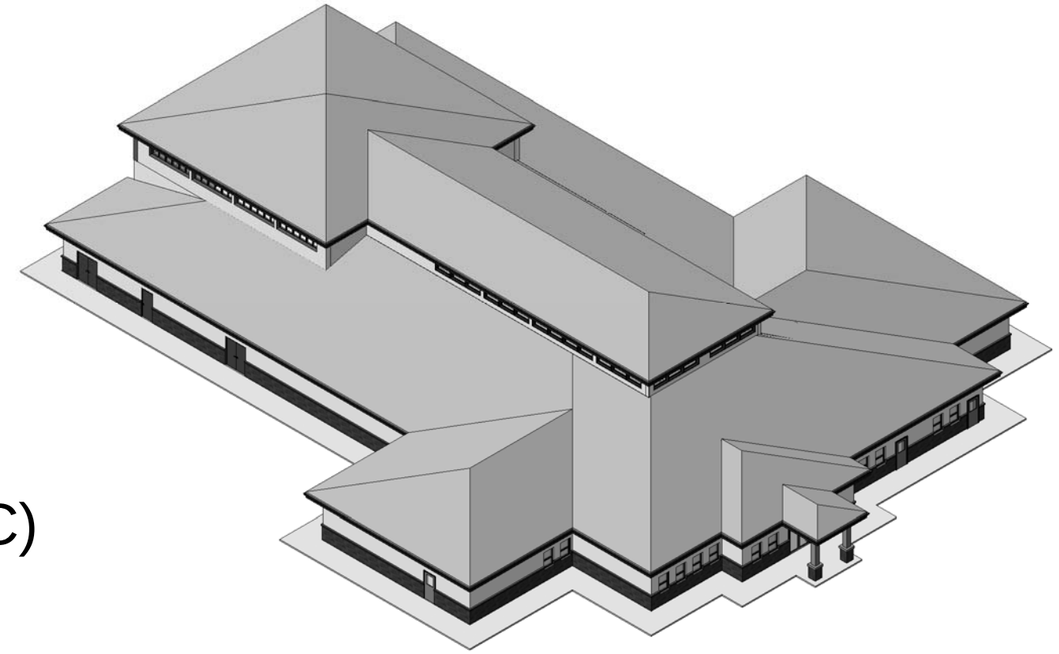
US Army Corps of Engineers ®
ENGINEERING AND SUPPORT CENTER
HUNTSVILLE, AL



CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

CENTER OF STANDARDIZATION

LOCATION:

CONTRACT NUMBER : N/A

SOLICITATION NUMBER : N/A

PREPARED: JUNE 2014

STATUS: 65% ENERGY CONSERVATION DESIGN PACKAGE

*ENERGY CONSERVATION MEASURES AND LEED/SUSTAINABLE DESIGN FEATURES HAVE BEEN CONSIDERED FOR THIS PROJECT.

ANTICIPATE LEED: 56 CREDIT POINTS.

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE

DISCIPLINES	DESIGNERS	REVIEWERS	SUPERVISORS
STRUCTURAL	MOLLY RICHARDSON	JOSH UMPHREY	JEFF COULSTON
ARCHITECTURAL	MARILYN SCOTT	JAY CLARK	TODD DUVERNAY
MECHANICAL PLUMBING FIRE PROTECTION	JOHN STEVENS/ DREW LANGE	PAUL McCARTY	ROD BRIDGEMAN
ELECTRICAL TELECOMMUNICATIONS SECURITY	CLARK RAMSEY	TBD	JEFF ZYSK

APPROVALS	SIGNATURES
BCOE BY	
REVIEWED BY (DIVISION CHIEF-MECH/ELEC)	
REVIEWED BY (DIVISION CHIEF-CIVIL/STRUC)	
RECOMMENDED BY (DIR OF ENGINEERING)	
APPROVED BY (COMMANDER)	

THIS PROJECT WAS DESIGNED BY THE U.S. ARMY ENGINEERING AND SUPPORT CENTER, HUNTSVILLE, OF THE U.S.ARMY CORPS OF ENGINEERS. THE INITIALS OR SIGNATURES AND REGISTRATIONS OF INDIVIDUALS APPEAR ON THESE DOCUMENTS WITHIN THE SCOPE OF THEIR EMPLOYMENT AS REQUIRED BY ER 1110-1-8152 AND CEHNC 1110-1-1.

INDEX OF DRAWINGS

SHEET I.D.	SHEET NAME	SHEET NUMBER
01 GENERAL		
G-001	COVER SHEET	1
G-002	DRAWING INDEX	2
G-003	SYMBOLS AND ABBREVIATIONS	3
07 STRUCTURAL		
S-001	GENERAL STRUCTURAL NOTES	4
S-101	FOUNDATION/SLAB PLAN	5
S-101 A	FOUNDATION/SLAB PLAN	6
S-101 B	FOUNDATION/SLAB PLAN	7
S-102	ROOF FRAMING PLAN	8
S-102 A	ROOF FRAMING PLAN	9
S-102 B	ROOF FRAMING PLAN	10
S-103	LOW ROOF FRAMING PLAN	11
S-103 A	LOW ROOF FRAMING PLAN	12
S-103 B	LOW ROOF FRAMING PLAN	13
S-104	CLERESTORY LOW-BEAM FRAMING PLAN	14
S-105	CLERESTORY MID-BEAM FRAMING PLAN	15
S-106	CLERESTORY ROOF FRAMING PLAN	16
S-201	FRAMING ELEVATIONS	17
S-202	FRAMING ELEVATIONS	18
S-203	FRAMING ELEVATIONS	19
S-204	FRAMING ELEVATIONS	20
S-205	FRAMING ELEVATIONS	21
S-206	FRAMING ELEVATIONS	22
S-501	FOUNDATION DETAILS	23
S-601	SCHEDULES	24
08 ARCHITECTURAL		
A-101	LIFE SAFETY PLAN	25
A-102	OVERALL FLOOR PLAN	26
A-103	ENLARGED FLOOR PLAN - AREA A	27
A-104	ENLARGED FLOOR PLAN - AREA B	28
A-105	ENLARGED FLOOR PLAN - AREA C	29
A-106	ENLARGED FLOOR PLAN - AREA D	30
A-107	ENLARGED KITCHEN PLAN AND ELEVATIONS	31
A-108	ENLARGED TOILET PLANS	32
A-109	ROOF PLAN	33
A-110	REFLECTED CEILING PLAN	34
A-201	EXTERIOR ELEVATIONS	35
A-202	EXTERIOR ELEVATIONS	36
A-203	INTERIOR ELEVATIONS	37
A-301	BUILDING SECTIONS	38
A-302	WALL SECTIONS	39
A-303	WALL SECTIONS	40
A-501	DETAILS	41
A-502	DOOR AND WINDOW DETAILS	42
A-601	WALL, DOOR AND WINDOW SCHEDULES	43
A-602	FINISH SCHEDULE	44
11 FIRE PROTECTION		
FX001	FIRE PROTECTION LEGEN AN GENERAL NOTES	45
FX101	HAZARD CLASSIFICATION PLAN - AREA A	46
FX102	HAZARD CLASSIFICATION PLAN - AREA B	47
FX103	HAZARD CLASSIFICATION PLAN - AREA C	48
FX104	HAZARD CLASSIFICATION PLAN - AREA D	49
FA001	FIRE ALARM AND MNS LEGEND AND OPERATIONS MATRIX	50
FA101	FIRE ALARM AND MNS FLOOR PLAN - AREA A	51
FA102	FIRE ALARM AND MNS FLOOR PLAN - AREA B	52
FA103	FIRE ALARM AND MNS FLOOR PLAN - AREA C	53
FA104	FIRE ALARM AND MNS FLOOR PLAN - AREA D	54
FA601	FIRE ALARM AND MNS DIAGRAM	55

INDEX OF DRAWINGS

SHEET I.D.	SHEET NAME	SHEET NUMBER
12 PLUMBING		
P-001	PLUMBING GENERAL NOTES AND LEGEND	56
P-101	POTABLE HOT AND COLD WATER - AREA A	57
P-102	POTABLE HOT AND COLD WATER - AREA B	58
P-103	POTABLE HOT AND COLD WATER - AREA C	59
P-104	POTABLE HOT AND COLD WATER - AREA D	60
P-105	SANITARY WASTE AND VENT - AREA A	61
P-106	SANITARY WASTE AND VENT - AREA B	62
P-107	SANITARY WASTE AND VENT - AREA C	63
P-108	SANITARY WASTE AND VENT - AREA D	64
P-201	HOT AND COLD WATER RISER DIAGRAMS	65
P-202	WASTE AND VENT RISER DIAGRAMS	66
P-501	PLUMBING DETAILS	67
P-601	PLUMBING SCHEDULES	68
14 MECHANICAL		
M-001	HVAC LEGEND AND NOTES	69
MH101	SUPPLY & RETURN DUCTWORK - AREA A	70
MH102	SUPPLY & RETURN DUCTWORK - AREA B	71
MH103	SUPPLY & RETURN DUCTWORK - AREA C	72
MH104	SUPPLY & RETURN DUCTWORK - AREA D	73
MH105	EXHAUST & O.A. DUCTWORK - AREA A	74
MH106	EXHAUST & O.A. DUCTWORK - AREA B	75
MH107	EXHAUST & O.A. DUCTWORK - AREA C	76
MH108	EXHAUST & O.A. DUCTWORK - AREA D	77
MP101	HVAC HYDRONIC PIPING PLAN - AREA A	78
MP102	HVAC HYDRONIC PIPING PLAN - AREA B	79
MP103	HVAC HYDRONIC PIPING PLAN - AREA C	80
M-401	ENLARGED FLOORPLAN - MECH. ROOM	81
M-501	HVAC DETAILS	82
M-502	HVAC DETAILS	83
M-503	HVAC DETAILS	84
M-601	HVAC SCHEDULES	85
M-602	HVAC SCHEDULES	86
MI801	HVAC CONTROLS LEGEND	87
MI802	CONTROLS SCHEMATIC AND SEQUENCE	88
MI803	CONTROLS SCHEMATIC AND SEQUENCE	89
MI804	CONTROLS SCHEMATIC AND SEQUENCE	90
MI805	CONTROLS SCHEMATIC AND SEQUENCE	91
15 ELECTRICAL		
E-001	LEGEND AND NOTES	92
E-501	TYPICAL MOUNTING HEIGHTS	93
EP101	POWER PLAN - AREA A	94
EP102	POWER PLAN - AREA B	95
EP103	POWER PLAN - AREA C	96
EP104	POWER PLAN - AREA D	97
EL101	LIGHTING PLAN - AREA A	98
EL102	LIGHTING PLAN - AREA B	99
EL103	LIGHTING PLAN - AREA C	100
EL104	LIGHTING PLAN - AREA D	101
EL501	LIGHT FIXTURE SCHEDULE AND DETAILS	102
16 TELECOMMUNICATIONS		
T-001	COMMUNICATIONS LEGEND AND GENERAL NOTES	103
T-101	COMMUNICATIONS PLAN - AREA A	104
T-102	COMMUNICATIONS PLAN - AREA B	105
T-103	COMMUNICATIONS PLAN - AREA C	106
T-104	TELECOMMUNICATIONS - AREA D	107

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: LES
DRAWN BY: EZ
CKD BY:
SBMT BY:
PLOT SCALE:
PLOT DATE: 6/6/2014 12:08:42 PM
FILE NAME:
SIZE: D 22" X 34"
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

DRAWING INDEX

PLATE REFERENCE NUMBER
G-002

DRAWING ABBREVIATIONS

A ----------
A - LABEL CLASS A DOOR
A/C - AIR CONDITION
A/C - UNIT AIR CONDITIONING UNIT
A/E - ARCHITECT/ENGINEER
AB - ANCHOR BOLT
ACC - ACCESSIBLE
ACS - AUTOMATIC CONTROL SYSTEM
ACT - ACOUSTICAL CEILING TILE
ADA - AMERICANS WITH DISABILITIES ACT
ADMIN - ADMINISTRATION
AFC - ABOVE FINISHED COUNTER
AFF - ABOVE FINISHED FLOOR
AFG - ABOVE FINISHED GRADE
AFS - ABOVE FINISHED SLAB
AGGR - AGGREGATE
AHU - AIR HANDLING UNIT
ALT - ALTERNATE
ALUM - ALUMINUM
ANOD - ANODIZE
APPROX - APPROXIMATE
AR - AS REQUIRED
ARCH - ARCHITECT
ASC - ABOVE SUSPENDED CEILING
ASSY - ASSEMBLY
ATC - ACOUSTICAL TILE CEILING
AVG - AVERAGE

B ----------
BALC - BALCONY
BB - BASEBOARD
BD - BOARD
BDRY - BOUNDARY
BFF - BELOW FINISH FLOOR
BHMA - BUILDER'S HARDWARE MANUFACTURER'S ASSOCIATION
BLDG - BUILDING
BLKG - BLOCKING
BLTIN - BUILT-IN
BOS - BOTTOM OF STEEL
BOT - BOTTOM
BRKT - BRACKET
BSMT - BASEMENT
BTWN - BETWEEN

C ----------
C CONC - CAST CONCRETE
CAB - CABINET
CAV - CAVITY
CD - CONSTRUCTION DOCUMENTS
CDW - CHILLED DRINKING WATER
CEM PLAS - CEMENT PLASTER
CER - CERAMIC
CF - CONTRACTOR FURNISHED
CF/CI - CONTRACTOR FURNISHED/CONTRACTOR INSTALLED
CFE - CONTRACTOR FURNISHED EQUIPMENT
CFLG - COUNTERFLASHING
CFM - CUBIC FEET PER MINUTE
CFMF - COLD-FORMED METAL FRAMING
CFS - CUBIC FEET PER SECOND
CG - CORNER GUARD
CI - CAST IRON
CIP - CAST-IN-PLACE
CJ - CONTROL JOINT
CL - CENTER LINE
CLG - CEILING
CLG DIFF - CEILING DIFFUSER
CLG HT - CEILING HEIGHT
CLL - COLUMN LINE
CLO - CLOSET
CLR - COLOR
CLRM - CLASSROOM
CMU - CONCRETE MASONRY UNIT
CNDS - CONDENSATE
CDR - CARD READER
CO - CLEANOUT
COL - COLUMN
COMM - COMMUNICATION
CONC - CONCRETE
CONC FLR - CONCRETE FLOOR
CONF - CONFERENCE
CONT - CONTINUE
COORD - COORDINATE
CORR - CORRIDOR
CP - CONCRETE PIPE
CPT - CARPET
CSWK - CASEWORK
CT - CERAMIC TILE
CTB - CERAMIC TILE BASE
CTF - CERAMIC TILE FLOOR
CTR - CENTER
CU FT - CUBIC FEET
CW - CASEMENT WINDOW

D ----------
D - DEPTH
DBL - DOUBLE
DEMO - DEMOLITION
DEPT - DEPARTMENT
DET - DETAIL
DIA - DIAMETER
DIM - DIMENSION
DIR - DIRECTION
DIST - DISTANCE
DOC - DOCUMENT
DR - DOOR
DS - DOWNSPOUT

E----------
E LABEL - CLASS E DOOR
EA - EACH
EF - EACH FACE
EIFS - EXTERIOR INSULATION AND FINISH SYSTEM
EJ - EXPANSION JOINT
ES - EACH SIDE
EL - ELEVATION
ELEV - ELEVATOR
ENTR - ENTRANCE
EPS - EXPANDED POLYSTYRENE BOARD (INSULATION)
EQ - EQUAL
E.W. - EACH WAY
EWC - ELECTRIC WATER COOLER
EXP - EXPOSED
EXT - EXTERIOR
EXT - EXTINGUISHER
EXT - GR EXTERIOR GRADE

F----------
FAS BD - FASCIA BOARD
FC BRK - FACE BRICK
FCO - FLOOR CLEANOUT
FD - FLOOR DRAIN
FDTN - FOUNDATION
FE - FIRE EXTINGUISHER
FEC - FIRE EXTINGUISHER CABINET
FF - FINISH FACE
FF EL - FINISH FLOOR ELEVATION
FF INSUL - FOIL BACKED INSULATION
FGL - FIBERGLASS
FH - FIRE HOSE
FHP - FULL HEIGHT PARTITION
FIN - FINISH
FIN BS - FINISH BOTH SIDES
FIN FLR - FINISH FLOOR
FIN GR - FINISH GRADE
FIXT - FIXTURE
FLDG - FOLDING
FLEX - FLEXIBLE
FLG - FLOORING
FLMT - FLUSH MOUNT
FLR - FLOOR
FOC - FACE OF CONCRETE
FOM - FACE OF MASONRY
FR - FIRE RESISTANT
FRG - FIBER REINFORCED GYPSUM
FRMG - FRAMING
FRTW - FIRE RETARDANT TREATED WOOD
FSTNR - FASTENER
FT - FEET
FTG - FOOTING
FWC - FABRIC WALLCOVERING

G ----------
G - NATURAL GAS
GALV - GALVANIZED
GB - GRAB BAR
GLZ - GLAZING
GR FL - GROUND FLOOR
GUT - GUTTER
GYP BD - GYPSUM BOARD
GYP PLAS - GYPSUM PLASTER

H ----------
HB - HOSE BIBB
HM - HOLLOW METAL
HMD - HOLLOW METAL DOOR
HORIZ - HORIZONTAL
HT - HEIGHT

I ----------
IBC - INTERNATIONAL BUILDING CODE
INSUL - INSULATION
INT - INTERIOR

J ----------
JAN - JANITOR

K ----------
KIT - KITCHEN
KPL - KICKPLATE

L----------
LAM - LAMINATE
LAV - LAVATORY
LBR - LUMBER
LF - LINEAR FEET (FOOT)
LIN - LINEAR
LKR - LOCKER
LOC - LOCATION
LT - LIGHT
LVDR - LOUVER DOOR
LVR - LOUVER

M ----------
MACH RM - MACHINE ROOM
MATL - MATERIAL
MAX - MAXIMUM
MC - MOISTURE CONTENT
MD - METAL DECK
MECH - MECHANICAL
MECH RM - MECHANICAL ROOM
MEMB - MEMBRANE
MF - MILL FINISH
MFR - MANUFACTURER
MID - MIDDLE
MIN - MINIMUM, MINUTE
MIRR - MIRROR
MISC - MISCELLANEOUS
MLDG - MOLDING (MOULDING)
MO - MASONRY OPENING
MOD - MODIFY
MB - MOISTURE BARRIER
MTG - MOUNTING
MTL - METAL
MVBL - MOVABLE
MWP - MEMBRANE WATERPROOFING

N ----------
N - NORTH
NA - NOT APPLICABLE
NFPA - NATIONAL FIRE PROTECTION ASSOCIATION
NIC - NOT IN CONTRACT
NO - NUMBER
NOM - NOMINAL
NP - NO PAINT
NRC - NOISE REDUCTION COEFFICIENT
NTS - NOT TO SCALE

O ----------
OA - OVERALL
OC - ON CENTER
OD - OUTSIDE DIAMETER
OFD - OVERFLOW DRAIN
OFF - OFFICE
OGL - OBSCURE GLASS
OPH - OPPOSITE HAND
OPNG - OPENING
OPP - OPPOSITE
OPQ - OPAQUE
OPR - OPERABLE
ORIG - ORIGINAL

P----------
PAT - PATTERN
PB - PULL BOX
PBD - PARTICLEBOARD
PCC - PRECAST CONCRETE
PCF - POUNDS PER CUBIC FOOT
PCT - PERCENT
PERF - PERFORATED
PERIM - PERIMETER
PH - PHASE
PIL - PILASTER
PL - PROPERTY LINE
PLAM - PLASTIC LAMINATE
PLAS - PLASTER
PLBG - PLUMBING
PLG - PILING
PLYWD - PLYWOOD
PNL - PANEL
PP - PL PUSH/PULL PLATE
PR - PAIR
PRCST - PRECAST
PRKG - PARKING
PS CONC - PRESTRESSED CONCRETE
PSF - POUNDS PER SQUARE FOOT
PSI - POUNDS PER SQUARE INCH
PT - PRESSURE TREATED
PTD - PAPER TOWEL DISPENSER
PTDR - PAPER TOWEL DISPENSER AND RECEPTACLE
PTN - PARTITION
PWR - POWER

Q ----------
QT - QUARRY TILE
QTY - QUANTITY

R----------
R - RADIUS
RB - RESILIENT BASE
RBM - REINFORCED BRICK MASONRY
RBR - RUBBER
RC - REINFORCED CONCRETE
RCP - REFLECTED CEILING PLAN
RD - ROOF DRAIN
RDG INS - RIGID INSULATION, SOLID
REC - RECESSED
REC RM - RECREATION ROOM
REF - REFERENCE
REM - REMOVABLE
REP - REPAIR
REPL - REPLACE
REQ - REQUIRE
REQ'D - REQUIRED
RESIL - RESILIENT
REST - RESTROOM
RF - RESILIENT FLOORING
RFG - ROOFING
RH - ROOF HATCH
RHR - RIGHT HAND REVERSE
RL - ROOF LEADER
RLG - RAILING
RM - ROOM
RO - ROUGH OPENING
RSD - ROLLING STEEL DOOR
RV - ROOF VENT
RVL - REVEAL

S----------
SB - SPLASH BLOCK
SCHED - SCHEDULE
SD - SMOKE DETECTOR
SF - SQUARE FOOT (FEET)
SFTWD - SOFTWOOD
SGL - SINGLE
SHT MTL FLASH - SHEET METAL (FLASHING)
SHTHG - SHEATHING
SHV - SHELVING
SIM - SIMILAR
SKLT - SKYLIGHT
SLNT - SEALANT
SMK - SMOKE
SMLS - SEAMLESS
SP EL - SPOT ELEVATION
SPEC - SPECIFICATION
SQ - SQUARE
SQ IN - SQUARE INCH
SQ YD - SQUARE YARD
SST - STAINLESS STEEL
ST - STAIRS
STD - STANDARD
STL JST - STEEL JOIST
STL RF DK - STEEL ROOF DECK
STOR - STORAGE
SUB FL - SUBFLOOR
SV - SHEET VINYL
SW - SIDEWALK

T----------
T - TREAD
TEL - TELEPHONE
TEMP - TEMPORARY
TER - TERRAZZO
TFF - TOP OF FINISH FLOOR
THK - THICKNESS
TK BD - TACKBOARD
TMPD GL - TEMPERED GLASS
TN - TRUE NORTH
TOF - TOP OF FOOTING
TOM - TOP OF MASONRY
TOPO - TOPOGRAPHY
TOS - TOP OF SLAB
TRTD - TREATED
TV - TELEVISION
TYP - TYPICAL

U----------
U-VALUE - THERMAL TRANSMITTANCE

INDEX OF DRAWINGS

NUMBERING SYSTEM:

DISCIPLINE:
C - CIVIL
L - LANDSCAPE
A - ARCHITECTURE
M - MECHANICAL
E - ELECTRICAL
P - PLUMBING
S - STRUCTURAI
G - GENERAL

SHEET NUMBER WITHIN DISCIPLINE

A-101

LEGEND

MATERIALS

CONCRETE/ PRECAST CONCRETE
SOIL
SAND, EIFS FINISH COAT, OR CEMENT PLASTER
BRICK
CMU
STONE
FIBERGLASS BATT INSULATION
FIBERGLASS SEMI RIGID INSULATION
MINERAL WOOL SEMI RIGID INSULATION
EXPANDED POLYSTYRENE RIGID INSULATION
EXTRUDED POLYSTYRENE RIGID INSULATION
POLYISOCYANURATE RIGID INSULATION
GYPSUM BOARD
EXTERIOR GYPSUM SHEATHING
EXTERIOR CEMENT BOARD
COATED GLASS MAT WATER RESISTANT GYP BD
PLYWOOD
COVER BOARD

ANNOTATION CALLOUTS/DRAWING SYMBOLS

1 A101 — INTERIOR ELEVATION
PLATE NUMBER WHERE SECTION/DETAIL IS DRAWN
1 A101 — EXTERIOR ELEVATION
PLATE NUMBER WHERE SECTION/DETAIL IS DRAWN
1 A101 — SECTION
PLATE NUMBER WHERE SECTION/DETAIL IS DRAWN
1 A101 — PLAN, BLOW-UP DETAIL
PLATE NUMBER WHERE SECTION/DETAIL IS DRAWN
SPOT ELEVATION
Name Elevation — FLOOR LEVEL & NAME
A — SHEET KEYNOTE

ROOM NAME/NUMBER
01 — WINDOW TYPE
1 — WALL TYPE
EQUIPMENT NUMBER
101 — DOOR NUMBER
N — NORTH ARROW
JOB NORTH

CEILING SYMBOLS

2' x 2' ACT CEILING
4' x 4' ACT CEILING
1' x 1' ACT CEILING
GYP. BD. CEILING
2 X 4 LIGHT FIXTURE
2 x 2 LIGHT FIXTURE
SUSP. FLUORESCENT LIGHT
RETURN AIR GRILLE
SUPPLY AIR GRILLE
EXHAUST AIR GRILLE
EXIT LIGHT

LEED 2009 for New Construction and Major Renovation

Project Checklist

Project Name: CDC 6-10
Date:

Y	N	?				
10		16		**Sustainable Sites**	Possible Points:	26
Y			Prereq 1	Construction Activity Pollution Prevention		
1			Credit 1	Site Selection		1
5			Credit 2	Development Density and Community Connectivity		5
		1	Credit 3	Brownfield Redevelopment		1
		6	Credit 4.1	Alternative Transportation—Public Transportation Access		6
		1	Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms		1
		3	Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles		3
		2	Credit 4.4	Alternative Transportation—Parking Capacity		2
1			Credit 5.1	Site Development—Protect or Restore Habitat		1
1			Credit 5.2	Site Development—Maximize Open Space		1
		1	Credit 6.1	Stormwater Design—Quantity Control		1
		1	Credit 6.2	Stormwater Design—Quality Control		1
		1	Credit 7.1	Heat Island Effect—Non-roof		1
1			Credit 7.2	Heat Island Effect—Roof		1
1			Credit 8	Light Pollution Reduction		1
4		6		**Water Efficiency**	Possible Points:	10
Y			Prereq 1	Water Use Reduction—20% Reduction		
2		2	Credit 1	Water Efficient Landscaping		2 to 4
		2	Credit 2	Innovative Wastewater Technologies		2
2		2	Credit 3	Water Use Reduction		2 to 4
19		16		**Energy and Atmosphere**	Possible Points:	35
Y			Prereq 1	Fundamental Commissioning of Building Energy Systems		
Y			Prereq 2	Minimum Energy Performance		
Y			Prereq 3	Fundamental Refrigerant Management		
12		7	Credit 1	Optimize Energy Performance		1 to 19
		7	Credit 2	On-Site Renewable Energy		1 to 7
2			Credit 3	Enhanced Commissioning		2
2			Credit 4	Enhanced Refrigerant Management		2
3			Credit 5	Measurement and Verification		3
		2	Credit 6	Green Power		2
6		8		**Materials and Resources**	Possible Points:	14
Y			Prereq 1	Storage and Collection of Recyclables		
		3	Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof		1 to 3
		1	Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements		1
		2	Credit 2	Construction Waste Management		1 to 2
		2	Credit 3	Materials Reuse		1 to 2

Materials and Resources, Continued

Y	N	?			
2			Credit 4	Recycled Content	1 to 2
2			Credit 5	Regional Materials	1 to 2
1			Credit 6	Rapidly Renewable Materials	1
1			Credit 7	Certified Wood	1
14		1		**Indoor Environmental Quality** Possible Points:	15
Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
1			Credit 1	Outdoor Air Delivery Monitoring	1
1			Credit 2	Increased Ventilation	1
1			Credit 3.1	Construction IAQ Management Plan—During Construction	1
1			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
1			Credit 5	Indoor Chemical and Pollutant Source Control	1
		1	Credit 6.1	Controllability of Systems—Lighting	1
1			Credit 6.2	Controllability of Systems—Thermal Comfort	1
1			Credit 7.1	Thermal Comfort—Design	1
1			Credit 7.2	Thermal Comfort—Verification	1
1			Credit 8.1	Daylight and Views—Daylight	1
1			Credit 8.2	Daylight and Views—Views	1
2	4			**Innovation and Design Process** Possible Points:	6
1			Credit 1.1	Innovation in Design: Specific Title	1
	1		Credit 1.2	Innovation in Design: Specific Title	1
	1		Credit 1.3	Innovation in Design: Specific Title	1
	1		Credit 1.4	Innovation in Design: Specific Title	1
	1		Credit 1.5	Innovation in Design: Specific Title	1
1			Credit 2	LEED Accredited Professional	1
1		3		**Regional Priority Credits** Possible Points:	4
1			Credit 1.1	Regional Priority: SSc1 Site Selection	1
	1		Credit 1.2	Regional Priority:Stormwater Design - Quality Contol	1
	1		Credit 1.3	Regional Priority: Certified Wood	1
	1		Credit 1.4	Regional Priority: Specific Credit	1
56	4	50		**Total** Possible Points:	110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

DESIGNER'S NOTES

1. THIS DRAWING PACKAGE WAS PREPARED USING BUILDING INFORMATION (BIM) TECHNOLOGIES.

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: E2
DRAWN BY: E2
SBMT BY:
CKD BY:
PLOT DATE: 6/3/2014
PLOT SCALE: 3/16" = 1'-0"
SIZE: D 22" X 34"
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

SYMBOLS AND ABBREVIATIONS

PLATE REFERENCE NUMBER
G-003
SHEET 3 OF 107

DESIGN CRITERIA

FOR THE STANDARD DESIGN A LOCATION WAS CHOSEN FOR A TYPICAL LOADING CASE:
FT. STEWART, GA

THIS STANARD BUILDING TYPE IS OCCUPANCY CATEGORY III.

THE STANDARD BUILDING CONSTRUCTION TYPE IS:
PRE-ENGINEERED LIGHT GAUGE METAL TRUSSES FRAMING TO
EXTERIOR AND INTERIOR STRUCTURAL STEEL STUD WALLS

1. BUILDING CODES AND SPECIFICATIONS:

1. INTERNATIONAL BUILDING CODE 2012 (IBC) AS MODIFIED BY UFC 1-200-01
2. AMERICAN CONCRETE INSTITUTE (ACI 318)
3. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE) 7-10
4. STEEL DECK INSTITUTE, SDI

2. LIVE LOADS:

MINIMUM LOADS:
ROOF----------20 PSF
FLOOR----------100 PSF

ALL INTERIOR WALLS AND PARTITIONS SHALL BE
DESIGNED TO RESIST A MINIMUM HORIZONTAL LOAD: 5 PSF

3. SNOW LOADS:

NO SNOW LOADING WAS USED THE TYPICAL DESIGN
GROUND SNOW LOAD (Pg) = 0 PSF

4. WIND LOADS:

BASIC WIND SPEED = 140 MPH
Kd = 0.85
EXPOSURE CATEGORY = C
Kzt = 1.0
Kz = 0.85
ENCLOSURE CLASSIFICATION = ENCLOSED
GPpl = +/-0.18

COMPONENTS AND CLADDING WERE NOT ACCOUNTED FOR AT 65%

5. SEISMIC LOADS:

SITE CLASS = D (ASSUMED)
Ss = 0.29
S1 = 0.10
Sds = 0.30
Sd1 = 0.16

BASIC SEISMIC-FORCE RESISTING SYSTEM =
PRE-ENGINEERED LIGHT GAUGE METAL TRUSSES FRAMING TO
EXTERIOR AND INTERIOR STRUCTURAL STEEL STUD WALLS

ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE PROCEDURE

GENERAL NOTES

1. STRUCTURAL DESIGN PROVIDED HEREIN IS FOR INFORMATION PURPOSES ONLY. STRUCTURAL DRAWINGS ARE NOT MANADATORY AND ARE ONLY PROVIDED TO GIVE DESIGNERS SUGGESTIONS ON HOW THE CHILD DEVELOPMENT CENTER COULD BE STRUCTURALLY DESIGNED.

2. STRUCTURAL DESIGNER WILL BE RESPONSIBLE FOR SELECTING APPROPRIATE STRUCTURAL SYSTEMS FOR ANY SPECIFIC SITE DESIGN.

3. FOUNDATION, WALL, AND ROOF SYSTEM STRUCTURAL DESIGN IS NOTATIONAL. FINAL STRUCTURAL DESIGN SHALL BE PERFORMED AND COORDINATED BY OTHERS.

4. THE STANDARD DESIGN SYTEMS INCLUDE PRE-ENGINEERED LIGHT GAUGE METAL TRUSSES, EXTERIOR AND INTERIOR STRUCTURAL STEEL STUD WALLS, CMU FOUNDATION WALLS AND CONCRETE STRIP FOOTINGS.

5. FLOOR DRAIN LOCATIONS NOT SHOWN FOR CLARITY. LOCATIONS TO BE COORDINATED WITH PLUMBING. SEE ARCH DRAWINGS FOR LOCATION.

6. CONTRACTOR SHALL VERIFY ALL DIMENSTIONS AND SITE CONDIITIONS PRIOR TO CONSTRUCTION/FABRICATION. CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.

7. THE STRUCTURE HAS BEEN DESIGNED TO SUPPORT IN PLACE LOADS ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LIMITING CONSTRUCTION LOADS SUCH THAT THESE LOADS DO NOT EXCEED THE DESIGN LOADS NOTED IN ABOVE REFERENCES.

8. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE CONSTRUCTION METHODS, PROCEDURE, AND SEQUENCES TO ENSURE STABILITY AND SAFETY DURING CONSTRUCTION. THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT AND MAINTAIN THE STRUCTURAL INTEGRITY OF ALL NEW AND EXITING CONSTRUCTION AT ALL STAGES.

9. SECTIONS AND DETAILS SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE CONSIDERED TYPICAL FOR SIMILAR CONDITIONS THAT DO NOT HAVE A SPECIFIC SECTION INDICATED.

10. THE CONTRACTOR SHALL COORDINATE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL, CIVIL, AND M/E/P DRAWINGS TO VERIFY SIZES AND LOCATIONS OF OPENINGS, SLEEVED, INSERTS, DEPRESSIONS, FINISHES, SLOPES, ETC. ANY DISCRPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

11. ANY DISCREPANCIES BETWEEN DRAWINGS, SPECIFICATIONS, REFERENCE STANDARDS, OR GOVERNING CODE, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN. CONTRACTOR SHALL NOTIFY THE ENGINEER OF DISCREPANCIES AND OBTAIN DIRECTION PRIOR TO PROCEEDING.

12. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING AND BRACING OF ALL STRUCTURAL WORK, AND SOIL EXCAVATION AS REQUIRED. SHORING AND BRACING SHALL NOT BE REMOVED UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS, AND MATERIALS HAVE ACHIEVED DESIGN STRENGTH.

CONCRETE

1. ALL CONCRETE WORK INCLUDING DETAILING, FABRICATION, PLACEMENT OF REINFORCING, MIXING, HANDLING, PLACING, FINISHING, AND CURING SHALL CONFORM TO THE FOLLOWING DOCUMENTS:

ACI 301 "STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE"
ACI 305 "HOT WEATHER CONCRETING"
ACI 306 "COLD WEATHER CONCRETING"
ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES"
ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"

2. ALL CAST-IN-PLACE CONCRETE SHALL HAVE SPECIFIED MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS, U.O.N.

3. ALL CONCRETE SHALL CONFORM TO ASTM C94.
REINFORCING BARS SHALL BE DEFORMED TYPE CONFORMING TO ASTM A615 GRADE 60.

4. WELDED WIRE REINFORCEMENT SHALL CONFORM TO ASTM A185, MINIMUM LAP AND EMBEDMENT TO BE THE GREATER OF ONE CROSS WIRE SPACING PLUS 2" OR 6", WHICHEVER IS GREATER.

5. FABRICATE AND PROVIDE BAR SUPPORTING ACCESSORIES IN ACCORDANCE WITH ACI MANUAL OF STANDARD PRACTICE AND C.R.S.I. SPECIFICATIONS. REINFORCING SHALL NOT BE WELDED IN ANY MANNER U.O.N. IN CONSTRUCTION DOCUMENTS.

6. REINFORCING SHALL BE CONTINUOUS WITH CLASS "B" TENSION LAP SPLICES, U.O.N.

7. CONCRETE COVERAGE OF REINFORCEMENT:
CONCRETE CAST AGAINST EARTH ---------- 3"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER:
NO. 6 BAR AND LARGER ---------- 2"
NO. 5 BAR AND SMALLER ---------- 1 1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
SLABS, WALLS, JOISTS ---------- 3/4"
BEAMS AND COLUMNS ---------- 1 1/2"
SLAB ON GRADE ---------- MID-DEPTH OF SLAB

8. PROVIDE REINFORCING BARS IN CONCRETE FOOTINGS TO MATCH THE SIZE AND SPACING OF THE HORIZONTAL REINFORCING AT ALL CORNERS AND INTERSECTIONS OF STRIP FOOTINGS. PROVIDE LEG LENGTH EQUIVALENT TO CLASS "A" TENSION LAP SLIPE U.O.N.

9. PROVIDE DOWEL TO FOUNDATION WITH 90 DEGREE HOOK TO MATCH SIZE AND SPACING OF VERTICAL REINFORCING.

10. FOOTINGS AND SLABS SHALL HAVE NO HORIZONTAL JOINTS (POURED TO THEIR FULL DEPTHS IN ONE OPERATION). ANY STOP IN CONCRETE WORK SHALL BE BULKHEADED AND DEYED, U.O.N. CONTROL JOINTS IN SLAB SHALL BE SPACED NO FURTHER THAN 15' IN EACH DIRECTION.

11. REFER TO GEOTECHNICAL REPORT FOR RECOMMENDATIONS RELATIVE TO SUBGRADE PREPARATION FOR SLAB ON GRADE.

12. CONTRACTOR HAS OPTION OF SLOPING SLAB TO FLOOR DRAIN OR RECESSED SLAB 1-1/2" AND SLOPING A MORTAR BED TO DRAIN. SEE ARCH DWGS FOR EXACT LOCATIONS.

13. FLOOR FINISH SHALL BE SMOOTH. CONCRETE SHALL BE TROWELED NO LESS THAN TWO TIMES.

14. SLAB-ON-GRADE TO BE 4" THICK AND REINFORCED AS SHOWN ON PLAN (ASTM A185).

FOUNDATION

1. ASSUMED MAXIMUM SOIL BEARING CAPACITY = 2,000 PSF

2. A GEOTECHNICAL INVESTIGATION AND REPORT FOR EACH LOCATION MUST BE COMPLETED.

3. STRUCTURAL/FOUNDATION DESIGNER WILL BE RESPONSIBLE FOR VERIFYING FOUNDATION DESIGN FOR SITE SPECIFIC GEOTECHNICAL REPORT.

4. CONCRETE SHALL NOT BE PLACED OVER FROZEN SOIL OR FOOTING EXCAVATIONS SUBJECTED TO WATER.

5. FILL CELLS OF CONCRETE MASONRY UNIT (CMU) FOUNDATION WALLS WITH GROUT BELOW SLAB OR OUTSIDE GRADE, WHICHEVER IS HIGHER

STRUCTURAL STEEL

1. STRUCTURAL STEEL SHAPE CONNECTION DESIGN SHALL CONFORM TO A.I.S.C.'S "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS."

2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:

HOLLOW STRUCTURAL SECTIONS ---------- ASTM A500, GRADE B
W SHAPES ----------ASTM A992
CHANNELS & ANGLES ---------- ASTM A36

3. STRUCTURAL FASTNERS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:

ANCHOR BOLTS ---------- ASTM 307
THREADED RODS ---------- ASTM A36
HEADED STUDS ---------- ASTM A108, GRADES 1015 TO 1020

4. BOLTED CONNECTIONS SHALL CONFORM TO RCSC'S "FOR STRUCTURAL JOINTS USING ASTM A325 AND A490 BOLTS". ALL BOLTS SHALL BE 19mm (3/4") DIAMETER U.O.N.

5. WELDED CONNECTIONS SHALL CONFORM TO AWS D1.1 "STRUCTURAL WELDING CODE-STELL." SIZE F WELDS SHALL BE 5m/M (3/16") UNLESS OTHERWISE NOTED AND ELECTRODES SHALL BE E70XX. WELDERS SHALL BE QUALIFIED IN ACCORDANCE WITH AWS.

METAL DECK

1. METAL DECK SHALL BE IN ACCORDANCE WITH THE STEEL DECK INSTITUTE AND AISI'S "SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS."

2. ALL FIELD WELDING OF DECK SHALL CONFORM WITH ANSI/AWS D1.3 "STRUCTURAL WELDING CODE-SHEET STEEL."

3. METAL DECK SHALL BE CONNECTED TO SUPPORTING STRUCTURE WITH #12 TEK SCREWS 6" O.C. SIDE LAP FASTENERS SHALL BE #10 TEK SCREWS. PROVIDE 4 SIDE LAP FASTENERS PER SPAN.

4. LIGHTGAGE FRAMING, SUSPENDED CEILING, LIGHT FIXTURES, AND DUCTS OR OTHER UTILITIES SHALL NOT BE SUPPORTED BY THE STEEL DECK.

5. DECK ENDS MAY BE EITHER BUTTED OR LAPPED OVER SUPPORTS. PROVIDE A MINIMUM OF (1-1/2") BEARING AT ALL SUPPORTING STEEL, U.O.N.

6. STEEL DECK SHALL BE CONTINUED OVER THREE OR MORE SPANS.

7. STEEL DECK SHALL BE GALVANIZED FINISHED IN A G-60 COATING CONFORMING TO ASTM A653, GRADE 33, MIN.

8. WELDED WASHERS SHALL BE USED WITH STEEL DECK THINNER THAN 22 GAGE.

ABREVIATIONS

AB ANCHORBOLT
ACI AMERICAN CONCRETE INSTITUTE
AISC AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ARCH ARCHITECTURAL
ASTM AMERICAN SOCIETY FOR TESTING AND MATERIALS
CJ CONTROL JOINT
CLR CLEAR
CMU CONCRETE MASONRY UNIT
COL COLUMN
CONC CONCRETE
DIA DIAMETER
EA EACH
E.W. EACH WAY
HORIZ HORIZONTAL
HSS HOLLOW STRUCTURAL SECTION
IBC INTERNATIONAL BUILDING CODE
IAW IN ACCORDANCE WITH
MIN MINIMUM
NEC NECESSARY
NOM NOMINAL
NTS NOT TO SCALE
O.C. ON CENTER
OPP OPPOSITE
OSB ORIENTED STRAND BOARD
PREFAB PREFABRICATED
PSF POUNDS PER SQUARE FOOT
REINF REINFORCEMENT
REQ'D REQUIRED
SIM SIMILAR
SQ SQUARE
STD STANDARD
TYP TYPICAL
U.O.N. UNLESS OTHERWISE NOTED
VCT VINYL COMPOSITE TYLE
W/ WITH

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

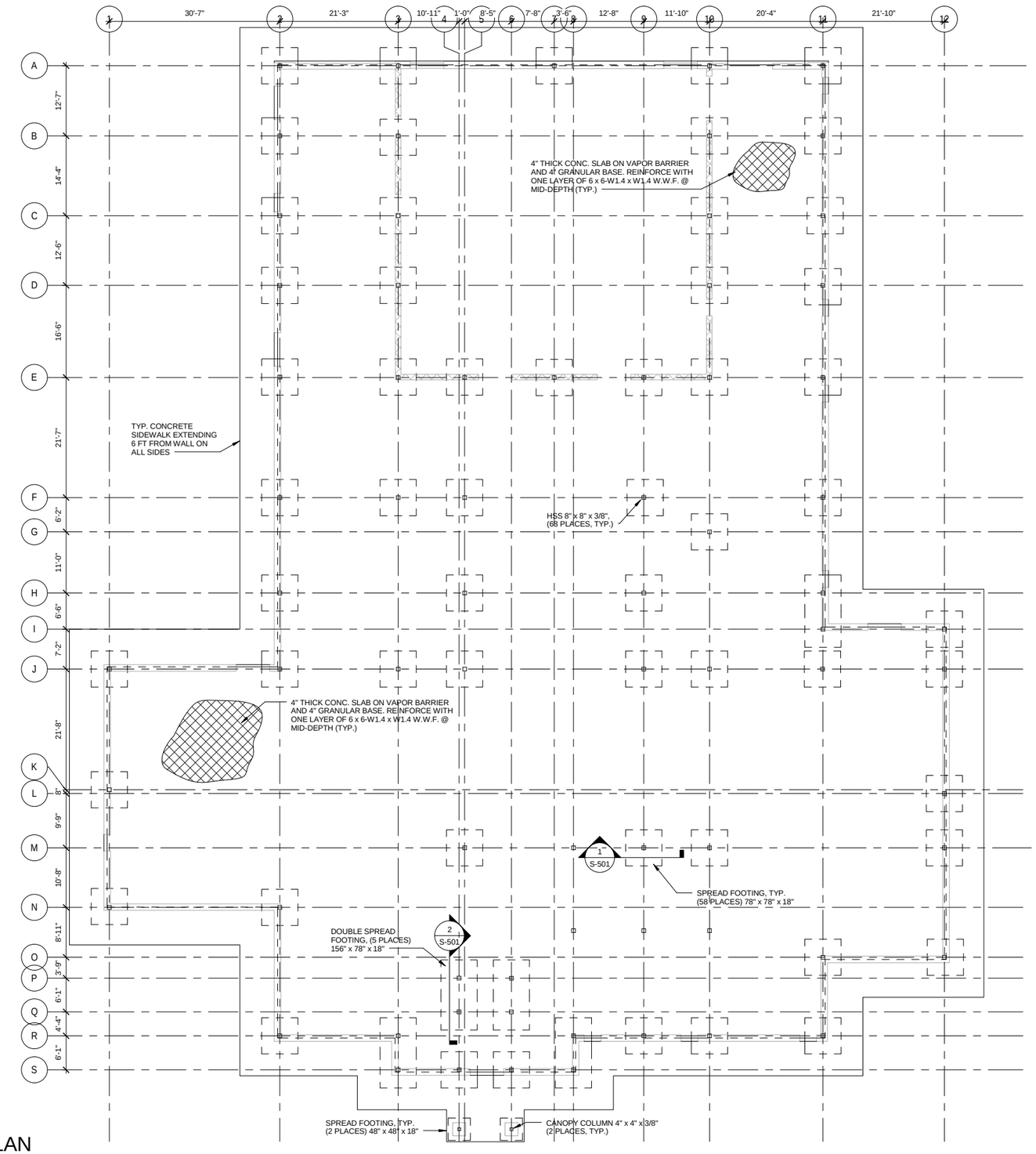
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
DESIGN BY: MER
DRAWN BY: MER
CKD BY: JMU
SBMT BY:
PLOT DATE: 6/11/2014 2:55:59 PM
PLOT SCALE:
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ
HUNTSVILLE AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

GENERAL STRUCTURAL NOTES

PLATE REFERENCE NUMBER
S-001



FOUNDATION/SLAB PLAN

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

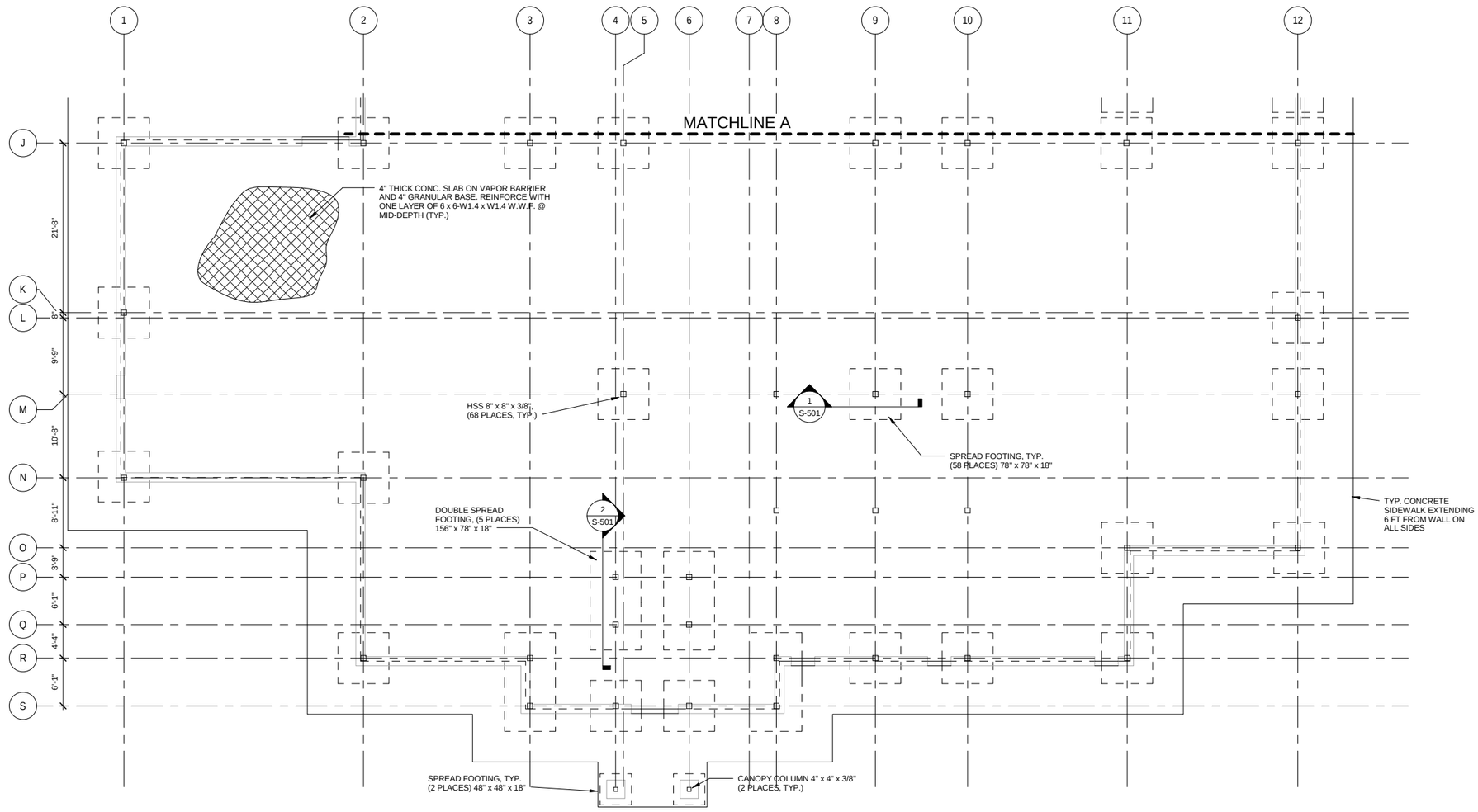
DESIGN BY: Designer
DRAWN BY: Author
CKD BY: Checker
SBMT BY: Approver
PLOT DATE: 6/11/2014 2:56:05 PM
PLOT SCALE: 3/32" = 1'-0"
SIZE: D 27" x 39"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

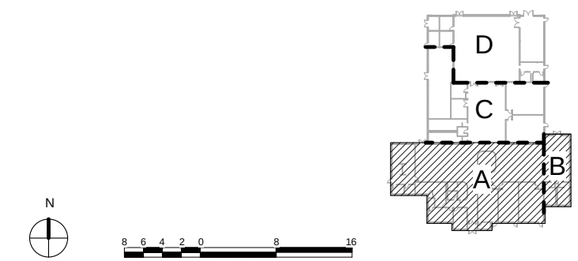
FOUNDATION/SLAB PLAN

PLATE REFERENCE NUMBER
S-101
SHEET 5 OF 107



FOUNDATION/SLAB PLAN - AREAS A & B

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



KEY PLAN

N

PLAN NORTH

8 6 4 2 0 8 16

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: MER
DRAWN BY: MER
SBMT BY:
CKD BY: JMU
PLOT DATE: 6/11/2014 7:56:11 PM
PLOT SCALE: As indicated
SIZE: D 27" x 34"
FILE NAME:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

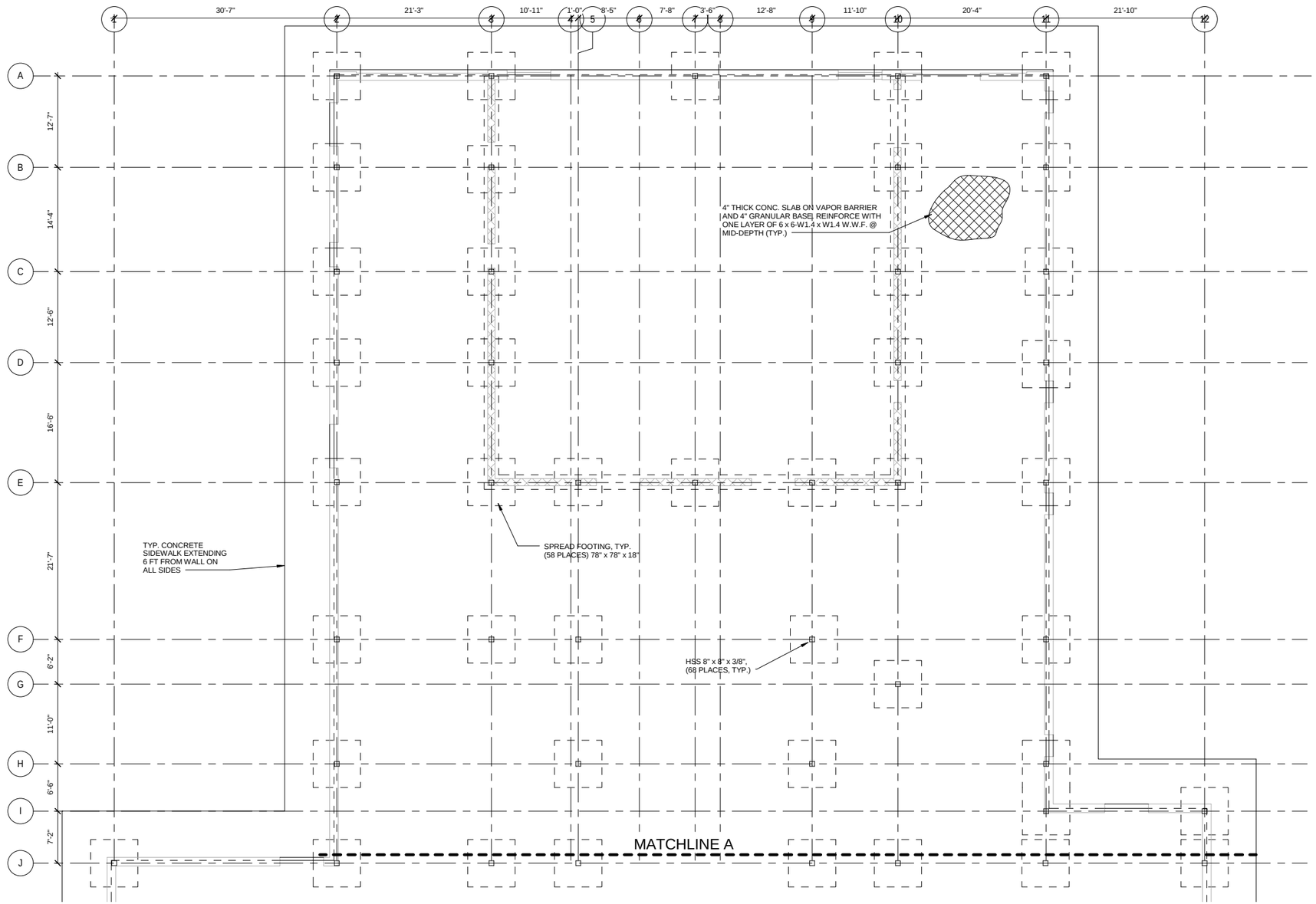
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

FOUNDATION/SLAB PLAN

PLATE REFERENCE NUMBER
S-101 A

SHEET 6 OF 107



FOUNDATION/SLAB PLAN - AREAS C & D

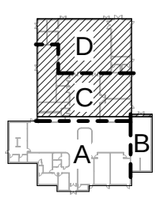
SCALE: 1/8" = 1'-0"

