" SS FROM FS ABOVE; PROVIDE 5 WATTS LF HEAT TRACING CABLE TO SANITARY P-TRAPS IN UNHEATED CRAWL SPACE, TYPICAL. REFER TO SPECIFICATION 23 05 15 FOR HEAT TRACE CABLE.
4. 2" VENT UP
5. 3" SS FROM CO ABOVE
6. 6" CO TO FG
7. 1/2" TP FROM ABOVE.
8. PROVIDE 5 WATTS LF HEAT TRACING CABLE ON ALL EXPOSED DOMESTIC WATER, FIRE, & TRAP PRIMER PIPING IN UNHEATED CRAWL SPACE, TYPICAL. REFER TO SPECIFICATION 23 05 15 FOR HEAT TRACING CABLE.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

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ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND — AGENCY
BASE, CITY, STATE
PROJECT STATION/INSTALLATION
BETHESDA, MD
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - SUPPLY AND DRAINAGE PLAN - FOUNDATION - AREA D

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065982
SHEET OF 0
P-10F-D

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KEY PLAN

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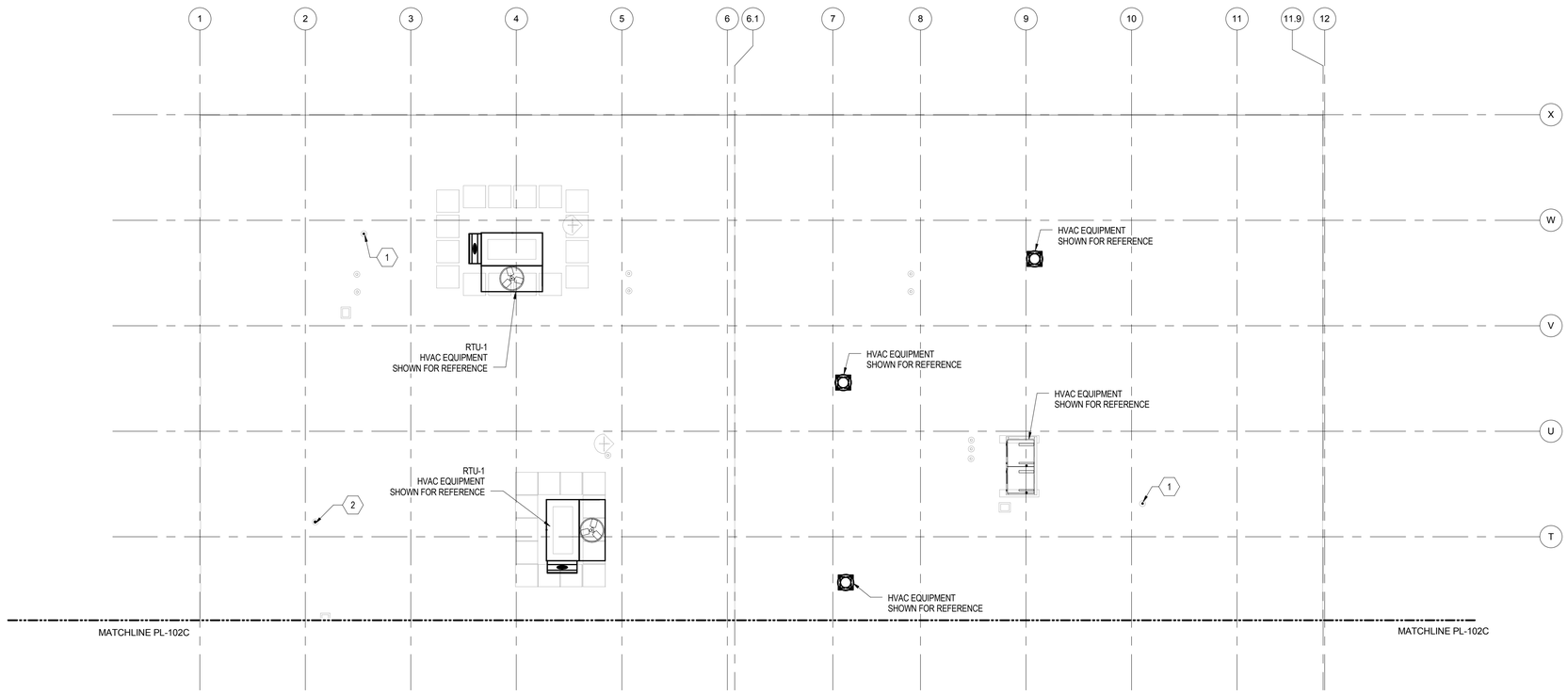


1 PLUMBING - SUPPLY AND DRAINAGE PLAN - ROOF - AREA D

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1 2" VTR
2 3" VTR

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
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3/26/14
PROFESSIONAL ENGINEER

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1101 KING STREET
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ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - SUPPLY AND DRAINAGE PLAN - ROOF - AREA D

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065984
SHEET OF 0

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KEY PLAN

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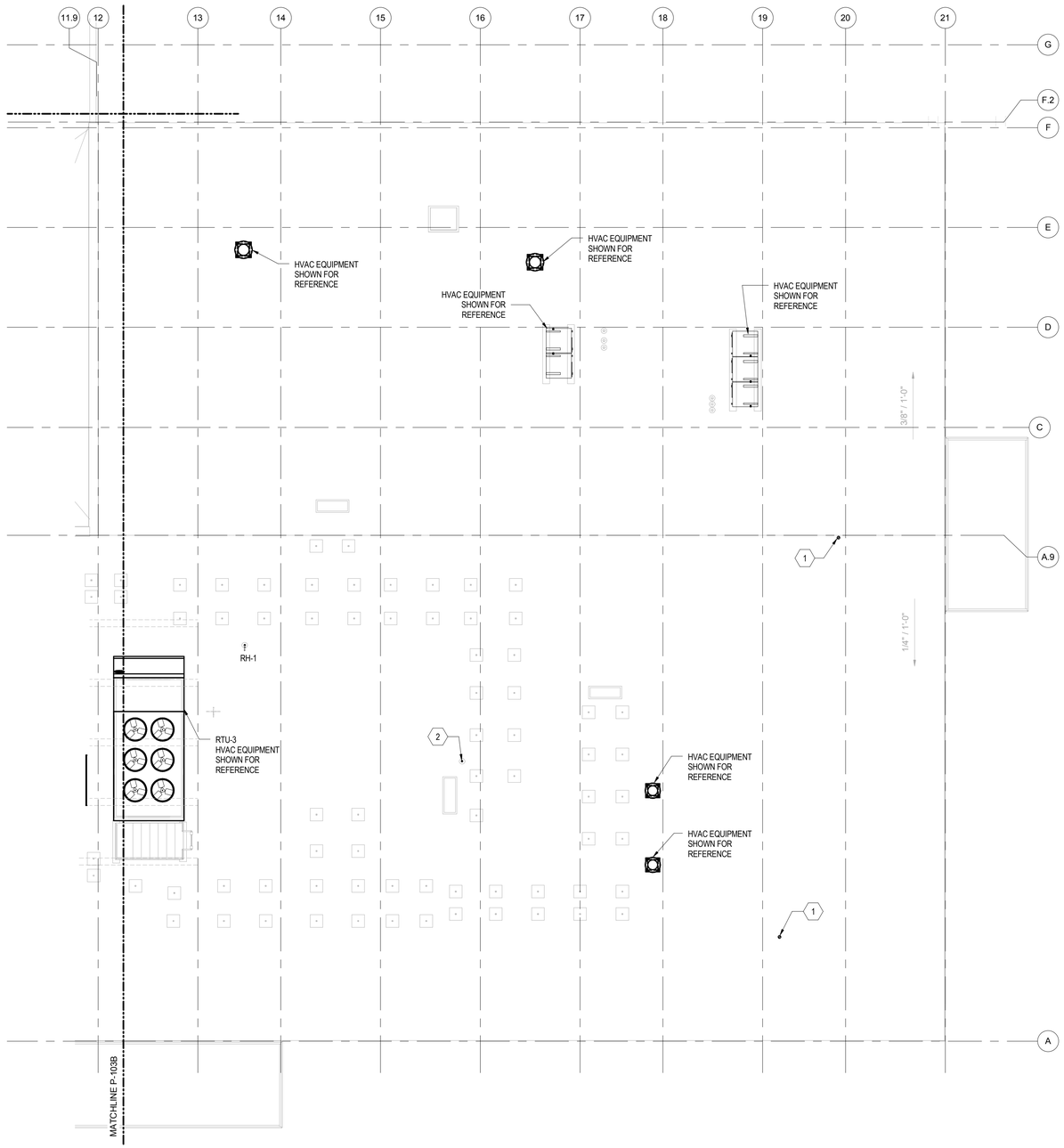


1 PLUMBING - SUPPLY AND DRAINAGE PLAN - ROOF AREA A

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1 4" VTR
2 2" VTR

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

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703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| | | | |
|---|---|---|---|
| DES | CBH | DRW CBH | CHK AB |
| PM/DM | CHEMENJU/HILL | | |
| BRANCH MANAGER | N/A | | |
| CHIEF ENG/ARCH | TOM COX | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE, CITY, STATE: BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING

PLUMBING - SUPPLY AND DRAINAGE PLAN - ROOF - AREA A

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO.: N62470-09-D-9044
NAVFAC DRAWING NO.: 13065985
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KEY PLAN

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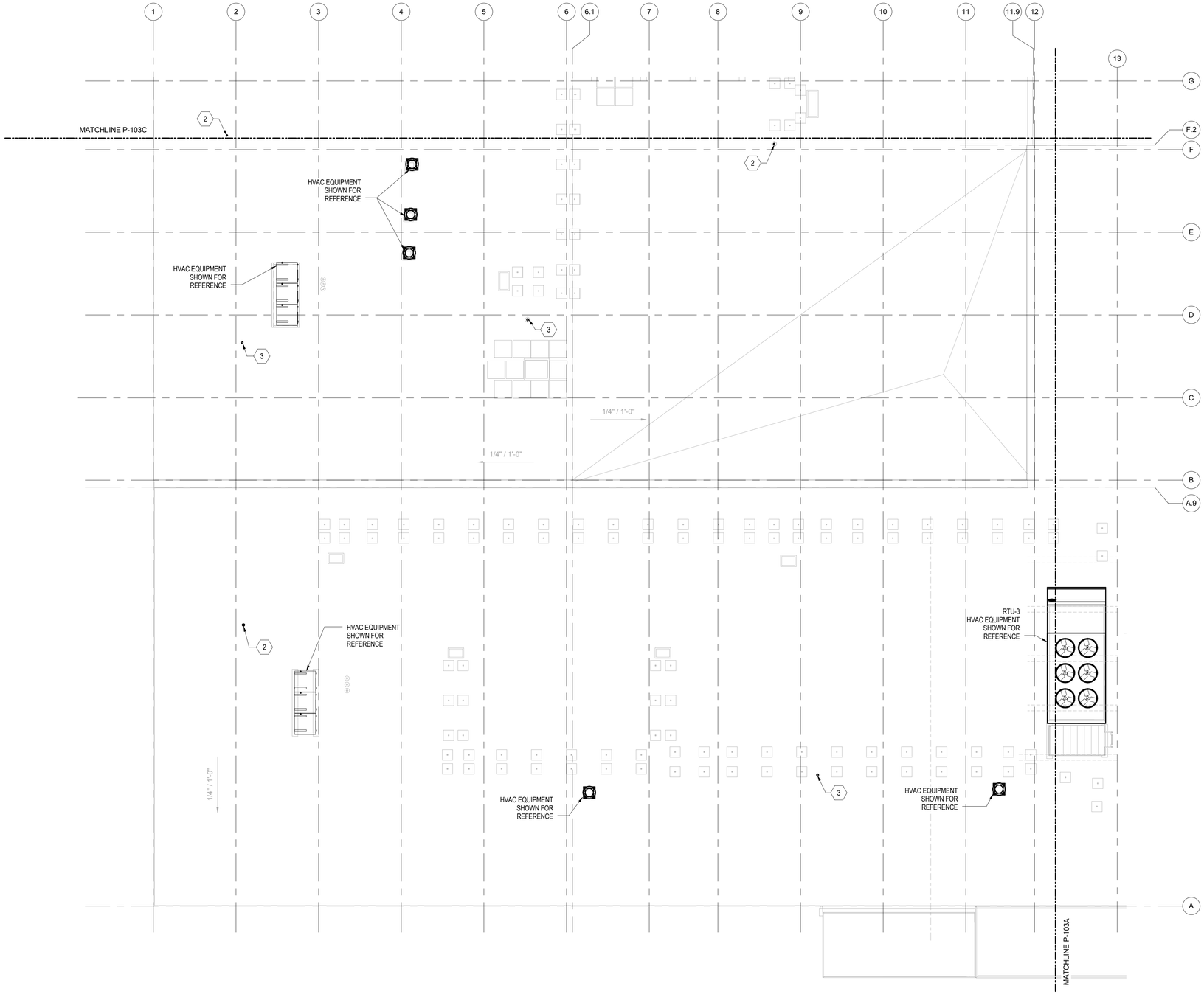


1 PLUMBING - SUPPLY AND DRAINAGE PLAN - ROOF AREA B

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1 2" VTR
2 3" VTR
3 4" VTR

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

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1101 KING STREET
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ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CBH | DRW CBH | CHK AB
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE, CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - SUPPLY AND DRAINAGE PLAN - ROOF - AREA B

SCALE: 1/8" = 1'-0"
EPROJECT NO: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065986
SHEET OF 0
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KEY PLAN

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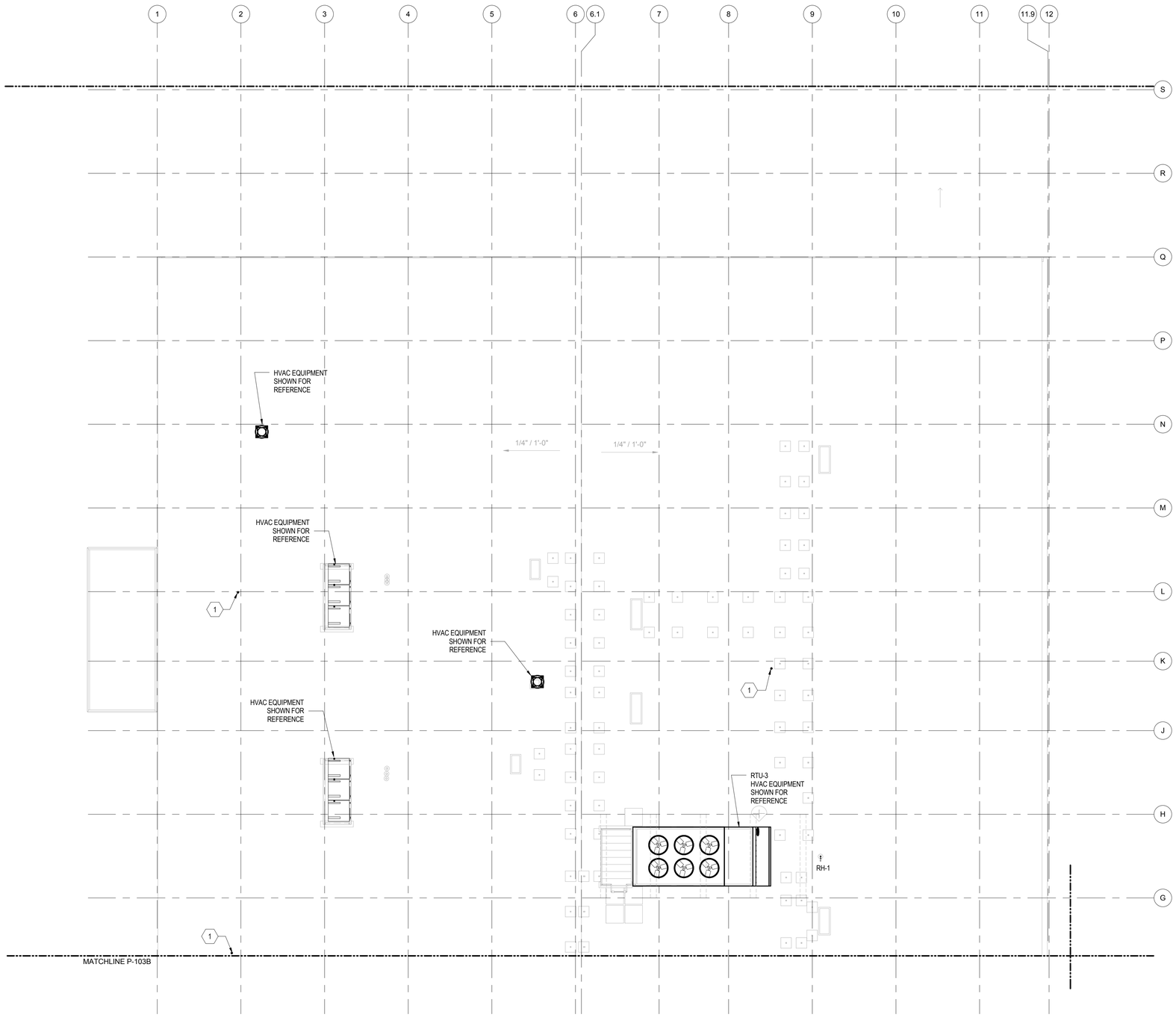


1 PLUMBING - SUPPLY AND DRAINAGE PLAN - ROOF AREA C

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1 3" VTR

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR

ARCHITECTURE | ENGINEERING & CONSULTING

1101 KING STREET
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ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB

PM/DM CHEMENJU/HILL

BRANCH MANAGER N/A

CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
PROJECT STATION/INSTALLATION
BETHESDA, MD
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - SUPPLY AND DRAINAGE PLAN - ROOF - AREA C

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

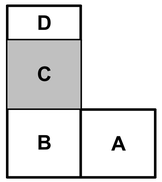
EPROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13065987

SHEET OF 0

P-103C




KEY PLAN

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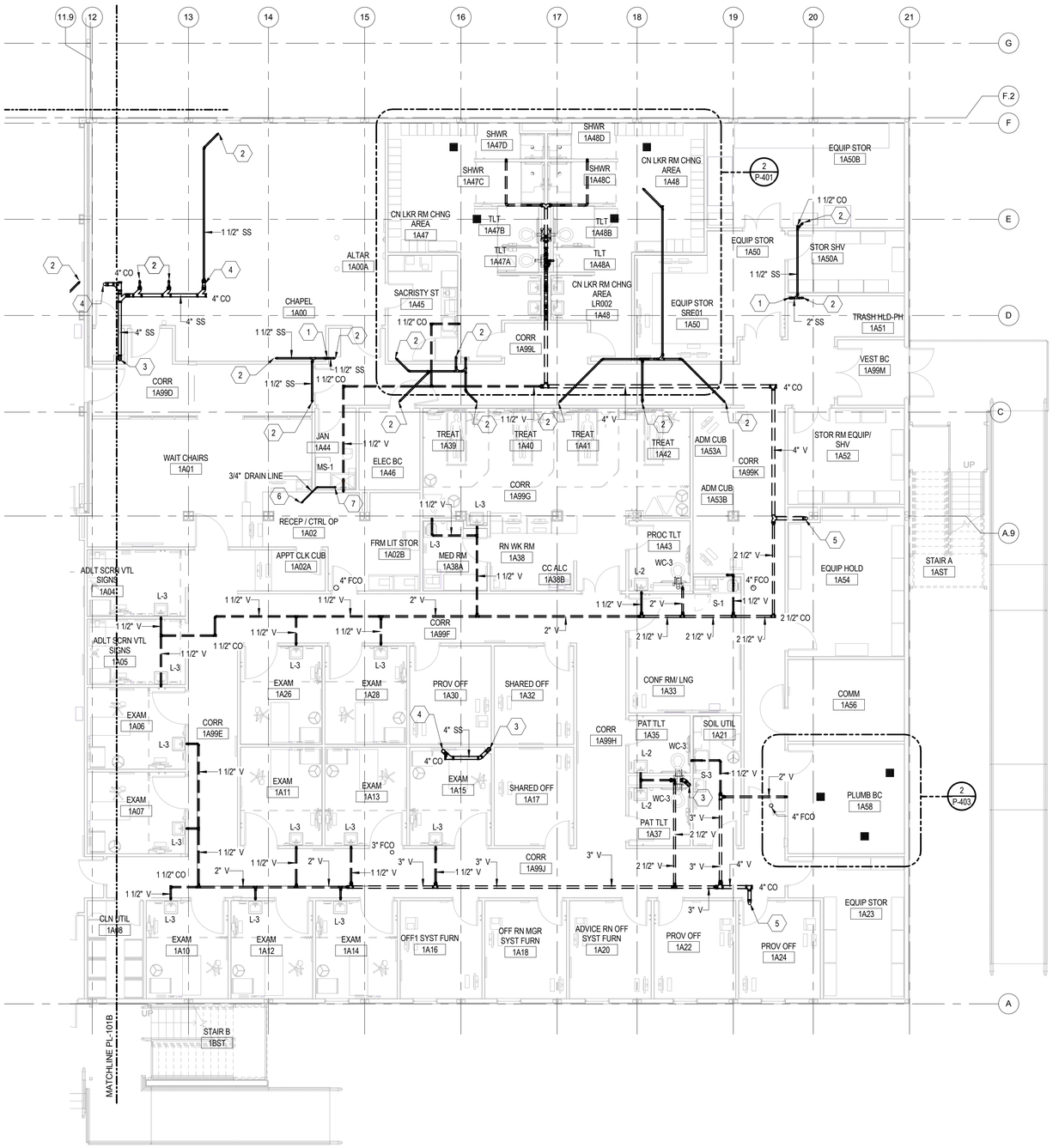


1 PLUMBING - GRAVITY PIPING PLAN - FIRST FLOOR - AREA A

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. 2" SS DN
2. 1 ½" SS FROM ABOVE
3. 4" SS DN
4. 4" SS FROM ABOVE
5. 4" VENT UP
6. 3/4" DRAIN LINE FROM ROOF HYDRANT ABOVE
7. 3/4" DRAIN LINE TO SPILL DOWN TO MOP SINK

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| DES | CBH | DRW | CBH | CHK | AB |
|---|---|---|---|---|---|
| PMDM | CHEMENJU/HILL | | | | |
| BRANCH MANAGER | N/A | | | | |
| CHIEF ENG/ARCH | TOM COX | | | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - GRAVITY PIPING PLAN - FIRST FLOOR - AREA A

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065995
SHEET 0 OF 0

PL-101A

KEY PLAN

D
C
B A

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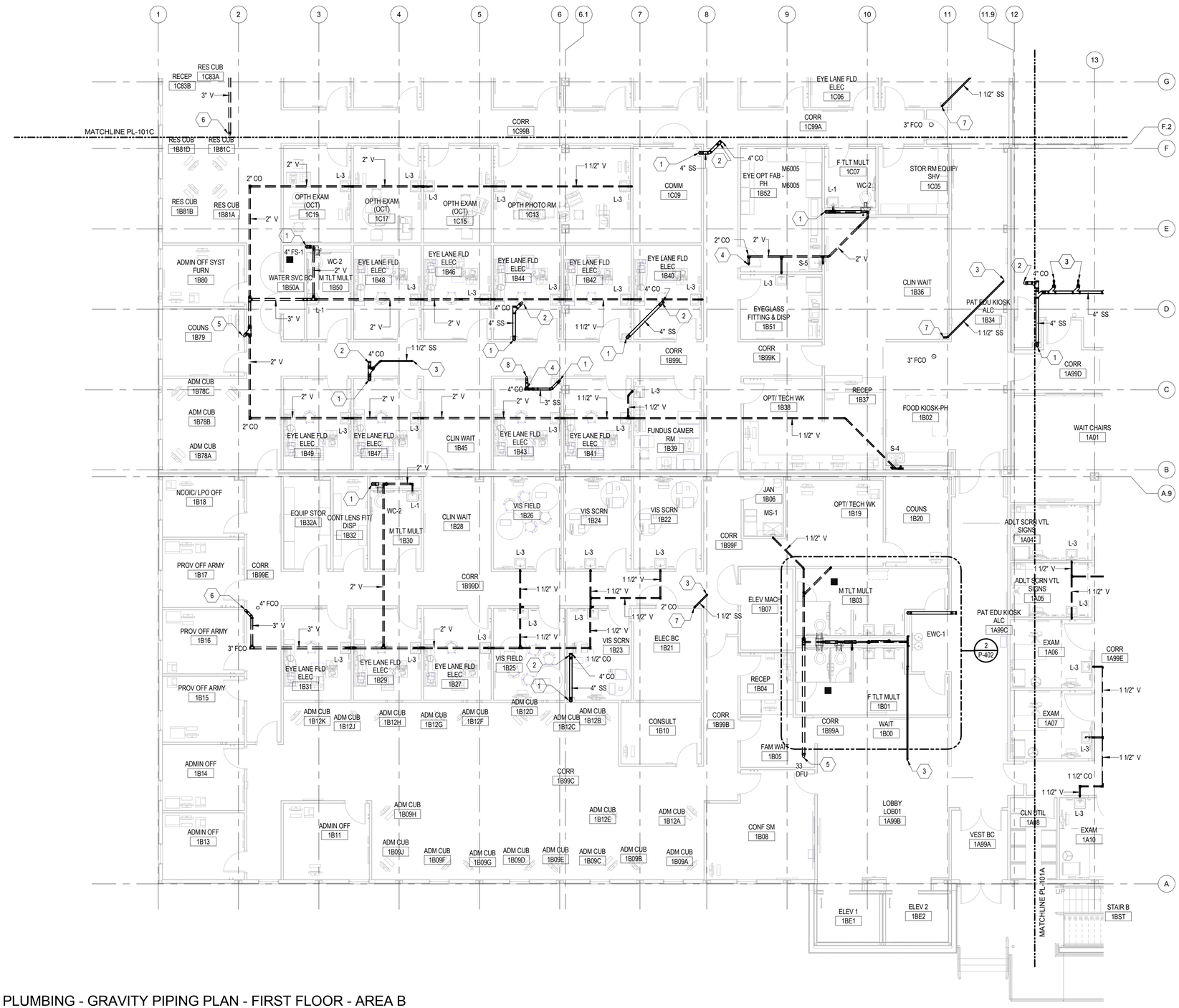


1 PLUMBING - GRAVITY PIPING PLAN - FIRST FLOOR - AREA B

1/8" = 1'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. 4" SS DN
2. 4" SS FROM ABOVE
3. 1 ½" SS FROM ABOVE
4. 2" VENT UP
5. 4" VENT UP
6. 3" VENT UP
7. 2" SS DN
8. 3" SS FROM MOP SINK ABOVE

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

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SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| DES | CBH | DRW | CBH | CHK | AB |
|---|---|---|---|---|---|
| PMDM | CHEMENJU/HILL | | | | |
| BRANCH MANAGER | N/A | | | | |
| CHIEF ENG/ARCH | TOM COX | | | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE: CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - GRAVITY PIPING PLAN - FIRST FLOOR - AREA B

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065996
SHEET OF 0

PL-101B

D
C
B A

KEY PLAN

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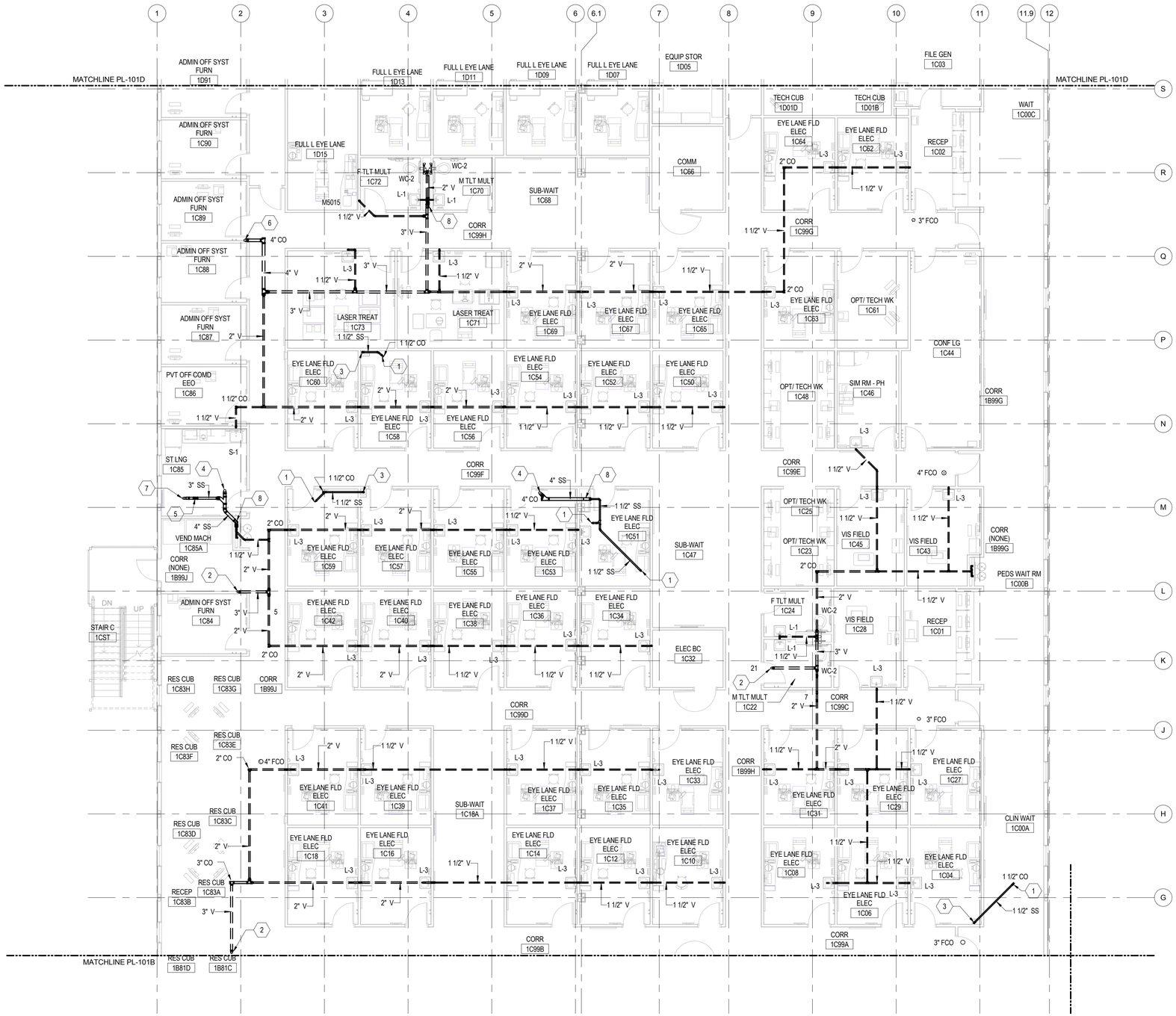


1 PLUMBING - GRAVITY PIPING PLAN - FIRST FLOOR - AREA C

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. 1 ½" SS FROM ABOVE
2. 3" VENT UP
3. 2" SS DN
4. 4" SS FROM ABOVE
5. 1 ½" VENT UP
6. 4" VENT UP
7. 3" SS FROM MOP SINK ABOVE
8. 4" SS DN

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB

PMDM CHEMENJU/HILL

BRANCH MANAGER N/A

CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE, CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING

PLUMBING - GRAVITY PIPING PLAN - FIRST FLOOR - AREA C

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

EFROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13065997

SHEET OF 0

PL-101C

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B A

KEY PLAN

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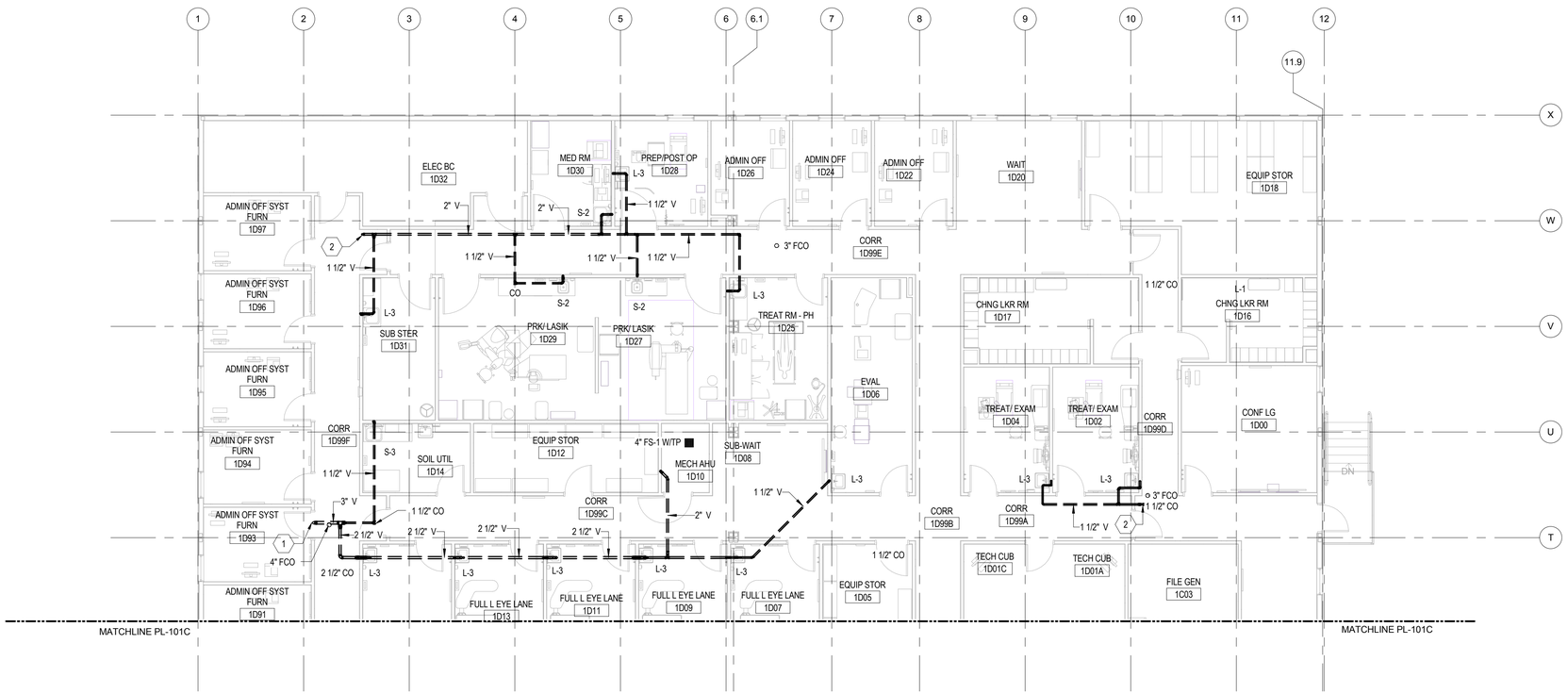
## GENERAL NOTES:

## KEYED NOTES:

1 3" VENT UP
2 2" VENT UP




1 PLUMBING - GRAVITY PIPING PLAN - FIRST FLOOR - AREA D

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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COMMONWEALTH OF VIRGINIA
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SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB
PMDM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND
BASE, CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - GRAVITY PIPING PLAN - FIRST FLOOR - AREA D

SCALE: 1/8" = 1'-0"
EPROJECT NO: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065998
SHEET OF 0

PL-101D

KEY PLAN
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C
B A

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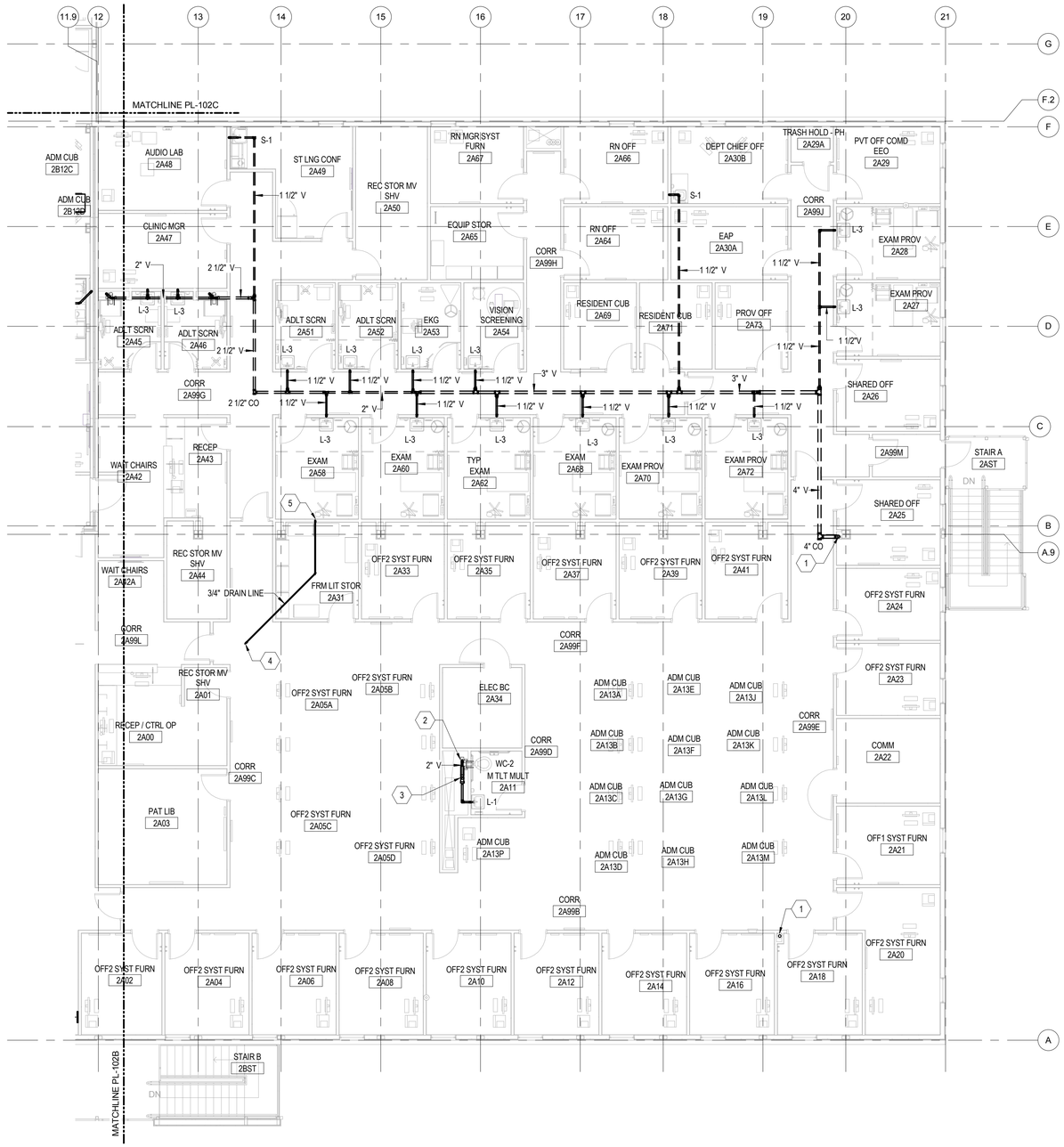


1 PLUMBING - GRAVITY PIPING PLAN - SECOND FLOOR - AREA A

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. 4" V UP AND DN
2. 2" VENT UP
3. 4" SS DN
4. 3/4" DRAIN LINE FROM ROOF HYDRANT ABOVE
5. 3/4" DRAIN LINE DN

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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COMMONWEALTH OF VIRGINIA
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Lic. No. 0402042516
3/26/14
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SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

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FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB
PMDM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - GRAVITY PIPING PLAN - SECOND FLOOR - AREA A

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065999
SHEET OF 0
PL-102A

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KEY PLAN

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1 PLUMBING - GRAVITY PIPING PLAN - SECOND FLOOR - AREA B

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. 4" VENT UP
2. 3" V UP AND DN
3. 4" V UP AND DN
4. 2" V FROM BELOW
5. 3" VENT UP
6. 4" SS DN

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
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3/26/14
PROFESSIONAL ENGINEER

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SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - GRAVITY PIPING PLAN - SECOND FLOOR - AREA B

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066000
SHEET OF 0

PL-102B

D
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B A
KEY PLAN

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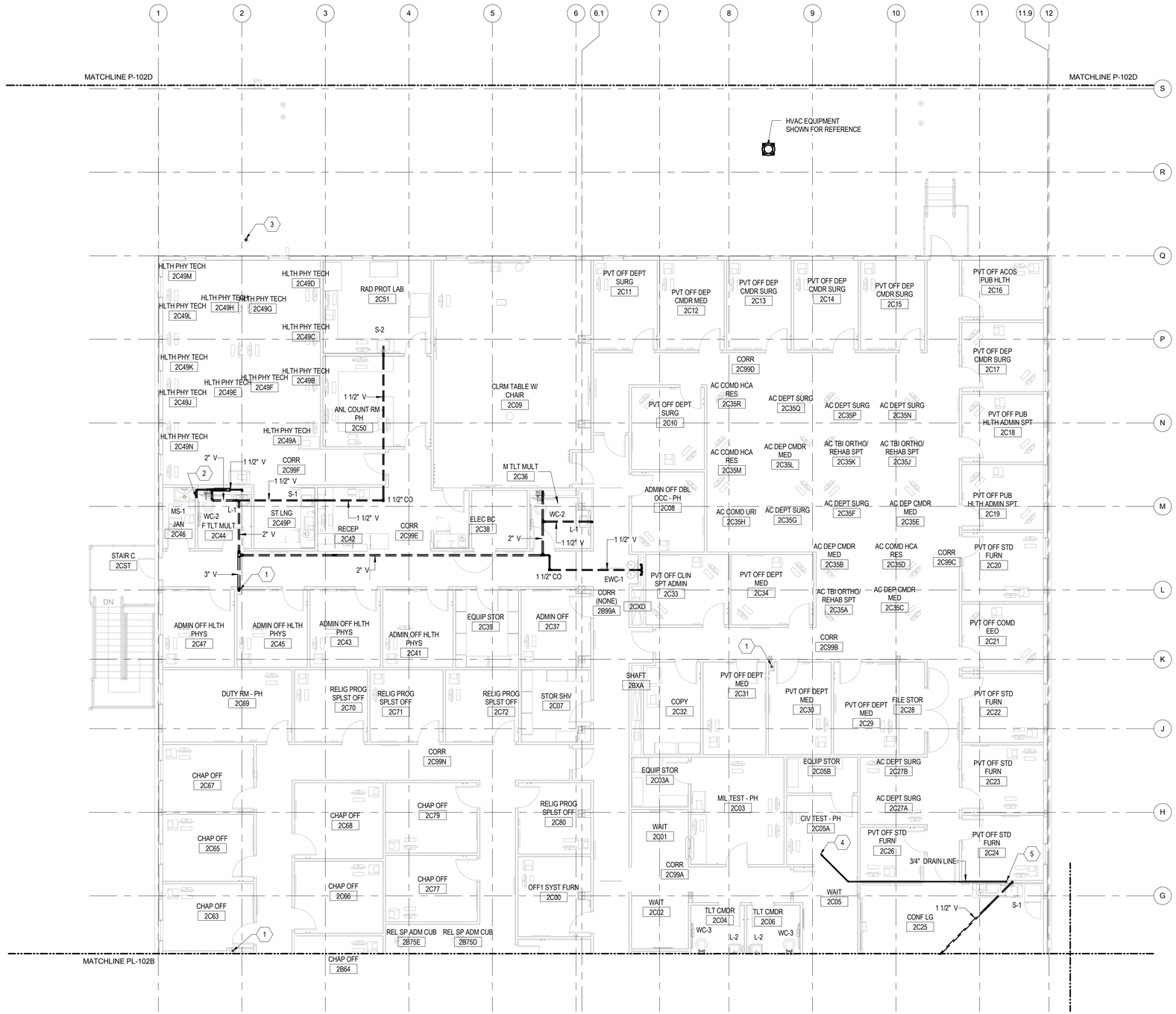


1 PLUMBING - GRAVITY PIPING PLAN - SECOND FLOOR - AREA C

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. 3" V UP AND DN
2. 2" V FROM BELOW
3. 4" VTR
4. 3/4" DRAIN LINE FROM ROOF HYDRANT ABOVE
5. 3/4" DRAIN LINE FROM ROOF HYDRANT TO DRAIN TO OPEN HUB DRAIN LOCATED IN SINK CABINET. MINIMUM 1" AIR GAP.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| | | | | | |
|---|---|---|---|---|---|
| DES | CBH | DRW | CBH | CHK | AB |
| PM/DM | CHEMENJU/HILL | | | | |
| BRANCH MANAGER | N/A | | | | |
| CHIEF ENG/ARCH | TOM COX | | | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE: BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - GRAVITY PIPING PLAN - SECOND FLOOR - AREA C

SCALE: 1/8" = 1'-0"
EPROJECT NO: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066001
SHEET OF 0
PL-102C

KEY PLAN

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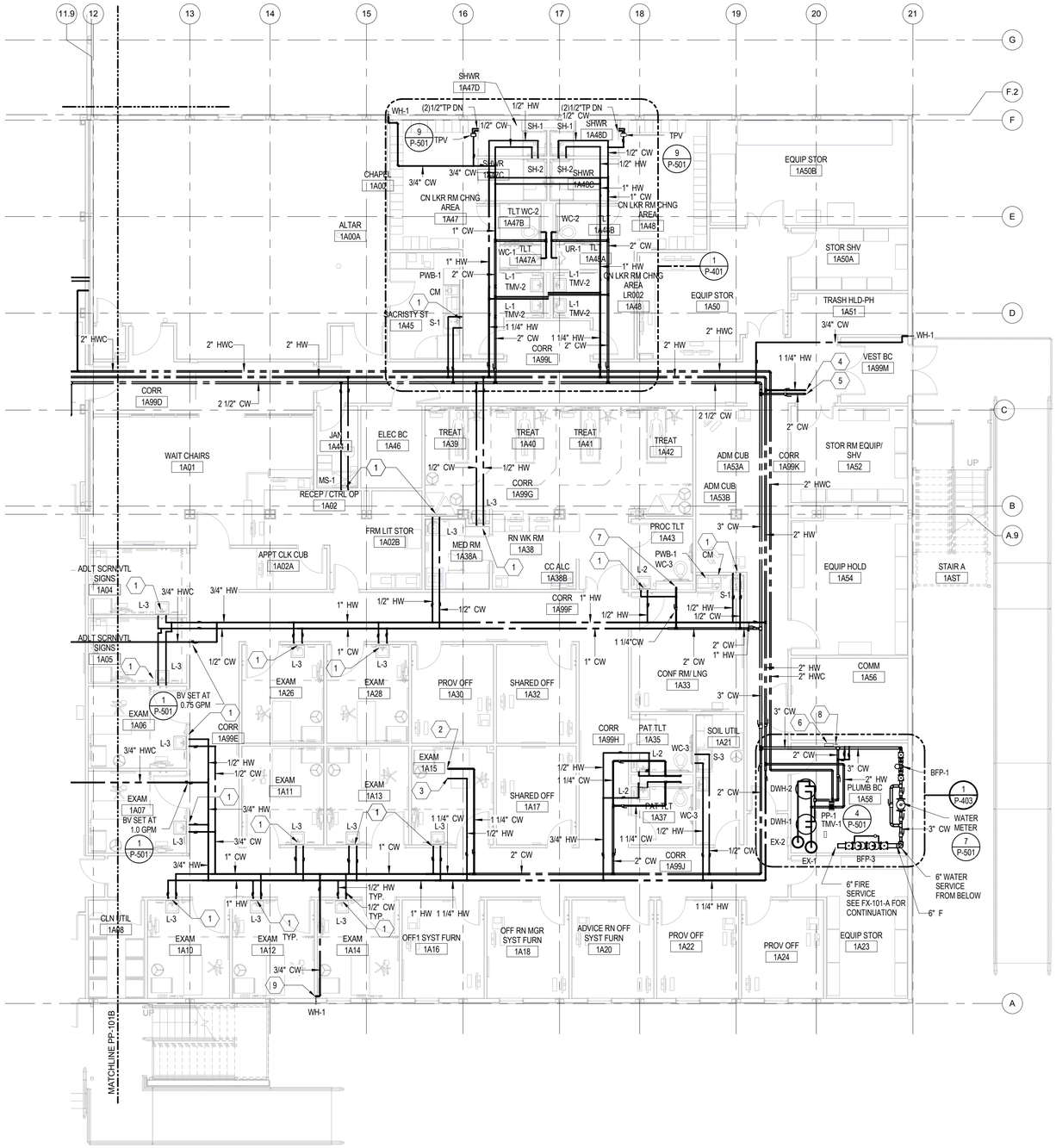


1 PLUMBING - DOMESTIC WATER PLAN - FIRST FLOOR - AREA A

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. ½" CW & ½" HW DN
2. 1 ½" CW UP
3. ½" HW UP
4. 2" CW UP
5. 1 ½" HW UP
6. ELECTRICAL HEAT TRACING CONTROLLER
7. 1" CW DN
8. TIMER FOR CIRCULATING PUMP
9. ¾" CW DN

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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COMMONWEALTH OF VIRGINIA
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3/26/14
PROFESSIONAL ENGINEER

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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB
PMDM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - DOMESTIC WATER PLAN - FIRST FLOOR - AREA A

SCALE: 1/8" = 1'-0"
EFPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065988
SHEET OF 0
PP-101A

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KEY PLAN

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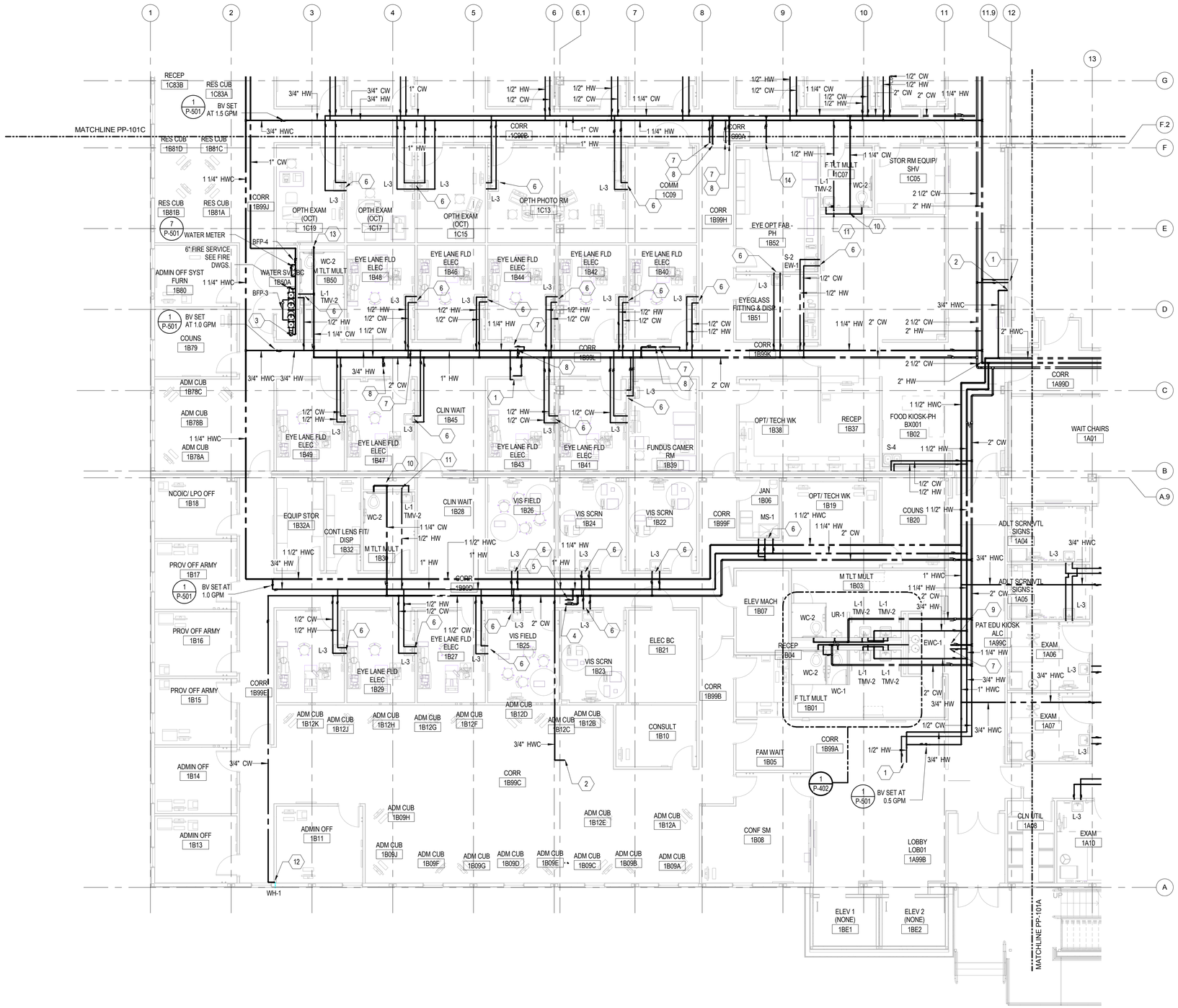


1 PLUMBING - DOMESTIC WATER PLAN - FIRST FLOOR - AREA B

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1 ½" CW & ½" HW UP
2 ¾" HWC UP
3 6" FIRE SERVICE FROM BELOW.
4 2" CW UP
5 1" HW UP
6 ½" CW & ½" HW DN
7 ½" HW UP
8 1 ¼" CW UP
9 1 ½" CW UP
10 1 ¼" CW DN
11 ½" HW DN
12 ¾" CW DN
13 1" CW DN
14 ¾" CW UP

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB
PMDM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE, CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - DOMESTIC WATER PLAN - FIRST FLOOR - AREA B

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065989
SHEET OF 0
PP-101B

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B A
KEY PLAN

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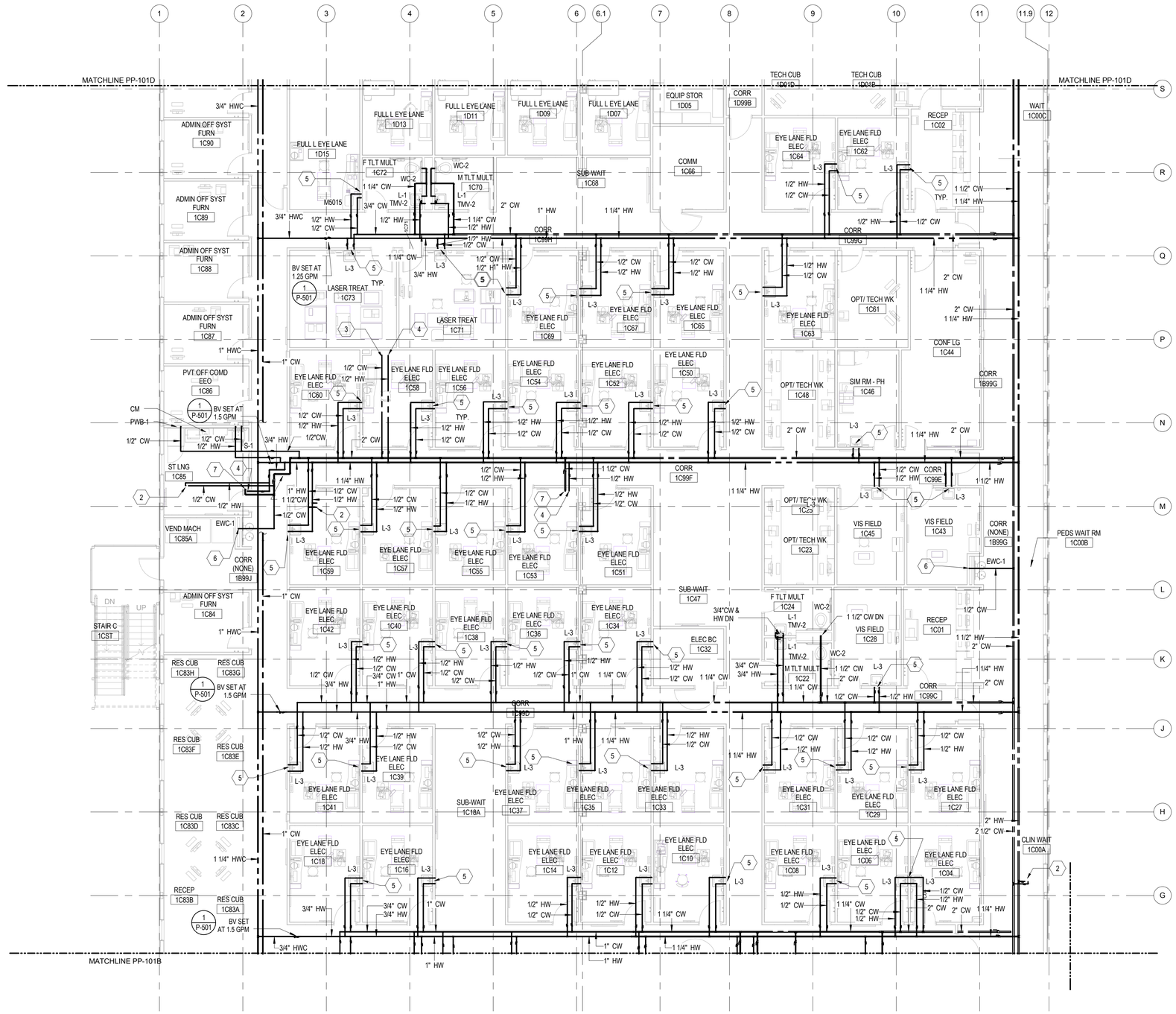


1 PLUMBING - DOMESTIC WATER PLAN - FIRST FLOOR - AREA C

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. 1" CW UP
2. ½" CW & ½" HW UP
3. 1 ½" CW UP
4. ½" HW UP
5. ½" CW & ½" HW DN
6. ½" CW DN
7. 1 ½" CW UP

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| DES | CBH | DRW | CBH | CHK | AB |
|---|---|---|---|---|---|

PM/DM: CHEMENJU/HILL
BRANCH MANAGER: N/A
CHIEF ENG/ARCH: TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY STATE: BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - DOMESTIC WATER PLAN - FIRST FLOOR - AREA C

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO.: N62470-09-D-9044
NAVFAC DRAWING NO.: 13065990
SHEET OF 0
PP-101C

D
C
B A
KEY PLAN

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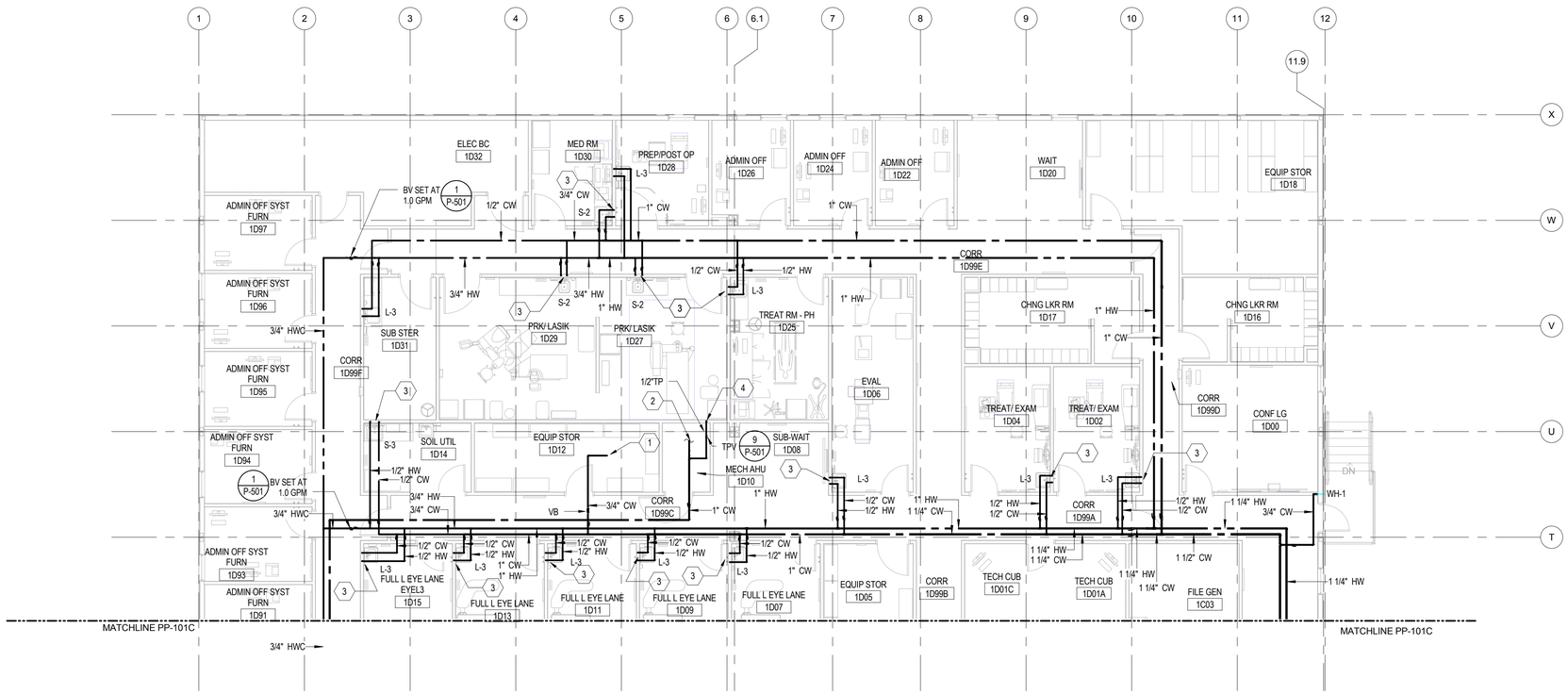
## GENERAL NOTES:

## KEYED NOTES:

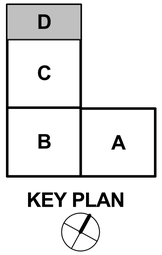
1. ¾" CW UP TO ROOF HYDRANT
2. 1" CW TO CONNECT TO MECHANICAL EQUIPMENT. SEE MH-101D FOR CONTINUATION.
3. ½" CW & ½" HW DN
4. 1/2" TP DOWN TO FLOOR SINK P-TRAP, SEE P-100D FOR CONTINUATION.




1 PLUMBING - DOMESTIC WATER PLAN - FIRST FLOOR - AREA D

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"




| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

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FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| | | | |
|---|---|---|---|
| DES | CBH | DRW CBH | CHK AB |
| PMDM | CHEMENJU/HILL | | |
| BRANCH MANAGER | N/A | | |
| CHIEF ENG/ARCH | TOM COX | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY STATE: BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - DOMESTIC WATER PLAN - FIRST FLOOR - AREA D

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065991
SHEET OF 0

PP-101D

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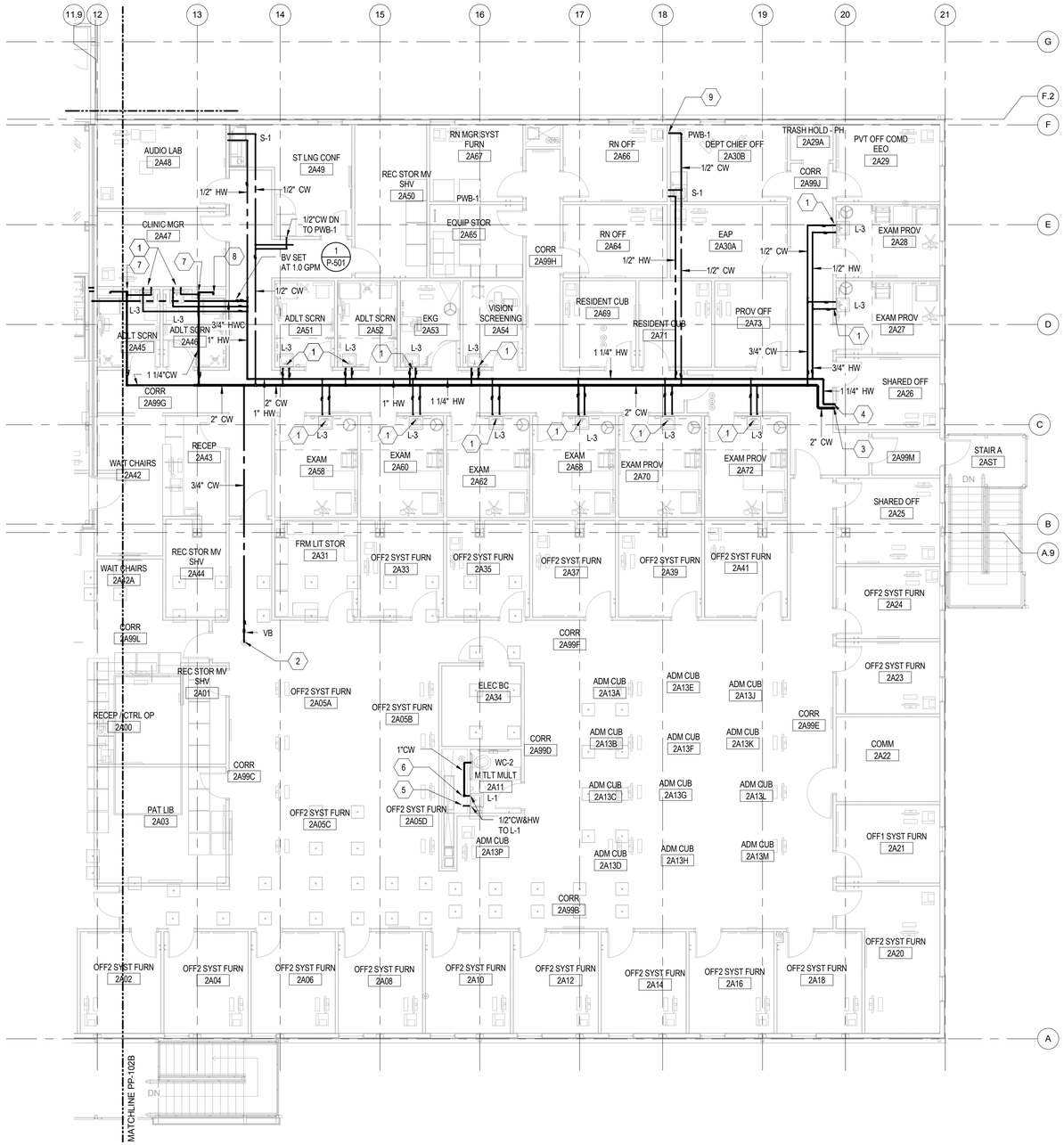


1 PLUMBING - DOMESTIC WATER PLAN - SECOND FLOOR - AREA A

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. ½" CW & ½" HW DN
2. ¾" CW UP TO ROOF HYDRANT
3. 2" CW FROM BELOW
4. 1 ¼" HW FROM BELOW
5. ½" HW FROM BELOW
6. 1 ¼" CW FROM BELOW
7. 1" CW DN
8. PROVIDE ROUGH-IN FOR FUTURE (PHASE 2) WATER CLOSET. SEE ARCHITECTURAL DRAWINGS FOR PHASE 2 FIXTURES IN THIS ROOM. PHASE 2 WATER CLOSET WILL BE SAME AS WC-2. PROVIDE CLOSET CARRIER AND CAPPED ROUGH-IN PIPING FULLY CONCEALED WITHIN TOILET CHASE.
9. 1/2" CW DN TO PWB-1. PWB-1: SERVES ICEMAKER IN FUTURE REFRIGERATOR. SEE ARCHITECTURAL DWGS FOR FUTURE (PHASE 2) EQUIPMENT LAYOUT IN THIS SPACE.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB
PMDM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE - CITY, STATE BETHESDA, MD
PROJECT STATION/INSTALLATION P125 - TEMPORARY MEDICAL FACILITIES PACKAGE 2 - CLINIC BUILDING
PLUMBING - DOMESTIC WATER PLAN - SECOND FLOOR - AREA A

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065992
SHEET OF 0

PP-102A

KEY PLAN

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1 PLUMBING - DOMESTIC WATER PLAN - SECOND FLOOR - AREA B

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. 1 ¼" CW FROM BELOW
2. ½" HW FROM BELOW
3. ½" CW & ½" HW FROM BELOW
4. 1" HW FROM BELOW
5. ¾" HWC DN
6. ½" CW & ½" HW DN
7. ½" CW FROM BELOW
8. 2" CW FROM BELOW
9. PROVIDE ROUGH-IN FOR FUTURE (PHASE 2) WATER CLOSET. SEE ARCHITECTURAL DRAWINGS FOR PHASE 2 FIXTURES IN THIS ROOM. PHASE 2 WATER CLOSET WILL BE SAME AS WC-2. PROVIDE CLOSET CARRIER AND CAPPED ROUGH-IN PIPING FULLY CONCEALED WITHIN TOILET CHASE.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500


APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB

PM/DM CHEMENJU/HILL

BRANCH MANAGER N/A

CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - DOMESTIC WATER PLAN - SECOND FLOOR - AREA B

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

EPROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13065993

SHEET OF 0

PP-102B

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C
B A
KEY PLAN

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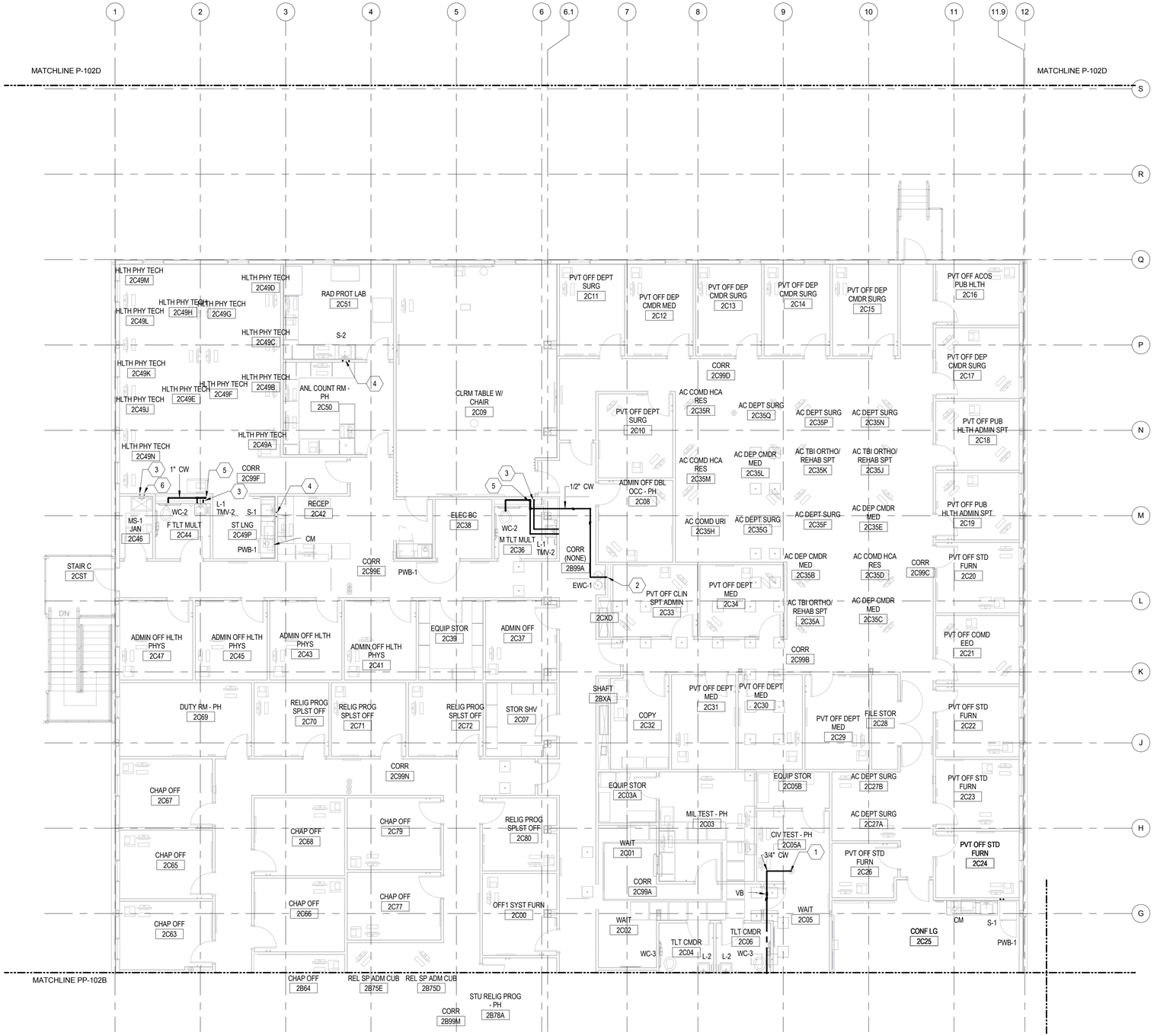


1 PLUMBING - DOMESTIC WATER PLAN - SECOND FLOOR - AREA C

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. ¾" CW UP TO ROOF HYDRANT
2. 1/2" CW DN
3. ½" HW FROM BELOW
4. ½" CW & ½" HW FROM BELOW
5. 1 ½" CW FROM BELOW
6. ½" CW FROM BELOW

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
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| | 35% SUBMITTAL | 03/08/13 |

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703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - DOMESTIC WATER PLAN - SECOND FLOOR - AREA C

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13065994
SHEET OF 0

PP-102C

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B A
KEY PLAN

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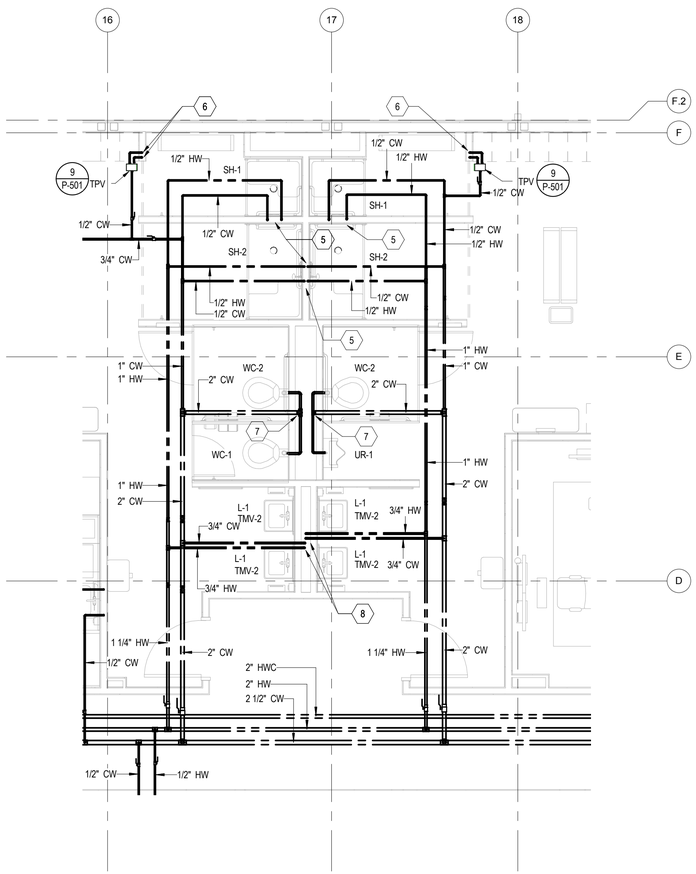
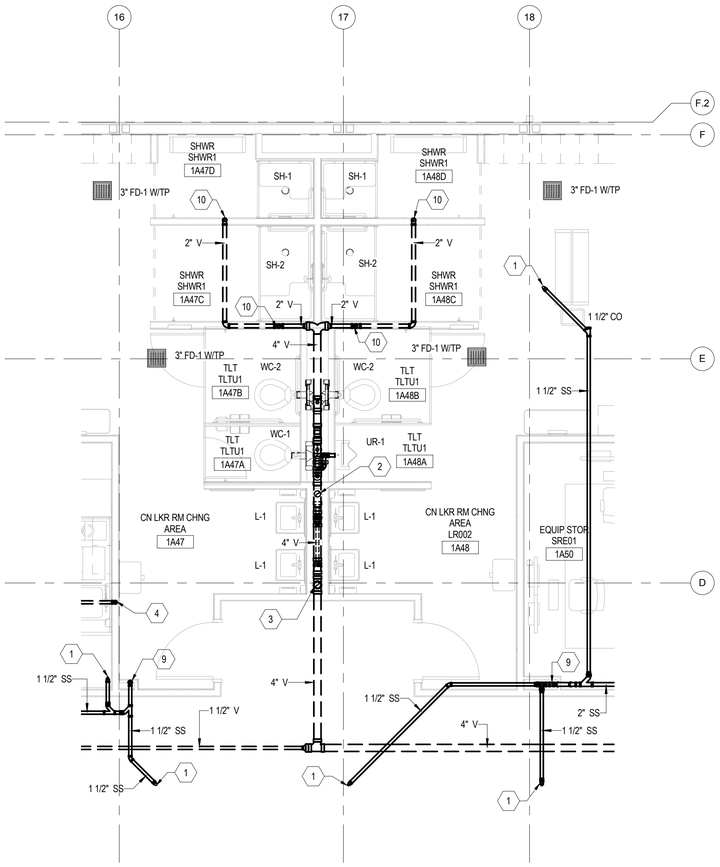



1 PLUMBING - DOMESTIC WATER ENLARGED PLAN - FIRST FLOOR LOCKER ROOM

1/4" = 1'-0"

0 2'-0" 4'-0" 8'-0"




2 PLUMBING - GRAVITY PIPING ENLARGED PLAN - FIRST FLOOR LOCKER ROOM

1/4" = 1'-0"

0 2'-0" 4'-0" 8'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. 1 ½" SS FROM ABOVE
2. 4" SS DN
3. 4" V RISE
4. 1 1/2" V FROM BELOW
5. ½" CW & ½" HW DN
6. 1/2" TP DOWN TO FLOOR DRAINS, SEE P-10F-A FOR CONTINUATION.
7. 2" CW DN
8. ¾" CW & ¾" HW DN
9. 2" SS DN
10. 2" V FROM BELOW

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR

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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB

PM/DM CHEMENJU/HILL

BRANCH MANAGER N/A

CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD

PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING

PLUMBING - DOMESTIC AND SANITARY ENLARGED PLAN - FIRST FLOOR LOCKER ROOMS

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

EPROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13066002

SHEET OF 0

P-401

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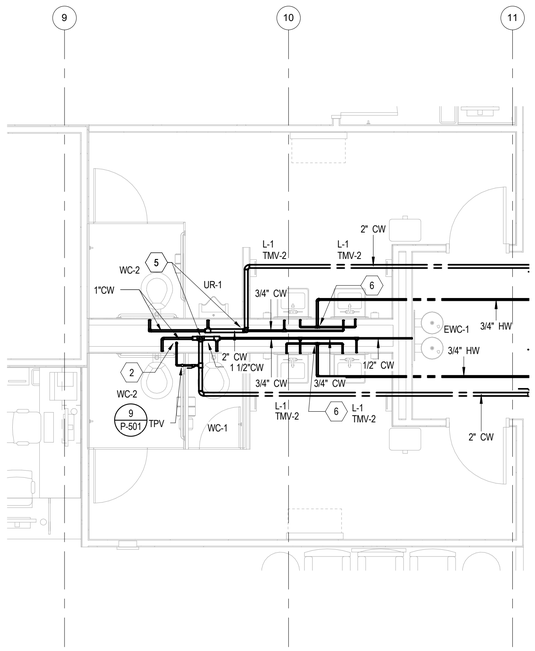
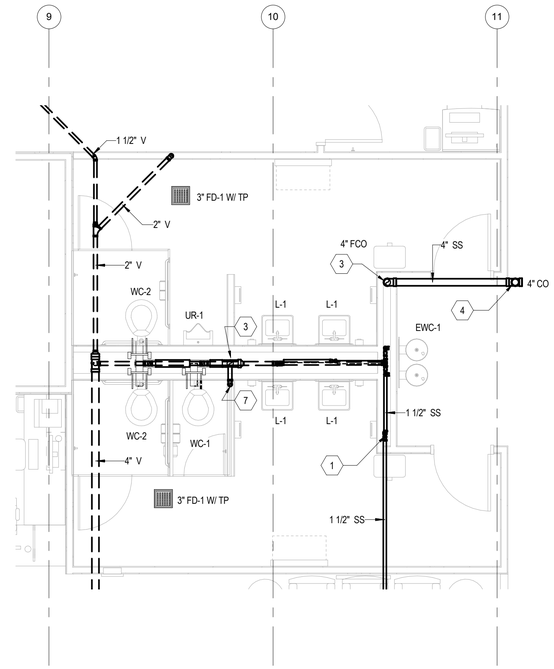



1 PLUMBING - DOMESTIC WATER ENLARGED PLAN - MULT TL RM 10B1 & 1B03

1/4" = 1'-0"

0 2'-0" 4'-0" 8'-0"




2 PLUMBING - GRAVITY PIPING ENLARGED PLAN - MULT TL RM 10B1 & 1B03

1/4" = 1'-0"

0 2'-0" 4'-0" 8'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. 1 1/2" SS DROP
2. 1/2" TP DOWN TO FLOOR DRAINS P-TRAPS, SEE P-10F-B FOR CONTINUATION.
3. 4" SS DN
4. 4" SS FROM ABOVE
5. 2" CW DN
6. ¾" HW DN
7. 2" V FROM BELOW

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR

ARCHITECTURE | ENGINEERING & CONSULTING

1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB

PMDM CHEMENJU/HILL

BRANCH MANAGER N/A

CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND — AGENCY
BASE, CITY, STATE
BETHESDA, MD

PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING

PLUMBING - DOMESTIC AND SANITARY ENLARGED PLAN - RM 1B01 & 1B03

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

EPROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13066003

SHEET OF 0

P-402

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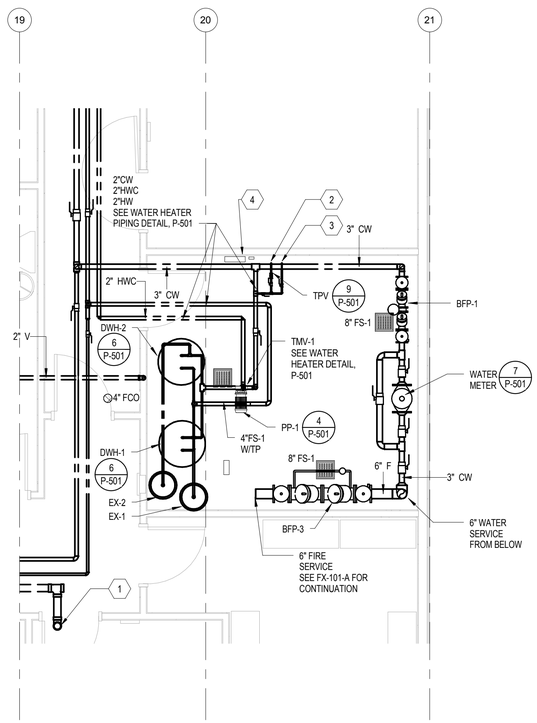


1 PLUMBING - SUPPLY AND DRAINAGE ENLARGED PLAN - PLUMBING BC RM 1A58

1/4" = 1'-0"

0 2'-0" 4'-0" 8'-0"

## GENERAL NOTES:

## KEYED NOTES:

1. 4" VENT UP
2. 1/2" TP DOWN TO FLOOR DRAINS, SEE P-10F-A FOR CONTINUATION.
3. 3/4" DN TO HB-1 (HB-1 NOT SHOWN FOR CLARITY).
4. ELECTRICAL HEAT TRACING CONTROLLER

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR


ARCHITECTURE | ENGINEERING & CONSULTING

1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500


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FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB

PMDM CHEMENJU/HILL

BRANCH MANAGER N/A

CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - SUPPLY AND DRAINAGE ENLARGED PLAN - PLUMBING BC RM 1A58

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

EPROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13066004

SHEET OF 0

P-403

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KEY PLAN

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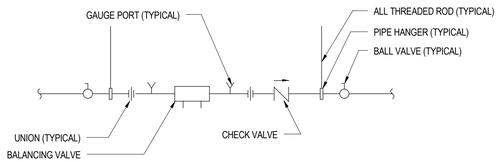
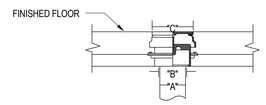


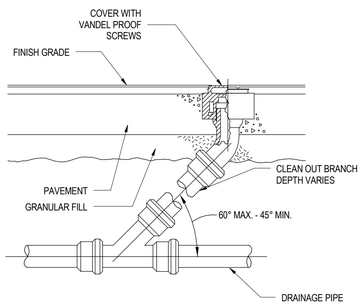

## 1 BALANCING VALVE INSTALLATION
NTS

| CLEANOUT SIZES | | | | | | |
|---|---|---|---|---|---|---|
| PIPE SIZE "A" | CAST IRON | | DURIRON * | | PLASTIC * | |
| | CO. SIZE "B" | TOP SIZE "C" | CO. SIZE "B" | TOP SIZE "C" | CO. SIZE "B" | TOP SIZE "C" |
| 2" | 2" | 4-1/2" | 3" | 5-3/4" | 2" | 4-1/2" |
| 3" | 3" | 5-3/4" | 4" | 6-1/2" | 3" | 5-3/4" |
| 4" | 4" | 6-1/2" | 5" | 8-1/2" | 4" | 6-1/2" |
| 6" | 4" | 6-1/2" | 5" | 8-1/2" | 4" | 6-1/2" |
| 8" | 4" | 6-1/2" | 5" | 8-1/2" | 4" | 6-1/2" |
| 10" | 4" | 6-1/2" | 5" | 8-1/2" | 4" | 6-1/2" |

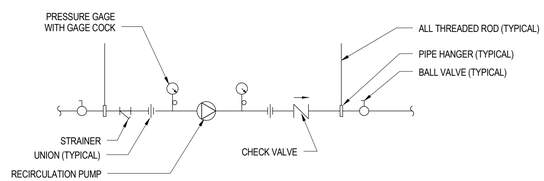
*NOTE: INTERIOR OF CLEANOUT AND PLUG TO BE DOUBLE COATED WITH EPOXY COATING.



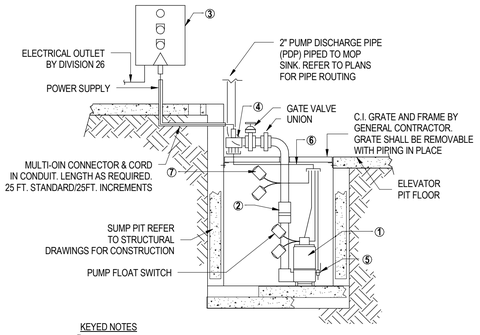

## 2 CLEANOUT TO FINISHED FLOOR DETAIL
NTS




## 3 CLEANOUT TO FINISHED GRADE DETAIL
NTS




## 4 HOT WATER SYSTEM RECIRCULATION PUMP INSTALLATION
NTS




KEYED NOTES

① SUBMERSILBLE EFFLUENT PUMP 1 HP, 115V, 3600RPM, 2"DISCHARGE CONNECTION.

② CHECK VALVE.

③ 115V, 1PH CONTROL SYSTEM WITH OPTIONAL BUILT-IN AUDIBLE AND VISUAL ALARM WHEN PUMP DOES NOT RUN DUE TO OIL IN PIT, HIGH AMPERAGE OR HIGH LIQUID CONDITION. PROVIDED WITH SILENCING BUTTON FOR AUDIBLE ALARM BUILT INTO PANEL. PANEL SHALL HAVE ADDITIONAL CONTACT FOR A REMOTE ALARM LOCATION (TIED INTO BMS). REFER TO FLOOR PLANS FOR LOCATION.

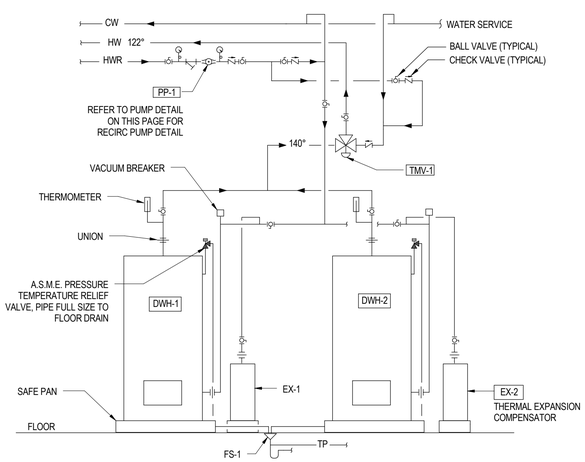
④ JUNCTION BOX FOR MULTI-PIN CONNECTOR AND CORD, CORD LENGTH AS REQUIRED.

⑤ OIL SENSOR PROBE.

⑥ POWER CABLE, PROBE CABLE AND FLOAT CABLE.

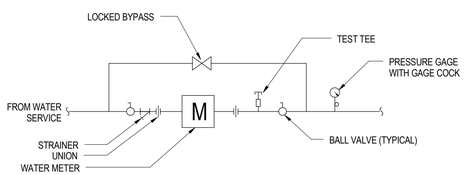
⑦ HIGH LIQUID ALARM FLOAT WITH CLAMP DEVICE TO MOUNT TO PUMP DISCHARGE PIPING.

## 5 SUBMERSIBLE OIL SENSING ELEVATOR SUMP PUMP DETAL
NTS

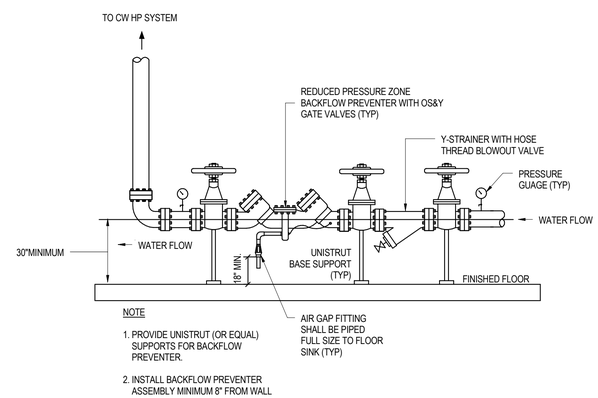



NOTES:
1. PROVIDE EQUIDISTANT MANIFOLDING OF PIPING SERVING WATER HEATERS.
2. CW, HW, & HWC PIPE SIZING TO INDIVIDUAL WATER HEATERS SHALL MATCH THE SIZES OF PIPE MAINS ROUTED TO HEATERS, AS INDICATED ON PLANS.