N

PLAN NORTH

8 6 4 2 0 8 16

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



KEY PLAN

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

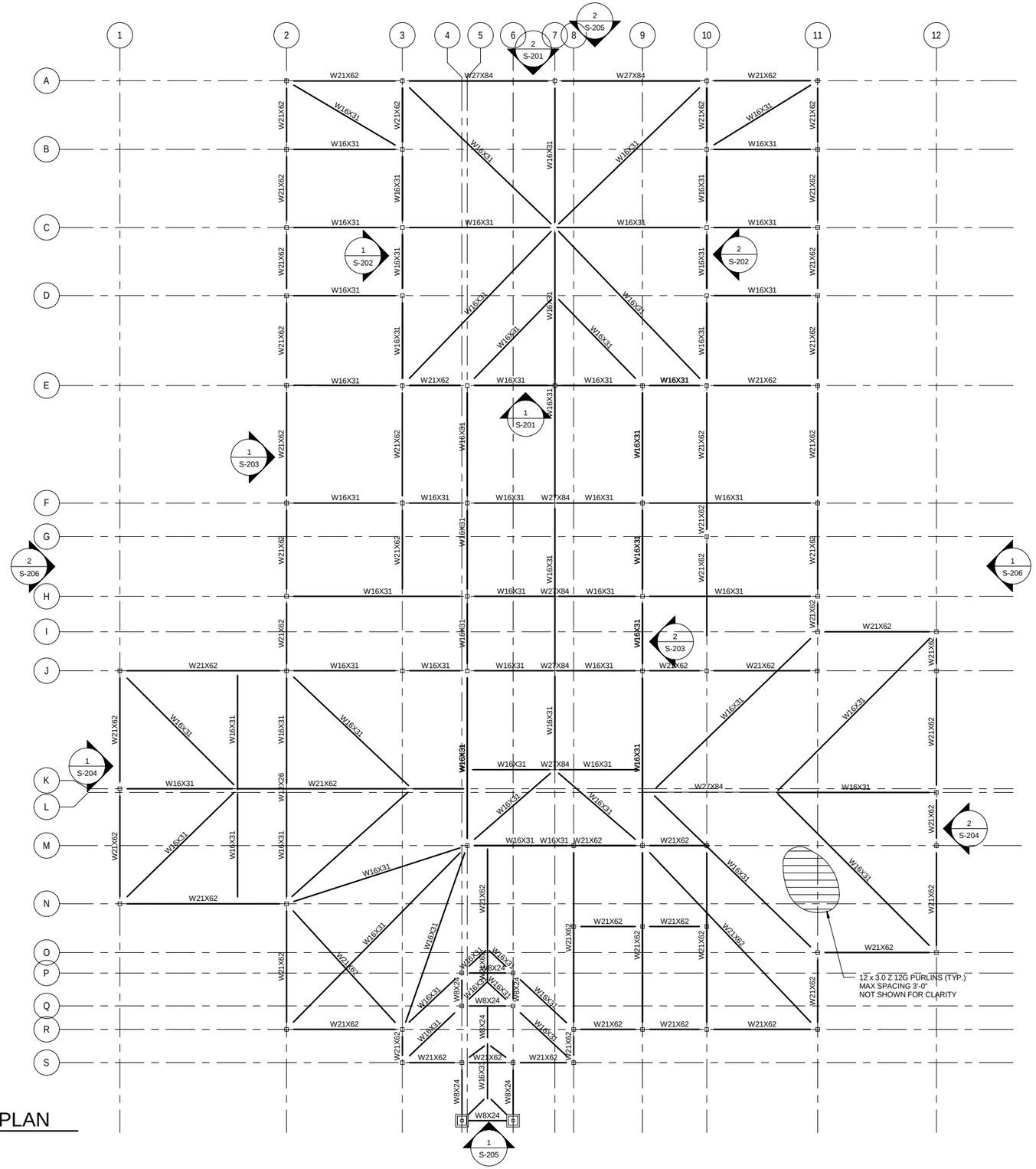
DESIGN BY: MER
DRAWN BY: MER
SBMT BY:
CKD BY: JMU
PLOT DATE: 6/11/2014 2:56:18 PM
PLOT SCALE: As indicated
SIZE: D 22" x 34"
FILE NAME:
DATE: JUNE, 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

FOUNDATION/SLAB PLAN

PLATE REFERENCE NUMBER
S-101 B
SHEET 7 OF 107



ROOF FRAMING PLAN

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

NOTES

1. FOR BEAM HEIGHTS AND SLOPES SEE FRAMING PLANS AND ELEVATIONS.

N

PLAN NORTH

16 8 0 16

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

DESIGN BY: Designer
DRAWN BY: Author
CKD BY: Checker
SBMT BY: Approver
PLOT DATE: 6/11/2014 2:56:55 PM
PLOT SCALE: 3/32" = 1'-0"
SIZE: 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER

4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

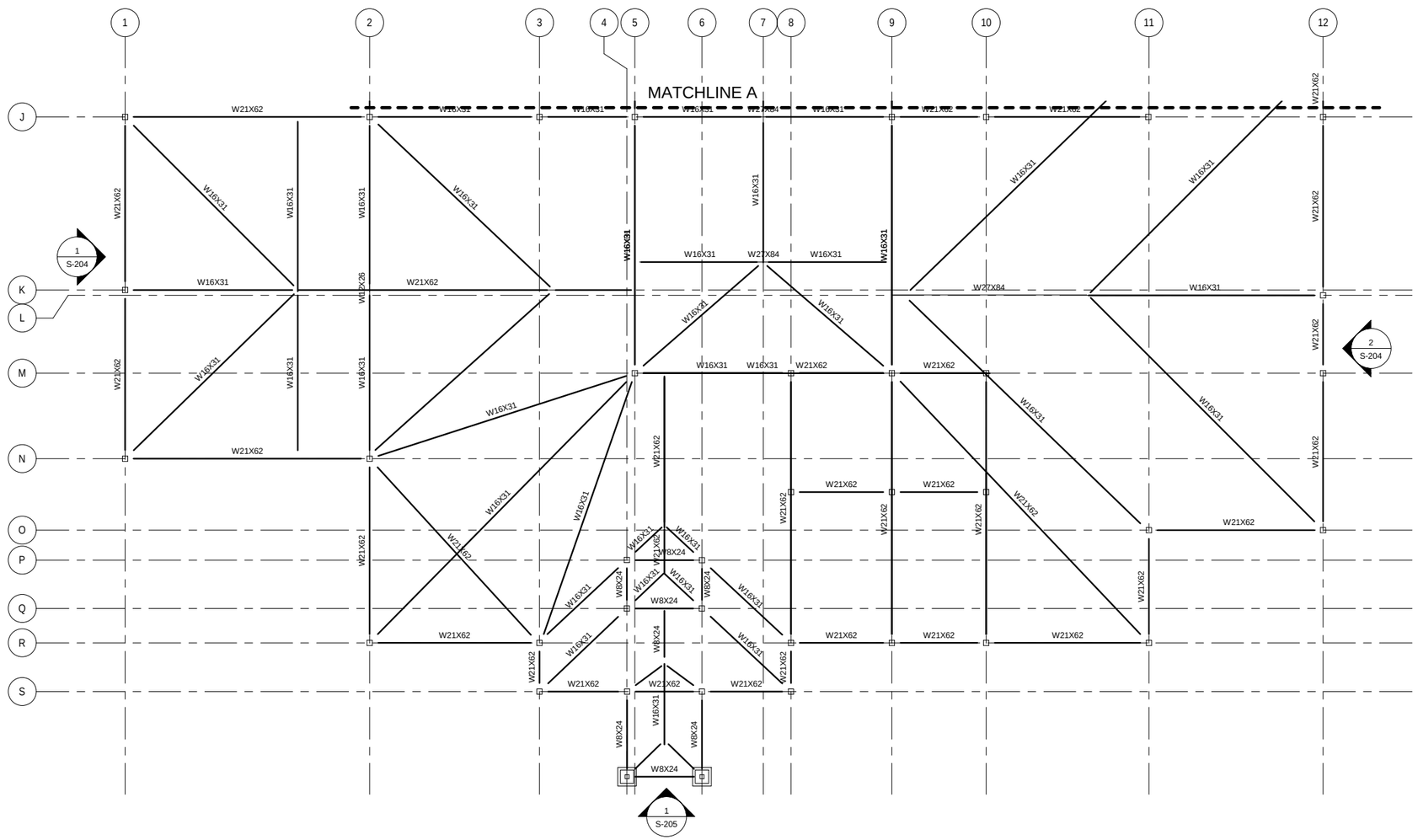
ROOF FRAMING PLAN

PLATE REFERENCE NUMBER
S-102

SHEET 8 OF 107

NOTES

1. FOR BEAM HEIGHTS AND SLOPES SEE FRAMING PLANS AND ELEVATIONS.



ROOF FRAMING PLAN - AREAS A & B

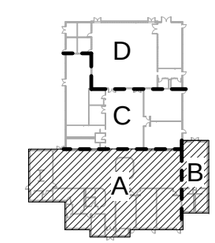
SCALE: 1/8" = 1'-0"

N

PLAN NORTH

8 6 4 2 0 8 16

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



KEY PLAN

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

DESIGN BY: Designer
DRAWN BY: Author
CKD BY: Checker
SBMT BY: Approver
PLOT DATE: 6/11/2014 2:57:03 PM
PLOT SCALE: As indicated
SIZE: 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER

4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

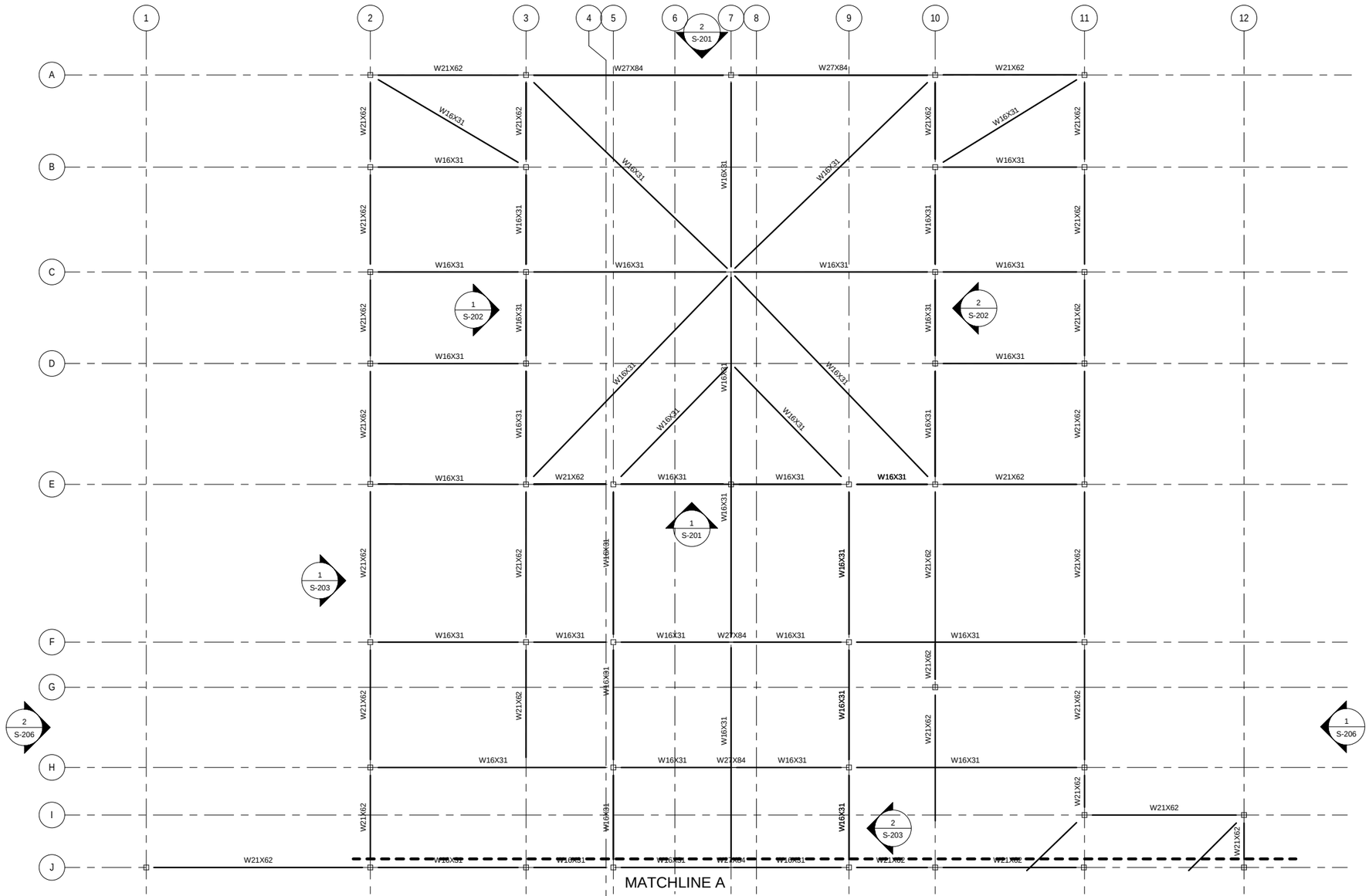
ROOF FRAMING PLAN

PLATE REFERENCE NUMBER
S-102 A

SHEET 9 OF 107

NOTES

1. FOR BEAM HEIGHTS AND SLOPES SEE FRAMING PLANS AND ELEVATIONS.

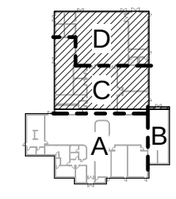


ROOF FRAMING PLAN - AREAS C & D

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

N
PLAN NORTH

8 6 4 2 0 8 16
SCALE: 1/8"=1'-0"



KEY PLAN

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

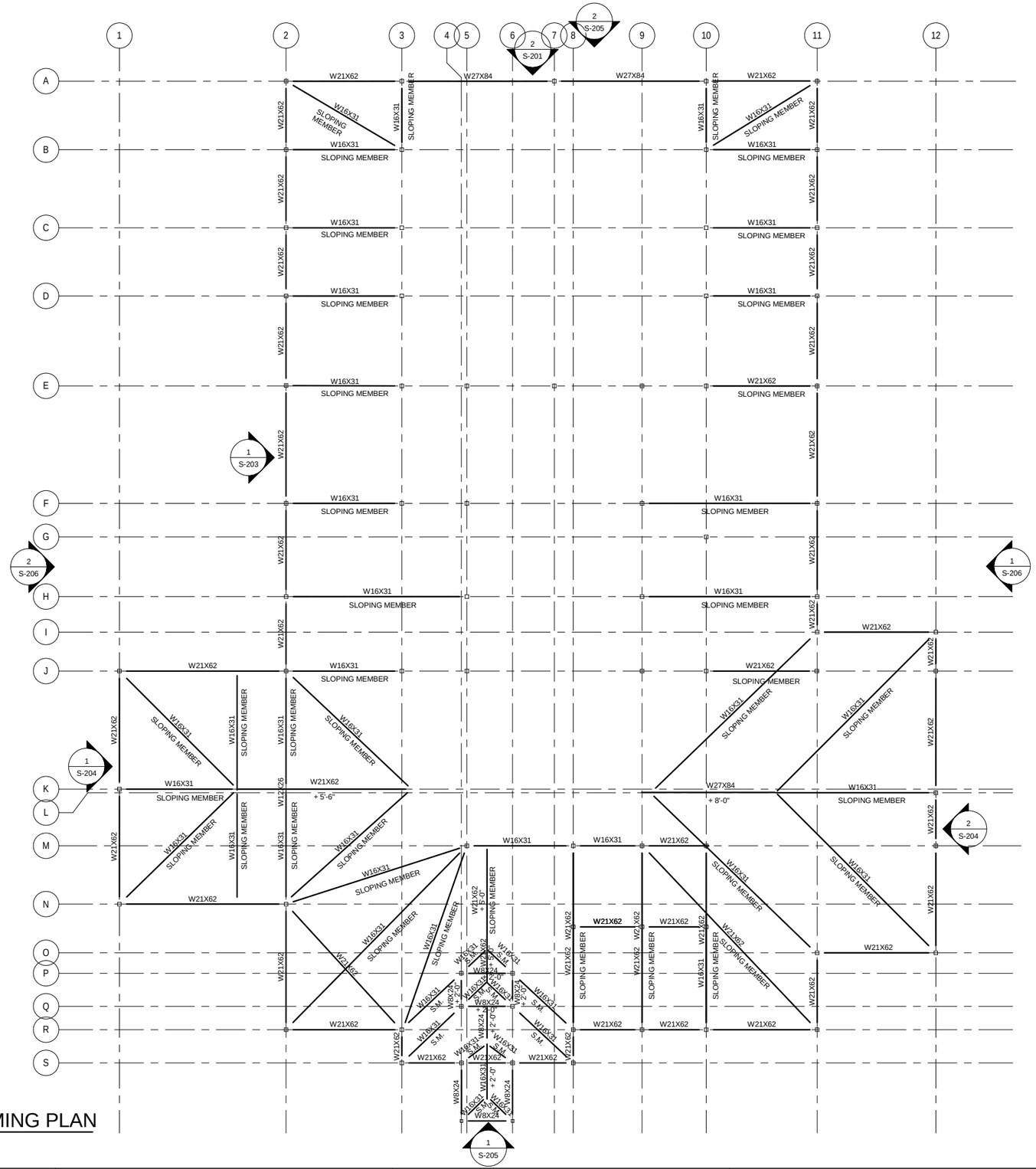
DESIGN BY: Designer
DRAWN BY: Author
CKD BY: Checker
SBMT BY: Approver
PLOT DATE: 6/11/2014 1:57:12 PM
PLOT SCALE: As indicated
SIZE: D 22" x 34"
FILE NAME:
DATE: 11JAN 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

ROOF FRAMING PLAN

PLATE REFERENCE NUMBER
S-102 B
SHEET 10 OF 107



LOW ROOF FRAMING PLAN

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

NOTES

1. ALL SLOPING MEMBERS BEGIN AT LOW ROOF ELEVATION AND HAVE A 3"/12" SLOPE.

2. ALL NON-SLOPING MEMBERS ARE AT LOW ROOF ELEVATION UNLESS NOTED OTHERWISE.

N

PLAN NORTH

KEY PLAN

16 8 0 16

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: MEM
DRAWN BY: MEM
CKD BY: JMU
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/11/2014 2:57:20 PM
PLOT SCALE: 3/32" = 1'-0"
SIZE: D 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

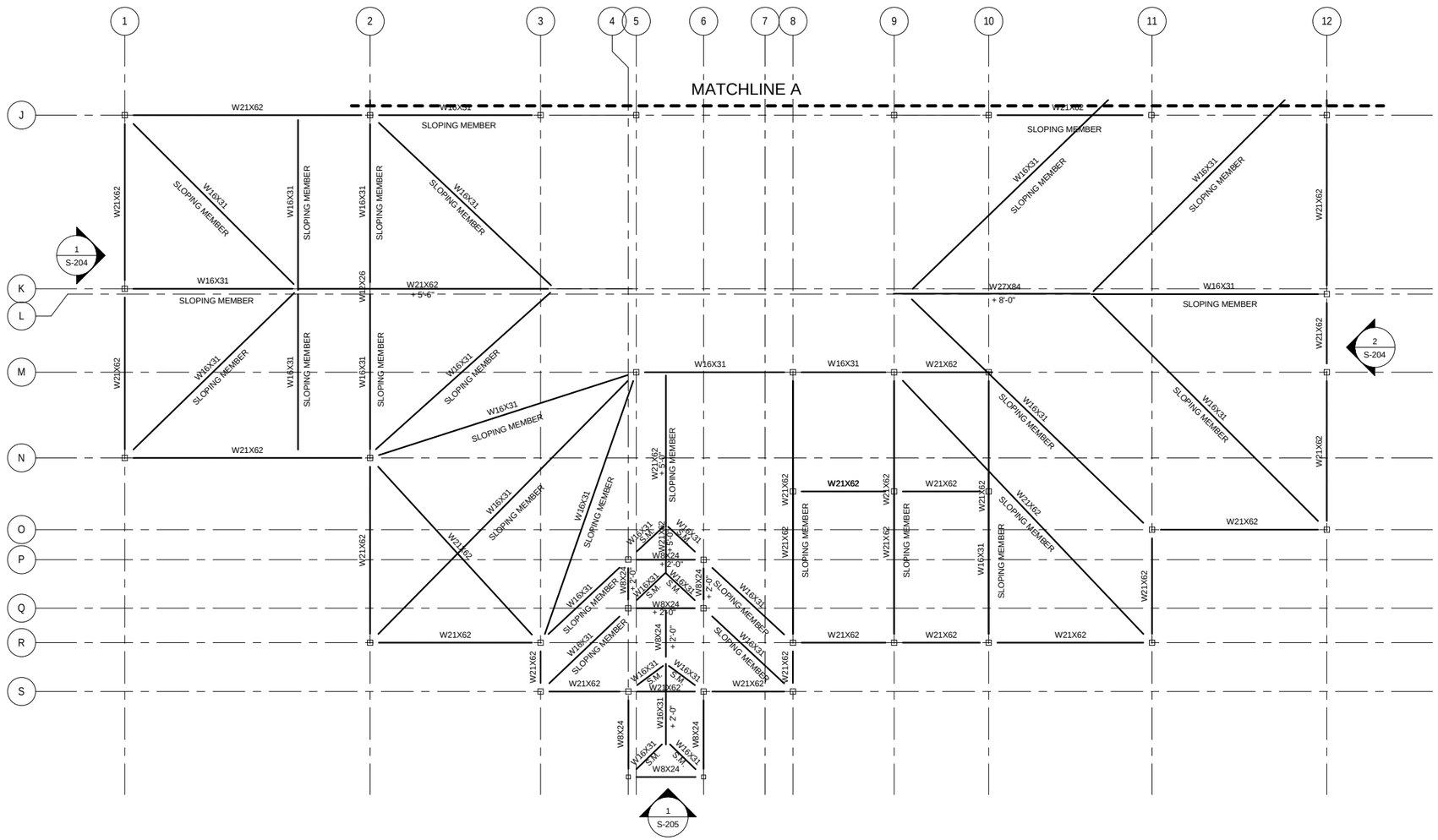
LOW ROOF FRAMING PLAN

PLATE REFERENCE NUMBER
S-103
SHEET 11 OF 107

NOTES

1. ALL SLOPING MEMBERS BEGIN AT LOW ROOF ELEVATION AND HAVE A 3"/12" SLOPE.

2. ALL NON-SLOPING MEMBERS ARE AT LOW ROOF ELEVATION UNLESS NOTED OTHERWISE.



LOW ROOF FRAMING PLAN - AREAS A & B

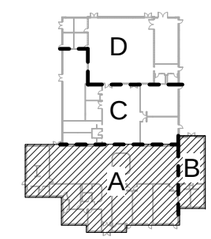
SCALE: 1/8" = 1'-0"

N

PLAN NORTH

8 6 4 2 0 8 16

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



KEY PLAN

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: Author
DRAWN BY: Author
SBMT BY: Approver
CKD BY: Checker
PLOT SCALE: As indicated
PLOT DATE: 6/11/2014 2:57:29 PM
SIZE: 22" x 34"
FILE NAME:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

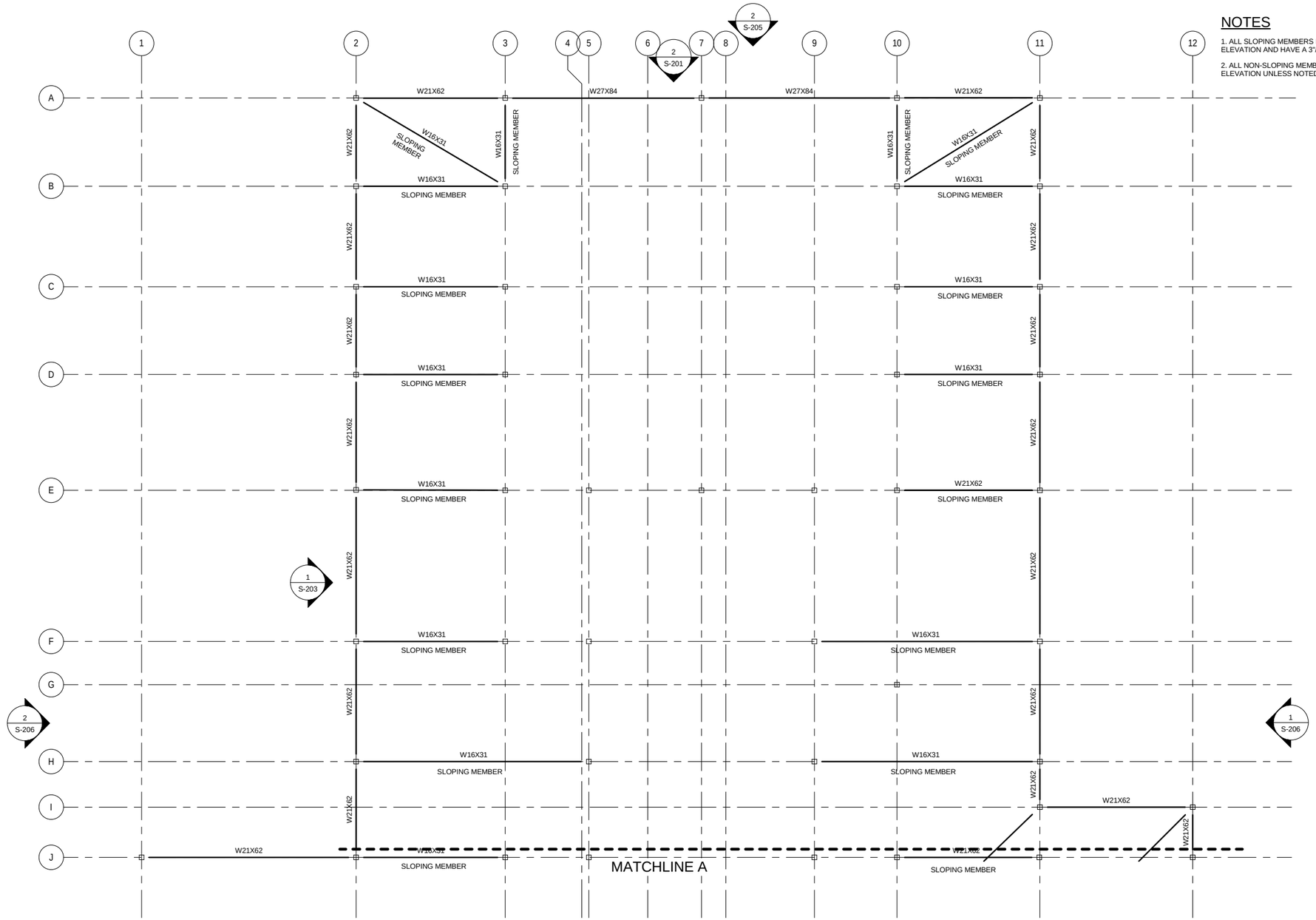
LOW ROOF FRAMING PLAN

PLATE REFERENCE NUMBER
S-103 A
SHEET 12 OF 107

NOTES

1. ALL SLOPING MEMBERS BEGIN AT LOW ROOF ELEVATION AND HAVE A 3"/12" SLOPE.

2. ALL NON-SLOPING MEMBERS ARE AT LOW ROOF ELEVATION UNLESS NOTED OTHERWISE.

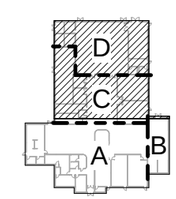


LOW ROOF FRAMING PLAN - AREAS C & D

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

N
PLAN NORTH

8 6 4 2 0 8 16
SCALE: 1/8"=1'-0"



KEY PLAN

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

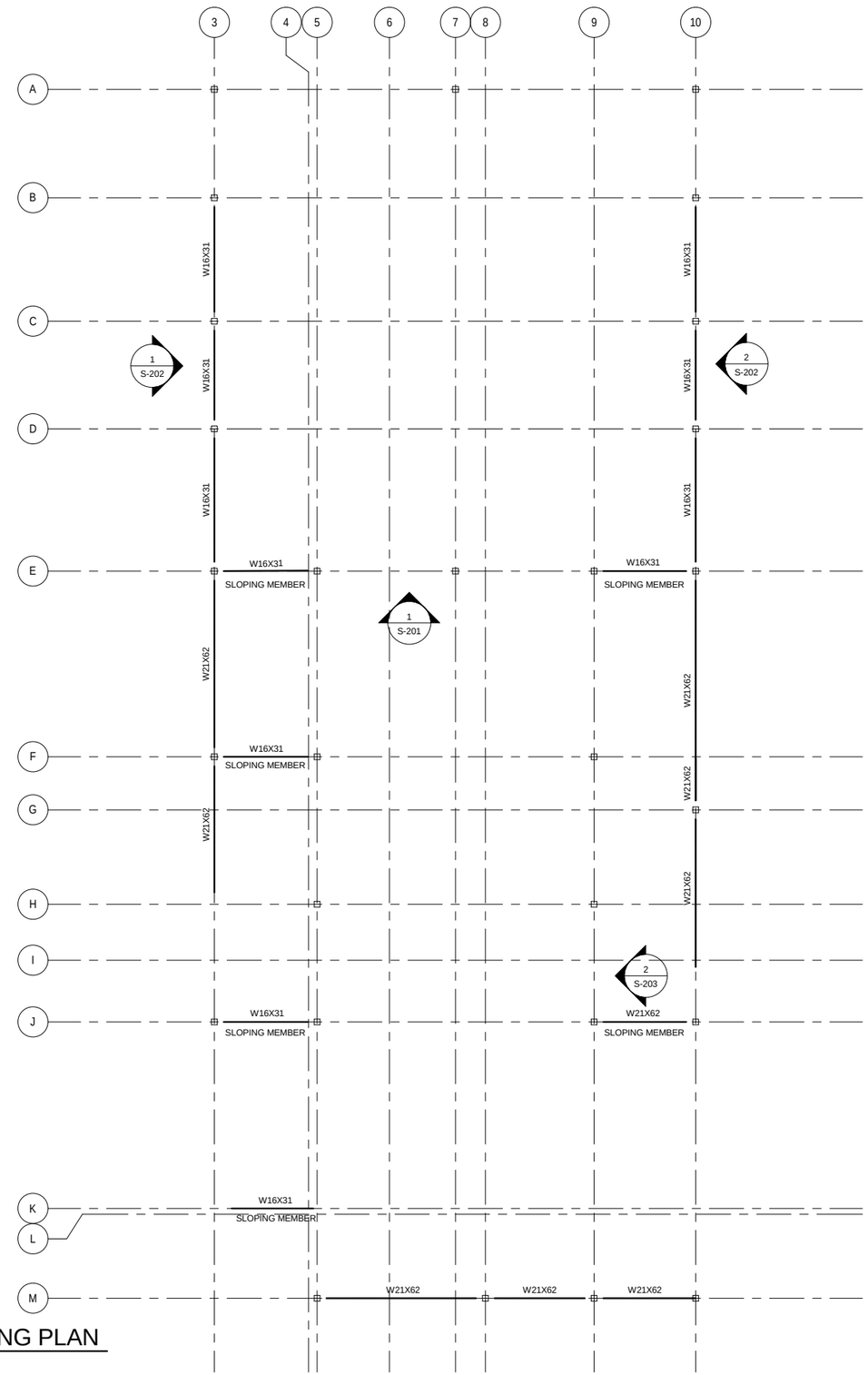
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
DESIGN BY: Designer
DRAWN BY: Author
CKD BY: Checker
SBMT BY: Approver
PLOT DATE: 6/11/2014 2:57:38 PM
PLOT SCALE: As indicated
SIZE: 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

LOW ROOF FRAMING PLAN

PLATE REFERENCE NUMBER
S-103 B



NOTES

1. ALL SLOPING MEMBERS BEGIN AT CLERESTORY LOW-BEAM ELEVATION AND HAVE A 3"/12" SLOPE.

2. ALL NON-SLOPING MEMBERS ARE AT CLERESTORY LOW-BEAM ELEVATION UNLESS NOTED OTHERWISE.

CLERESTORY LOW BEAM FRAMING PLAN

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

N

PLAN NORTH

8 6 4 2 0 8 16

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

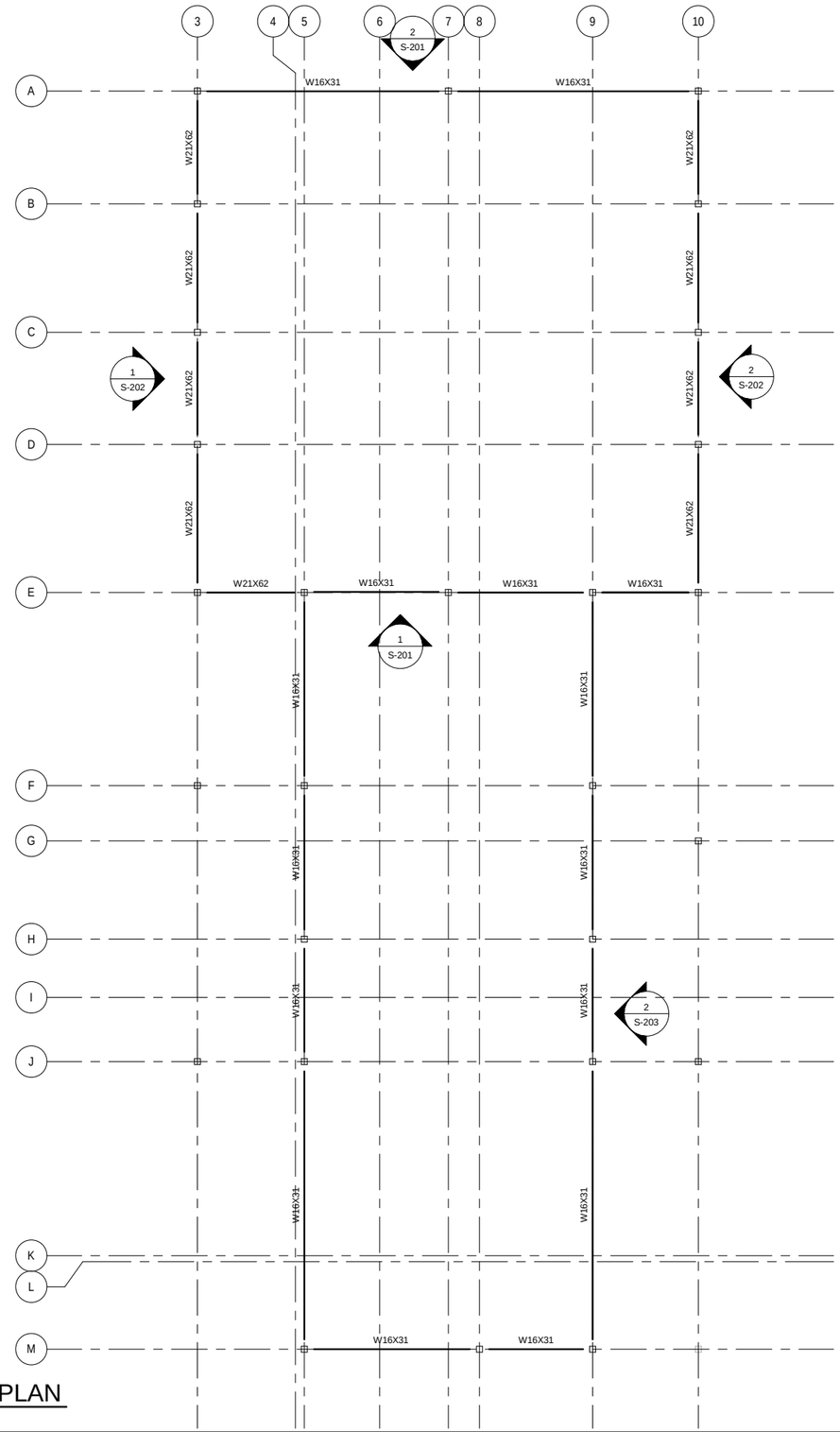
DESIGN BY: Designer
DRAWN BY: Author
SBMT BY: Approver
CKD BY: Checker
PLOT DATE: 6/11/2014 2:57:43 PM
PLOT SCALE: 1/8" = 1'-0"
SIZE: D 22" x 34"
FILE NAME:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

CLERESTORY LOW-BEAM FRAMING PLAN

PLATE REFERENCE NUMBER
S-104
SHEET 14 OF 107



CLERESTORY MID-BEAM FRAMING PLAN

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

NOTES

1. ALL BEAMS ARE AT CLERESTORY MID-BEAM ELEVATION UNLESS NOTED OTHERWISE.

N

PLAN NORTH

8 6 4 2 0 8 16

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: MER
DRAWN BY: MER
SBMT BY:
CKD BY: JMU
PLOT DATE: 6/11/2014 2:57:50 PM
PLOT SCALE: 1/8" = 1'-0"
SIZE: D 22" X 34"
FILE NAME:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

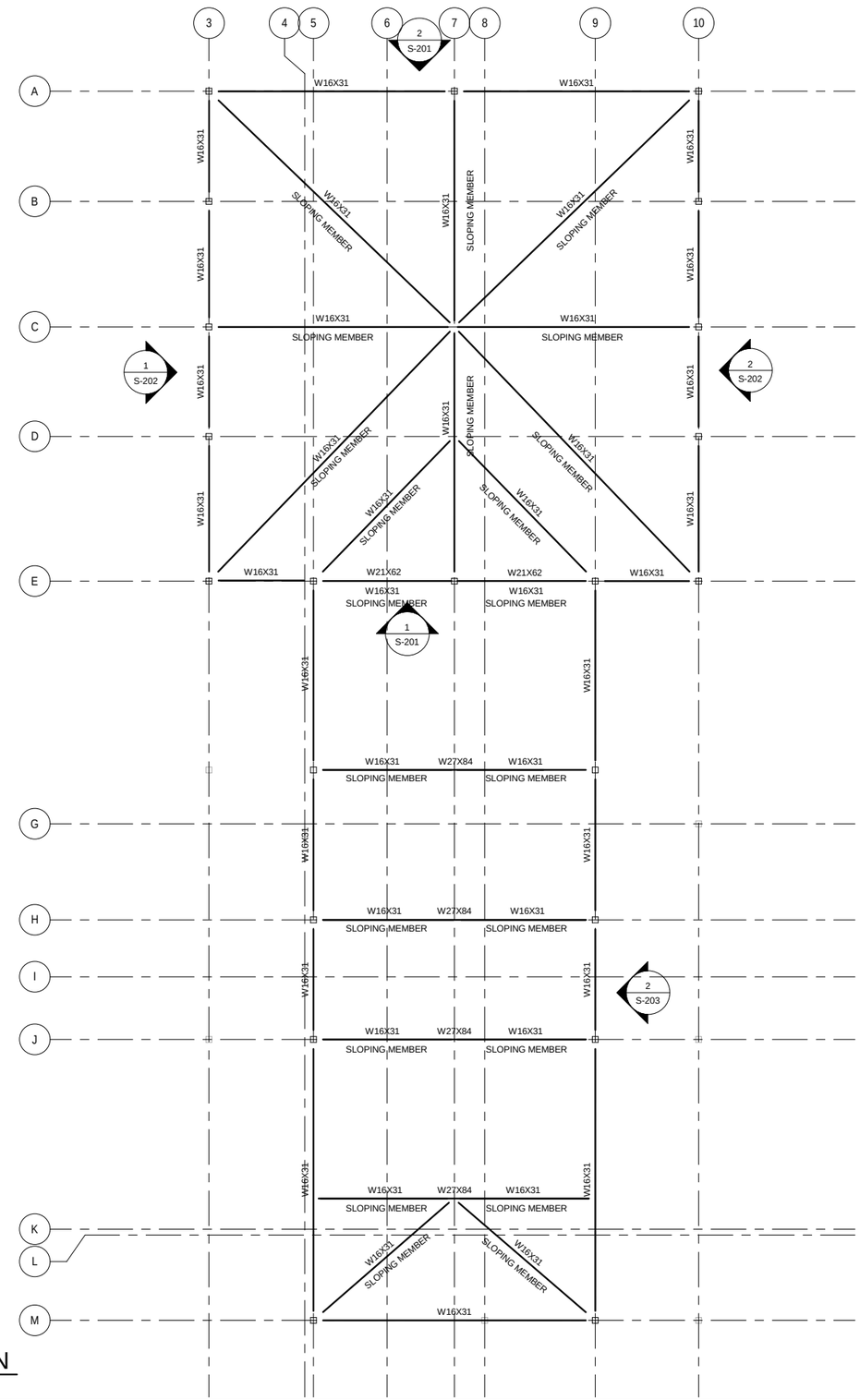
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER

4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

CLERESTORY MID-BEAM FRAMING PLAN

PLATE REFERENCE NUMBER
S-105
SHEET 15 OF 107



NOTES

1. ALL SLOPING MEMBERS BEGIN AT CLERESTORY ROOF ELEVATION AND HAVE A 3"/12" SLOPE.

2. ALL BEAMS ARE AT CLERESTORY ROOF ELEVATION UNLESS NOTED OTHERWISE.

N

PLAN NORTH

8 6 4 2 0 8 16

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

CLERESTORY ROOF FRAMING PLAN

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

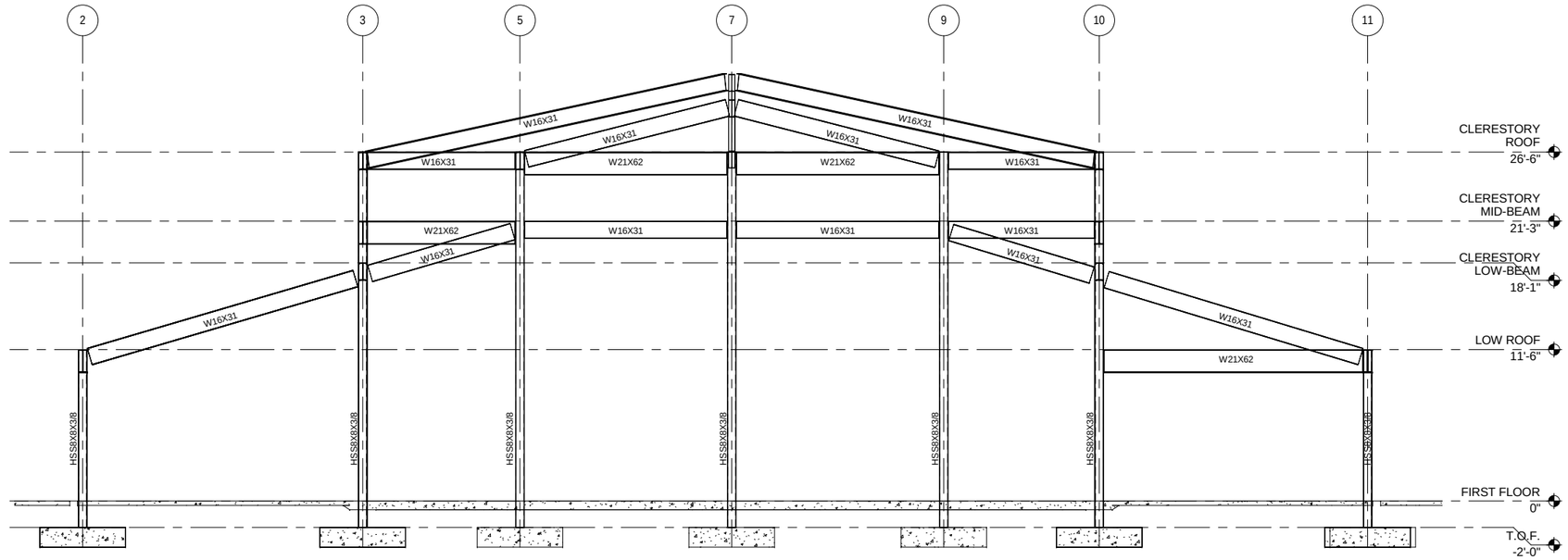
DESIGN BY: MER
DRAWN BY: MER
SBMT BY:
CKD BY: JMU
PLOT DATE: 6/11/2014 2:57:56 PM
PLOT SCALE: 1/8" = 1'-0"
SIZE: 22" x 34"
FILE NAME:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

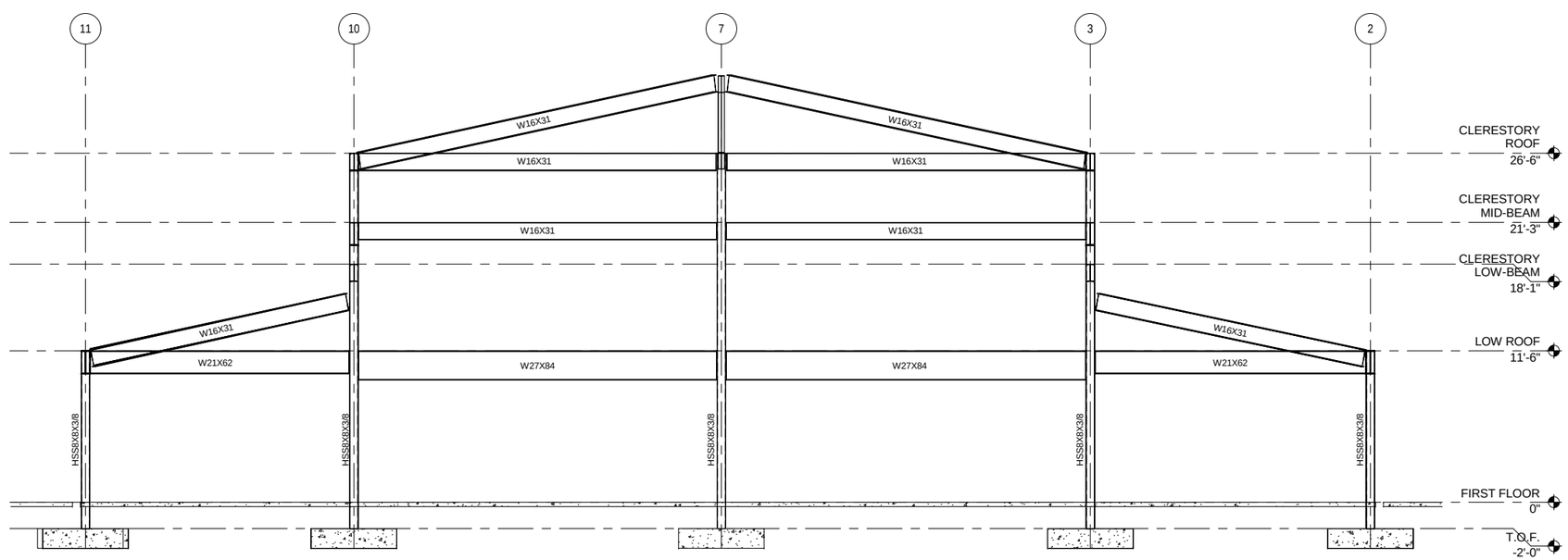
CLERESTORY ROOF FRAMING PLAN

PLATE REFERENCE NUMBER
S-106
SHEET 16 OF 107



1 S-102 CLERESTORY FRONT ELEVATION

3/16" = 1'-0"



2 S-102 CLERESTORY BACK ELEVATION

3/16" = 1'-0"

8 4 0 8

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: MER
DRAWN BY: MER
SBMT BY:
DATE: 1 JUNE 2014
SOLICITATION NO.: N/A
CKD BY: JMU
CONTRACT NO.: N/A
PLOT DATE: 6/11/2014 2:58:02 PM
CATEGORY CODE:
PLOT SCALE: 3/16" = 1'-0"
SIZE: 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER

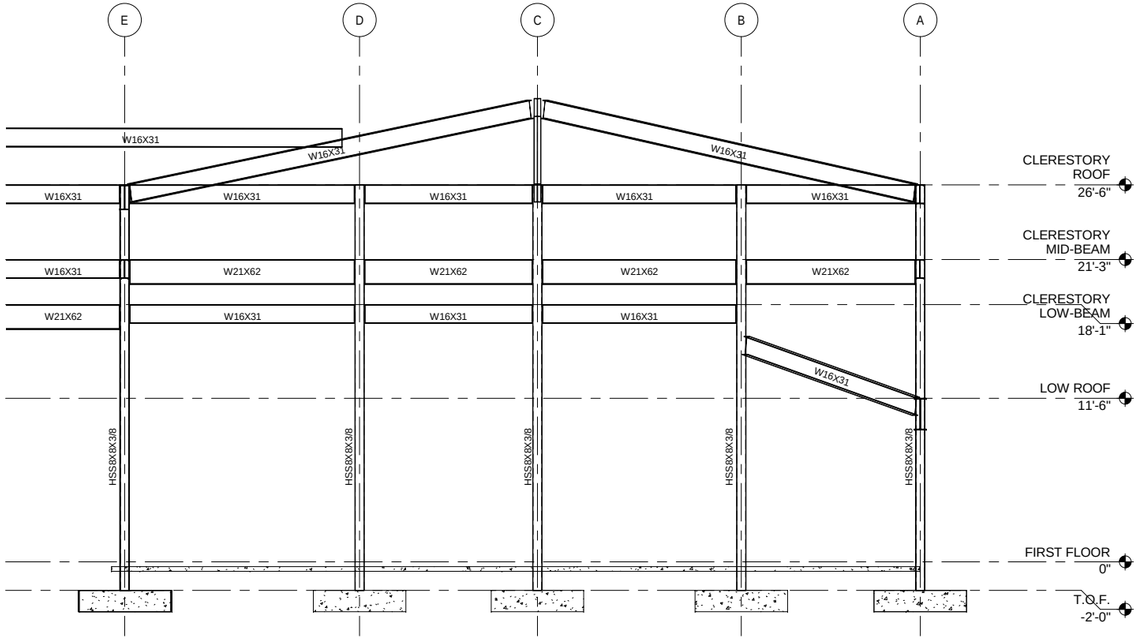
4820 UNIVERSITY SQ.
HUNTSVILLE AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

FRAMING ELEVATIONS

PLATE REFERENCE NUMBER
S-201

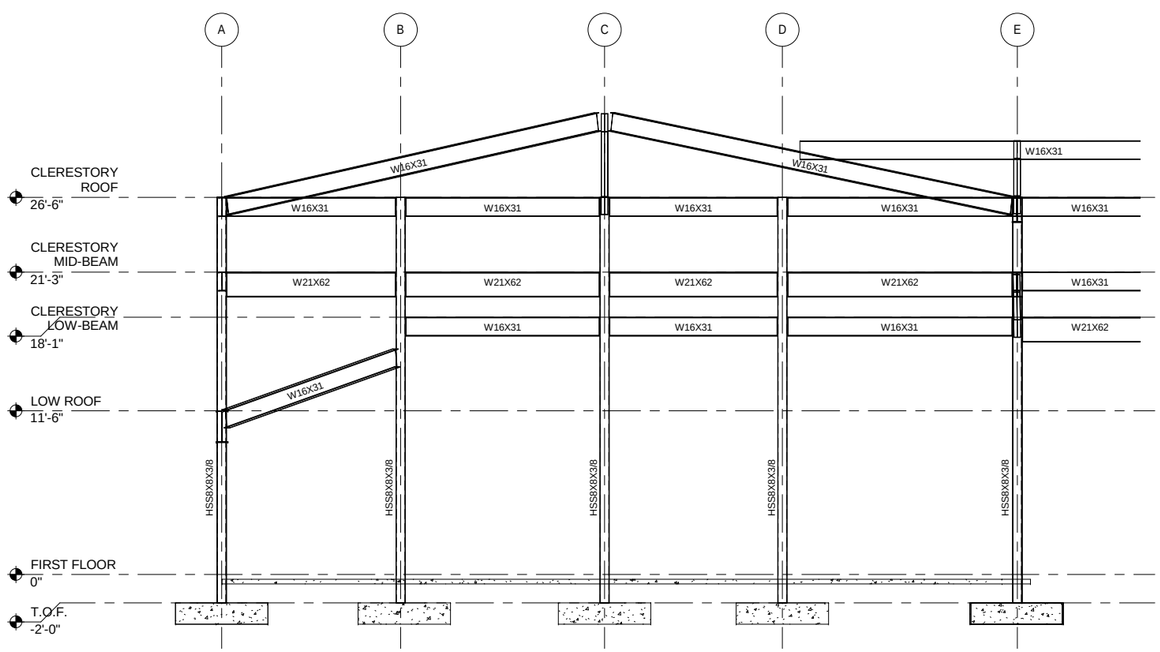
SHEET 17 OF 107



2 S-101 A

CLERESTORY WEST ELEVATION

3/16" = 1'-0"



1 S-101 A

CLERESTORY EAST ELEVATION

3/16" = 1'-0"

8 4 0 8

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: Designer | DATE: JUNE 2014
DRAWN BY: Author | CKD BY: Checker | SOLICITATION NO.: N/A
SBMT BY: Approver | PLOT DATE: 6/11/2014 2:58:09 PM | CONTRACT NO.: N/A
PLOT SCALE: 3/16" = 1'-0" | CATEGORY CODE:
SIZE: 22" X 34" | FILE NAME:

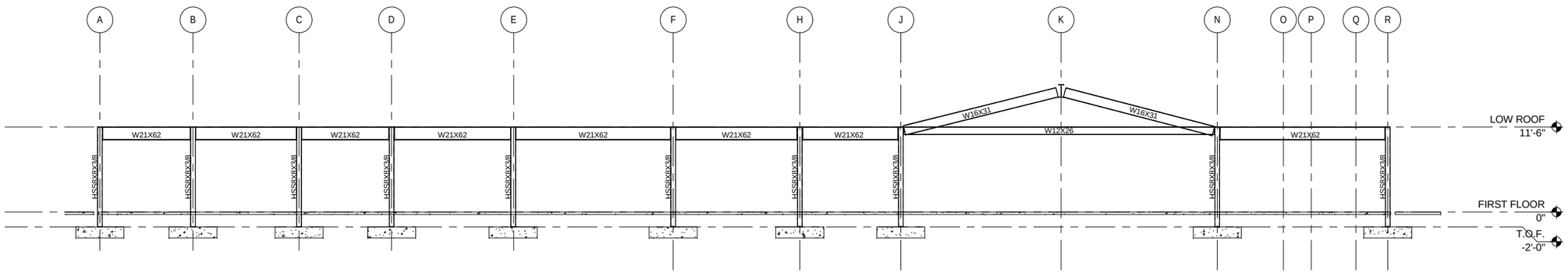
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

FRAMING ELEVATIONS

PLATE REFERENCE NUMBER
S-202

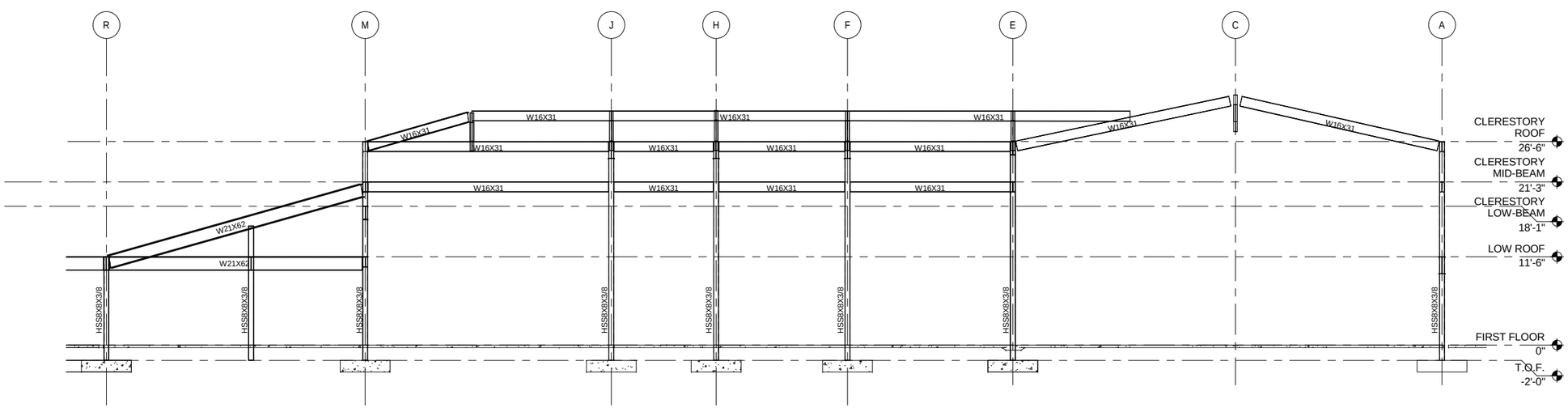
SHEET 18 OF 107



1 S-101 A

EAST ELEVATION AT COLUMN LINE 2

1/8" = 1'-0"



2 S-101 A

MAIN ATRIUM WEST ELEVATION

1/8" = 1'-0"

8 6 4 2 0 8 16

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

DESIGN BY: Designer
DRAWN BY: Author
CKD BY: Checker
SBMT BY: Approver
PLOT DATE: 6/11/2014 2:58:18 PM
PLOT SCALE: 1/8" = 1'-0"
SIZE: 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER

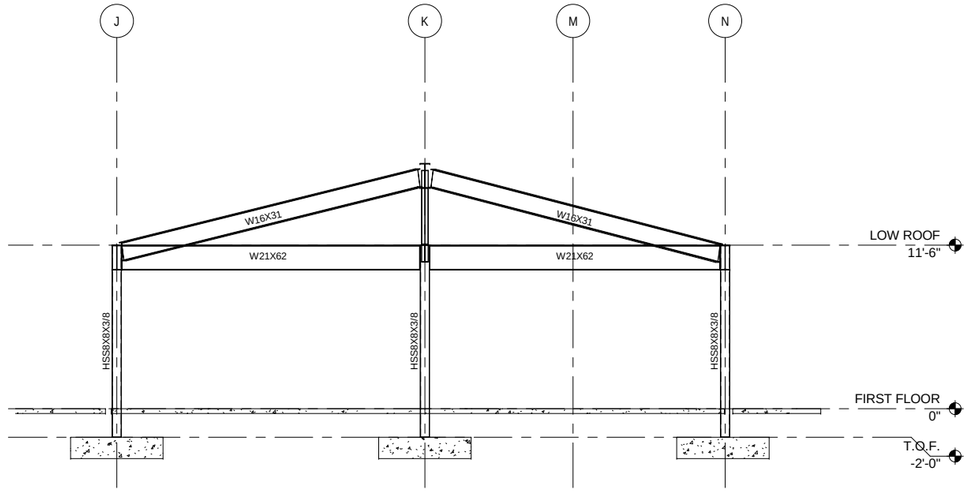
4820 UNIVERSITY SQ.
HUNTSVILLE AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