## 6 WATER HEATER PIPING DETAIL (DWH-1 AND DWH-2)
NTS




## 7 WATER METER PIPING INSTALLATION SCHEMATIC
NTS

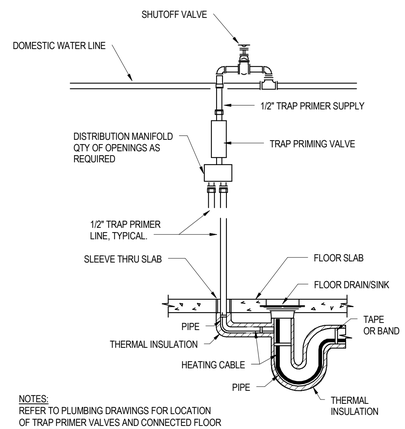



NOTE

1. PROVIDE UNISTRUT (OR EQUAL) SUPPORTS FOR BACKFLOW PREVENTER.

2. INSTALL BACKFLOW PREVENTER ASSEMBLY MINIMUM 8" FROM WALL

## 8 REDUCED PRESSURE ZONE BACKFLOW PREVENTER DETAIL
NTS




NOTES:
REFER TO PLUMBING DRAWINGS FOR LOCATION OF TRAP PRIMER VALVES AND CONNECTED FLOOR FLOOR DRAINS/FLOOR SINKS.

## 9 TRAP PRIMER DETAIL
NTS

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

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FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| | | | |
|---|---|---|---|
| DES CBH | DRW CBH | CHK AB | |
| PM/DM | CHEMENJU/HILL | | |
| BRANCH MANAGER | N/A | | |
| CHIEF ENG/ARCH | TOM COX | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME:
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE, CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING DETAILS

SCALE: As indicated
EPROJECT NO.: 1151333
CONSTR. CONTR. NO.: N62470-09-D-9044
NAVFAC DRAWING NO.: 13066005
SHEET 0 OF 0
P-501

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## PUMP SCHEDULE

| MARK NUMBER | LOCATION | SERVES | TYPE | FLOW GPM | HEAD FT WG | MIN EFF % | MOTOR DATA HP | RPM | CONTROL V/PH | TYPE | SUCTION DIFFUSER Y/N | TRIPLE DUTY VALVE SIZE IN | BASIS OF DESIGN | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PP-1 | WATER SERVICE ROOM | DOMESTIC HOT WATER | DOMESTIC HOT WATER CIRCULATION PUMP | 16 | 33 | N/A | 0.4 | 3300 | 115/1 | N/A | N/A | N/A | | |
| PP-2 | ELEVATOR PIT SUMP PUMP | FIRST FLOOR ELEVATOR | ELEVATOR SUMP PUMP | 50 | 10' | N/A | 0.5 | 3600 | 115/1 | na | na | na | | 1 |
| PP-3 | ELEVATOR PIT SUMP PUMP | FIRST FLOOR ELEVATOR | ELEVATOR SUMP PUMP | 50 | 10' | N/A | 0.5 | 3600 | 115/1 | na | na | na | | 1 |

NOTES:
1. OILMINDER TYPE PUMP

## PLUMBING FIXTURE CONNECTION SCHEDULE

| FIXT DESIG | FIXTURE DESCRIPTION (JSN) | JSN NUMBER | SPECIFICATION SECTION | CONNECTION SIZE (DN) CW | HW | RO | WASTE | VENT | OTHER | OTHER | MOUNTING HEIGHT | ADA COMPLIANT Y/N | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| WC-1 | WATER CLOSET - WALL HUNG - FV | P9050 | 22 00 70 | 1" | | | 4" | 2" | | | INST | NO | |
| WC-2 | WATER CLOSET - WALL HUNG - FV - ADA | P9050 | 22 00 70 | 1" | | | 4" | 2" | | | INST | YES | |
| WC-3 | WATER CLOSET - WALL HUNG - FV | P9050 | 22 00 70 | 1" | | | 4" | 2" | | | INST | NO | |
| UR-1 | URINAL - ADA | P8100 | 22 00 70 | 3/4" | | | 2" | 1-1/2" | | | INST | YES | |
| L-1E | LAVATORY -COUNTER MOUNT - ADA | P3070M | 22 00 70 | 1/2" | 1/2" | | 1-1/2" | 1-1/2" | | | INST | NO | |
| L-1 | LAVATORY, PUBLIC/STAFF WALL MTD | P3100M | 22 00 70 | 1/2" | 1/2" | | 1-1/2" | 1-1/2" | | | INST | YES | |
| L-2 | LAVATORY, PATIENT WALL MTD | P3100 | 22 00 70 | 1/2" | 1/2" | | 1-1/2" | 1-1/2" | | | INST | YES | |
| L-3 | LAVATORY, EXAM WALL MTD | P3100 | 22 00 70 | 1/2" | 1/2" | | 1-1/2" | 1-1/2" | | | INST | YES | |
| S-1 | SINK - COUNTER MOUNT | CS010 | 22 00 70 | 1/2" | 1/2" | | 1-1/2" | 1-1/2" | | | INST | SPECS | 2 |
| S-2 | SINK - COUNTER MOUNT | CS090 | 22 00 70 | 1/2" | 1/2" | | 1-1/2" | 1-1/2" | | | INST | SPECS | 2 |
| S-3 | SINK - COUNTER MOUNT | CS200 | 22 00 70 | 1/2" | 1/2" | | 1-1/2" | 1-1/2" | | | INST | SPECS | 2 |
| S-4 | SINK - COUNTER MTD DOUBLE BOWL | CS230 | 22 00 70 | 1/2" | 1/2" | | 1-1/2" | 1-1/2" | | | INST | SPECS | 2 |
| SH-1 | SHOWER | P5040/U8000 | 22 00 70 | 1/2" | 1/2" | | 2" | 1-1/2" | | | INST | YES | |
| SH-2 | SHOWER | P5040/U8001 | 22 00 70 | 1/2" | 1/2" | | 2" | 1-1/2" | | | INST | YES | |
| MS-1 | MOP SERVICE BASIN | P4700 | 22 00 70 | 3/4" | 3/4" | | 3" | 1-1/2" | | | INST | | |
| PWB-1 | SUPPLY BOX - REFRIGERATOR ICE MAKER WALL BOX | P8710 (SIM) | 22 00 70 | 1/2" | | | | | | | 24 | | |
| PWB-2 | PLUMBING STANDPIPE AND SUPPLY BOX | P8710 | 22 00 70 | 1/2" | 1/2" | | 2" | 2" | | | PLANS | | 3 |
| EW-1 | EMERGENCY EYEWASH | P1965 | 22 00 70 | 1/2" | 1/2" | | 2" | 2" | | | INST | SPECS | |
| EWC-1 | WATER COOLER, ELECTRIC | R2201 | 22 00 70 | 1/2" | | | 1-1/2" | 1-1/2" | | | INST | SPECS | |
| WH-1 | WALL HYDRANT | | | 3/4" | | | | | | | | | |
| RH-1 | ROOF HYDRANT | | | 3/4" | | | | | | | | | |
| HB-1 | HOSE BIBB | | | 3/4" | | | | | | | | | |

NOTES:

1. WHEN FLOOR MOUNTED, TOP SHALL BE FLUSH WITH THE FLOOR. WHEN MOUNTED VERTICALLY, MOUNT AT 30" AFF.
2 WASTE ON SOME SINKS IS 2". VERIFY BY MARK NUMBER IN SPECIFICATIONS.
3 MOUNT BENEATH COUNTER WITH BOTTOM OF PWB AT APPROXIMATELY 16" AFF. COORDINATE WITH CASEWORK.

INST: REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS, FOR PWB, REFER TO MANUFACTURER'S INSTALLATION INSTRUCTIONS OF EQUIPMENT SERVED BY PWB
INDIR: INDIRECT WASTE TO FLOOR DRAIN
FLUSH: MOUNT TOP OF FIXTURE FLUSH WITH FINISHED FLOOR
OVERHD: OVERHEAD - ABOVE CEILING
ASF: ABOVE SHOWER FLOOR
DRN: MEASURED TO DRAIN INLET

## THERMAL EXPANSION COMPENSATOR SCHEDULE

| MARK NUMBER | LOCATION | SERVES | STORAGE GALLONS | SUPPLY PRESSURE PSI | RELIEF VALVE SETTING PSI | INITIAL TEMP degF | FINAL TEMP degF | EXPANSION FACTOR | MAXIMUM ACCEPTANCE VOL GALLONS | MIN. TANK VOL GALLONS | BASIS OF DESIGN | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EX-1 | WATER SERVICE ROOM | DHW-1 | 120 | 80 | 150 | 90 | 140 | 0.0196 | 1.32 | 8 | | |
| EX-2 | WATER SERVICE ROOM | DHW-2 | 120 | 80 | 150 | 90 | 140 | 0.0196 | 1.32 | 8 | | |

NOTES:

## WATER HEATER SCHEDULE

| MARK NUMBER | LOCATION | CAPACITY DEG F RISE | RECOVERY GPH | L W T DEG F | HEATING MEDIA DATA ELECTRIC KW | V/PH | ELEMENTS | GAS INPUT BTUH | DRAFT | STEAM PSI | LBS/HR | STORAGE TANK CAPICITY GAL | LINING | BASIS OF DESIGN | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DWH-1 | WATER SERVICE ROOM | 100 | 166 | 140 | 40.5 | 480/3 | 9 | | | | | 120 | GLASS | | |
| DWH-2 | WATER SERVICE ROOM | 100 | 166 | 140 | 40.5 | 480/3 | 9 | | | | | 120 | GLASS | | |

NOTES:

## REDUCED PRESSURE BACKFLOW PREVENTER SCHEDULE

| MARK NUMBER | LOCATION | SERVICE | STANDARD | SIZE IN | CAPACITY FLOW GPM | HEAD LOSS PSI | BASIS OF DESIGN | NOTE |
|---|---|---|---|---|---|---|---|---|
| BFP-1 | WATER SERVICE ROOM 1A58 | DOMESTIC | ASSE 1047 | 3" | 140 | 8 | REDUCED PRESSURE ZONE ASSEMBLY | |
| BFP-2 | STAFF LOUNGE | COFFEE MAKER | ASSE 1015 | 1/2" | VARIES | | DOUBLE CHECK VALVE ASSEMBLY | |
| BFP-3 | WATER SERVICE ROOM | FIRE SERVICE | ASSE 1048 | 6" | | | DOUBLE CHECK VALVE ASSEMBLY | |
| BFP-4 | WATER SERVICE ROOM 1B50A | DOMESTIC | ASSE 1047 | 1" | 3 | 8 | REDUCED PRESSURE ZONE ASSEMBLY | |

NOTES:

## THERMOSTATIC MIXING VALVE SCHEDULE

| MARK NUMBER | LOCATION | SERVICE | FLOW RATE GPM | DISCHARGE TEMPERATURE F | MAX. SYSTEM PRESSURE DROP PSI | BASIS OF DESIGN | NOTE |
|---|---|---|---|---|---|---|---|
| TMV-1 | WATER SERVICE ROOM | DOMESTIC | 19.55 | 122 | 5 | | |
| TMV-2 | VARIES | DOMESTIC | 5 | 110 | 10 | | |

NOTES:

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|---|---|---|
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| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

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SOPHEAP CHAN
Lic. No. 0402042516
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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

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ACTIVITY
SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB
PMDM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
PLUMBING - SCHEDULES

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066007
SHEET OF 0
P-601

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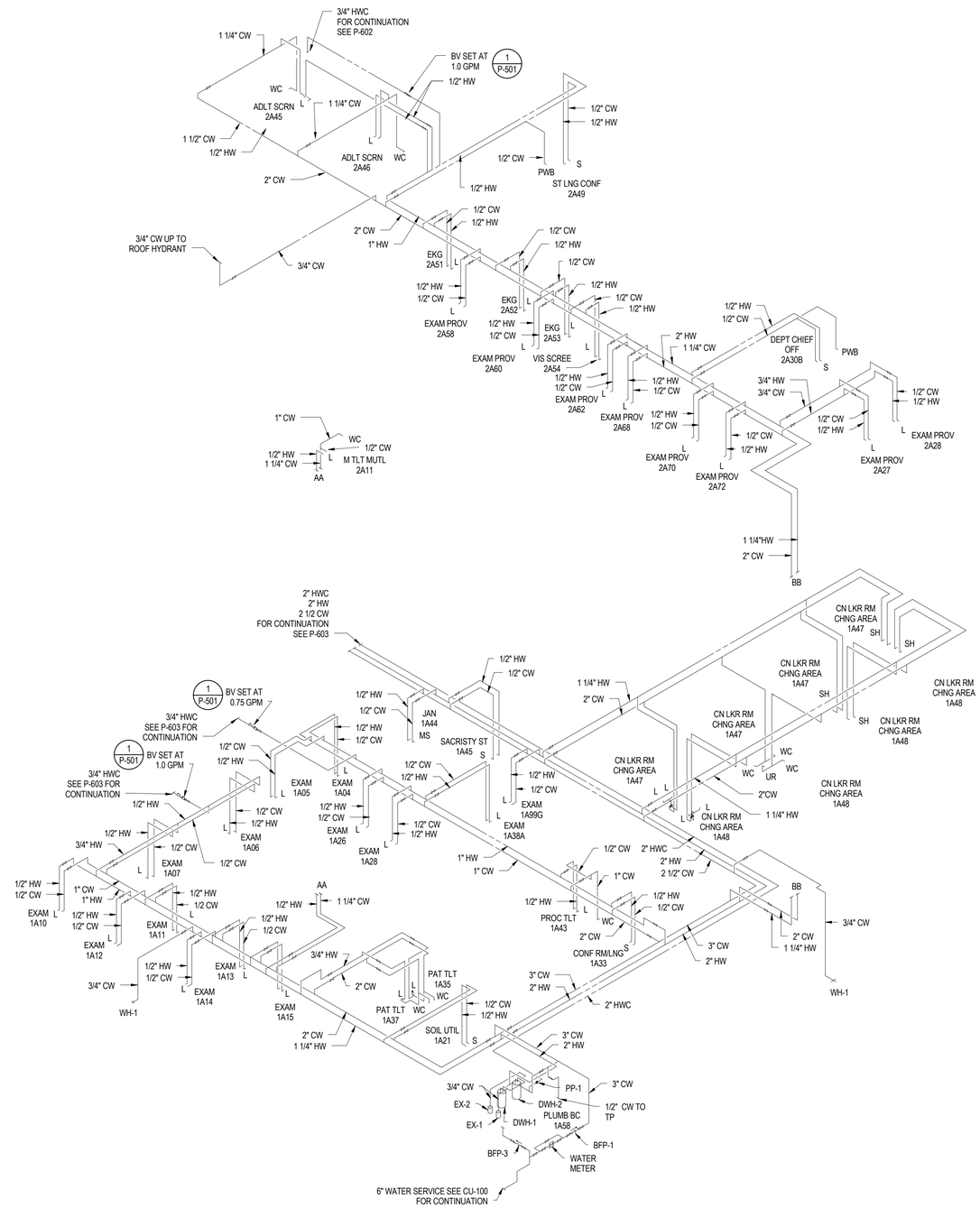


1 DOMESTIC WATER ISOMETRIC AREA A

NTS

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |

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703-518-8500

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ACTIVITY

SATISFACTORY TO DATE

| DES | CBH | DRW | CBH | CHK | AB |
|---|---|---|---|---|---|
| PM/DM | CHEMENJU/HILL | | | | |
| BRANCH MANAGER | N/A | | | | |
| CHIEF ENG/ARCH | TOM COX | | | | |

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NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
SE DOMESTIC WATER RISER DIAGRAM AREA A

SCALE: 1" = 30'-0"

EPROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13066006

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P-602

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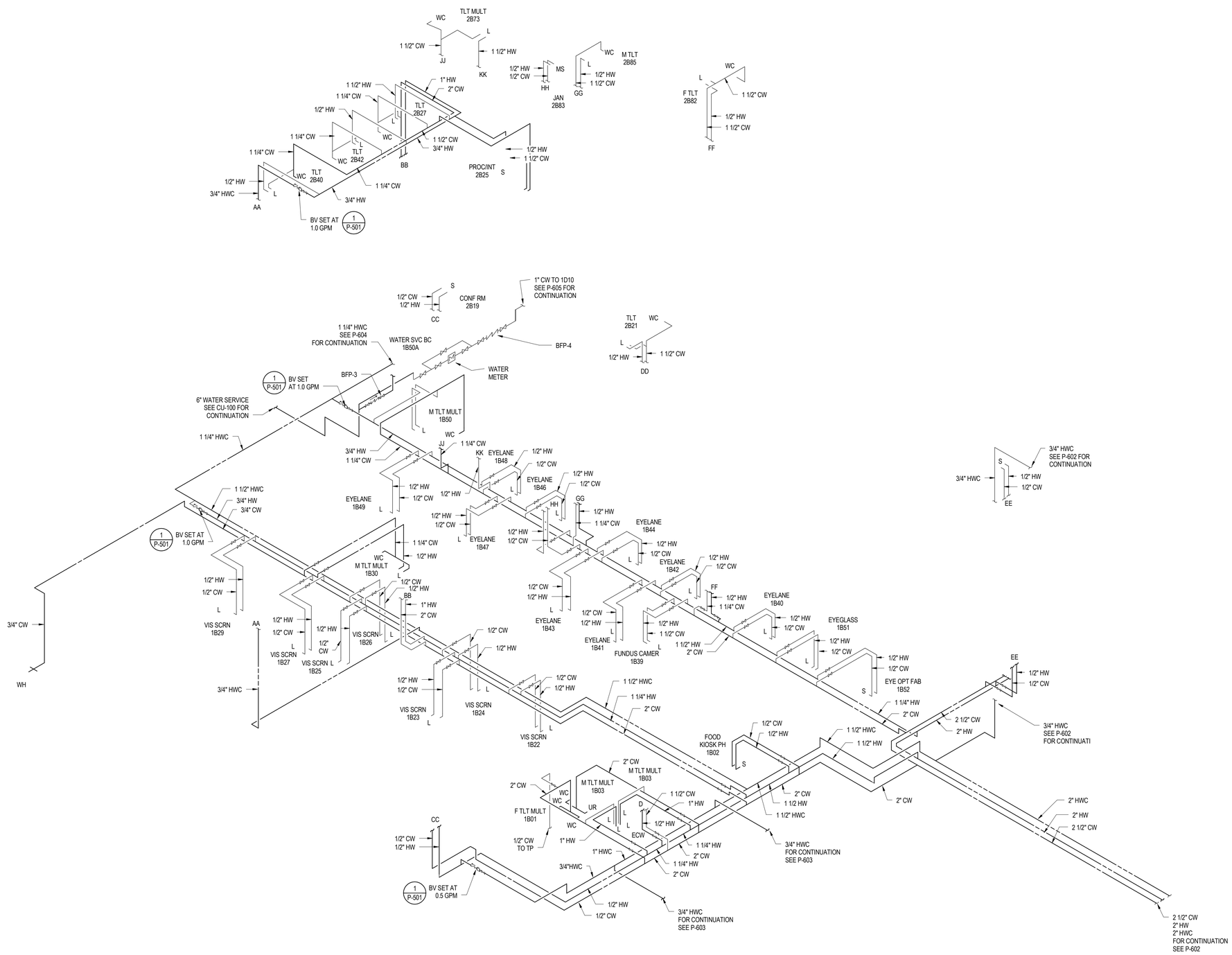


1 DOMESTIC WATER ISOMETRIC AREA B

NTS

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |

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SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

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SATISFACTORY TO DATE

DES CBH | DRW CBH | CHK AB

PM/DM CHEMENJU/HILL

BRANCH MANAGER N/A

CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE, CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
SE DOMESTIC WATER RISER DIAGRAM AREA B

SCALE: 1" = 10'-0"

EPROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13066009

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P-603

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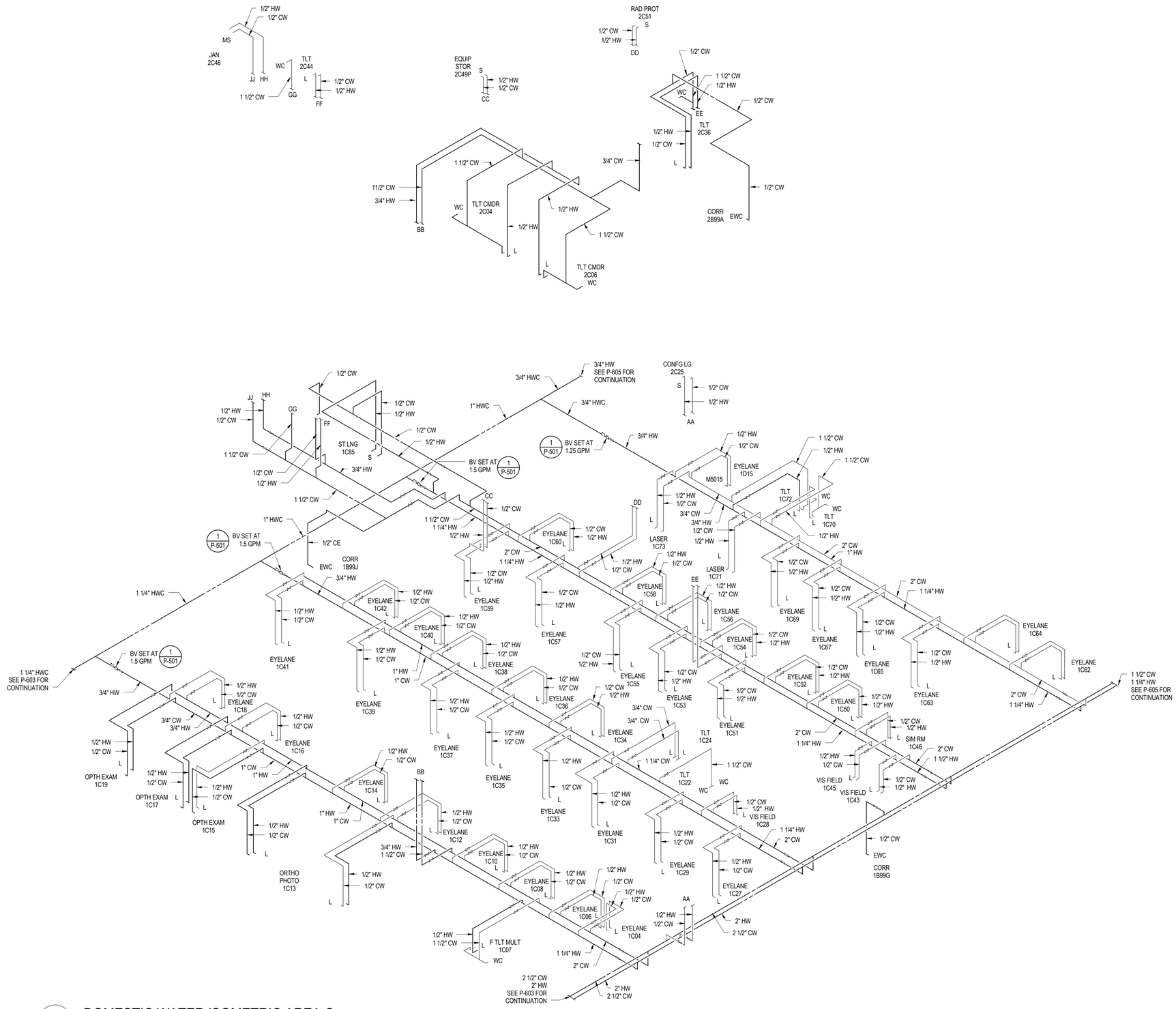


1 DOMESTIC WATER ISOMETRIC AREA C

NTS

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |

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703-518-8500

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ACTIVITY

SATISFACTORY TO DATE

| DES | CBH | DRW | CBH | CHK | AB |
|---|---|---|---|---|---|

PM/DM: CHEMENJU/HILL

BRANCH MANAGER: N/A

CHIEF ENG/ARCH: TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE: BETHESDA, MD

PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING

SE DOMESTIC WATER RISER DIAGRAM AREA C

SCALE: 3/32" = 1'-0"

EPROJECT NO.: 1151333

CONSTR. CONTR. NO.: N62470-09-D-9044

NAVFAC DRAWING NO.: 13066010

SHEET P-604 OF 0

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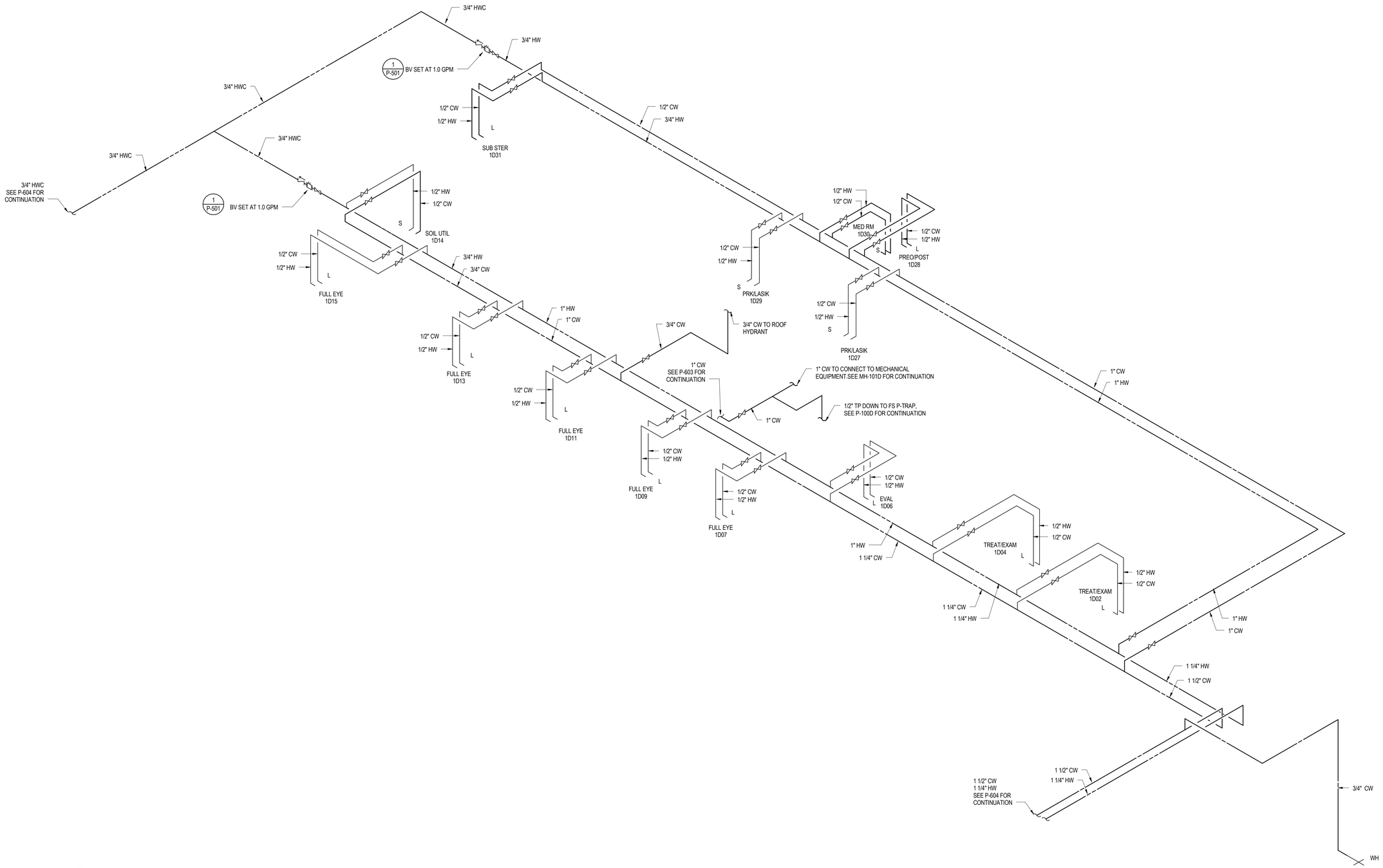


1 DOMESTIC WATER ISOMETRIC AREA D

NTS

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |

NAVFAC

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ACTIVITY

SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB

PMDM CHEMENJU/HILL

BRANCH MANAGER N/A

CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING

SE DOMESTIC WATER RISER DIAGRAM AREA D

SCALE: 3/16" = 1'-0"

EPROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

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P-605

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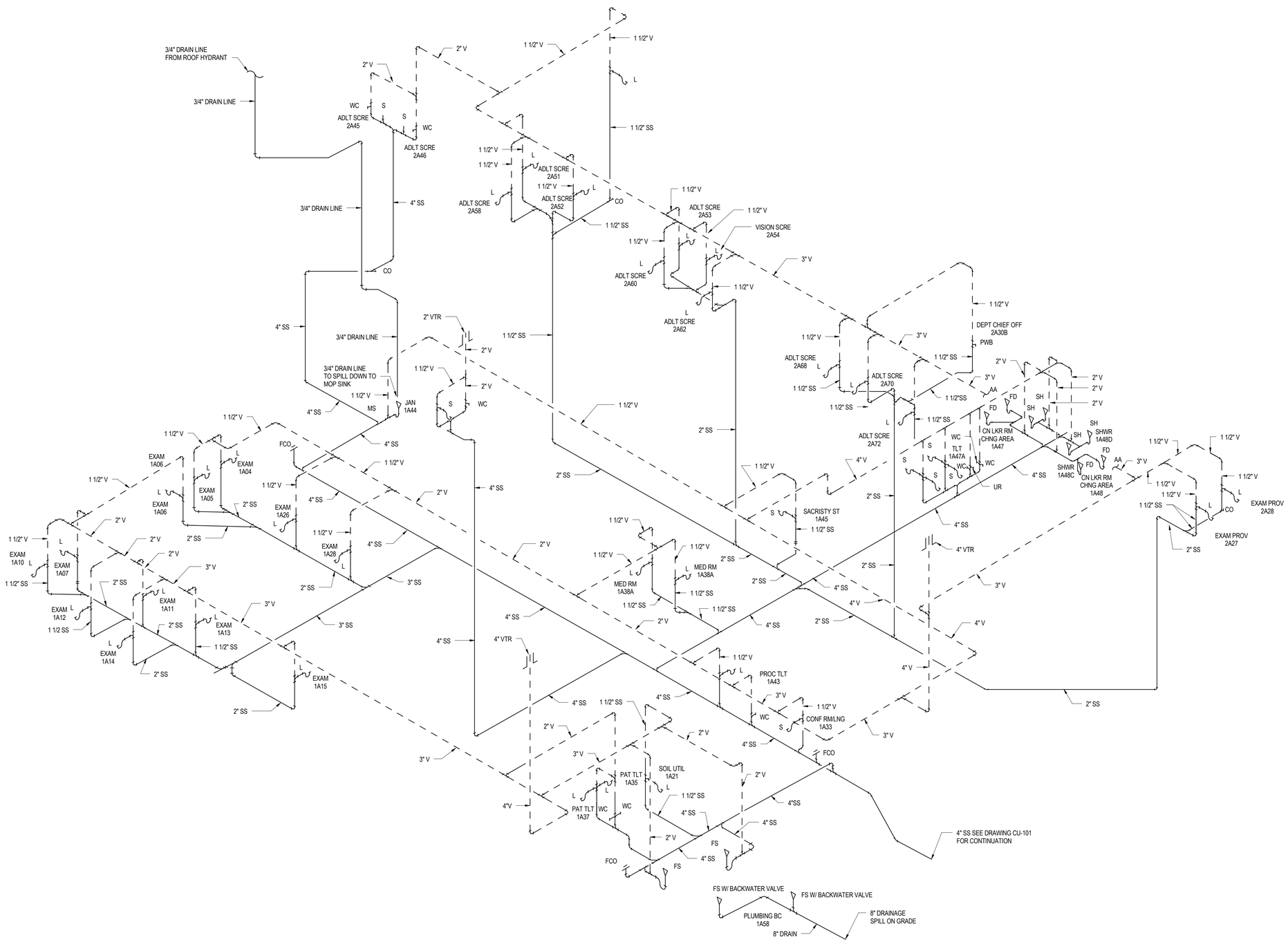


1 SE SANITARY AND VENT ISOMETRIC AREA A

NTS

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |

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SATISFACTORY TO DATE

| | | | | | |
|---|---|---|---|---|---|
| DES | CBH | DRW | CBH | CHK | AB |
| PM/DM | CHEMENJU/HILL | | | | |
| BRANCH MANAGER | N/A | | | | |
| CHIEF ENG/ARCH | TOM COX | | | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE, CITY, STATE: BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
SE SANITARY AND VENT RISER DIAGRAM AREA A

SCALE: 3/8" = 1'-0"
EPROJECT NO. 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066008
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P-606

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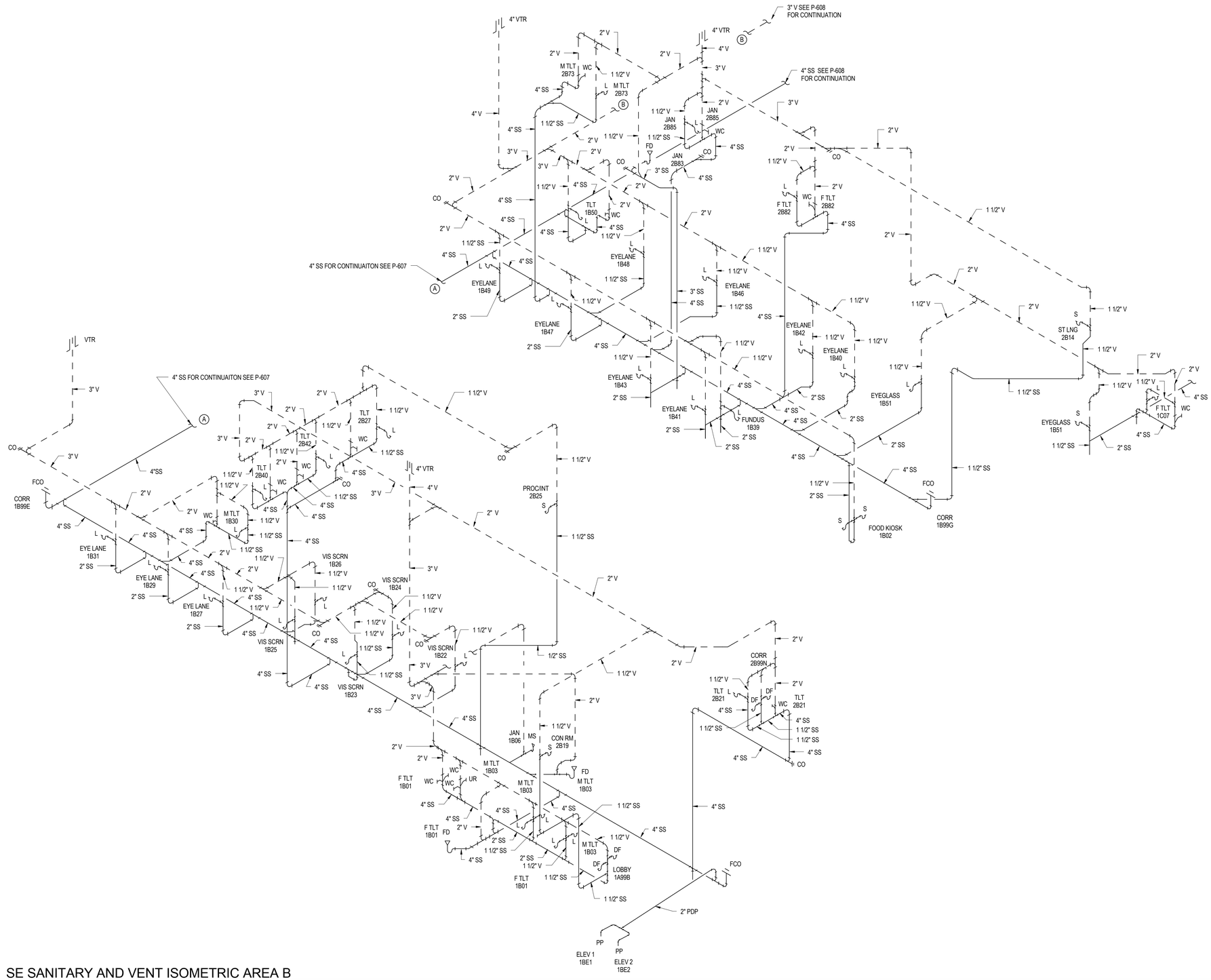


1 SE SANITARY AND VENT ISOMETRIC AREA B

NTS

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| | FINAL CORRECTED SET | 03/26/14 |
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DES CBH | DRW CBH | CHK AB

PM/DM CHEMENJU/HILL

BRANCH MANAGER N/A

CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME:
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SE SANITARY AND VENT RISER DIAGRAM AREA B

SCALE: 3/16" = 1'-0"

EPROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13066012

SHEET 0 OF 0

P-607

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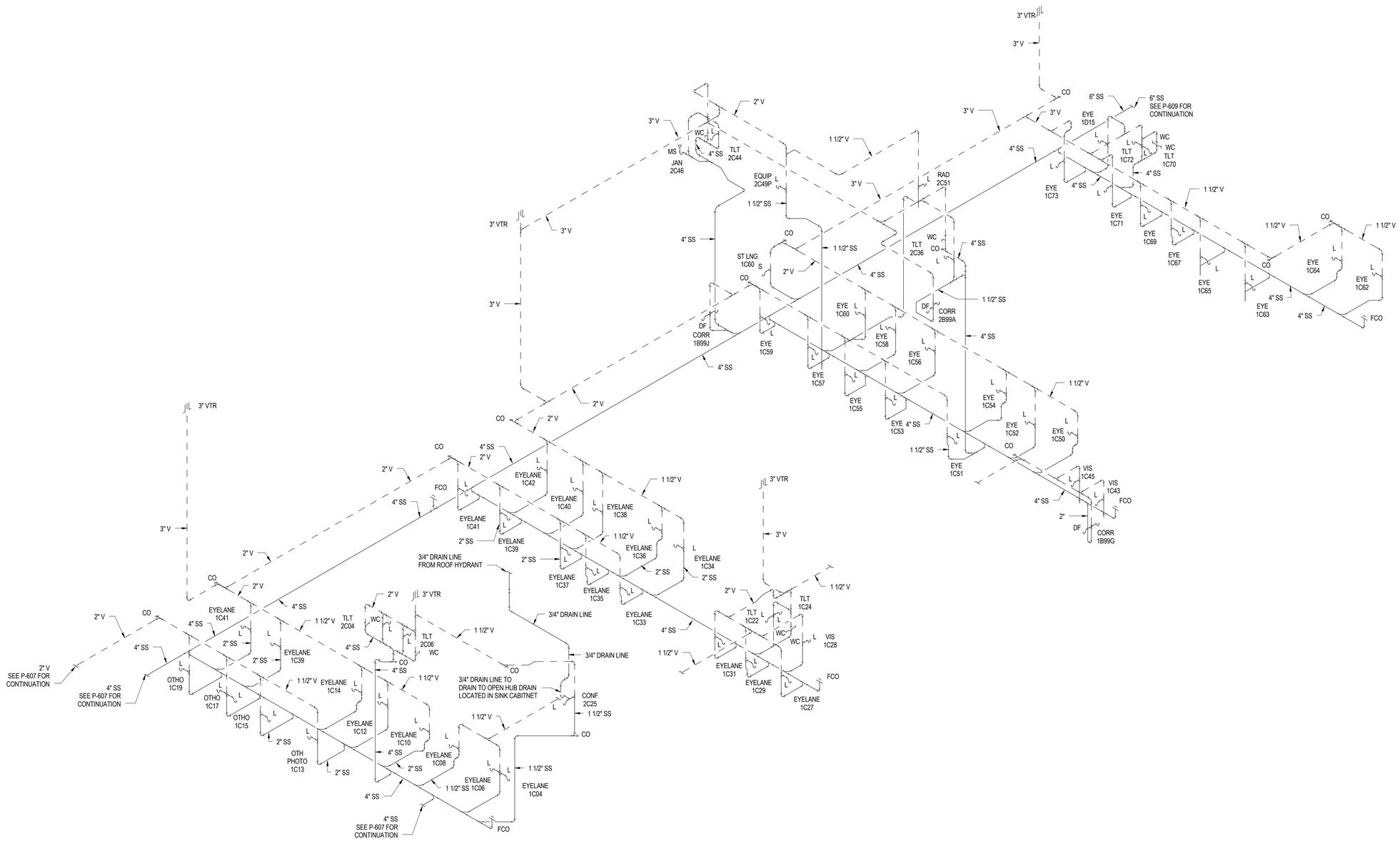


1 SE SANITARY AND VENT ISOMETRIC AREA C

NTS

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR

ARCHITECTURE | ENGINEERING & CONSULTING

1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | CBH | DRW | CBH | CHK | AB |
|---|---|---|---|---|---|
| PMDM | CHEMENJU/HILL | | | | |
| BRANCH MANAGER | N/A | | | | |
| CHIEF ENG/ARCH | TOM COX | | | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME:
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING

SE SANITARY AND VENT RISER DIAGRAM AREA C

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

EPROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13066013

SHEET 0 OF 0

P-608

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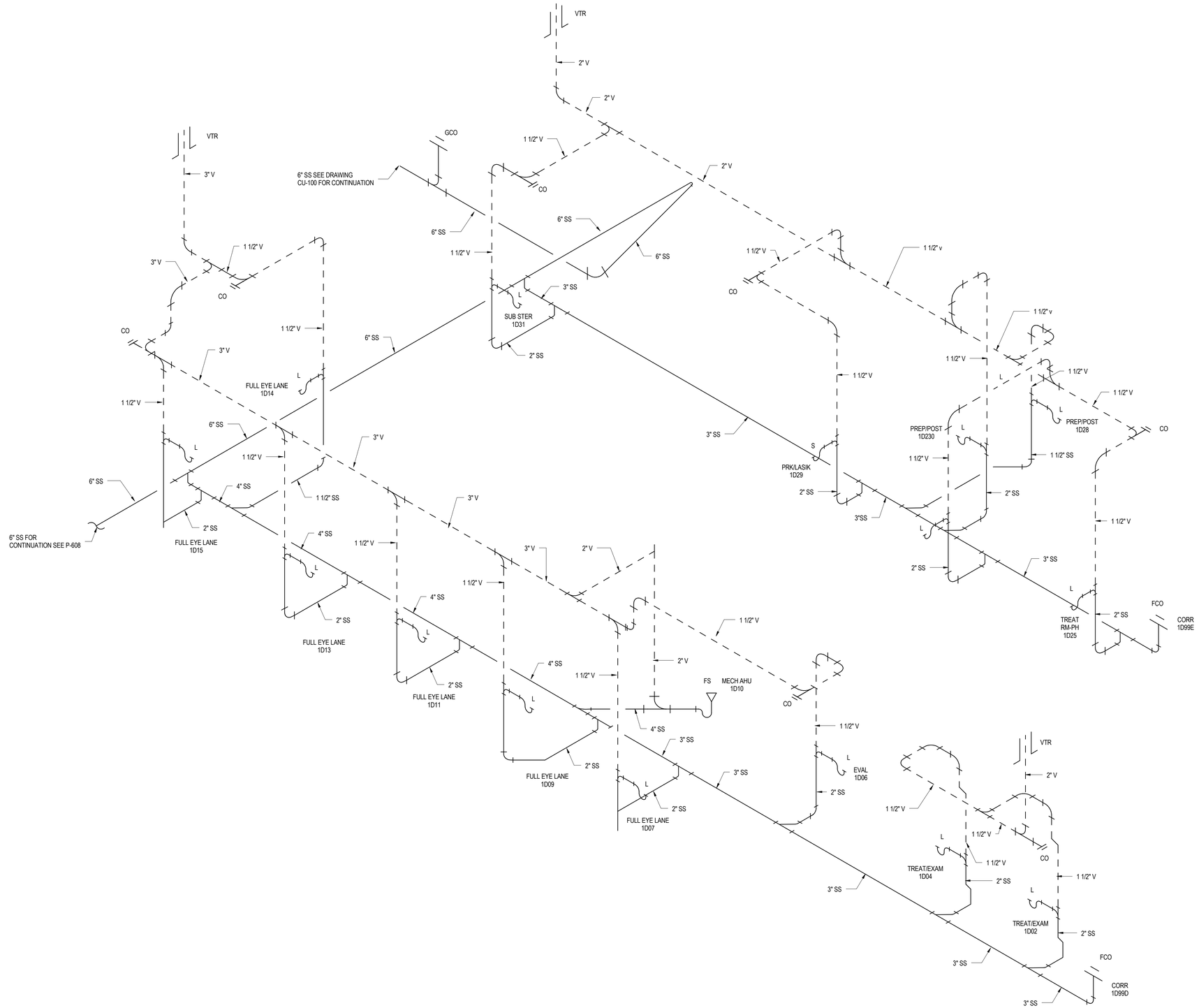


1 SE SANITARY AND VENT ISOMETRIC AREA D

NTS

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |

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SOPHEAP CHAN
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SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CBH DRW CBH CHK AB

PMDM CHEMENJU/HILL

BRANCH MANAGER N/A

CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE, CITY, STATE BETHESDA, MD
PROJECT STATION/INSTALLATION P125 - TEMPORARY MEDICAL FACILITIES PACKAGE 2 - CLINIC BUILDING

SE SANITARY AND VENT RISER DIAGRAM AREA D

SCALE: 3/8" = 1'-0"

EPROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13066014

SHEET 0 OF 0

P-609

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## MECHANICAL SYMBOLS AND ABBREVIATIONS

| ABBR. | SYMBOL | REMARKS |
|---|---|---|
| | D1 / CFM | HORIZONTALLY MOUNTED SUPPLY AIR DIFFUSER/REGISTER/GRILLE |
| | R1 / CFM | HORIZONTALLY MOUNTED RETURN/EXHAUST AIR REGISTER/GRILLE |
| | WS1 / CFM | VERTICALLY MOUNTED SUPPLY AIR DIFFUSER/REGISTER/GRILLE |
| | DOWN / UP | |
| | | RECTANGULAR DUCTWORK SUPPLY/OUTSIDE AIR ELBOW |
| | | ROUND DUCTWORK SUPPLY/OUTSIDE AIR ELBOW |
| | | OVAL DUCTWORK SUPPLY/OUTSIDE AIR ELBOW |
| | | RECTANGULAR DUCTWORK RETURN AIR ELBOW |
| | | ROUND DUCTWORK RETURN AIR ELBOW |
| | | OVAL DUCTWORK RETURN AIR ELBOW |
| | | RECTANGULAR DUCTWORK EXHAUST/RELIEF AIR ELBOW |
| | | ROUND DUCTWORK EXHAUST/RELIEF AIR ELBOW |
| | | OVAL DUCTWORK EXHAUST/RELIEF AIR ELBOW |
| FD | | FIRE DAMPER - HORIZONTALLY MOUNTED |
| SD | | SMOKE DAMPER - HORIZONTALLY MOUNTED |
| FSD | | FIRE/SMOKE DAMPER - HORIZONTALLY MOUNTED |
| FD | | FIRE DAMPER - VERTICALLY MOUNTED |
| SD | | SMOKE DAMPER - VERTICALLY MOUNTED |
| FSD | | FIRE/SMOKE DAMPER - VERTICALLY MOUNTED |
| VD | | VOLUME DAMPER |
| AD | [M] | AUTOMATIC (MOTORIZED) DAMPER |
| DSD | (S)D | DUCT MOUNTED SMOKE DETECTOR |
| | | DUCT MOUNTED HUMIDIFIER |
| | | AIR TERMINAL UNIT |
| | | AIR TERMINAL UNIT WITH REHEAT COIL |
| | | ELECTRIC REHEAT |
| SA | * SA | SUPPLY AIR (* DUCT SIZE) |
| RA | * RA | RETURN AIR (* DUCT SIZE) |
| EA | * EA | EXHAUST AIR (* DUCT SIZE) |
| OA | * OA | OUTSIDE AIR (* DUCT SIZE) |
| REL A | * RELA | RELIEF AIR (* DUCT SIZE) |
| | | FLEXIBLE DUCT |
| | | ELBOW WITH TURNING VANE |

## MECHANICAL SYMBOLS AND ABBREVIATIONS

| ABBR. | SYMBOL | REMARKS |
|---|---|---|
| | 24x12 | RECTANGULAR DUCT SIZE, FIRST NUMBER INDICATES SIZE FOR SIDE SHOWN |
| | 24" | ROUND DUCT SIZE |
| | 24/12 | FLAT-OVAL DUCT SIZE, FIRST NUMBER INDICATES SIZE FOR SIDE SHOWN |
| | * / * * | DETAIL OR SECTION DESIGNATION (* DETAIL OR SECTION REFERENCE) (* * SHEET NUMBER DETAIL OR SECTION DRAWN ON) |
| | | |
| | * | EQUIPMENT DESIGNATION (* EQUIPMENT MARK NUMBER) |
| | * | UP TO FIXTURE DESIGNATION (* FIXTURE TYPE) |
| | TYPE (RATING); GPM REQUIRED; MBH (TOTAL FOR LOOP); ACTIVE LENGTH | FIN TUBE AND RADIANT PANEL DESIGNATION |
| | * | REFERENCE DESIGNATION (* NOTE NUMBER) |
| | INSERT INDICATES PIPE OR DUCT DESIGNATION; INSERT INDICATES NUMBER; RISER | REFERENCE DESIGNATION (* RISER NUMBER) |
| | * / ** | FIRE RISER DESIGNATION (* REFERENCE) (** RISER NUMBER) |
| | (H) | HUMIDISTAT OR HUMIDITY SENSOR |
| | (T) | THERMOSTAT OR TEMPERATURE SENSOR |
| | (P) | PRESSURE SWITCH OR PRESSURE SENSOR |
| | (S)CO | CARBON MONOXIDE DETECTOR |
| | (S)CO2 | CARBON DIOXIDE DETECTOR |

## MECHANICAL SYMBOLS AND ABBREVIATIONS

| ABBR. | SYMBOL | REMARKS |
|---|---|---|
| CW | | DOMESTIC COLD WATER |
| V | | VENT PIPING |
| RD | RD | ROOF DRAIN ABOVE FLOOR |
| D | D | DRAIN PIPING |
| S(X) | S(X) | STEAM SUPPLY (X)=PSI |
| CR(X) | CR(X) | STEAM CONDENSATE (X)=PSI |
| | | ISOLATION VALVE (BALL/BUTTERFLY/GATE - SEE SPECIFICATIONS) |
| | | CHECK VALVE (ARROW INDICATES DIRECTION OF FLOW) |
| | | PRESSURE REDUCING VALVE |
| | | (FLANGED/SCREWED) PIPE UNION OR FLANGE |
| | | STRAINER |
| | | RELIEF & PRESSURE RELIEF VALVE |
| | | THERMOMETER |
| | | PRESSURE GAGE WITH GAGE COCK |
| | | ARROW INDICATES DOWNWARD PITCH OF PIPE |
| | | ARROW INDICATES DIRECTION OF FLOW |
| | | PIPE ECCENTRIC REDUCER |
| | | PIPE CONCENTRIC REDUCER |
| | | CAPPED END |
| | | PIPE ELBOW UP |
| | | PIPE ELBOW DOWN |
| | | PIPE TEE UP |
| | | PIPE TEE DOWN |
| | | FLEXIBLE CONNECTOR |
| | A | AUTOMATIC AIR VENT |
| | | MANUAL AIR VENT |
| | T | TEST PORT |
| | | BALL CHECK OR DRIP VALVE |
| | BFP | BACKFLOW PREVENTER |

## MECHANICAL SYMBOLS AND ABBREVIATIONS

| ABBR. | REMARKS | ABBR. | REMARKS |
|---|---|---|---|
| ACH | AIR CHANGES/HOUR | MAX | MAXIMUM |
| ADJ | ADJUSTABLE | MFR | MANUFACTURER |
| AFF | ABOVE FINISHED FLOOR | MISC | MISCELLANEOUS |
| ALT | ALTERNATE | MIN | MINUTE(S), MINIMUM |
| AP | ACCESS PANEL | MTD | MOUNTED |
| APD | AIR PRESSURE DROP | NC | NORMALLY CLOSED, NOISE CRITERIA |
| AVG | AVERAGE | NO | NORMALLY OPEN, NUMBER |
| BAS | BUILDING AUTOMATION SYSTEM | NR | NOISE REDUCTION |
| BDD | GRAVITY BACKDRAFT DAMPER | NTS | NOT TO SCALE |
| BHP | BRAKE HORSE POWER | OD | OUTSIDE DIAMETER, OVERFLOW STORM DRAIN |
| BTUH | BRITISH THERMAL UNITS PER HOUR | OS&Y | OUTSIDE SCREW AND YOKE VALVE |
| CAP | CAPACITY | PD | PRESSURE DROP |
| CFM | CUBIC FEET PER MINUTE | PH | PHASE |
| CLG | CEILING, COOLING | PLBG | PLUMBING |
| COND | CONDENSER, CONDENSATE | PSI | POUND(S) PER SQUARE INCH |
| CONN | CONNECTION | QTY | QUANTITY |
| DB | DRY BULB | RH | RELATIVE HUMIDITY |
| dB | DECIBEL(S) | RL | REFRIGERANT LIQUID |
| DDC | DIRECT DIGITAL CONTROL | RPM | REVOLUTIONS PER MINUTE |
| DIA | DIAMETER | RM | ROOM |
| DN | DOWN | RS | REFRIGERANT SUCTION |
| DX | DIRECT EXPANSION | SCFM | STANDARD CUBIC FEET PER MINUTE |
| EAT | ENTERING AIR TEMPERATURE | SHT | SHEET |
| EFF | EFFICIENCY | SP | SUMP PUMP, STATIC PRESSURE |
| ESP | EXTERNAL STATIC PRESSURE | SQ | SQUARE |
| EWT | ENTERING WATER TEMPERATURE | TD | TEMPERATURE DIFFERENTIAL |
| EXH | EXHAUST | TEMP | TEMPERATURE |
| EXST | EXISTING | TSP | TOTAL STATIC PRESSURE |
| F | FAHRENHEIT | TYP | TYPICAL |
| FL | FLOOR | UNO | UNLESS NOTED OTHERWISE |
| FLA | FULL LOAD AMPS | V | VOLT(S) |
| FLEX | FLEXIBLE | VAV | VARIABLE AIR VOLUME |
| FPM | FEET PER MINUTE | VEL | VELOCITY |
| GAL | GALLON(S) | VFD | VARIABLE FREQUENCY DRIVE |
| GPH | GALLON(S) PER HOUR | W | WATT(S) |
| GPM | GALLON(S) PER MINUTE | WC | WATER COLUMN |
| HG | HOT GAS | WB | WET BULB |
| HP | HORSEPOWER | WG | WATER GAUGE |
| HTG | HEATING | WPD | WATER PRESSURE DROP |
| HVAC | HEATING, VENTILATING, & AIR CONDITIONING | WSFU | WATER SUPPLY FIXTURE UNITS |
| HZ | HERTZ | | |
| IN | INCH(ES) | | |
| KW | KILOWATT(S) | | |
| LAT | LEAVING AIR TEMPERATURE | | |
| LBS | POUNDS | | |
| LF | LINEAR FOOT, LINEAR FEET | | |
| LWT | LEAVING WATER TEMPERATURE | | |

## MECHANICAL CONTROL SYMBOLS

| SYMBOL | REMARKS | SYMBOL | REMARKS |
|---|---|---|---|
| DPS | DIFFERENTIAL PRESSURE SENSOR | AFD | ADJUSTABLE FREQUENCY DRIVE |
| | COIL (TYPE INDICATED) | S | SMOKE DETECTOR |
| T | TEMPERATURE SENSOR | T | SPACE TEMPERATURE SENSOR |
| HS | HUMIDITY SENSOR | H | SPACE HUMIDITY SENSOR |
| D | CONTROL VALVE | F | FLOURINE SENSOR |
| SP | STATIC PRESSURE SENSOR | | CONTROL DAMPER |
| | | ES | END SWITCH |

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |
| | 20% SUBMITTAL | 01/18/13 |

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COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CS | DRW VV | CHK DL
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND
BASE - CITY STATE: BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL - SYMBOLS AND ABBREVIATIONS

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066015
SHEET OF 0
M-001

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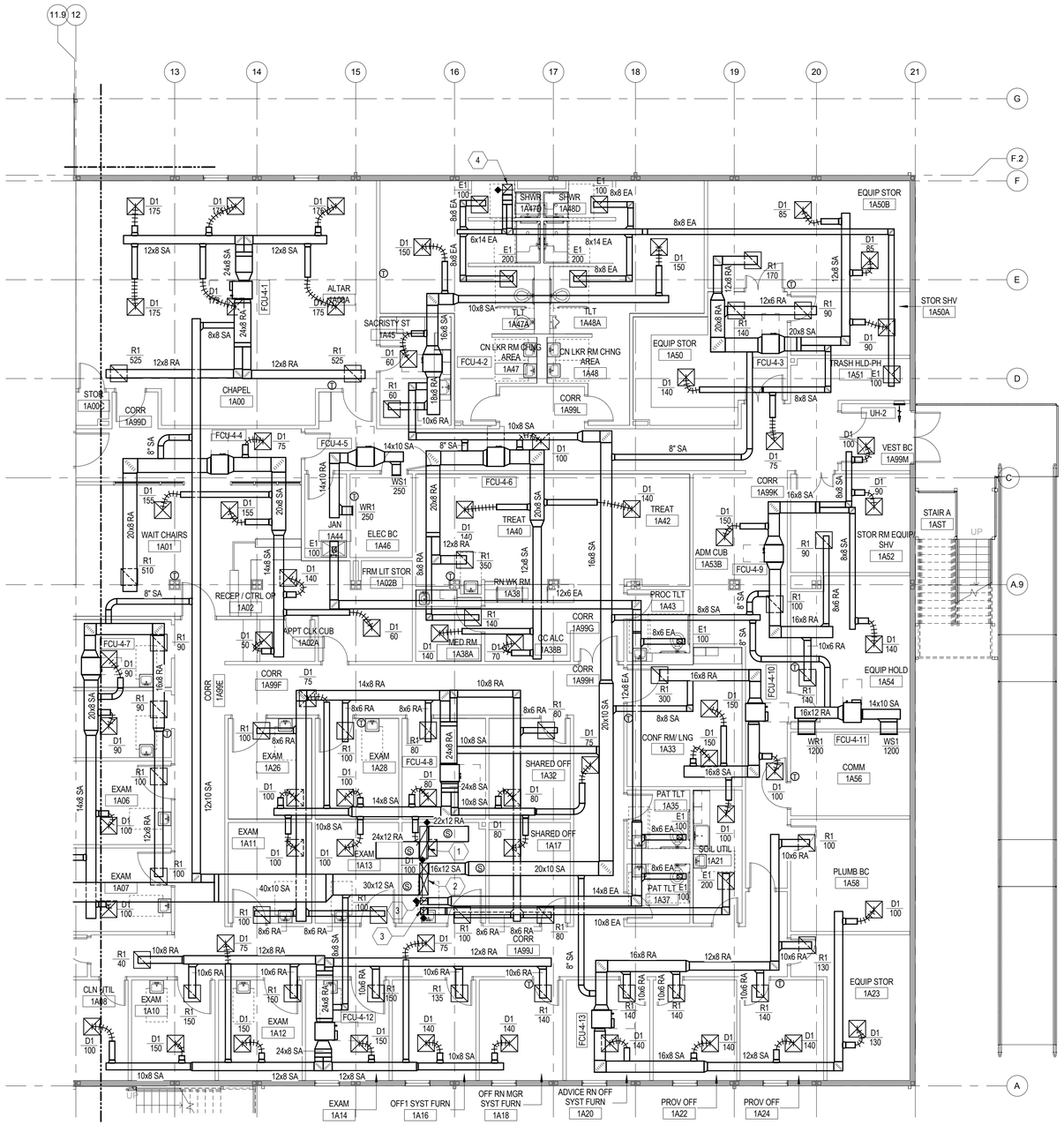
## GENERAL NOTES:

A. COORDINATE DUCT PENATRATION, LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
B. DUCT/FLEX CONNECT TO SUPPLY AIR DEVICE SHALL BE SAME SIZE AS NECK CONNECTION AND LIMITED TO SIX FEET.
C. UNLESS SHOWN DIFFERENTLY, SIZE ALL SUPPLY DUCT DOWNSTREAM OF AIR TERMINAL UNITS, RETURN AND EXHAUST DUCT BRANCHES AND LOW PRESSURE DUCTS AT 0.08 IN WG/ 100 FEET.
D. PROVIDE BALANCING DAMPER FOR ALL BRANCH DUCT TAKE OFF.

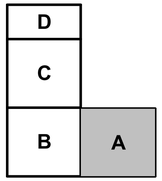
## KEYED NOTES:

1 46x12 RA UP.
2 46x12 SA UP.
3 10x10 EA UP.
4 14x14 EA UP.




1 LEVEL 1 P125 - AREA A - HVAC
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"




KEY PLAN

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |

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PROFESSIONAL ENGINEER

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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CS DRW VV CHK DL
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE, CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL - FLOOR PLAN - FIRST FLOOR AREA A

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066016
SHEET OF 0
MH-101A

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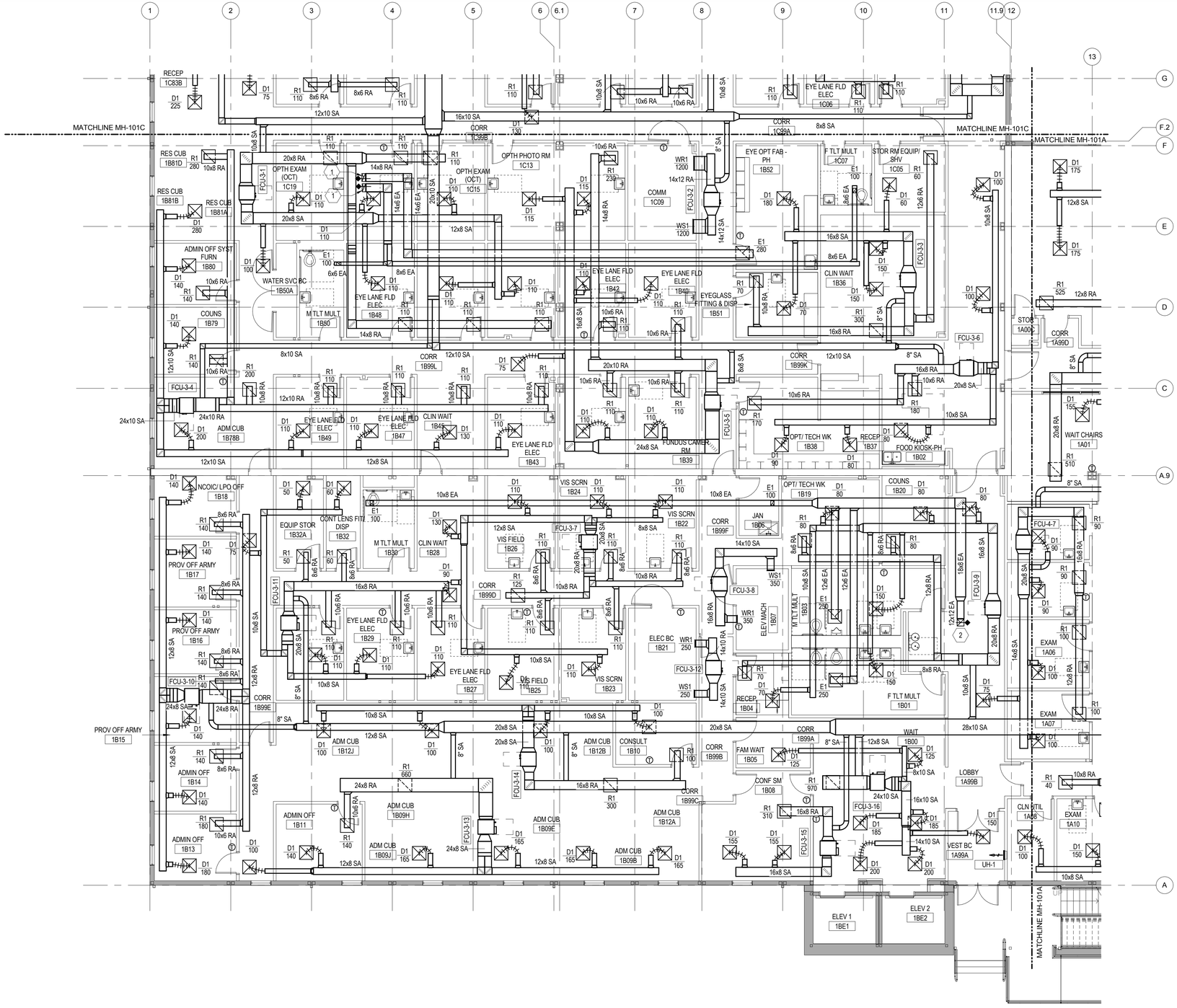


1 LEVEL 1 P125 - AREA B - HVAC

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

A. COORDINATE DUCT PENATRATION, LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.

B. DUCT/FLEX CONNECT TO SUPPLY AIR DEVICE SHALL BE SAME SIZE AS NECK CONNECTION AND LIMITED TO SIX FEET.

C. UNLESS SHOWN DIFFERENTLY, SIZE ALL SUPPLY DUCT DOWNSTREAM OF AIR TERMINAL UNITS, RETURN AND EXHAUST DUCT BRANCHES AND LOW PRESSURE DUCTS AT 0.08 IN WG/ 100 FEET.

D. PROVIDE BALANCING DAMPER FOR ALL BRANCH DUCT TAKE OFF.

## KEYED NOTES:

1 14x6 EA UP.

2 12x12 EA UP.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |
| | 20% SUBMITTAL | 01/18/13 |

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HDR

ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | CS | DRW | VV | CHK | DL |
|---|---|---|---|---|---|

PMDM: CHEMENJU/HILL

BRANCH MANAGER: N/A

CHIEF ENG/ARCH: TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE: BETHESDA, MD

PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING

MECHANICAL - FLOOR PLAN - FIRST FLOOR AREA B

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

EPROJECT NO.: 1151333

CONSTR. CONTR. NO.: N62470-09-D-9044

NAVFAC DRAWING NO.: 13066017

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C
B A

KEY PLAN

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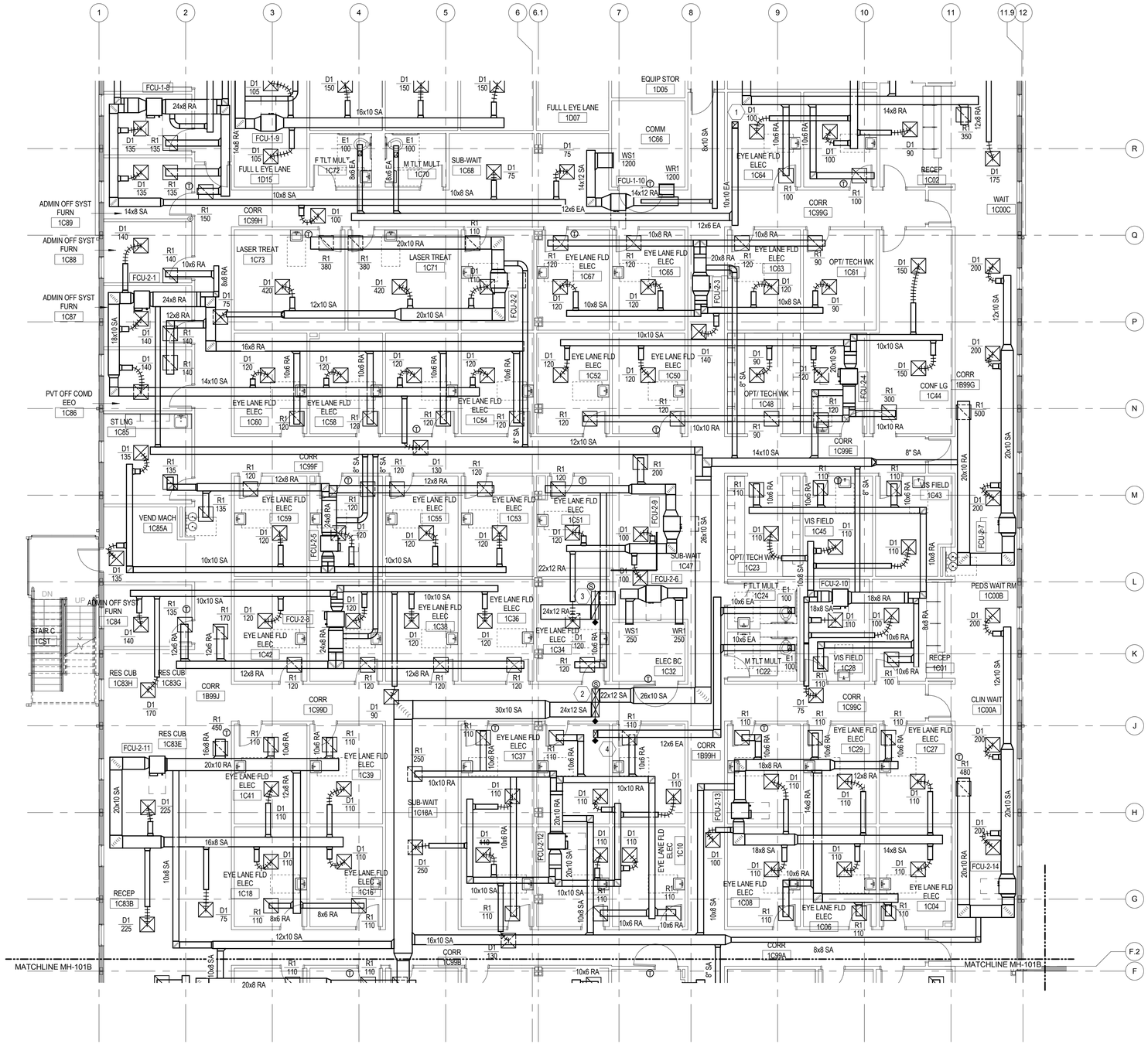


1 LEVEL 1 P125 - AREA C - HVAC
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

A. COORDINATE DUCT PENATRATION, LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
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C. UNLESS SHOWN DIFFERENTLY, SIZE ALL SUPPLY DUCT DOWNSTREAM OF AIR TERMINAL UNITS, RETURN AND EXHAUST DUCT BRANCHES AND LOW PRESSURE DUCTS AT 0.08 IN WG/ 100 FEET.
D. PROVIDE BALANCING DAMPER FOR ALL BRANCH DUCT TAKE OFF.

## KEYED NOTES:

1 10x10 EA UP TO EF-2-3.
2 46x12 SA UP.
3 46x12 RA UP.
4 12x6 EA UP.

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| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |
| | 20% SUBMITTAL | 01/18/13 |

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ACTIVITY
SATISFACTORY TO DATE

DES CS DRW VV CHK DL
PMDM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL - FLOOR PLAN - FIRST FLOOR AREA C

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066018
SHEET OF 0
MH-101C

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KEY PLAN

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## GENERAL NOTES:

A. COORDINATE DUCT PENATRATION, LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
B. DUCT/FLEX CONNECT TO SUPPLY AIR DEVICE SHALL BE SAME SIZE AS NECK CONNECTION AND LIMITED TO SIX FEET.
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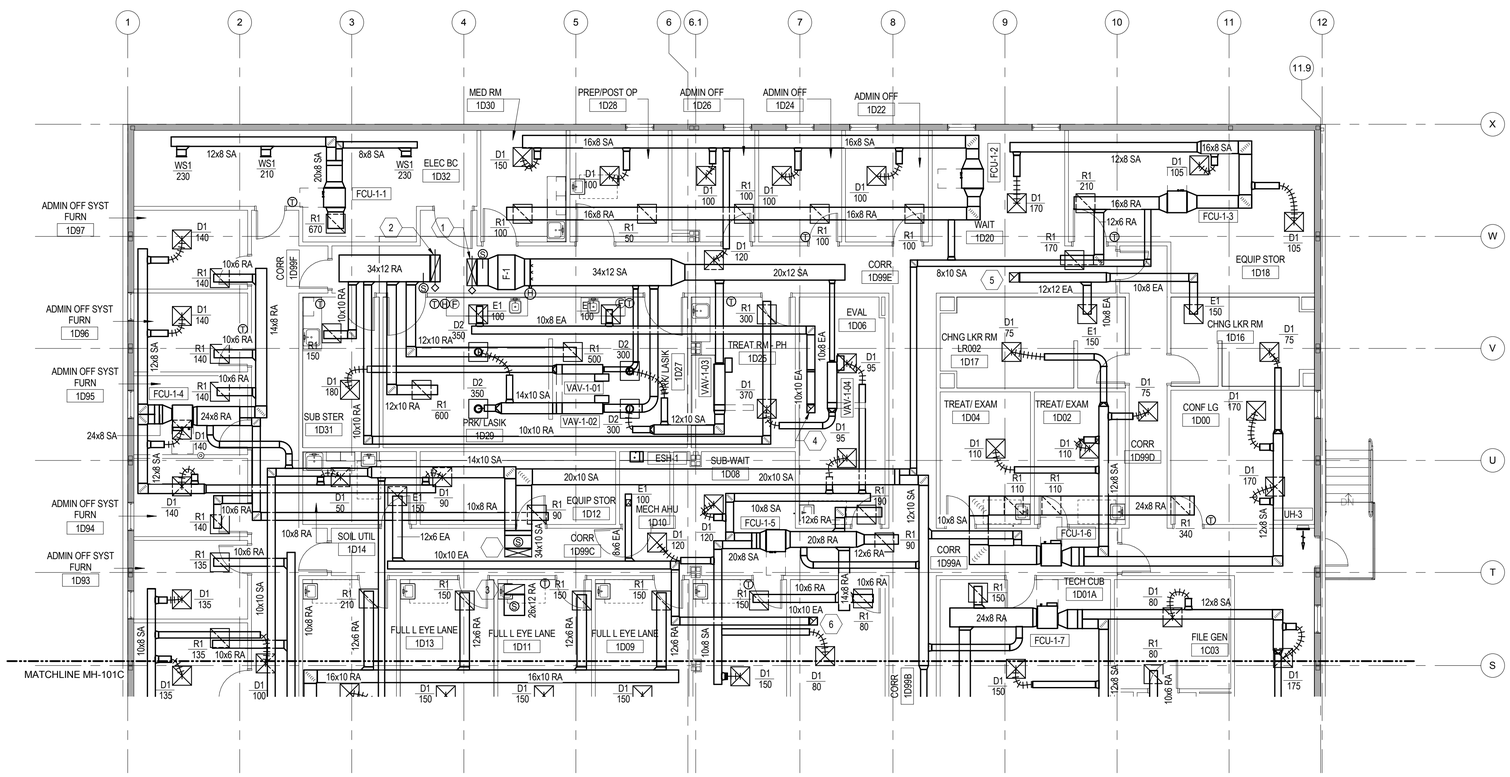
D. PROVIDE BALANCING DAMPER FOR ALL BRANCH DUCT TAKE OFF.

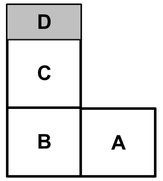
## KEYED NOTES:

1 34x12 SA UP TO RTU-1.
2 34x12 RA UP TO RTU-1.
3 26x12 RA UP TU RTU-2.
4 10x10 EA UP TO EF-1-1.
5 12x12 EA UP TO EF-2-1.
6 10x10 EA UP TO EF-2-2.




1 LEVEL 1 P125 - AREA D - HVAC
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"




KEY PLAN

| SYM | DESCRIPTION | DATE |
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| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |
| | 20% SUBMITTAL | 01/18/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CS DRW VV CHK DL
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL - FLOOR PLAN - FIRST FLOOR AREA D

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066019
SHEET OF 0
MH-101D

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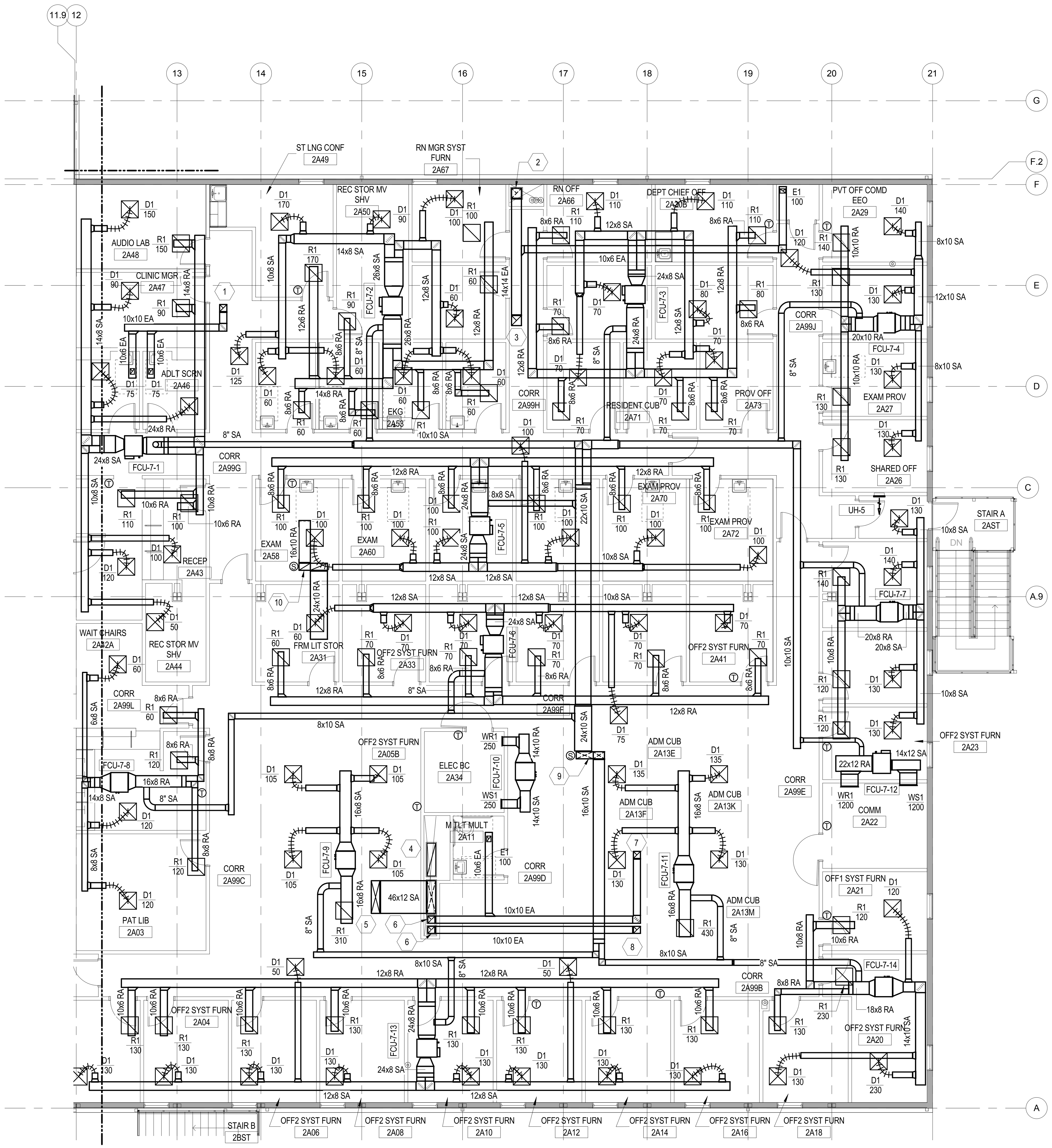


1 LEVEL 2 P125 - AREA A - HVAC

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

A. COORDINATE DUCT PENATRATION, LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.

B. DUCT/FLEX CONNECT TO SUPPLY AIR DEVICE SHALL BE SAME SIZE AS NECK CONNECTION AND LIMITED TO SIX FEET.

C. UNLESS SHOWN DIFFERENTLY, SIZE ALL SUPPLY DUCT DOWNSTREAM OF AIR TERMINAL UNITS, RETURN AND EXHAUST DUCT BRANCHES AND LOW PRESSURE DUCTS AT 0.08 IN WG/ 100 FEET.

D. PROVIDE BALANCING DAMPER FOR ALL BRANCH DUCT TAKE OFF.

## KEYED NOTES:

1. 10x10 EA UP TO EF-4-6.
2. 14x14 EA DN.
3. 14x14 EA UP TO EF-4-2.
4. 46x12 RA UP & DN.
5. 46x12 SA UP.
6. 10x10 EA DN.
7. 10x10 EA UP TO EF-4-3.
8. 10x10 EA UP TO EF-4-4.
9. 40x10 SA UP.
10. 40x10 RA UP.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |
| | 20% SUBMITTAL | 01/18/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
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PROFESSIONAL ENGINEER

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ARCHITECTURE | ENGINEERING & CONSULTING
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SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES CS | DRW VV | CHK DL |
|---|---|---|

PM/DM CHEMENJU/HILL

BRANCH MANAGER N/A

CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
COMPONENT NAME
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL - FLOOR PLAN - SECOND FLOOR AREA A

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

EPROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13066020

SHEET OF 0

MH-102A

KEY PLAN

| D | |
|---|---|
| C | |
| B | A |

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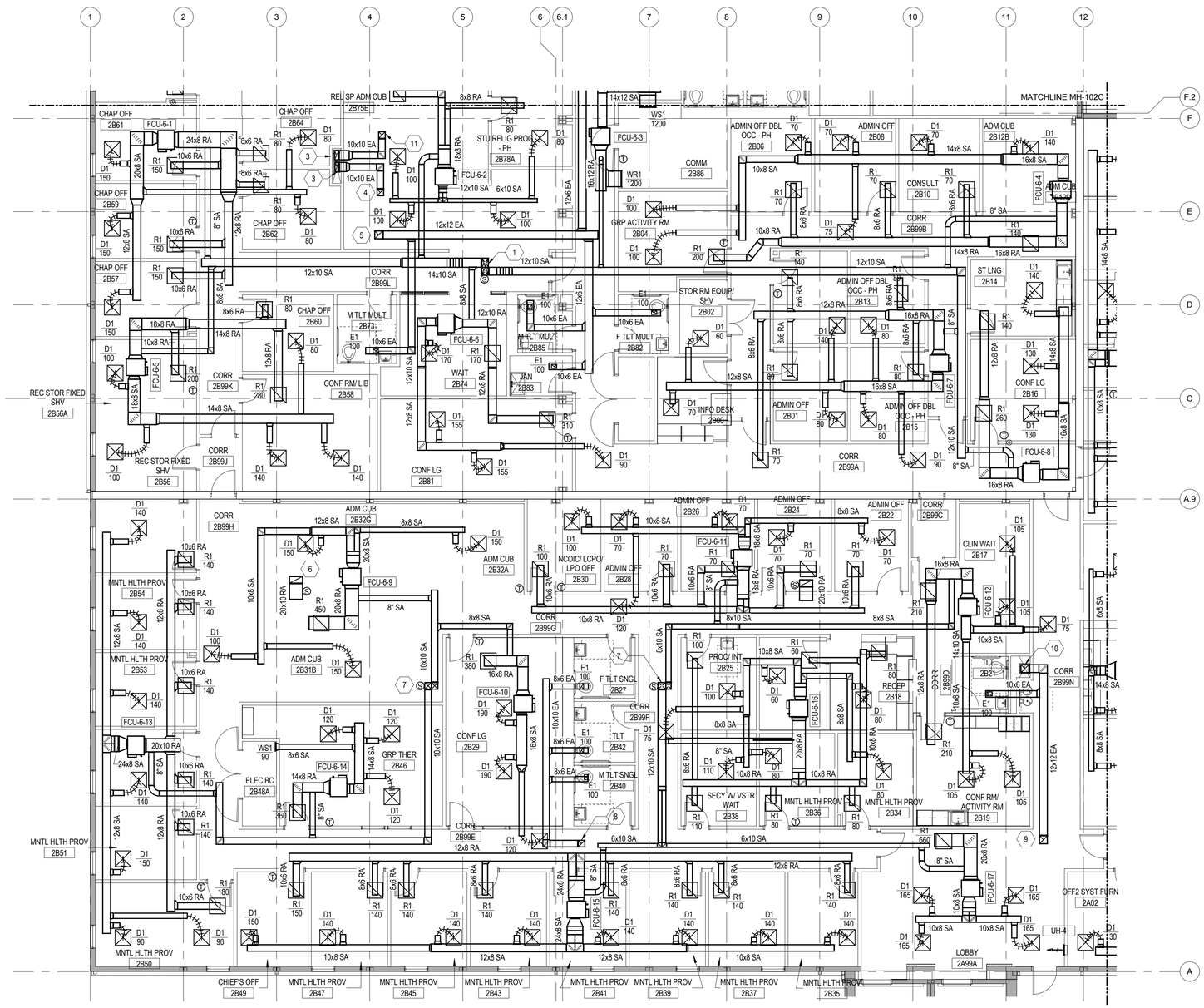


1 LEVEL 2 P125 - AREA B - HVAC

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

A. COORDINATE DUCT PENATRATION, LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
B. DUCT/FLEX CONNECT TO SUPPLY AIR DEVICE SHALL BE SAME SIZE AS NECK CONNECTION AND LIMITED TO SIX FEET.
C. UNLESS SHOWN DIFFERENTLY, SIZE ALL SUPPLY DUCT DOWNSTREAM OF AIR TERMINAL UNITS, RETURN AND EXHAUST DUCT BRANCHES AND LOW PRESSURE DUCTS AT 0.08 IN WG/ 100 FEET.
D. PROVIDE BALANCING DAMPER FOR ALL BRANCH DUCT TAKE OFF.

## KEYED NOTES:

1 26x10 SA UP.
2 40x12 RA UP.
3 12x6 EA DN.
4 10x10 EA UP TO EF-3-3.
5 12x12 EA UP TO EF-3-4.
6 20x10 RA UP.
7 20x10 SA UP.
8 10x10 EA UP TO EF-4-5.
9 12x12 EA UP TO EF-4-1.
10 12x12 EA DN.
11 10x10 EA UP TO EF-3-2.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |
| | 20% SUBMITTAL | 01/18/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR

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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| DES | CS | DRW | VV | CHK | DL |
|---|---|---|---|---|---|

PM/DM: CHEMENJU/HILL
BRANCH MANAGER: N/A
CHIEF ENG/ARCH: TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE, CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL - FLOOR PLAN - SECOND FLOOR AREA B

SCALE: 1/8" = 1'-0"
EFPROJECT NO.: 1151333
CONSTR. CONTR. NO.: N62470-09-D-9044
NAVFAC DRAWING NO.: 13066021
SHEET MH-102B OF 0

D
C
B A
KEY PLAN

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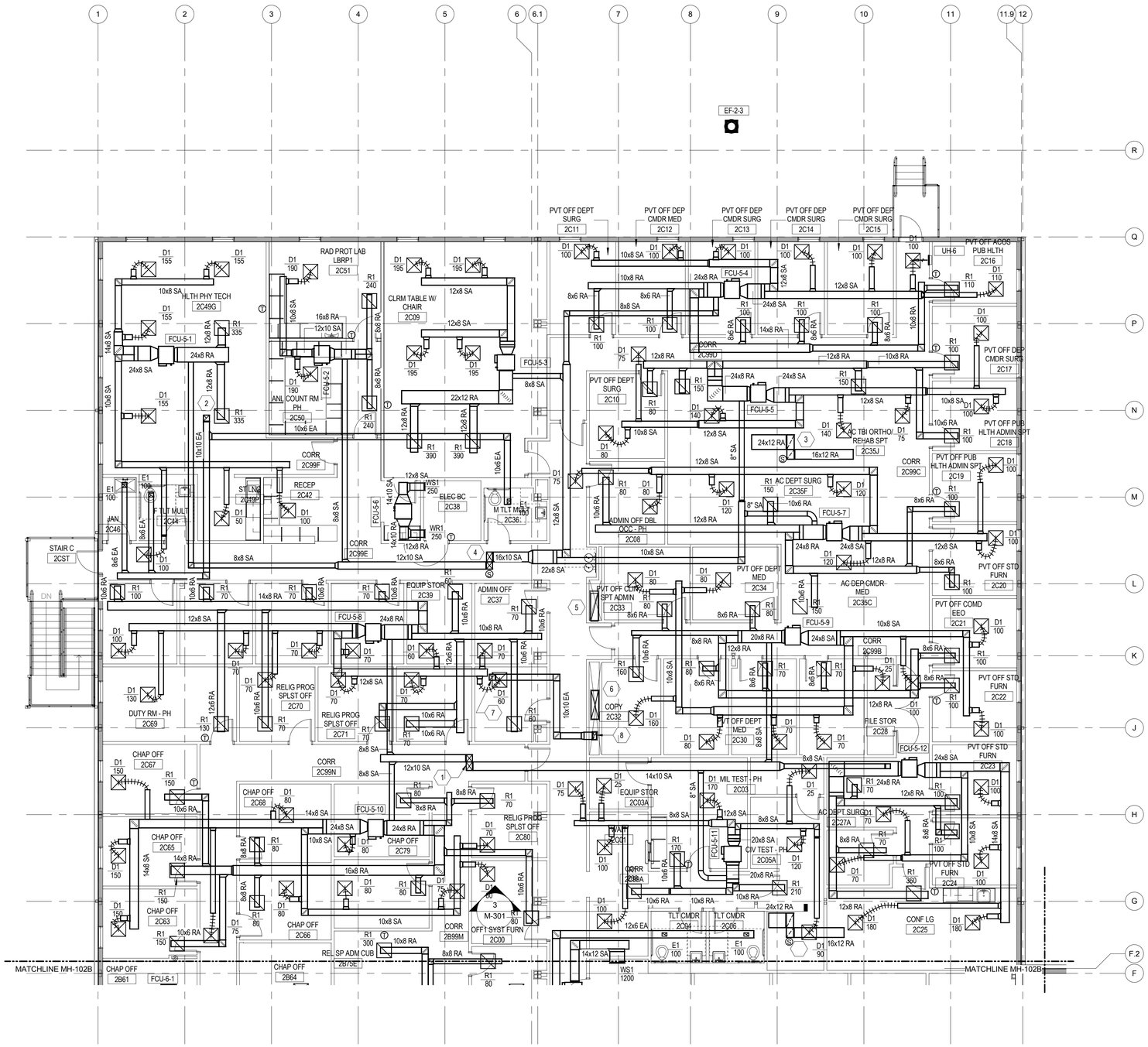


1 LEVEL 2 P125 - AREA C - HVAC

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

## KEYED NOTES:

1 26x10 SA UP.
2 10x10 EA UP TO EF-3-5.
3 40x12 RA UP.
4 28x10 SA UP.
5 46x12 RA UP & DN.
6 46x12 SA UP & DN.
7 10x10 EA UP TO EF-3-1.
8 12x6 EA DN.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |
| | 20% SUBMITTAL | 01/18/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
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Lic. No. 0402042516
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PROFESSIONAL ENGINEER

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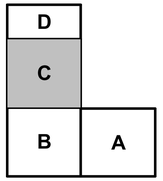
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| | | | |
|---|---|---|---|
| DES | CS | DRW | VV |
| CHK | DL | | |
| PMDM | CHEMENJU/HILL | | |
| BRANCH MANAGER | N/A | | |
| CHIEF ENG/ARCH | TOM COX | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL - FLOOR PLAN - SECOND FLOOR AREA C

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO.: N62470-09-D-9044
NAVFAC DRAWING NO.: 13066022
SHEET MH-102C OF 0




KEY PLAN

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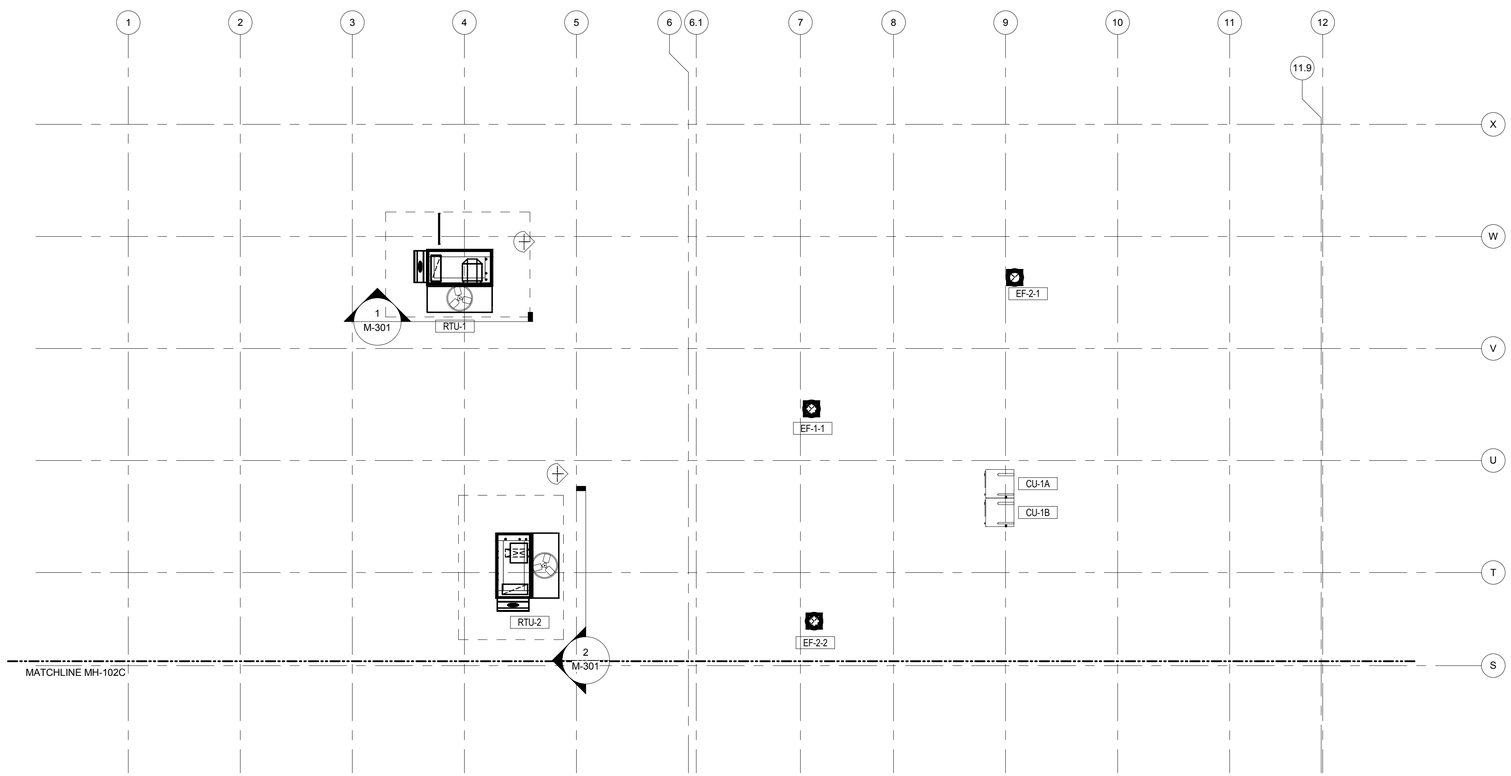
## GENERAL NOTES:

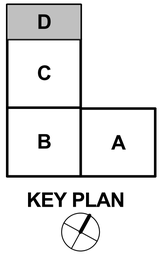
A. COORDINATE DUCT PENATRATION, LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
B. DUCT/FLEX CONNECT TO SUPPLY AIR DEVICE SHALL BE SAME SIZE AS NECK CONNECTION AND LIMITED TO SIX FEET.
C. UNLESS SHOWN DIFFERENTLY, SIZE ALL SUPPLY DUCT DOWNSTREAM OF AIR TERMINAL UNITS, RETURN AND EXHAUST DUCT BRANCHES AND LOW PRESSURE DUCTS AT 0.08 IN WG/ 100 FEET.
D. PROVIDE BALANCING DAMPER FOR ALL BRANCH DUCT TAKE OFF.

## KEYED NOTES:




1 LEVEL 2 P125 - AREA D - HVAC
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"




KEY PLAN

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |
| | 20% SUBMITTAL | 01/18/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CS | DRW VV | CHK DL
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL - FLOOR PLAN - SECOND FLOOR AREA D

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066023
SHEET OF 0

MH-102D

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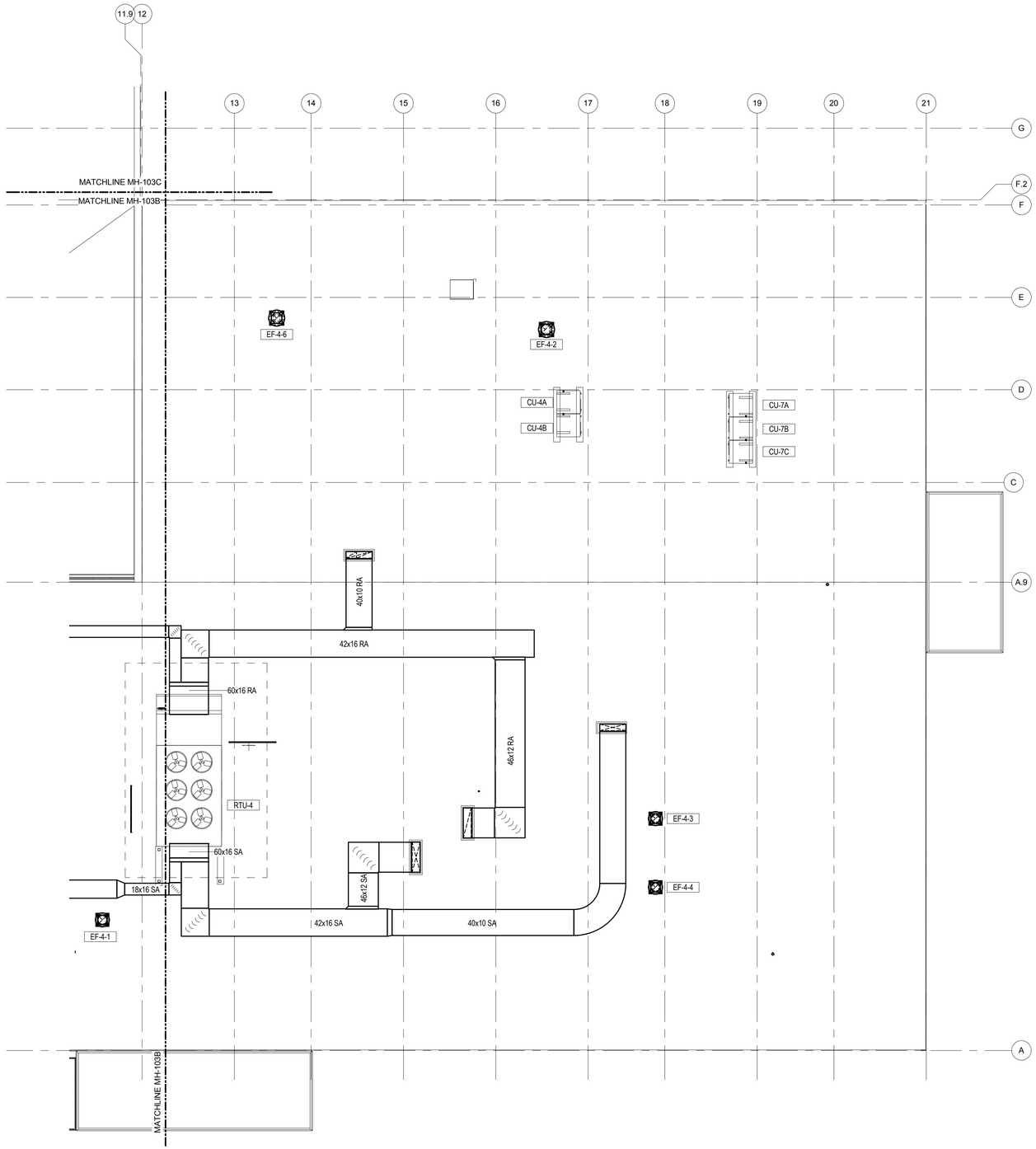


1 ROOF P125 - AREA A - HVAC

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

A. COORDINATE DUCT PENATRATION, LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
B. DUCT/FLEX CONNECT TO SUPPLY AIR DEVICE SHALL BE SAME SIZE AS NECK CONNECTION AND LIMITED TO SIX FEET.
C. UNLESS SHOWN DIFFERENTLY, SIZE ALL SUPPLY DUCT DOWNSTREAM OF AIR TERMINAL UNITS, RETURN AND EXHAUST DUCT BRANCHES AND LOW PRESSURE DUCTS AT 0.08 IN WG/ 100 FEET.
D. PROVIDE BALANCING DAMPER FOR ALL BRANCH DUCT TAKE OFF.
E. DUCT WORK SHALL BE MINMIMUM 12 INCHES ABOVE ROOF LEVEL.
F. PROVIDE DUCT SUPPORT FOR DUCTWORK ABOVE ROOF.

## KEYED NOTES:

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |
| | 20% SUBMITTAL | 01/18/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

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ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| | | | |
|---|---|---|---|
| DES | CS | DRW | VV |
| CHK | DL | | |

PM/DM: CHEMENJU/HILL
BRANCH MANAGER: N/A
CHIEF ENG/ARCH: TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE : CITY : STATE
PROJECT STATION/INSTALLATION
BETHESDA, MD
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL - ROOF PLAN - AREA A

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066024
SHEET 0 OF 0

MH-103A

| | |
|---|---|
| D | |
| C | |
| B | A |

KEY PLAN

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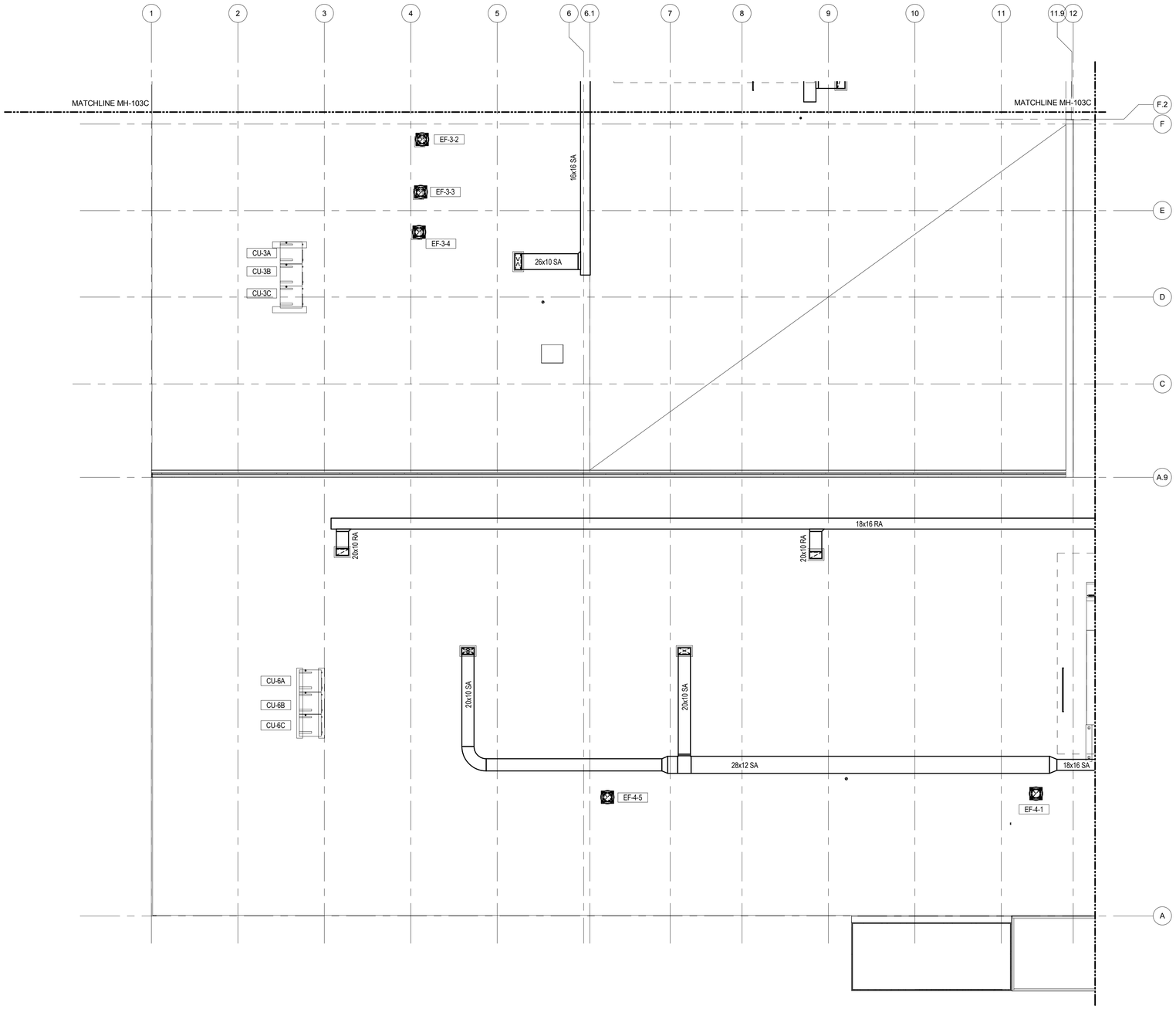


1 ROOF P125 - AREA B - HVAC
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

A. COORDINATE DUCT PENATRATION, LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
B. DUCT/FLEX CONNECT TO SUPPLY AIR DEVICE SHALL BE SAME SIZE AS NECK CONNECTION AND LIMITED TO SIX FEET.
C. UNLESS SHOWN DIFFERENTLY, SIZE ALL SUPPLY DUCT DOWNSTREAM OF AIR TERMINAL UNITS, RETURN AND EXHAUST DUCT BRANCHES AND LOW PRESSURE DUCTS AT 0.08 IN WG/ 100 FEET.
D. PROVIDE BALANCING DAMPER FOR ALL BRANCH DUCT TAKE OFF.
E. DUCT WORK SHALL BE MINMIMUM 12 INCHES ABOVE ROOF LEVEL.
F. PROVIDE DUCT SUPPORT FOR DUCTWORK ABOVE ROOF.

## KEYED NOTES:

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |
| | 20% SUBMITTAL | 01/18/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| DES | CS | DRW | VV | CHK | DL |
|---|---|---|---|---|---|

PM/DM: CHEMENJU/HILL
BRANCH MANAGER: N/A
CHIEF ENG/ARCH: TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL - ROOF PLAN - AREA B

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066025
SHEET 0 OF 0

MH-103B

KEY PLAN
D
C
B A

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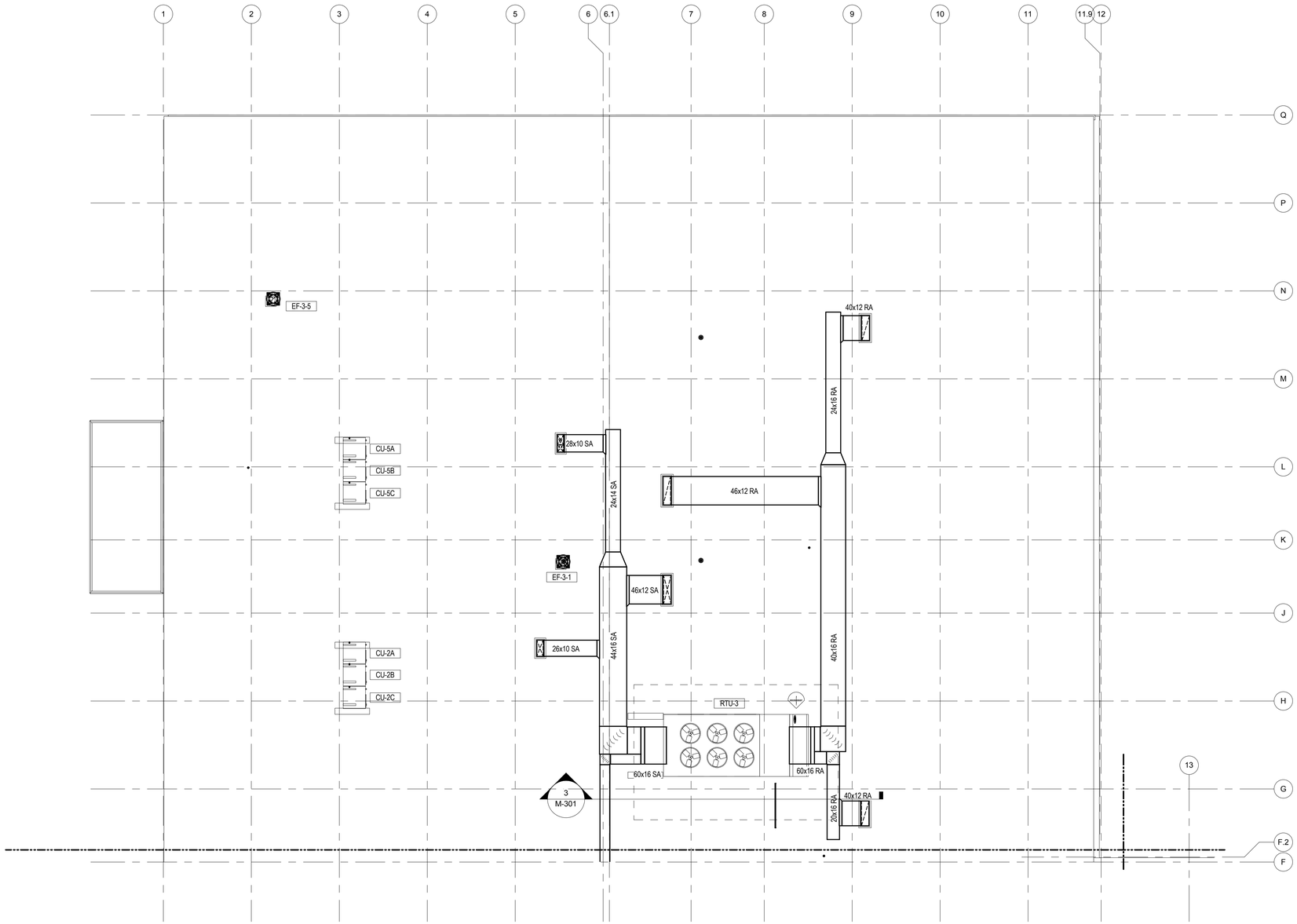
## GENERAL NOTES:

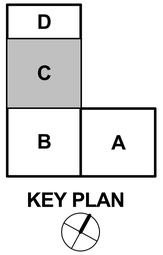
A. COORDINATE DUCT PENATRATION, LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
B. DUCT/FLEX CONNECT TO SUPPLY AIR DEVICE SHALL BE SAME SIZE AS NECK CONNECTION AND LIMITED TO SIX FEET.
C. UNLESS SHOWN DIFFERENTLY, SIZE ALL SUPPLY DUCT DOWNSTREAM OF AIR TERMINAL UNITS, RETURN AND EXHAUST DUCT BRANCHES AND LOW PRESSURE DUCTS AT 0.08 IN WG/ 100 FEET.
D. PROVIDE BALANCING DAMPER FOR ALL BRANCH DUCT TAKE OFF.
E. DUCT WORK SHALL BE MINMIMUM 12 INCHES ABOVE ROOF LEVEL.
F. PROVIDE DUCT SUPPORT FOR DUCTWORK ABOVE ROOF.

## KEYED NOTES:




1 ROOF P125 - AREA C - HVAC
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"




KEY PLAN

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |
| | 20% SUBMITTAL | 01/18/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| DES | CS | DRW | VV | CHK | DL |
|---|---|---|---|---|---|
| PM/DM | CHEMENJU/HILL | | | | |
| BRANCH MANAGER | N/A | | | | |
| CHIEF ENG/ARCH | TOM COX | | | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY STATE
PROJECT STATION/INSTALLATION
BETHESDA, MD
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL - ROOF PLAN - AREA C

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066026
SHEET OF 0

MH-103C

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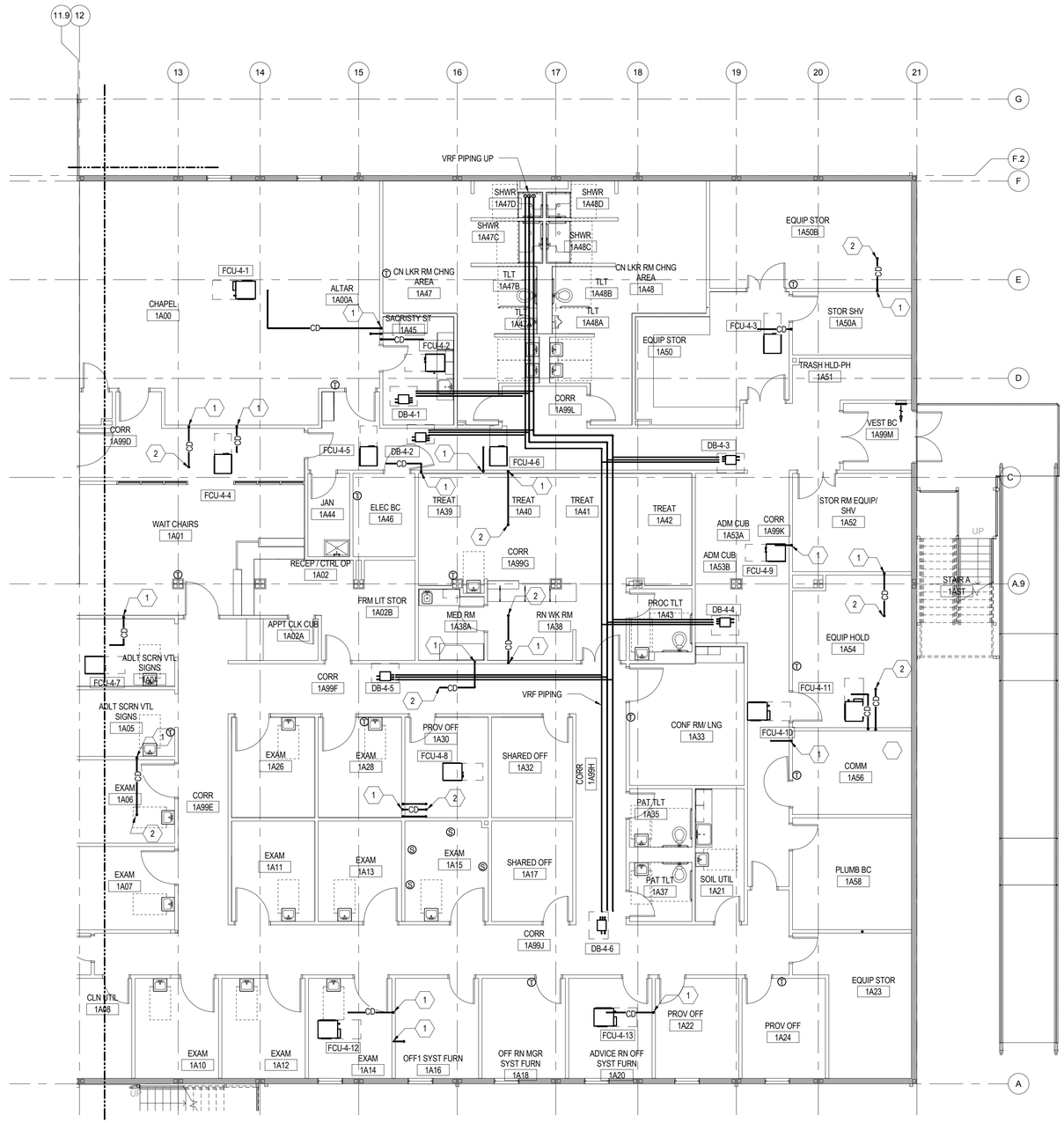
## GENERAL NOTES:

A. COORDINATE LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
B. ALL PIPING SIZE AND ROUTING, AND DISTRIBUTION BOX CAPACITY ASSOCIATED TO VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SHALL BE SIZED AND PROVIDED BY MANUFACTURER.
C. UNLESS OTHERWISE NOTE, ALL FCU CONDENSATE PIPING SHALL BE 3/4" AND DISCHRGE ON GRADE.

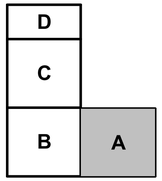
## KEYED NOTES:

1 CONDENSATE DRAIN DN AND DISCHARGE ABOVE GRADE.
2 CONDENSATE DRAIN UP.




1 LEVEL 1 P125 - AREA A - HVAC PIPING
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"




KEY PLAN

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

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ARCHITECTURE | ENGINEERING & CONSULTING
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SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CS DRW VV CHK DL
PMDM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE, CITY, STATE BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL PIPING - FLOOR PLAN - FIRST FLOOR AREA A

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066027
SHEET OF 0
MP-101A

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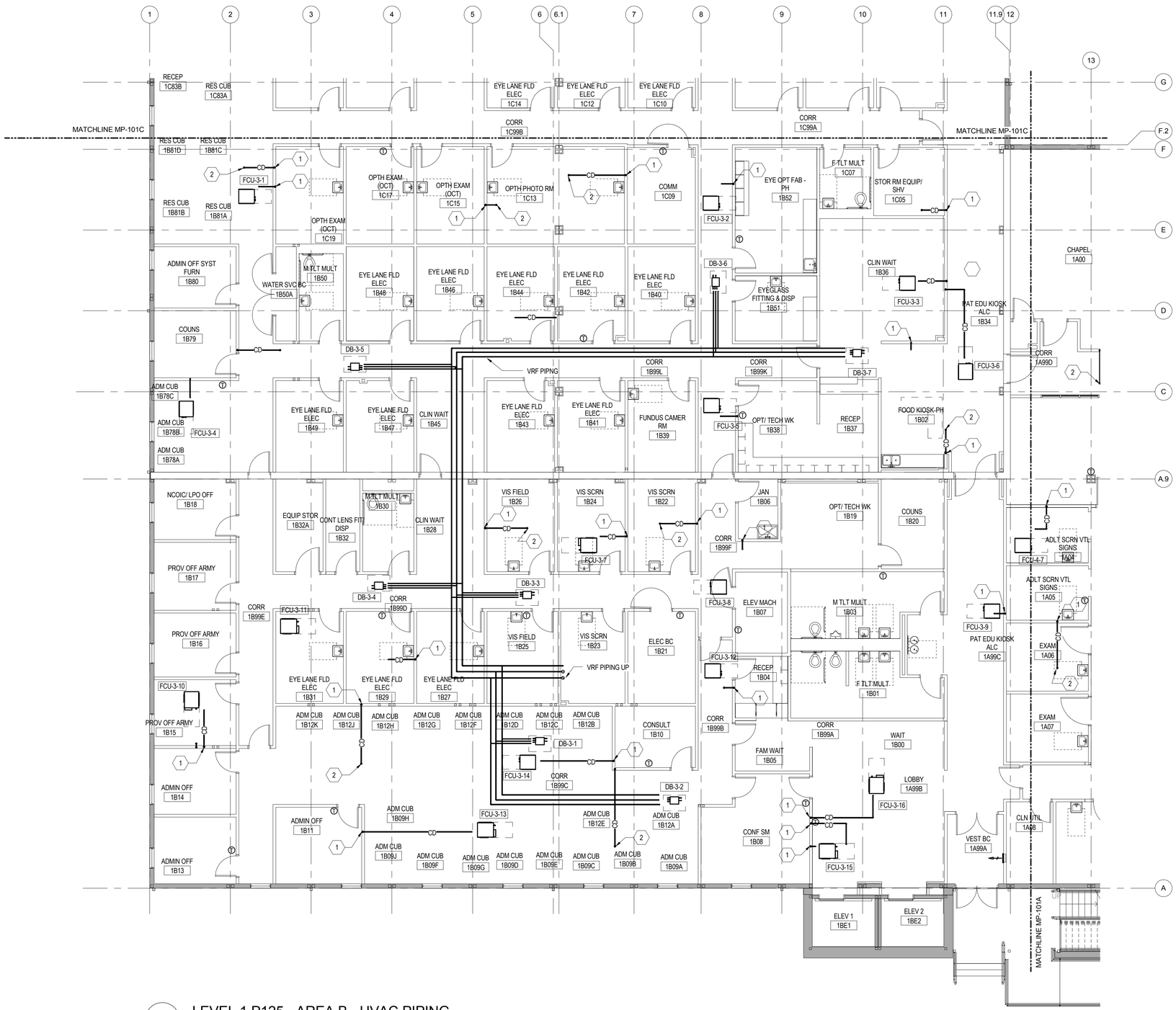


1 LEVEL 1 P125 - AREA B - HVAC PIPING

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

A. COORDINATE LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.

B. ALL PIPING SIZE AND ROUTING, AND DISTRIBUTION BOX CAPACITY ASSOCIATED TO VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SHALL BE SIZED AND PROVIDED BY MANUFACTURER.

C. UNLESS OTHERWISE NOTE, ALL FCU CONDENSATE PIPING SHALL BE 3/4" AND DISCHRGE ON GRADE.

## KEYED NOTES:

1 CONDENSATE DRAIN DN AND DISCHARGE ABOVE GRADE.

2 CONDENSATE DRAIN UP.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR

ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CS DRW VV CHK DL

PM/DM CHEMENJU/HILL

BRANCH MANAGER N/A

CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE, CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL PIPING - FLOOR PLAN - FIRST FLOOR AREA B

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

EPROJECT NO. 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13066028

SHEET OF 0

MP-101B

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B A

KEY PLAN

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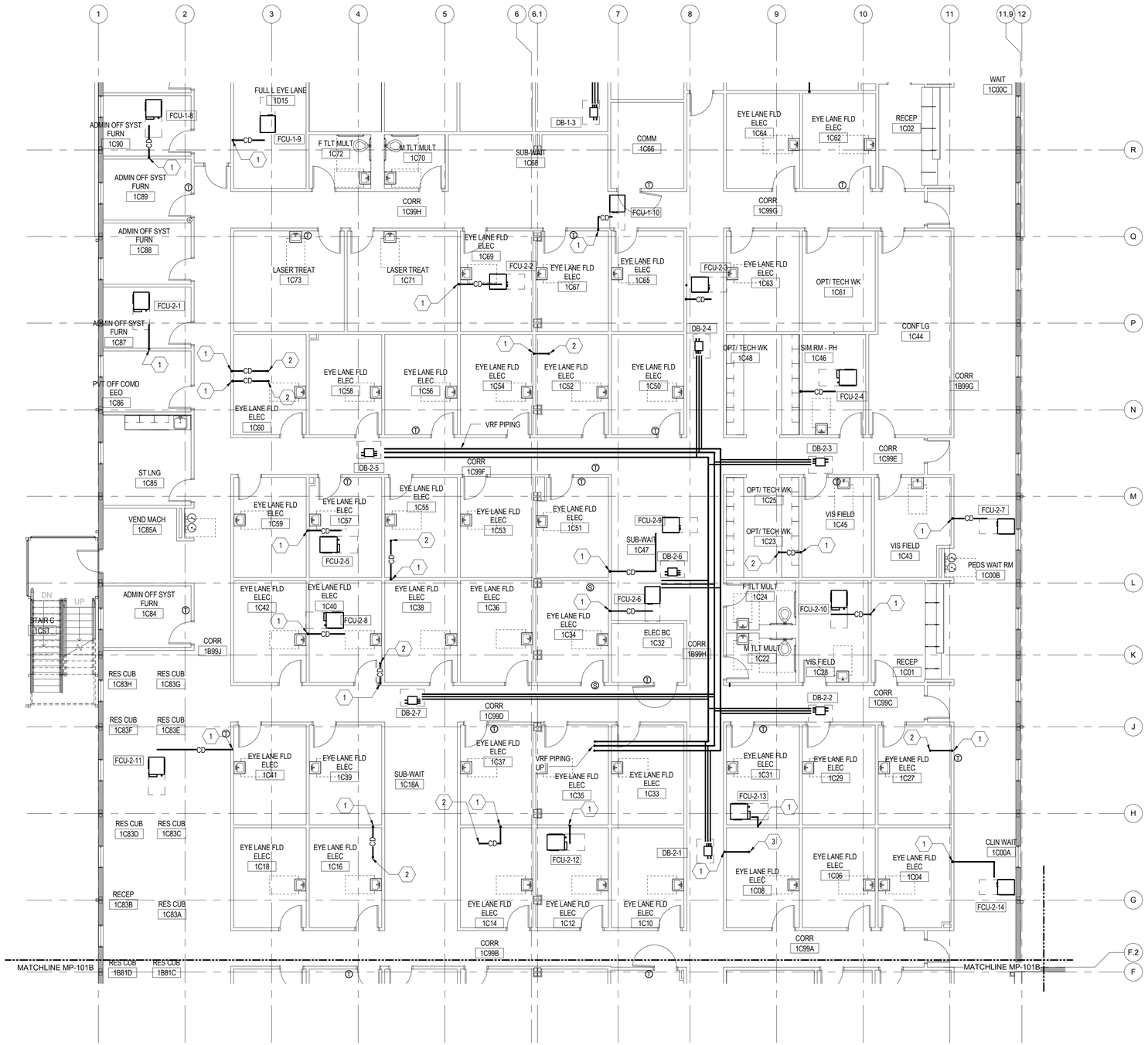


1 LEVEL 1 P125 - AREA C HVAC PIPING

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

A. COORDINATE LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.

B. ALL PIPING SIZE AND ROUTING, AND DISTRIBUTION BOX CAPACITY ASSOCIATED TO VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SHALL BE SIZED AND PROVIDED BY MANUFACTURER.

C. UNLESS OTHERWISE NOTE, ALL FCU CONDENSATE PIPING SHALL BE 3/4" AND DISCHRGE ON GRADE.

## KEYED NOTES:

1 CONDENSATE DRAIN DN AND DISCHARGE ABOVE GRADE.

2 CONDENSATE DRAIN UP.

3 CONDENSATE DRAIN DN.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |

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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | CS | DRW | VV | CHK | DL |
|---|---|---|---|---|---|

PMDM CHEMENJU/HILL

BRANCH MANAGER N/A

CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL PIPING - FLOOR PLAN - FIRST FLOOR AREA C

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

EPROJECT NO.: 1151333

CONSTR. CONTR. NO. N62470-09-D-9044

NAVFAC DRAWING NO. 13066029

SHEET OF 0

MP-101C

D
C
B A

KEY PLAN

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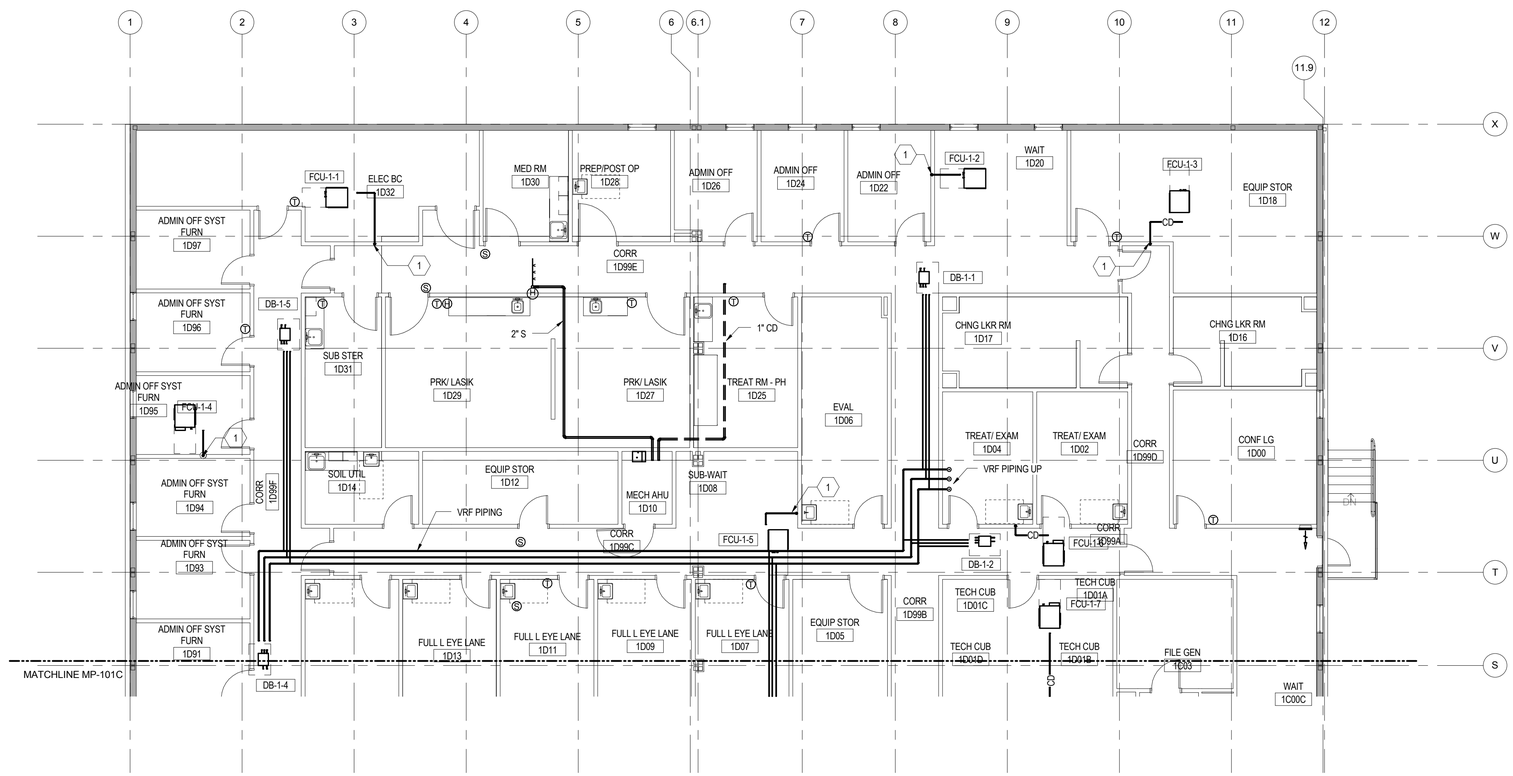
## GENERAL NOTES:

A. COORDINATE LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
B. ALL PIPING SIZE AND ROUTING, AND DISTRIBUTION BOX CAPACITY ASSOCIATED TO VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SHALL BE SIZED AND PROVIDED BY MANUFACTURER.
C. UNLESS OTHERWISE NOTE, ALL FCU CONDENSATE PIPING SHALL BE 3/4" AND DISCHRGE ON GRADE.

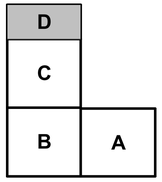
## KEYED NOTES:

1 CONDENSATE DRAIN DN AND DISCHARGE ABOVE GRADE.




1 LEVEL 1 P 125 - AREA D - HVAC PIPING
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"




KEY PLAN

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
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Lic. No. 0402042516
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PROFESSIONAL ENGINEER

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| DES | CS | DRW | VV | CHK | DL |
|---|---|---|---|---|---|
| PMDM | CHEMENJU/HILL | | | | |
| BRANCH MANAGER | N/A | | | | |
| CHIEF ENG/ARCH | TOM COX | | | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL PIPING - FLOOR PLAN - FIRST FLOOR AREA D

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066030
SHEET OF 0

MP-101D

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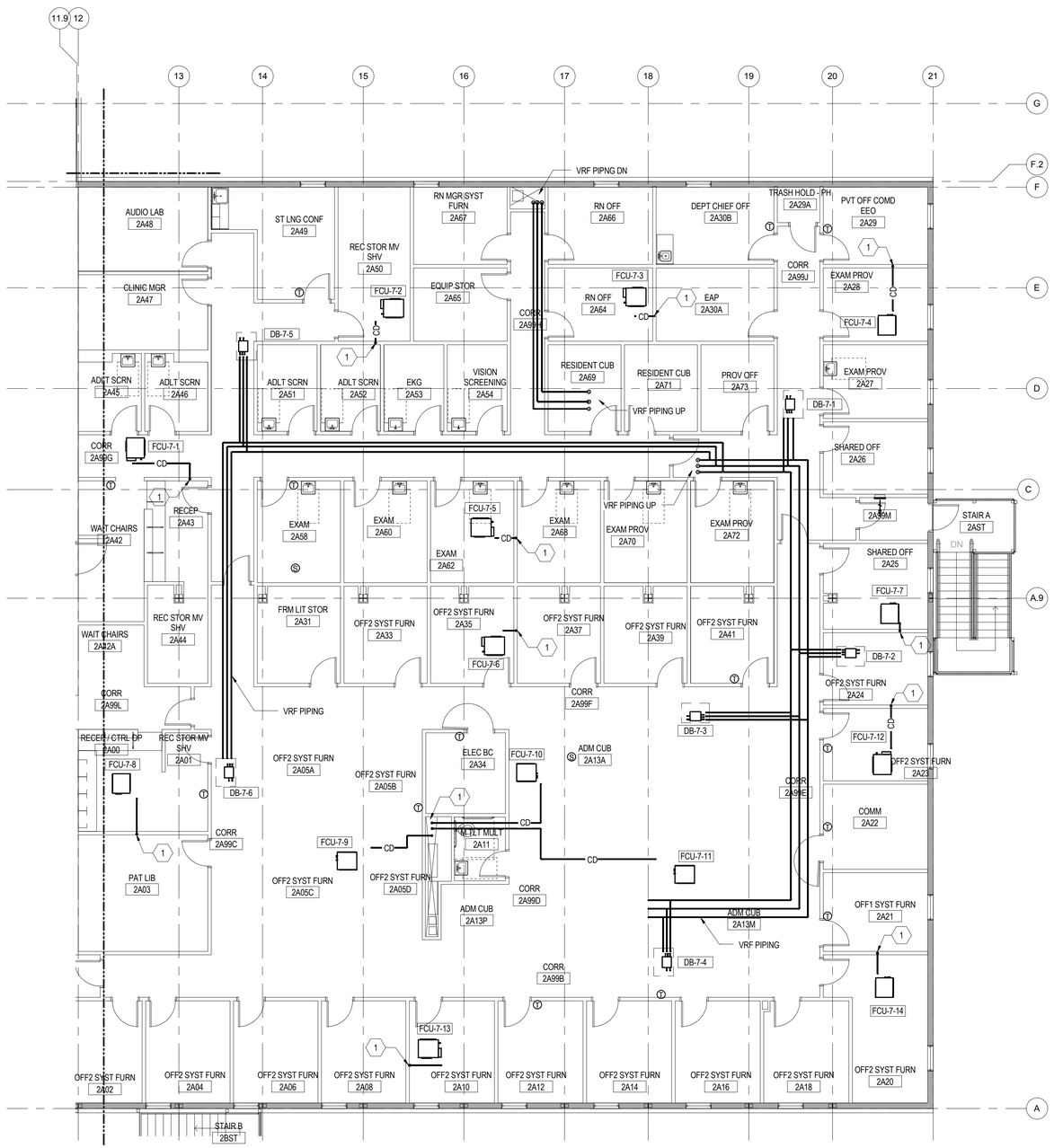


1 LEVEL 2 P125 - AREA A - HVAC PIPING

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

A. COORDINATE LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
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D. ALL RTU CONDENSATE SHALL BE 1-1/2".