FRAMING ELEVATIONS

PLATE REFERENCE NUMBER
S-203

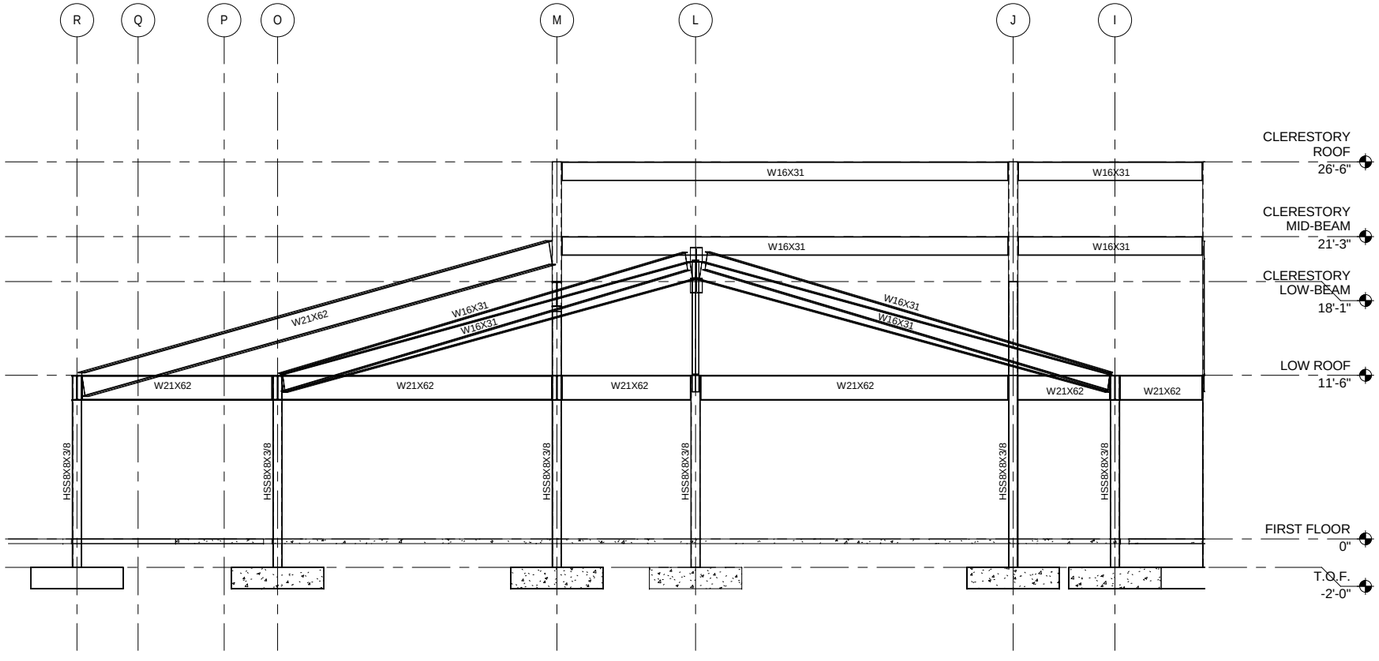
SHEET 19 OF 107



1
S-101 A

KITCHEN EAST ELEVATION

3/16" = 1'-0"



2
S-101 A

LOBBY WEST ELEVATION

3/16" = 1'-0"

8 4 0 8
SCALE: 3/16"=1'-0"

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

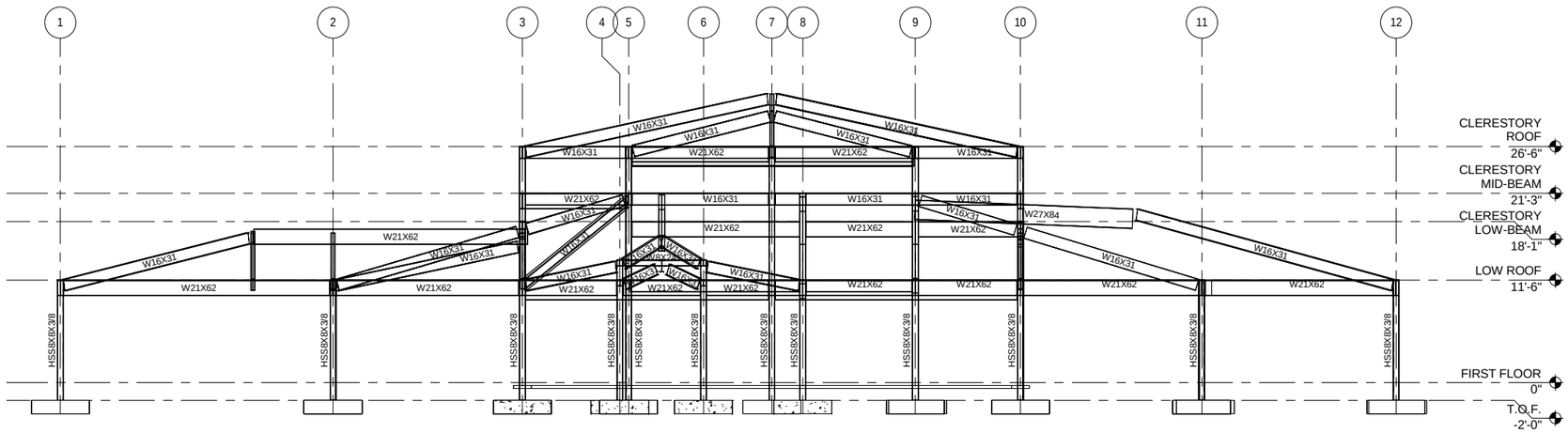
DESIGN BY: MER
DATE: JUNE 2014
DRAWN BY: MER
CKD BY: JMU
SOLICITATION NO.: N/A
SBMT BY:
PLOT DATE: 6/11/2014 2:58:39 PM
CONTRACT NO.: N/A
PLOT SCALE: 3/16" = 1'-0"
CATEGORY CODE:
SIZE: 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

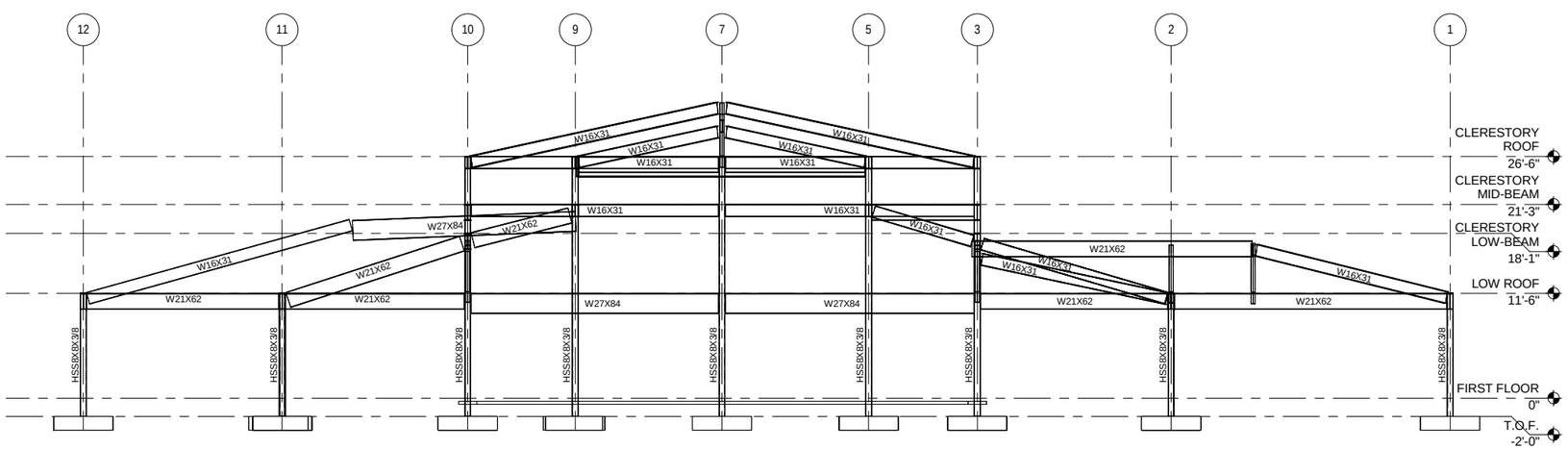
FRAMING ELEVATIONS

PLATE REFERENCE NUMBER
S-204
SHEET 20 OF 107



1 S-102 SOUTH FRAMING ELEVATION

1/8" = 1'-0"



2 S-102 NORTH FRAMING ELEVATION

1/8" = 1'-0"

8 6 4 2 0 8 16

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: Designer
DRAWN BY: Author
SBMT BY: Approver
CKD BY: Checker
PLOT DATE: 6/11/2014 2:58:57 PM
PLOT SCALE: 1/8" = 1'-0"
SIZE: 22" X 34"
FILE NAME:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER

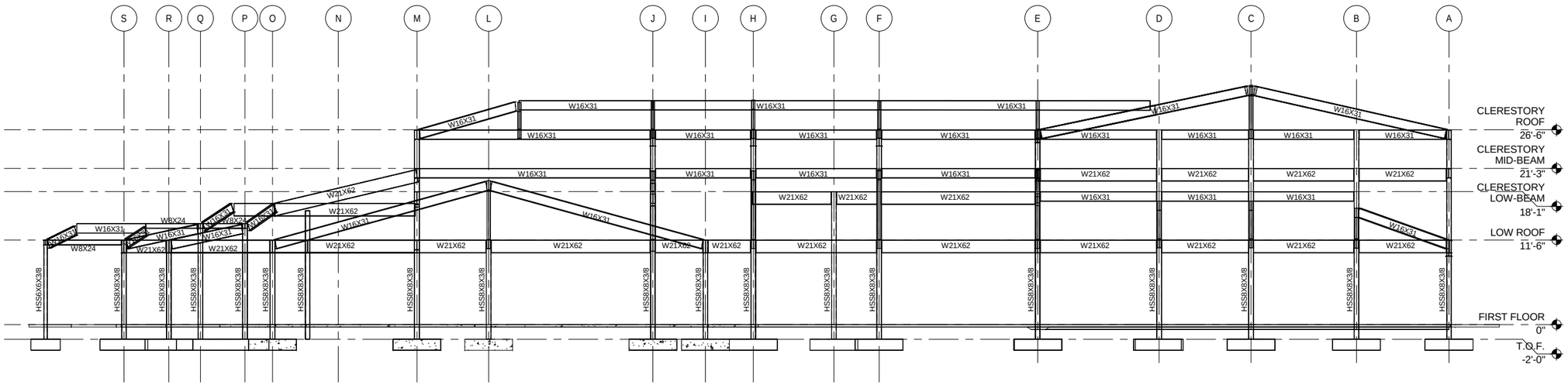
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

FRAMING ELEVATIONS

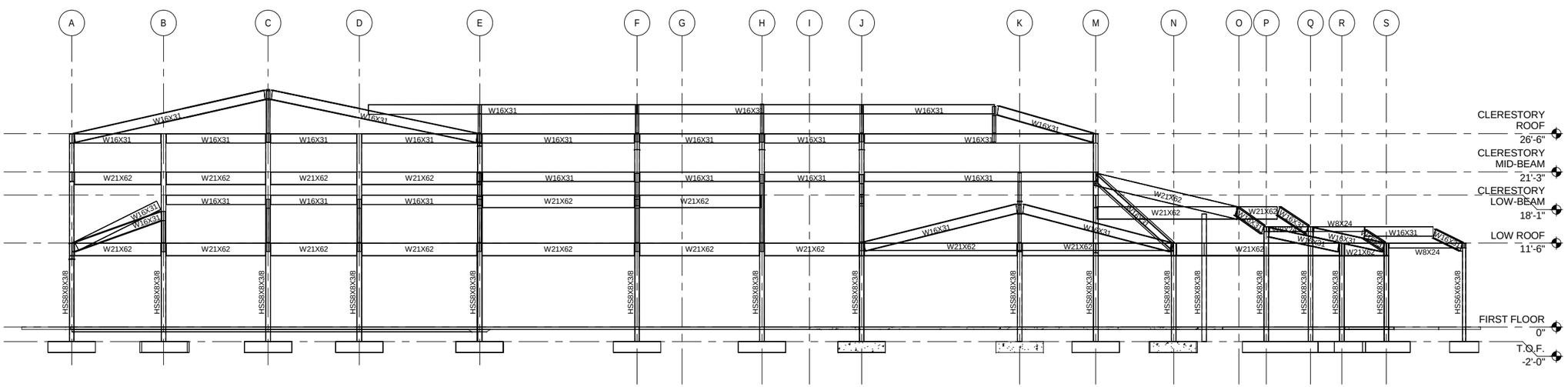
PLATE REFERENCE NUMBER
S-205

SHEET 21 OF 107



1 S-102 EAST FRAMING ELEVATION

1/8" = 1'-0"



2 S-102 WEST FRAMING ELEVATION

1/8" = 1'-0"

8 6 4 2 0 8 16

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: Designer | DATE: JUNE 2014
DRAWN BY: Author | CKD BY: Checker | SOLICITATION NO.: N/A
SBMT BY: Approver | PLOT DATE: 6/11/2014 2:59:07 PM | CONTRACT NO.: N/A
PLOT SCALE: 1/8" = 1'-0" | CATEGORY CODE:
SIZE: D 22" x 34" | FILE NAME:

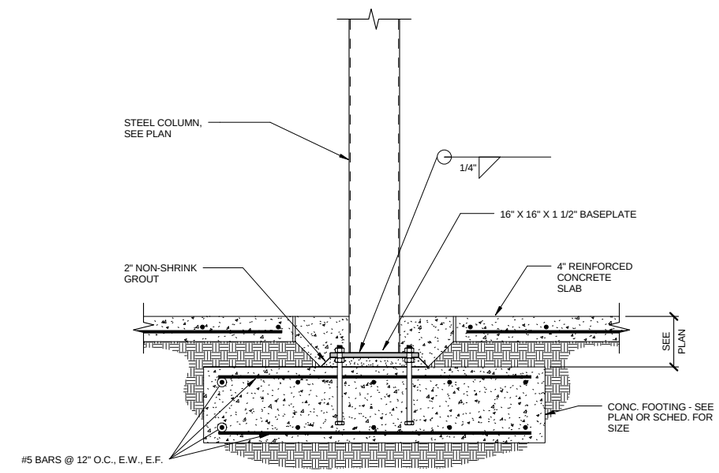
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

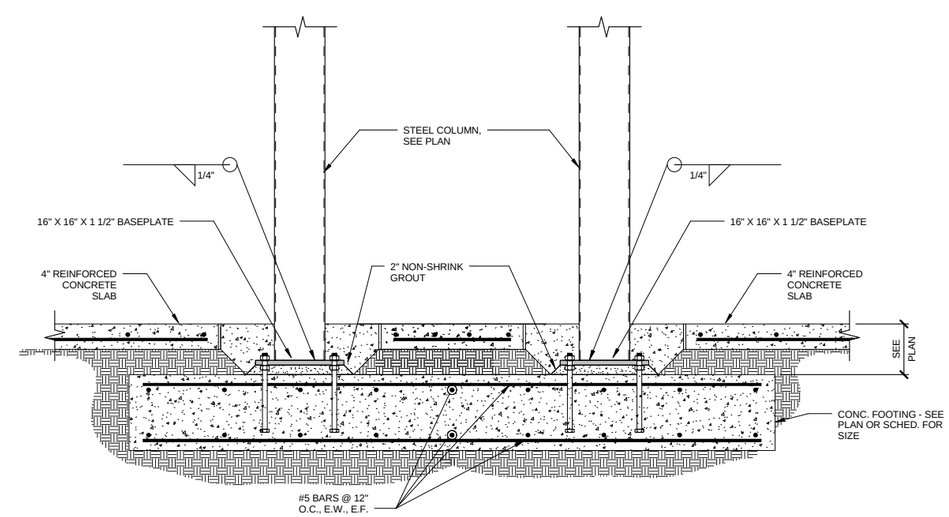
FRAMING ELEVATIONS

PLATE REFERENCE NUMBER
S-206

SHEET 22 OF 107



1 TYPICAL COLUMN FOOTING DETAIL
NOT TO SCALE



2 TYPICAL DOUBLE COLUMN FOOTING DETAIL
NOT TO SCALE

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: MEK
DRAWN BY: Author
CKD BY: JMU
SBMT BY: JWC
PLOT DATE: 6/11/2014 2:59:17 PM
PLOT SCALE: 1 = 1'-0"
SIZE: 22" X 34"
FILE NAME:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

FOUNDATION DETAILS

PLATE REFERENCE NUMBER
S-501
SHEET 23 OF 107

STRUCTURAL FRAMING SCHEDULE

TYPE	LENGTH	VOLUME
W8X24	10'-8"	0 CF
W8X24	9'-5"	0 CF
W8X24	10'-3"	0 CF
W8X24	9'-5"	0 CF
W8X24	6'-1"	0 CF
W8X24	9'-5"	0 CF
W8X24	6'-1"	0 CF
W8X24	6'-8"	0 CF
W8X24: 8		
W12X26	42'-9"	2 CF
W12X26: 1		
W16X31	22'-7"	1 CF
W16X31	27'-7"	2 CF
W16X31	29'-8"	2 CF
W16X31	19'-9"	1 CF
W16X31	25'-1"	1 CF
W16X31	21'-9"	1 CF
W16X31	22'-2"	1 CF
W16X31	22'-2"	1 CF
W16X31	22'-2"	1 CF
W16X31	22'-2"	1 CF
W16X31	34'-7"	2 CF
W16X31	32'-8"	2 CF
W16X31	31'-7"	2 CF
W16X31	31'-9"	2 CF
W16X31	30'-9"	2 CF
W16X31	22'-4"	1 CF
W16X31	22'-8"	1 CF
W16X31	21'-8"	1 CF
W16X31	10'-11"	1 CF
W16X31	36'-2"	2 CF
W16X31	48'-3"	3 CF
W16X31	37'-5"	2 CF
W16X31	6'-11"	0 CF
W16X31	6'-11"	0 CF
W16X31	10'-1"	1 CF
W16X31	6'-3"	0 CF
W16X31	6'-3"	0 CF
W16X31	15'-3"	1 CF
W16X31	15'-5"	1 CF
W16X31	15'-4"	1 CF
W16X31	15'-4"	1 CF
W16X31	12'-3"	1 CF
W16X31	41'-10"	3 CF
W16X31	41'-9"	3 CF
W16X31	43'-11"	3 CF
W16X31	42'-7"	3 CF
W16X31	28'-8"	2 CF
W16X31	28'-0"	2 CF
W16X31	40'-9"	2 CF
W16X31	40'-8"	2 CF
W16X31	39'-3"	2 CF
W16X31	39'-4"	2 CF
W16X31	24'-4"	1 CF
W16X31	21'-3"	1 CF
W16X31	21'-6"	1 CF
W16X31	21'-6"	1 CF
W16X31	21'-3"	1 CF
W16X31	33'-7"	2 CF
W16X31	33'-7"	2 CF
W16X31	21'-7"	1 CF
W16X31	17'-1"	1 CF
W16X31	13'-8"	1 CF
W16X31	21'-3"	1 CF
W16X31	17'-1"	1 CF
W16X31	13'-8"	1 CF
W16X31	32'-0"	2 CF
W16X31	32'-1"	2 CF
W16X31	19'-9"	1 CF
W16X31	32'-1"	2 CF
W16X31	32'-4"	2 CF
W16X31	32'-1"	2 CF
W16X31	13'-8"	1 CF

STRUCTURAL FRAMING SCHEDULE

TYPE	LENGTH	VOLUME
W16X31	13'-8"	1 CF
W16X31	17'-1"	1 CF
W16X31	17'-1"	1 CF
W16X31	21'-5"	1 CF
W16X31	21'-7"	1 CF
W16X31	16'-1"	1 CF
W16X31	16'-1"	1 CF
W16X31	11'-11"	1 CF
W16X31	16'-6"	1 CF
W16X31	12'-6"	1 CF
W16X31	14'-4"	1 CF
W16X31	12'-9"	1 CF
W16X31	27'-10"	2 CF
W16X31	27'-8"	2 CF
W16X31	13'-0"	1 CF
W16X31	14'-6"	1 CF
W16X31	12'-6"	1 CF
W16X31	16'-6"	1 CF
W16X31	11'-11"	1 CF
W16X31	12'-2"	1 CF
W16X31	16'-5"	1 CF
W16X31	12'-6"	1 CF
W16X31	14'-4"	1 CF
W16X31	28'-0"	2 CF
W16X31	27'-11"	2 CF
W16X31	14'-4"	1 CF
W16X31	12'-6"	1 CF
W16X31	16'-5"	1 CF
W16X31	11'-10"	1 CF
W16X31	23'-4"	1 CF
W16X31	23'-4"	1 CF
W16X31	21'-7"	1 CF
W16X31	21'-8"	1 CF
W16X31	16'-7"	1 CF
W16X31	16'-8"	1 CF
W16X31	18'-2"	1 CF
W16X31	30'-9"	2 CF
W16X31	36'-10"	2 CF
W16X31	22'-0"	1 CF
W16X31	6'-8"	0 CF
W16X31	6'-8"	0 CF
W16X31	6'-4"	0 CF
W16X31	6'-4"	0 CF
W16X31	22'-9"	1 CF
W16X31	21'-10"	1 CF
W16X31	12'-4"	1 CF
W16X31	14'-1"	1 CF
W16X31	14'-1"	1 CF
W16X31	16'-3"	1 CF
W16X31	16'-1"	1 CF
W16X31	16'-4"	1 CF
W16X31	15'-8"	1 CF
W16X31	16'-3"	1 CF
W16X31	16'-1"	1 CF
W16X31	16'-3"	1 CF
W16X31	16'-1"	1 CF
W16X31	12'-4"	1 CF
W16X31	30'-3"	2 CF
W16X31	12'-8"	1 CF
W16X31	12'-8"	1 CF
W16X31: 122		
W21X62	22'-1"	3 CF
W21X62	21'-1"	3 CF
W21X62	30'-7"	4 CF
W21X62	23'-1"	3 CF
W21X62	21'-3"	3 CF
W21X62	6'-4"	1 CF
W21X62	11'-2"	1 CF
W21X62	9'-5"	1 CF
W21X62	11'-7"	1 CF
W21X62	6'-6"	1 CF
W21X62	12'-8"	1 CF
W21X62	11'-10"	1 CF

STRUCTURAL FRAMING SCHEDULE

TYPE	LENGTH	VOLUME
W21X62	20'-10"	2 CF
W21X62	14'-2"	2 CF
W21X62	22'-2"	3 CF
W21X62	20'-1"	2 CF
W21X62	22'-4"	3 CF
W21X62	7'-2"	1 CF
W21X62	21'-11"	3 CF
W21X62	16'-9"	2 CF
W21X62	21'-8"	3 CF
W21X62	16'-2"	2 CF
W21X62	12'-9"	1 CF
W21X62	14'-4"	2 CF
W21X62	12'-9"	1 CF
W21X62	20'-7"	2 CF
W21X62	21'-3"	3 CF
W21X62	12'-7"	1 CF
W21X62	14'-4"	2 CF
W21X62	12'-6"	1 CF
W21X62	16'-5"	2 CF
W21X62	21'-7"	3 CF
W21X62	17'-1"	2 CF
W21X62	13'-3"	2 CF
W21X62	30'-11"	4 CF
W21X62	9'-5"	1 CF
W21X62	12'-7"	1 CF
W21X62	14'-4"	2 CF
W21X62	12'-6"	1 CF
W21X62	16'-6"	2 CF
W21X62	11'-11"	1 CF
W21X62	16'-6"	2 CF
W21X62	12'-6"	1 CF
W21X62	14'-4"	2 CF
W21X62	12'-7"	1 CF
W21X62	21'-7"	3 CF
W21X62	15'-9"	2 CF
W21X62	12'-3"	1 CF
W21X62	34'-2"	4 CF
W21X62	11'-10"	1 CF
W21X62	12'-8"	1 CF
W21X62	34'-3"	4 CF
W21X62	34'-4"	4 CF
W21X62	20'-10"	2 CF
W21X62	31'-6"	4 CF
W21X62	20'-2"	3 CF
W21X62	31'-11"	4 CF
W21X62	48'-3"	6 CF
W21X62	16'-1"	2 CF
W21X62	16'-1"	2 CF
W21X62	35'-4"	4 CF
W21X62	35'-7"	4 CF
W21X62	5'-7"	1 CF
W21X62	27'-8"	3 CF
W21X62	18'-3"	1 CF
W21X62	21'-4"	3 CF
W21X62	12'-2"	1 CF
W21X62	5'-11"	1 CF
W21X62	6'-6"	1 CF
W21X62	19'-6"	2 CF
W21X62	19'-6"	2 CF
W21X62	12'-8"	1 CF
W21X62	11'-10"	1 CF
W21X62: 73		
W27X84	28'-1"	5 CF
W27X84	28'-0"	5 CF
W27X84	24'-6"	4 CF
W27X84	26'-5"	5 CF
W27X84	32'-4"	5 CF
W27X84	32'-4"	5 CF
W27X84	32'-2"	5 CF
W27X84: 7		
Grand total: 211		

SPREAD FOOTING SCHEDULE

TYPE	WIDTH	LENGTH	DEPTH	VOLUME	REINF. LONGITUDINAL SIZE	REINF. LONGITUDINAL SPACING	REINF. TRANSVERSE SIZE	REINF. TRANSVERSE SPACING
4"' X 4' X 18"	4'-0"	4'-0"	1'-6"	24 CF	5	1'-0"	5	1'-0"
4"' X 4' X 18"	4'-0"	4'-0"	1'-6"	24 CF	5	1'-0"	5	1'-0"
4"' X 4' X 18": 2								
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	59 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	59 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18"	6'-6"	6'-6"	1'-6"	63 CF	5	1'-0"	5	1'-0"
6'-6" X 6'-6" X 18": 51								
Grand total: 53								

SLAB SCHEDULE

TYPE	LEVEL	PERIMETER	AREA	VOLUME	REBAR/WIRE MESH	COMMENTS
4" Concrete Slab-On-Grade	FIRST FLOOR	662'-8"	19976 SF	6659 CF	6 x 6 W1.4x1.4 W.W.F. @ MID-DEPTH	1st Floor Slab
4" Concrete Slab-On-Grade	FIRST FLOOR	1395'-9"	4348 SF	1449 CF		Sidewalk
Grand total: 2		2058'-5"		8108 CF		

FOUNDATION WALL SCHEDULE

TYPE	COUNT	STRUCTURAL USAGE	WIDTH	LENGTH	VOLUME (W/GROUT)	COMMENTS
CDC MD MULTIPURPOSE TOP HALF	6	Bearing	1'-4"	227'-4"	1651 CF	
EXT - CMU12in	4	Bearing	1'-0"	169'-0"	2763 CF	
Grand total				396'-4"	4413 CF	

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
DESIGN BY: MER
DRAWN BY: MER
CKD BY: JMU
SBMT BY:
PLOT DATE: 6/11/2014 2:59:33 PM
PLOT SCALE:
FILE NAME:
SIZE D 22" x 34"

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

SCHEDULES

PLATE REFERENCE NUMBER
S-601

BUILDING DATA

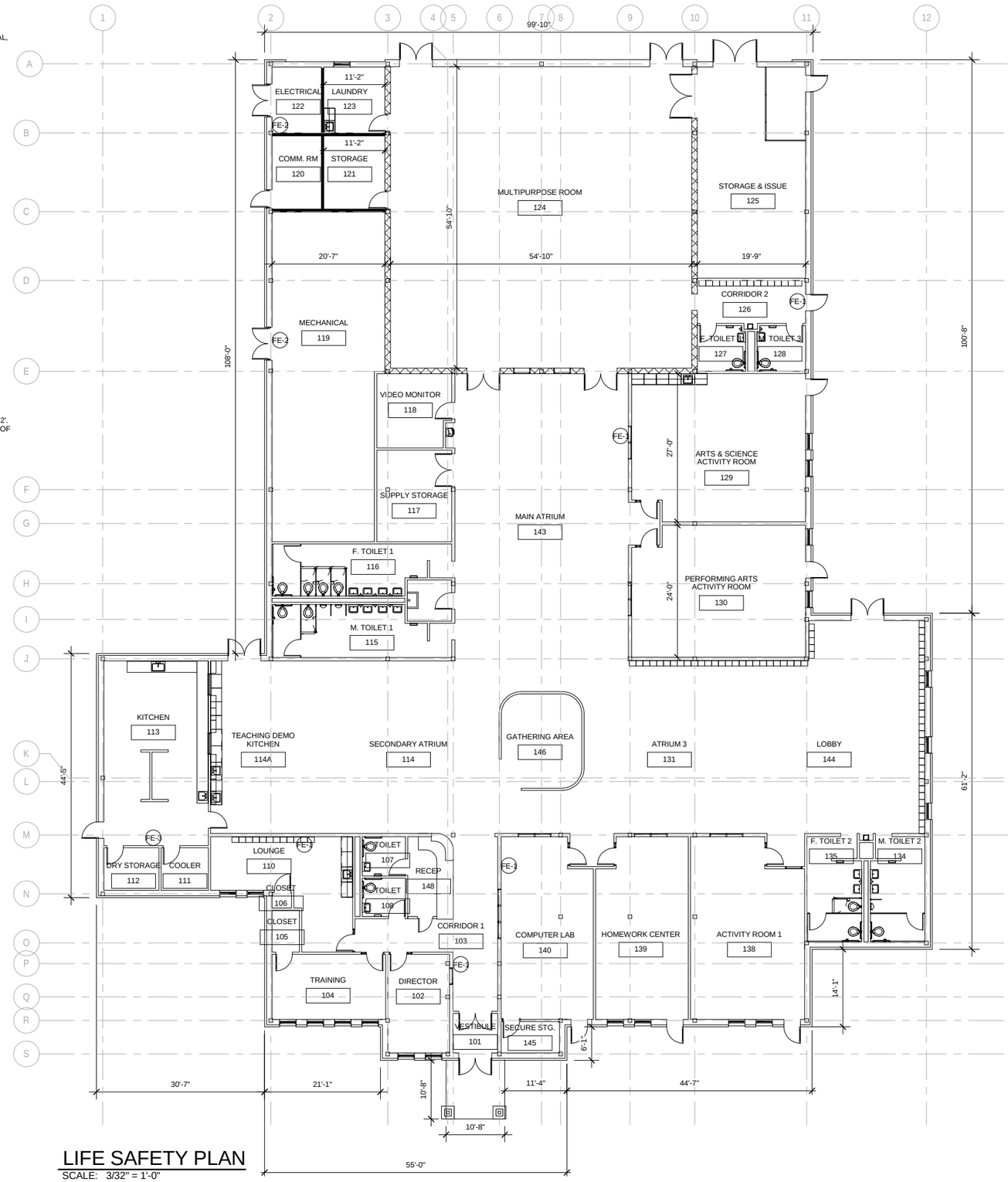
1. OCCUPANCY: GROUP E, THE USE OF A BUILDING FOR EDUCATIONAL, SUPERVISION OR PERSONAL CARE SERVICES FOR MORE THAN 5 CHILDREN OLDER THAN 2-1/2 YEARS OLD.
2. CONSTRUCTION CLASSIFICATION: TYPE V
   DUE TO THE HVAC'S PLENUM DESIGN, COMPBUSTIBLE MATERIALS (TO INCLUDE WOOD FRAMING/BLOCKING) ARE NOT ALLOWED WITHIN THE SPACE.
3. FIRE PREVENTION SYSTEM: AUTOMATIC SPRINKLER SYSTEM
4. TOTAL SIZES: Main Building: 20,451 SF
   Porch: 57 SF
   Total = 20,508 SF
5. MAXIMUM TRAVEL DISTANCE IS 80 FEET.

PLAN SYMBOL KEY

- ONE HOUR FIRERATED WALL
- FE-1 10-LB, ABC, FIRE EXTINGUISHER WITH CABINET
- FE-2 10-LB, CO2 FIRE EXTINGUISHER WITH CABINET
- FE-3 6-LB, TYPE K FIRE EXTINGUISHER WITH CABINET
- EXIT EXIT SIGN LOCATED ON CEILING ABOVE DOOR
- EXIT SIGN LOCATED ON WALL ABOVE DOOR
- EMERGENCY LIGHTS ON WALL

DESIGNER'S NOTES

1. THE ASSUMED STANDOFF DISTANCE FOR PURPOSES OF ATFP IS 82'. EXTERIOR CONSTRUCTION WALL TYPE SHALL MEET REQUIREMENTS OF UFC 4-010-01.



LIFE SAFETY PLAN

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

PLAN NORTH

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

CDC 6-10 MEDIUM BIM DESIGN			
ROOM	DESCRIPTION	PROGRAM AREA (SF2)	ACTUAL AREA (SF2)
101	VESTIBULE	57 SF	69.8 SF
102	DIRECTOR	197 SF	222.1 SF
103	CORRIDOR 1	515 SF	396.1 SF
104	TRAINING	242 SF	271 SF
105	CLOSET	0 SF	46.6 SF
106	CLOSET	0 SF	14 SF
107	TOILET	60 SF	63.2 SF
108	TOILET	60 SF	61 SF
110	LOUNGE	346 SF	387.1 SF
111	COOLER	69 SF	76.7 SF
112	DRY STORAGE	80 SF	92.2 SF
113	KITCHEN	633 SF	681.4 SF
114	SECONDARY ATRIUM	1376 SF	1018.9 SF
114A	TEACHING DEMO KITCHEN	53 SF	414.2 SF
115	M. TOILET 1	283 SF	311.9 SF
116	F. TOILET 1	283 SF	303.3 SF
117	SUPPLY STORAGE	227 SF	241 SF
118	VIDEO MONITOR	123 SF	192.1 SF
119	MECHANICAL	1123 SF	1241.2 SF
120	COMM. RM	142 SF	135.7 SF
121	STORAGE	242 SF	164.2 SF
122	ELECTRICAL	119 SF	124.9 SF
123	LAUNDRY	116 SF	150.8 SF
124	MULTIPURPOSE ROOM	3452 SF	3126.7 SF
125	STORAGE & ISSUE	723 SF	814.3 SF
126	CORRIDOR 2	515 SF	174 SF
127	F. TOILET 3	68 SF	81.7 SF
128	M. TOILET 3	68 SF	83.3 SF
129	ARTS & SCIENCE ACTIVITY ROOM	719 SF	875.6 SF
130	PERFORMING ARTS ACTIVITY ROOM	760 SF	776.6 SF
131	ATRIUM 3	0 SF	677.8 SF
134	M. TOILET 2	182 SF	210.2 SF
135	F. TOILET 2	182 SF	204.3 SF
138	ACTIVITY ROOM 1	692 SF	685.2 SF
139	HOMEWORK CENTER	534 SF	567 SF
140	COMPUTER LAB	532 SF	558.5 SF
142	JANITOR	60 SF	67.6 SF
143	MAIN ATRIUM	2292 SF	2499.8 SF
144	LOBBY	0 SF	1284 SF
145	SECURE STG.	60 SF	74.8 SF
146	GATHERING AREA	221 SF	288.6 SF
148	RECEP	140 SF	120.1 SF

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: NWS
DATE: 6/2/2014
DRAWN BY: EZ
CKD BY:
SOLICITATION NO.: N/A
SBMT BY:
PLOT DATE: 6/3/2014 1:21:49 PM
CONTRACT NO.: N/A
PLOT SCALE: As indicated
CATEGORY CODE:
SIZE: D 22"X 34"
FILE NAME:

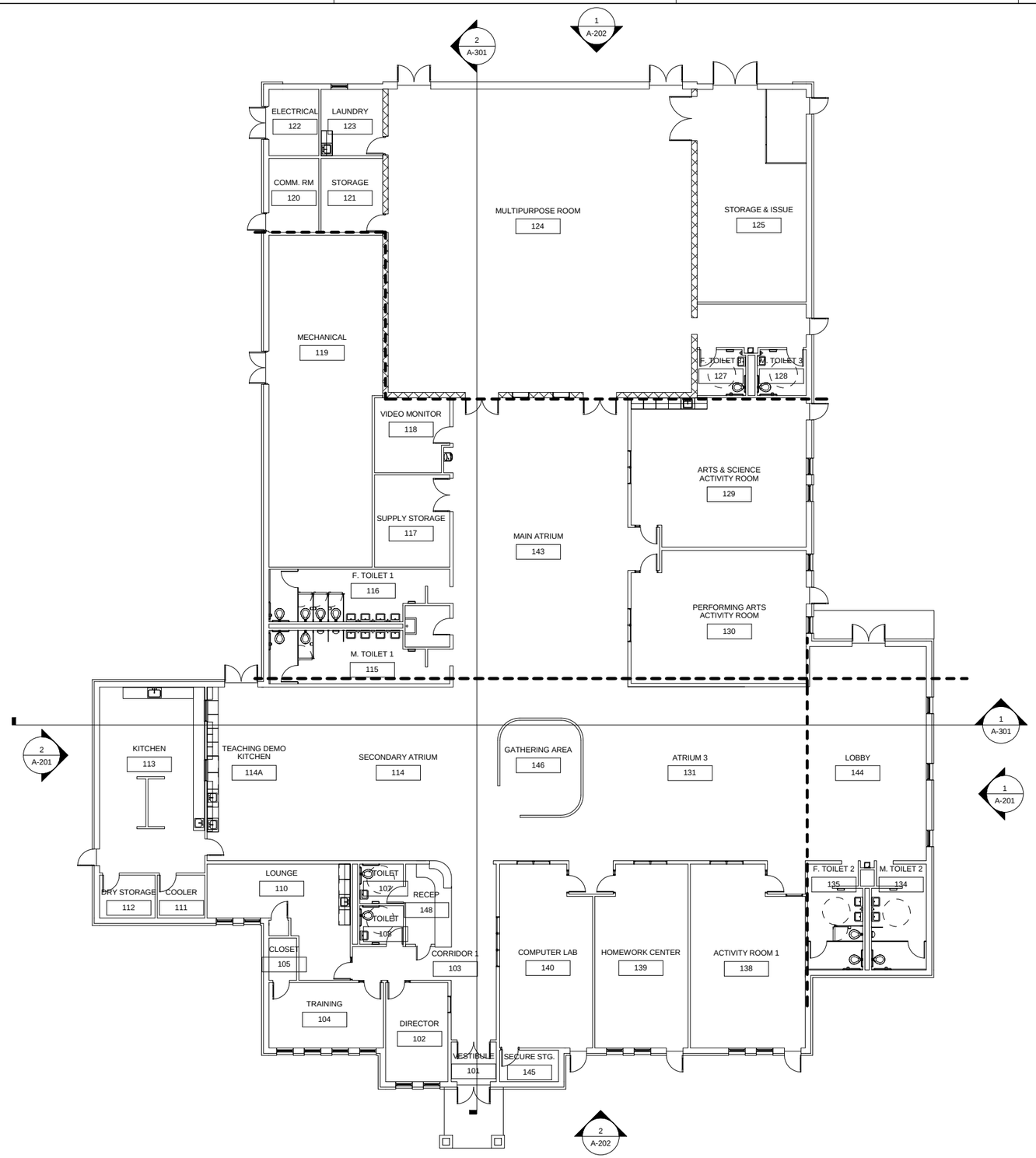
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

LIFE SAFETY PLAN

PLATE REFERENCE NUMBER
A-101

SHEET 25 OF 107



OVERALL FLOOR PLAN

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

ENERGY CONSERVATION NOTES

1. BUILDING THERMAL ENVELOPE SHALL MEET MINIMUM REQUIREMENTS BASED ON THE CLIMATE ZONE.
2. RECOMMENDED MINIMUM THERMAL RESISTANCE (R-VALUE) FOR EXTERIOR WALLS IN CDC 6-10 ZONE 1, 2 USE R-18 OR BETTER.
3. A CONTINUOUS AIR BARRIER SHALL BE PROVIDED THROUGHOUT THE BUILDING THERMAL ENVELOPE.
4. THE AIR BARRIER SHALL BE PERMITTED TO BE LOCATED ON THE INSIDE OR OUTSIDE OF THE BUILDING ENVELOPE.
5. AIR BARRIERS ARE NOT REQUIRED IN BUILDINGS LOCATED IN CLIMATE ZONES 1, 2, AND 3.
6. THE AIR BARRIER SHALL BE CONTINUOUS FOR ASSEMBLIES THAT ARE THE THERMAL ENVELOPE OF THE BUILDING AND ACROSS THE JOINTS AND ASSEMBLIES.
7. AIR BARRIER JOINTS AND SEAMS SHALL BE SEALED, INCLUDING SEALING TRANSITIONS IN PLACES AND CHANGES IN MATERIALS.
8. BREAKS OR JOINTS IN THE AIR BARRIER SHALL BE SEALED.

N

PLAN NORTH

16 8 0 16

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

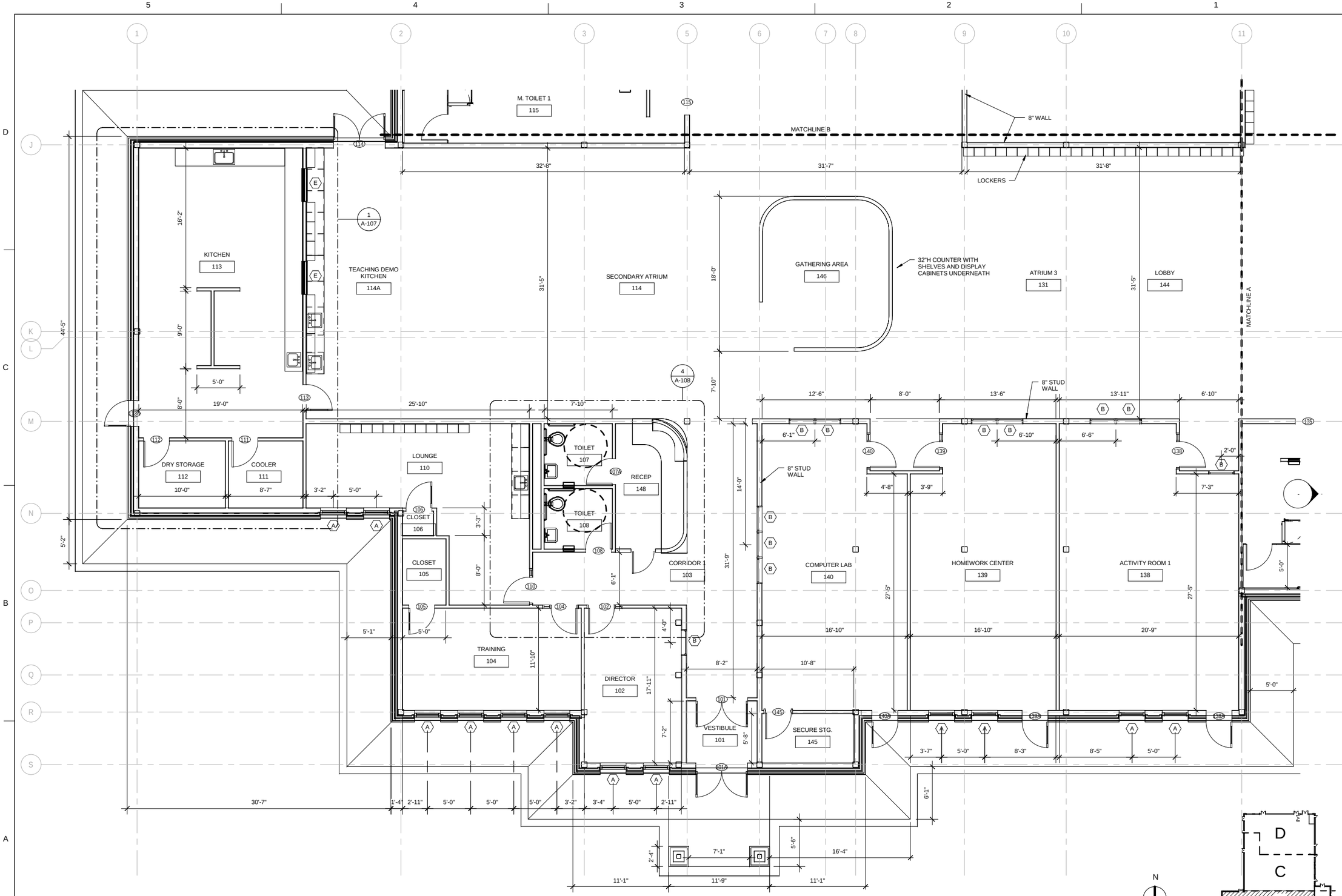
DESIGN BY: UNK
DATE: JUNE 2014
DRAWN BY: EZ
CKD BY:
SQUICITATION NO.: N/A
SBMT BY:
PLOT DATE: 6/3/2014 1:21:50 PM
CONTRACT NO.: N/A
PLOT SCALE: 3/32" = 1'-0"
CATEGORY CODE:
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

OVERALL FLOOR PLAN

PLATE REFERENCE NUMBER
A-102
SHEET 26 OF 107



GENERAL NOTES

1. ALL DIMENSIONS ARE FROM OUTSIDE STUD TO OUTSIDE STUD.

ENLARGED FLOOR PLAN AREA-A

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

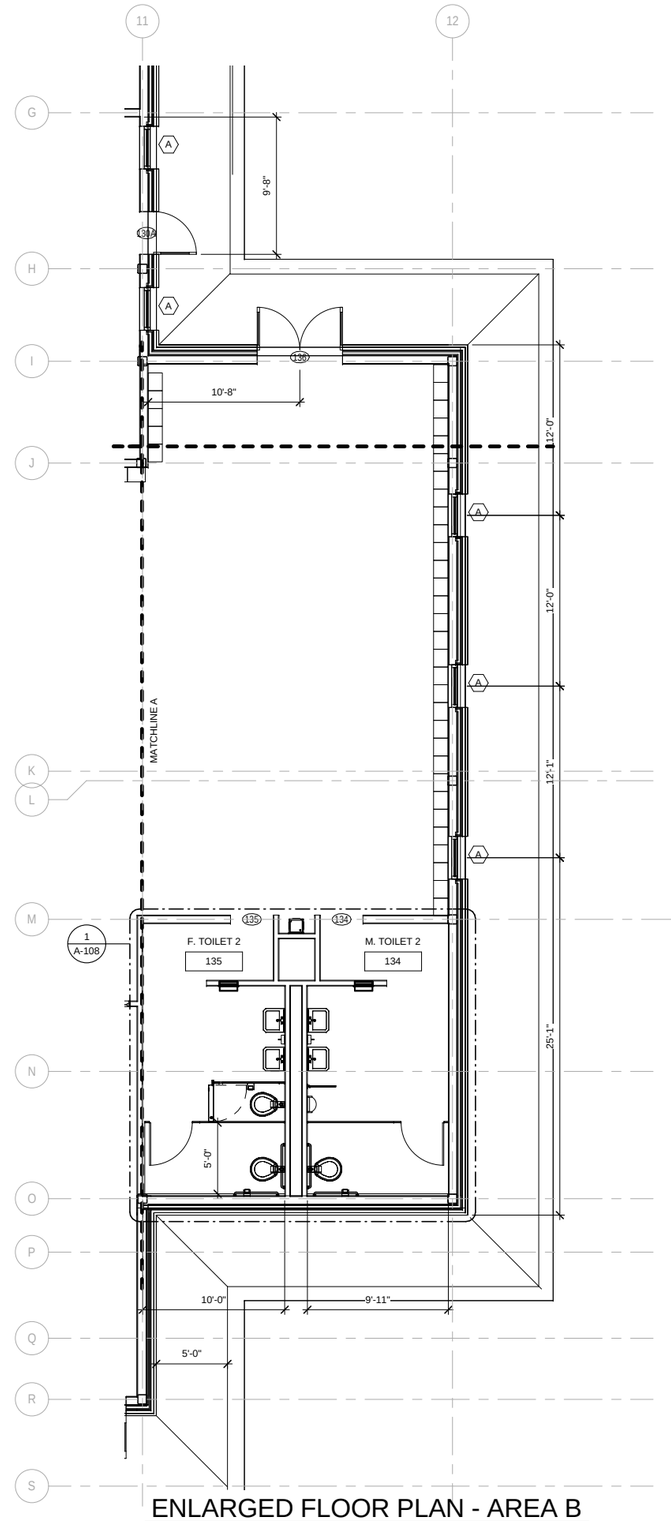
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
DESIGN BY: NBS
DRAWN BY: EZ
CKD BY:
SBMT BY:
PLOT DATE: 6/3/2014 1:21:51 PM
PLOT SCALE: As indicated
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

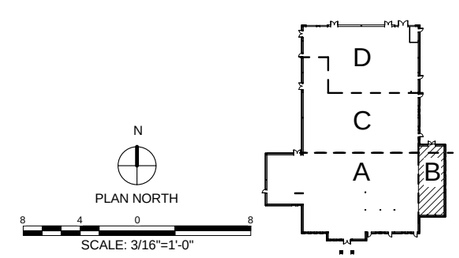
ENLARGED FLOOR PLAN - AREA A

PLATE REFERENCE NUMBER
A-103
SHEET 27 OF 107



ENLARGED FLOOR PLAN - AREA B

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



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

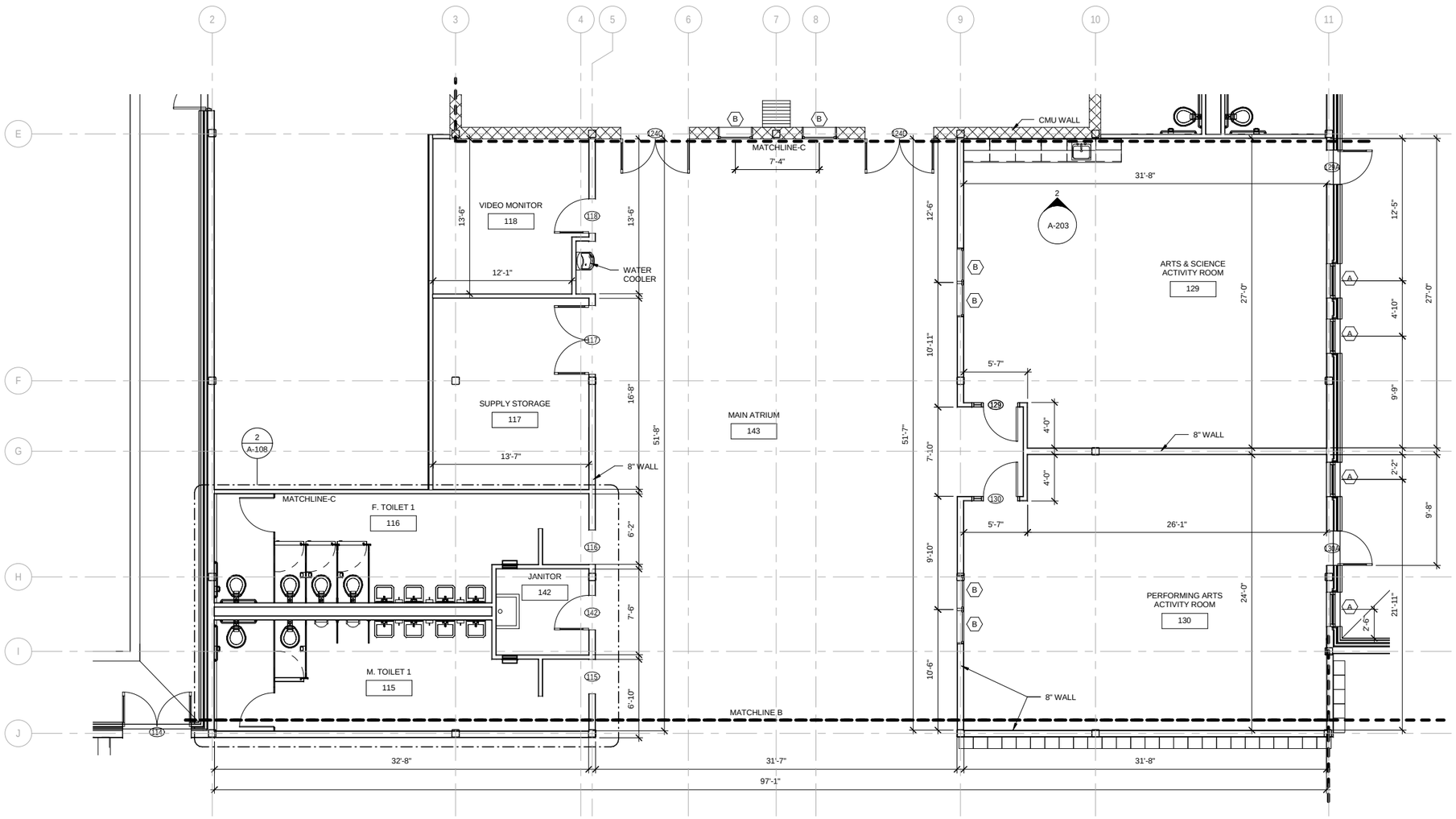
DESIGN BY: N/A
DRAWN BY: EZ
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/2/2014 1:21:52 PM
PLOT SCALE: As indicated
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

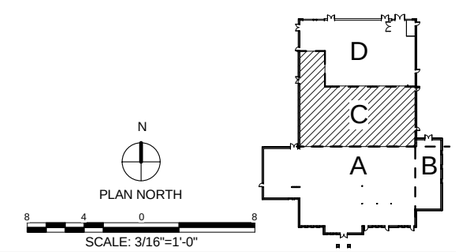
ENLARGED FLOOR PLAN - AREA B

PLATE REFERENCE NUMBER
A-104
SHEET 28 OF 107



ENLARGED FLOOR PLAN - AREA C

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



N

PLAN NORTH

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: NAS
DRAWN BY: EZ
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/3/2014 1:21:53 PM
PLOT SCALE: As indicated
SIZE: D 22" x 34"
FILE NAME:

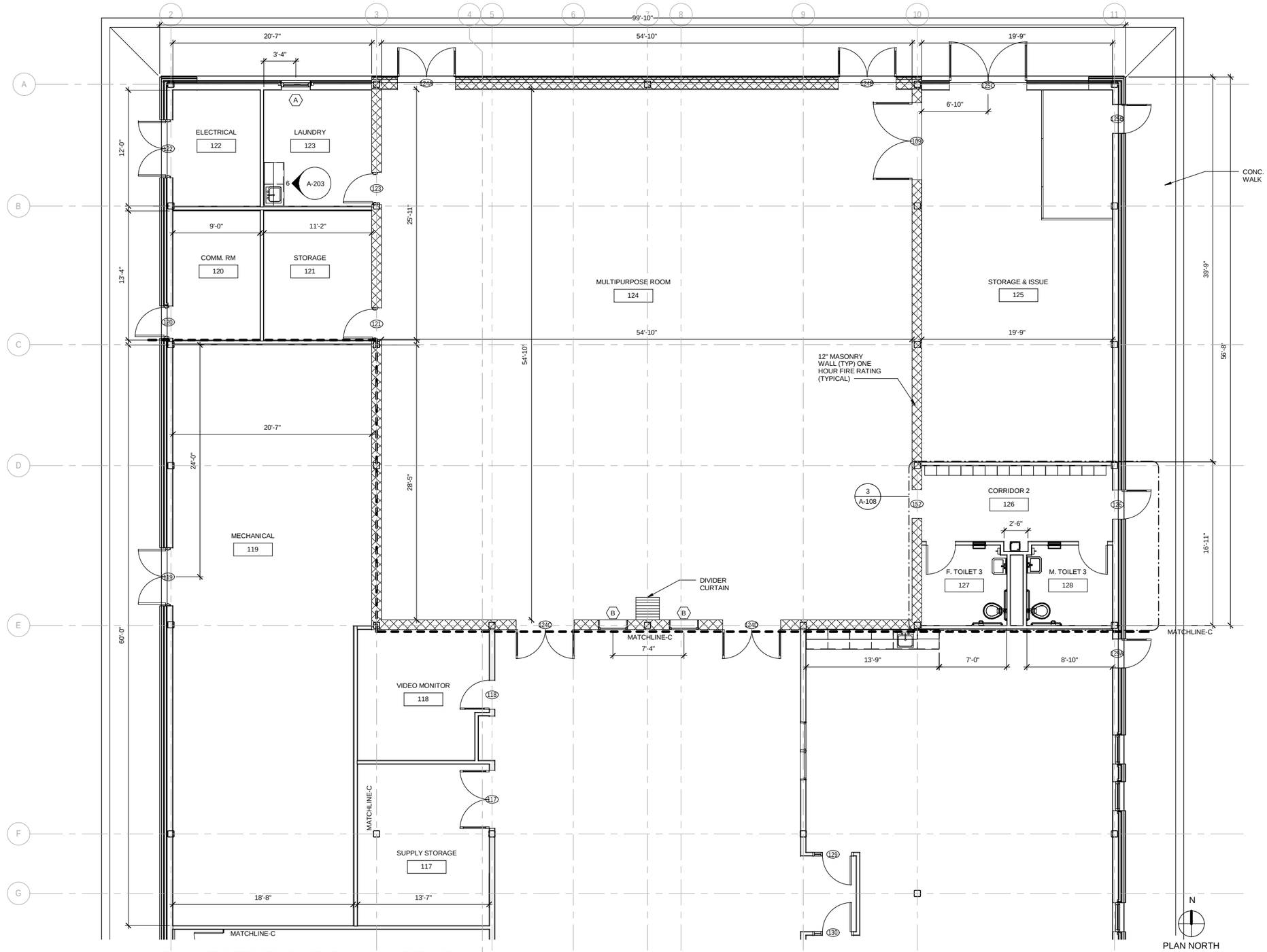
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

ENLARGED FLOOR PLAN - AREA C

PLATE REFERENCE NUMBER
A-105

SHEET 29 OF 107



ENLARGED FLOOR PLAN - AREA D

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

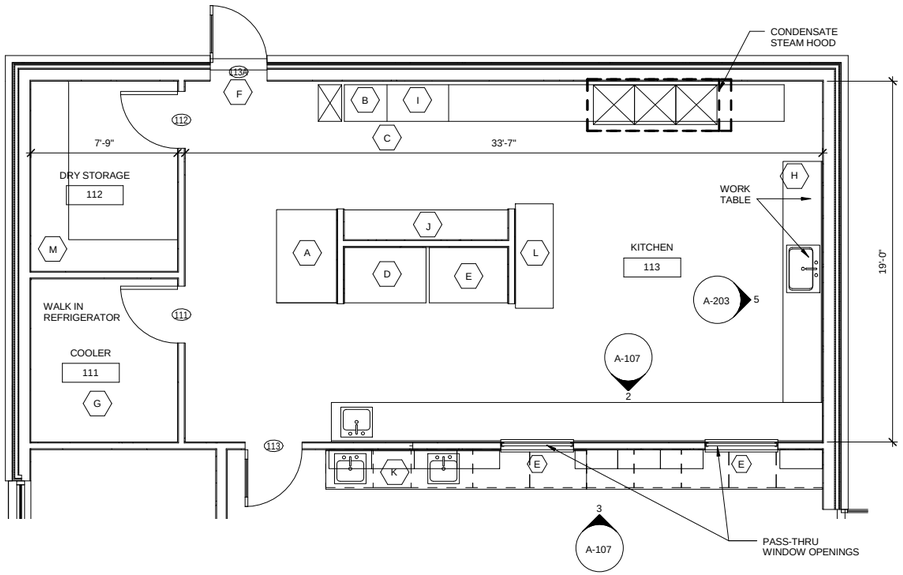
DESIGN BY: MAS
DRAWN BY: EZ
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/3/2014 1:21:54 PM
PLOT SCALE: As indicated
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

ENLARGED FLOOR PLAN - AREA D

PLATE REFERENCE NUMBER
A-106
SHEET 30 OF 107



1 ENLARGED KITCHEN PLAN
A-103 SCALE: 1/4" = 1'-0"

N
PLAN NORTH

4 3 2 1 0 4 8
SCALE: 1/4"=1'-0"

KITCHEN EQUIPMENT SCHEDULE:

A — FROZEN FOOD CABINET, MECHANICAL REFRIGERATED, COMMERCIAL, SELF-CONTAINED (REACH-IN) FREEZER NSN:4110-00-370-5374
ELECTRIC: 115V, 1PH, 60HZ
DIMENSIONS: 59"W X 38"D X 85"H

B — DISH TABLE, SOILED, STAINLESS STEEL (SS)
STANDARD FEATURES: INTEGRAL SCRAPING TROUGH 6"W X 1-1/2"D AT WATER INLET ENDS. 5"D AT DISPOSAL SINK END (APPROCIMATE DIM.)
DISPOSAL SINK 16" X 20" X 7"D (APPROXIMATE). VACUUM BREAKER HOLES AND HOLES FOR PRE-RINSE ASSEMBLY PROVIDED THROUGH BACKSPLASH.