## KEYED NOTES:

1 CONDENSATE DRAIN DN.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |

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COMMONWEALTH OF VIRGINIA
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Lic. No. 0402042516
3/26/14
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HDR

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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

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FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| | | | |
|---|---|---|---|
| DES | CS | DRW | VV |
| CHK | DL | | |
| PM/DM | CHEMENJU/HILL | | |
| BRANCH MANAGER | N/A | | |
| CHIEF ENG/ARCH | TOM COX | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE, CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL PIPING - FLOOR PLAN - SECOND FLOOR AREA A

| | |
|---|---|
| SCALE: | 1/8" = 1'-0" |
| EPROJECT NO. | 1151333 |
| CONSTR. CONTR. NO. | N62470-09-D-9044 |
| NAVFAC DRAWING NO. | 13066031 |
| SHEET | OF 0 |

MP-102A

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KEY PLAN

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## GENERAL NOTES:

A. COORDINATE LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
B. ALL PIPING SIZE AND ROUTING, AND DISTRIBUTION BOX CAPACITY ASSOCIATED TO VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SHALL BE SIZED AND PROVIDED BY MANUFACTURER.
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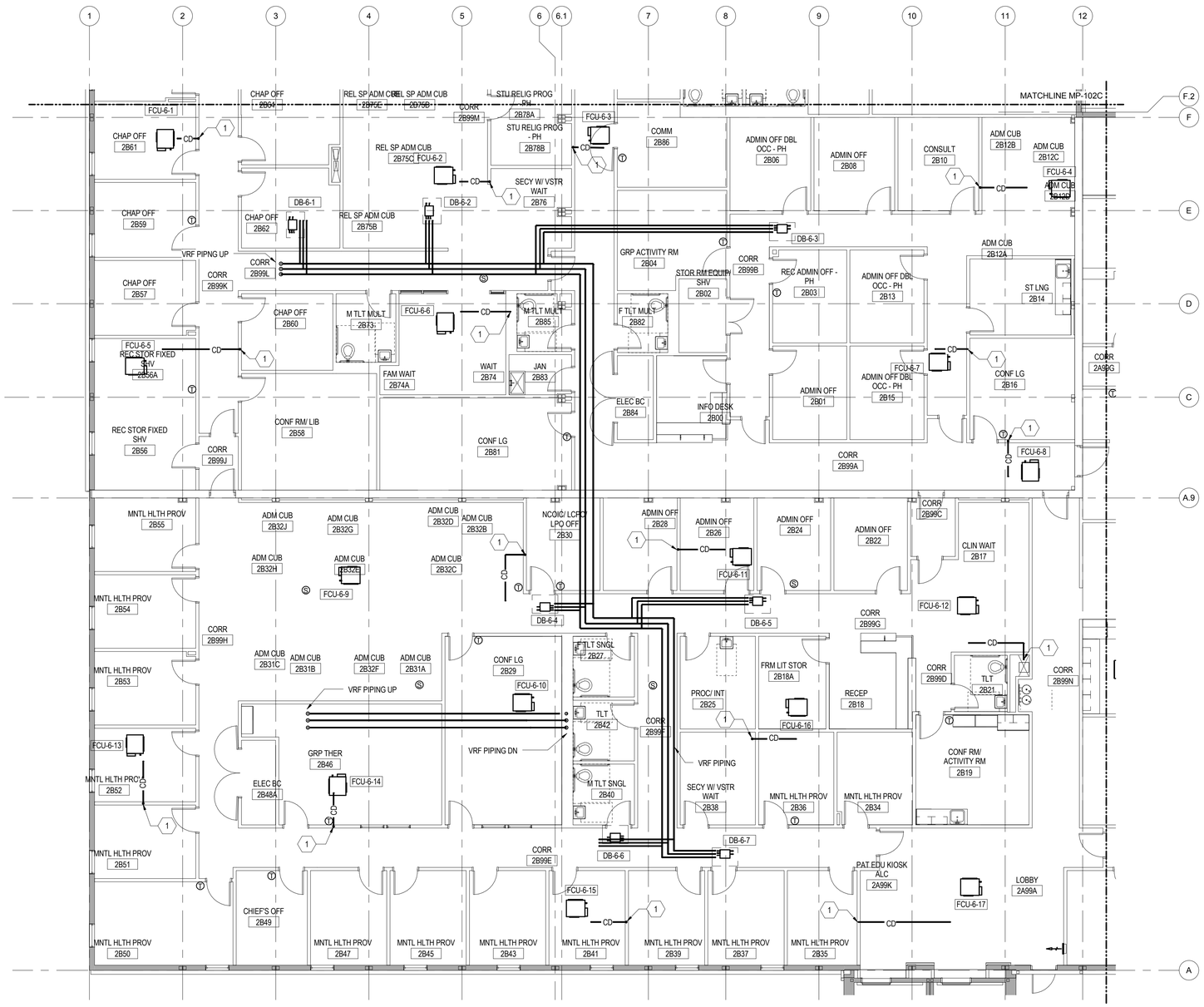
D. ALL RTU CONDENSATE SHALL BE 1-1/2".

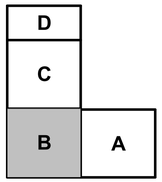
## KEYED NOTES:

1 CONDENSATE DRAIN DN.




1 LEVEL 2 P125 - AREA B HVAC PIPING
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"




KEY PLAN

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| DES | CS | DRW | VV | CHK | DL |
|---|---|---|---|---|---|

PM/DM: CHEMENJU/HILL
BRANCH MANAGER: N/A
CHIEF ENG/ARCH: TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
PROJECT STATION/INSTALLATION
BETHESDA, MD
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL PIPING - FLOOR PLAN - SECOND FLOOR AREA B

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO.: N62470-09-D-9044
NAVFAC DRAWING NO.: 13066032
SHEET 0 OF

MP-102B

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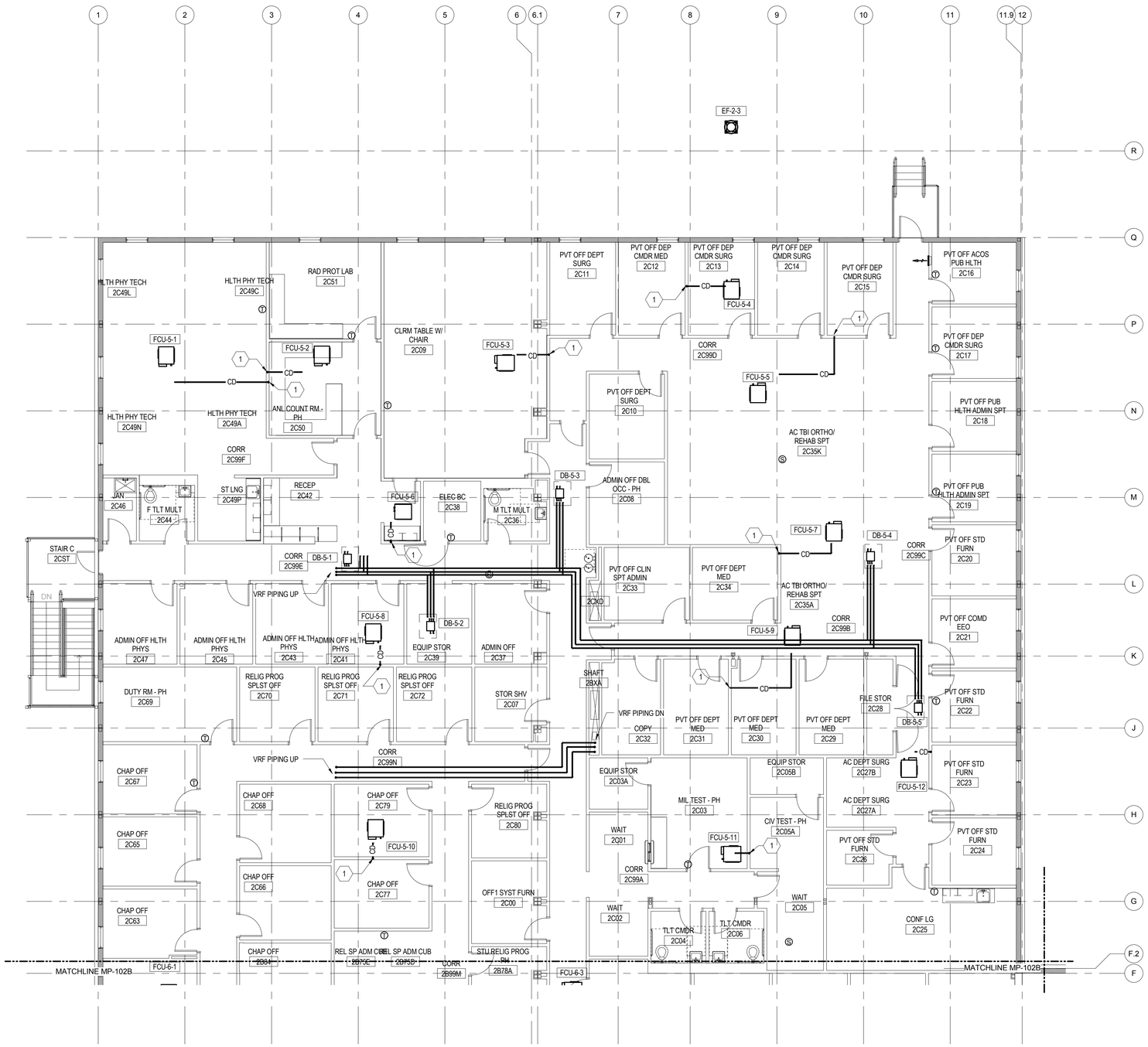
## GENERAL NOTES:

A. COORDINATE LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
B. ALL PIPING SIZE AND ROUTING, AND DISTRIBUTION BOX CAPACITY ASSOCIATED TO VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SHALL BE SIZED AND PROVIDED BY MANUFACTURER.
C. UNLESS OTHERWISE NOTE, ALL FCU CONDENSATE PIPING SHALL BE 3/4" AND DISCHRGE ON GRADE.
D. ALL RTU CONDENSATE SHALL BE 1-1/2".

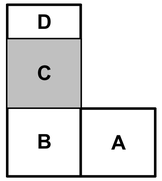
## KEYED NOTES:

1 CONDENSATE DRAIN DN.




1 LEVEL 2 P125 - AREA C - HVAC PIPING
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"




KEY PLAN

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| DES | CS | DRW | VV | CHK | DL |
|---|---|---|---|---|---|

PM/DM: CHEMENJU/HILL
BRANCH MANAGER: N/A
CHIEF ENG/ARCH: TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE: BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL PIPING - FLOOR PLAN - SECOND FLOOR AREA C

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO.: N62470-09-D-9044
NAVFAC DRAWING NO.: 13066033
SHEET MP-102C OF 0

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## GENERAL NOTES:

A. COORDINATE LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
B. ALL PIPING SIZE AND ROUTING, AND DISTRIBUTION BOX CAPACITY ASSOCIATED TO VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SHALL BE SIZED AND PROVIDED BY MANUFACTURER.
C. UNLESS OTHERWISE NOTE, ALL FCU CONDENSATE PIPING SHALL BE 3/4" AND DISCHRGE ON GRADE.
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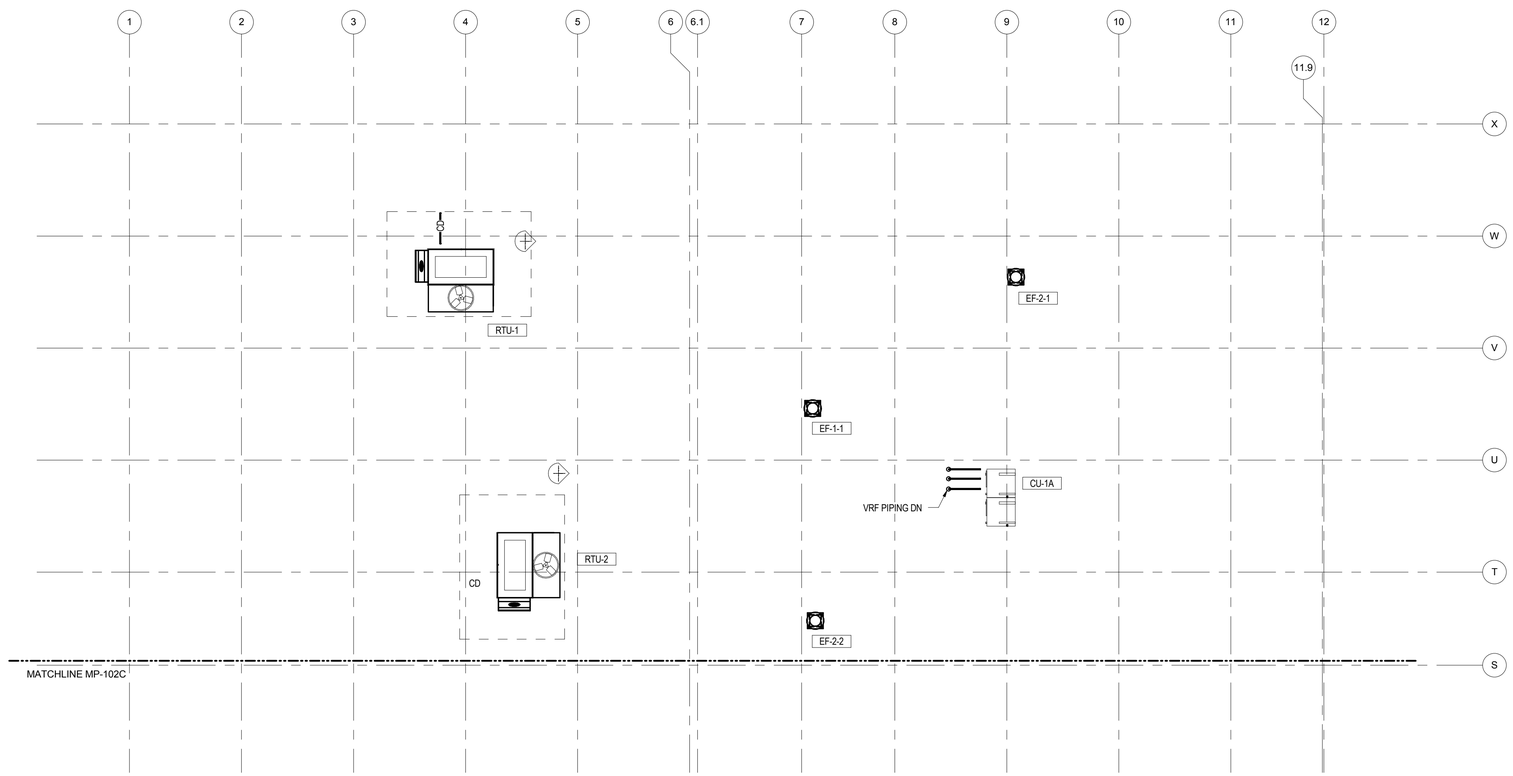
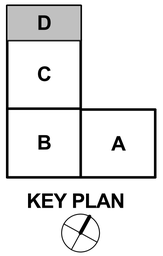
## KEYED NOTES:




1 LEVEL 2 P125 - AREA D - HVAC PIPING
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"




| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500


APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| | | | |
|---|---|---|---|
| DES | CS | DRW VV | CHK DL |
| PM/DM | CHEMENJU/HILL | | |
| BRANCH MANAGER | N/A | | |
| CHIEF ENG/ARCH | TOM COX | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE, CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL PIPING - FLOOR PLAN - SECOND FLOOR AREA D

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO.: N62470-09-D-9044
NAVFAC DRAWING NO.: 13066034
SHEET OF 0

MP-102D

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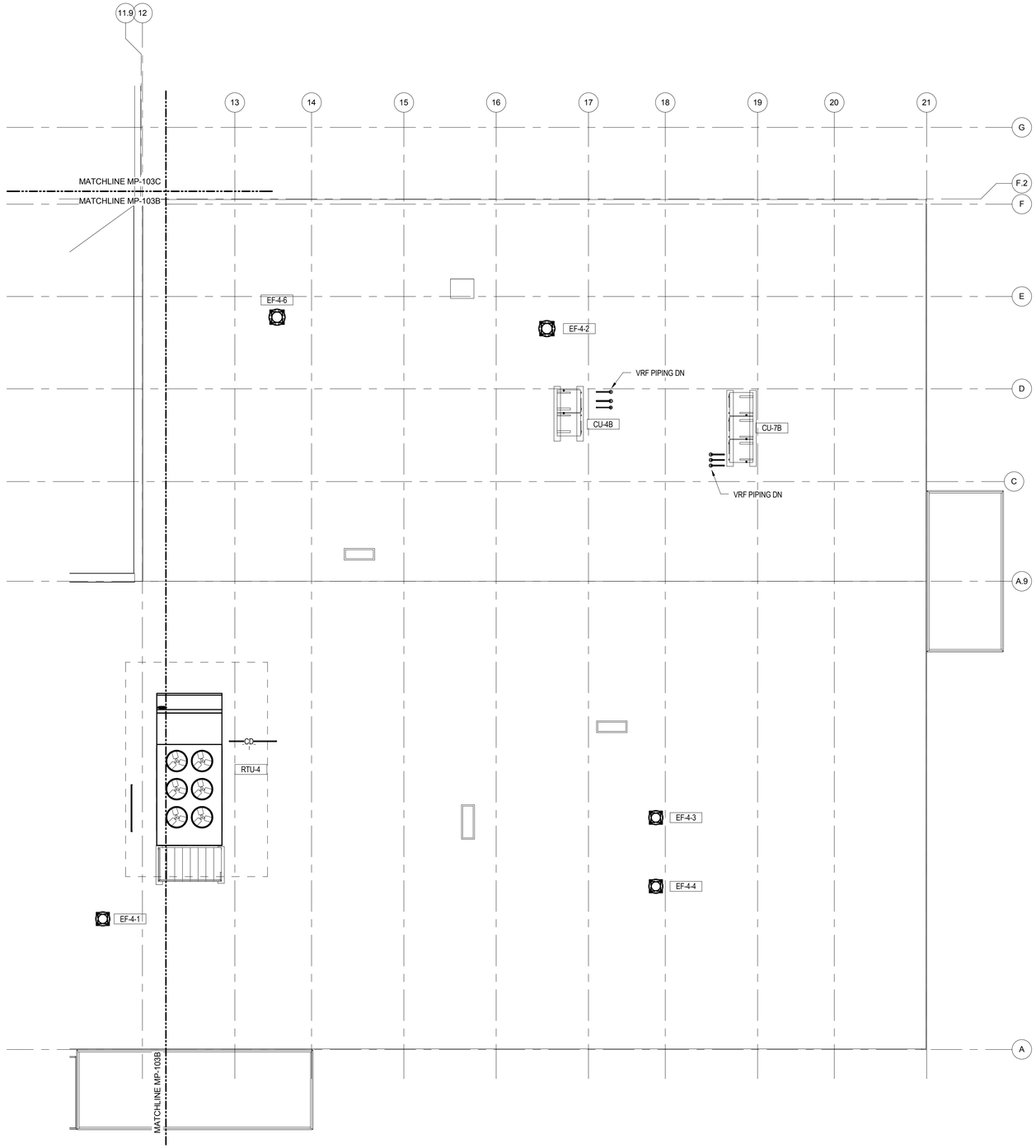


1 ROOF P125 - AREA A - HVAC PIPING

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

A. COORDINATE LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
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## KEYED NOTES:

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NAVFAC

COMMONWEALTH OF VIRGINIA
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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CS DRW VV CHK DL
PMdM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE : CITY : STATE BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL PIPING - FLOOR PLAN - ROOF AREA A

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066035
SHEET OF 0

MP-103A

| | |
|---|---|
| D | |
| C | |
| B | A |

KEY PLAN

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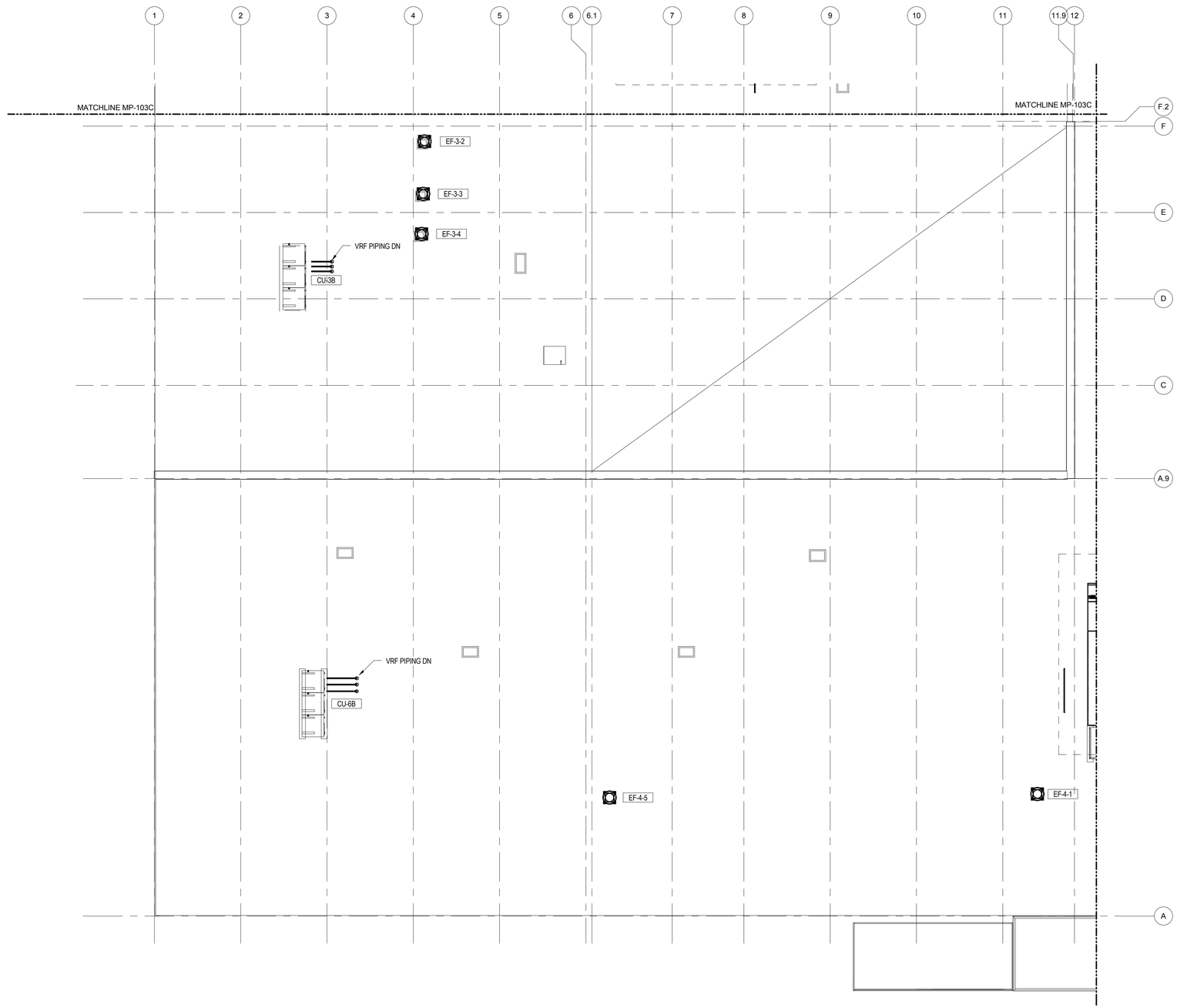


1 ROOF P125 - AREA B - HVAC PIPING

1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"

## GENERAL NOTES:

A. COORDINATE LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
B. ALL PIPING SIZE AND ROUTING, AND DISTRIBUTION BOX CAPACITY ASSOCIATED TO VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SHALL BE SIZED AND PROVIDED BY MANUFACTURER.
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## KEYED NOTES:

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ALEXANDRIA, VIRGINIA 22314
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APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| | | | |
|---|---|---|---|
| DES | CS | DRW | VV |
| CHK | DL | | |
| PM/DM | CHEMENJU/HILL | | |
| BRANCH MANAGER | N/A | | |
| CHIEF ENG/ARCH | TOM COX | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE: BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING

MECHANICAL PIPING - FLOOR PLAN - ROOF AREA B

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO.: N62470-09-D-9044
NAVFAC DRAWING NO.: 13066036
SHEET 0 OF 0

MP-103B

KEY PLAN

D
C
B A

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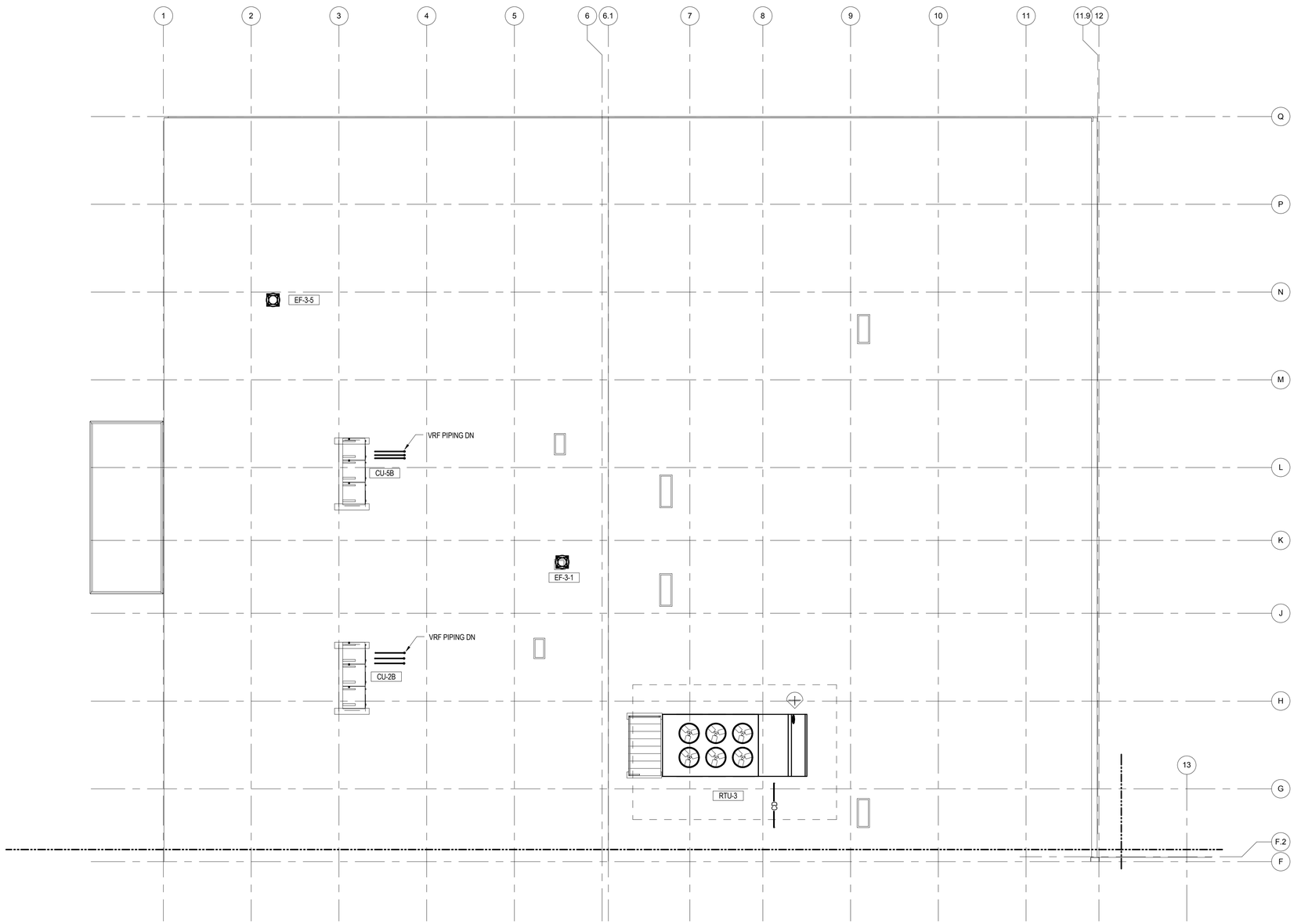
## GENERAL NOTES:

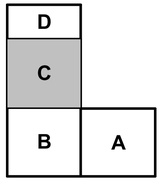
A. COORDINATE LOCATION AND EQUIPMENT ACCESS PRIOR TO INSTALLATION.
B. ALL PIPING SIZE AND ROUTING, AND DISTRIBUTION BOX CAPACITY ASSOCIATED TO VARIABLE REFRIGERANT FLOW (VRF) SYSTEM SHALL BE SIZED AND PROVIDED BY MANUFACTURER.
C. UNLESS OTHERWISE NOTE, ALL FCU CONDENSATE PIPING SHALL BE 3/4" AND DISCHRGE ON GRADE.
D. ALL RTU CONDENSATE SHALL BE 1-1/2".

## KEYED NOTES:




1 ROOF P125 - AREA C - HVAC PIPING
1/8" = 1'-0"

0 4'-0" 8'-0" 16'-0"




KEY PLAN

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |

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COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR

ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CS DRW VV CHK DL
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL PIPING - FLOOR PLAN - ROOF AREA C

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066037
SHEET OF 0

MP-103C

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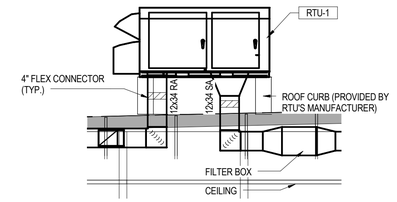
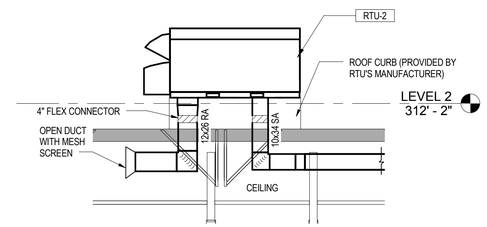
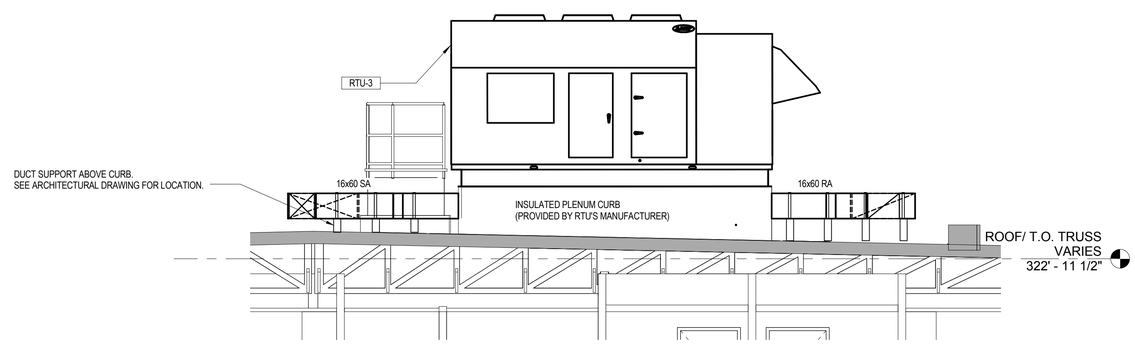



1 RTU-1
1/4" = 1'-0"




2 RTU-2
1/4" = 1'-0"




3 RTU-3 AND RTU-4
1/4" = 1'-0"

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |

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3/26/14
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SUITE 400
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703-518-8500

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FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

| DES | CS | DRW | VV | CHK | DL |
|---|---|---|---|---|---|
| PM/DM | CHEMENJU/HILL | | | | |
| BRANCH MANAGER | N/A | | | | |
| CHIEF ENG/ARCH | TOM COX | | | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE: BETHESDA, MD

PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING

MECHANICAL SECTIONS

SCALE: 1/4" = 1'-0"
EPROJECT NO: 1151333
CONSTR. CONTR. NO: N62470-09-D-9044
NAVFAC DRAWING NO. 13066038
SHEET OF 0

M-301

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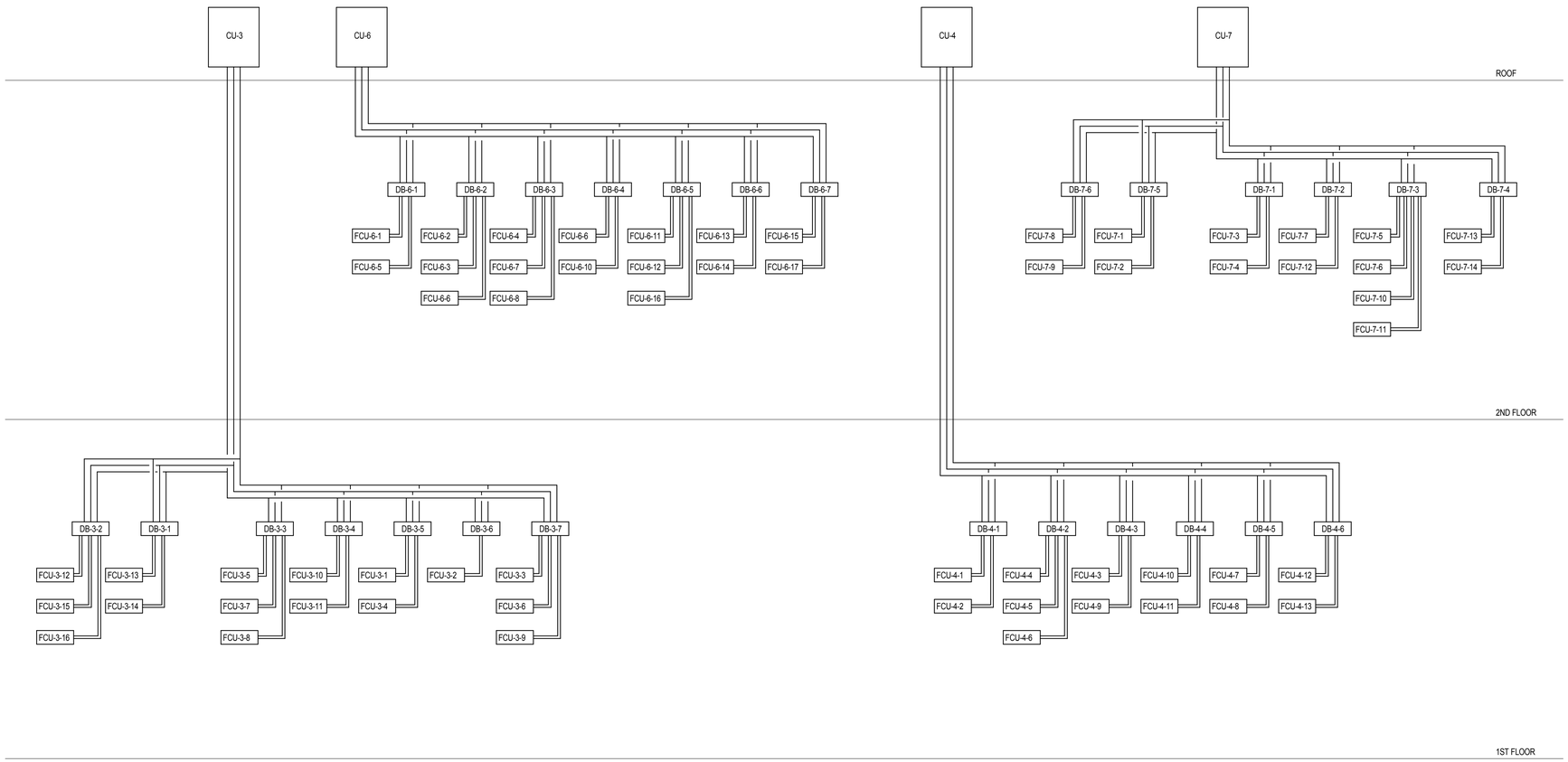


VRF SYSTEM RISER DIAGRAM (CU-3, CU-4, CU-6 AND CU-7)

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |

NAVFAC

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Lic. No. 0402042516
3/26/14
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SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

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FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| DES | CS | DRW | VV | CHK | DL |
|---|---|---|---|---|---|
| PM/DM | CHEMENJU/HILL | | | | |
| BRANCH MANAGER | N/A | | | | |
| CHIEF ENG/ARCH | TOM COX | | | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME:
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL - VRF SYSTEM RISER DIAGRAM

SCALE: 12" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066040
SHEET OF 0

M-401

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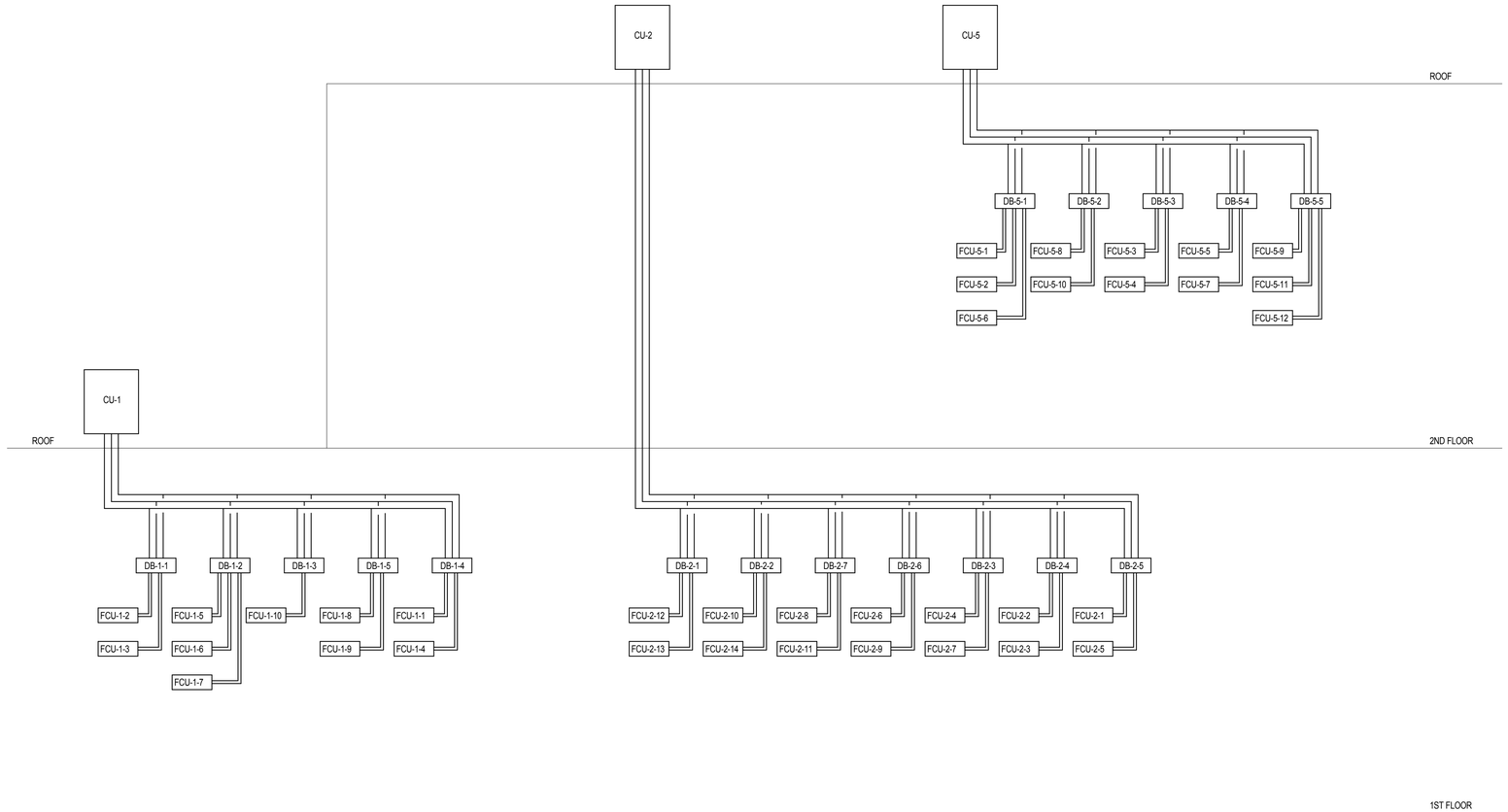


VRF SYSTEM RISER DIAGRAM (CU-1 , CU-2 AND CU-5)

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |

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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

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FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CS DRW VV CHK DL
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME: NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE : CITY STATE
PROJECT STATION/INSTALLATION
BETHESDA, MD
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL - VRF SYSTEM RISER DIAGRAM

SCALE: 12" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066041
SHEET OF 0

M-402

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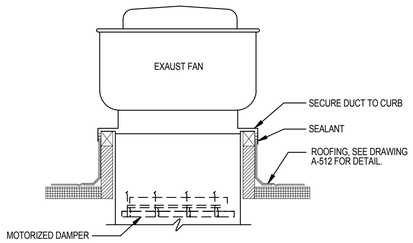
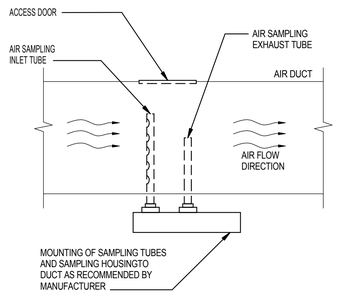
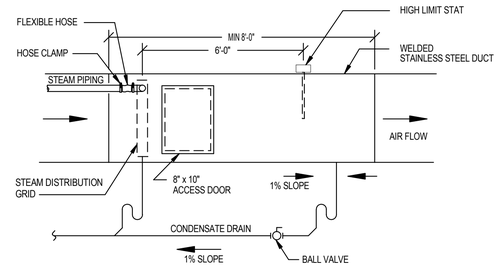


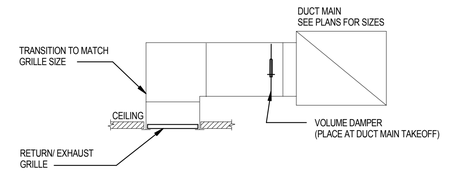

A EXHAUST FAN MOUNTING DETAIL
SCALE: N.T.S.




B DUCT MOUNTED SMOKE DETECTOR DETAIL
SCALE: N.T.S.

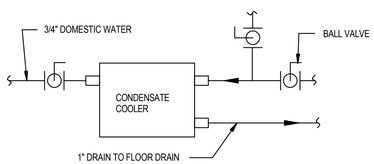



C DUCT MOUNTED HUMIDIFIER DETAIL
SCALE: N.T.S.

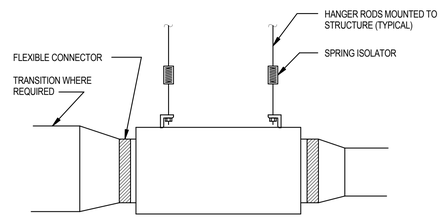



NOTES : 1. PROVIDE REMOTE DAMPER CABLE CONTROL WHEN BALANCING DAMPER IS NOT ACCESSIBLE THROUGH THE CEILING TILES. ( MAX 8'-0")

D RETURN/EXHAUST GRILLE DETAIL
SCALE: N.T.S.

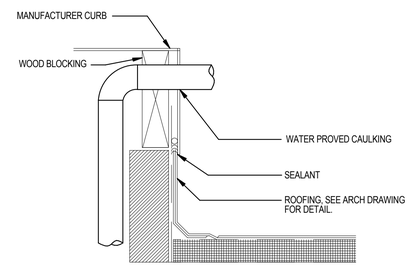



E CONDENSATE COOLER INSTALLATION (RTU-1)
SCALE: N.T.S.

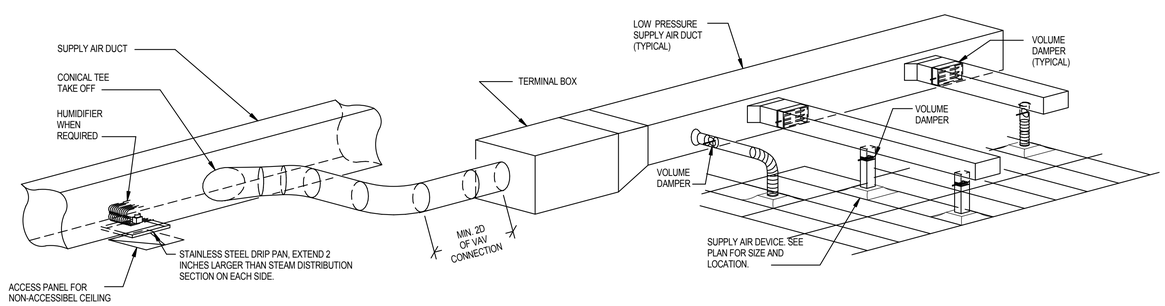



NOTE : 1. INSTALL EQUIPMENT WITH PROPER SERVICE AND CLEARANCE PER MANUFACTURER'S REQUIREMENT.

F SUSPENDED CEILING EQUIPMENT MOUNTING DETAIL
SCALE: N.T.S.




G HVAC PIPE PENETRATED ROOF DETAIL
SCALE: N.T.S.

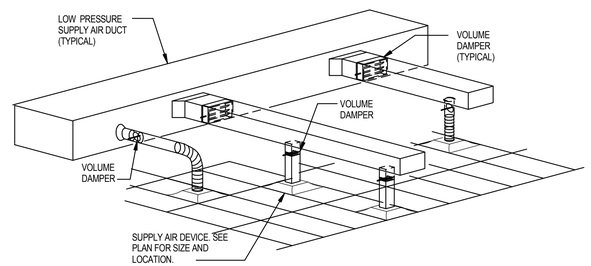



NOTES : 1. PROVIDE REMOTE DAMPER CABLE CONTROL WHEN BALANCING DAMPER IS NOT ACCESSIBLE THROUGH THE CEILING TILES.( MAX 8'-0")

2. MAXIMUM FLEXIBLE CONNECTION IS 5 FEET.

3. DRIP PAN SHALL BE PROVIDED WITH LEAK DETECTION MONITORED.

H TYPICAL SUPPLY DUCT INSTALLATION FOR RTU-1
SCALE: N.T.S.




NOTES : 1. PROVIDE REMOTE DAMPER CABLE CONTROL WHEN BALANCING DAMPER IS NOT ACCESSIBLE THROUGH THE CEILING TILES.( MAX 8'-0")

2. MAXIMUM FLEXIBLE CONNECTION IS 5 FEET.

I TYPICAL DUCT WORK INSTALLATION
SCALE: N.T.S.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 20% SUBMITTAL | 01/18/13 |

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COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

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FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| | | | |
|---|---|---|---|
| DES | CS | DRW | VV |
| CHK | DL | | |
| PM/DM | CHEMENJU/HILL | | |
| BRANCH MANAGER | N/A | | |
| CHIEF ENG/ARCH | TOM COX | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL DETAILS

SCALE: 12" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066042
SHEET M-501 OF 0

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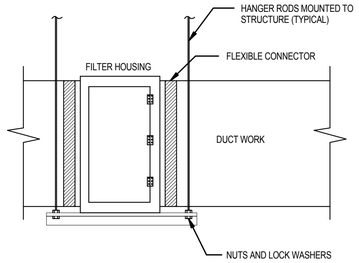
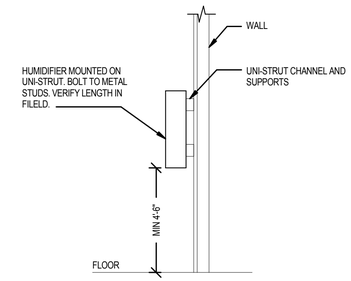


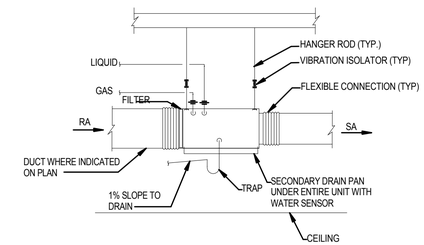

NOTE : 1. INSTALL EQUIPMENT WITH PROPER SERVICE AND CLEARANCE PER MANUFACTURER'S REQUIREMENT.

J FINAL FILTER HOUSING MOUNTING DETAIL
SCALE: N.T.S.

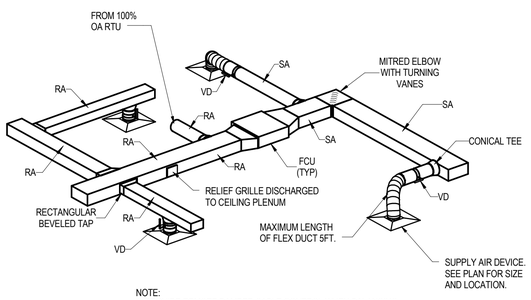
K NOT USED
SCALE: N.T.S.




L HUMIDIFIER MOUNTING DETAIL
SCALE: N.T.S.




M FAN COIL INSTALLATION DETAIL
SCALE: N.T.S.




NOTE:
1. PROVIDE REMOTE DAMPER CABLE CONTROL WHEN BALANCING DAMPER IS NOT ACCESSIBLE THROUGH CEILING. MAXIMUM LENGTH 8FT.
2. PROVIDE SECONDARY DRIP PAN WITH WATER SENSOR. SHUT DOWN UNIT IF SENSOR DETECTS WATER. PROVIDE ALARM AT CONTROL PANEL FOR VVR SYSTEM.

N TYPICAL FAN COIL UNIT
SCALE: N.T.S.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |

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COMMONWEALTH OF VIRGINIA
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PROFESSIONAL ENGINEER

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1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| | | | |
|---|---|---|---|
| DES | CS | DRW VV | CHK DL |
| PM/DM | CHEMENJU/HILL | | |
| BRANCH MANAGER | N/A | | |
| CHIEF ENG/ARCH | TOM COX | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL DETAILS

SCALE: 12" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066043
SHEET OF 0
M-502

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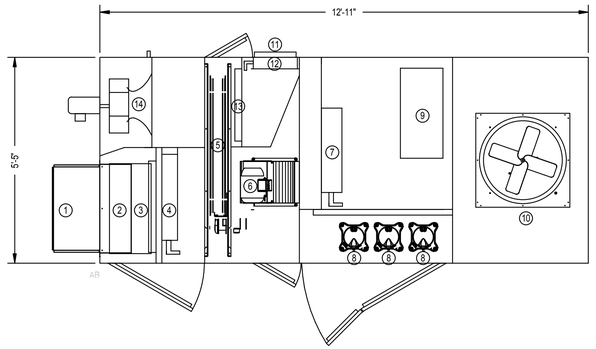
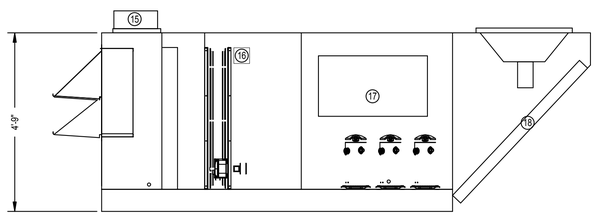



TOP VIEW



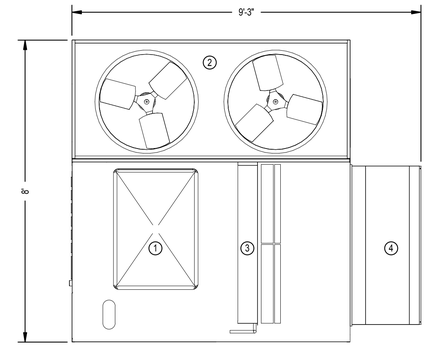

RIGHT SIDE VIEW

1. MAKEUP AIR INLET
2. BOTTOM RETURN INLET
3. MERV 8 PREFILTER
4. COOLING COIL
5. DEHUMIDIFYING WHEEL
6. SUPPLY FAN
7. POST COOLING COIL
8. COMPRESSOR
9. BOTTOM SUPPLY OUTLET
10. CONDENSING FAN
11. REACTION AIR INLET
12. REACTIVATION COIL
13. MERV 8 FILTER
14. REACTION AIR FAN
15. REACTION AIR OUTLET
16. ELECTRICAL ACCESS
17. ELECTRICAL PANEL
18. CONDENSING COIL

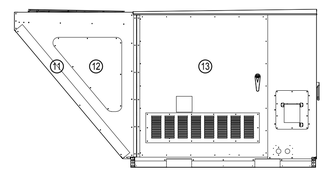
## 1 RTU-1 DETAIL

SCALE: N.T.S.

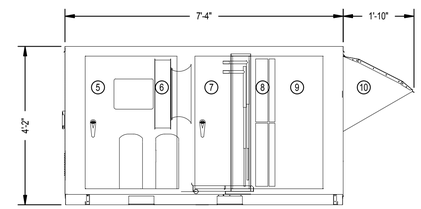
NOTES:
1. ALL DIMENSIONS ARE IN INCHES.
2. PROVIDE BIRDSCREEN ON INTAKE AIR INLET AND RELIEF AIR OUTLET.
3. PROVIDE DOUBLE SLOPED STAINLESS STEEL, IAQ TYPE CONDENSATE DRAIN PAN.
4. OA DAMPER SHALL BE FULLY MODULATING TYPE.
5. RA DAMPER SHALL BE FULLY MODULATING TYPE.




TOP VIEW



FRONT VIEW




RIGHT SIDE VIEW

1. BOTTOM SUPPLY AIR OUTLET
2. CONDENSER SECTION
3. DX COOLING COIL
4. OUTSIDE AIR HOOD
5. SUPPLY FAN ACCESS PANEL
6. SUPPLY FAN
7. COIL ACCESS PANEL
8. MERV 8 FILTER
9. FILTER ACCESS PANEL
10. OUTSIDE AIR INLET WITH MOTORIZED DAMPER
11. CONDENSER COIL
12. CONDENSER COIL ACCESS PANELL
13. CONTROLS ACCESS PANEL

## 2 RTU-2 DETAIL

SCALE: N.T.S.

NOTES:
1. ALL DIMENSIONS ARE IN INCHES.
2. PROVIDE BIRDSCREEN ON INTAKE AIR INLET AND RELIEF AIR OUTLET.
3. PROVIDE DOUBLE SLOPED STAINLESS STEEL, IAQ TYPE CONDENSATE DRAIN PAN.
4. OA DAMPER SHALL BE FULLY MODULATING TYPE.
5. RA DAMPER SHALL BE FULLY MODULATING TYPE.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR

ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CS | DRW VV | CHK DL
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE, CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL DETAILS

SCALE: 1/2" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066044
SHEET OF 0

M-503

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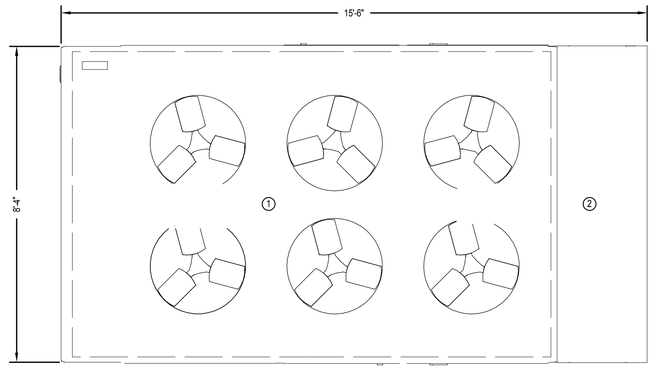
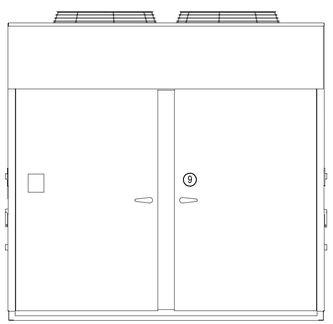
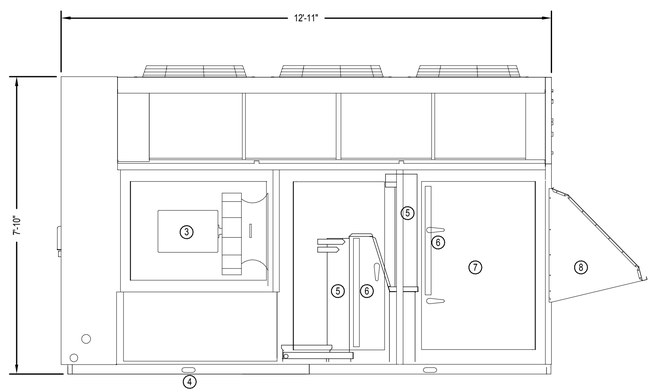



TOP VIEW

1. CONDENSER FAN (6)
2. OUTSIDE AIR HOOD
3. SUPPLY FAN
4. BOTTOM SUPPLY OUTLET
5. DX COOLING COIL
6. MERV 8 FILTER
7. FILTER ACCESS PANEL
8. OUTSIDE AIR INLET WITH MOTORIZED DAMPER
9. CONTROL AND CONDENSER ACCESS VESTIBULE




FRONT VIEW




RIGHT SIDE VIEW

## 1 RTU-3 AND 4 DETAIL

SCALE: N.T.S.

NOTES:

1. ALL DIMENSIONS ARE IN INCHES.
2. PROVIDE BIRDSCREEN ON INTAKE AIR INLET AND RELIEF AIR OUTLET.
3. PROVIDE DOUBLE SLOPED STAINLESS STEEL, IAQ TYPE CONDENSATE DRAIN PAN.
4. OA DAMPER SHALL BE FULLY MODULATING TYPE.
5. RA DAMPER SHALL BE FULLY MODULATING TYPE.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |

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SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

| DES | CS | DRW | VV | CHK | DL |
|---|---|---|---|---|---|
| PM/DM | CHEMENJU/HILL | | | | |
| BRANCH MANAGER | N/A | | | | |
| CHIEF ENG/ARCH | TOM COX | | | | |

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
COMPONENT NAME:
NAVAL FACILITIES ENGINEERING COMMAND
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL DETAILS

SCALE: 1/2" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066045
SHEET OF 0

M-504

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## ROOFTOP UNIT SCHEDULE

| MARK NUMBER | NOMINAL AIRFLOW CFM | MINIMUM OA CFM | SUPPLY FAN ESP (IN. WG) | SUPPLY FAN HP | REACTIVATION FAN MAX CFM | REACTIVATION FAN HP | PRE-COOLING (CC-1) REFRIGERANT | PRE-COOLING (CC-1) TOTAL (MBH) | PRE-COOLING (CC-1) SENSIBLE (MBH) | DEHUMIDIFYING WHEEL EAT DB (°F) | DEHUMIDIFYING WHEEL EAT WB (°F) | DEHUMIDIFYING WHEEL LAT DB (°F) | DEHUMIDIFYING WHEEL LAT WB (°F) | DEHUMIDIFYING WHEEL EAT DB (°F) | DEHUMIDIFYING WHEEL EAT WB (°F) | DEHUMIDIFYING WHEEL LAT DB (°F) | DEHUMIDIFYING WHEEL LAT WB (°F) | POST-COOLING (CC-2) REFRIGERANT | POST-COOLING (CC-2) TOTAL (MBH) | POST-COOLING (CC-2) SENSIBLE (MBH) | POST-COOLING (CC-2) EAT DB (°F) | POST-COOLING (CC-2) EAT WB (°F) | POST-COOLING (CC-2) LAT DB (°F) | POST-COOLING (CC-2) LAT WB (°F) | ELECTRICAL FLA | ELECTRICAL V/PH/HZ | WEIGHT LBS | BASIS OF DESIGN | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RTU-1 | 1,850 | 310 | 2.8 | 2 | 3,000 | 2 | R410 | 50.00 | 48.90 | 74.1 | 59.8 | 50.0 | 49.9 | 50.0 | 49.9 | 66.0 | 50.0 | R410 | 32.20 | 32.20 | 66.0 | 50.0 | 50.0 | 42.2 | 30.2 | 480/3/60 | 2700 | MUNTERS HCU-2400 | 1, 2, 3, 4, 5 |

NOTES:

1. MERV 8 PRE-FILTER.
2. VARIABLE SPEED CONTROLLER FOR SUPPLY FAN AND REACTIVATION FAN.
3. 480V SINGLE POINT CONNECTION AND 120V SINGLE POINT CONNECTION (MARINE LIGHT AND CONVENIENCE OUTLET)
4. INSULATED ROOF CURB TO ELEVATE UNIT 24 INCHES ABOVE ROOF.
5. LOW AMBIENT OPERATION

## ROOFTOP UNIT SCHEDULE

| MARK NO | LOCATION | SUPPLY AIR CFM | OUTDOOR AIR CFM | SUPPLY FAN ESP | SUPPLY FAN HP | COOLING DATA EAT DB | COOLING DATA EAT WB | COOLING DATA LAT DB | COOLING DATA LAT WB | COOLING DATA TOTAL MBH | COOLING DATA SENSIBLE MBH | HEATING DATA EAT DB | HEATING DATA LAT DB | HEATING DATA CAPACITY KW | ELECTRICAL VOLT | ELECTRICAL PH | ELECTRICAL HZ | ELECTRICAL FLA | REMARKS | WEIGHT LBS | BASIS OF DESIGN OR APPROVED EQUAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RTU-2 | ROOF | 2500 | 2500 | 2.1 | 2 | 95 | 76 | 53.14 | 52.94 | 180.9 | 108.0 | 10 | 85.8 | 60.0 | 480 | 3 | 60 | 76 | NOTE 1, 2, 3, 4, 5, 6 | 1750 | AAON-RN |
| RTU-3 | ROOF | 8500 | 8500 | 2.5 | 10 | 95 | 76 | 53.73 | 53.53 | 602.5 | 362.0 | 10 | 84.3 | 200.0 | 480 | 3 | 60 | 255 | NOTE 1, 2, 3, 4, 5, 6 | 5700 | AAON-RN |
| RTU-4 | ROOF | 8950 | 8950 | 2.6 | 10 | 95 | 76 | 54.13 | 53.93 | 625.3 | 377.5 | 10 | 80.6 | 200.0 | 480 | 3 | 60 | 255 | NOTE 1, 2, 3, 4, 5, 6 | 5920 | AAON-RN |

NOTES:
1. VARIABLE FREQUENCY DRIVE AND H/OA SWITCH
2. MARINE LIGHT (120 V)/ SERVICE OUTLET
3. SINGLEPOINT OF CONNECTION
4. ESP INCLUDING 0.65 INCH WG DIRTY FILTER ALLOWANCE
5. CONTROLS SHALL BE FACTORY INSTALLED
6. HOT GAS BY PASS

## AIR TERMINAL UNIT SCHEDULES

| MARK NUMBER | SERVING | DESIGN AIRFLOW (CFM) | MIN FLOW (CFM) | INLET DIA (IN) | MAX AIR PD (IN) | ELECTRIC HEAT DATA CFM | ELECTRIC HEAT DATA EAT (°F) | ELECTRIC HEAT DATA LAT (°F) | ELECTRIC HEAT DATA KW | ELECTRIC HEAT DATA V/PH/HZ | BASIS OF DESIGN | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VAV-1-01 | 1D31-SUB STER | 180 | 120 | 6 | 0.11 | 120 | 55 | 94.5 | 1.5 | 277/1/60 | TITUS DESV | 1, 2, 3, 4, 5 |
| VAV-1-02 | 1D25-LASIK | 600 | 460 | 10 | 0.20 | 460 | 55 | 89.3 | 5.0 | 480/3/60 | TITUS DESV | 1, 2, 3, 4, 5 |
| VAV-1-03 | 1D29-LASIK | 700 | 560 | 10 | 0.28 | 560 | 55 | 83.2 | 5.0 | 480/3/60 | TITUS DESV | 1, 2, 3, 4, 5 |
| VAV-1-04 | 1D25-TREAT-PH | 370 | 300 | 8 | 0.16 | 300 | 55 | 86.6 | 3.0 | 277/1/60 | TITUS DESV | 1, 2, 3, 4, 5 |

**NOTES:**

1. AIR FLOW PROVING SWITCH.
2. DOOR INTERLOCK DISCONNECT SWITCH.
3. SCR CONTROLLER FOR HEAT.
4. STATIC PRESSURE SCHEDULED INCLUDING HEATING COIL.
5. HIGH TEMPERATURE LIMIT SWITCH.

## ELECTRIC UNIT HEATER SCHEDULE

| MARK NUMBER | LOCATION | TYPE | HORIZONTAL THROW (FT) | HEATING KW | ELECTRICAL DATA VOLT | ELECTRICAL DATA PH | ELECTRICAL DATA HZ | BASIS OF DESIGN | NOTE |
|---|---|---|---|---|---|---|---|---|---|
| UH-1 | ENTRANCE | ELEC | - | 3 | 277 | 1 | 60 | TRANE UHWA | 1, 2, 3 |
| UH-2 | ENTRANCE | ELEC | - | 3 | 277 | 1 | 60 | TRANE UHWA | 1, 2, 3 |
| UH-3 | ENTRANCE | ELEC | - | 3 | 277 | 1 | 60 | TRANE UHWA | 1, 2, 3 |
| UH-4 | ENTRANCE | ELEC | - | 3 | 277 | 1 | 60 | TRANE UHWA | 1, 2, 3 |
| UH-5 | ENTRANCE | ELEC | - | 3 | 277 | 1 | 60 | TRANE UHWA | 1, 2, 3 |
| UH-6 | ENTRANCE | ELEC | - | 3 | 277 | 1 | 60 | TRANE UHWA | 1, 2, 3 |

NOTES:

1. HEATING ELEMENT TO BE CONTROLLED WITH BUILT-IN THERMOSTAT SET AT 60°F (ADJUSTABLE.)
2. UNIT MOUNTED MOTOR DISCONNECT SWITCH.
3. SEMI-RECESS FIT IN 4 INCHES WALL

## ELECTRIC STEAM HUMIDIFIER SCHEDULE

| MARK NUMBER | SERVE | TYPE | OUTPUT LBS/HR | DIMENSION WxHxD INCHES | ELECTRICAL DATA NORMINAL AMP RATING | ELECTRICAL DATA VOLT | ELECTRICAL DATA PH | ELECTRICAL DATA HZ | BASIS OF DESIGN | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|
| ESH-1 | RTU-1 | ELECTRIC | 29 | 18x23x11-12 | 12 | 480 | 3 | 60 | ARMSTRONG EHU-701 | 1, 2, 3, 4, 5 |

NOTES:

1. MODULATED CONTROL FOR CAPACITY 10% TO 100%
2. STAINLESS STEEL DISPERSION GRID TO MATCH DUCT WORK
3. DUCTED HUMIDITY SENSOR COMPATABLE TO STEAM GENERATOR
4. HIGH LIMIT STAT
5. DUCT PRESSURE SWITCH

## FILTER HOUSING SCHEDULE

| MARK NO | SERVES | WIDTH (INCHES) | HEIGHT (INCHES) | LENGTH (INCHES) | AIR FLOW CFM | VELOCITY FPM | FILTER RATING | FILTER (INITIAL) PRESSURE DROP IN.WG | BASIS OF DESIGN | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|
| F-1 | RTU-1 | 27.25 | 27.25 | 25 | 1850 | 360 | MERV 14 | 0.32 | CAMFIL FARR | 1 |

NOTES: NOTES:

1. 1. HINGED ACCESS DOORS, COORDINATE WITH PLAN FOR LEFT OR RIGHT SIDE.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |
| | 35% SUBMITTAL | 03/08/13 |

NAVFAC

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APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CS | DRW VV | CHK DL
PMDM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL SCHEDULES

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066046
SHEET OF 0
M-601

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## AIR DEVICE SCHEDULES

| MARK NUMBER | SERVICE | TYPE | AIR FLOW (CFM) | MODULE SIZE (IN) | NECK SIZE (IN) | MAX STATIC (IN. WG) | MAX NC | MATERIAL | FINISH | BASIS OF DESIGN | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| D1 | SUPPLY | DIFFUSER | 0-155 | 24X24 | 6Ø | 0.15 | 30 | STEEL | WHITE | TITUS TDC | 1, 2 |
| | SUPPLY | DIFFUSER | 156-300 | 24X24 | 8Ø | 0.15 | 30 | STEEL | WHITE | TITUS TDC | 1, 2 |
| | SUPPLY | DIFFUSER | 301-400 | 24X24 | 10Ø | 0.15 | 30 | STEEL | WHITE | TITUS TDC | 1, 2 |
| D2 | SUPPLY | DIFFUSER | 0-250 | 24X24 | 8Ø | 0.6 | 30 | STEEL | WHITE | ANEMOSTAT HCRF | 1, 3, 4 |
| | SUPPLY | DIFFUSER | 251-350 | 24X24 | 10Ø | 0.75 | 30 | STEEL | WHITE | ANEMOSTAT HCRF | 1, 3, 4 |
| WS1 | SUPPLY | REGISTER | 0-250 | 10x6 | | 0.10 | 30 | STEEL | WHITE | TITUS 272RS | 1, 2 |
| | SUPPLY | REGISTER | 251-400 | 12x10 | | 0.10 | 30 | STEEL | WHITE | TITUS 272RS | 1, 2 |
| | SUPPLY | REGISTER | 401-950 | 24x10 | | 0.10 | 30 | STEEL | WHITE | TITUS 272RS | 1, 2 |
| | SUPPLY | REGISTER | 951-1800 | 24x12 | | 0.15 | 35 | STEEL | WHITE | TITUS 272RS | 1, 2 |
| R1 | RET/EXH | PERFORATED | 0-175 | 24x24 | 6x6 | 0.10 | 30 | STEEL | WHITE | TITUS PDR | 1, 2 |
| | RET/EXH | PERFORATED | 176-250 | 24x24 | 8x8 | 0.10 | 30 | STEEL | WHITE | TITUS PDR | 1, 2 |
| | RET/EXH | PERFORATED | 251-420 | 24x24 | 10x10 | 0.10 | 30 | STEEL | WHITE | TITUS PDR | 1, 2 |
| | RET/EXH | PERFORATED | 421-600 | 24x24 | 12x12 | 0.10 | 30 | STEEL | WHITE | TITUS PDR | 1, 2 |
| | RET/EXH | PERFORATED | 601-1350 | 24x24 | 18x18 | 0.10 | 30 | STEEL | WHITE | TITUS PDR | 1, 2 |
| | RET/EXH | PERFORATED | 1351-2100 | 24x24 | 22x22 | 0.20 | 35 | STEEL | WHITE | TITUS PDR | 1, 2 |
| WR1 | RET/EXH | GRILLE | 0-250 | 12x8 | | 0.10 | 30 | STEEL | WHITE | TITUS 350RS | 1, 2 |
| | RET/EXH | GRILLE | 251-520 | 12x12 | | 0.10 | 30 | STEEL | WHITE | TITUS 350RS | 1, 2 |
| | RET/EXH | GRILLE | 521-1450 | 24x12 | | 0.10 | 30 | STEEL | WHITE | TITUS 350ZRL | 1, 2 |
| | RET/EXH | GRILLE | 1451-1800 | 30x12 | | 0.10 | 35 | STEEL | WHITE | TITUS 350ZRL | 1, 2 |
| E1 | RET/EXH | GRILLE | 0-140 | 8x6 | | 0.10 | 30 | STEEL | WHITE | TITUS 350RL | 1, 2 |
| | RET/EXH | GRILLE | 141-240 | 12x6 | | 0.10 | 30 | STEEL | WHITE | TITUS 350RL | 1, 2 |
| | RET/EXH | GRILLE | 241-340 | 12X8 | | 0.10 | 30 | STEEL | WHITE | TITUS 350RL | 1, 2 |
| | RET/EXH | GRILLE | 341-400 | 12x10 | | 0.10 | 30 | STEEL | WHITE | TITUS 350RL | 1, 2 |
| | RET/EXH | GRILLE | 401-650 | 18x12 | | 0.10 | 30 | STEEL | WHITE | TITUS 350RL | 1, 2 |
| | RET/EXH | GRILLE | 651-1300 | 36x12 | | 0.15 | 35 | STEEL | WHITE | TITUS 350RL | 1, 2 |
| | RET/EXH | GRILLE | 1301-2200 | 48x12 | | 0.15 | 35 | STEEL | WHITE | TITUS 350RL | 1, 2 |

NOTES

1. COORDINATE BORDER MOUTING TYPE AND LOCATION WITH ARCHITECTURAL PLANS.
2. ALUMINUM FINISH FOR WET LOCATION.
3. LIGHT ALERT FILTER MONITORING
4. MAGNA-PACK HEPA FILTER

## EXHAUST FAN SCHEDULE

| MARK NUMBER | LOCATION | SERVES | NOMINAL AIRFLOW CFM | STATIC PRESSURE IN WG | PRESSURE IN WG | RPM | ELECTRICAL HP | VOLT | PHASE | TYPE | WEIGHT LBS | BASIS OF DESIGN | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| EF-1-1 | ROOF | 1D25/27 - LASIK | 200 | 0.4 | 0.4 | 1375 | 1/6 | 120 | 1 | DIRECT | 50 | GREENHECK CUE-080VG | 1, 2, 3, 4 |
| EF-2-1 | ROOF | 1D16/17 - CHANGE ROOM | 300 | 0.5 | 0.5 | 1337 | 1/6 | 120 | 1 | DIRECT | 50 | GREENHECK CUE-095VG | 1, 2, 3, 4 |
| EF-2-2 | ROOF | 1D14 - SOIL UTILITY | 300 | 0.5 | 0.5 | 1337 | 1/6 | 120 | 1 | DIRECT | 50 | GREENHECK CUE-095VG | 1, 2, 3, 4 |
| EF-2-3 | ROOF | 1C70/72 - TLT | 200 | 0.5 | 0.5 | 1504 | 1/6 | 120 | 1 | DIRECT | 50 | GREENHECK CUE-080VG | 1, 2, 3, 4 |
| EF-3-1 | ROOF | 1C22/24 - TLT | 200 | 0.7 | 0.7 | 1661 | 1/6 | 120 | 1 | DIRECT | 50 | GREENHECK CUE-085VG | 1, 2, 3, 4 |
| EF-3-2 | ROOF | 1B52 - EYE OP FAB | 300 | 0.6 | 0.6 | 1496 | 1/6 | 120 | 1 | DIRECT | 50 | GREENHECK CUE-090VG | 1, 2, 3, 4 |
| EF-3-3 | ROOF | 1C07/1B50 - TLT | 200 | 0.6 | 0.6 | 1622 | 1/6 | 120 | 1 | DIRECT | 50 | GREENHECK CUE-080VG | 1, 2, 3, 4 |
| EF-3-4 | ROOF | 2B73/85 - TLT | 600 | 0.5 | 0.5 | 1539 | 1/6 | 120 | 1 | DIRECT | 50 | GREENHECK CUE-095VG | 1, 2, 3, 4 |
| EF-3-5 | ROOF | TLT | 300 | 0.5 | 0.5 | 1383 | 1/6 | 120 | 1 | DIRECT | 50 | GREENHECK CUE-090VG | 1, 2, 3, 4 |
| EF-4-1 | ROOF | 1B01/03 - TLT | 800 | 0.8 | 0.8 | 1505 | 1/4 | 120 | 1 | DIRECT | 75 | GREENHECK CUE-101VG | 1, 2, 3, 4 |
| EF-4-2 | ROOF | 1A47/48 - LOCKER RM | 900 | 0.8 | 0.8 | 1568 | 1/4 | 120 | 1 | DIRECT | 75 | GREENHECK CUE-101VG | 1, 2, 3, 4 |
| EF-4-3 | ROOF | 1A35/37 - TLT | 500 | 0.6 | 0.6 | 1567 | 1/6 | 120 | 1 | DIRECT | 50 | GREENHECK CUE-095VG | 1, 2, 3, 4 |
| EF-4-4 | ROOF | 1A21 - SOIL UTILITY | 200 | 0.5 | 0.5 | 1504 | 1/6 | 120 | 1 | DIRECT | 50 | GREENHECK CUE-080VG | 1, 2, 3, 4 |
| EF-4-5 | ROOF | 2B27/40/42 - TLT | 300 | 0.5 | 0.5 | 1337 | 1/6 | 120 | 1 | DIRECT | 50 | GREENHECK CUE-090VG | 1, 2, 3, 4 |
| EF-4-6 | ROOF | TLT | 200 | 0.4 | 0.4 | 1375 | 1/6 | 120 | 1 | DIRECT | 50 | GREENHECK CUE-080VG | 1, 2, 3, 4 |

NOTES:

1. MOTOR STARTER AND BUIT-IN DISCONNECT SWITCH
2. BIRD SCREEN
3. 18 INCHES ROOF CURB
4. MOTORIZED DAMPER

## DISTRIBUTION BOX SCHEDULE (VRF SYSTEMS)

| MARK NUMBER | SERVING | ELECTRICAL DATA VOLT | PH | HZ | BASIS OF DESIGN | NOTE |
|---|---|---|---|---|---|---|
| DB-1-1 | FCU-1-2, FCU-1-3 | 208 | 1 | 60 | | 1 |
| DB-1-2 | FCU-1-5, FCU-1-6, FCU-1-7 | 208 | 1 | 60 | | 1 |
| DB-1-3 | FCU-1-10 | 208 | 1 | 60 | | 1 |
| DB-1-4 | FCU-1-8, FCU-1-9 | 208 | 1 | 60 | | 1 |
| DB-1-5 | FCU-1-1, FCU-1-4 | 208 | 1 | 60 | | 1 |
| DB-2-1 | FCU-2-12, FCU-2-13 | 208 | 1 | 60 | | 1 |
| DB-2-2 | FCU-2-10, FCU-2-14 | 208 | 1 | 60 | | 1 |
| DB-2-3 | FCU-2-4, FCU-2-7 | 208 | 1 | 60 | | 1 |
| DB-2-4 | FCU-2-2, FCU-2-3 | 208 | 1 | 60 | | 1 |
| DB-2-5 | FCU-2-1, FCU-2-5 | 208 | 1 | 60 | | 1 |
| DB-2-6 | FCU-2-6, FCU-2-9 | 208 | 1 | 60 | | 1 |
| DB-2-7 | FCU-2-8, FCU-2-11 | 208 | 1 | 60 | | 1 |
| DB-3-1 | FCU-3-13, FCU-3-14 | 208 | 1 | 60 | | 1 |
| DB-3-2 | FCU-3-12, FCU-3-15, FCU-3-16 | 208 | 1 | 60 | | 1 |
| DB-3-3 | FCU-3-5, FCU-3-7, FCU-3-8 | 208 | 1 | 60 | | 1 |
| DB-3-4 | FCU-3-10, FCU-3-11 | 208 | 1 | 60 | | 1 |
| DB-3-5 | FCU-3-1, FCU-3-4 | 208 | 1 | 60 | | 1 |
| DB-3-6 | FCU-3-2 | 208 | 1 | 60 | | 1 |
| DB-3-7 | FCU-3-3, FCU-3-6, FCU-3-9 | 208 | 1 | 60 | | 1 |
| DB-4-1 | FCU-4-1, FCU-4-2 | 208 | 1 | 60 | | 1 |
| DB-4-2 | FCU-4-4, FCU-4-5, FCU-4-6 | 208 | 1 | 60 | | 1 |
| DB-4-3 | FCU-4-3, FCU-4-9 | 208 | 1 | 60 | | 1 |
| DB-4-4 | FCU-4-10, FCU-4-11 | 208 | 1 | 60 | | 1 |
| DB-4-5 | FCU-4-7, FCU-4-8 | 208 | 1 | 60 | | 1 |
| DB-4-6 | FCU-4-12, FCU-4-13 | 208 | 1 | 60 | | 1 |
| DB-5-1 | FCU-5-1, FCU-5-2, FCU-5-6 | 208 | 1 | 60 | | 1 |
| DB-5-2 | FCU-5-8, FCU-5-10 | 208 | 1 | 60 | | 1 |
| DB-5-3 | FCU-5-3, FCU-5-4 | 208 | 1 | 60 | | 1 |
| DB-5-4 | FCU-5-5, FCU-5-7 | 208 | 1 | 60 | | 1 |
| DB-5-5 | FCU-5-9, FCU-5-11, FCU-5-12 | 208 | 1 | 60 | | 1 |
| DB-6-1 | FCU-6-1, FCU-6-5 | 208 | 1 | 60 | | 1 |
| DB-6-2 | FCU-6-2, FCU-6-3, FCU-6-6 | 208 | 1 | 60 | | 1 |
| DB-6-3 | FCU-6-4, FCU-6-7, FCU-6-8 | 208 | 1 | 60 | | 1 |
| DB-6-4 | FCU-6-9, FCU-6-10 | 208 | 1 | 60 | | 1 |
| DB-6-5 | FCU-6-11, FCU-6-12, FCU-6-16 | 208 | 1 | 60 | | 1 |
| DB-6-6 | FCU-6-13, FCU-6-14 | 208 | 1 | 60 | | 1 |
| DB-6-7 | FCU-6-15, FCU-6-17 | 208 | 1 | 60 | | 1 |
| DB-7-1 | FCU-7-3, FCU-7-4 | 208 | 1 | 60 | | 1 |
| DB-7-2 | FCU-7-7, FCU-7-12 | 208 | 1 | 60 | | 1 |
| DB-7-3 | FCU-7-5, FCU-7-6, FCU-7-10, FCU-7-11 | 208 | 1 | 60 | | 1 |
| DB-7-4 | FCU-7-13, FCU-7-14 | 208 | 1 | 60 | | 1 |
| DB-7-5 | FCU-7-1, FCU-7-2 | 208 | 1 | 60 | | 1 |
| DB-7-6 | FCU-7-8, FCU-7-9 | 208 | 1 | 60 | | 1 |

NOTES:

1. RUN REFRIGERANT SUCTION AND LIQUID INDIVIDUALLY FROM FCU TO DISTRIBUTION BOX

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER


HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500


APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CS DRW VV CHK DL
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME:
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
BASE - CITY STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL SCHEDULES

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066047
SHEET M-602 OF 0

C:\vvt\191274-MEP-F2-CENTRAL_vwcbtasa.rvt 3/19/2014 1:35:52 PM

## VARIABLE REFRIGERANT VOLUME FAN COIL UNIT SCHEDULE

| MARK NO | SERVING | SUPPLY MAX CFM | SUPPLY DESIGN CFM | OA CFM | COOLING DATA EAT DB | EAT WB | LAT DB | LAT WB | TOTAL BTUH | SENSIBLE BTUH | HEATING BTUH | FAN ESP INCH | ELECTRICAL MCA | VOLT | PH | HZ | BASIS OF DESIGN | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FCU-1-01 | 1D32 - ELEC RM | 1377 | 1240 | N/A | 72 | 61 | 53 | 52 | 37,903 | 29,457 | 53,998 | 0.8 | 3.4 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-1-02 | 1D22/1D24/1D26 - ADMIN OFF | 883 | 670 | 170 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-1-03 | 1D20 - WAIT | 689 | 380 | 120 | 72 | 61 | 55 | 54.5 | 19,002 | 13,191 | 26,999 | 0.8 | 1.8 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-1-04 | 1D94/D95/1D96/1D97 - ADMIN OFF | 883 | 700 | 120 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-1-05 | 1D94/1D95/1D96/1D97 - ADMIN OFF | 689 | 660 | 225 | 72 | 61 | 55 | 54.5 | 19,002 | 13,191 | 26,999 | 0.8 | 1.8 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-1-06 | 1D00 - CONF | 883 | 785 | 285 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-1-07 | 1C62/1C64 - EYE LANE FLD | 883 | 870 | 230 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-1-08 | 1C89/1C90 - ADMIN OFF | 883 | 870 | 225 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-1-09 | 1D09/1D11/1D123 - FULL LANE FLD ELEC | 689 | 660 | 220 | 72 | 61 | 55 | 54.5 | 19,002 | 13,191 | 26,999 | 0.8 | 1.8 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-1-10 | 1C66 - COMM | 1377 | 1200 | 100 | 72 | 61 | 53 | 52 | 37,903 | 29,457 | 53,998 | 0.8 | 3.4 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-2-01 | 1C54/1C56/1C58 - EYE LANE FLD ELEC | 1130 | 1030 | 255 | 72 | 61 | 53 | 52 | 28,403 | 23,424 | 39,999 | 0.8 | 2.9 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-2-02 | 1C71/1C73 - LASER TREAT | 1130 | 1035 | 235 | 72 | 61 | 53 | 52 | 28,403 | 23,424 | 39,999 | 0.8 | 2.9 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-2-03 | 1C83/1C85/1C87 - EYE LANE FLD ELEC | 689 | 590 | 180 | 72 | 61 | 55 | 54.5 | 19,002 | 13,191 | 26,999 | 0.8 | 1.8 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-2-04 | 1C50/1C52 - EYE LANE FLD ELEC | 883 | 750 | 300 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-2-05 | 1C53/1C55/1C57/1C59 - EYE LANE FLD ELEC | 883 | 750 | 220 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-2-06 | 1C47 - ELEC | 318 | 250 | N/A | 72 | 61 | 56.5 | 56 | 5,901 | 5,309 | 8,500 | 0.8 | 0.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-2-07 | 1C00B - WAIT | 689 | 600 | 120 | 72 | 61 | 55 | 54.5 | 19,002 | 13,191 | 26,999 | 0.8 | 1.8 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-2-08 | 1C36/1C38/1C40/1C42 - EYE LANE FLD ELEC | 883 | 880 | 225 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-2-09 | 1C34/1C51 - EYE LANE FLD ELEC | 635 | 430 | 160 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-2-10 | 1C28/1C43/1C45 - VIS FIELD | 635 | 615 | 180 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-2-11 | 1C16/1C18/1C39 - EYE LANE FLD ELEC | 1130 | 965 | 255 | 72 | 61 | 53 | 52 | 28,403 | 23,424 | 39,999 | 0.8 | 2.9 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-2-12 | 1C10/1C12/1C14 - EYE LANE FLD ELEC | 1130 | 1040 | 330 | 72 | 61 | 53 | 52 | 28,403 | 23,424 | 39,999 | 0.8 | 2.9 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-2-13 | 1C04/1C06/1C08 - EYE LANE FLD ELEC | 883 | 760 | 265 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-2-14 | 1C00A - WAIT | 689 | 600 | 120 | 72 | 61 | 55 | 54.5 | 19,002 | 13,191 | 26,999 | 0.8 | 1.8 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-01 | 1C15/1C17/1C19 - OPTH EXAM | 689 | 650 | 225 | 72 | 61 | 55 | 54.5 | 19,002 | 13,191 | 26,999 | 0.8 | 1.8 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-02 | 1C09 - COMM | 1377 | 1200 | 100 | 72 | 61 | 53 | 52 | 37,903 | 29,457 | 53,998 | 0.8 | 3.4 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-03 | 1B51 - EYEGLASS FITTING/ 1B52 EYE OPT | 689 | 620 | 195 | 72 | 61 | 55 | 54.5 | 19,002 | 13,191 | 26,999 | 0.8 | 1.8 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-04 | 1B43/1B47/1B49 - EYE LANE FLD ELEC | 1130 | 1130 | 300 | 72 | 61 | 53 | 52 | 28,403 | 23,424 | 39,999 | 0.8 | 2.9 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-05 | 1B39/1B40/1B41 - EYE LANE FLD ELEC | 883 | 745 | 265 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-06 | 1B37 - RECP/ 1B38 OPT/ TECH WK | 635 | 450 | 100 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-07 | 1B24/1B25/1B26 - VIS SCRN | 883 | 770 | 300 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-08 | 1B07 - MECHINE RM | 318 | 250 | N/A | 72 | 61 | 56.5 | 56 | 5,901 | 5,309 | 8,500 | 0.8 | 0.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-09 | 1B19 - OPT/WK/ 1B20 - COUNS | 635 | 600 | 300 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-10 | 1B13/1B14 - ADMIN OFF | 883 | 880 | 130 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-11 | 1B27/1B28/1B31 - EYE LANE FLD | 635 | 515 | 170 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-12 | 1C47 - ELEC | 318 | 250 | N/A | 72 | 61 | 56.5 | 56 | 5,901 | 5,309 | 8,500 | 0.8 | 0.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-13 | 1B09/1B11 - ADMIN OFF | 1130 | 970 | 160 | 72 | 61 | 53 | 52 | 28,403 | 23,424 | 39,999 | 0.8 | 2.9 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-14 | 1B10 - CONSULT | 635 | 400 | 110 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-15 | 1B08 - CONF RM | 318 | 315 | 125 | 72 | 61 | 56.5 | 56 | 5,901 | 5,309 | 8,500 | 0.8 | 0.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-3-16 | 1A99 - LOBBY | 1377 | 1170 | 360 | 72 | 61 | 53 | 52 | 37,903 | 29,457 | 53,998 | 0.8 | 3.4 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-4-01 | 1A00 - CHAPEL | 1130 | 1040 | 300 | 72 | 61 | 53 | 52 | 28,403 | 23,424 | 39,999 | 0.8 | 2.9 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-4-02 | 1A47/1A48 - CHANGE ROOM | 635 | 360 | 300 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-4-03 | 1A50 - EQUIP STOR | 635 | 475 | 120 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-4-04 | 1A01 WAIT CHAIR/ 1A02 REC | 689 | 635 | 150 | 72 | 61 | 55 | 54.5 | 19,002 | 13,191 | 26,999 | 0.8 | 1.8 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-4-05 | 1A46 - ELEC | 318 | 250 | N/A | 72 | 61 | 56.5 | 56 | 5,901 | 5,309 | 8,500 | 0.8 | 0.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-4-06 | 1A01 WAIT CHAIR/ 1A02 REC | 635 | 590 | 160 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-4-07 | 1A06/1A07 - EXAM | 635 | 455 | 150 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-4-08 | 1A11/1A13/1A15 - EXAM | 1130 | 890 | 255 | 72 | 61 | 53 | 52 | 28,403 | 23,424 | 39,999 | 0.8 | 2.9 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-4-09 | 1A52/1A53 - STOR | 635 | 480 | 100 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-4-10 | 1A33 - CONF | 635 | 500 | 200 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-4-11 | 1A56 - COMM | 1377 | 1200 | 100 | 72 | 61 | 53 | 52 | 37,903 | 29,457 | 53,998 | 0.8 | 3.4 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-4-12 | 1A10/1A12/1A14 - EXAM | 1130 | 980 | 210 | 72 | 61 | 53 | 52 | 28,403 | 23,424 | 39,999 | 0.8 | 2.9 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-4-13 | 1A20/1A22 - OFF | 689 | 650 | 100 | 72 | 61 | 55 | 54.5 | 19,002 | 13,191 | 26,999 | 0.8 | 1.8 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-5-01 | 2C49 - HLTH PHY TECH | 883 | 870 | 200 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-5-02 | 2C50/2C51 - RAD PROT LAB | 635 | 380 | 150 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-5-03 | 2C09 - CLRM TABLE | 1130 | 780 | 225 | 72 | 61 | 53 | 52 | 28,403 | 23,424 | 39,999 | 0.8 | 2.9 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-5-04 | 2C11/2C12/2C13/2C14 - PVT OFF | 883 | 710 | 140 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-5-05 | 2C17/2C18 - PVT OFF | 883 | 720 | 180 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-5-06 | 2C38 - ELEC BC | 318 | 250 | N/A | 72 | 61 | 56.5 | 56 | 5,901 | 5,309 | 8,500 | 0.8 | 0.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-5-07 | 2C19/2C20 - PVT OFF | 883 | 715 | 180 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-5-08 | 2C41/2C43/2C45 - ADMIN OFF | 1130 | 840 | 215 | 72 | 61 | 53 | 52 | 28,403 | 23,424 | 39,999 | 0.8 | 2.9 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-5-09 | 2C29/2C30/2C31 - ADMIN OFF | 1130 | 875 | 215 | 72 | 61 | 53 | 52 | 28,403 | 23,424 | 39,999 | 0.8 | 2.9 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-5-10 | 2C63/2C65/2C66/2C67 - CHAP OFF | 1130 | 1070 | 215 | 72 | 61 | 53 | 52 | 28,403 | 23,424 | 39,999 | 0.8 | 2.9 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-5-11 | 2C01/2C02 - WAIT | 883 | 705 | 160 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-5-12 | 2C25 - CONF | 883 | 660 | 250 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-01 | 2B57/2B59/2B61 - CHAP OFF | 883 | 710 | 120 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-02 | 2B76 - SEC WAIT | 635 | 380 | 100 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-03 | 1B86 - COMM | 1377 | 1200 | 100 | 72 | 61 | 53 | 52 | 37,903 | 29,457 | 53,998 | 0.8 | 3.4 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-04 | 2B06/2B08 - ADMIN OFF | 883 | 660 | 160 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-05 | 2B58 - CONF RM/LIB | 635 | 560 | 200 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-06 | 2B81 - CONF RM | 635 | 570 | 210 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-07 | 2B13/2B15 - ADMIN OFF | 635 | 570 | 210 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-08 | 2B16 - CONF RM | 635 | 400 | 120 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-09 | 2B32- ADMIN | 635 | 550 | 120 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-10 | 2B29- CONF | 635 | 500 | 250 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-11 | 2B22/2B24/2B26 - ADMIN | 635 | 500 | 120 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-12 | 2B19 - CONF | 635 | 495 | 200 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-13 | 2B51/2B52/2B53 - MNTL HLTH PROV | 1130 | 910 | 120 | 72 | 61 | 53 | 52 | 28,403 | 23,424 | 39,999 | 0.8 | 2.9 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-14 | 2B46 - GROUP THERAPY RM | 635 | 450 | 120 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-15 | 2B41/2B43/2B45 - MNTL HLTH PROV | 1377 | 1160 | 165 | 72 | 61 | 53 | 52 | 37,903 | 29,457 | 53,998 | 0.8 | 3.4 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-16 | 2B34/2B36 - MNTL HLTH PROV | 635 | 585 | 120 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-6-17 | 2A99A - LOBBY | 883 | 660 | 200 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-7-01 | 2A99A - LOBBY | 883 | 630 | 170 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-7-02 | 2A51/2A52 - ADLT SCRN | 883 | 775 | 180 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-7-03 | 2A69 - RESIDENT CUB | 635 | 580 | 140 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-7-04 | 2A26/2A27 - EXAM | 883 | 650 | 150 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-7-05 | 2A58/2A60 - EXAM | 883 | 700 | 225 | 72 | 61 | 52 | 51.5 | 23,702 | 19,497 | 33,999 | 0.8 | 2.3 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-7-06 | 2A33/2A35/2A37 - SYS OFF | 635 | 485 | 140 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-7-07 | 2A33/2A35/2A37 - SYS OFF | 635 | 520 | 130 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-7-08 | 2A03 - PAT LIB | 318 | 300 | 100 | 72 | 61 | 56.5 | 56 | 5,901 | 5,309 | 8,500 | 0.8 | 0.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-7-09 | 2A05 - SYS FURN | 635 | 420 | 130 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-7-10 | 2A34 - ELEC BC | 318 | 250 | N/A | 72 | 61 | 56.5 | 56 | 5,901 | 5,309 | 8,500 | 0.8 | 0.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-7-11 | 2A13 - ADM CUB | 635 | 1530 | 130 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-7-12 | 2A22 - COMM | 1377 | 1200 | 100 | 72 | 61 | 53 | 52 | 37,903 | 29,457 | 53,998 | 0.8 | 3.4 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-7-13 | 2A02/2A04/2A06 - SYS FURN | 1377 | 1140 | 180 | 72 | 61 | 53 | 52 | 37,903 | 29,457 | 53,998 | 0.8 | 3.4 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |
| FCU-7-14 | 2A18/2A20 - SYS FURN | 635 | 500 | 100 | 72 | 61 | 55 | 54.5 | 14,201 | 12,055 | 19,999 | 0.8 | 1.6 | 208 | 1 | 60 | DAIKIN FXDQ | 1, 2, 3, 4, 5, 6, 7 |

NOTES:

1. WALL MOUNTED THERMOSTAT
2. MOTOR STARTER
3. MERV 8 FILTER
4. AUXILIARY DRAIN PAN AND OVERFLOW DETECTOR. DOUBLE SLOPE STAINLESS STEEL, IAQ TYPE CONDENSATE DRAIN PAN.
5. UNIT WITH R-410 DX COIL AND COMPATIBLE TO VARIABLE REFRIGERANT SYSTEM
6. UNIT WITH CONDENSATE PUMP, PROVIDE TRANSFORMER IF REQUIRE
7. FANS TO BE PROVIDED WITH ECM MOTORS.