C — SPRAY ASSEMBLY, PRE-RINSE, WALL-MOUNTED, GOOSENECK

D — OVEN, BAKING AND ROASTING, CONVECTION,
ELECTRIC: 208V, 60HZ, 3 PH
NSN: 7310-00-320-9829
DIMENSIONS: 40"W X 39"D X 65"H

E — RANGE, ELECTRIC, COMMERCIAL, HOT TOP
ELECTRIC: 208V, 60HZ, 3 PH, 24KW
NSN: 7310-01-034-0169
DIMENSIONS: 36"W X 38"D X 36"H

F — AIR CURTAIN, FLY CONTROL SIZED TO COVER COMPLETE WIDTH OF DOOR

G — WALK-IN REFRIGERATOR
DIMENSIONS: 5'-10"W X 7'-9"D X 7'-1 1/2" H
STANDARD FEATURES: INDOOR COOLER, WITHOUT FLOOR
FINISH: STAINLESS STEEL. ENTRANCE DOOR 36"W X 77"H WITH DOOR CLOSER, VAPOR LIGHT
REFRIGERATOR: +35° F HOLDING TEMPERATURE, TPR, OUTDOOR, FULL HERMETIC AIR COOLED, WEATHER COVER, 0075MED3/4HP, LOW AMP CONTROL VOLTAGE REMOTE CONDENSING UNIT LOCATION (SERVICE YARD)

H — ICE MACHINE (UNDER COUNTER). STANDARD FEATURES: HALF CUBE, AIR COOLED, 1/2HP. FINISH: STAINLESS STEEL

I — DISHWASHER, DOOR TYPE, STAINLESS STEEL WITH BOOSTER HEATER AND STAINLESS STEEL COUNTERTOPS SIZED TO FIT,
DIMENSIONS: 67 1/2" H X 29 1/2"D X 41"W

J — OVERHEAD RACK SHELF, FLAT, STAINLESS STEEL (4 EACH)
DIMENSIONS: 96"L X 18"W

K — UNDER COUNTER REFRIGERATOR
DIMENSIONS: 23"W X 23 1/2"D X 331/2"H

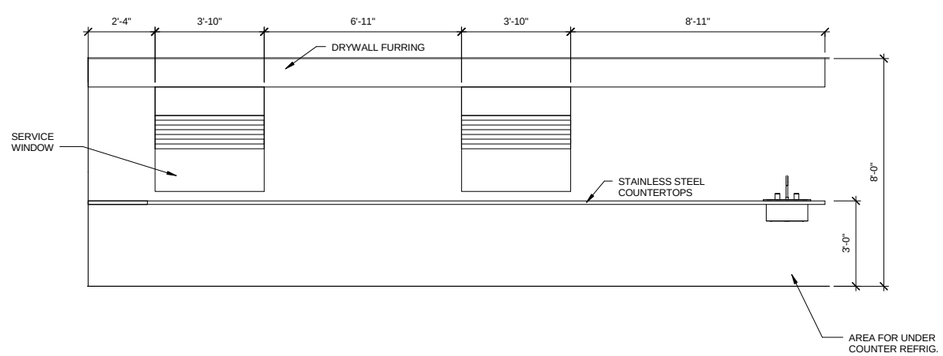
L — PREP TABLE, STIANLESS STEEL
DIMENSIONS: 66"W X 24"D X 36"H
STANDARD FEATURES: FOUR 5" DIAMETER NON-MARKING BALL-BEARING STEM-TYPE CASTERS, TWO CASTERS WITH LOCKING BRAKES
20" X 20" X 5"D STAINLESS STEEL DRAWER WITH REMOVABLE INSET.

M — SHELVING, DRY STORAGE

-ALL DIMENSIONS ARE WIDTH, LENGTH, AND HEIGHT
-ALL EQUIPMENT MAY NOT BE SHOWN ON THE PLAN BUT CONTRACTOR SHALL INCLUDE ALL EQUIPMENT ON THE CONDENSED EQUIPMENT LIST IN COST ESTIMATE.

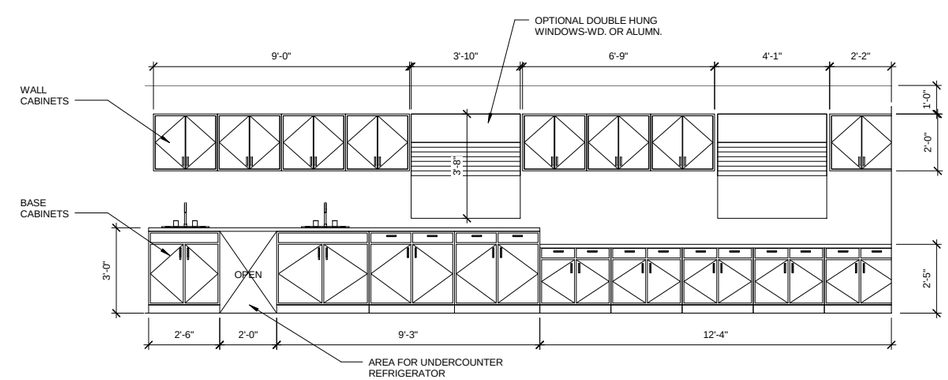
CONDENSED EQUIPMENT LIST-1 EA. OF THE FOLLOWING

1. AIR CURTAIN, UNHEATED
2. DISH TABLE CLEAN
3. DISH TABLE SOILED:SS
4. DISHWASHER UNDER COUNTER
5. DISPOSAL:1.5 HP, WASTE & PRE-RINSE
6. EXHAUST HOOD
7. FREEZER REACH-IN, 59" X 38" X 85"
8. ICE MACHINE UNDER COUNTER
9. OVEN ELECTRIC, 40" X 39" X 65"
10. REFRIGERATOR, UNDER THE COUNTER
11. RANGE ELECTRIC, 36" X 38" X 36"
12. REFRIGERATOR, SIDE BY SIDE W/ ICE MAKER
13. SHELF, 18" X 96"
14. SHELVING, DRY STORAGE
15. SINK, 3 COMPARTMENT, 10'-0" X 2'-6" X 2'-10"
16. SINK, HAND: FOOD PREP.
17. SPRAY ASSEMBLY, PRE-RINSE: GOOSENECK
18. TABLE, WORK: W/ DOUBLE SINKS, 30" X 72" X 36"
19. REFRIGERATOR, WALK-IN, 5'-10" X 7'-9" X 7'-1"



2 ELEVATION - KITCHEN
A-107 SCALE: 3/8" = 1'-0"

4 2 0 4
SCALE: 3/8"=1'-0"



3 ELEVATION - DEMO KITCHEN
A-105 SCALE: 3/8" = 1'-0"

4 2 0 4
SCALE: 3/8"=1'-0"

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

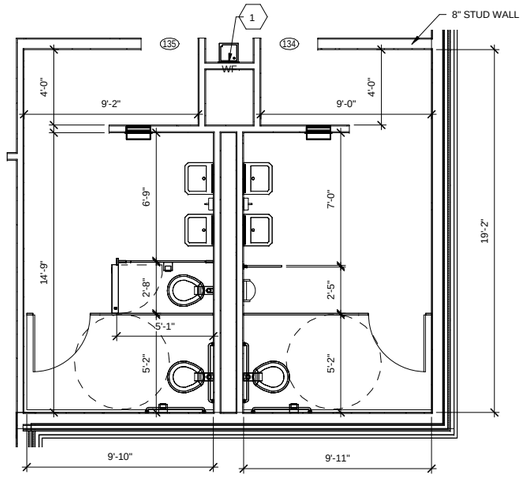
DESIGN BY: NWS
DRAWN BY: EZ
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOL/CITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/3/2014 1:21:55 PM
PLOT SCALE: As indicated
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

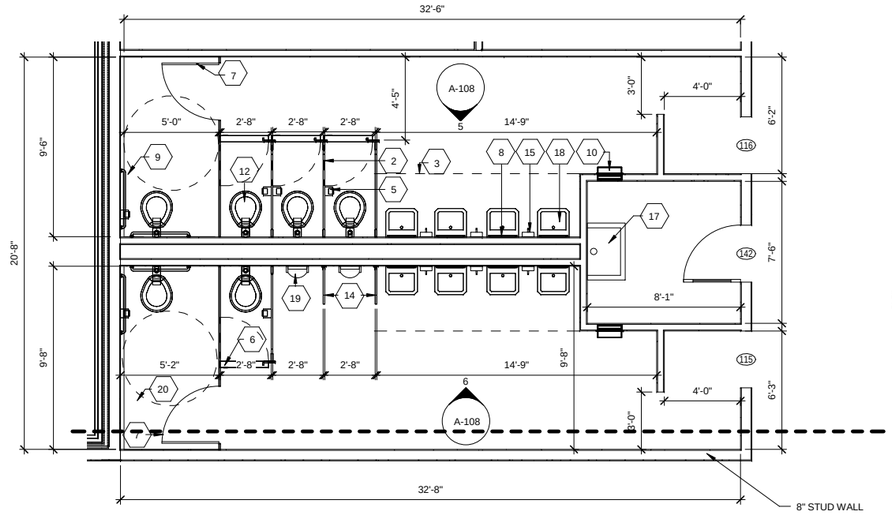
ENLARGED KITCHEN PLAN AND ELEVATIONS

PLATE REFERENCE NUMBER
A-107
SHEET 31 OF 107

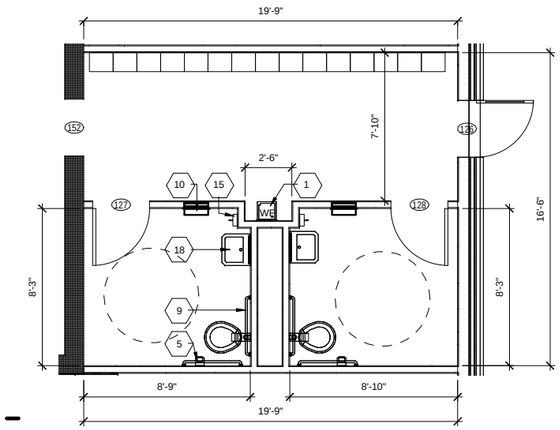


1 ENLARGED FLOOR PLAN-TOILETS 134 & 135
A-104 SCALE: 1/4" = 1'-0"

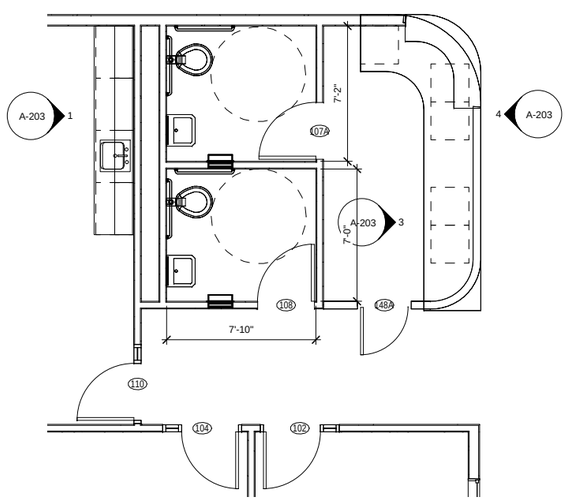
SEE PLAN 2, THIS SHEET, FOR TYPICAL KEY NOTES.



2 ENLARGED FLOOR PLAN-TOILETS 115, 116, & JANITOR 142
A-104 SCALE: 1/4" = 1'-0"

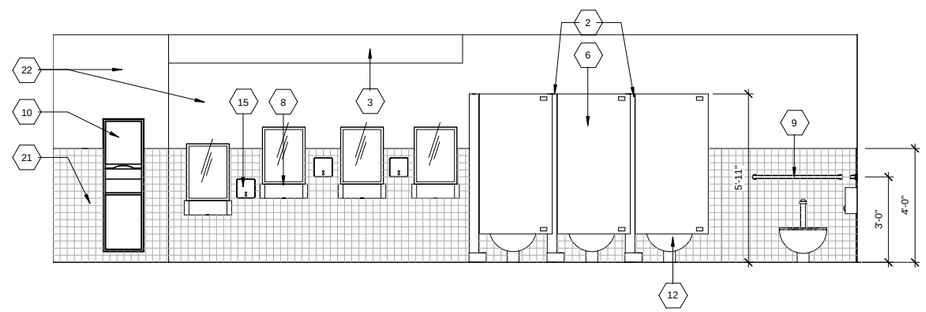


3 ENLARGED FLOOR PLAN-TOILET 127 & 128
A-103 SCALE: 1/4" = 1'-0"

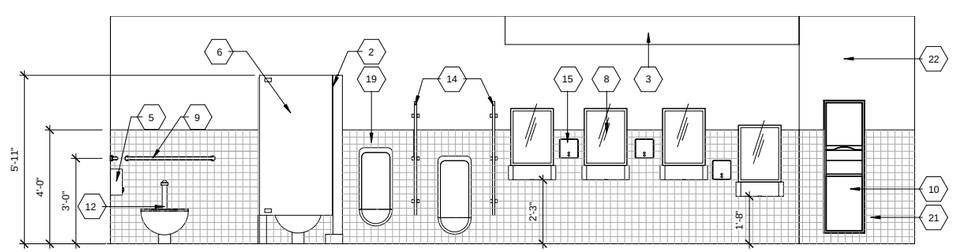


4 ENLARGED FLOOR PLAN-TOILET & RECEPTION
A-103 SCALE: 1/4" = 1'-0"

SEE PLAN 3, THIS SHEET, FOR TYPICAL KEY NOTES.



5 ELEVATION-WOMEN TOILET ROOM
A-108 SCALE: 3/8" = 1'-0"



6 ELEVATION-MEN TOILET ROOM
A-108 SCALE: 3/8" = 1'-0"

KEYED NOTES:

1. DRINKING FOUNTAIN
2. SOLID PLASTIC TOILET PARTITIONS
3. LINE OF OVERHEAD CEILING FURRING ABOVE
4. SLOPE OF FLOOR TO FLOOR DRAIN
5. ROLL TISSUE HOLDER
6. STANDARD 24" PARTITION DOOR
7. HANDICAPPED PARTITION DOOR WITH A MIN. CLEARANCE OF 32"
8. 18" X 30" MIRROR
9. STAINLESS STEEL GRAB BAR
10. PAPER TOWEL DISPENSER
11. FLOOR DRAIN-SEE MECHANICAL
12. WATER CLOSET
13. 18" X 30" MIRROR-MOUNT 40" AFF.
14. URINAL SCREEN
15. SOAP DISPENSER
16. 12" MASONRY WALL
17. JANITOR SINK
18. LAVATORY
19. URINAL
20. 5'-0" WHEELCHAIR RADIUS
21. CERAMIC TILE WALL FINISH
22. DRYWALL FINISH

4 3 2 1 0 4 8
SCALE: 1/4"=1'-0"

4 2 0 4
SCALE: 3/8"=1'-0"

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

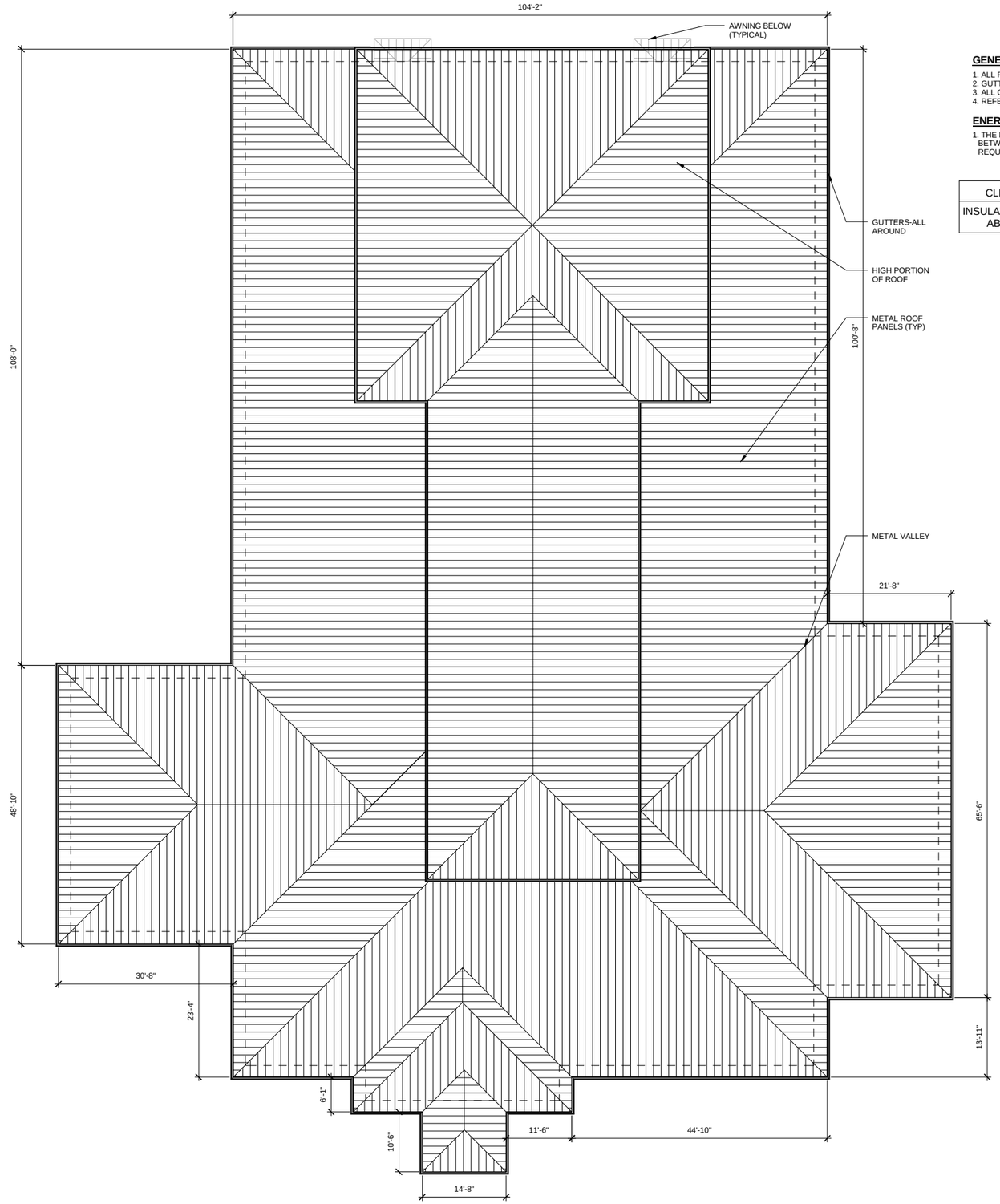
DESIGN BY: NAVFAC
DRAWN BY: EZ
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/3/2014 1:21:57 PM
PLOT SCALE: As indicated
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

ENLARGED TOILET PLANS

PLATE REFERENCE NUMBER
A-108
SHEET 32 OF 107



ROOF PLAN

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

GENERAL NOTES

1. ALL ROOF SLOPES ARE 4:12.
2. GUTTERS AND DOWN SPOUTS SHALL BE SIZES AS REGIONAL BUILDING CODES MANDATE.
3. ALL GUTTERS AND DOWN SPOUTS SHALL BE CONNECTED TO AN UNDERGROUND DRAINAGE SYSTEM.
4. REFER TO ELECTRICAL DRAWINGS FOR APPLICABLE LIGHTING PROTECTION REQUIREMENTS.

ENERGY CONSERVATION NOTES

1. THE MINIMUM THERMAL RESISTANCE (R-VALUE) OF THE INSULATING MATERIAL INSTALLED EITHER BETWEEN THE ROOF FRAMING OR CONTINUOUSLY ON THE ROOF ASSEMBLY SHALL MEET MINIMUM REQUIREMENTS BASED ON CLIMATE ZONE.

CLIMATE ZONE	1	2	3	4	5	6	7	8
INSULATION ENTIRELY ABOVE DECK	R-20ci	R-20ci	R-20ci	R-25ci	R-25ci	R-30ci	R-35ci	R-35ci

N

PLAN NORTH

16 8 0 16

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: NWA
DRAWN BY: EZ
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/2/2014 1:21:58 PM
PLOT SCALE: As indicated
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

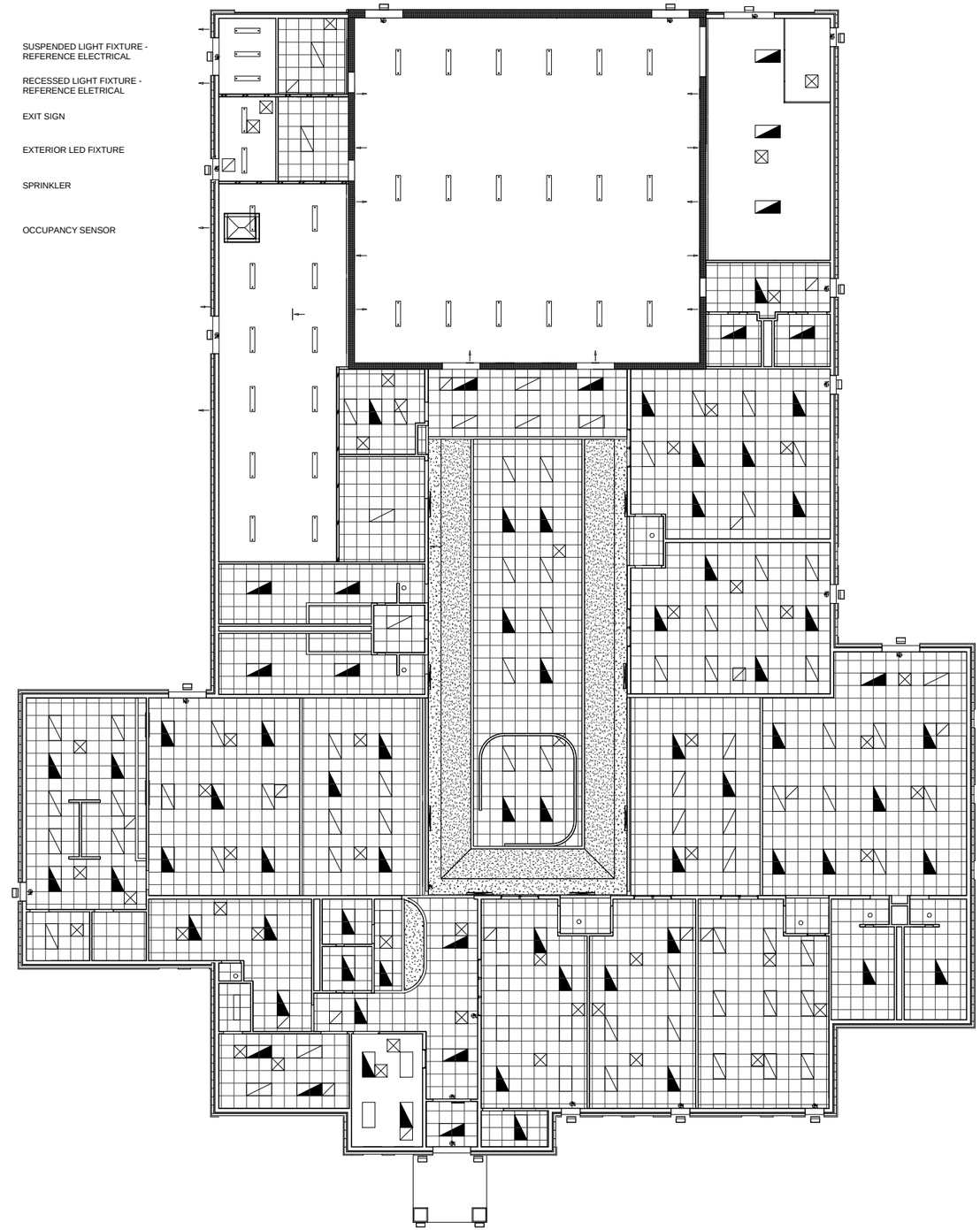
CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

ROOF PLAN

PLATE REFERENCE NUMBER
A-109
SHEET 33 OF 107

SYMBOL LEGEND

- 2X2 CEILING GRID
- GWB CEILING
- EXPOSED CONSTRUCTION
- RETURN AIR DIFFUSER - REFERENCE MECHANICAL
- SUPPLY AIR DIFFUSER - REFERENCE MECHANICAL
- CEILING ACCESS PANEL
- 2X4 EMERGENCY LIGHTING FIXTURE
- 2X4 LIGHTING FIXTURE
- 1X4 LIGHTING FIXTURE
- SUSPENDED LIGHT FIXTURE - REFERENCE ELECTRICAL
- RECESSED LIGHT FIXTURE - REFERENCE ELETRICAL
- EXIT SIGN
- EXTERIOR LED FIXTURE
- S P — SPRINKLER
- OCCUPANCY SENSOR



REFLECTED CEILING PLAN

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

ENERGY CONSERVATION NOTES

1. REFER TO ELECTRICAL DESIGN FOR ENERGY CONSERVATION MEASURES.

N

PLAN NORTH

16 8 0 16

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

DESIGN BY: N/A
DRAWN BY: EZ
SBMT BY:
CKD BY:
PLOT SCALE: As indicated
PLOT DATE: 6/2/2014 1:21:59 PM
SIZE: D 22" X 34"
FILE NAME:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:

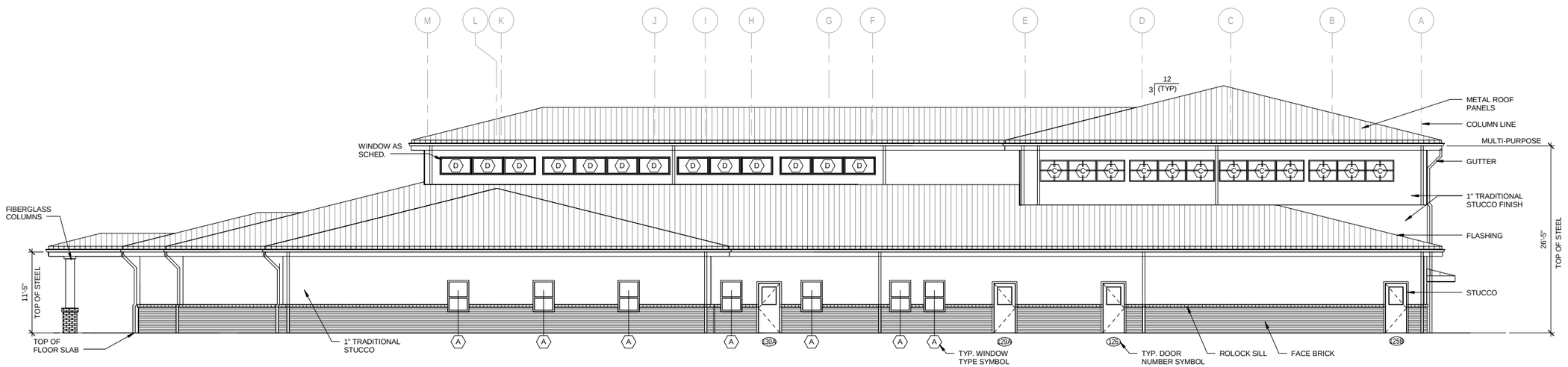
CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

REFLECTED CEILING PLAN

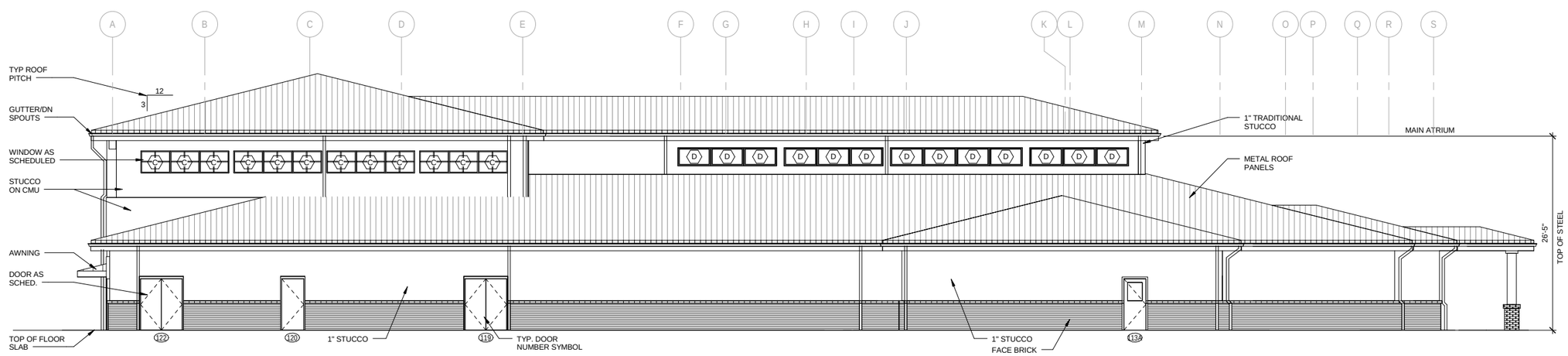
PLATE REFERENCE NUMBER
A-110
SHEET 34 OF 107

GENERAL NOTES:

1. SEE SHEET A-502 FOR CLERESTORY WINDOW ELEVATIONS.
2. SEE SHEET A-502 FOR TYPICAL EXTERIOR AND INTERIOR WINDOW TYPES.



1 EAST ELEVATION
A-102 SCALE: 1/8" = 1'-0"



2 WEST ELEVATION
A-102 SCALE: 1/8" = 1'-0"

N
PLAN NORTH

8 6 4 2 0 8 16
SCALE: 1/8"=1'-0"

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: NEAS
DRAWN BY: EZ
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/3/2014 1:22:04 PM
PLOT SCALE: 1/8" = 1'-0"
SIZE: D 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

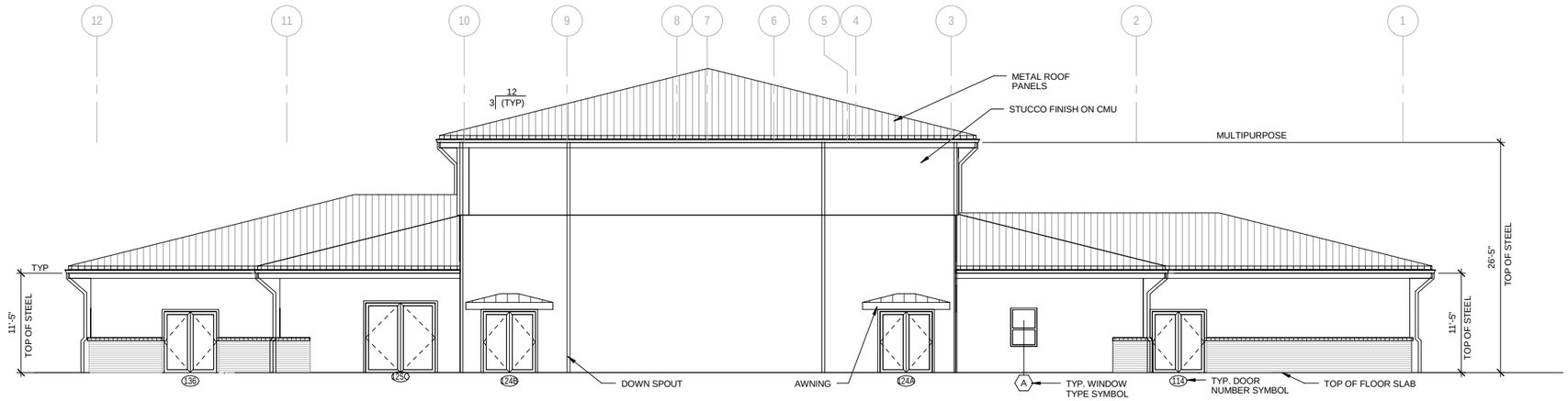
CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

EXTERIOR ELEVATIONS

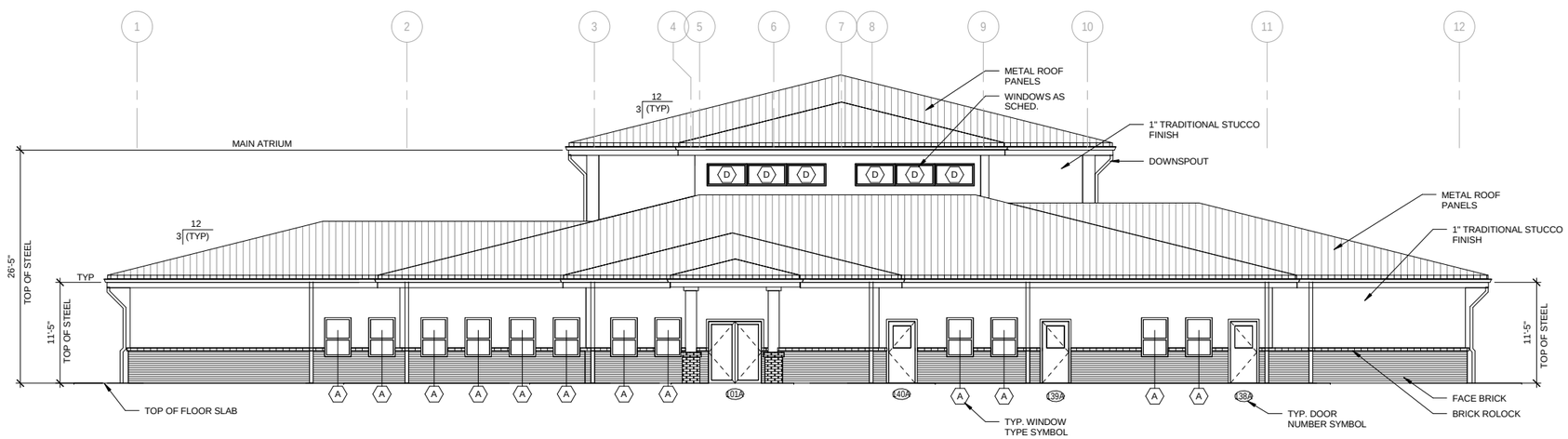
PLATE REFERENCE NUMBER
A-201
SHEET 35 OF 107

GENERAL NOTES:

1. SEE SHEET A-601 FOR CLERESTORY WINDOW ELEVATIONS.
2. SEE SHEET A-601 FOR TYPICAL EXTERIOR AND INTERIOR WINDOW TYPES.



1 NORTH ELEVATION
A-102 SCALE: 1/8" = 1'-0"



2 SOUTH ELEVATION
A-102 SCALE: 1/8" = 1'-0"

N
PLAN NORTH
8 6 4 2 0 8 16
SCALE: 1/8"=1'-0"

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

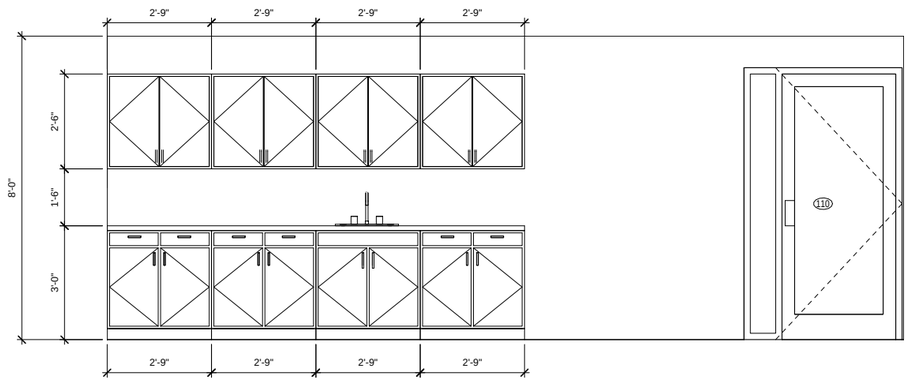
DESIGN BY: NKS
DRAWN BY: EZ
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/3/2014 1:22:06 PM
PLOT SCALE: 1/8" = 1'-0"
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

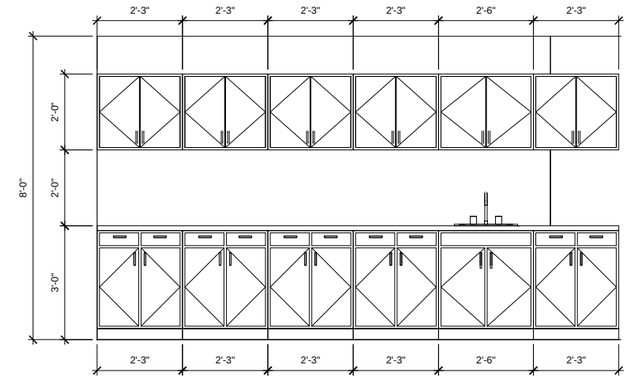
CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

EXTERIOR ELEVATIONS

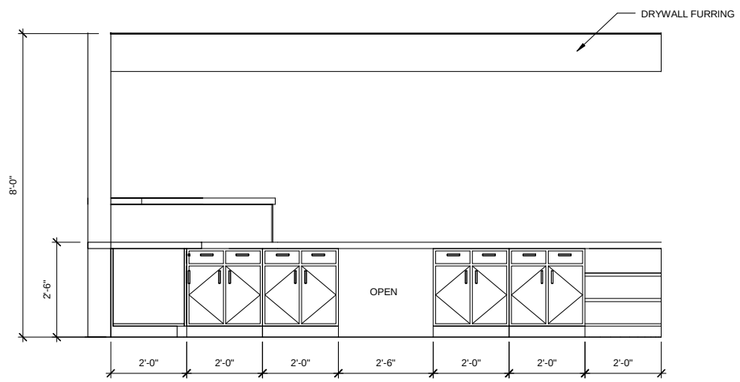
PLATE REFERENCE NUMBER
A-202
SHEET 36 OF 107



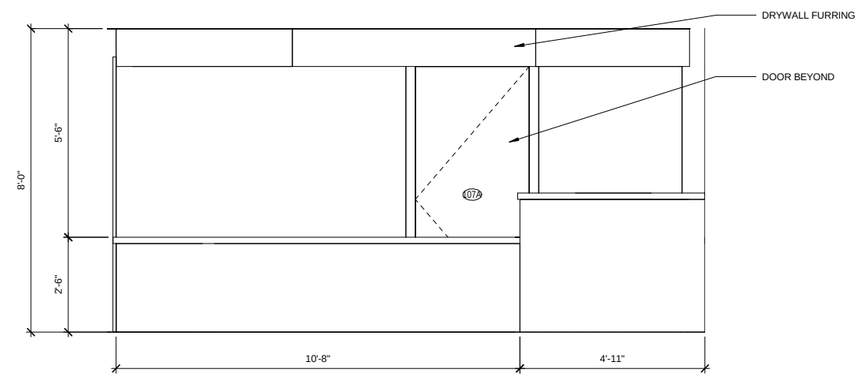
1 A-108 ELEVATION-STAFF LOUNGE
SCALE: 1/2" = 1'-0"



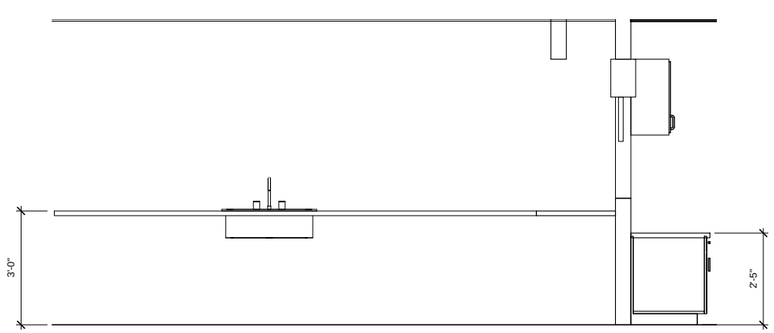
2 A-105 ELEVATION-ARTS & SCIENCES
SCALE: 1/2" = 1'-0"



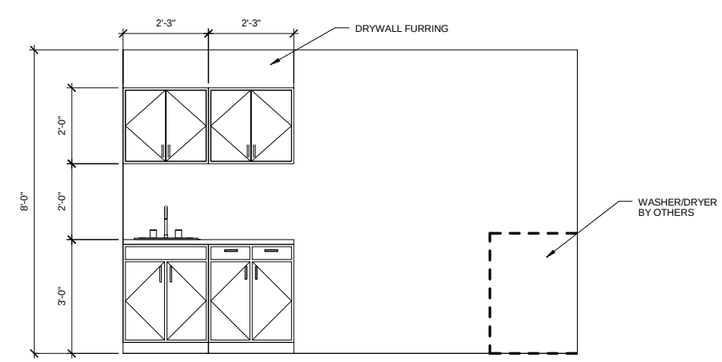
3 A-108 ELEVATION-RECEPTION COUNTER A
SCALE: 1/2" = 1'-0"



4 A-108 ELEVATION-RECEPTION COUNTER B
SCALE: 1/2" = 1'-0"



5 A-107 ELEVATION-KITCHEN CABINETS
SCALE: 1/2" = 1'-0"



6 A-106 ELEVATION-LAUNDRY ROOM
SCALE: 1/2" = 1'-0"

2 1 0 2 4
SCALE: 1/2"=1'-0"

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: MAK
DRAWN BY: EZ
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/3/2014 12:20:07 PM
PLOT SCALE: 1/2" = 1'-0"
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

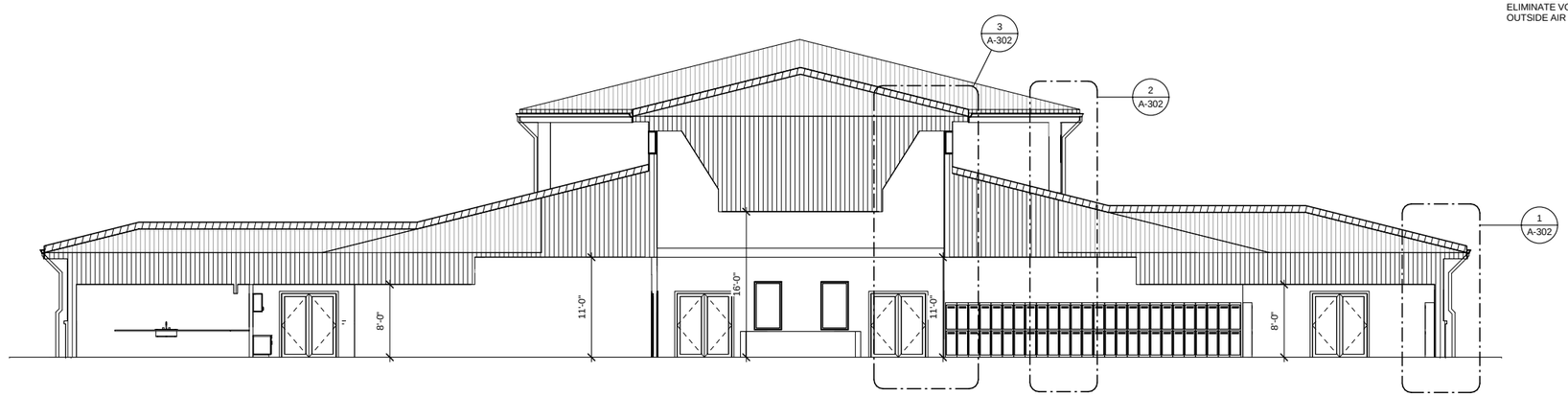
CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

INTERIOR ELEVATIONS

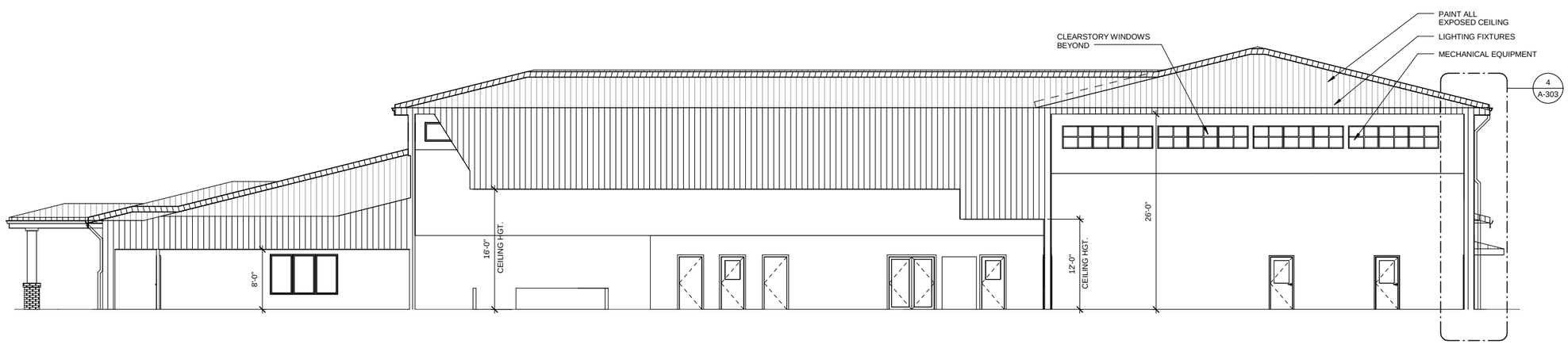
PLATE REFERENCE NUMBER
A-203
SHEET 37 OF 107

GENERAL NOTES

1. PROVIDE SEAL AT BUILDING FACADE.
2. DESIGN SHALL COMPLY WITH ECB 2012-16 BUILDING AIR TIGHTNESS AND AIR BARRIER CONTINUITY REQUIREMENTS.
3. ALL ROOF WALL CONNECTIONS SHALL BE SEALED FOR AIR LOSS.
4. ALL SIDE WALL CONNECTIONS SHALL BE SEALED FOR AIR LOSS.
5. PROVIDE CAULK, FOAM, AND BATT INSULATION WHERE REQUIRED TO ELIMINATE VOIDS IN THE BUILDING ENVELOPE AND REDUCE INFILTRATION OF OUTSIDE AIR OR EXFILTRATION OF CONDITIONED AIR.



1 A-101 BUILDING SECTION
SCALE: 1/8" = 1'-0"



2 A-102 BUILDING SECTION
SCALE: 1/8" = 1'-0"

8 6 4 2 0 8 16
SCALE: 1/8"=1'-0"

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: MAS
DRAWN BY: EZ
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/3/2014 1:22:08 PM
PLOT SCALE: 1/8" = 1'-0"
SIZE: D 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

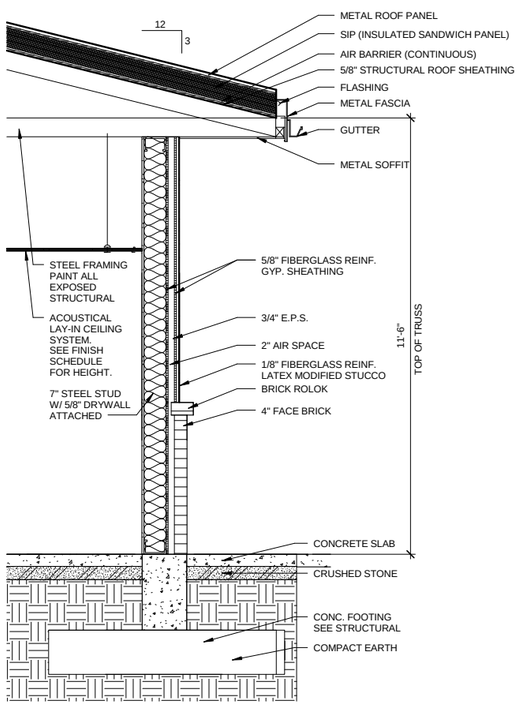
CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

BUILDING SECTIONS

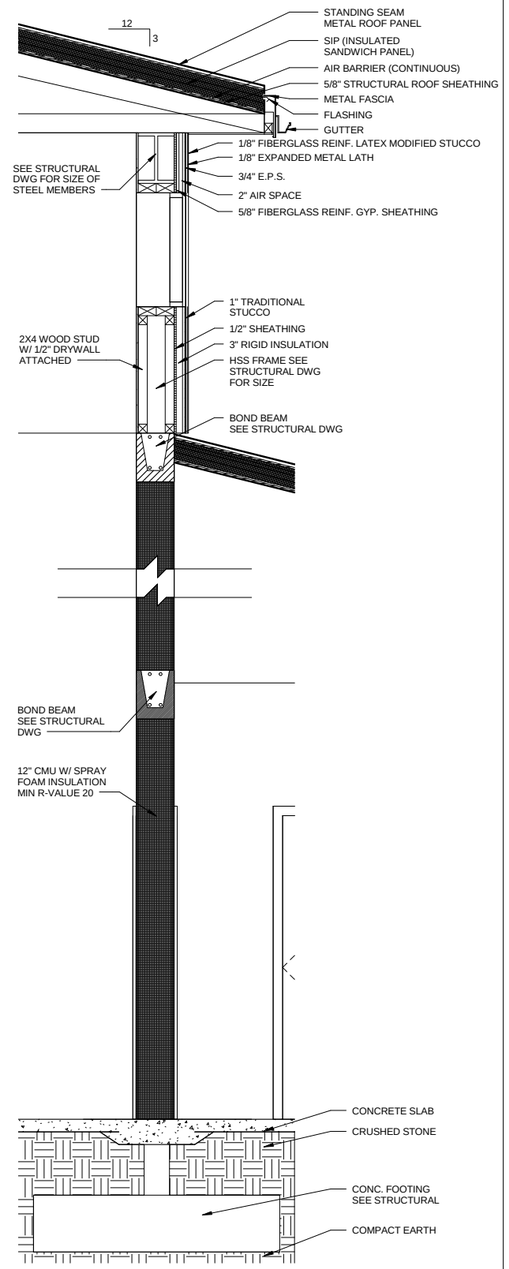
PLATE REFERENCE NUMBER
A-301
SHEET 38 OF 107

ENERGY CONSERVATION NOTES

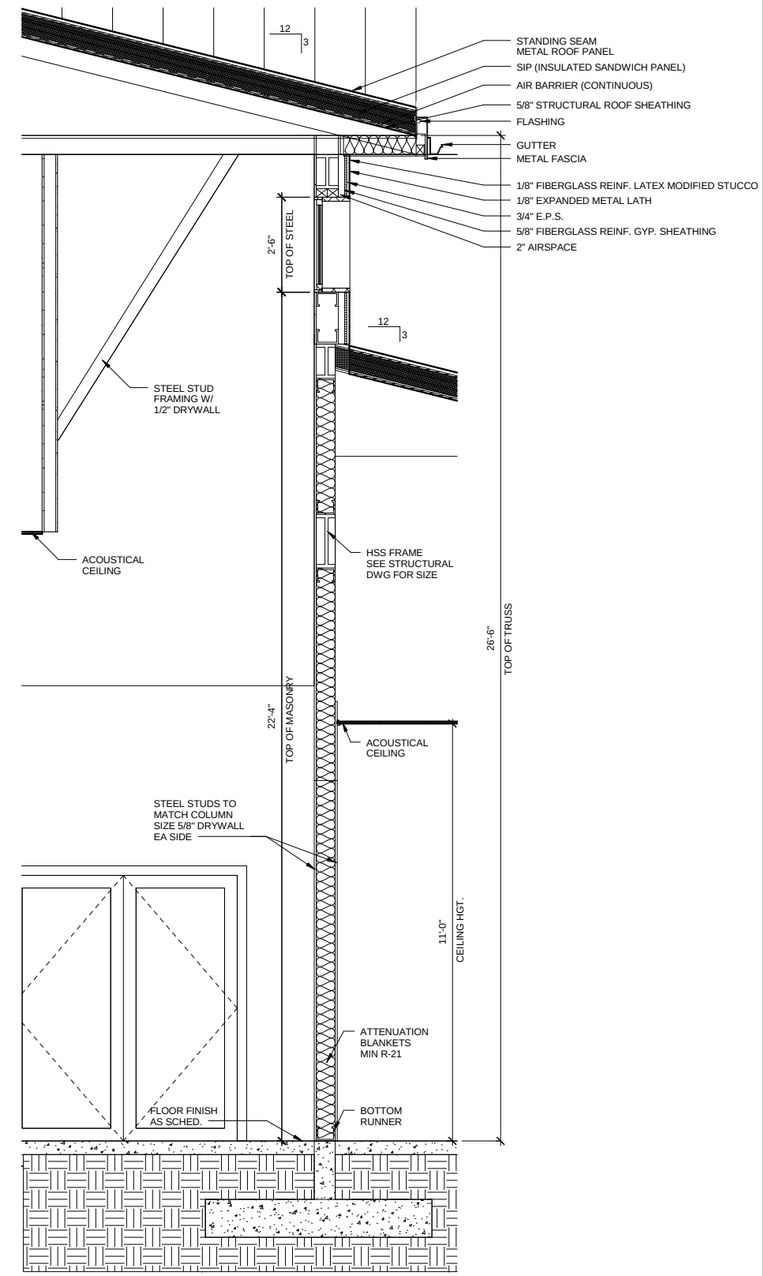
1. ALL PENETRATIONS OF AIR BARRIER SHALL BE CAULKED, GASKETED, AND COMPATIBLE WITH CONSTRUCTION MATERIALS AND LOCATION.
2. PROPOSED WALL ASSEMBLY MIN R VALUE: 22



1 A-301 SECTION-EXTERIOR WALL
SCALE: 1/2" = 1'-0"



2 A-301 SECTION-WAREHOUSE SIDE WALL
SCALE: 1/2" = 1'-0"



3 A-301 SECTION-CLERESTORY WALL
SCALE: 1/2" = 1'-0"

2 1 0 2 4
SCALE: 1/2"=1'-0"

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

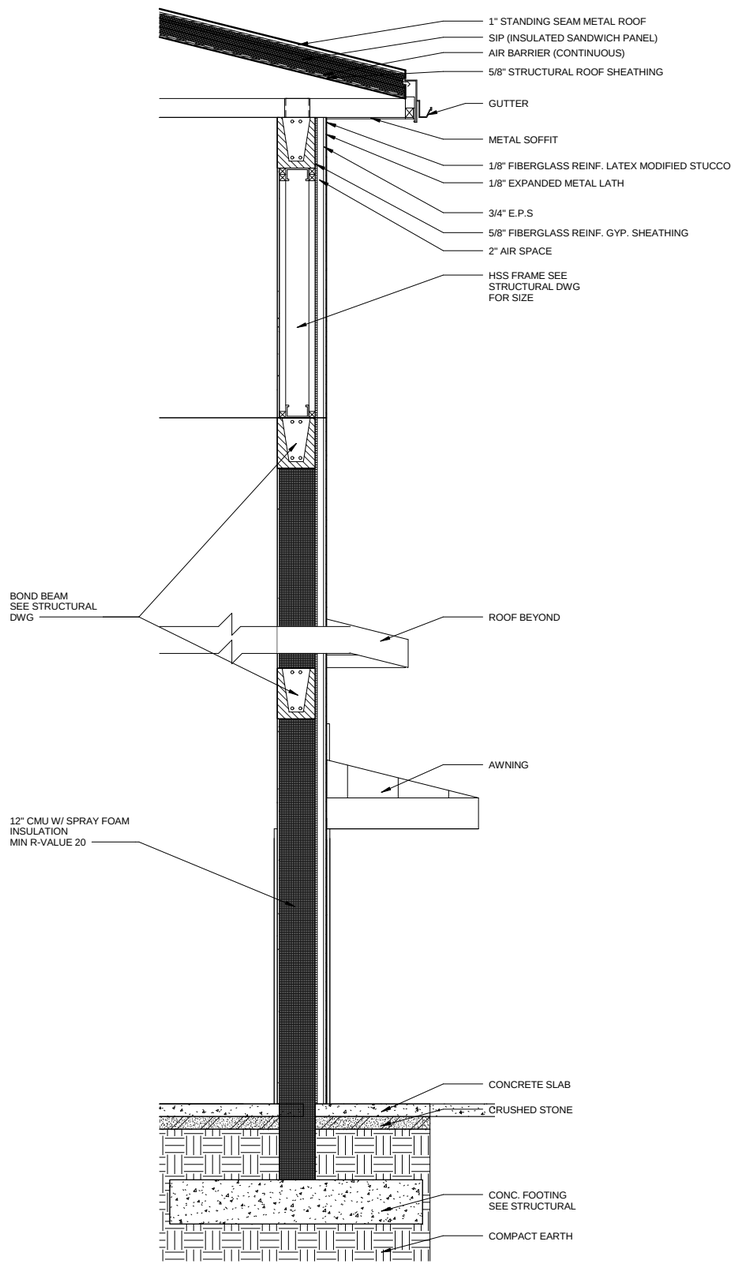
DESIGN BY: MEAS
DRAWN BY: EZ
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/3/2014 1:22:09 PM
PLOT SCALE: 1/2" = 1'-0"
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

WALL SECTIONS

PLATE REFERENCE NUMBER
A-302



4 A-301 SECTION-MULTIPURPOSE BACK WALL
SCALE: 1/2" = 1'-0"

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

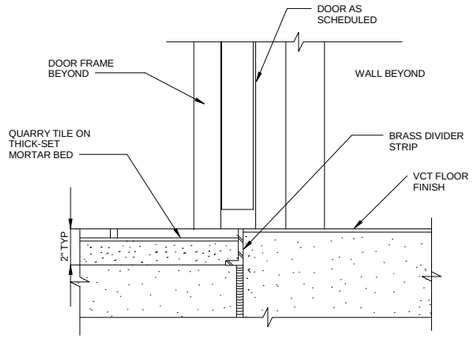
DESIGN BY: NWS
DRAWN BY: EZ
SBMT BY:
DATE: DEC 2014
SOLICITATION NO.: N/A
CKD BY:
PLOT DATE: 6/3/2014 1:22:09 PM
CONTRACT NO.: N/A
PLOT SCALE: 1/2" = 1'-0"
CATEGORY CODE:
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

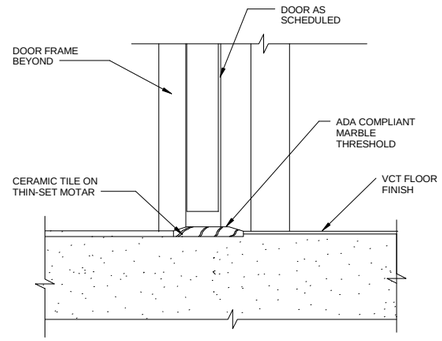
CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

WALL SECTIONS

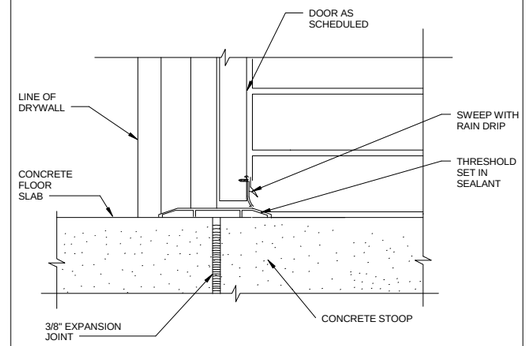
PLATE REFERENCE NUMBER
A-303



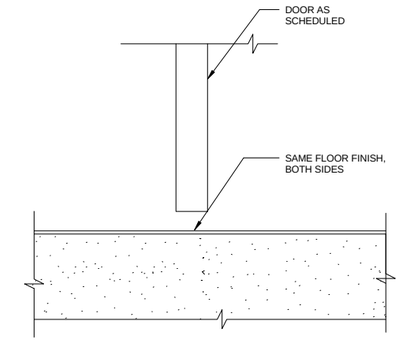
1 DETAIL - SILL 1
NOT TO SCALE



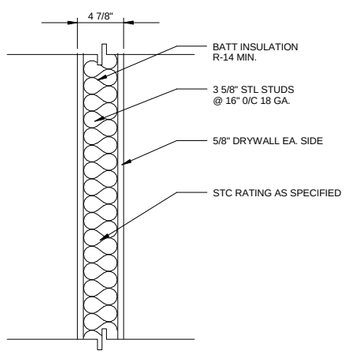
2 DETAIL - SILL 2
NOT TO SCALE



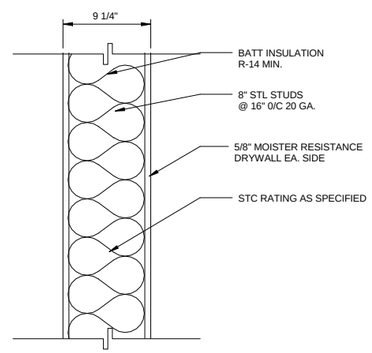
3 DETAIL - SILL 3
NOT TO SCALE



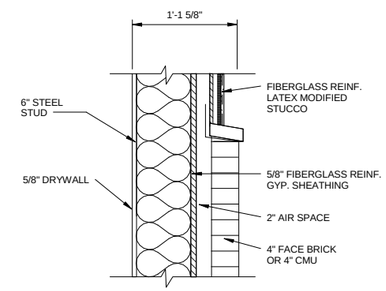
4 DETAIL - SILL 4
NOT TO SCALE



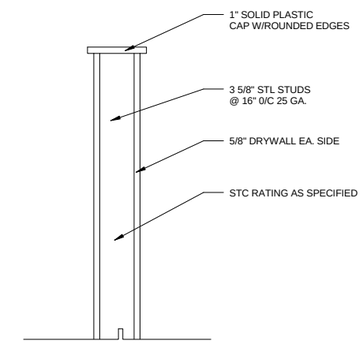
5 DETAIL - WALL TYPE 1
NOT TO SCALE



6 DETAIL - WALL TYPE 2
NOT TO SCALE

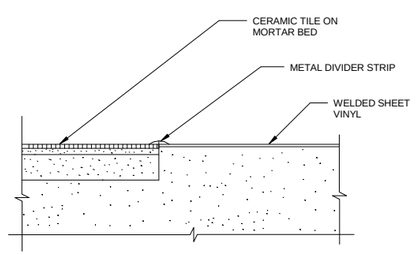


7 DETAIL - WALL TYPE 3
SCALE: 1" = 1'-0"

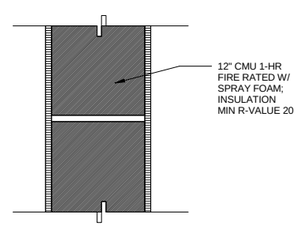


8 DETAIL - WALL TYPE 4
NOT TO SCALE

NOTE: THE CONTRACTOR HAS THE OPTION OF USING A MORTAR BED OR SLOPING THE SLAB AND APPLY TILE W/THIN-SET MORTAR.