## VARIABLE REFRIGERANT VOLUME AIR COOLED CONDENSING UNIT SCHEDULE

| MARK NO | SERVING | REFRIGERANT | COOLING CAPACITY MBH | HEATING CAPACITY MBH | ELEC MODULE A MCA | MODULE B MCA | MODULE C MCA | V/ PH/ HZ | WEIGHT LBS | BASIS OF DESIGN | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CU-1 | FCU-1-1 - FCU-1-10 | R-410 | 206 | 231 | 20.3 | 20.5 | NONE | 480/3/60 | 573+573 | DAIKIN REYQ216PBYD | 1,2 |
| CU-2 | FCU-2-1 - FCU-2-14 | R-410 | 251 | 283 | 16.7 | 20.3 | 20.3 | 480/3/60 | 463+573+573 | DAIKIN REYQ264PBYD | 1,2 |
| CU-3 | FCU-3-1 - FCU-3-16 | R-410 | 297 | 334 | 20.3 | 20.3 | 20.5 | 480/3/60 | 573+573+573 | DAIKIN REYQ312PBYD | 1,2 |
| CU-4 | FCU-4-1 - FCU4-13 | R-410 | 206 | 231 | 20.3 | 20.5 | NONE | 480/3/60 | 573+573 | DAIKIN REYQ216PBYD | 1,2 |
| CU-5 | FCU-5-1 - FCU-5-12 | R-410 | 251 | 283 | 16.7 | 20.3 | 20.3 | 480/3/60 | 463+573+573 | DAIKIN REYQ264PBYD | 1,2 |
| CU-6 | FCU-6-1 - FCU-6-17 | R-410 | 320 | 360 | 20.5 | 20.3 | 20.5 | 480/3/60 | 573+573+573 | DAIKIN REYQ336PBYD | 1,2 |
| CU-7 | FCU-7-1 - FCU-7-14 | R-410 | 251 | 283 | 16.7 | 20.3 | 20.3 | 480/3/60 | 463+573+573 | DAIKIN REYQ264PBYD | 1,2 |

NOTES:

1. LOW AMBIENT OPERATION UP TO -4 F
2. CONDENSING UNITS ARE HEAT RECOVERY TYPE CAPABLE OF PROVIDING SIMULTANEOUS COOLING AND HEATING AS REQUIRED BY INDOOR FAN COIL UNITS

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR

ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CS DRW VV CHK DL
PMDM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
COMPONENT NAME
NAVAL FACILITIES ENGINEERING COMMAND – AGENCY
BASE, CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL SCHEDULES

SCALE: 1/8" = 1'-0"
EFPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066048
SHEET OF 0
M-603

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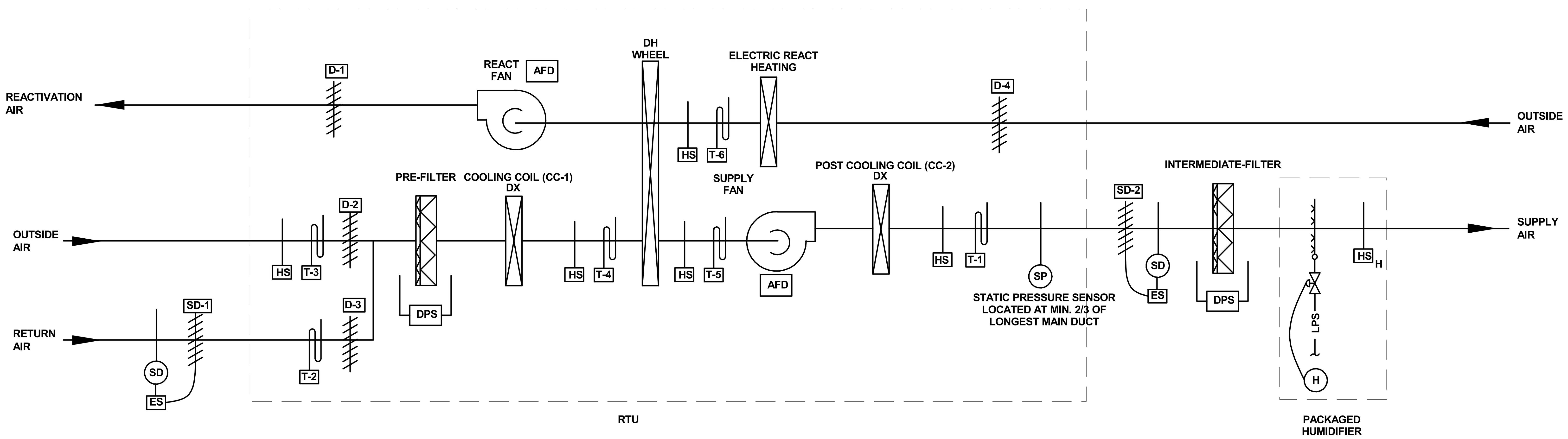


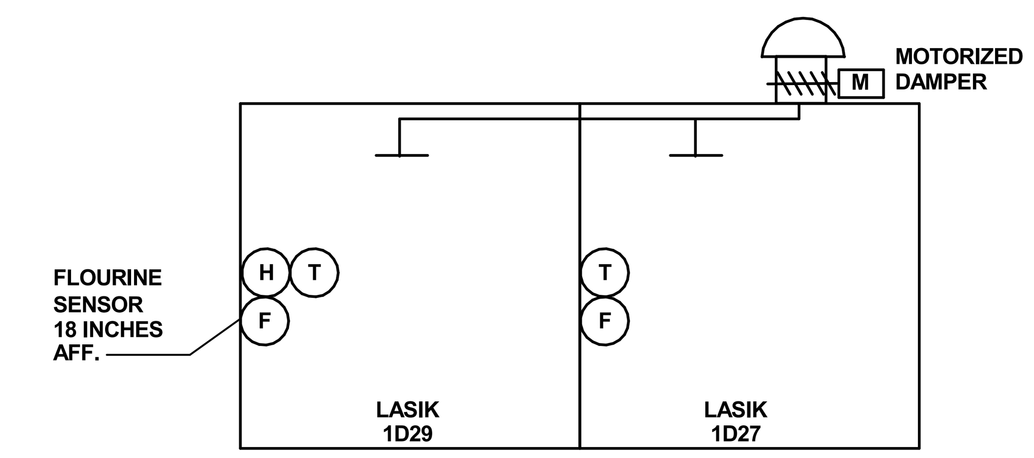


## CONTROL POINT SCHEDULES

**INPUT**

| SYSTEM, APPARATUS, OR AREA POINT DESCRIPTION | ANALOG – MEASURED: TEMPERATURE | PRESSURE | DIFFERENTIAL PRESS. | HUMIDITY | KW | AIR FLOW | WATER/STEAM FLOW | SPEED | DAMPER/VALVE POSITION | LEVEL | ANALOG – CALCULATED: KWH | ENTHALPY | RUN TIME | EFFICIENCY | DIGITAL: STATUS | DAMPER/ END SWITCH | SMOKE | FREEZE | AIR FLOW | ALARM | PPM | WATER LEVEL | LOW PRESS ALARM |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RTU-1 | | | | | | | | | | | | | | | | | | | | | | | |
| Supply Air | X | | | | | | | | | | | | | | | | X | | | | | | |
| Supply Air humidity | | | | X | | | | | | | | | | | | | | | | | | | |
| Supply Air static pressure | | X | | | | | | | | | | | | | | | | | | | | | |
| SA Fan (VFD) | | | | | | | | X | | | | | X | | X | | | | | | | | |
| Return Air | X | | | | | | | | | | | | | | | | X | | | | | | |
| Return Air humidity | | | | X | | | | | | | | X | | | | | | | | | | | |
| Return Air damper (D-3) | | | | | | | | | X | | | | | | | X | | | | | | | |
| Outside Air | X | | | | | | | | | | | | | | | | | | | | | | |
| Outside Air humidity | | | | X | | | | | | | | X | | | | | | | | | | | |
| Outside Air damper (D-2) | | | | | | | | | X | | | | | | | | | | | | | | |
| Damper (D-4) | | | | | | | | | | | | | | | | X | | | | | | | |
| Smoke Damper (SD-1) | | | | | | | | | | | | | | | | X | | | | | | | |
| Smoke Damper (SD-2) | | | | | | | | | | | | | | | | X | | | | | | | |
| Temperature (T-4) | X | | | | | | | | | | | | | | | | | | | | | | |
| Humidity (T-4) | | | | X | | | | | | | | | | | | | | | | | | | |
| Temperature (T-5) | X | | | | | | | | | | | | | | | | | | | | | | |
| Humidity (T-5) | | | | X | | | | | | | | | | | | | | | | | | | |
| Temperature (T-6) | X | | | | | | | | | | | | | | | | | | | | | | |
| Humidity (T-6) | | | | X | | | | | | | | | | | | | | | | | | | |
| REACT Fan (VFD) | | | | | | | | X | | | | | X | | X | | | | | | | | |
| DH wheel | | | | | | | | | | | | | X | | X | | | | | | | | |
| Humidifier | | | | | | | | | | | | | X | | X | | | | | | | | |
| Leak detector (Drip pan) | | | | | | | | | | | | | | | | | | | | | | X | |
| Cooling Coil (DX) Compressors | | | | | | | | | | | | | X | | X | | | | | | | | |
| Pre filter | | | X | | | | | | | | | | | | | | | | | | | | |
| Intermediate filter | | | X | | | | | | | | | | | | | | | | | | | | |
| Exhaust Fan | | | | | | | | | | | | | X | | X | | | | | | | | |
| Damper | | | | | | | | | X | | | | | | | | | | | | | | |
| Flourine concentration | | | | | | | | | | | | | | | | | | | | X | X | | |

**OUTPUTS**

| SYSTEM, APPARATUS, OR AREA POINT DESCRIPTION | ANALOG: DMPR POS | VALVE POS | SET POINT ADJ. | SPEED | FIRING RATE | MODULATION CONTROL | DIGITAL: OFF-ON | OFF-AUTO-ON | OFF-HI-LO | OPEN-CLOSE |
|---|---|---|---|---|---|---|---|---|---|---|
| RTU-1 | | | | | | | | | | |
| Supply Air | | | X | | | | | | | |
| Supply Air humidity | | | X | | | | | | | |
| Supply Air static pressure | | | X | | | | | | | |
| SA Fan (VFD) | | | | X | | | X | | | |
| Return Air | | | | | | | | | | |
| Return Air humidity | | | X | | | | | | | |
| Return Air damper (D-3) | X | | | | | | | | | |
| Outside Air | | | | | | | | | | |
| Outside Air humidity | | | | | | | | | | |
| Outside Air damper (D-2) | X | | | | | | | | | |
| Damper (D-4) | | | | | | | | | | |
| Smoke Damper (SD-1) | | | | | | | | | | |
| Smoke Damper (SD-2) | | | | | | | | | | |
| Temperature (T-4) | | | | | | | | | | |
| Humidity (T-4) | | | | | | | | | | |
| Temperature (T-5) | | | | | | | | | | |
| Humidity (T-5) | | | | | | | | | | |
| Temperature (T-6) | | | | | | | | | | |
| Humidity (T-6) | | | | | | | | | | |
| REACT Fan (VFD) | | | | X | | | X | | | |
| DH wheel | | | | | | | X | | | |
| Humidifier | | | | | | X | X | | | |
| Leak detector (Drip pan) | | | | | | | | | | |
| Cooling Coil (DX) Compressors | | | | X | | X | | | | |
| Pre filter | | | | | | | | | | |
| Intermediate filter | | | | | | | | | | |
| Exhaust Fan | | | | | | | X | | | |
| Damper | X | | | | | | | | | |
| Flourine concentration | | | | | | | | | | |

**SYSTEM FEATURES / GENERAL**

| SYSTEM, APPARATUS, OR AREA POINT DESCRIPTION | ALARMS: HI ANALOG | LOW ANALOG | HI BINARY | LOW BINARY | TROUBLE | FAILURE ALARM | PROGRAMS: TIME SCHEDULING | DEMAND LIMITING | DUTY CYCLE | START/STOP OPT. | NIGHT SETBACK | INTERLOCK | ALARM INSTRUCT | MAINT. WK. ORD. | GENERAL: GRAPHIC | SUPPLEMENTARY NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RTU-1 | | | | | | | X | | | X | X | X | X | | X | |
| Supply Air | X | X | | | | | | | | | | | | | | |
| Supply Air humidity | X | | | | | | | | | | | | | | | |
| Supply Air static pressure | X | | | | | | | | | | | | | | | |
| SA Fan (VFD) | | | | | | X | | | | | | | | | | |
| Return Air | | | | | | | | | | | | | | | | |
| Return Air humidity | | X | | | | | | | | | | | | | | |
| Return Air damper (D-3) | | | | | | | | | | | | | | | | |
| Outside Air | | | | | | | | | | | | | | | | |
| Outside Air humidity | | | | | | | | | | | | | | | | |
| Outside Air damper (D-2) | | | | | | | | | | | | | | | | |
| Damper (D-4) | | | | | | | | | | | | | | | | |
| Smoke Damper (SD-1) | | | | | | | | | | | | | | | | |
| Smoke Damper (SD-2) | | | | | | | | | | | | | | | | |
| Temperature (T-4) | | | | | | | | | | | | | | | | |
| Humidity (T-4) | | | | | | | | | | | | | | | | |
| Temperature (T-5) | | | | | | | | | | | | | | | | |
| Humidity (T-5) | | | | | | | | | | | | | | | | |
| Temperature (T-6) | | | | | | | | | | | | | | | | |
| Humidity (T-6) | | | | | | | | | | | | | | | | |
| REACT Fan (VFD) | | | | | | X | | | | | | | | | | |
| DH wheel | | | | | | X | | | | | | | | | | |
| Humidifier | | | | | | X | | | | | | | | | | |
| Leak detector (Drip pan) | | | X | | | | | | | | | | | | | |
| Cooling Coil (DX) Compressors | | | | | | X | | | | | | | | | | |
| Pre filter | X | | | | | | | | | | | | | | | |
| Intermediate filter | X | | | | | | | | | | | | | | | |
| Exhaust Fan | | | | | | X | | | | | | | | | X | |
| Damper | | | | | | | | | | | | | | | | |
| Flourine concentration | X | | | | | | | | | | | | | | | |

**LASIK/PRK ROOFTOP UNIT (RTU-1)**

1. GENERAL:
   - A. CONTROL CONTRACTOR SHALL PROVIDE ALL NECESSARY CONTROL EQUIPMENT TO COMPLETE THE SEQUENCE OF OPERATION.
   - B. AHU'S SHALL BE ENABLED BY A TIME CLOCK.
   - C. SUPPLY FAN SHALL EACH BE INTERLOCKED THROUGH A DAMPER END SWITCH SO IT CANNOT START UNTIL SMOKE DAMPERS SD-1 AND SD-2 ARE FULLY OPEN. EXHAUST FAN EF-1-1 TO BE INTERLOCKED WITH AHU SHALL BE STARTED AND STOPPED WITH SUPPLY AIR FAN THROUGH THE DIRECT DIGITAL CONTROLLER.
   - D. SEE M-703 FOR VAV BOX CONTROL.

2. OCCUPIED MODE:
   DAMPERS D-1, D-2, D-3 AND D-4 SHALL MODULATE TO PRESET CONDITION. SUPPLY FAN SHALL MODULATE TO MAINTAIN DUCT STATIC PRESSUREWHICH SHALL BE RESET BASED ON A POLLING OF ALL TERMINAL UNITS. COOLING COIL CC-1 SHALL MAINTAIN A DISCHARGE TEMPERATURE OF 50°F (ADJ). DEHUMIDIFYING WHEEL SHALL ENERGIZE. POST COOLING COIL (CC-2) SHALL MODULATE TO MAINTAIN A DISCHARGE TEMPERATURE OF 55°F (ADJ). DH WHEEL SHALL BE ENERGIZED WHEN UNIT ENERGIZED AND DE-ENERGIZED WHEN UNIT IS DE-ENERGIZED.

3. HUMIDITY CONTROL :
   WHEN HUMIDITY STAT IS BELOW 40%RH (ADJ.) THE CONTROLLER SHALL ENERGIZE THE HUMIDIFIER SYSTEM WHICH SHALL MAINTAIN HUMIDITY AT 40%RH (ADJ.). HUMIDIFIER SHALL DE-ENERGIZE WHEN HUMIDISTAT SENSE 42% RH (ADJ.)
   AFTER HUMIDIFIER IS ENERGIZED AND THE HUMIDITY IS STILL BELOW 40%RH (ADJ.) FOR 30 MINS (ADJ.), THE HUMIDIFIER SYSTEM SHALL BE DE-ENERGIZED AND ALARMED.
   WHEN DISCHARGED AIR HUMIDITY IS AT 90%RH (ADJ.), THE HUMIDIFIER SYSTEM SHALL BE DE-ENERGIZED AND ALARMED.
   HUMIDIFIER SHALL BE DISABLED WHEN THE SUPPLY FAN IS OFF.
   LEAK DETECTOR SHALL BE LOCATED IN DRIP PAN UNDER STEAM DISPERSION SECTION, AND GENERATE AN ALARM WHEN WATER LEAK IS DETECTED.
   IF THERE IS NO CALL FOR HUMIDIFICATION FOR 48HRS, THE HUMIDIFIER SHALL BE DE-ENERGIZED.

4. UNOCCUPIED MODE:
   WHEN THE CONTROLLER CALLS FOR COOLING, DAMPER D-3 SHALL BE FULLY OPEN. DAMPER D-2 SHALL BE FULLY CLOSED. SUPPLY FAN SHALL MAINTAIN DUCT STATIC PRESSURE BASED ON POLLING OF ALL TERMINAL UNITS. COOLING COIL (CC-1) SHALL MODULATE TO MAINTAIN RETURN AIR TEMPERATURE OF 70°F.
   WHEN THE CONTROLLER CALLS FOR HEATING, DAMPER D-3 SHALL BE FULLY OPEN AND DAMPER D-2 SHALL BE FULLY CLOSED. SUPPLY FAN SHALL MAINTAIN DUCT STATIC PRESSURE BASED ON POLLING OF ALL TERMINAL UNITS. ALL TERMINAL UNITS SHALL MODULATE TO THE MINIMUM POSITION. UPON A FURTHER DROP IN RETURN AIR TEMPERATURE, ELECTRIC HEATING COIL IN TERMINAL UNITS SHALL ENERGIZE AND MODULATE TO MAINTAIN ROOM SETPOINT.

5. WARM-UP/ COOL DOWN MODE:
   THE CONTROLLER SHALL CALCULATE THE OPTIMUM WARM-UP AND COOL DOWN TIME AS A FUNCTION OF THE DIFFERENCE BETWEEN SPACE TEMPERATURE AND OCCUPIED SETPOINT AND THE AMOUNT OF TIME PRIOR TO SCHEDULED OCCUPANCY.

6. EXHAUST FAN: EF-1-1
   EXHAUST FAN SHALL BE ENERGIZED WHEN FLOURINE CONCENTRATION IS ABOVE 1 PPM (ADJ.) AND GENERATE AN ALARM. WHEN THE CONCENTRATION LOWER THAN SET POINT FOR 2 MINS (ADJ.) FAN SHALL STOP.

7. FILTER STATUS:
   THE DIFFERENTIAL PRESSURE OF FILTERS SHALL INDICATE FILTER LOADING. AN ALARM SHALL BE GENERATED WHEN DIFFERENTIAL PRESSURE REACHES 1.0" (ADJ.)

8. HIGH STATIC PRESSURE PROTECTION:
   WHEN DUCT STATIC PRESSURE REACHES 3" (ADJ.), AN ALARM SHALL BE GENERATED. UNIT SHALL DEENERGIZE AND REQUIRE MANUAL RESTART.

9. SMOKE DETECTOR CONTROL (COORDINATE WITH FIRE PROTECTION):
   UPON DETECTING SMOKE, ASSOCIATED SMOKE DAMPER SHALL CLOSE AND AHU SHALL DEENERGIZE VIA FIRE ALARM CONTACT. DAMPER D2 SHALL BE FULLY CLOSED.

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER


HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500


APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO DATE

DES CS | DRW VV | CHK DL
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
COMPONENT NAME
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL CONTROLS

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066049
SHEET OF 0

M-701

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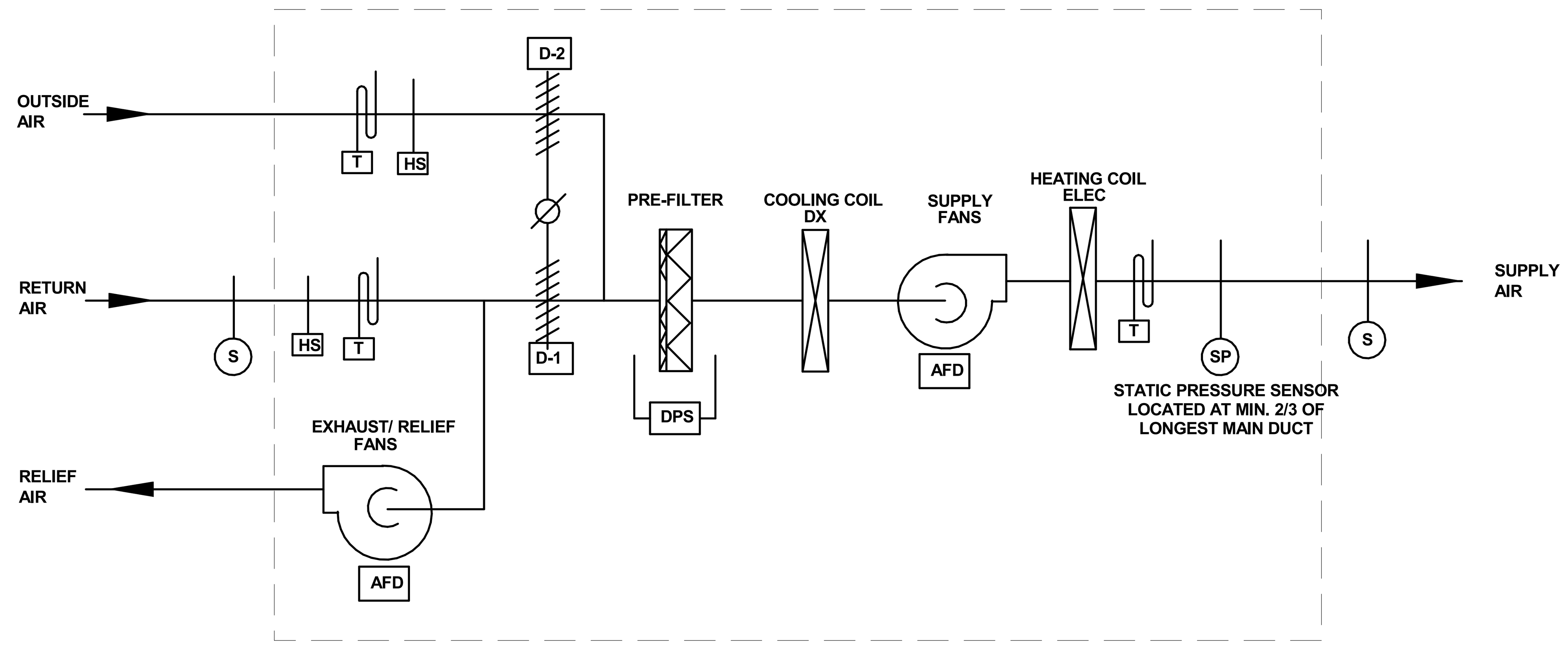


**ROOFTOP UNITS ( RTU-2, RTU-3 AND RTU-4)**

1. GENERAL:
A. CONTROL SHALL BE PROVIDED BY RTU MANUFACTURER.
B. THE RTU SHALL BE ENABLED BY ADJUSTABLE TIME SCHEDULES .

2. OCCUPIED MODE:
DAMPER D-1 SHALL BE FULLY CLOSED, DAMPER D-2 SHALL BE FULLY OPENED. SUPPLY FAN AND EXHAUST/RELIEF FAN SHALL MAINTAIN CONSTANT AIR VOLUME. HEATING COIL, COILING COIL AND ASSOCIATED COMPRESSORS SHALL MODULATE TO MAINTAIN SUPPLY AIR TEMPERATURE AT 70 °F (ADJ.) FOR WINTER AND 55° (ADJ.) FOR SUMMER.

3. UNOCCUPIED MODE:
RTU AND ASSOCIATED EXHAUST FAN SHALL BE OFF. FAN COIL UNIT SHALL MAINTAIN SPACE TEMPERATURE SET POINT.

4. EXHAUST FAN:
EF-2-1, EF-2-2 AND EF-2-3 SHALL BE INTERLOCKED TO RTU-2.
EF-3-1, EF-3-2, EF-3-3, EF-3-4 AND EF-3-5 SHALL BE INTERLOCKED TO RTU-3.
EF-4-1, EF-4-2, EF-4-3, EF-4-4, EF-4-5 AND EF-4-6 SHALL BE INTERLOCKED TO RTU-4.

5. FILTER STATUS:
THE DIFFERENTIAL PRESSURE OF FILTERS SHALL INDICATE FILTER LOADING. AN ALARM SHALL BE GENERATED WHEN DIFFERENTIAL PRESSURE REACHES 1.0" (ADJ.)

6. HIGH STATIC PRESSURE PROTECTION:
WHEN DUCT STATIC PRESSURE IS 2.0" (ADJ.) HIGHER THAN PRESET CONDITION, AN ALARM SHALL BE GENERATED. UNIT SHALL BE OFF.

7. SMOKE DETECTOR CONTROL (COORDINATE WITH FIRE PROTECTION):
UPON DETECTING SMOKE, RTU SHALL BE SHUTDOWN VIA FIRE ALARM CONTACT.

## CONTROL POINT SCHEDULES

| | INPUT | | | | | | | | | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | ANALOG | | | | | | | | | | | | | | | DIGITAL | | | | | | | | |
| | MEASURED | | | | | | | | | | CALCULATED | | | | | | | | | | | | | |
| SYSTEM, APPARATUS, OR AREA POINT DESCRIPTION | TEMPERATURE | PRESSURE | DIFFERENTIAL PRESS. | HUMIDITY | KW | AIR FLOW | WATER/STEAM FLOW | SPEED | DAMPER/VALVE POSITION | LEVEL | KWH | ENTHALPY | RUN TIME | EFFICIENCY | | STATUS | DAMPER/VALVE POSITION | SMOKE | FREEZE | AIR FLOW | ALARM | CO2 LEVEL | WATER LEVEL | LOW PRESS ALARM |
| RTU-2 THRU RTU-4 | | | | | | | | | | | | | | | | | | | | | | | | |
| Supply Air | X | | | | | | | | | | | | | | | | | X | | | | | | |
| Supply Air Humidity | | | | X | | | | | | | | | | | | | | | | | | | | |
| Supply Air Static Pressure | | X | | | | | | | | | | | | | | | | | | | | | | |
| Supply Fan (VFD) | | | | | | | | X | | | | | X | | | X | | | | | | | | |
| Outside Air | X | | | | | | | | | | | | | | | | | | | | | | | |
| Outside Air Humidity | | | | X | | | | | | | | X | | | | | | | | | | | | |
| Outside Air Damper (D-2) | | | | | | | | | X | | | | | | | | | | | | | | | |
| Return/Exhaust Fan (VFD) | | | | | | | | X | | | | | X | | | X | | | | | | | | |
| Return Air | X | | | | | | | | | | | | | | | | | X | | | | | | |
| Return Air Humidity | | | | X | | | | | | | | X | | | | | | | | | | | | |
| Return Air Damper (D-1) | | | | | | | | | X | | | | | | | | | | | | | | | |
| Cooling Coil (DX) Compressors | | | | | | | | | | | | | X | | | X | | | | | | | | |
| Elec Heating Coil | | | | | | | | | | | | | X | | | X | | | | | | | | |
| Pre filter | | | X | | | | | | | | | | | | | | | | | | | | | |
| Exhaust Fans | | | | | | | | | | | | | X | | | X | | | | | | | | |
| Damper | | | | | | | | | X | | | | | | | | | | | | | | | |

| | OUTPUTS | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | ANALOG | | | | | | DIGITAL | | | | | |
| SYSTEM, APPARATUS, OR AREA POINT DESCRIPTION | DMPR POS | VALVE POS | SET POINT ADJ. | SPEED | FIRING RATE | MODULATION CONTROL | OFF-ON | OFF-AUTO-ON | OFF-HI-LO | OPEN-CLOSE | | |
| RTU-2 THRU RTU-4 | | | | | | | | | | | | |
| Supply Air | | | X | | | | | | | | | |
| Supply Air Humidity | | | X | | | | | | | | | |
| Supply Air Static Pressure | | | X | | | | | | | | | |
| Supply Fan (VFD) | | | | X | | | X | | | | | |
| Outside Air | | | | | | | | | | | | |
| Outside Air Humidity | | | | | | | | | | | | |
| Outside Air Damper (D-2) | X | | | | | | | | | | | |
| Return/Exhaust Fan (VFD) | | | | X | | | X | | | | | |
| Return Air | | | | | | | | | | | | |
| Return Air Humidity | | | | | | | | | | | | |
| Return Air Damper (D-1) | X | | | | | | | | | | | |
| Cooling Coil (DX) Compressors | | | | X | | X | | | | | | |
| Elec Heating Coil | | | | | | X | | | | | | |
| Pre filter | | | X | | | | | | | | | |
| Exhaust Fans | | | | | | | X | | | | | |
| Damper | X | | | | | | | | | | | |

| | SYSTEM FEATURES | | | | | | | | | | | | | | | | | GENERAL | | | | | SUPPLEMENTARY NOTES |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | ALARMS | | | | | | | PROGRAMS | | | | | | | | | | | | | | | |
| SYSTEM, APPARATUS, OR AREA POINT DESCRIPTION | HI ANALOG | LOW ANALOG | HI BINARY | LOW BINARY | TROUBLE | FAILURE ALARM | | TIME SCHEDULING | DEMAND LIMITING | DUTY CYCLE | START/STOP OPT. | ENTHALPY OPT. | NIGHT SETBACK | INTERLOCK | ALARM INSTRUCT | MAINT. WK. ORD. | | | GRAPHIC | | | | | |
| RTU-2 THRU RTU-4 | | | | | | | | X | | | X | X | X | X | X | | | | X | | | | | |
| Supply Air | X | X | | | | | | | | | | | | | | | | | | | | | | |
| Supply Air Humidity | X | | | | | | | | | | | | | | | | | | | | | | | |
| Supply Air Static Pressure | X | | | | | | | | | | | | | | | | | | | | | | | |
| Supply Fan (VFD) | | | | | | X | | | | | | | | | | | | | | | | | | |
| Outside Air | | | | | | | | | | | | | | | | | | | | | | | | |
| Outside Air Humidity | | | | | | | | | | | | | | | | | | | | | | | | |
| Outside Air Damper (D-2) | | | | | | | | | | | | | | | | | | | | | | | | |
| Return/Exhaust Fan (VFD) | | | | | | X | | | | | | | | | | | | | | | | | | |
| Return Air | | | | | | | | | | | | | | | | | | | | | | | | |
| Return Air Humidity | | | | | | | | | | | | | | | | | | | | | | | | |
| Return Air Damper (D-1) | | | | | | | | | | | | | | | | | | | | | | | | |
| Cooling Coil (DX) Compressors | | | | | | X | | | | | | | | | | | | | | | | | | |
| Elec Heating Coil | X | | | | | X | | | | | | | | | | | | | | | | | | |
| Pre filter | X | | | | | | | | | | | | | | | | | | | | | | | |
| Exhaust Fans | | | | | | X | | | | | | | | | | | X | | | | | | | |
| Damper | | | | | | | | | | | | | | | | | | | | | | | | |

| SYM | DESCRIPTION | DATE |
| --- | --- | --- |
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CS | DRW VV | CHK DL
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
COMPONENT NAME
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL CONTROLS

SCALE: 1/8" = 1'-0"
EPROJECT NO.: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066050
SHEET OF 0
M-702

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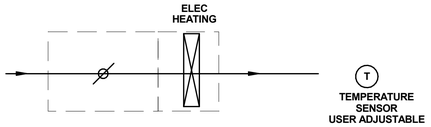



**VARIABLE AIR VOLUME BOX**

1. GENERAL:
A. CONTROL CONTRACTOR SHALL PROVIDE ALL NECESSARY CONTROL EQUIPMENT TO COMPLETE THE SEQUENCE OF OPERATION.
B. THE VAV BOX SHALL MODULATE AIR FLOW BETWEEN ITS MINIMUM AND MAXIMUM SETPOINT.

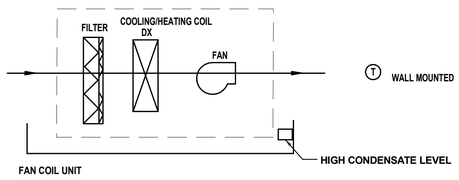
2. TEMPERATURE CONTROL:
A. ON A RISE IN SPACE TEMPERATURE ABOVE 72°F (ADJ.), CONTROLLER SHALL MODULATE THE TERMINAL BOX DAMPER OPENED.
B. ON A FALL IN SPACE TEMPERATURE BELOW 70°F (ADJ.), CONTROLLER SHALL MODULATE THE TERMINAL BOX DAMPER TO MINIMUM SETTING.
C. UPON FURTHER SPACE TEMPERATURE DROP AND THE AIR VOLUME IS AT MINIMUM SETTING, CONTROLLER SHALL MODULATE ELECTRIC HEAT TO MAINTAIN THE SPACE TEMPERATURE SET POINT.

3. COOLING AND HEATING SET POINTS SHALL EACH HAVE SEPARATE OCCUPIED AND UNOCCUPIED SETTINGS. CONTROLLER SHALL AUTOMATICALLY SHIFT BETWEEN OCCUPIED AND UNOCCUPIED SETTINGS WHEN SCHEDULED.

4. DURING UNOCCUPIED AND WARMING UP MODE, VAV'S ELECTRIC HEAT SHALL BE DE-ENERGIZED. VAV'S ELECTRIC HEAT SHALL BE ENERGIZED ONLY WHEN RTU CAN NOT MAINTAIN AVERAGE SPACE TEMPERATURE SET POINTS.

## CONTROL POINT SCHEDULES

| SYSTEM, APPARATUS, OR AREA POINT DESCRIPTION | INPUT ANALOG MEASURED TEMPERATURE | PRESSURE | DIFFERENTIAL PRESS. | HUMIDITY | KW | AIR FLOW | WATER/STEAM FLOW | SPEED | VALVE POSITION | CALCULATED LEVEL | KWH | ENTHALPY | RUN TIME | EFFICIENCY | INPUT DIGITAL STATUS | SMOKE | FREEZE | AIR FLOW | ALARM | LOW LEVEL ALARM | LOW PRESS ALARM | OUTPUTS ANALOG DAMPER POS | VALVE POS | SET POINT ADJ. | SPEED | FIRING RATE | SCR CONTROL | OUTPUTS DIGITAL OFF-ON | OFF-AUTO-ON | OFF-HI-LO | OPEN-CLOSE | SYSTEM FEATURES ALARMS HI ANALOG | LOW ANALOG | HI BINARY | LOW BINARY | TROUBLE | FAILURE ALARM | PROGRAMS TIME SCHEDULING | DEMAND LIMITING | DUTY CYCLE | START/STOP OPT. | ENTHALPY OPT. | NIGHT SETBACK | INTERLOCK | ALARM INSTRUCT | MAINT. WK. ORD. | STATIC PRESS. OPT. | GENERAL GRAPHIC | | | | SUPPLEMENTARY NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AIR TERMINAL BOX (typical) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | X | | X | X | X | | | X | | | | | | |
| Space Temp. | X | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | X | X | | | | | | | | | | | | | | | | | | | | | | | |
| Supply Air | X | | | | | X | | | X | | | | | | | | | | | | | X | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | |
| Electric heat | | | | | | | | | | | | | | | | X | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

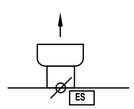



1. GENERAL:
A. VARIABLE REFRIGERANT VOLUME MANUFACTURER SHALL PROVIDE ALL NECESSARY CONTROL EQUIPMENT TO COMPLETE THE SEQUENCE OF OPERATION.
B. VRF SYSTEM SHALL HAVE CAPABILITY TO OPERATE PER TIME SCHEDULES AND SET BACK CONFIGULATION.

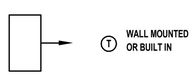
2. FAN AND CONDENSING UNIT:
WHEN COOLING OR HEATING IS REQUIRED, FAN SHALL BE ENERGIZED, BRANCH SELECTOR BOX SHALL APPROPRIATELY SELECT HEATING OR COOLING TO MAINTAIN TEMPERATURE SETPOINT.
3. CONDENSATE OVER FLOW DETECTION:
IF OVERFLOW DETECTOR SENSES WATER, UNIT SHALL DE-ENERGIZE AND SIGNAL TO CONTROL PANEL IN ROOM 1D98

## CONTROL POINT SCHEDULES

| SYSTEM, APPARATUS, OR AREA POINT DESCRIPTION | INPUT ANALOG MEASURED TEMPERATURE | PRESSURE | DIFFERENTIAL PRESS. | HUMIDITY | KW | AIR FLOW | WATER/STEAM FLOW | SPEED | VALVE POSITION | CALCULATED LEVEL | KWH | ENTHALPY | RUN TIME | EFFICIENCY | INPUT DIGITAL STATUS | SMOKE | FREEZE | AIR FLOW | ALARM | LOW LEVEL ALARM | LOW PRESS ALARM | OUTPUTS ANALOG DMPR POS | VALVE POS | SET POINT ADJ. | SPEED | FIRING RATE | OUTPUTS DIGITAL OFF-ON | OFF-AUTO-ON | OFF-HI-LO | OPEN-CLOSE | SYSTEM FEATURES ALARMS HI ANALOG | LOW ANALOG | HI BINARY | LOW BINARY | TROUBLE | FAILURE ALARM | PROGRAMS TIME SCHEDULING | DEMAND LIMITING | DUTY CYCLE | START/STOP OPT. | ENTHALPY OPT. | NIGHT SETBACK | INTERLOCK | ALARM INSTRUCT | MAINT. WK. ORD. | STATIC PRESS. OPT. | GENERAL GRAPHIC | | | | SUPPLEMENTARY NOTES |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FAN COIL UNIT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | | X | | | | | | | | |
| Supply Fan | | | | | | | | | | | | X | | | X | | | | | | | | | | | | X | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| Space Temp. | X | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | X | X | | | | | | | | | | | | | | | | | | | | | | | |
| DX Coil and Condensing Unit | | | | | | | | | | | | | | | X | | | | | | | | | | | | X | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| Condensate Over Flow | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |




EXHAUST FAN




UNIT HEATER

**MISCELLANEOUS EQUIPMENT**

1. GENERAL:
A. CONTROL CONTRACTOR SHALL PROVIDE ALL NECESSARY CONTROL EQUIPMENT TO COMPLETE THE SEQUENCE OF OPERATION.

2. EXHAUST FAN

MOTORIZED EXHAUST FAN DAMPER SHALL BE CLOSED WHEN THE FAN IS DE-ENERGIZED. MOTORIZED EXHAUST FAN DAMPER SHALL MODULATE FULLY OPEN PRIOR TO ENERGIZING THE FAN.

EXHAUST FAN (EF-2-1 THRU EF-4-6) SHALL BE INTERLOCKED TO ASSOCIATED RTU.

3. ELECTRIC UNIT HEATER:
UNIT HEATER SHALL MAINTAIN SPACE TEMPERATURE AT 60°F (ADJ.).

### TIME SCHEDULES (RTU-1)

| TIME | COOLING F | HEATING F |
|---|---|---|
| 11 PM - 6 AM | 80 | 60 |
| 6 AM - 11 PM | 70 | 70 |

### TIME SCHEDULES (RTU-2, 3 AND 4))

| TIME | COOLING F | HEATING F |
|---|---|---|
| 11 PM - 6 AM | OFF | OFF |
| 6 AM - 11 PM | 55 | 85 |

### TIME SCHEDULES (VAV)

| TIME | COOLING F | HEATING F |
|---|---|---|
| 11 PM - 6 AM | 80 | 60 |
| 6 AM - 11 PM | 70 | 70 |

### TIME SCHEDULES (FCU)

| TIME | COOLING F | HEATING F |
|---|---|---|
| 11 PM - 6 AM | 80 | 60 |
| 6 AM - 11 PM | 72 | 70 |

| SYM | DESCRIPTION | DATE |
|---|---|---|
| | FINAL CORRECTED SET | 03/26/14 |
| | 100% FINAL DESIGN SUBMISSION | 02/14/14 |
| | 65% VE SUBMISSION | 11/25/13 |
| | 65% SUBMITTAL | 04/26/13 |

NAVFAC

COMMONWEALTH OF VIRGINIA
SOPHEAP CHAN
Lic. No. 0402042516
3/26/14
PROFESSIONAL ENGINEER

HDR
ARCHITECTURE | ENGINEERING & CONSULTING
1101 KING STREET
SUITE 400
ALEXANDRIA, VIRGINIA 22314
703-518-8500

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO DATE

DES CS | DRW VV | CHK DL
PM/DM CHEMENJU/HILL
BRANCH MANAGER N/A
CHIEF ENG/ARCH TOM COX

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND ~ AGENCY
COMPONENT NAME:
NAVAL FACILITIES ENGINEERING COMMAND
BASE - CITY, STATE
BETHESDA, MD
PROJECT STATION/INSTALLATION
P125 - TEMPORARY MEDICAL FACILITIES
PACKAGE 2 - CLINIC BUILDING
MECHANICAL CONTROLS

SCALE: 1/8" = 1'-0"
EPROJECT NO: 1151333
CONSTR. CONTR. NO. N62470-09-D-9044
NAVFAC DRAWING NO. 13066051
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M-703

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