9 DETAIL - SILL 5
NOT TO SCALE



10 DETAIL - WALL TYPE 3, 12" CMU 1 HR FIRE RATED WITH FILLED CELLS
NOT TO SCALE

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: NEILS
DRAWN BY: EZ
CKD BY:
SBMT BY:
DATE: 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/3/2014 1:22:10 PM
PLOT SCALE: 1" = 1'-0"
SIZE: D 22" X 34"
FILE NAME:

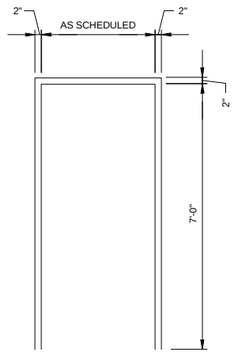
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

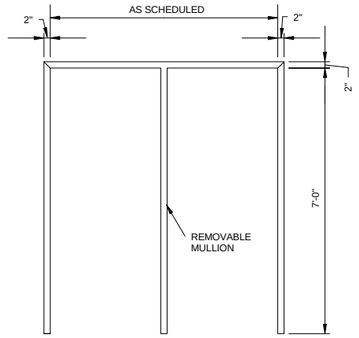
DETAILS

PLATE REFERENCE NUMBER
A-501

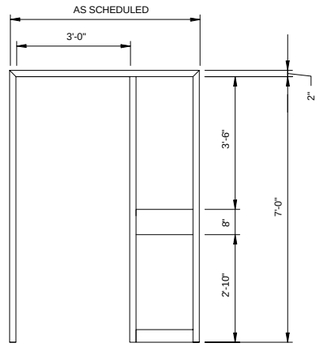
SHEET 41 OF 107



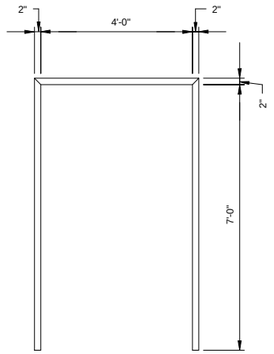
1 DETAIL - FRAME TYPE F1
NOT TO SCALE



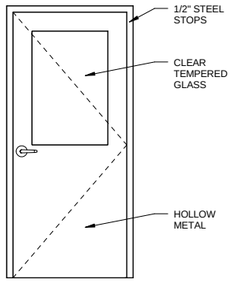
2 DETAIL - FRAME TYPE F2
NOT TO SCALE



3 DETAIL - FRAME TYPE F3
NOT TO SCALE

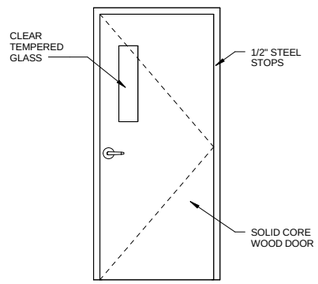


4 DETAIL - FRAME TYPE F4
NOT TO SCALE

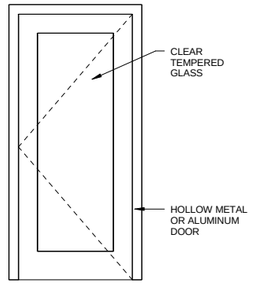


5 DETAIL - DOOR TYPE A
NOT TO SCALE

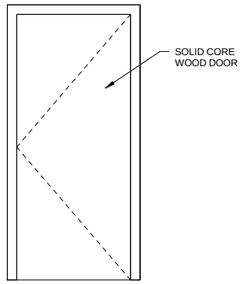
NOTE: ALL INTERIOR DOORS SHALL BE SOLID
WOOD-EXTERIOR DOORS SHALL BE INSULATED METAL.



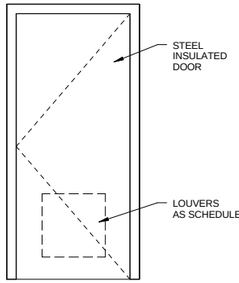
6 DETAIL - DOOR TYPE B
NOT TO SCALE



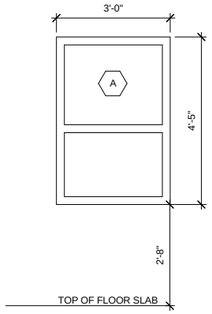
7 DETAIL - DOOR TYPE C
NOT TO SCALE



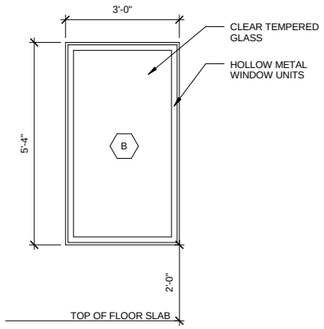
8 DETAIL - DOOR TYPE D
NOT TO SCALE



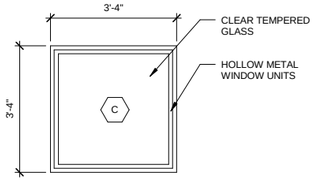
9 DETAIL - DOOR TYPE E
NOT TO SCALE



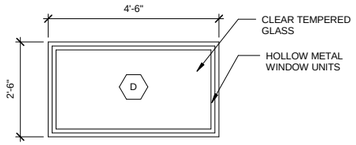
10 DETAIL - WINDOW TYPE A
NOT TO SCALE



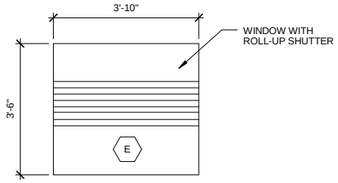
11 DETAIL - WINDOW TYPE B
NOT TO SCALE



12 DETAIL - WINDOW TYPE C
NOT TO SCALE



13 DETAIL - WINDOW TYPE D
NOT TO SCALE



14 DETAIL - WINDOW TYPE E
NOT TO SCALE

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: Multi-Site
DATE: JUNE 2014
DRAWN BY: EZ
CKD BY:
SOLICITATION NO.: N/A
SBMT BY:
PLOT DATE: 6/3/2014 1:22:11 PM
CONTRACT NO.: N/A
PLOT SCALE: As indicated
CATEGORY CODE:
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

DOOR AND WINDOW DETAILS

PLATE REFERENCE NUMBER
A-502

DOOR SCHEDULE

DOOR NUMBER	TYPE	DOOR MATERIAL	WIDTH	HEIGHT	FRAME TYPE	FRAME MATERIAL
101	C	HOLLOW METAL/GLASS	6'-0"	7'-0"	F2	HOLLOW METAL
101A	C	HOLLOW METAL/GLASS	6'-0"	7'-0"	F2	HOLLOW METAL
102	C	SOLID CORE WOOD/GLASS	3'-0"	7'-0"	F3	HOLLOW METAL
104	C	SOLID CORE WOOD/GLASS	3'-0"	7'-0"	F3	HOLLOW METAL
105	A	SOLID CORE WOOD	3'-0"	7'-0"	F1	HOLLOW METAL
106	A	SOLID CORE WOOD	3'-0"	7'-0"	F1	HOLLOW METAL
107A	D	SOLID CORE WOOD	3'-0"	7'-0"	F1	HOLLOW METAL
108	D	SOLID CORE WOOD	3'-0"	7'-0"	F1	HOLLOW METAL
109	N/B	SOLID CORE WOOD	8'-0"	8'-0"		HOLLOW METAL
110	C	HOLLOW METAL/GLASS	3'-0"	7'-0"	F3	HOLLOW METAL
111	D	SOLID CORE WOOD	3'-0"	7'-0"	F1	HOLLOW METAL
112	D	SOLID CORE WOOD	3'-0"	7'-0"	F1	HOLLOW METAL
113	A	HOLLOW METAL/GLASS	3'-0"	7'-0"	F1	HOLLOW METAL
113A	A	HOLLOW METAL/GLASS	3'-0"	7'-0"	F1	HOLLOW METAL
114	C	HOLLOW METAL/GLASS	6'-0"	7'-0"	F2	HOLLOW METAL
115	N/A	CASED OPENING	3'-0"	7'-0"	F1	HOLLOW METAL
116	N/A	CASED OPENING	3'-0"	7'-0"	F1	HOLLOW METAL
117	C	HOLLOW METAL/GLASS	6'-0"	7'-0"	F2	HOLLOW METAL
118	A	HOLLOW METAL/GLASS	3'-0"	7'-0"	F1	HOLLOW METAL
119	D	SOLID CORE WOOD	5'-8"	7'-0"	F2	HOLLOW METAL
120	E	METAL	3'-0"	7'-0"	F1	N/A
121	56	SOLID CORE WOOD	3'-0"	7'-0"		HOLLOW METAL
122	D	SOLID CORE WOOD	5'-8"	7'-0"	F2	HOLLOW METAL
123	56	SOLID CORE WOOD	3'-0"	7'-0"		HOLLOW METAL
124A	C	HOLLOW METAL/GLASS	6'-0"	7'-0"	F2	HOLLOW METAL
124B	C	HOLLOW METAL/GLASS	6'-0"	7'-0"	F2	HOLLOW METAL
124C	C	HOLLOW METAL/GLASS	6'-0"	7'-0"	F2	HOLLOW METAL
124D	C	HOLLOW METAL/GLASS	6'-0"	7'-0"	F2	HOLLOW METAL
125B	A	HOLLOW METAL/GLASS	3'-0"	7'-0"	F1	HOLLOW METAL
125C	N/B	HOLLOW METAL/GLASS	8'-0"	8'-0"		HOLLOW METAL
126	A	HOLLOW METAL/GLASS	3'-0"	7'-0"	F1	HOLLOW METAL
127	D	SOLID CORE WOOD	3'-0"	7'-0"	F1	HOLLOW METAL
128	D	SOLID CORE WOOD	3'-0"	7'-0"	F1	HOLLOW METAL
129	C	HOLLOW METAL/GLASS	3'-0"	7'-0"	F3	HOLLOW METAL
129A	A	HOLLOW METAL/GLASS	3'-0"	7'-0"	F1	HOLLOW METAL
130	C	HOLLOW METAL/GLASS	3'-0"	7'-0"	F3	HOLLOW METAL
130A	A	HOLLOW METAL/GLASS	3'-0"	7'-0"	F1	HOLLOW METAL
134	N/A	CASED OPENING	3'-0"	7'-0"	F1	HOLLOW METAL
135	N/A	CASED OPENING	3'-0"	7'-0"	F1	HOLLOW METAL
136	C	HOLLOW METAL/GLASS	6'-0"	7'-0"	F2	HOLLOW METAL
138	C	HOLLOW METAL/GLASS	3'-0"	7'-0"	F3	HOLLOW METAL
138A	A	HOLLOW METAL/GLASS	3'-0"	7'-0"	F1	HOLLOW METAL
139	C	HOLLOW METAL/GLASS	3'-0"	7'-0"	F3	HOLLOW METAL
139A	A	HOLLOW METAL/GLASS	3'-0"	7'-0"	F1	HOLLOW METAL
140	C	HOLLOW METAL/GLASS	3'-0"	7'-0"	F3	HOLLOW METAL
140A	A	HOLLOW METAL/GLASS	3'-0"	7'-0"	F1	HOLLOW METAL
142	A	HOLLOW METAL/GLASS	3'-0"	7'-0"	F1	HOLLOW METAL
145	56	SOLID CORE WOOD	3'-0"	7'-0"		HOLLOW METAL
148A	D	SOLID CORE WOOD	2'-6"	2'-4"	NA	HOLLOW METAL
152	N/A	CASED OPENING	3'-0"	7'-0"	F1	HOLLOW METAL

GENERAL DOOR, FRAME, AND WINDOW NOTES

1. ALL NEW WINDOWS REQUIRE THERMAL BROKEN FRAMES.

2. DUAL PANE GLASS WITH A LOW E-COATING AND LAMINATE SHALL CONFORM TO MIN STANDARDS FOR ANTI-TERRORISM AND FORCE PROTECTION.

3. ALL WINDOWS SHALL BE CAULKED ON INTERIOR WITH A LATEX CAULK AND ON THE EXTERIOR WITH A URETHANE CAULK TO MATCH THE WINDOW COLOR.

4. ALL EXTERIOR DOORS SHALL BE WEATHER STRIPPED AND SEALED, INCLUDING FOYER AND VESTIBULE DOORS.

5. ALL WINDOWS SHALL BE CAULKED SEALED AGAINST AIR AND MOISTURE PENETRATION.

WINDOW SCHEDULE

TYPE	WIDTH	HEIGHT	FRAME MATERIAL	U-VALUE	SHGC
A	3'-0"	4'-5"	HOLLOW MTL ALUM, OPTIONAL	MAX U-.55	.25
B	3'-0"	5'-4"	HOLLOW MTL ALUM, OPTIONAL	MAX U-.55	.25
C	4'-0"	3'-0"	HOLLOW MTL ALUM, OPTIONAL	MAX U-.55	.25
D	4'-6"	2'-6"	HOLLOW MTL ALUM, OPTIONAL	MAX U-.55	.25
E	3'-10"	3'-6"	ALUMINUM	N/A	N/A

* PROPOSED WWR FOR CDC 6-10 MEDIUM, IS 10%

WINDOW TO WALL RATIO (WWR)

CRITERIA	BENCHMARK
ASHRAE 189.1 - 2009	40% OR LESS
ASHRAE 90.1 - 2007	40% OR LESS

GENERAL NOTES

1. SEE SHEET A-503 FOR DOOR AND FRAME TYPES.

2. SEE DETAIL 4 SHEET A-501 FOR TYPICAL 3-5/8" STEEL STUD AT INTERIOR DOORS.

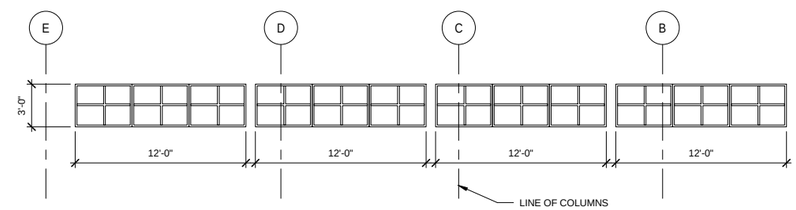
3. SEE DETAILS 1 AND 2 SHEET A-501 FOR TYPICAL 6" STEEL STUD DETAILS AT EXTERIOR DOORS.

4. SEE DETAILS 6 AND 7 SHEET A-501 FOR TYPICAL 12 INCH INTERIOR MASONRY DOOR DETAILS.

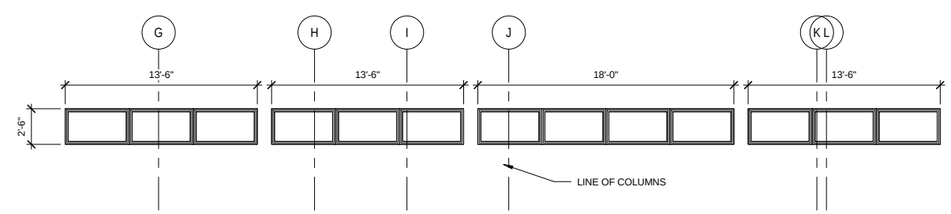
5. SEE DETAILS 2 AND 9 SHEET A-502 FOR TYPICAL THRESHOLDS AT TOILET AREAS.

6. SEE DETAIL 1 SHEET A-502 FOR TYPICAL THRESHOLD AT KITCHEN TRANSITION DOORS.

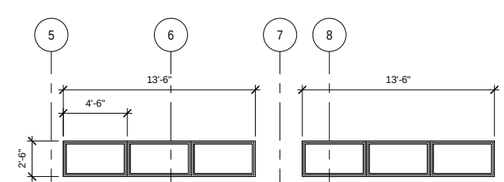
7. SEE DETAIL 3 SHEET A-502 FOR TYPICAL THRESHOLD AT EXTERIOR DOORS.



1 ELEVATION-WINDOW TYPE "C"
SCALE: 3/16" = 1'-0"



2 ELEVATION-WINDOW TYPE "D"
SCALE: 3/16" = 1'-0"



3 ELEVATION-WINDOW TYPE "D" 2
SCALE: 3/16" = 1'-0"

8 4 0 8
SCALE: 3/16"=1'-0"

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: NKS
DRAWN BY: EZ
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/3/2014 1:22:12 PM
PLOT SCALE: As indicated
SIZE: D 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

WALL, DOOR AND WINDOW SCHEDULES

PLATE REFERENCE NUMBER
A-601
SHEET 43 OF 107

FINISH SCHEDULE

ROOM NO	ROOM NAME	CEILING HEIGHT	NORTH FINISH		EAST FINISH		SOUTH FINISH		WEST FINISH		CEILING FINISH	FLOOR FINISH
			WALL	BASE	WALL	BASE	WALL	BASE	WALL	BASE		
101	VESTIBULE	8'-0"	DRYWALL-EPOXY PAINT	QUARRY TILE	DRYWALL-EPOXY PAINT	QUARRY TILE	DRYWALL-EPOXY PAINT	QUARRY TILE	DRYWALL-EPOXY PAINT	QUARRY TILE	2X2 ACOUSTIC	QUARRY TILE
102	DIRECTOR	8'-0"	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	2X2 ACOUSTIC	CARPET
103	CORRIDOR 1	8'-0"	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
104	TRAINING	8'-0"	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
105	CLOSET	8'-0"	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
106	CLOSET	8'-0"	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
107	TOILET	8'-0"	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	2X2 ACOUSTIC	CERAMIC TILE
108	TOILET	8'-0"	DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	2X2 ACOUSTIC	CERAMIC TILE
110	LOUNGE	8'-0"	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
111	COOLER	8'-0"	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	QUARRY TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	QUARRY TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	QUARRY TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	QUARRY TILE	2X2 ACOUSTIC VINYL	QUARRY TILE
112	DRY STORAGE	8'-0"	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	QUARRY TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	QUARRY TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	QUARRY TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	QUARRY TILE	2X2 ACOUSTIC VINYL	QUARRY TILE
113	KITCHEN	8'-0"	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	QUARRY TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	QUARRY TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	QUARRY TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	QUARRY TILE	2X2 ACOUSTIC VINYL	QUARRY TILE
114	SECONDARY ATRIUM	11'-0"	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
114A	TEACHING DEMO KITCHEN	8'-0"	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
115	M. TOILET 1	8'-0"	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	2X2 ACOUSTIC	CERAMIC TILE
116	F. TOILET 1	8'-0"	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	2X2 ACOUSTIC	CERAMIC TILE
117	SUPPLY STORAGE	8'-0"	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
118	VIDEO MONITOR	8'-0"	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
119	MECHANICAL	0"	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	EXPOSED CONSTRUCTION	CONCRETE SEALER
120	COMM. RM	0"	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	EXPOSED CONSTRUCTION	CONCRETE SEALER
121	STORAGE	8'-0"	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	EXPOSED CONSTRUCTION	CONCRETE SEALER
122	ELECTRICAL	0"	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	EXPOSED CONSTRUCTION	CONCRETE SEALER
123	LAUNDRY	8'-0"	DRYWALL-EPOXY PAINT	QUARRY TILE	DRYWALL-EPOXY PAINT	QUARRY TILE	DRYWALL-EPOXY PAINT	QUARRY TILE	DRYWALL-EPOXY PAINT	QUARRY TILE	2X2 ACOUSTIC	QUARRY TILE
124	MULTIPURPOSE ROOM	23'-0"	PAINTED CONCRETE MASONRY UNITS	RUBBER	PAINTED CONCRETE MASONRY UNITS	RUBBER	PAINTED CONCRETE MASONRY UNITS	RUBBER	PAINTED CONCRETE MASONRY UNITS	RUBBER	EXPOSED CONSTRUCTION	ATHLETIC FLOORING
125	STORAGE & ISSUE	23'-0"	PAINTED CONCRETE MASONRY UNITS	RUBBER	PAINTED CONCRETE MASONRY UNITS	RUBBER	PAINTED CONCRETE MASONRY UNITS	RUBBER	PAINTED CONCRETE MASONRY UNITS	RUBBER	EXPOSED CONSTRUCTION	ATHLETIC FLOORING
126	CORRIDOR 2	8'-0"	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
127	F. TOILET 3	8'-0"	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	2X2 ACOUSTIC	CERAMIC TILE
128	M. TOILET 3	8'-0"	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	2X2 ACOUSTIC	CERAMIC TILE
129	ARTS & SCIENCE ACTIVITY ROOM	8'-0"	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
130	PERFORMING ARTS ACTIVITY ROOM	8'-0"	DRYWALL-EPOXY PAINT	WOOD	DRYWALL-EPOXY PAINT	WOOD	DRYWALL-EPOXY PAINT	WOOD	DRYWALL-EPOXY PAINT	WOOD	2X2 ACOUSTIC	VINYL COMPOSITION TILE
131	ATRIUM 3	12'-0"	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
134	M. TOILET 2	8'-0"	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	2X2 ACOUSTIC	CERAMIC TILE
135	F. TOILET 2	8'-0"	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	EPOXY PAINTED DRYWALL-CERAMIC TILE WAINSCOT TO 4'-0"	CERAMIC TILE	2X2 ACOUSTIC	CERAMIC TILE
138	ACTIVITY ROOM 1	8'-0"	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
139	HOMEWORK CENTER	8'-0"	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
140	COMPUTER LAB	8'-0"	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	DRYWALL-EPOXY PAINT	RUBBER	2X2 ACOUSTIC	CARPET
142	JANITOR	8'-0"	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
143	MAIN ATRIUM	16'-0"	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
144	LOBBY	8'-0"	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
145	SECURE STG.	8'-0"	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE
146	GATHERING AREA	16'-0"	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	2X2 ACOUSTIC	CARPET
148	RECEP	8'-0"	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	DRYWALL-PAINT	RUBBER	2X2 ACOUSTIC	VINYL COMPOSITION TILE

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: N/A
DRAWN BY: EZ
CKD BY:
SBMT BY:
PLOT SCALE:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE:
PLOT DATE: 6/3/2014 1:22:12 PM
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER

4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER (CDC)
STANDARD DESIGN, MEDIUM
6 - 10 YEARS OLD

FINISH SCHEDULE

PLATE REFERENCE NUMBER
A-602

APPLICABLE BUILDING CODE:

1. UFC 3-600-01 FIRE PROTECTION ENGINEERING FOR FACILITIES - 1 MAR 2013
2. IBC INTERNATIONAL BUILDING CODE - 2012
3. NFPA 101 LIFE SAFETY CODE (LSC) - 2012
4. NFPA 13 INSTALLATION OF SPRINKLER SYSTEMS - 2013
5. NFPA 72 NATIONAL FIRE ALARM AND SIGNALING CODE - 2013
6. NFPA 96 VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING OPERATIONS - 2011
7. NFPA 10 PORTABLE FIRE EXTINGUISHERS - 2013

DENOTES HAZARD CATEGORY 1 (HC-1) OCCUPANCY

SUPPRESSION SYSTEM TYPE	WET PIPE
DESIGN DENSITY	0.10 GPM PER SQ FT
REMOTE HYDRAULIC AREA	1500 SQ FT
MAXIMUM COVERAGE PER SPRINKLER	225 SQ FT
OUTSIDE HOSE STREAM DEMAND	250 GPM
DURATION OF SUPPLY	60 MINUTES

DENOTES HAZARD CATEGORY 2 (HC-2) OCCUPANCY

SUPPRESSION SYSTEM TYPE	WET PIPE
DESIGN DENSITY	0.20 GPM PER SQ FT
REMOTE HYDRAULIC AREA	2500 SQ FT
MAXIMUM COVERAGE PER SPRINKLER	130 SQ FT
OUTSIDE HOSE STREAM DEMAND	250 GPM
DURATION OF SUPPLY	60 MINUTES

DENOTES HAZARD CATEGORY 3 (HC-3) OCCUPANCY

SUPPRESSION SYSTEM TYPE	WET PIPE
DESIGN DENSITY	0.30 GPM PER SQ FT
REMOTE HYDRAULIC AREA	2500 SQ FT
MAXIMUM COVERAGE PER SPRINKLER	130 SQ FT
OUTSIDE HOSE STREAM DEMAND	500 GPM
DURATION OF SUPPLY	90 MINUTES

FIRE PROTECTION GENERAL NOTES

1. THE ENTIRE BUILDING SHALL BE PROTECTED BY AN AUTOMATIC WET PIPE SPRINKLER SYSTEM. EXCEPT AS MODIFIED HERE-IN, THE FIRE SUPPRESSION SYSTEM SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH UFC 3-600-01 2013, NFPA 101 2012, AND NFPA 13 2013.
2. CONTRACTOR SHALL PERFORM A FIRE FLOW TEST(S) PRIOR TO BEGINNING SPRINKLER SYSTEM DESIGN. FLOW TEST(S) SHALL BE CONDUCTED IN ACCORDANCE WITH UFC 3-600-01 AND NFPA 291.
3. DESIGN DENSITIES, HOSE STREAM ALLOWANCES, AND SUPPLY DURATIONS SHALL BE AS SHOWN IN THE OCCUPANCY HAZARD LEGEND ON THIS SHEET AND SHALL BE IN ACCORDANCE WITH UFC 3-600-01
4. ALL SPRINKLER SYSTEM COMPONENTS SHALL MEET THE REQUIREMENTS OF NFPA 13.
5. PROVIDE AUXILIARY DRAINS FOR ALL TRAPPED PIPING. AUXILIARY DRAIN LINES SHALL BE PROVIDED WITH SIGNS AS REQUIRED BY NFPA 13 AND SHALL BE PIPED TO A BUILDING DRAIN OR TO THE BUILDING EXTERIOR.
6. SPRINKLERS IN FINISHED AREAS SHALL BE SEMI-RECESSED, CHROME PENDANT TYPE HEADS WITH ESCUTCHEONS THAT MATCH THE CEILING COLOR AS CLOSELY AS PRACTICABLE. SPRINKLERS IN UNFINISHED AREAS SHALL BE BRASS FINISH UPRIGHT TYPE HEADS.
7. SOME SYMBOLS INDICATED IN THE FIRE PROTECTION SYMBOL LEGEND MAY NOT APPEAR IN THE DRAWINGS.

FIRE PROTECTION SYMBOL LEGEND

SYMBOL	ITEM
	ALARM CHECK VALVE
	WALL MTD FIRE DEPT CONN
	BALL VALVE
	GATE VALVE
	GLOBE VALVE
	CHECK VALVE
	REDUCER
TC	INSPECTOR'S TEST CONNECTION
	TEE, OUTLET TURNED UP
	TEE, OUTLET TURNED DOWN
	ELBOW, 90°, OUTLET TURNED UP
	ELBOW, 90° OUTLET TURNED DOWN
	SPRINKLER RISER
	TEST HEADER
FPCP	FIRE PUMP CONTROL PANEL
JPCP	JOCKEY PUMP CONTROL PANEL
	SPRINKLER, HORIZONTAL SIDEWALL
	SPRINKLER, HORIZONTAL SIDEWALL WITH GUARD
	SPRINKLER, PENDANT ON DROP
	SPRINKLER, UPRIGHT ON SPRIG
	SPRINKLER, UPRIGHT ON SPRIG WITH GUARD
	SPRINKLER, UPRIGHT
	UNION

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

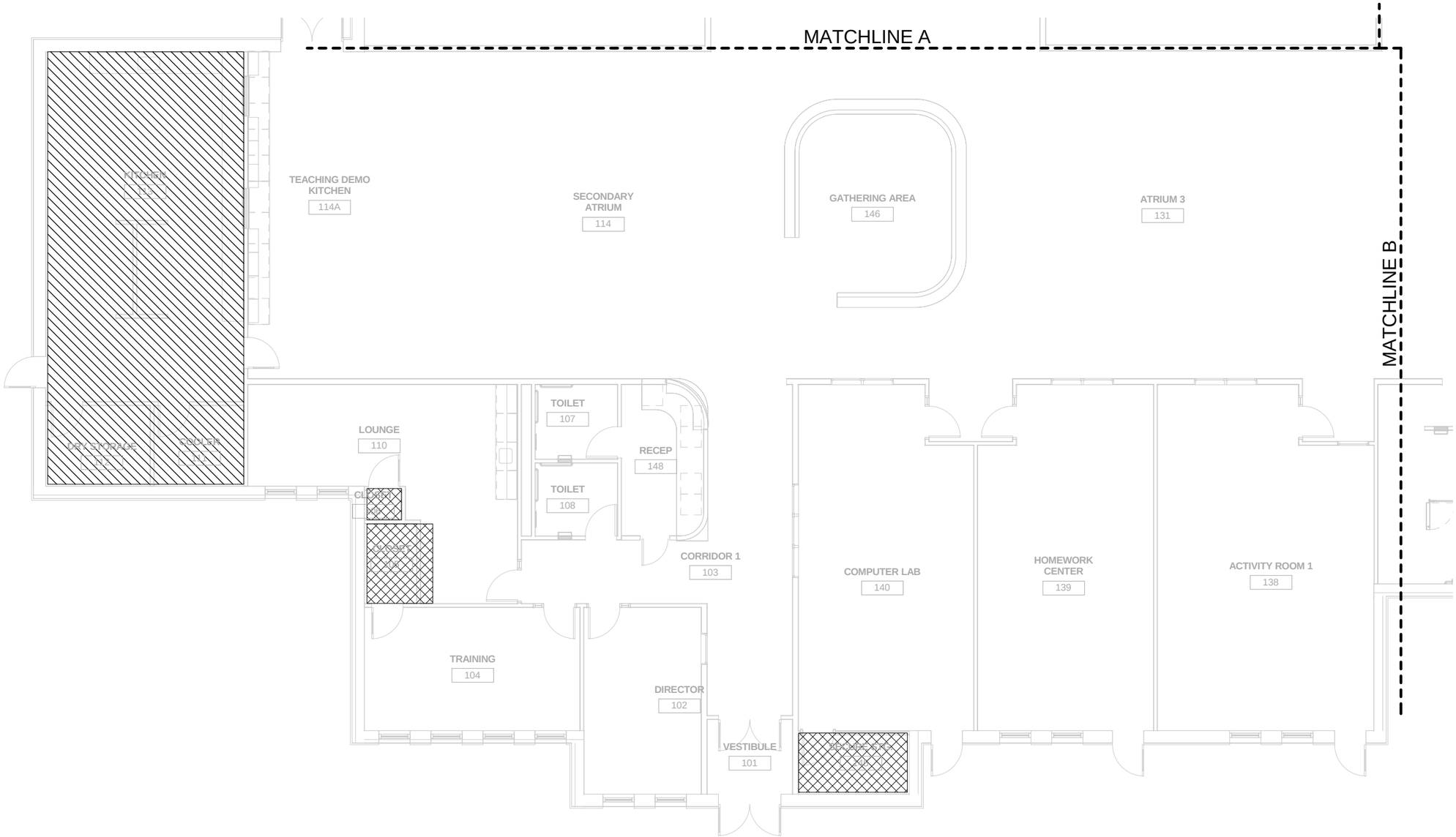
DESIGN BY: PEL
DRAWN BY: PTL
CKD BY: PLM
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/4/2014 10:43:47 AM
PLOT SCALE: As indicated
SIZE: 22" X 34"
FILE NAME:
CATEGORY CODE: 65% DESIGN PACKAGE

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

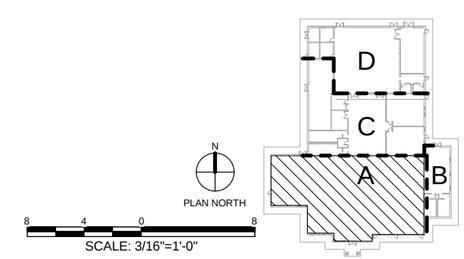
FIRE PROTECTION LEGEN AN GENERAL NOTES

PLATE REFERENCE NUMBER
FX001
SHEET 45 OF 107



HAZARD CLASSIFICATION PLAN - AREA A

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



N
PLAN NORTH

8 4 0 8
SCALE: 3/16"=1'-0"

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE

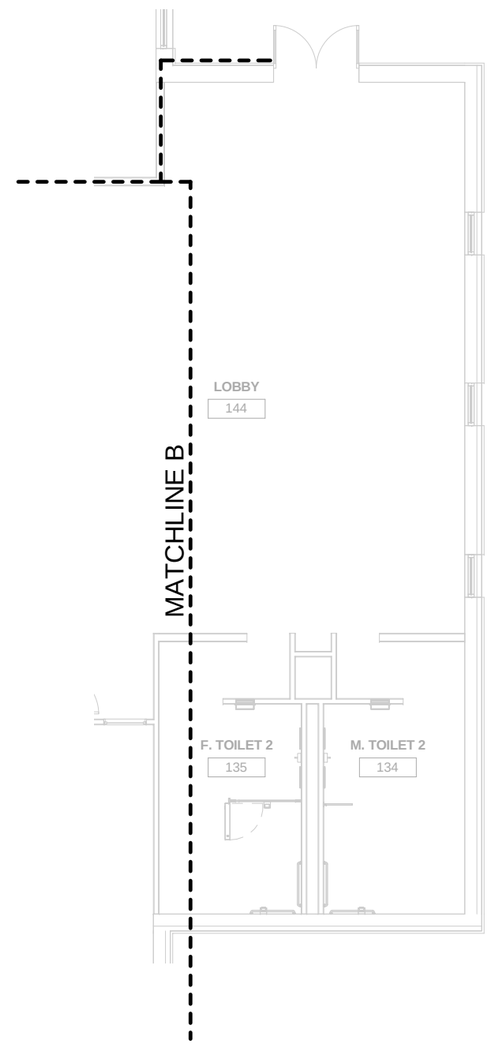
DESIGN BY: PIL
DR/WN BY: PTL
CKD BY: PLM
SBMT BY:
PLOT DATE: 6/4/2014 10:43:49 AM
PLOT SCALE: As Indicated
SIZE: 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

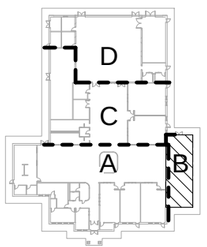
HAZARD CLASSIFICATION PLAN - AREA A

PLATE REFERENCE NUMBER
FX101
SHEET 46 OF 107



HAZARD CLASSIFICATION PLAN - AREA B

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



N
PLAN NORTH

8 4 0 8
SCALE: 3/16"=1'-0"

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE

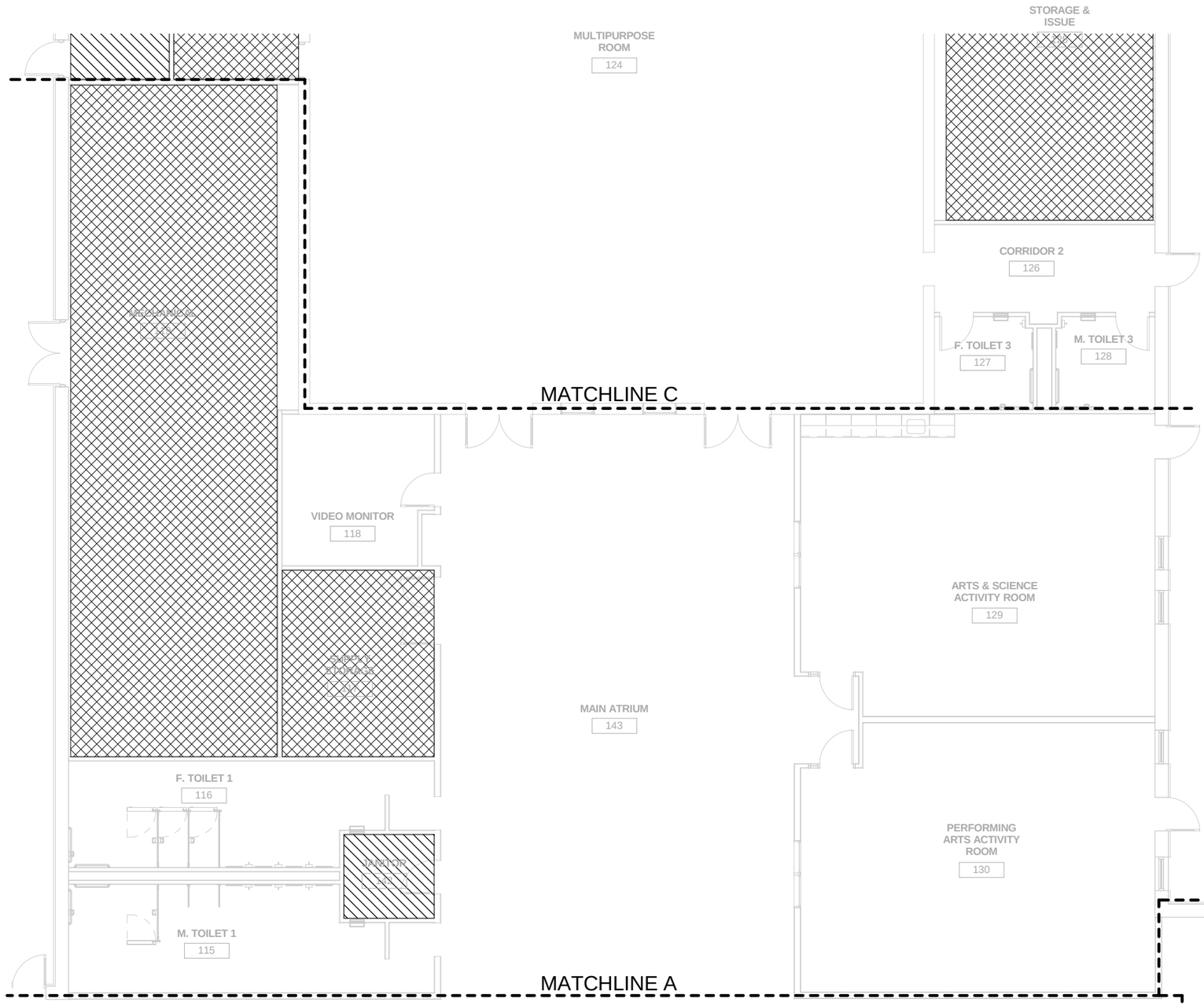
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

DESIGN BY: PEL
DRAWN BY: PTL
SBMT BY:
CKD BY: PLM
PLOT SCALE: As indicated
PLOT DATE: 6/4/2014 10:43:51 AM
SIZE: D 22" x 34"
FILE NAME:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 85% DESIGN PACKAGE

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

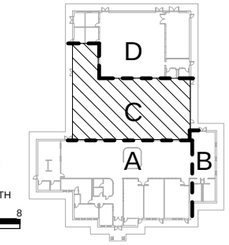
HAZARD CLASSIFICATION PLAN - AREA B

PLATE REFERENCE NUMBER
FX102



HAZARD CLASSIFICATION PLAN - AREA C

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



N

PLAN NORTH

8 4 0 8

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

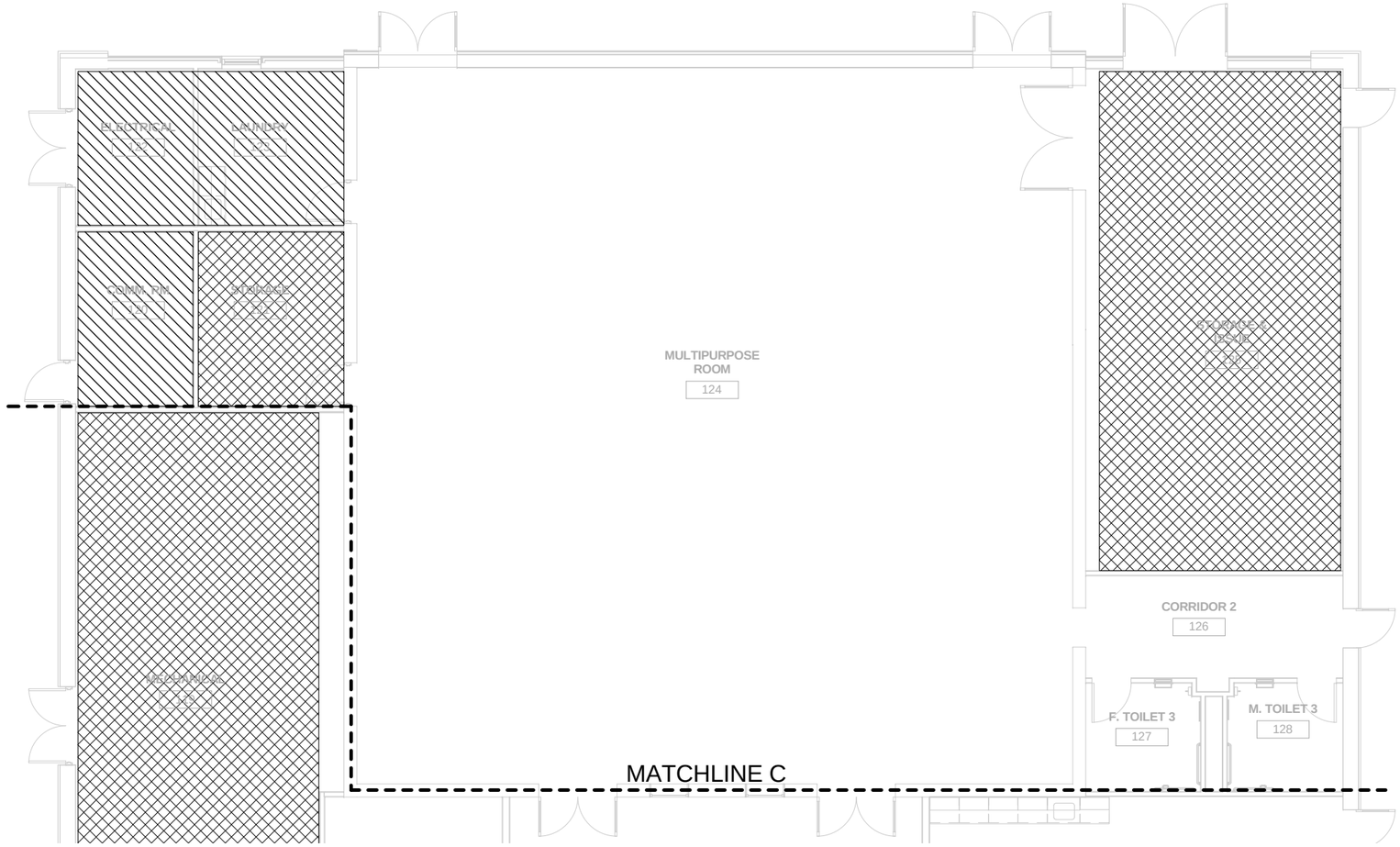
DESIGN BY: PEL
DRAWN BY: PTL
SBMT BY:
CKD BY: PLM
PLOT DATE: 6/4/2014 10:43:54 AM
PLOT SCALE: As indicated
SIZE: 22" x 34"
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

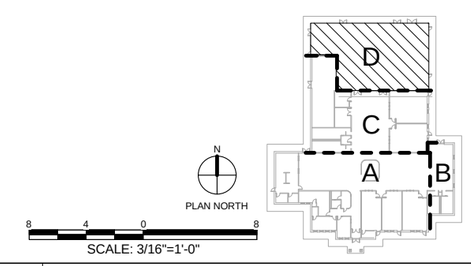
HAZARD CLASSIFICATION PLAN - AREA C

PLATE REFERENCE NUMBER
FX103
SHEET 48 OF 107



HAZARD CLASSIFICATION PLAN - AREA D

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



PLAN NORTH

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: PTL
DRAWN BY: PTL
CKD BY: PLM
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/4/2014 10:43:57 AM
CATEGORY CODE: 85% DESIGN PACKAGE
PLOT SCALE: As indicated
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE

4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

HAZARD CLASSIFICATION PLAN - AREA D

PLATE REFERENCE NUMBER
FX104

SHEET 49 OF 107

FIRE DETECTION AND MASS NOTIFICATION SYMBOLS

- M — FIRE ALARM MANUAL PULL STATION.
- XX — FIRE ALARM STROBE (CLEAR), WALL MOUNTED. NUMBER INDICATES INTENSITY. 'WP' INDICATES WEATHERPROOF.
- FIRE ALARM HORN (85db)
- 15 — MASS NOTIFICATION SYSTEM STROBE (AMBER), WALL MOUNTED. NUMBER INDICATES INTENSITY. 'WP' INDICATES WEATHERPROOF.
- WP P — COMBINED FIRE ALARM AND MASS NOTIFICATION/ PAGING SYSTEM SPEAKER AND STROBE, CEILING MOUNTED OR WALL MOUNTED AS INDICATED. "WP" INDICATES EXTERIOR WEATHERPROOF REQUIRED.
- HEAT DETECTOR
- P S — PHOTOELECTRIC SMOKE DETECTOR, CEILING MOUNTED.
- P S — PHOTOELECTRIC SMOKE DETECTOR, WALL MOUNTED
- DUCT SMOKE DETECTOR.
- SPRINKLER SYSTEM FLOW SWITCH.
- SPRINKLER SYSTEM TAMPER SWITCH.
- FACP — FIRE ALARM CONTROL PANEL.
- MNP — MASS NOTIFICATION SYSTEM CONTROL PANEL.
- LOC — FLUSH MOUNTED MASS NOTIFICATION SYSTEM "LOCAL OPERATOR CONSOLE"

GENERAL NOTES

1. NOT USED.

2. IN GENERAL, TO MINIMIZE SOUND TRANSMISSION, DO NOT INSTALL "BACK TO BACK" OUTLET BOXES.

3. SEAL PENETRATIONS THROUGH FLOORS OR FIRE WALLS TO MAINTAIN THE INTEGRITY OF THE FIRE AND ACOUSTIC RATINGS OF THE WALLS AND FLOORS.

4. NOT USED.

5. SEE ELECTRICAL LEGEND AND NOTES FOR TYPICAL MOUNTING HEIGHTS.

ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISHED FLOOR
C	CONDUIT
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CU	COPPER
FACP	FIRE ALARM CONTROL PANEL
GFCI	GOVERNMENT FURNISHED, CONTRACTOR INSTALLED
FADS	FIRE ALARM AND DETECTION SYSTEM
FEB	FIRE EXTINGUISHER BRACKET
FEC	FIRE EXTINGUISHER CABINET
HZ	HERTZ
IDS	INTRUSION DETECTION SYSTEM
LED	LIGHT EMITTING DIODE
MFR	MANUFACTURER
MH	MOUNTING HEIGHT
MNS	MASS NOTIFICATION SYSTEM
NEC	NATIONAL ELECTRICAL CODE
NO.	NUMBER
PAF	PAINTED AFTER FABRICATION
PIR	PASSIVE INFRARED
R/W	RACEWAY
SPD	SURGE PROTECTIVE DEVICE
TR	TRANSFORMER
TVSS	TRANSIENT VOLTAGE SURGE SUPRESSOR
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UOI	UNLESS OTHERWISE INDICATED
UON	UNLESS OTHERWISE NOTED
V	VOLT
W, WP	WEATHERPROOF

FIRE ALARM/MASS NOTIFICATION SYSTEMS OPERATIONS MATRIX

	DISPLAY MESSAGE ON FACP	DISPLAY MESSAGE ON FIRE ALARM ANNUNCIATOR	RECORD EVENT IN THE HISTORY LOG	TRANSMIT ALARM TO CENTRAL FIRE ALARM SYSTEM	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL FIRE ALARM SYSTEM	TRANSMIT TROUBLE SIGNAL TO CENTRAL FIRE ALARM SYSTEM	ACTIVATE CLEAR FIRE ALARM NOTIFICATION STROBES	ACTIVATE AMBER MASS NOTIFICATION STROBES	BROADCAST FIRE ALARM MESSAGE	BROADCAST FIRE ALARM TROUBLE SIGNAL	BROADCAST RECORDED OR LIVE MASS NOTIFICATION MESSAGE	SHUT DOWN PROTECTED AIR-HANDLING UNIT(S)	ELEVATOR RECALL PRIMARY FLOOR (FIRST FLOOR)	ELEVATOR RECALL SECONDARY FLOOR (SECOND FLOOR)	CONTINUOUSLY ILLUMINATE FIREFIGHTER SERVICE LIGHT IN ELEVATOR CAB	FLASH FIREFIGHTER SERVICE INDICATOR IN ELEVATOR CAB	SHUNT-TRIP DISCONNECT OF ELEVATOR EQUIPMENT
MANUAL FIRE ALARM PULL STATION	●	●	●	●			●		●								
SPRINKLER WATER FLOW SWITCH - ELEVATOR EQUIPMENT ROOM																	
SPRINKLER WATER FLOW SWITCH - ELEVATOR HOISTWAY																	
SPRINKLER WATER FLOW SWITCH - OTHER	●	●	●	●			●		●								
SPRINKLER VALVE TAMPER SWITCH AND PIV	●	●	●		●												
SMOKE DETECTOR - ELEVATOR EQUIPMENT ROOM																	
SMOKE DETECTOR - ELEVATOR HOISTWAY																	
SMOKE DETECTOR - FIRST FLOOR ELEVATOR LOBBY																	
SMOKE DETECTOR - SECOND FLOOR ELEVATOR LOBBY																	
SMOKE DETECTOR - FA/MNS CONTROL PANEL ROOM	●	●	●	●			●		●								
DUCT SMOKE DETECTOR	●	●	●	●			●		●			●					
HEAT DETECTOR - ELEVATOR EQUIPMENT ROOM																	
HEAT DETECTOR - ELEVATOR SHAFT																	
FACP TROUBLE	●	●	●			●				●							
FACP SILENCE SWITCH	●	●	●														
MNS ACTIVATION					●			●			●						

NOTES, FIRE ALARM & MASS NOTIFICATION SYSTEM SEQUENCE OF OPERATION:

1A. NOT USED.

1B. NOT USED.

1C. NOT USED.

2. NOT USED.

3. NOT USED.

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE

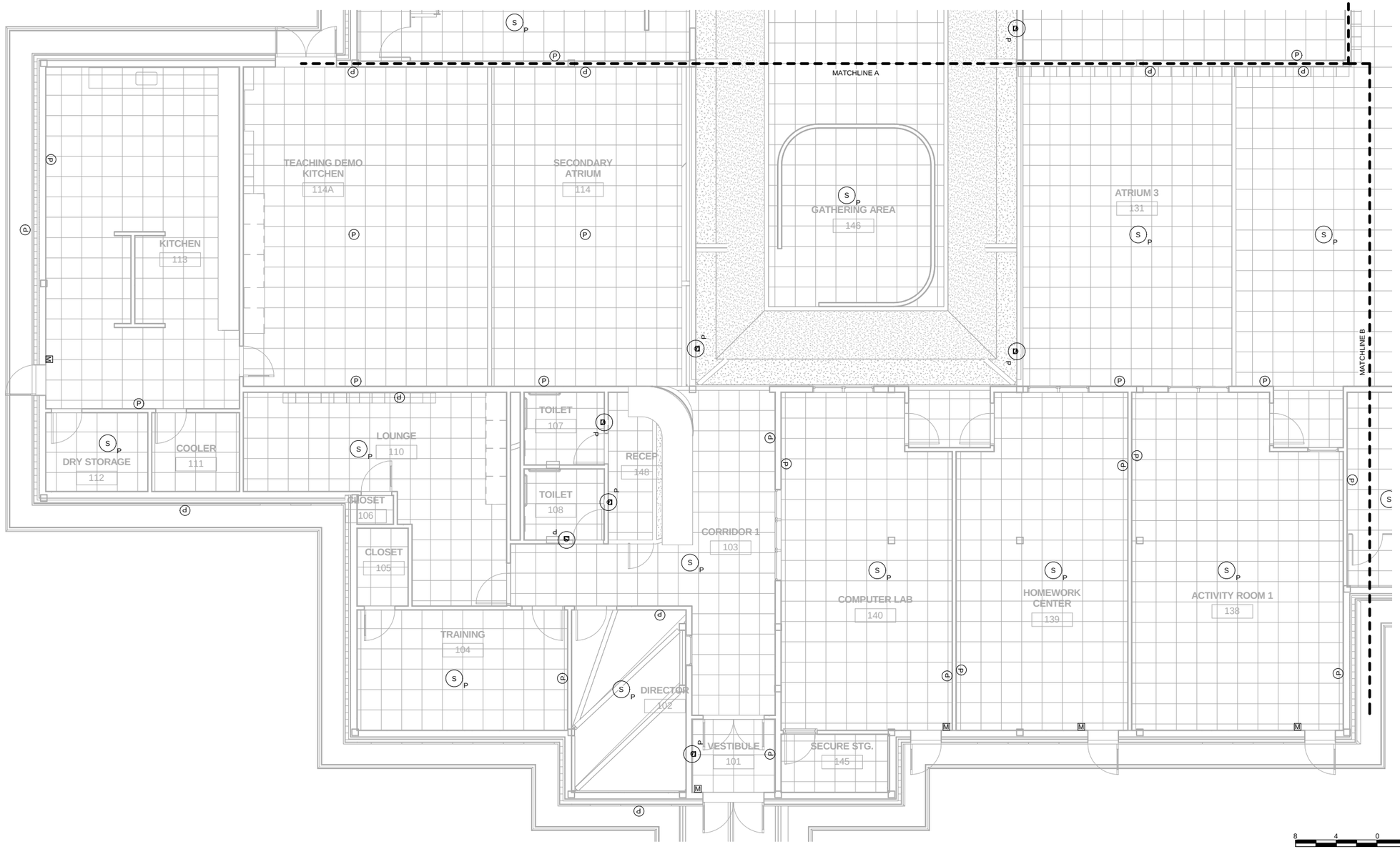
DESIGN BY: KLS
DRAWN BY: KLS
CKD BY: BS
SBMT BY:
PLOT DATE: 6/4/2014 10:44:57 AM
PLOT SCALE: 12" = 1'-0"
SIZE D: 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

FIRE ALARM AND MNS LEGEND AND OPERATIONS MATRIX

PLATE REFERENCE NUMBER
FA001
SHEET 50 OF 107

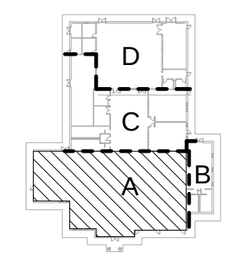


SCALE: 3/16"=1'-0"

PLAN NORTH

FIRE DETECTION/ALARM SYSTEM AND MNS - AREA A

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



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE

4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

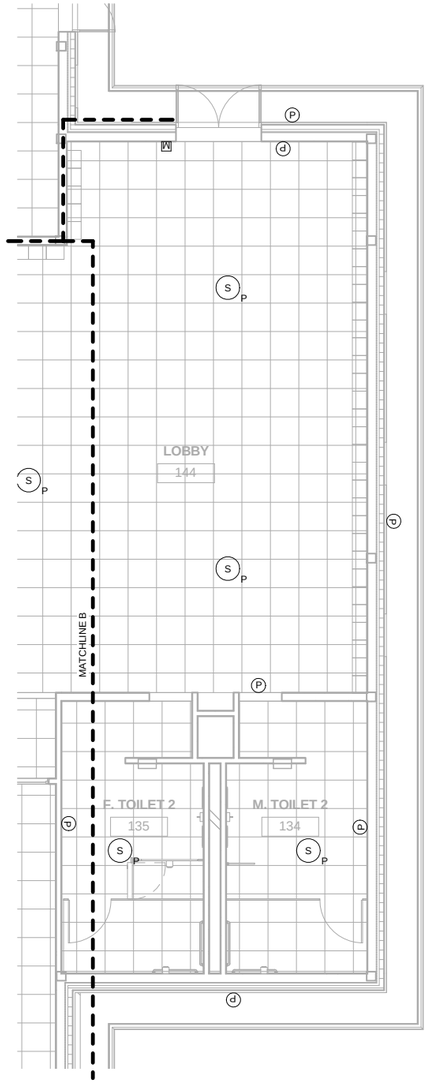
DESIGN BY: CR
DRAWN BY: CR
SBMT BY:
CKD BY:
PLOT DATE: 6/4/2014 10:41:42 AM
PLOT SCALE: As Indicated
SIZE: 22" x 34"
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE
FILE NAME:

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

FIRE ALARM AND MNS
FLOOR PLAN - AREA A

PLATE REFERENCE NUMBER
FA101

SHEET 51 OF 107

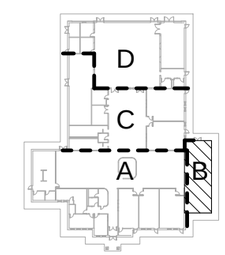


SCALE: 3/16"=1'-0"

PLAN NORTH

FIRE DETECTION/ALARM SYSTEM AND MNS - AREA B

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



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

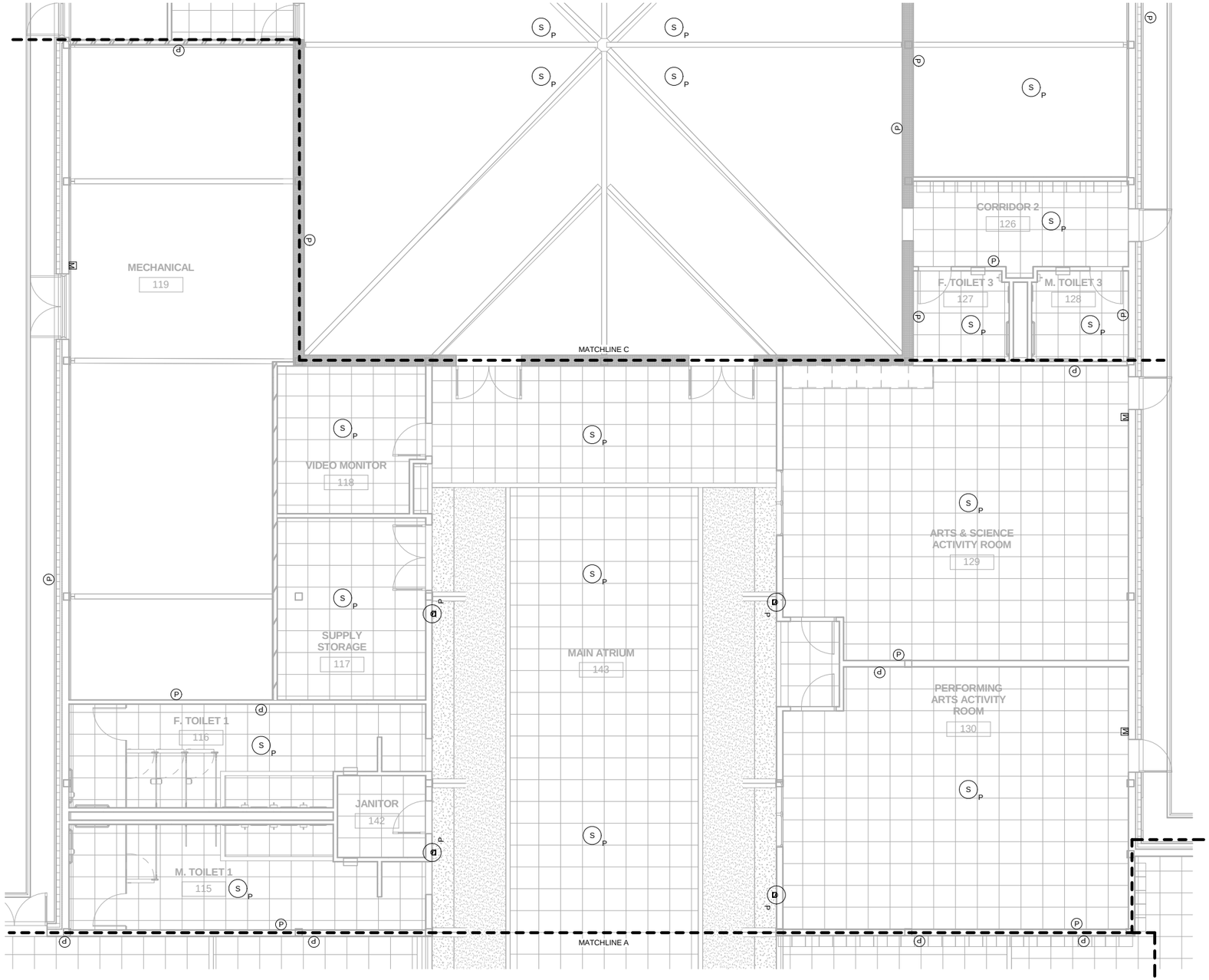
DESIGN BY: CR
DRAWN BY: CR
SBMT BY:
CKD BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/4/2014 10:41:44 AM
CATEGORY CODE: 65% DESIGN PACKAGE
PLOT SCALE: As indicated
SIZE: D 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

FIRE ALARM AND MNS
FLOOR PLAN - AREA B

PLATE REFERENCE NUMBER
FA102

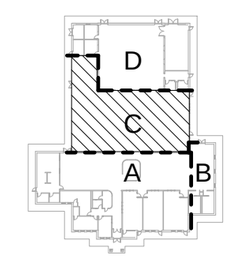


FIRE DETECTION/ALARM SYSTEM AND MNS - AREA C

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

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

PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: CR
DRAWN BY: CR
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 85% DESIGN PACKAGE
PLOT DATE: 6/4/2014 10:41:49 AM
PLOT SCALE: As indicated
SIZE: 34" X 24"
FILE NAME:

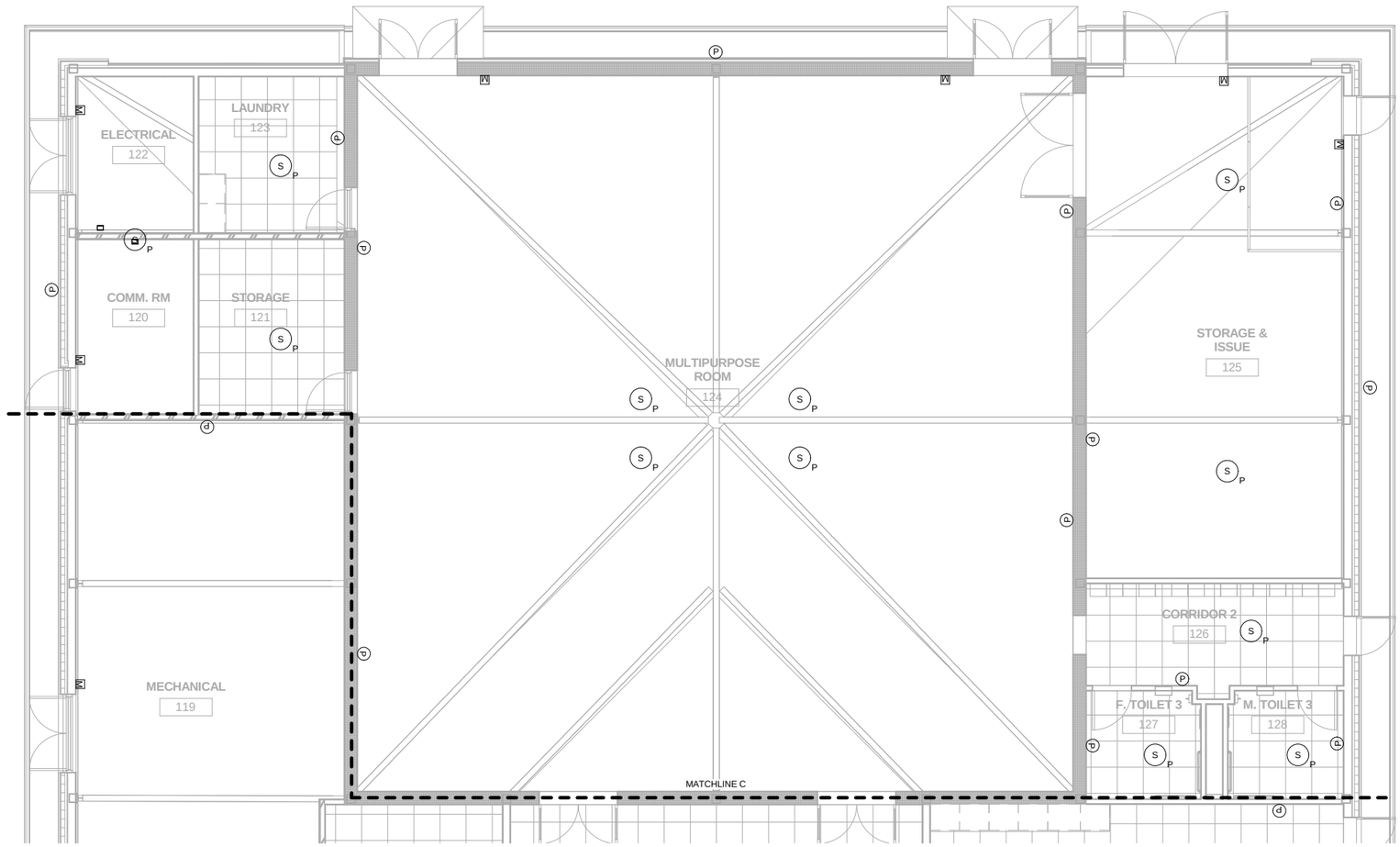
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

FIRE ALARM AND MNS
FLOOR PLAN - AREA C

PLATE REFERENCE NUMBER
FA103

SHEET 53 OF 107

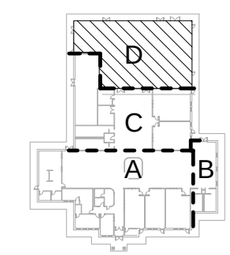


FIRE DETECTION/ALARM SYSTEM AND MNS - AREA D

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

8 4 0 8
SCALE: 3/16"=1'-0"

N
PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

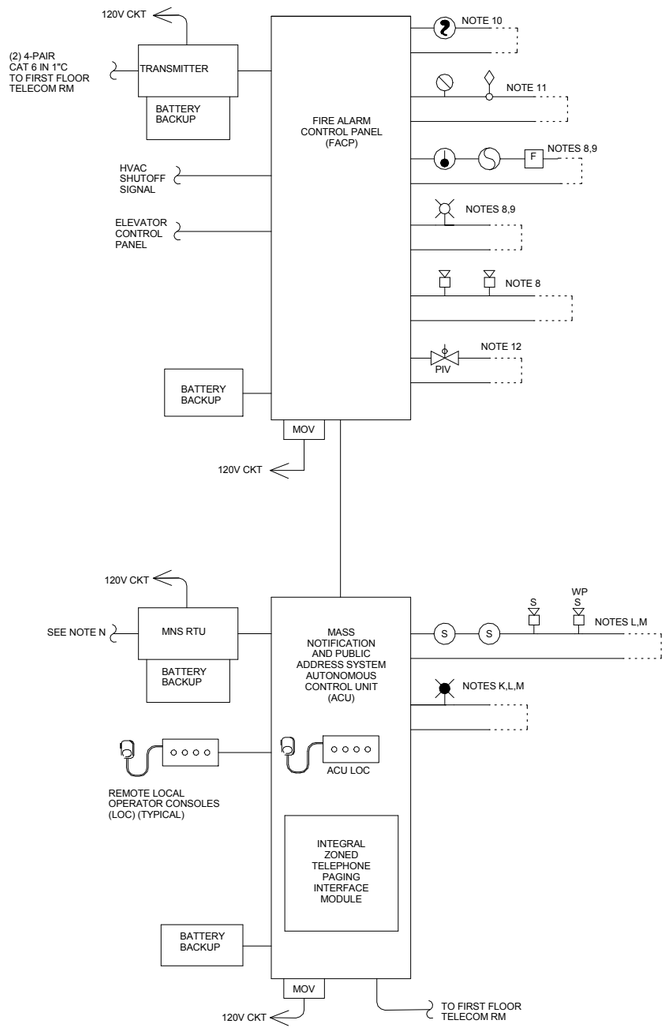
DESIGN BY: CR
DRAWN BY: CR
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE
PLOT DATE: 6/4/2014 10:41:52 AM
PLOT SCALE: As indicated
SIZE: 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

FIRE ALARM AND MNS
FLOOR PLAN - AREA D

PLATE REFERENCE NUMBER
FA104



FIRE ALARM, MASS NOTIFICATION AND PUBLIC ADDRESS RISER

FIRE ALARM SYSTEM NOTES

1. (GENERAL) THE FIRE ALARM SYSTEM SHALL BE A COMPLETELY SUPERVISED SYSTEM EMPLOYING ANALOG ADDRESSABLE INITIATING DEVICES AND MULTIPLEX COMMUNICATION TECHNIQUES. EACH DETECTION, MONITORING, AND CONTROL DEVICE SHALL BE INDIVIDUALLY ADDRESSABLE. DEVICES WHICH ARE NOT INHERENTLY ADDRESSABLE (I.E. TAMPER, FLOW SWITCHES, DOOR HOLDERS, ETC.) SHALL BE EQUIPPED WITH ADDRESSABLE MONITOR AND CONTROL MODULES.

2. NOT USED.

3. THE FIRE ALARM SYSTEM AND THE FA/MNS/PA SYSTEM SHALL HAVE SEPARATE CONTROL PANELS.

4. (GENERAL) REFER TO THE FIRE ALARM AND MASS NOTIFICATION SPECIFICATIONS FOR ADDITIONAL INTERFACE REQUIREMENTS BETWEEN THE FIRE ALARM AND MASS NOTIFICATION SYSTEMS.

5. (GENERAL) AN ALARM CONDITION ON ANY DEVICE SHALL AUTOMATICALLY INITIATE THE CONDITION FOUND IN THE SPECIFICATIONS AND STILL ALLOW FOR ADDITIONAL ALARMS AND TROUBLES TO BE REPORTED TO THE CENTRAL RECEIVING UNIT.

6. (GENERAL) THE CONTRACTOR SHALL INSTALL CONDUIT AND WIRING IN ACCORDANCE WITH THE FIRE ALARM MANUFACTURER'S SHOP DRAWINGS AND REQUIREMENTS AND NFPA STANDAR DS. THE SYSTEM SHALL BE A CLASS A, FOUR WIRE, TWO CONDUIT LOOP SYSTEM. CONDUIT SHALL BE RED OR SHALL BE MARKED WITH A RED STRIPE EVERY 10 FEET. ALL JUNCTION OR PULLBOXES SHALL BE PAINTED RED.

7. (GENERAL) PROVIDE A CABINET MOUNTED METAL OXIDE VARISTOR (MOV) BASED SURGE PROTECTION DEVICE (SPD) AT THE FACP POWER INPUT. THE DEVICE SHALL SUPPLEMENT THE SPD INTEGRAL TO THE FACP. THE DEVICE SHALL BE UL 1449 LISTED (3RD EDITION) AND SHALL SATISFY THE REQUIREMENTS OF IEEE C62.41.

8. MAXIMUM NUMBER OF DEVICES PER CIRCUIT SHALL BE IN ACCORDANCE WITH THE FIRE ALARM CONTROL PANEL LIMITATIONS.

9. REFER TO FIRE ALARM AND MASS NOTIFICATION FLOOR PLANS AND SPECIFICATIONS FOR QUANTITY AND LOCATION OF INITIATION AND NOTIFICATION DEVICES.

10. REFER TO MECHANICAL CONTROL DIAGRAMS FOR QUANTITY AND LOCATION OF DUCT SMOKE DETECTORS

11. REFER TO FIRE PROTECTION AND SPRINKLER DETAIL SHEETS FOR QUANTITY AND LOCATION OF SPRINKLER FLOW SWITCHES AND SPRINKLER TAMPER SWITCHES.

12. POST INDICATOR VALVE (PIV) TAMPER SWITCH SHALL BE WITHIN 100 FEET OF THE BUILDING. COORDINATE WITH INSTALLATION WATER UTILITY FOR EXACT LOCATION.

13. THE FIRE ALARM CONTROL PANEL SHALL BE FULLY COMPATIBLE WITH THE KING-FISHER INDUSTRIAL RADIO ALARM CONTROL SYSTEM (IRACS).

14. FT. CAMPBELL APPROVED FIRE ALARM MANUFACTURERS ARE FIRELITE, GE, and QUICK START.

15. THE FIRE ALARM TRANSMITTER SHALL BE GOVERNMENT FURNISHED, CONTRACTOR INSTALLED.

MNS & PA SYSTEM NOTES

A. (GENERAL) THE COMBINATION MNS/PA SYSTEM SHALL CONSIST OF A SUPERVISED AUDIO DISTRIBUTION NETWORK TO INCLUDE AMPLIFIERS, AUDIO BOOSTERS, AMPLIFIER SPLITTERS, MESSAGE KITS, OUTPUT CHANNEL KITS, MICROPHONES, BATTERIES, BATTERY CHARGERS, SPEAKERS, CABLING, AND ANY ANCILLARY COMPONENTS REQUIRED TO MEET THE REQUIRED SYSTEM CONFIGURATION AND OPERATION.

B. (GENERAL) THE PUBLIC ADDRESS SYSTEM SHALL SUPPORT BOTH MICROPHONE INPUT AND TELEPHONE CALL-IN INPUT VIA AN INTEGRAL ZONED TELEPHONE PAGING INTERFACE MODULE . THE MASS NOTIFICATION SYSTEM SHALL SUPPORT BOTH MICROPHONE INPUT AND THE DELIVERY OF LOCALLY PRE-RECORDED MESSAGES.

C. (GENERAL) THE MNS SHALL BE FULLY COMPATIBLE WITH THE BASE WIDE MNS. THE MNS SHALL BE CAPABLE OF ACCEPTING PRE-RECORDED AND LIVE MESSAGES FROM A REMOTE SITE BY WAY OF DRY CONTACTS AND 600Ω AUDIO INPUTS. THE MANUFACTURER SHALL PROVIDE AND INSTALL THE INTERFACE TO THE BASE WIDE MNS. COORDINATE WITH THE MANUFACTURER TO DETERMINE THE INTERFACE REQUIREMENTS BETWEEN THE BUILDING MNS SYSTEM AND THE BASE WIDE MNS.

D. (GENERAL) THE MNS SHALL SILENCE BOTH THE PA MESSAGES AND THE FIRE ALARM HORNS WHILE MASS NOTIFICATION MESSAGES ARE BEING BROADCAST.

E. (GENERAL) REFER TO THE FIRE ALARM AND MASS NOTIFICATION SPECIFICATIONS FOR ADDITIONAL INTERFACE REQUIREMENTS BETWEEN THE FIRE ALARM AND MASS NOTIFICATION SYSTEMS.

F. (GENERAL) SPEAKER QUALITY SHALL BE CONSISTENT WITH PUBLIC REQUIREMENTS. INTERIOR SPEAKERS SHALL BE RATED AT 8-10 WATTS AND SHALL HAVE A MINIMUM FREQUENCY RESPONSE OF 200 HZ TO 10,000 HZ. SPEAKER TAPS SHALL BE ADJUSTED AS NECESSARY.

G. (GENERAL) THE CONTRACTOR TO INSTALL CONDUIT AND WIRING IN ACCORDANCE WITH THE MASS NOTIFICATION MANUFACTURER'S SHOP DRAWINGS AND REQUIREMENTS.

H. (GENERAL) SPEAKER BACKBOXES SHALL BE PROVIDED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

I. (GENERAL) MASS NOTIFICATION MESSAGES SHALL BE PROGRAMMED PER SPECIFICTIONS.

J. (GENERAL) THE PUBLIC ADDRESS SYSTEM SHALL BE ZONED AS FOLLOWS:

ZONE 1: ALL AREAS
ZONE 2: FIRST AND SECOND FLOOR AREAS
ZONE 3: FIRST FLOOR AREAS
ZONE 4: SECOND FLOOR AREAS
ZONE 5: EXTERIOR AREAS
ZONE 6: SPARE
ZONE 7: SPARE

VERIFY ZONING WITH THE CONTRACTING OFFICER PRIOR TO ZONING ASSIGNMENTS.

K. NOT USED.

L. (GENERAL) MAXIMUM NUMBER OF SPEAKERS AND STROBES PER CIRCUIT SHALL BE IN ACCORDANCE WITH THE CONTROL PANEL LIMITATIONS. CONDUCTOR INTEGRITY MONITORING IS REQUIRED.

M. (GENERAL) REFER TO FIRE ALARM AND MASS NOTIFICATION FLOOR PLANS AND SPECIFICATIONS FOR QUANTITY AND LOCATION OF INDICATION AND NOTIFICATION DEVICES AND REMOTE LOCAL OPERATING CONSOLES.

N. THE MASS NOTIFICATION SYSTEM SHALL BE CAPABLE OF CONNECTING TO A FUTURE FACILITY SYSTEM USING DRY CONTACTS AND 600 OHM AUDIO INPUTS.

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE
DESIGN BY: WJC
DRAWN BY: WJC
CKD BY:
PLOT DATE: 6/4/2014 10:41:55 AM
SBMT BY:
PLOT SCALE: 12" = 1'-0"
SIZE: D 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

FIRE ALARM AND MNS DIAGRAM

PLATE REFERENCE NUMBER
FA601
SHEET 55 OF 107

PLUMBING GENERAL NOTES - APPLIES TO ALL P-SERIES SHEETS

1. FURNISH ALL LABOR, INSTALL ALL MATERIALS AND EQUIPMENT, AND INCLUDE ALL SERVICES AND INCIDENTALS PROPER TO THE INSTALLATION OF WORK INVOLVED FOR A COMPLETE AND OPERATING FACILITY.
2. CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES, SPECS AND DRAWINGS.
3. PROVIDE CLEARANCES AROUND EQUIPMENT AS RECOMMENDED BY MANUFACTURER. COORDINATE EQUIPMENT ELECTRICAL REQUIREMENTS WITH ELECTRICAL DRAWINGS.
4. THE PLUMBING DRAWINGS ARE GENERALLY DIAGRAMMATIC AND SHOW THE RELATIONSHIP BETWEEN EQUIPMENT AND CONNECTIONS. DO NOT SCALE THE DRAWINGS FOR EXACT SIZE OR LOCATIONS. DETAILS AND ASSEMBLY DRAWINGS ARE SPECIFIC AND SHALL BE ADHERED TO.
5. THE PLUMBING SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, SPECIFICATIONS, NFPA 54 AND THE INTERNATIONAL PLUMBING CODE.
6. ALL BUILDINGS SHALL BE DESIGNED FOR SEISMIC DESIGN CATEGORY "C".
7. CONCRETE HOUSEKEEPING PAD SIZES SHALL BE COORDINATED WITH INSTALLED EQUIPMENT.
8. COORDINATE VENT THRU ROOF AND WATER HEATER INTAKE/FLUE PIPING PENETRATIONS THRU ROOF WITH ROOFING CONTRACTOR. FLASHING SHALL BE BY ROOFING CONTRACTOR.
9. REFER TO SCHEDULES, DETAILS AND DIAGRAMS FOR PIPE AND PIPE SIZES NOT SHOWN.
10. ALL PIPING RUN-OUTS TO FIXTURES SHALL BE SAME SIZE AS OUTLINED IN THE PLUMBING FIXTURE SCHEDULE ON SHEET P-601

PLUMBING LEGEND - APPLIES TO ALL P-SERIES SHEETS

X" SS	SANITARY SEWER
X" V	SANITARY VENT
X" CD	CONDENSATE DRAIN (SEE MP-PLATES)
X" CW	DOMESTIC COLD WATER
X" HW	DOMESTIC HOT WATER
X" HWR	DOMESTIC HOT WATER RECIRCULATED
	GATE VALVE
	BALL VALVE
	A.S.M.E. RATED T&P RELIEF VALVE
	CHECK VALVE
	PRESSURE REDUCING VALVE
	PIPE DROP
	PIPE RISE
	FLANGE
	UNION
	HOSE BIBB/WALL HYDRANT
	PIPE TEE
	PIPE ELBOW
	DRAWING NOTE
P - #	PLUBMING EQUIPMENT TAG
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
BFF	BELOW FINISHED FLOOR
BFG	BELOW FINISHED GRADE
BOP	BOTTOM OF PIPE
CD	CONDENSATE DRAIN
CO	CLEANOUT
ECO	EXTERIOR CLEANOUT
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
HB	HOSE BIBB
HD	HUB DRAIN
INV	INVERT
RPBP	REDUCED PRESSURE PRINCIPAL BACKFLOW PREVENTER
SS	SANITARY SEWER
V	VENT
VTR	VENT THRU ROOF
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTOR

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: 13-JUNE-2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE

DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
PLOT DATE: 6/12/2014 3:44:11 PM
PLOT SCALE: 1/8" = 1'-0"
SIZE: D 22" X 34"
FILE NAME:

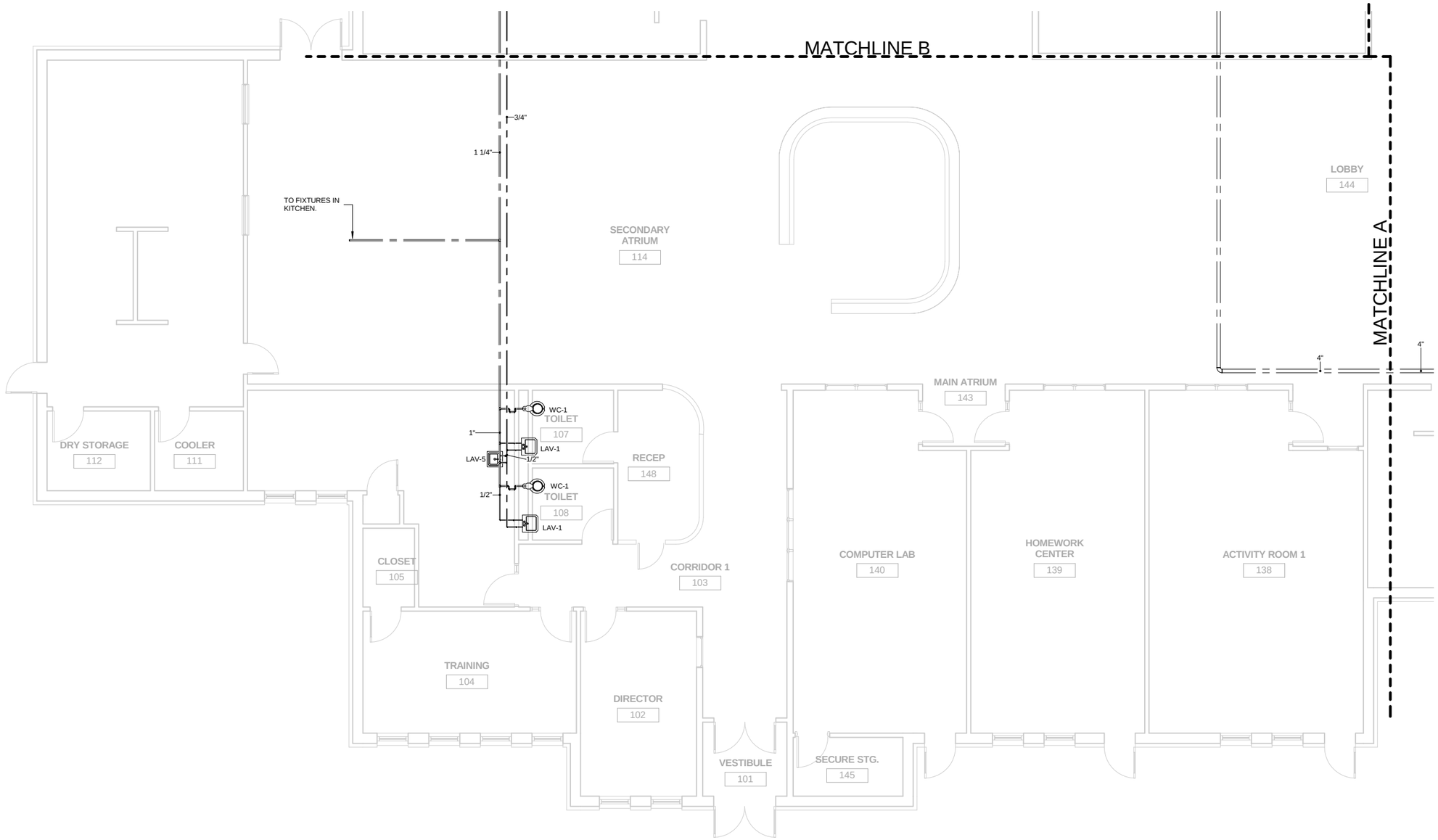
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE

4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

PLUMBING GENERAL NOTES AND LEGEND

PLATE REFERENCE NUMBER
P-001

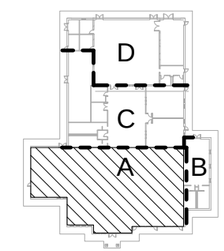


8 4 0 8
SCALE: 3/16"=1'-0"

N
PLAN NORTH

POTABLE HOT AND COLD WATER - AREA A

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



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

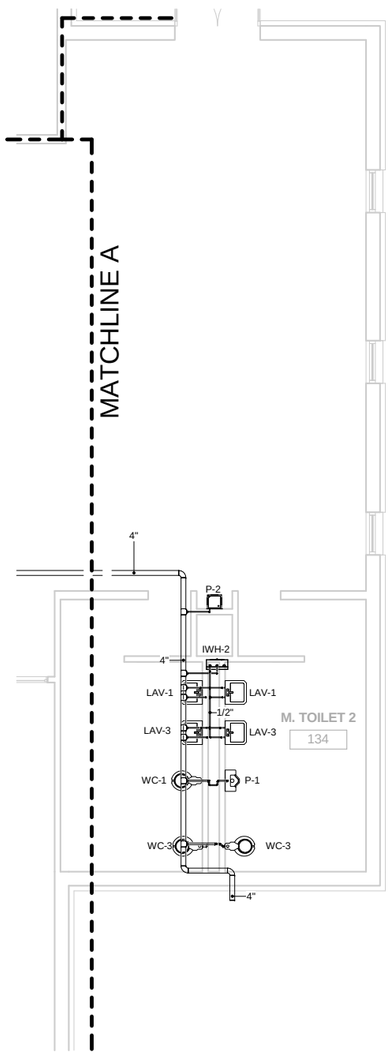
DESIGN BY: JCS
DRAWN BY: JCS
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CKD BY: PLM
CONTRACT NO.: N/A
PLOT DATE: 6/4/2014 10:48:19 AM
CATEGORY CODE: 65% DESIGN PACKAGE
PLOT SCALE: As indicated
SIZE: 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

POTABLE HOT AND COLD WATER - AREA A

PLATE REFERENCE NUMBER
P-101
SHEET 57 OF 107

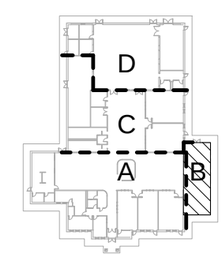


POTABLE HOT & COLD WATER - AREA B

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

8 4 0 8
SCALE: 3/16"=1'-0"

N
PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

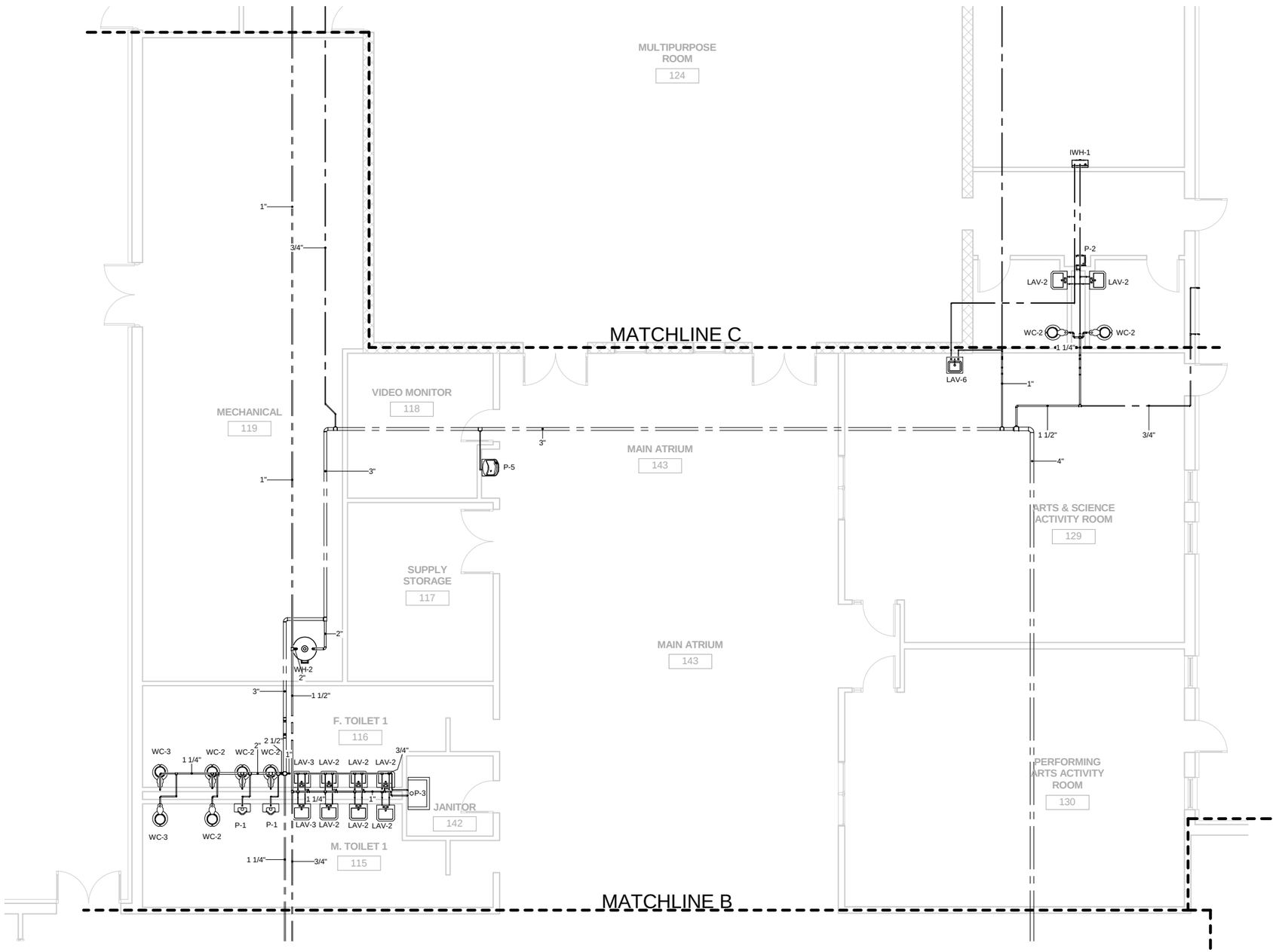
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/4/2014 10:48:21 AM
CATEGORY CODE: 1635 DESIGN PACKAGE
PLOT SCALE: As indicated
SIZE: D 22 X 34
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

POTABLE HOT AND COLD WATER - AREA B

PLATE REFERENCE NUMBER
P-102
SHEET 58 OF 107

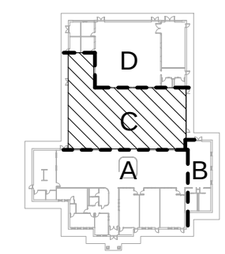


POTABLE HOT AND COLD WATER - AREA C

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

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

PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: DES
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/4/2014 10:49:25 AM
CATEGORY CODE: 65% DESIGN PACKAGE
PLOT SCALE: As indicated
SIZE: 22" x 34"
FILE NAME:

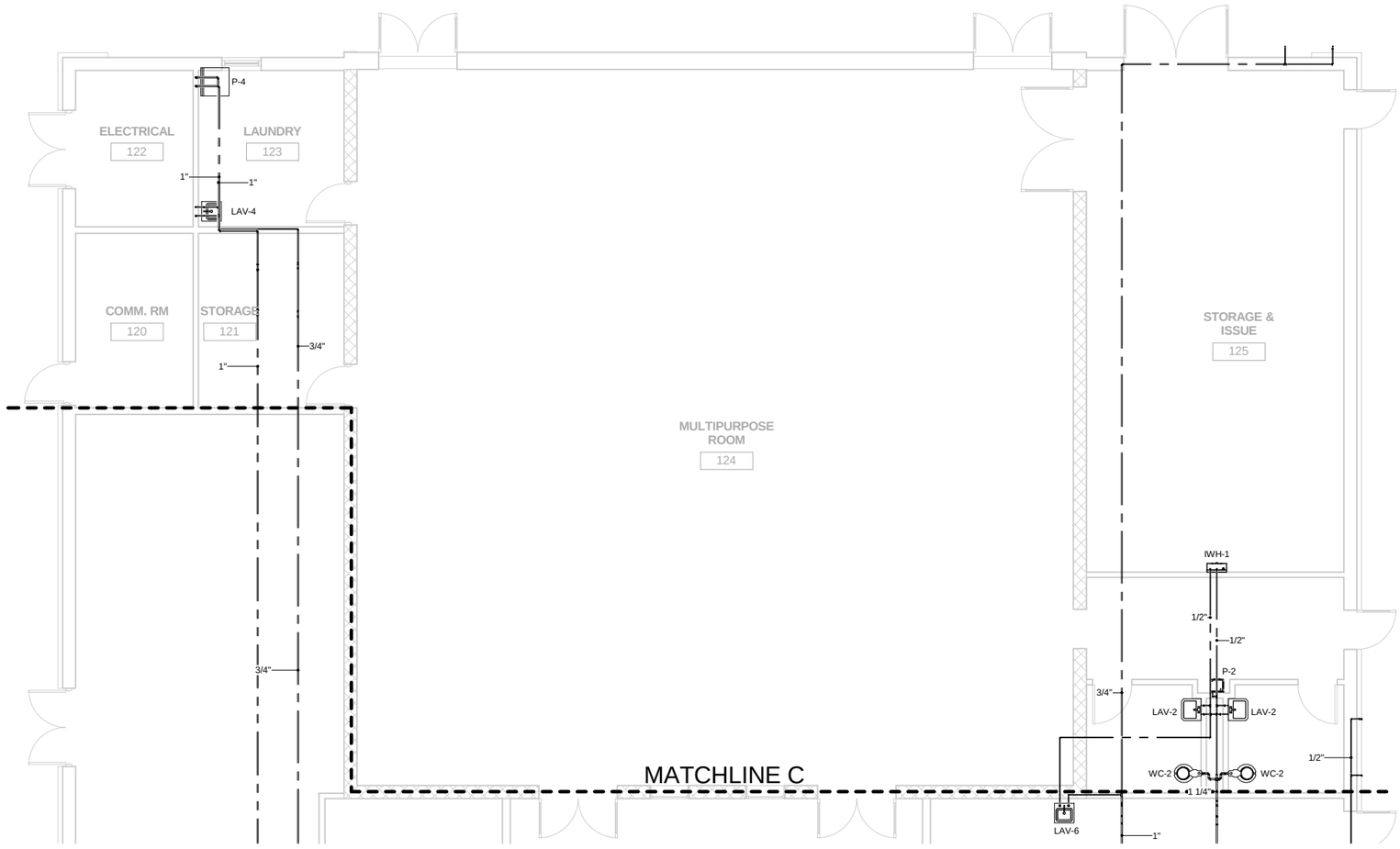
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

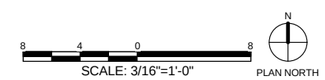
CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

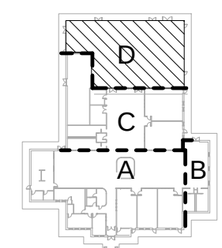
POTABLE HOT AND COLD WATER - AREA C

PLATE REFERENCE NUMBER
P-103

SHEET 59 OF 107







POTABLE HOT AND COLD WATER - AREA D

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

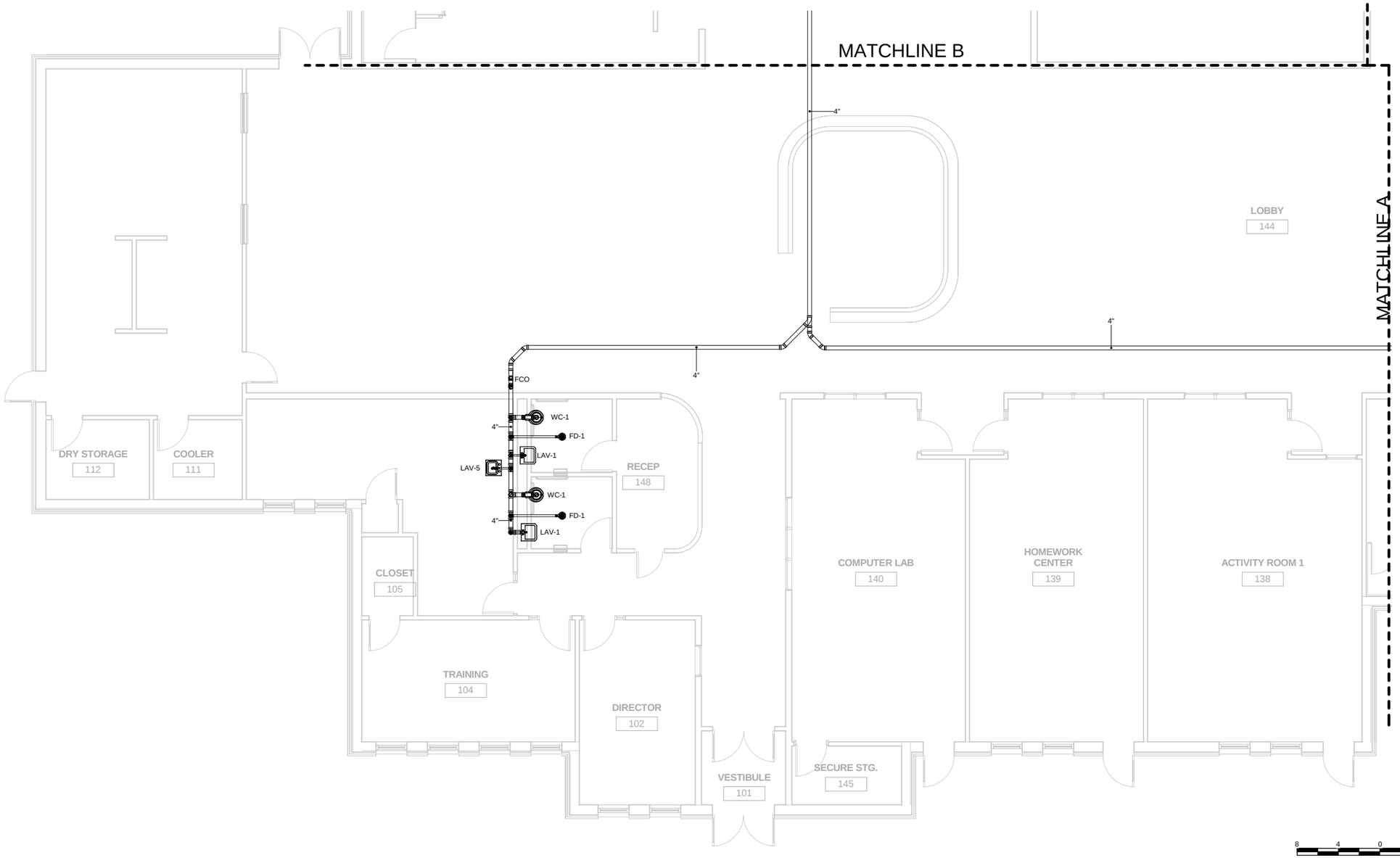
DESIGN BY: JCS
DRAWN BY: JCS
SBMT BY:
DATE: 12JAN 2014
SOLICITATION NO.: N/A
CKD BY: PLM
CONTRACT NO.: N/A
PLOT DATE: 6/4/2014 10:48:29 AM
CATEGORY CODE: 65% DESIGN PACKAGE
PLOT SCALE: As indicated
SIZE: 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

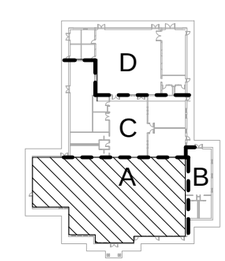
POTABLE HOT AND COLD WATER - AREA D

PLATE REFERENCE NUMBER
P-104
SHEET 60 OF 107



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

PLAN NORTH



SANITARY WASTE AND VENT - AREA A

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/4/2014 10:48:32 AM
PLOT SCALE: As indicated
SIZE: 30" X 42" X 34"
FILE NAME:
CATEGORY CODE: 1635 DESIGN PACKAGE

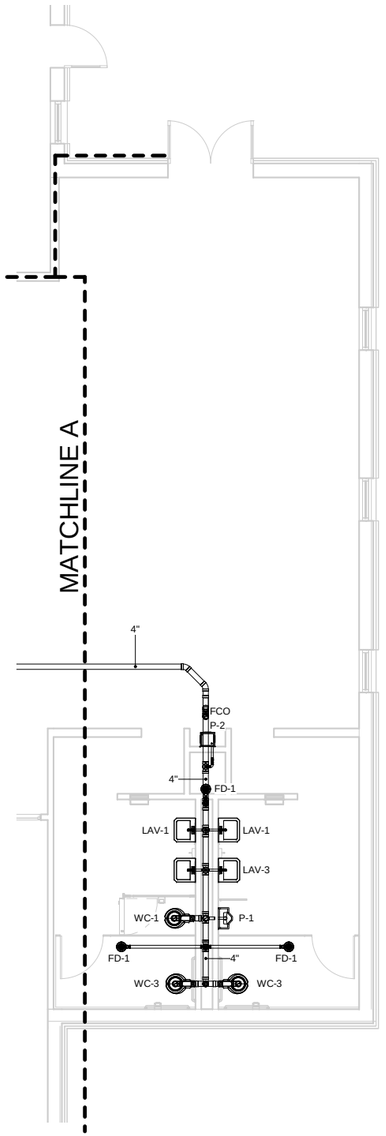
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

SANITARY WASTE AND VENT - AREA A

PLATE REFERENCE NUMBER
P-105

SHEET 61 OF 107

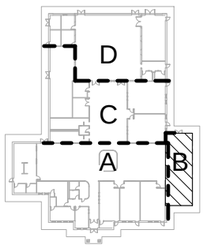


SANITARY WASTE AND VENT - AREA B

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

8 4 0 8
SCALE: 3/16"=1'-0"

N
PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

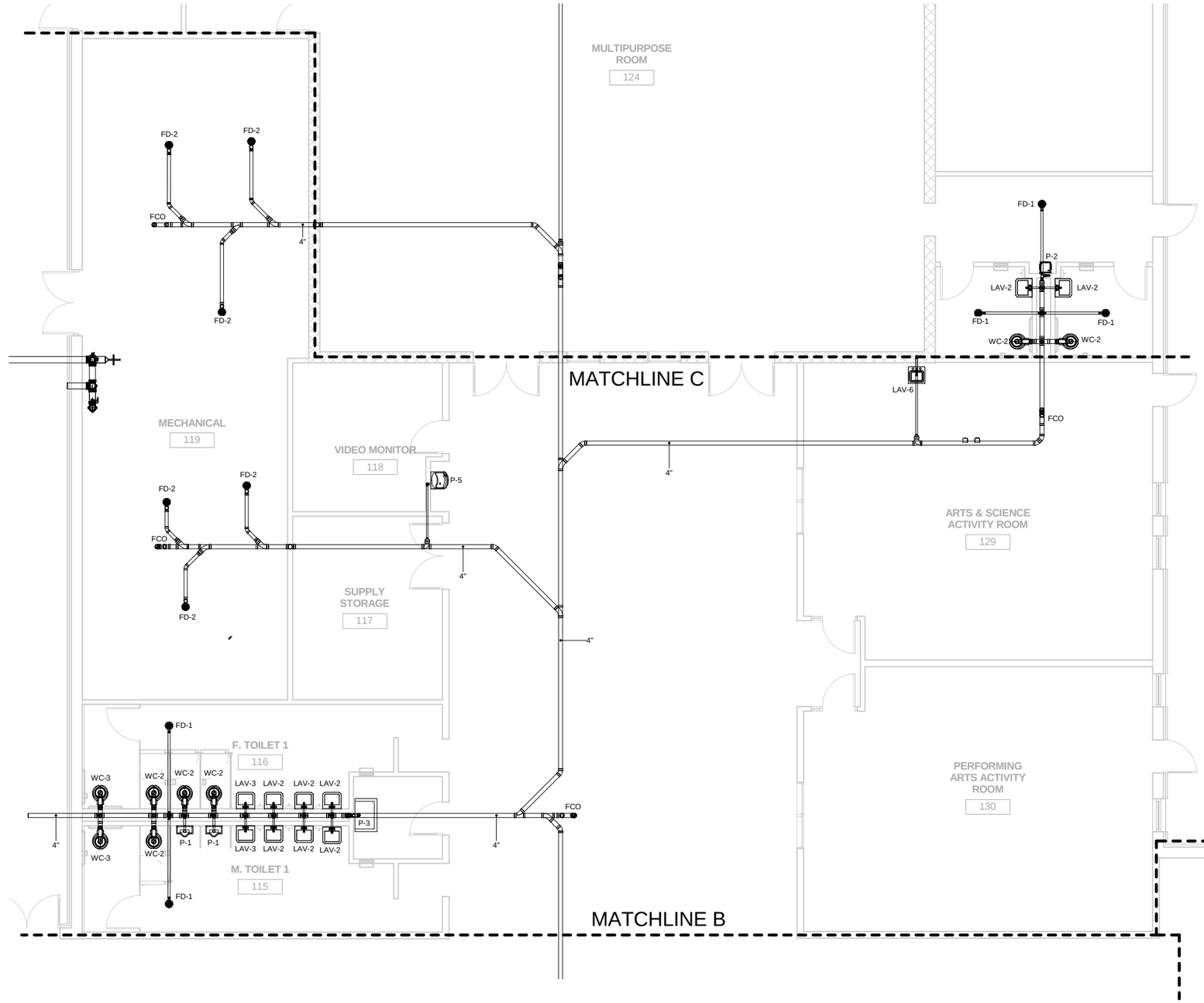
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/4/2014 10:48:35 AM
CATEGORY CODE: 167/5 DESIGN PACKAGE
PLOT SCALE: As indicated
SIZE: D 22 X 34
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

SANITARY WASTE AND VENT - AREA B

PLATE REFERENCE NUMBER
P-106
SHEET 62 OF 107

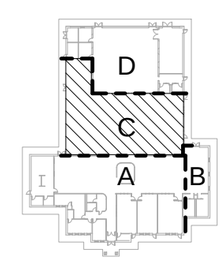


SANITARY WASTE AND VENT - AREA C

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

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

PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: 1 JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/4/2014 10:48:41 AM
PLOT SCALE: As indicated
CATEGORY CODE: 635% DESIGN PACKAGE
SIZE: 22" X 34"
FILE NAME:

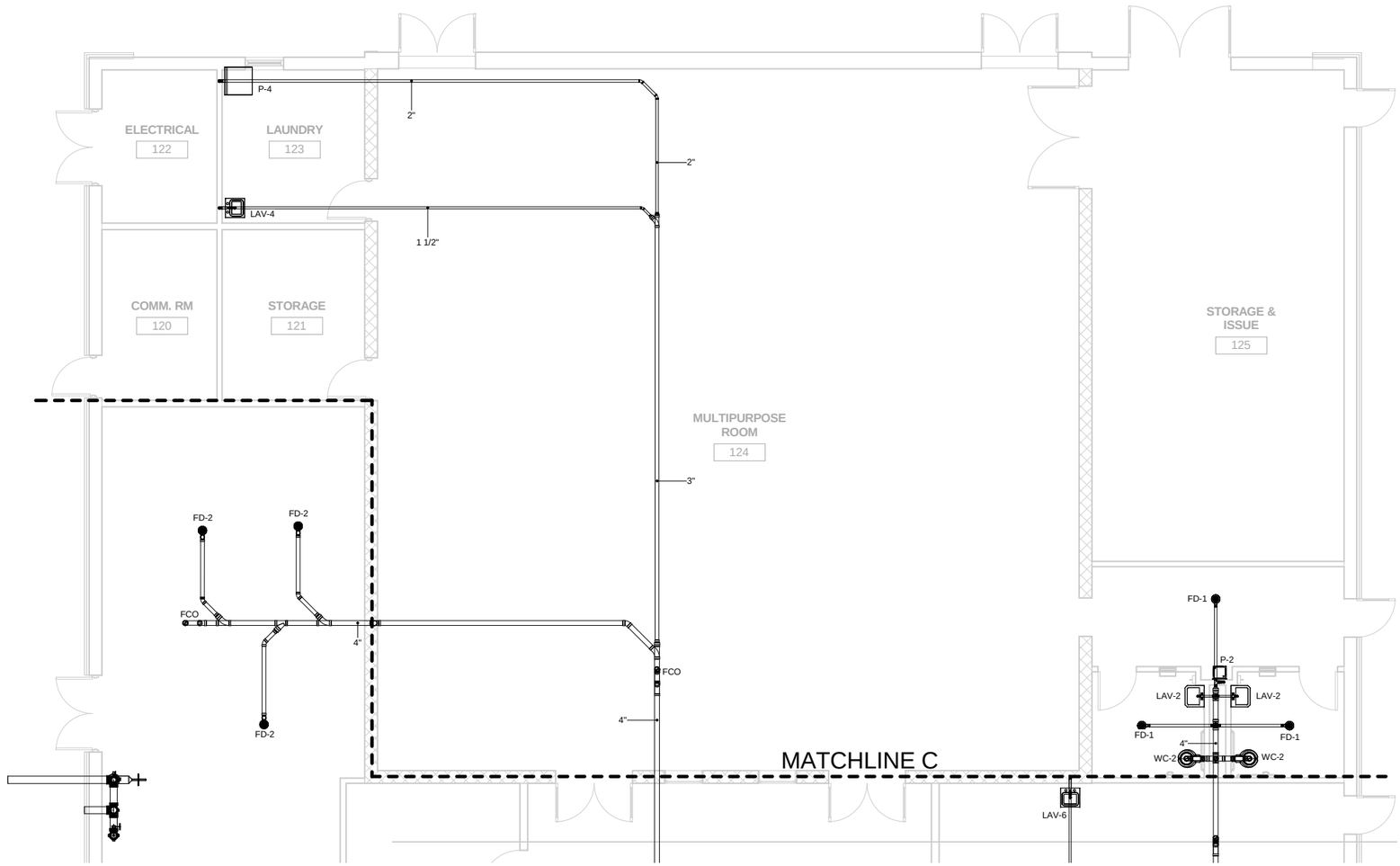
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

SANITARY WASTE AND VENT - AREA C

PLATE REFERENCE NUMBER
P-107

SHEET 63 OF 107

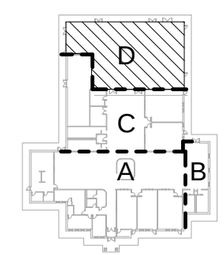


SANITARY WASTE AND VENT - AREA D

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

8 4 0 8
SCALE: 3/16"=1'-0"

N
PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

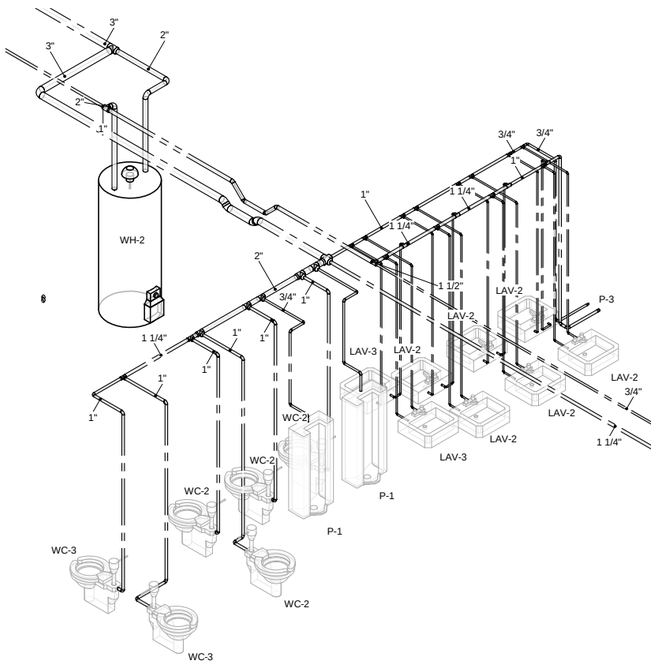
DESIGN BY: JCS
DATE: JUNE 2014
DRAWN BY: JCS
CKD BY: PLM
SOLICITATION NO.: N/A
SBMT BY:
PLOT DATE: 6/4/2014 10:48:45 AM
CONTRACT NO.: N/A
PLOT SCALE: As indicated
CATEGORY CODE: 65% DESIGN PACKAGE
SIZE: D 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

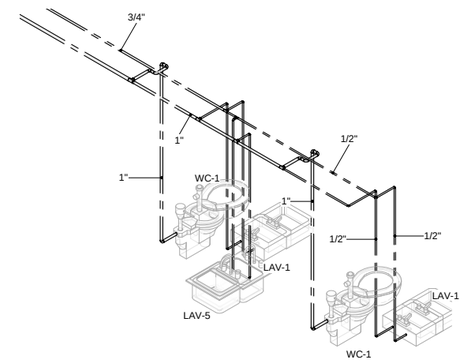
SANITARY WASTE AND VENT - AREA D

PLATE REFERENCE NUMBER
P-108
SHEET 64 OF 107



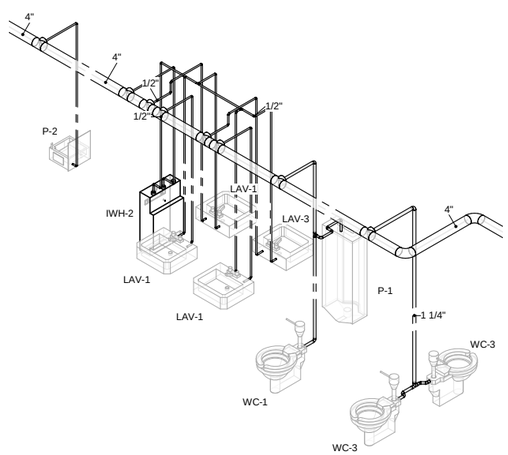
HOT AND COLD WATER RISER DIAGRAM - TOILETS 115 AND 116

SCALE: NOT TO SCALE



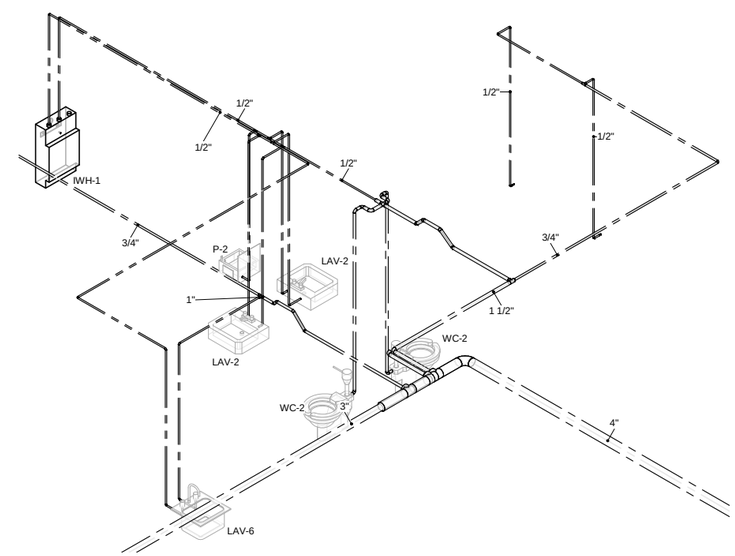
HOT AND COLD WATER RISER DIAGRAM - TOILETS 107 AND 108

SCAL NOT TO SCALE



HOT AND COLD WATER RISER DIAGRAM - TOILETS 134 AND 135

SCALE: NOT TO SCALE



HOT AND COLD WATER RISER DIAGRAM - TOILETS 127 AND 128

SCALE: NOT TO SCALE

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: DES
DATE: JUNE 2014
DRAWN BY: JCS
CKD BY: PLM
SOLICITATION NO.: N/A
SBMT BY:
PLOT DATE: 6/4/2014 10:48:51 AM
CONTRACT NO.: N/A
PLOT SCALE:
CATEGORY CODE: 65% DESIGN PACKAGE
SIZE D 22" x 34"
FILE NAME:

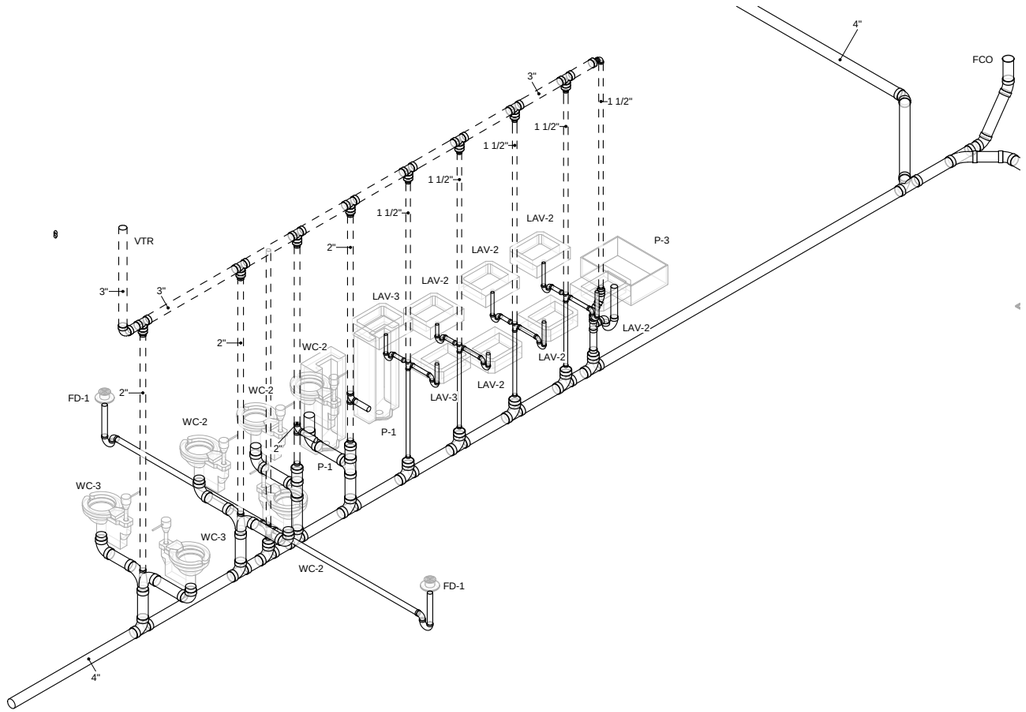
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

HOT AND COLD WATER RISER DIAGRAMS

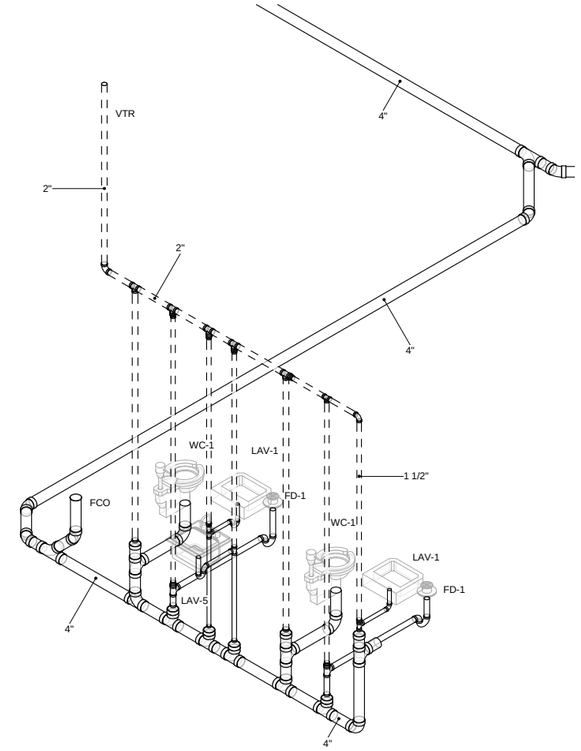
PLATE REFERENCE NUMBER
P-201

SHEET 65 OF 107



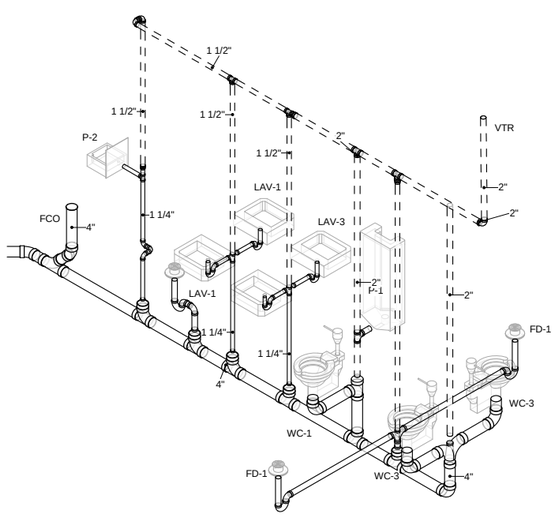
WASTE AND VENT RISER DIAGRAM - TOILETS 115 AND 116

SCALENTS



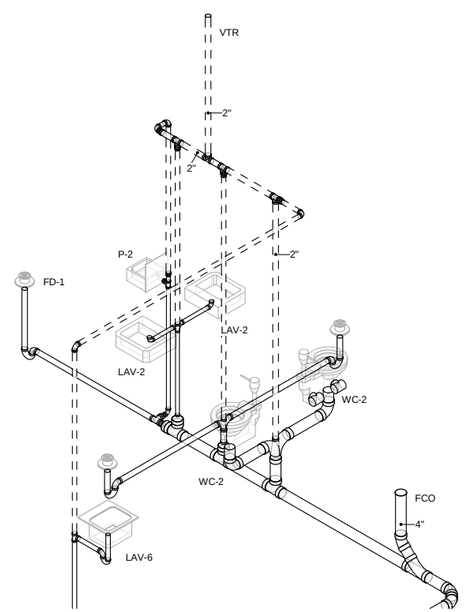
WASTE AND VENT RISER DIAGRAM - TOILETS 107 AND 108

SCALE:



WASTE AND VENT RISER DIAGRAM - TOILETS 134 AND 135

SCALE:



WASTE AND VENT RISER DIAGRAM - TOILETS 127 AND 128

SCALE:

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: JCS	DATE: JUNE 2014
DRAWN BY: JCS	CKD BY: PLM
SBMT BY:	SOLICITATION NO.: N/A
PLOT DATE: 6/4/2014 10:48:57 AM	CONTRACT NO.: N/A
PLOT SCALE:	CATEGORY CODE: 65% DESIGN PACKAGE
SIZE: D 22" X 34"	FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE

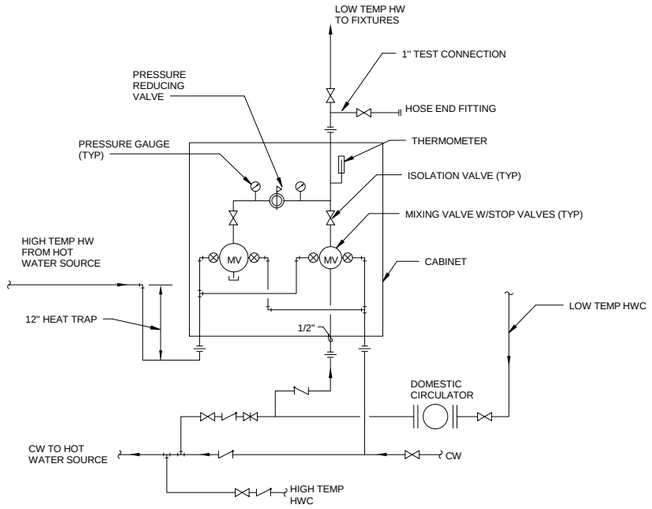
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

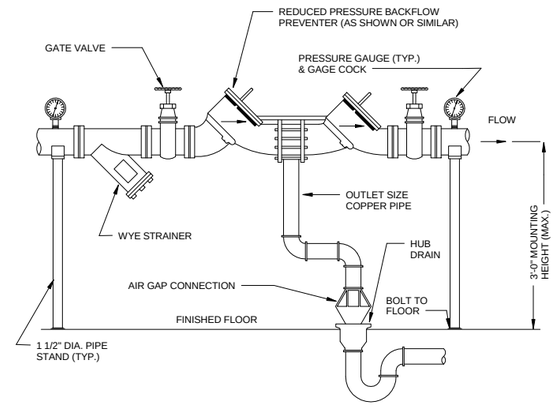
WASTE AND VENT RISER DIAGRAMS

PLATE REFERENCE NUMBER
P-202

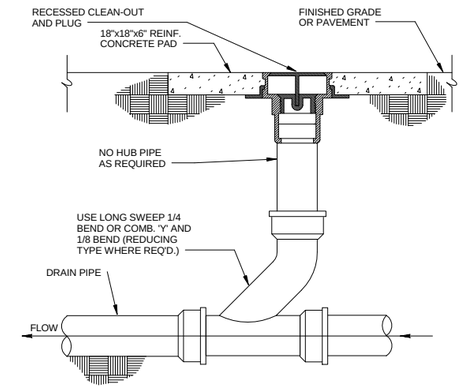
SHEET 66 OF 107



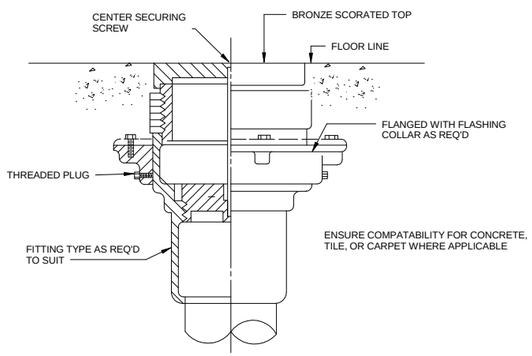
1 MIXING VALVE ASSEMBLY
NOT TO SCALE



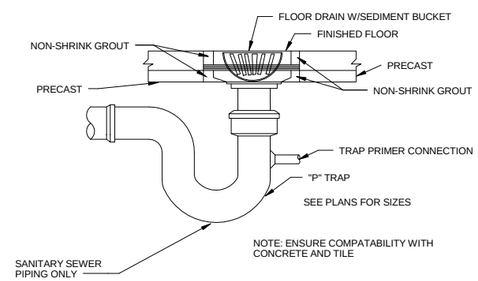
2 BACKFLOW PREVENTER
NOT TO SCALE



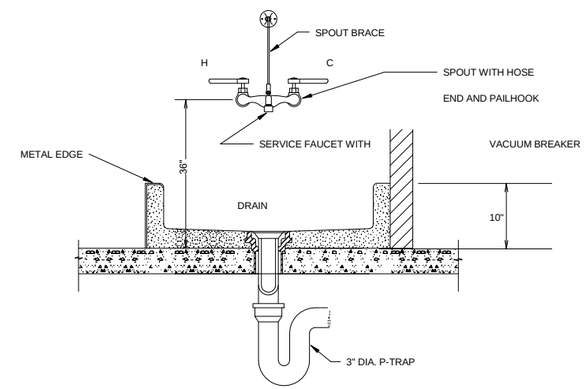
3 CLEANOUT DETAIL
NOT TO SCALE



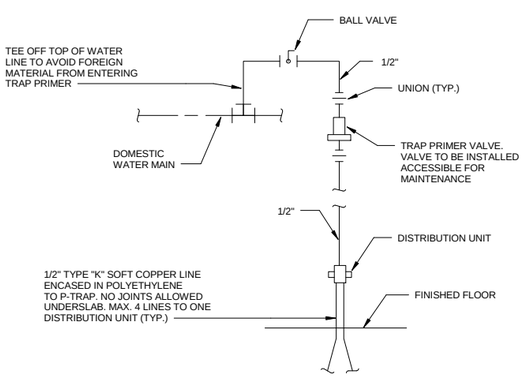
4 FLOOR CLEANOUT DETAIL
NOT TO SCALE



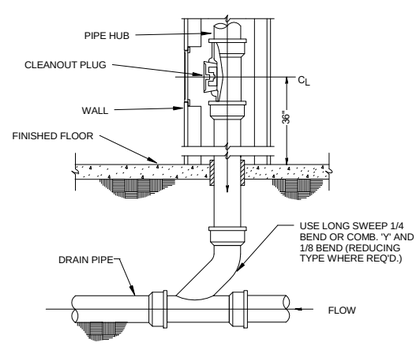
5 FLOOR DRAIN W/SEDIMENT BUCKET DETAIL
NOT TO SCALE



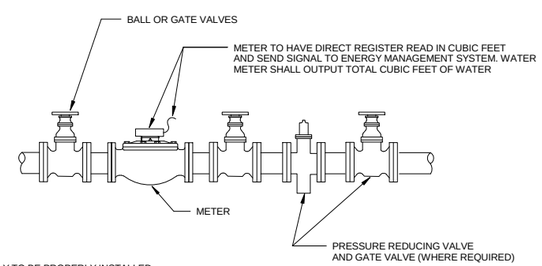
6 MOP SINK DETAIL
NOT TO SCALE



7 TRAP PRIMER
NOT TO SCALE



8 WALL CLEANOUT
NOT TO SCALE



NOTES:

1. METERING ASSEMBLY TO BE PROPERLY INSTALLED AND ADEQUATELY SUPPORTED TO ALLOW FOR EASY MAINTENANCE, REPAIR AND REPLACEMENT. PROVIDE POWER AND CONNECTIONS TO SYSTEM.

9 WATER METER
NOT TO SCALE

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: JCS | DATE: JUNE 2014
DRAWN BY: JCS | CKD BY: PLM | SOLICITATION NO.: N/A
SBMT BY: | PLOT DATE: 6/4/2014 10:49:00 AM | CONTRACT NO.: N/A
PLOT SCALE: As indicated | CATEGORY CODE: 65% DESIGN PACKAGE
SIZE: D 22" x 34" | FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

PLUMBING DETAILS

PLATE REFERENCE NUMBER
P-501
SHEET 67 OF 107

MARK	TYPE	DESCRIPTION	MOUNTING		CONNECTION			NOTES
			TYPE	HEIGHT	C.W. (IN)	H.W. (IN)	WASTE (IN)	
FD-1	FLOOR DRAIN	2" FLOOR DRAIN	FLOOR	-			2"	-
FD-2	FLOOR DRAIN	3" FLOOR DRAIN	FLOOR	-			3"	-
LAV-1	LAVATORY (ADULT)	ADULT HEIGHT, 20" x 18" VITREOUS CHINA	WALL	-	1/2"	1/2"	1 1/4"	AUTO FAUCET w/GOOSENECK SPOUT
LAV-2	LAVATORY (CHILD)	CHILD HEIGHT, 20" x 18" VITREOUS CHINA	WALL	31" A.F.F.	1/2"	1/2"	1 1/4"	-
LAV-3	LAVATORY (HDCP)	HANDICAP HEIGHT, 20" x 28" VITREOUS CHINA	WALL	31" A.F.F.	1/2"	1/2"	1 1/4"	AUTO FAUCET w/GOOSENECK SPOUT
LAV-4	SINK (LAUNDRY/SERVICE)	22" x 19" LAUNDRY/SERVICE SINK	WALL	-	1/2"	1/2"	2"	-
LAV-5	SINK (KITCHEN)	25" x 22" x 8" COUNTERTOP, STAINLESS STEEL, 1 COMPARTMENT	COUNTERTOP	-	1/2"	1/2"	1 1/2"	AUTO FAUCET w/GOOSENECK SPOUT
LAV-6	SINK (MULTIPURPOSE/ACTIVITY)	25" x 22" x 8" COUNTERTOP, STAINLESS STEEL, 1 COMPARTMENT	COUNTERTOP	-	1/2"	1/2"	2"	-
P-1	URINAL (STALL)	VITREOUS CHINA	FLOOR	-	3/4"	0"	2"	-
P-2	DRINKING FOUNTAIN	CHILLED-WATER DRINKING FOUNTAIN	WALL	-	1/2"		1 1/4"	-
P-3	MOP SINK	FLOOR MOUNTED TILE MOP SINK	FLOOR	-	1/2"	1/2"	2"	WASTE SHALL BE ROUTED INTO A 2" FLOOR DRAIN
P-4	WASHING MACHINE	AUTOMATIC CLOTHES WASHING MACHINE	FLOOR	-	1"	1"	2"	-
P-5	DRINKING FOUNTAIN	EZ ADA	WALL	30" A.F.F.	1/2"		1 1/4"	HANDICAP HEIGHT
WC-1	TOILET (ADULT)	ADULT HEIGHT VITREOUS CHINA, TOP SPUD, ELONGATED BOWL	FLOOR	-	1"		4"	FLUSH VALVE, ELONGATED SEAT
WC-2	TOILET (CHILD)	CHILD HEIGHT VITREOUS CHINA, TOP SPUD, CHILD SEAT	FLOOR	11" RIM HEIGHT	1"		4"	FLUSH VALVE, CHILD SEAT
WC-3	TOILET (HDCP)	HANDICAP HEIGHT, VITREOUS CHINA, TOP SPUD, ELONGATED BOWL	FLOOR	18" RIM HEIGHT	1"		4"	FLUSH VALVE, ELONGATED SEAT

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: JCS
DATE: JUNE 2014
DRAWN BY: JCS
CKD BY: PLM
SOLICITATION NO.: N/A
SBMT BY:
CONTRACT NO.: N/A
PLOT DATE: 6/4/2014 10:49:02 AM
CATEGORY CODE: 635% DESIGN PACKAGE
PLOT SCALE:
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

PLUMBING SCHEDULES

PLATE REFERENCE NUMBER
P-601

ABBREVIATIONS

A	
A/C	AIR CONDITION (- ING, -ER, -ED)
ABS	ABSOLUTE
AC UNIT	AIR CONDITIONING UNIT
ACH	AIR CHANGES PER HOUR
ADA	AMERICANS WITH DISABILITIES ACT
ADP	APPARATUS DEW POINT
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
ALT	ALTITUDE
AMB	AMBIENT
APPROX	APPROXIMATE
AS	AIR SEPARATOR
ATM	ATMOSPHERE
AUX	AUXILARY
AVG	AVERAGE
B	
B	BOILER
BBD	BOILER BLOWDOWN
BF	BOILER FEED SYSTEM
BHP	BRAKE HORSEPOWER
BLDG	BUILDING
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BP	BOILING POINT
BP	BOILER PUMP
BT	BUFFER TANK
BTU	BRITISH THERMAL UNIT
C	
CFM	FLOW, CUBIC FEET PER MINUTE
CH	CHILLER
CHWR	CHILLED WATER, SUPPLY
CHWR	CHILLED WATER, RETURN
CLG LOAD	COOLING LOAD
CMPR	COMPRESSOR
CO	CARBON MONOXIDE
CO2	CARBON DIOXIDE
COEF	COEFFICIENT
COND	CONDENS(-ER, -ING, -ATION)
CRP	CONDENSATE RETURN PUMP
CT	COOLING TOWER
CT	COOLING TOWER
CU FT	CUBIC FEET
CU IN	CUBIC INCH
CV	COEFFICIENT, VALVE FLOW
CWR	CONDENSER WATER, RETURN
CWS	CONDENSER WATER, SUPPLY
D	
D	DAMPER
DB	DRY BULB TEMPERATURE
DBA	DECIBEL
DEG	DEGREE
DENS	DENSITY
DIA	DIAMETER
DIFF	DIFFERENCE
DP	DIFFERENTIAL PRESSURE
DPT	DEW POINT TEMPERATURE
DX	DIRECT EXPANSION
E	
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
EG	EXHAUST AIR GRILLE
ENT	ENTERING
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EVAP	EVAPOR(-E, -ING, -ED, -OR)
EWT	ENTERING WATER TEMPERATURE
EXP	EXPANSION
F	
F	TEMPERATURE FARENHEIT
FA	FREE AREA
FC	FLUID COOLER
FC	FLEX CONNECTOR
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FT	FEET
G	
GAL	GALLONS
GPH	FLOW, GALLONS PER HOUR
GPM	FLOW, GALLONS PER MINUTE
GR	GRAINS
GSHP	GROUND SOURCE HEAT PUMPE
H	
H	ENTHALPY
HG	MERCURY
HGT	HEIGHT
HP	HEAT PUMP
HPS	HIGH PRESSURE STEAM
HR	HOUR
HTHW	HIGH TEMPERATURE HOT WATER (>200 F)
HVU	HEATING VENTILATING UNIT
HWR	HYDRONIC HOT WATER, RETURN
HWS	HYDRONIC HOT WATER, SUPPLY
HX	HEAT EXCHANGER
HZ	FREQUENCY
I	
I.E.	INVERT ELEVATION
IH	INFRARED HEATER
IN	INCH
K	
K	THERMAL CONDUCTIVITY

KW	KILOWATT
KWH	KILOWATT-HOUR
L	
L	LOUVER
LAT	LEAVING AIR TEMPERATURE
LB	POUNDS
LF	LINEAR FEET
LG	LENGTH
LHG	HEAT GAIN, LATENT
LMTD	LEAST MEAN TEMPERATURE DIFFERENCE
LPS	LOW PRESSURE STEAM
LWT	LEAVING WATER TEMPERATURE
M	
MAX	MAXIMUM
MBH	1000 * BRITISH THERMAL UNIT
MIN	MINUTE
MIN	MINIMUM
MPS	MEDIUM PRESSURE STEAM
N	
N/A	NOT APPLICABLE
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NO / #	NUMBER
NTS	NOT TO SCALE
O	
OA	OUTSIDE AIR
OAT	OUTSDIE AIR TEMPERATURE
OZ	OUNCE
P	
PCHWP	PRIMARY CHILLED WATER PUMP
PCWP	PRIMARY CONDENSER WATER PUMP
PH	PHASE, ELECTRICAL
PHWP	PRIMARY HOT WATER PUMP
PPM	PARTS PER MILLION
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE IN
PSIA	PSI, ABSOLUTE
R	
R	THERMAL RESISTANCE
RA	RETURN AIR
RAT	RETURN AIR TEMPERATURE
REFR	REFRIGERANT
RG	RETURN AIR GRILLE
RH	RELATIVE HUMIDITY
RPM	REVOLUTION PER MINUTE
S	
S	ENTROPY
SA	SUPPLY AIR
SAT	SUPPLY AIR TEMPERATURE
SC	SHADING COEFFICIENT
SCFM	CFM, STANDARD CONDITIONS
SCFS	CUBIC FEET PER SECOND, STANDARD
SCHWP	SECONDARY CHILLED WATER PUMP
SD	SUCTION DIFFUSER
SD	SUPPLY AIR DIFFUSER
SF	SUPPLY FAN
SF	SAFETY FACTOR
SG	SPECIFIC GRAVITY
SG	SUPPLY AIR GRILLE
SHG	SENSIBLE HEAT GAIN
SHGC	SENSIBLE HEAT GAIN COEFFICIENT
SHR	SENSIBLE HEAT RATIO
SHWP	SECONDARY HOT WATER PUMP
SP	STATIC PRESSURE
SP HT	SPECIFIC HEAT
SPEC	SPECIFICATION
SQ	SQUARE
STD	STANDARD
SUCT	SUCTION
T	
T STAT	THERMOSTAT
TAB	TEST AND BALANCE
TEMP	TEMPERATURE
TG	TRANSFER AIR GRILLE
TON	TON OF REFRIGERATION (12,000 BTU)
TXV	THERMOSTATIC EXPANSION VALVE
U	
UH	UNIT HEATER
V	
V	VALVE
VAV	VARIABLE AIR VOLUME
VD	VOLUME DAMPER
VENT	VENTILATION
VFD	VARIABLE FREQUENECY DRIVE
VP	VELOCITY PRESSURE
VSD	VARIABLE SPEED DRIVE
W	
W	WATT
WB	WET BULB TEMPERATURE
WC	WATER COLUMN
WSHP	WATER SOURCE HEAT PUMP
WT	WEIGHT
Y	
YD	YARD
YR	YEAR

SYMBOLS

PIPING

- BALL VALVE
- BUTTERFLY VALVE
- CHECK VALVE
- GATE VALVE
- AUTOMATIC FLOW CONTROL VALVE
- MANUAL CALIBRATED BALANCE VALVE
- GLOBE VALVE
- PRESSURE REDUCING VALVE
- 3-WAY CONTROL VALVE, DDC
- 2-WAY CONTROL VALVE, DDC
- WYE STRAINER
- PRESSURE GAUGE
- THERMOSTAT

DUCTWORK

- EXISTING DUCTWORK TO BE REMOVED
- 24X12 RECTANGULAR DUCT. FIRST DIMENSION IS SIDE SHOWN. DIMENSIONS ARE FREE AREA
- 45 DEG BRANCH TAKE-OFF
- DUCT TRANSITION
- MITERED ELBOW WITH TURNING VANES
- RECT. TO ROUND SPIN-IN FITTING W/DAMPER
- 10" ROUND DUCT WITH DIAMETER SIZE DIMENSIONS ARE FREE AREA
- FLEXIBLE DUCT
- SUPPLY /OUTDOOR AIR DUCT
- RETURN AIR DUCT
- EXHAUST AIR DUCT
- MANUAL VOLUME DAMPER
- CONTROL/MOTORIZED DAMPER
- FIRE DAMPER
- (T) THERMOSTAT
- (E) EMERGENCY SHUTDOWN SWITCH
- (S) TEMPERATURE SENSOR
- (CO) CARBON DIOXIDE SENSOR
- (H) HUMIDITY SENSOR/HUMIDISTAT

GENERAL NOTES:

A "HVAC GENERAL NOTES" APPLY TO HVAC DRAWINGS. "PLAN NOTES" APPLY ONLY TO THE SHEETS ON WHICH THEY APPEAR. THE WORD "PROVIDE" MEANS "FURNISH AND INSTALL".

B MECHANICAL DRAWINGS ARE DIAGRAMMATIC TO SHOW DESIGN INTENT. PROVIDE ANY ADDITIONAL DROPS, RISES, OR OFFSETS REQUIRED FOR A COMPLETE SYSTEM INSTALLATION. COORDINATE EXACT ROUTING OF MECHANICAL WORK WITH ALL OTHER TRADES AND OBSTRUCTIONS PRIOR TO BEGINNING WORK. COORDINATE EXACT LOCATIONS OF CEILING MOUNTED EQUIPMENT WITH LIGHTS, CEILING GRID, SPRINKLERS AND OTHER OBSTRUCTIONS. FIELD VERIFY EXISTING CONDITIONS IF APPLICABLE.

C EQUIPMENT SHOWN ON THE DRAWINGS WAS OBTAINED FROM COMMON MANUFACTURERS OF HVAC EQUIPMENT AND ACCOUNTS FOR CLEARANCES AND OVERALL DIMENSIONS. SELECT AND PROVIDE HVAC EQUIPMENT THAT WILL FIT IN THE MECHANICAL SPACES PROVIDED, WHILE MAINTAINING MANUFACTURER'S MAINTENANCE CLEARANCES.

D COORDINATE WITH ROOF CONTRACTOR WATERPROOFING OF ROOF PENETRATIONS AND SUPPORTS OF ROOF MOUNTED EQUIPMENT. PROVIDE FLASHING FOR ROOF CURBS AND DUCTWORK. PROVIDE BOOTS FOR PIPES. PROVIDE PITCH POCKETS FOR REFRIGERANT LINES AND ROOF SUPPORTS THAT ARE NOT PIPES OR CURBS.

E ROUTE HORIZONTAL DUCT AS HIGH AS POSSIBLE & AVOID INTERFERENCE WITH OTHER DUCTS, PIPING, LIGHTS, AND STRUCTURE. ROUTE HORIZONTAL PIPES PARALLEL TO WALLS AND ABOVE CEILINGS & AVOID INTERFERENCE AND CONTACT WITH DUCTS, OTHER PIPING, LIGHTS, AND STRUCTURE.

F DO NOT INSTALL ANY EQUIPMENT OR FABRICATE ANY DUCTWORK PRIOR TO VERIFICATION OF ROUTING AND AVAILABILITY OF SPACE. COORDINATE SPACE REQUIREMENT WITH ALL OTHER TRADES.

G PROVIDE SUPPORT FOR ALL DUCTWORK, PIPING, AND MECHANICAL EQUIPMENT. FIELD VERIFY ALL EQUIPMENT DIMENSIONS PRIOR TO FABRICATION OF EQUIPMENT SUPPORTS. WHERE INDICATED ON DRAWINGS, FLOOR MOUNTED EQUIPMENT SHALL HAVE HOUSEKEEPING PADS EXTENDING 4 INCHES OUTSIDE THE EQUIPMENT ENVELOPE AND MINIMUM 4 INCHES HIGH FOR EQUIPMENT WITHOUT DRAINS OR 6 INCHES HIGH FOR EQUIPMENT WITH DRAINS.

H COORDINATE WITH GENERAL CONTRACTOR ACCESS PANEL LOCATIONS IN WALLS AND DRYWALL CEILINGS FOR ACCESS TO VALVES, DAMPERS, CONTROLS, EQUIPMENT REQUIRING SERVICING, AND DUCTWORK ACCESS PANELS. DUCTWORK ACCESS PANELS SHALL BE PROVIDED FOR FIRE DAMPERS, AND ACTUATORS IN THE DUCTWORK, PANEL SIZE SHALL BE AS REQUIRED PER THE SPECIFICATIONS.

I DUCT DIMENSIONS NOTED ON THE DRAWINGS ARE INSIDE FREE AREA DIMENSIONS. DIFFUSER AND GRILLE NECK SIZES ARE THE SAME DIMENSIONS AS THE DUCTWORK RUN-OUT TO THE DEVICE, UNLESS OTHERWISE NOTED.

J INSULATED FLEXIBLE DUCT SHALL BE USED TO CONNECT SUPPLY AIR DIFFUSERS, UNLESS SHOWN OTHERWISE. THE MAXIMUM LENGTH OF RUN FOR FLEXIBLE DUCT SHALL BE 5'-0" AND SHALL BE INSTALLED FREE OF KINKS AND ABRUPT TURNS. MAXIMUM UNSUPPORTED LENGTH SHALL BE 3'-0". FLEXIBLE DUCT TO DIFFUSER SHALL BE SAME SIZE AS DIFFUSER NECK, UNLESS OTHERWISE NOTED.

K BRANCH TAPS SHALL USE EITHER A 45 DEGREE OR BELL ENTRY. BRANCH EXTRACTORS ARE NOT TO BE USED. PROVIDE TRANSITIONS AT ALL CHANGES IN DUCT SIZE, INCLUDING DIFFUSERS AND GRILLES, UNLESS SHOWN OR NOTED OTHERWISE. FLEXIBLE DUCT CONNECTIONS SHALL BE USED TO ISOLATE ALL FAN -POWERED EQUIPMENT.

L SUPPLY, RETURN AND EXHAUST DIFFUSERS/GRILLES SHALL HAVE BALANCE DAMPERS IN THE DUCT, UNLESS DAMPERS ARE NOTED IN THE AIR DEVICE SCHEDULE. LOCATE BALANCE DAMPERS AS NEAR AS POSSIBLE TO DUCT BRANCH TAKEOFF WHILE MINIMIZING ACCESS DIFFICULTIES. DAMPERS TO AIR DEVICES SHALL BE LOCKING QUADRANT TYPE, WITH A STAND-OFF FOR DUCTS WITH INSULATION.

M REFER TO ARCHITECTURAL DRAWINGS AND PLANS FOR EXACT LOCATIONS OF DIFFUSERS, LINEAR SLOT DIFFUSERS, REGISTERS, GRILLES AND LOUVERS.

N EXPOSED DUCT IN OCCUPIED SPACES TO BE PAINTED, COLOR TO BE SELECTED BY ARCHITECT.

O RUN-OUT PIPES TO COILS 3/4" UNLESS OTHERWISE NOTED. NOTED PIPE SIZES THE SAME IN DIRECTION OF DECREASING FLOW TILL CHANGED BY ANOTHER PIPE SIZE NOTE.

P USE FITTINGS FOR ALL PIPE CHANGES IN DIRECTION AND SIZE AND BRANCH CONNECTIONS. EXTRUDED TEE CONNECTIONS AND BUSHINGS SHALL NOT BE USED. PROVIDE ISOLATION VALVES ON ALL BRANCHES OFF MAIN PIPE.

Q FOR HYDRONIC PIPES, INSTALL MANUAL AIR VENTS AT HIGH POINTS AND DRAIN VALVES AT THE LOW POINTS OF THE PIPE. FOR EQUIPMENT WITH DRAINS, PROVIDE DRAIN PIPE FROM THE EQUIPMENT TO A FLOOR DRAIN OR MOP SINK.

R REFRIGERANT LINE SIZES PROVIDED ARE PRELIMINARY. COORDINATE LINE SIZES WITH MANUFACTURER'S RECOMMENDATIONS FOR ACTUAL EQUIPMENT INSTALLED. A FILTER DRIER, SOLENOID VALVE, SIGHT GLASS, AND THERMAL EXPANSION VALVE SHALL BE INSTALLED IN THE LIQUID LINE UPSTREAM OF THE EVAPORATOR. A FILTER DRIER SHALL BE INSTALLED IN THE SUCTION LINE UPSTREAM OF THE CONDENSING UNIT.

S AIR CONDITIONING UNITS INSTALLED ABOVE A CEILING SHALL BE PROVIDED WITH CONDENSATE OVERFLOW DETECTION TO DE-ENERGIZE UNIT AND ALARM DDC SYSTEM. COMMUNICATION ROOM AC UNITS SUSPENDED FROM STRUCTURE SHALL BE PROVIDED WITH AN AUXILIARY DRAIN PAN AND OVERFLOW DETECTION BELOW THE UNIT. COLD WATER PIPES INSTALLED ABOVE ELECTRICAL EQUIPMENT SHALL HAVE INSULATED AUXILIARY DRAIN PANS WITH OVERFLOW DETECTION THAT ALARMS THE DDC SYSTEM. COORDINATE WITH ELECTRICAL CONTRACTOR TO PREVENT ROUTING CHILLED WATER, COLD WATER, AND CONDENSATE PIPE OVER ELECTRIC EQUIPMENT WHERE POSSIBLE.

T EQUIPMENT DESIGNATED TO HAVE A FACTORY MOUNTED DISCONNECT SWITCH SHALL BE SIZED FOR THE ELECTRICAL CHARACTERISTICS OF THAT PIECE OF EQUIPMENT. EQUIPMENT THAT DOES NOT HAVE A FACTORY MOUNTED DISCONNECT SHALL HAVE A FIELD INSTALLED DISCONNECT PROVIDED AND INSTALLED BY THE ELECTRICAL CONTRACTOR. MECHANICAL CONTRACTOR SHALL PROVIDE VARIABLE FREQUENCY DRIVES AND STARTERS WHERE NOT PROVIDED BY EQUIPMENT MANUFACTURER. VARIABLE FREQUENCY DRIVES AND STARTERS SHALL BE INSTALLED AND WIRED BY THE ELECTRICAL CONTRACTOR.

U SUPPLY CONTROL POWER TRANSFORMERS, ALL LOW VOLTAGE WIRING, AND WIRING FROM POWER SUPPLY TO CONTROL TRANSFORMERS AND DEVICES. HUMIDISTATS SHALL BE WALL MOUNTED IN THE SPACE TO BE CONTROLLED. FURNISH, INSTALL, AND WIRE THERMOSTATS, EXCEPT WHERE PROVIDED BY THE FACTORY. THERMOSTATS SHALL AVOID CASEWORK. SUPPLY CURRENT SENSORS TO ELECTRICAL CONTRACTOR FOR INSTALLATION IN POWER WIRING.

V UNLESS OTHERWISE NOTED, WALL THERMOSTATS/TEMPERATURE SENSORS SHALL BE MOUNTED ON THE WALL A MINIMUM HEIGHT OF 54" ABOVE FINISHED FLOOR.

W FIRE BARRIERS ARE SHOWN ON LIFE SAFETY/FIRE PROTECTION DRAWINGS. PIPE PENETRATIONS THRU FIRE BARRIERS SHALL BE SEALED WITH FIRE STOP SUITABLE FOR THE RATING OF THE WALL OR FLOOR BEING PENETRATED. DUCT PENETRATIONS THRU FIRE BARRIERS SHALL HAVE A FIRE DAMPER INSTALLED AT THE PENETRATION SUITABLE FOR THE RATING OF THE WALL OR FLOOR BEING PENETRATED. REFER TO FIRE PROTECTION DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

X DUCT-MOUNTED SMOKE DETECTORS SHALL BE PROVIDED ON AIR DISTRIBUTION SUPPLY SYSTEMS HAVING A CAPACITY GREATER THAN 2000 CFM. SMOKE DETECTOR SHALL BE MOUNTED DOWNSTREAM OF THE AIR FILTERS AND AHEAD OF ANY BRANCH CONNECTIONS. RETURN SYSTEM DUCT-MOUNTED SMOKE DETECTORS SHALL NOT BE REQUIRED WHERE THE ENTIRE SPACE SERVED BY THE AIR DISTRIBUTION SYSTEM IS PROTECTED BY A SYSTEM OF AREA SMOKE DETECTORS. DUCT-MOUNTED SMOKE DETECTORS TO BE FURNISHED AND WIRED TO FIRE ALARM SYSTEM BY QUALIFIED FIRE ALARM SYSTEM INSTALLER. COORDINATE TYPE AND LOCATION WITH FIRE ALARM SYSTEM INSTALLER.

Y CONSTRUCT DUCTWORK TO THE FOLLOWING STATIC PRESSURE CLASSIFICATIONS:

SUPPLY DUCT (DOAS, MUA) +2 IN WG
SUPPLY DUCT (HP) +0.5 IN WG
RETURN DUCT (HP) -0.5 IN WG
OUTSIDE AIR DUCT (DOAS, MUA) -2 IN WG
EXHAUST DUCT (UPSTREAM OF FAN) -2 IN WG
EXHAUST DUCT (DOWNSTREAM OF FAN) +0.5 IN WG

Z COMMISSION HVAC SYSTEMS AND EQUIPMENT AND SYSTEMS REQUIRING COMMISSIONING FOR LEED FUNDAMENTAL COMMISSIONING IN ACCORDANCE WITH ASHRAE GUIDELINE 1 AND LEED REQUIREMENTS. THE COMMISSIONING AGENT SHALL BE CERTIFIED BY AABC, NEBB, OR TABB AS DESCRIBED IN GUIDELINE 1.

AA WORK INDICATED ON DRAWINGS IS NEW UNLESS OTHERWISE NOTED ON THE DRAWINGS

BB SOME SYMBOLS/ABBREVIATIONS INDICATED ON THIS LEGEND SHEET MAY NOT APPEAR IN THE DRAWINGS.

CC DO NOT LOCATE MECHANICAL WORK IN ELECTRICAL OR COMMUNICATION ROOMS, EXCEPT FOR RUNOUTS SPECIFICALLY SERVING THE RESPECTIVE ROOM.

DD MATERIALS INSTALLED IN A RETURN AIR PLENUM (CEILING OR ROOM) MUST BE RATED FOR AIR PLENUM INSTALLATION: COORDINATE WITH ALL OTHER TRADES ACCORDINGLY.

DESIGNER NOTES:

1 PLEASE NOTE THAT THE MECHANICAL DESIGN PROVIDED HEREIN IS FOR INFORMATION ONLY. THE MECHANICAL DRAWINGS ARE NOT MANDATORY AND ARE PROVIDED TO GIVE DESIGNERS SUGGESTIONS ON HOW A CHILD DEVELOPMENT CENTER(CDC) COULD BE MECHANICALLY DESIGNED.

2 THE MECHANICAL DESIGNER WILL BE ENTIRELY RESPONSIBLE FOR SELECTING THE APPROPRIATE EQUIPMENT AND SYSTEMS FOR ANY SPECIFIC SITE DESIGN.

3 THE DESIGN PROVIDED HEREIN IS BASED UPON A FICTIONAL SITE LOCATED IN FORT BRAGG, NORTH CAROLINA.

4 THE DESIGNER OF RECORD SHALL VERIFY VENTILATION REQUIREMENTS MEET ASHRAE 62.1 FOR EACH SPACE WITHIN THE BUILDING. OCCUPANCIES USED FOR VENTILATION CALCULATIONS SHOULD BE VERIFIED WITH THE CUSTOMER AS SITE SPECIFIC REQUIREMENTS MAY VARY FROM THOSE USED IN THIS STANDARD DESIGN.

ATFP NOTES:

1 EXTERIOR EQUIPMENT: LOCATE A MINIMUM OF 33 FEET FROM BUILDING. IF CONDITIONS REQUIRE THAT EQUIPMENT BE LOCATED LESS THAN 33 FEET FROM THE BUILDING, THEN THE EQUIPMENT SHALL BE LOCATED AND ARRANGED SO THAT AN OBJECT OVER SIX INCHES INHEIGHT WOULD BE READILY OBSERVED BY BUILDING OCCUPANTS.

2 AIR INTAKES: LOCATE A MINIMUM OF 10 FEET ABOVE THE GROUND.

3 EMERGENCY SHUTOFF SWITCH: PROVIDE A SHUTOFF SWITCH IN THE HVAC CONTROL SYSTEM THAT CAN IMMEDIATELY SHUT DOWN THE AIR DISTRIBUTION SYSTEMS THROUGHOUT THE BUILDING. LOCATE THE SWITCH TO BE EASILY ACCESSIBLE BY BUILDING OCCUPANTS.

4 DAMPERS: FIT OUTSIDE AIR INTAKES, RELIEF, AND EXHAUST OPENINGS WITH LOW LEAKAGE DAMPERS THAT AUTOMATICALLY CLOSE WHEN THE AIR SHUTOFF SWITCH IS ACTIVATED. THE LOW LEAKAGE DAMPERS SHALL HAVE A LEAKAGE RATE OF LESS THAN 3 CFM/SQUARE FOOT AT A PRESSURE DIFFERENTIAL OF 3.0 INCHES STATIC PRESSURE.

5 OVERHEAD EQUIPMENT WEIGHING OVER 30 POUNDS: DESIGN ALL EQUIPMENT MOUNTINGS TO RESIST A FORCE 0.5 TIMES THE WEIGHT OF THE EQUIPMENT IN ANY HORIZONTAL DIRECTION AND 1.5 TIMES THE EQUIPMENT WEIGHT IN THE DOWNWARD DIRECTION. THIS REQUIREMENT IS SEPARATE FROM OTHER MOUNTING REQUIREMENTS FOR SEISMIC OR OTHER FORCES.

US Army Corps of Engineers ®
HUNTSVILLE CENTER

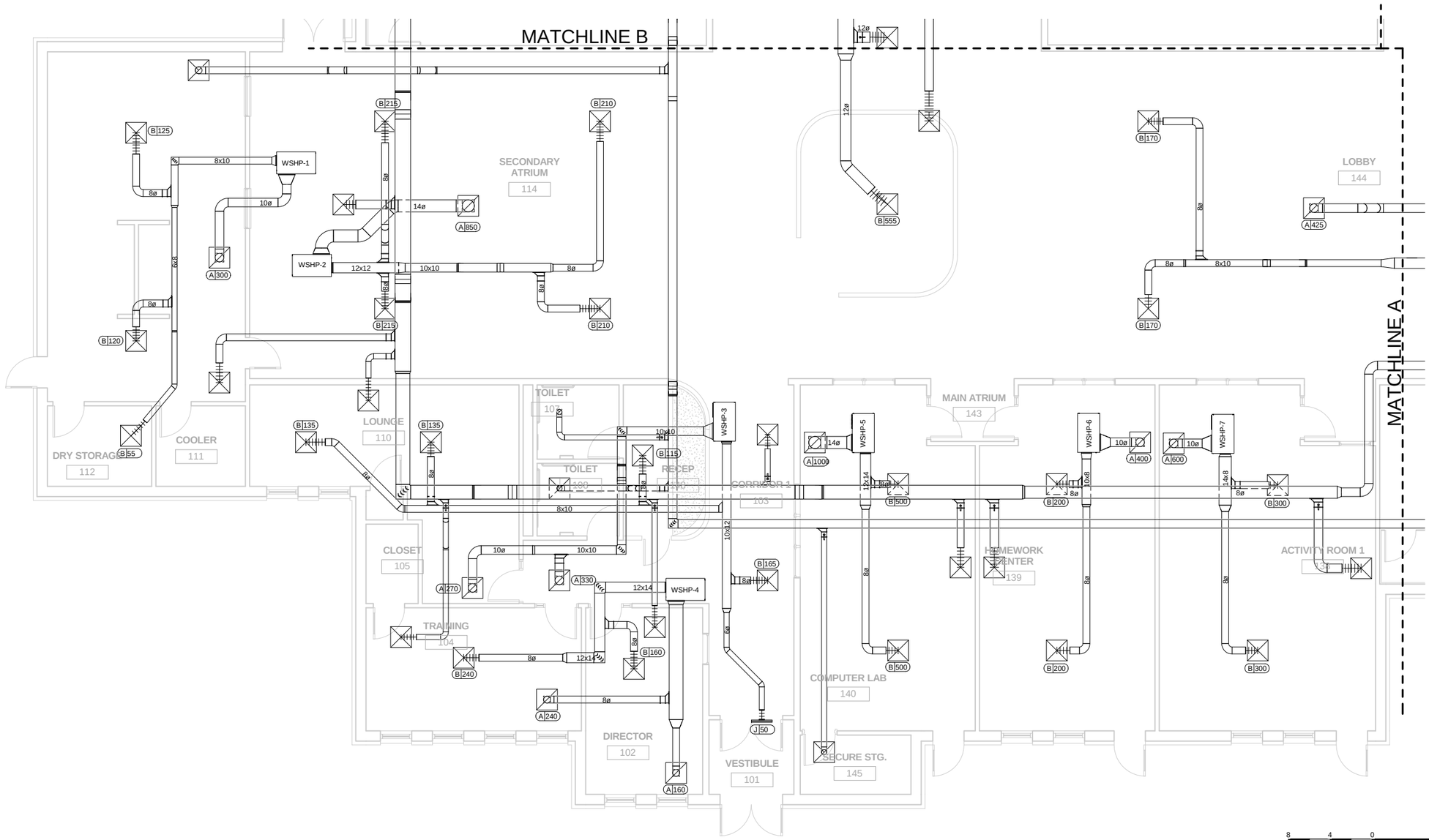
SYMBOL | DESCRIPTION | DATE | BY

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
PLOT SCALE: 1/4" = 1'-0"
PLOT DATE: 6/9/2014 11:46:52 AM
SIZE: D 22" x 34"
FILE NAME:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

HVAC LEGEND AND NOTES

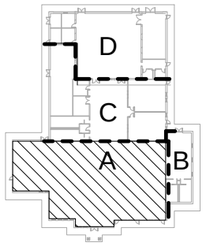


SCALE: 3/16"=1'-0"

PLAN NORTH

SUPPLY & RETURN DUCTWORK - AREA A

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



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

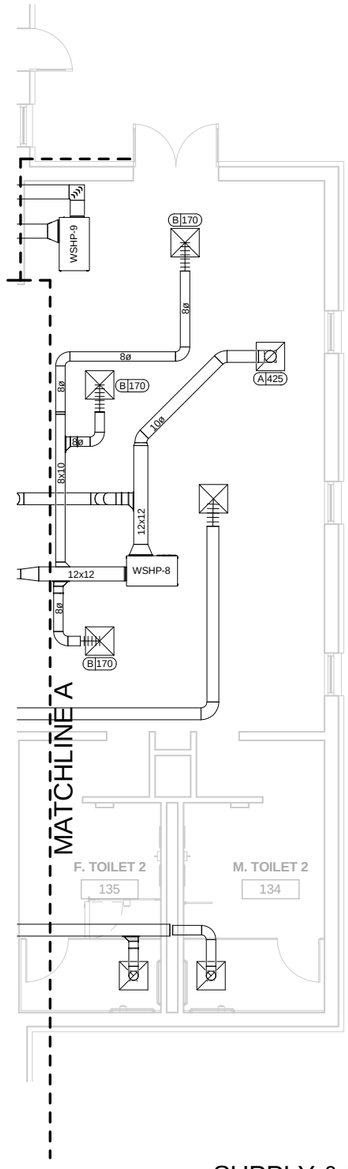
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE
PLOT DATE: 6/6/2014 11:47:08 AM
PLOT SCALE: As indicated
SIZE: 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

SUPPLY & RETURN DUCTWORK - AREA A

PLATE REFERENCE NUMBER
MH101
SHEET 70 OF 107

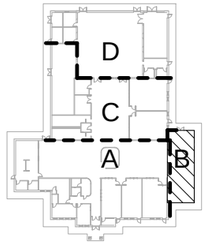


SUPPLY & RETURN DUCTWORK - AREA B

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

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

PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

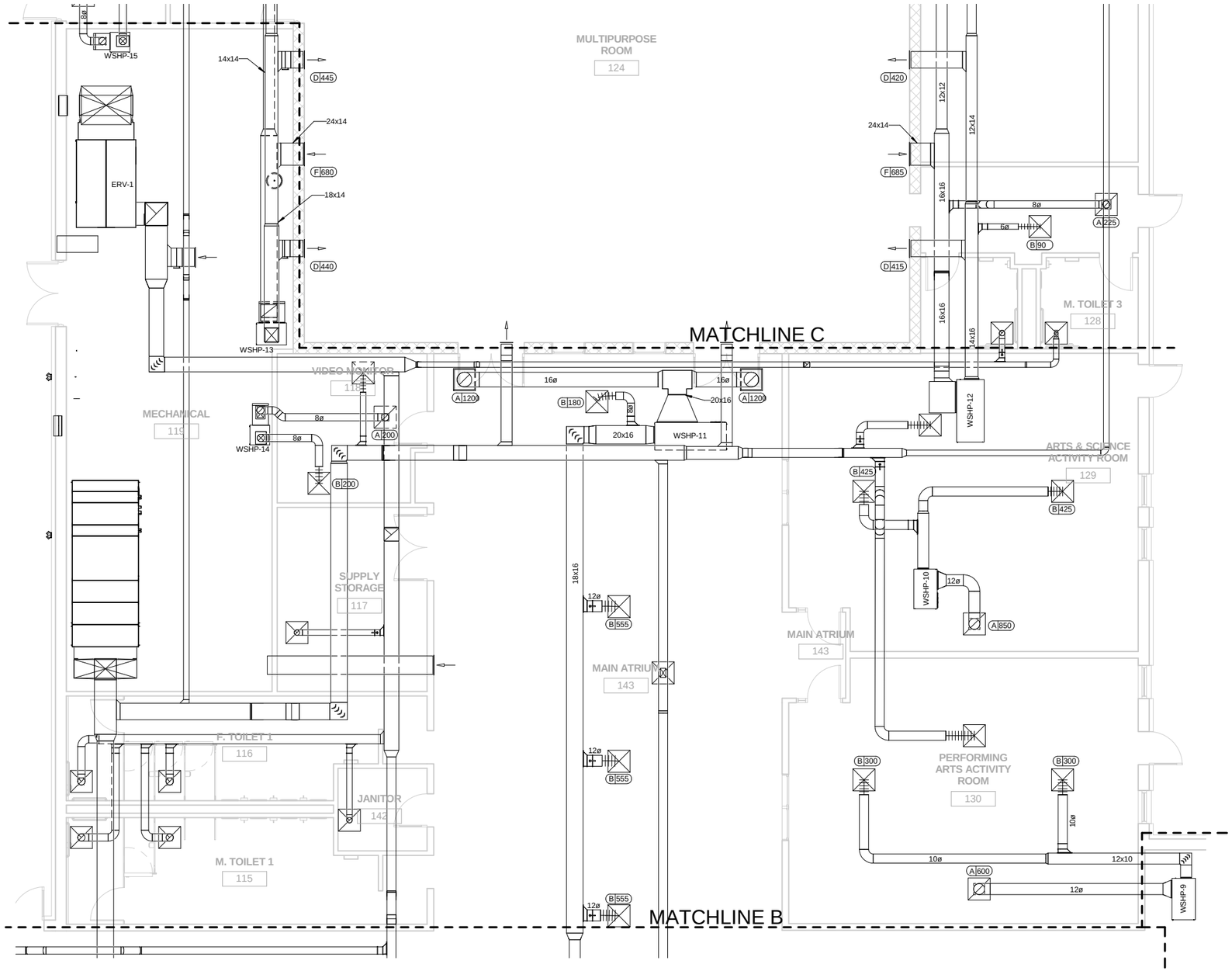
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/6/2014 11:47:11 AM
CATEGORY CODE: 65% DESIGN PACKAGE
PLOT SCALE: As indicated
SIZE: 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

SUPPLY & RETURN DUCTWORK - AREA B

PLATE REFERENCE NUMBER
MH102

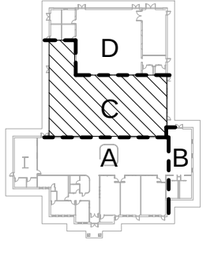


SUPPLY & RETURN DUCTWORK - AREA C

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

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

PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/9/2014 1:14:71 AM
PLOT SCALE: As indicated
CATEGORY CODE: 65% DESIGN PACKAGE
SIZE: 22" x 34"
FILE NAME:

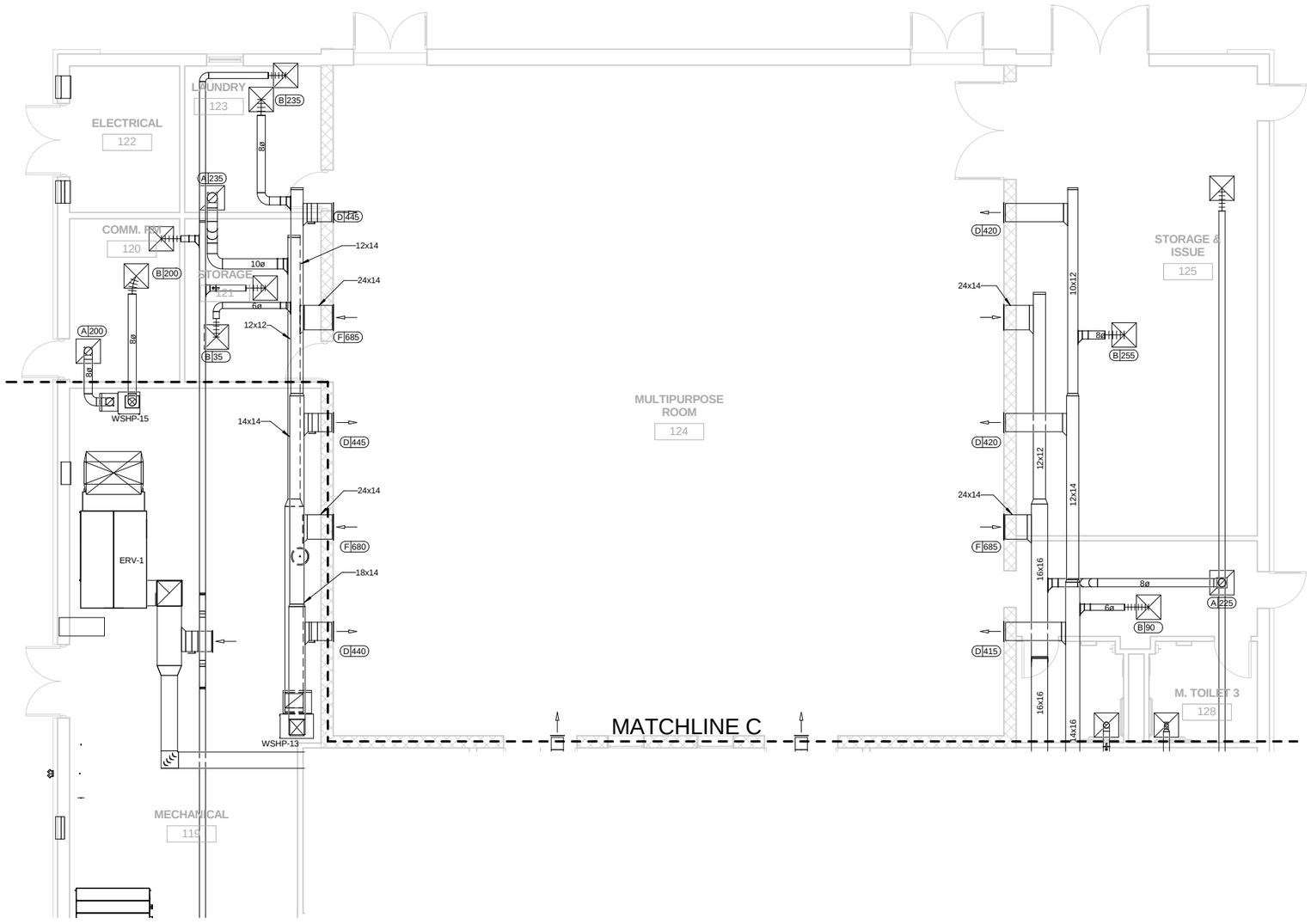
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

SUPPLY & RETURN DUCTWORK - AREA C

PLATE REFERENCE NUMBER
MH103

SHEET 72 OF 107

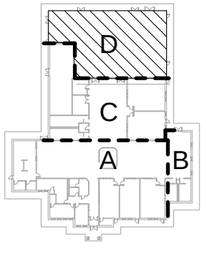


SUPPLY & RETURN DUCTWORK - AREA D

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

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

PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

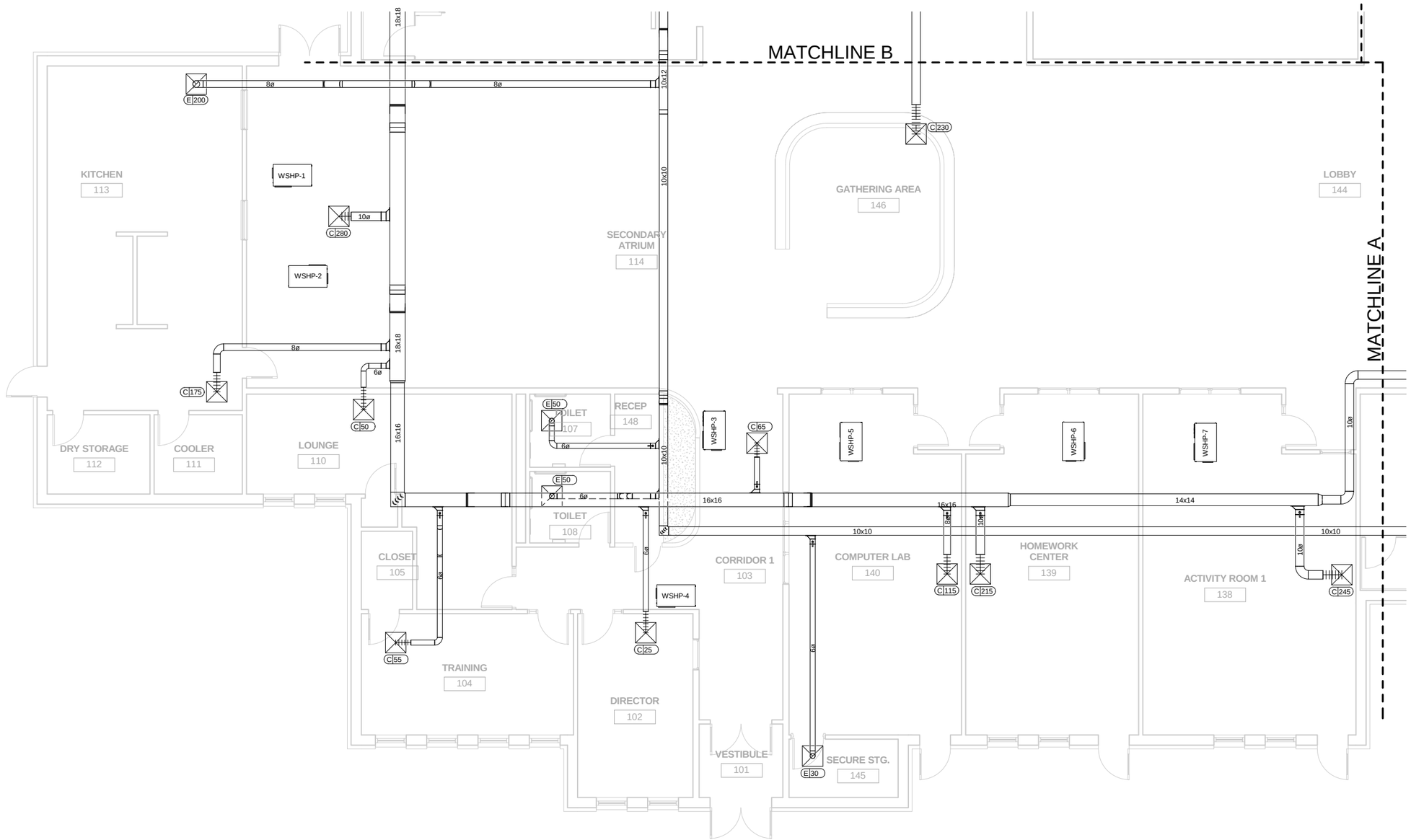
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE
PLOT DATE: 6/6/2014 11:47:17 AM
PLOT SCALE: As indicated
SIZE: 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

SUPPLY & RETURN DUCTWORK - AREA D

PLATE REFERENCE NUMBER
MH104

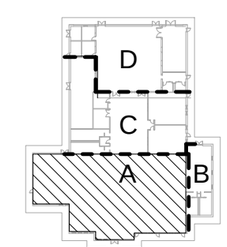


EXHAUST & O.A. DUCTWORK - AREA A

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

8 4 0 8
SCALE: 3/16"=1'-0"

N
PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

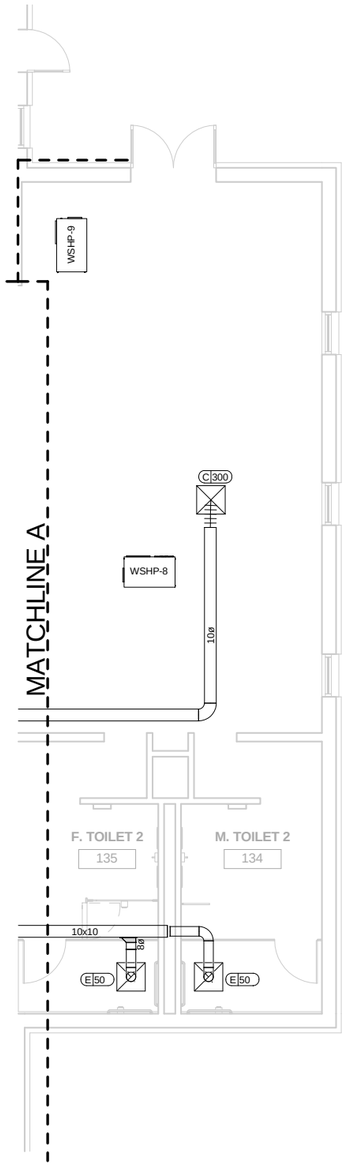
DESIGN BY: DES
DRAWN BY: JCS
SBMT BY:
CKD BY: PLM
PLOT DATE: 6/9/2014 11:47:19 AM
PLOT SCALE: As indicated
SIZE: 22" x 34"
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

EXHAUST & O.A. DUCTWORK - AREA A

PLATE REFERENCE NUMBER
MH105
SHEET 74 OF 107

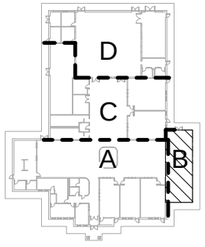


EXHAUST & O.A. DUCTWORK - AREA B

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

8 4 0 8
SCALE: 3/16"=1'-0"

N
PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

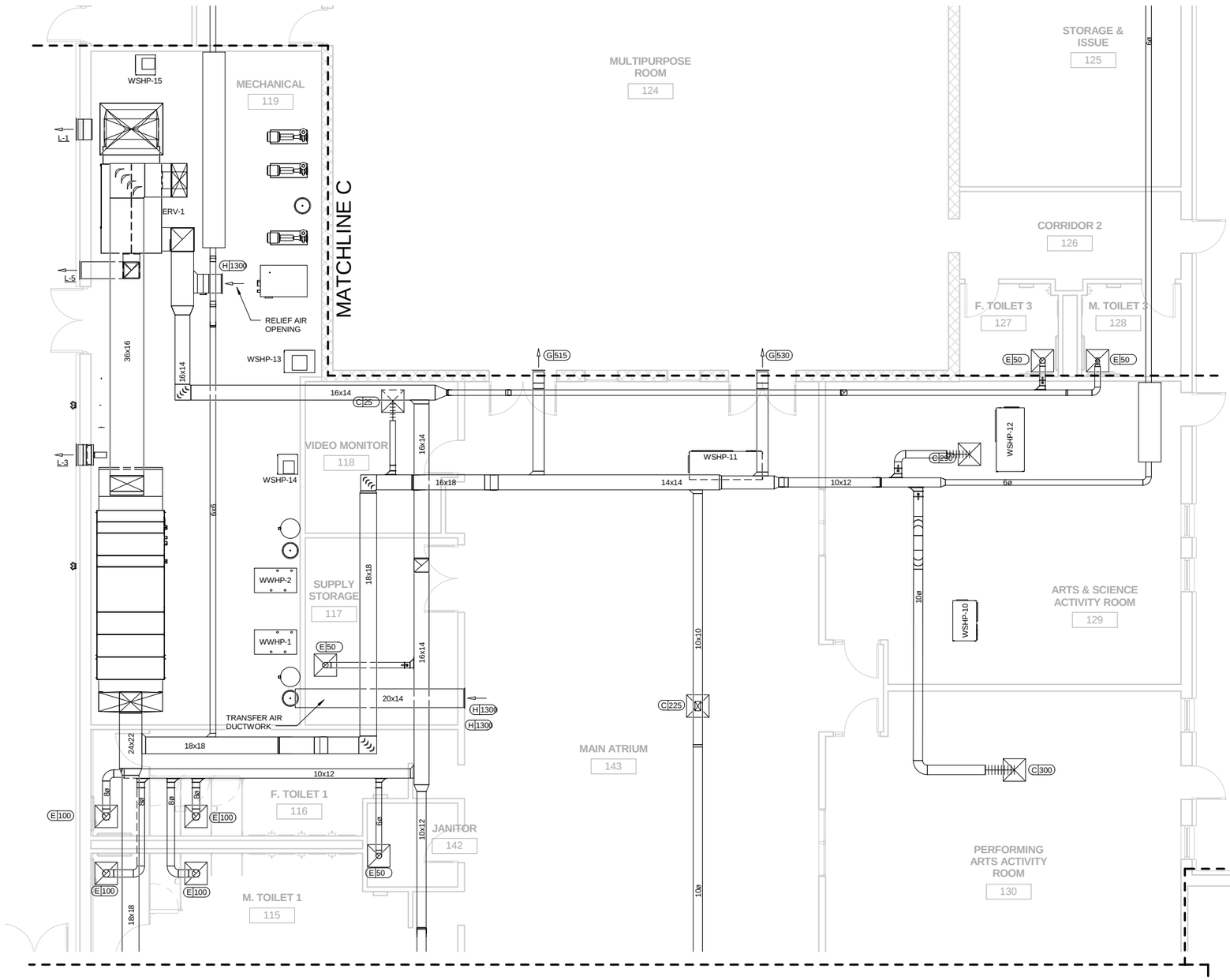
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/6/2014 11:47:21 AM
CATEGORY CODE: 65% DESIGN PACKAGE
PLOT SCALE: As indicated
SIZE: 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

EXHAUST & O.A. DUCTWORK - AREA B

PLATE REFERENCE NUMBER
MH106
SHEET 75 OF 107

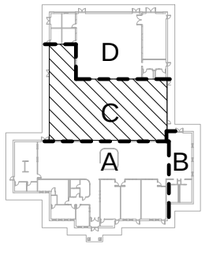


EXHAUST & O.A. DUCTWORK - AREA C

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

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

PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

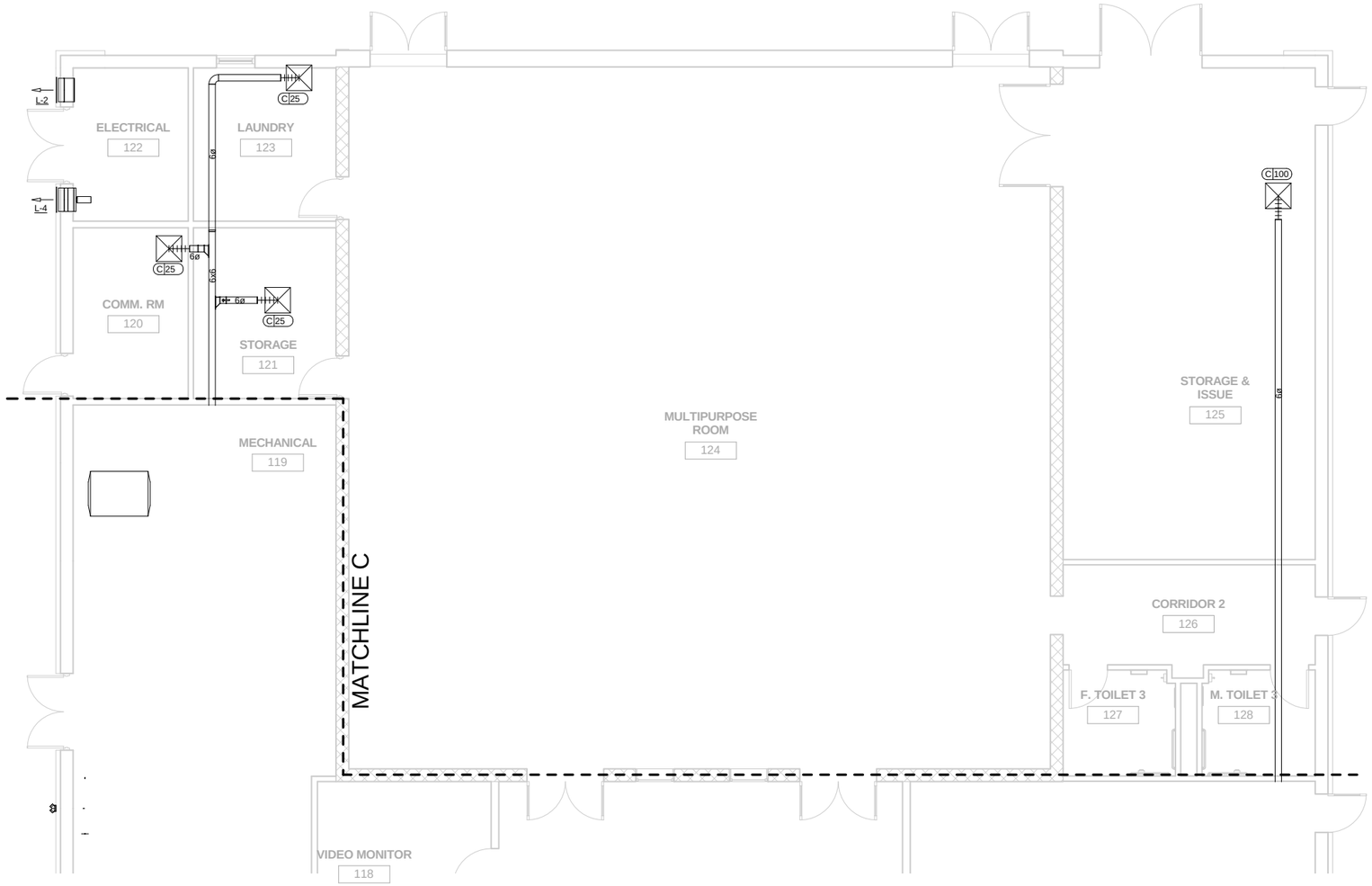
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
PLOT DATE: 6/6/2014 11:47:24 AM
PLOT SCALE: As indicated
SIZE: 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

EXHAUST & O.A. DUCTWORK - AREA C

PLATE REFERENCE NUMBER
MH107
SHEET 76 OF 107

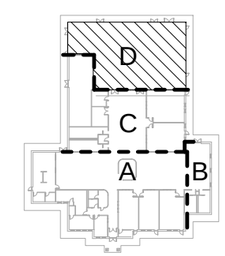


EXHAUST & O.A. DUCTWORK - AREA D

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

8 4 0 8
SCALE: 3/16"=1'-0"

N
PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

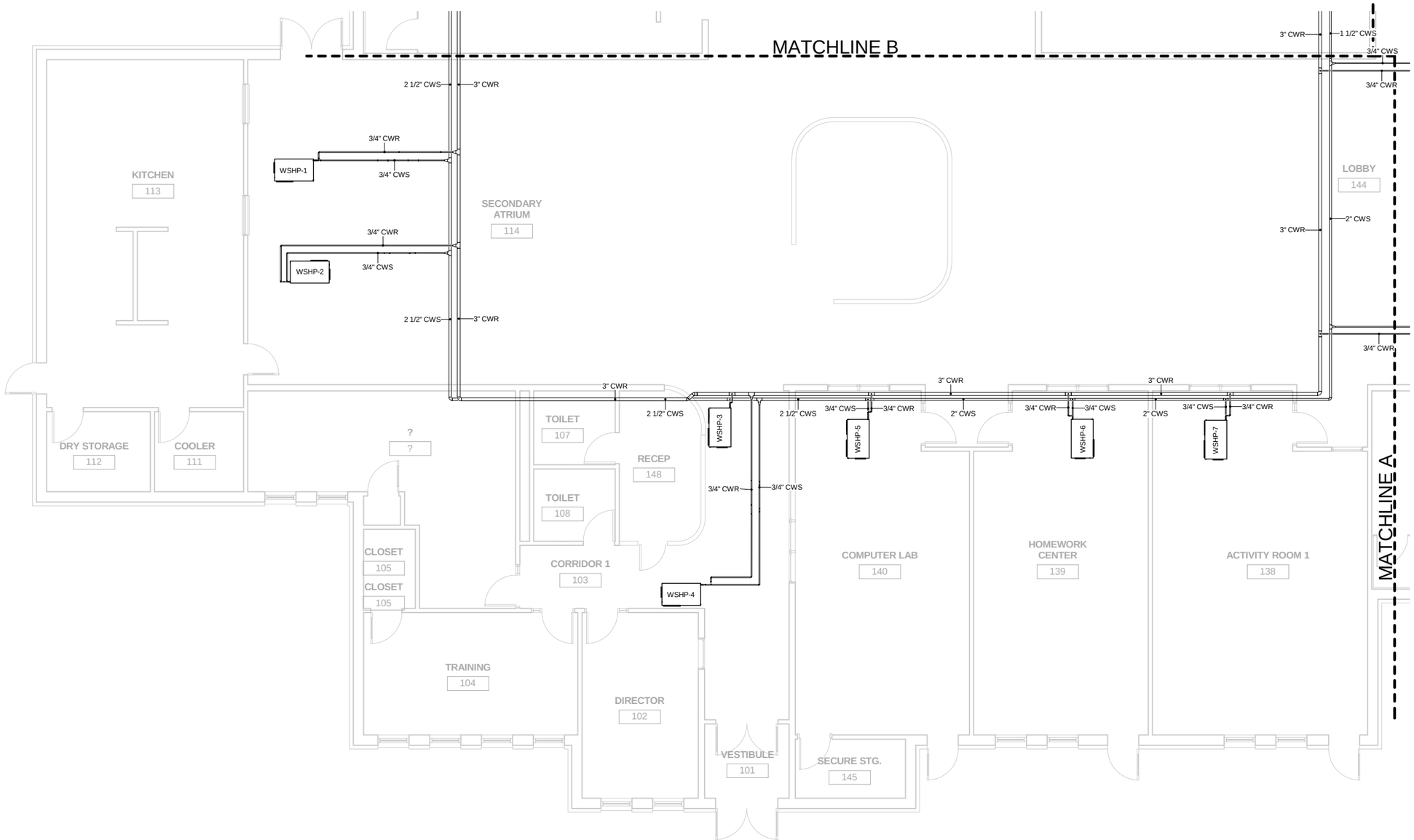
DESIGN BY: DES
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/6/2014 11:47:26 AM
CATEGORY CODE: 685% DESIGN PACKAGE
PLOT SCALE: As indicated
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

EXHAUST & O.A. DUCTWORK - AREA D

PLATE REFERENCE NUMBER
MH108

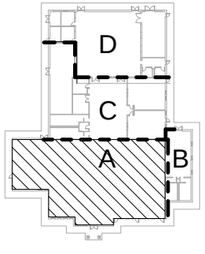


HVAC HYDRONIC PIPING PLAN - AREA A

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

8 4 0 8
SCALE: 3/16"=1'-0"

N
PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

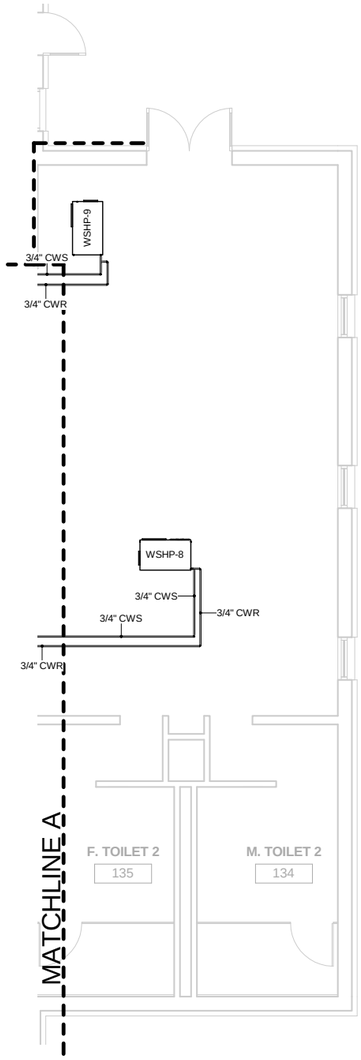
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE
PLOT DATE: 6/6/2014 11:47:39 AM
PLOT SCALE: As indicated
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

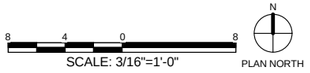
HVAC HYDRONIC PIPING PLAN - AREA A

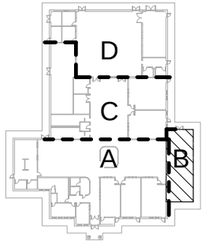
PLATE REFERENCE NUMBER
MP101



HVAC HYDRONIC PIPING PLAN - AREA B

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





US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

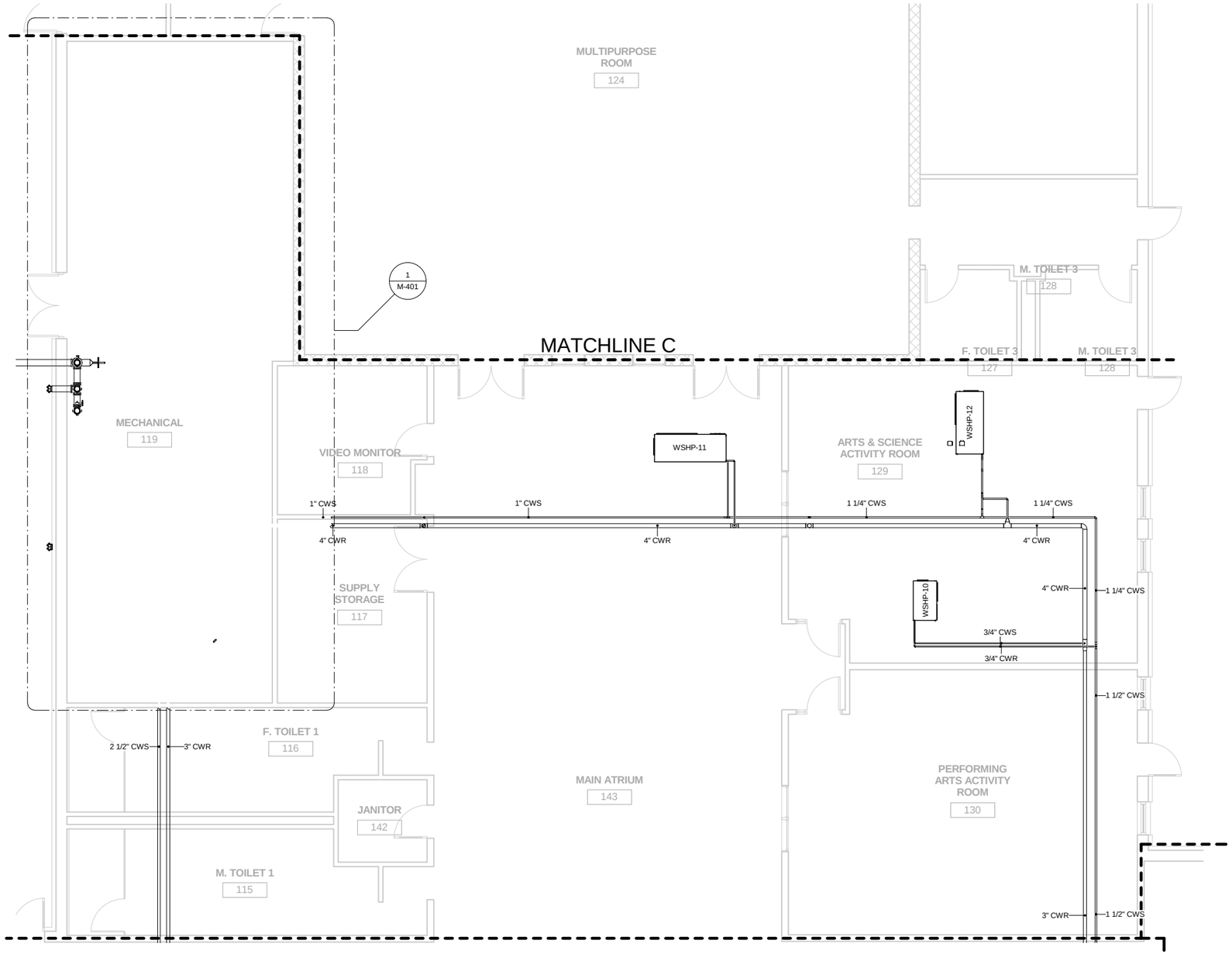
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
DATE: JUNE 2014
SOLICITATION NO.: N/A
SBMT BY:
PLOT DATE: 6/6/2014 11:47:41 AM
CONTRACT NO.: N/A
CATEGORY CODE: 835% DESIGN PACKAGE
PLOT SCALE: As indicated
SIZE: 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

HVAC HYDRONIC PIPING PLAN - AREA B

PLATE REFERENCE NUMBER
MP102
SHEET 79 OF 107

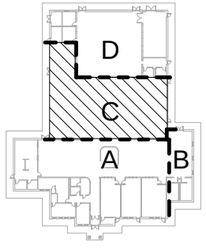


HVAC HYDRONIC PIPING PLAN - AREA C

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

8 4 0 8
SCALE: 3/16"=1'-0"

N
PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

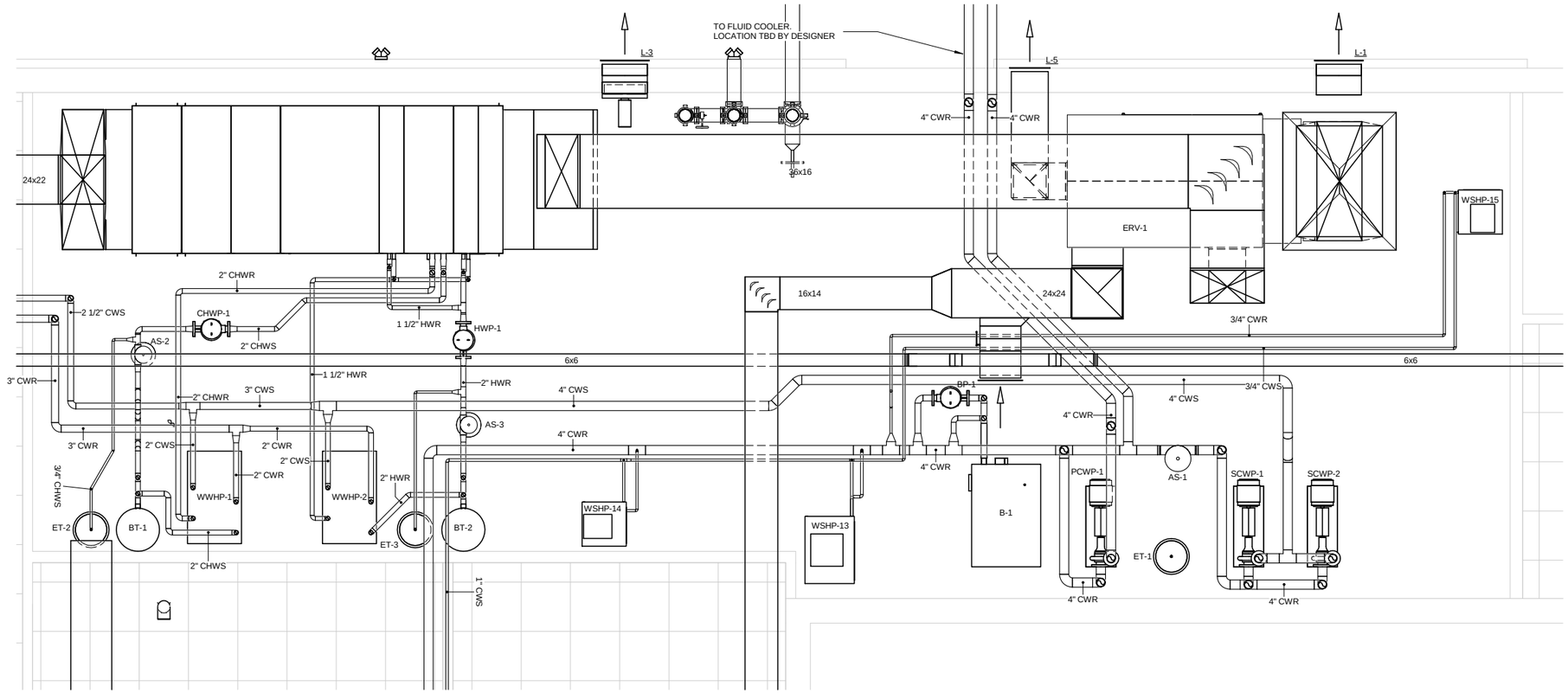
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: 1 JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/6/2014 11:47:43 AM
CATEGORY CODE: 65% DESIGN PACKAGE
PLOT SCALE: As indicated
SIZE: 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

HVAC HYDRONIC PIPING PLAN - AREA C

PLATE REFERENCE NUMBER
MP103
SHEET 80 OF 107



ENLARGED FLOORPLAN - MECH. ROOM

SCALE: 3/8" = 1' 0"

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE

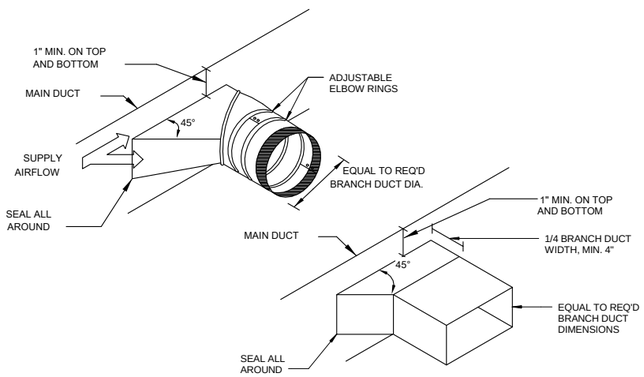
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
PLOT DATE: 6/6/2014 11:44:55 AM
PLOT SCALE: 3/8" = 1'-0"
SIZE: D 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

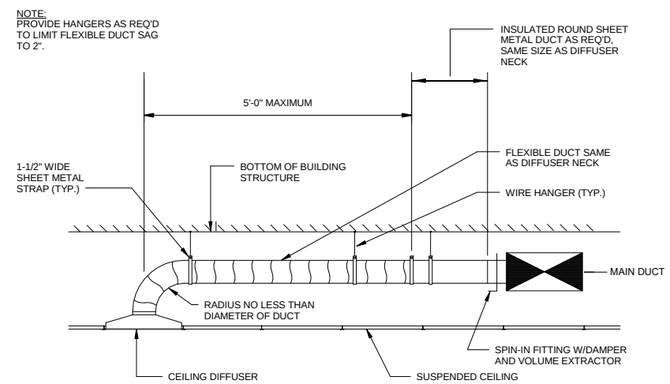
CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

ENLARGED FLOORPLAN - MECH. ROOM

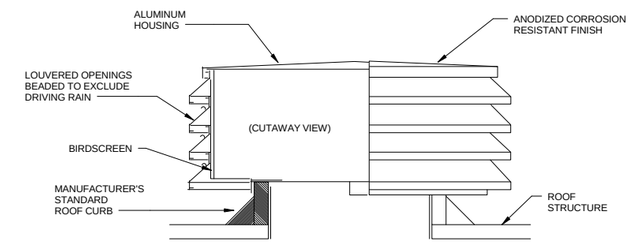
PLATE REFERENCE NUMBER
M-401



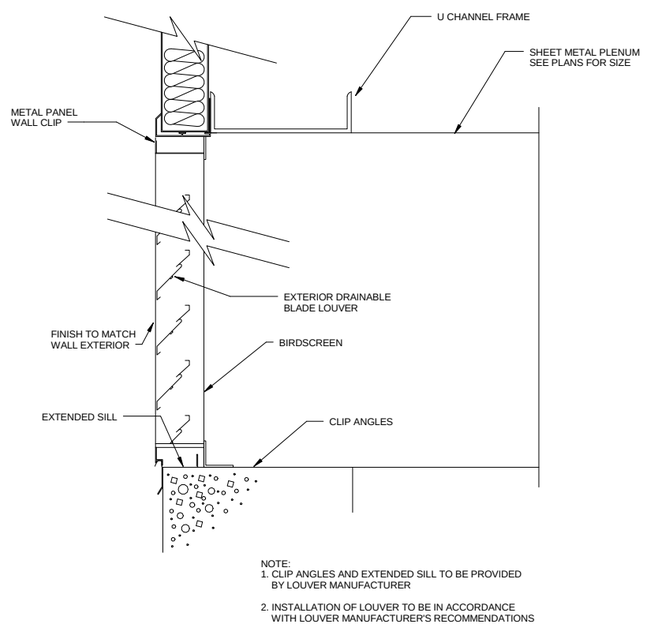
1 BRANCH DUCT TAKE-OFF DETAIL
NOT TO SCALE



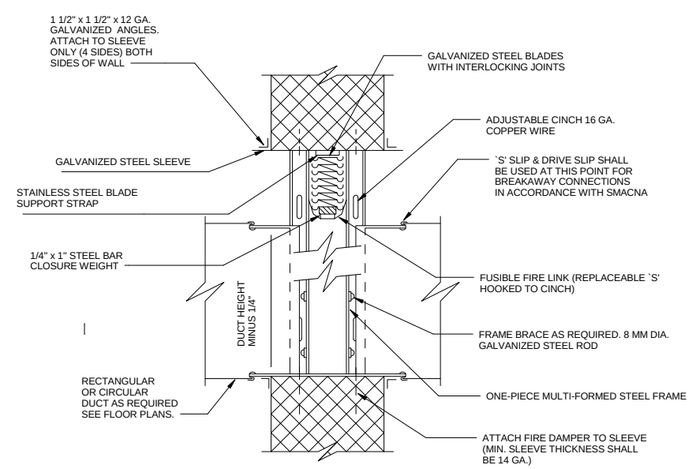
2 TYPICAL BRANCH DUCT
NOT TO SCALE



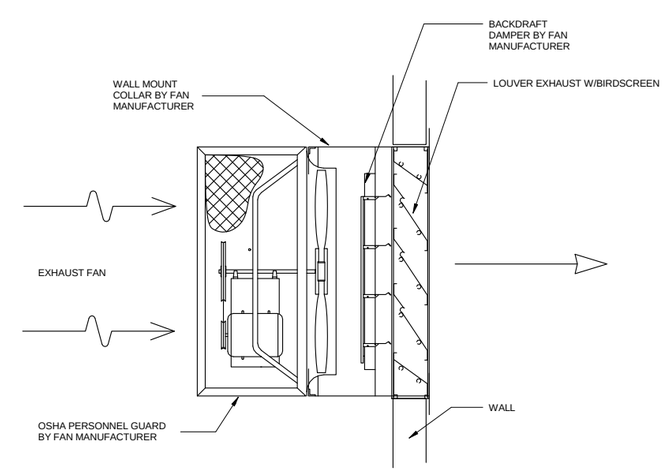
3 RELIEF/INTAKE HOOD DETAIL
NOT TO SCALE



4 WALL LOUVER DETAIL
NOT TO SCALE



5 WALL FIRE DAMPER DETAIL
NOT TO SCALE



6 PROPELLER FAN DETAIL
NOT TO SCALE

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

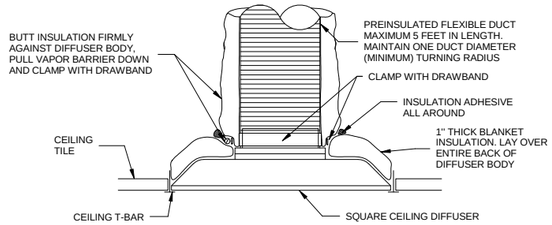
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 635% DESIGN PACKAGE
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
PLOT DATE: 6/6/2014 11:46:58 AM
PLOT SCALE: As indicated
SIZE: 22" x 34"
FILE NAME:

U.S. ARMY CORP'S OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

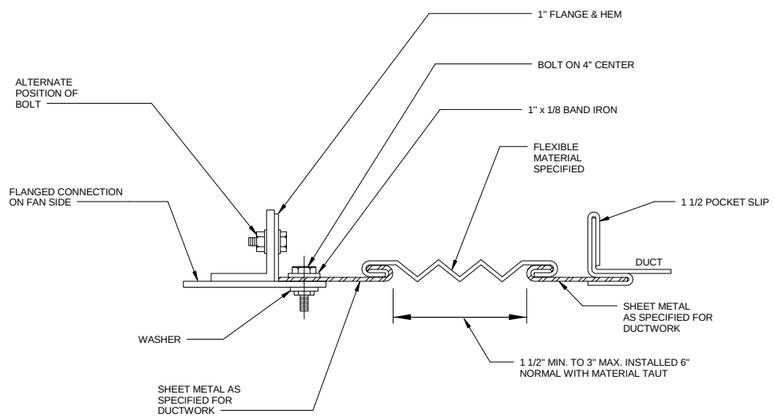
CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

HVAC DETAILS

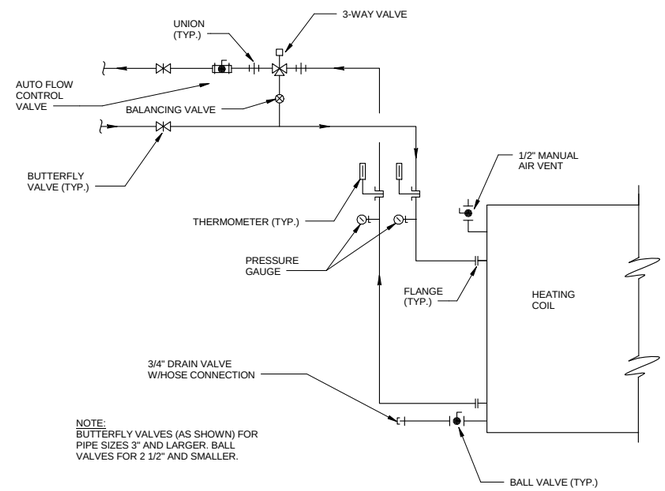
PLATE REFERENCE NUMBER
M-501
SHEET 82 OF 107



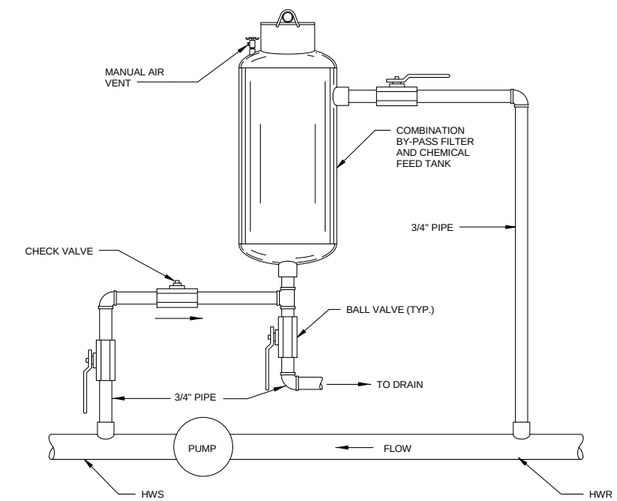
1 CEILING DIFFUSER INSTALLATION DETAIL
NOT TO SCALE



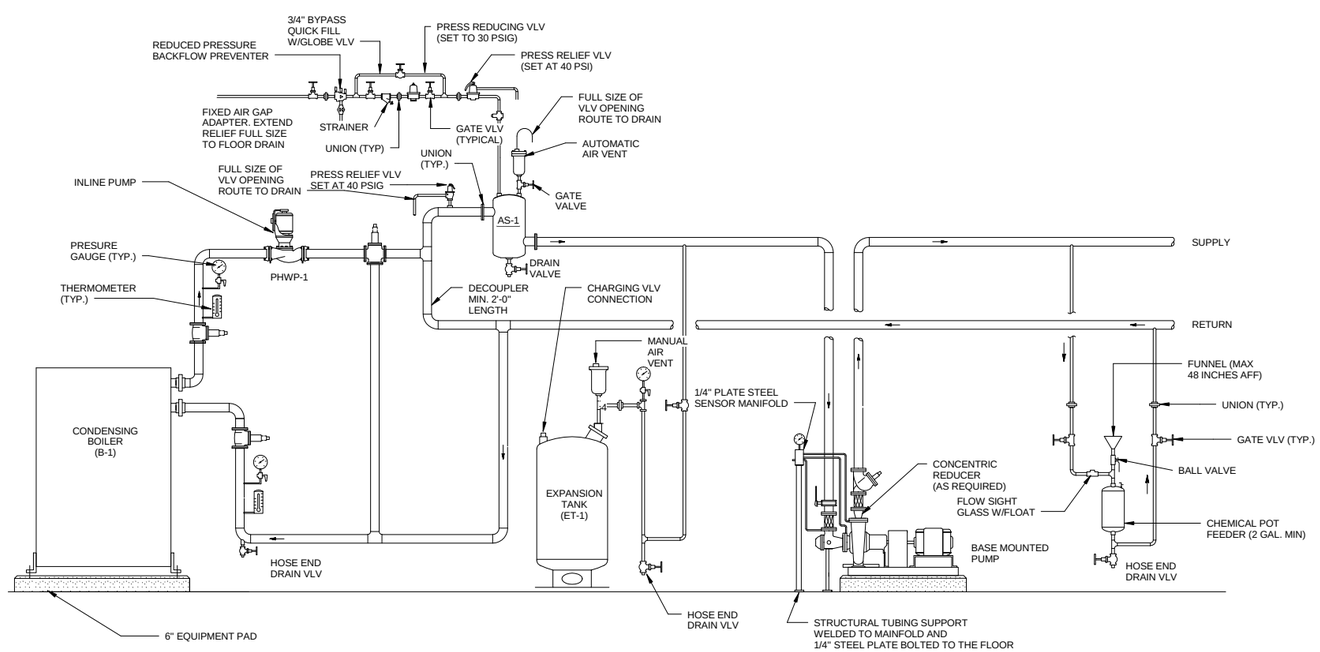
2 FLEXIBLE DUCT CONNECTION DETAIL
NOT TO SCALE



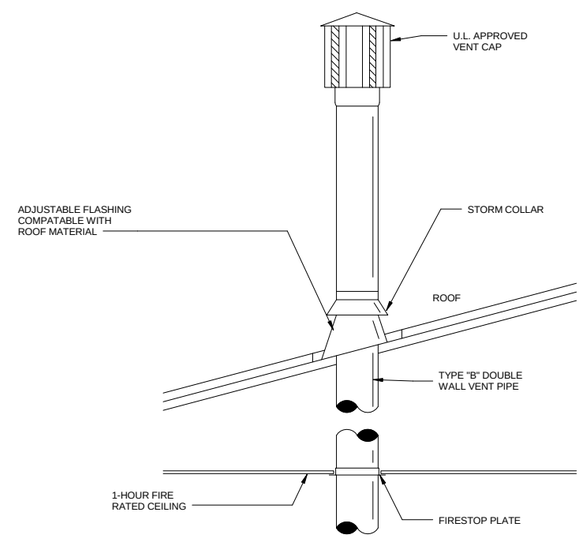
3 HOT WATER COIL CONNECTION
NOT TO SCALE



4 CHEMICAL TREATMENT DETAIL
NOT TO SCALE



5 HOT WATER PIPING DIAGRAM DETAIL
NOT TO SCALE



6 FLUE VENT THROUGH ROOF DETAIL
NOT TO SCALE

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

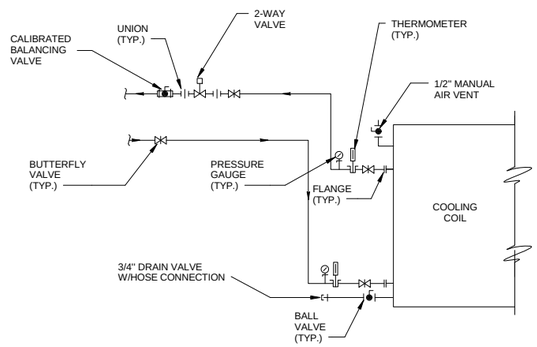
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
PLOT DATE: 6/6/2014 11:47:01 AM
PLOT SCALE: As indicated
SIZE: 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

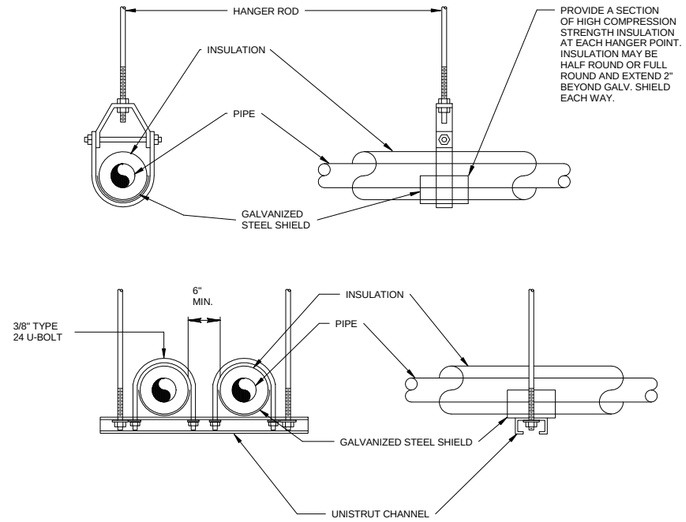
CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

HVAC DETAILS

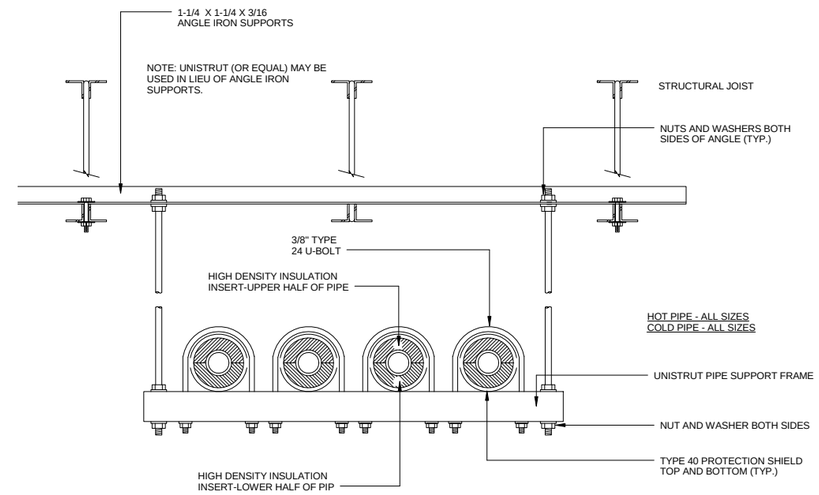
PLATE REFERENCE NUMBER
M-502
SHEET 83 OF 107



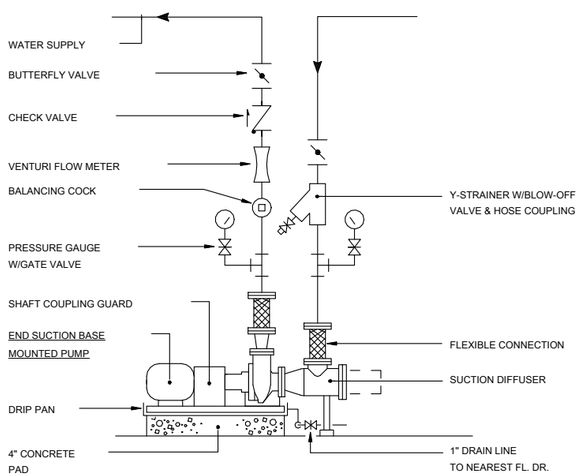
1 CHILLED WATER COIL CONNECTION DETAIL
NOT TO SCALE



2 HYDRIONIC PIPE HANGERS
NOT TO SCALE



3 PIPE HANGER SUPPORT DETAIL
NOT TO SCALE



4 END SUCTION PUMP DETAIL
NOT TO SCALE

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: DES. | DATE: JUNE 2014 | SOLICITATION NO.: N/A
DRAWN BY: JCS | CKD BY: PLM | CONTRACT NO.: N/A
SBMT BY: | PLOT DATE: 6/6/2014 11:47:03 AM | CATEGORY CODE: 65% DESIGN PACKAGE
PLOT SCALE: As indicated | FILE NAME:
SIZE: 22" X 34"

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

HVAC DETAILS

PLATE REFERENCE NUMBER
M-503
SHEET 84 OF 107

AIR SEPARATOR SCHEDULE

MARK	SERVICE	CONNECTION SIZE (IN.)	FLOW (GPM)	SHIPPING WEIGHT (LB)	NOTES
AS-1	CONDENSER	4	120	-	1, 2, 3, 5
AS-2	CHILLED WATER	2	75	-	1, 2, 3, 5
AS-3	HOT WATER	2	55	-	1, 2, 3, 5

NOTES:

1. PROVIDE AIR SEPARATOR WITH REMOVABLE STRAINER
2. PROVIDE MANUAL/AUTOMATIC AIR VENT
3. PROVIDE AIR SEPARATOR WITH FLANGED CONNECTIONS
4. PROVIDE AIR SEPARATOR WITH GROOVED CONNECTIONS
5. PROVIDE INLET AND OUTLET CONNECTIONS TANGENTIAL TO THE VESSEL
6. PROVIDE INLET AND OUTLET CONNECTIONS PERPENDICULAR TO THE VESSEL

AIR DEVICE SCHEDULE

MARK	DUTY	TYPE	DIFFUSERS, GRILLES & LOUVERS			MAX AIRFLOW	FACE	SLOT DIFFUSERS			LOUVERS		MAX NC	MOUNTING	MATERIAL	FINISH	NOTES
			MODULE SIZE (IN.)	NECK SIZE (IN.)	SPACING (IN.)			LENGTH (IN.)	NO. OF SLOTS	SLOT SPACING (IN.)	FREE AREA	FREE AREA VELOCITY					
A	RA	GRILLE	24 X 24	NOTE 7	1/2	400	EGGCRATE						30	LAY-IN	ALUMINUM	OFF WHITE	
B	SA	DIFFUSER	24 X 24	NOTE 7	1 1/2	250	LOUVERED						30	LAY-IN	ALUMINUM	OFF WHITE	
C	OA	DIFFUSER	24 X 24	NOTE 7	1 1/2	500	LOUVERED						30	LAY-IN	ALUMINUM	OFF WHITE	
D	SA	GRILLE	18 X 6	NOTE 7	3/4	500	DOUBLE DEFLECTION						30	WALL	ALUMINUM	COLOR BY ARCHITECT	
E	EA	GRILLE	24 X 24	NOTE 7	1/2	200	EGGCRATE						30	SURFACE	ALUMINUM	OFF WHITE	
F	RA	GRILLE	24 X 14	NOTE 7	1/2	1400	35° DEFLECTION						30	WALL	ALUMINUM	COLOR BY ARCHITECT	
G	OA	GRILLE	12 X 12	NOTE 7	3/4	650	DOUBLE DEFLECTION						30	WALL	ALUMINUM	COLOR BY ARCHITECT	
H	EA	GRILLE	20 X 14	NOTE 7	3/4	650	DOUBLE DEFLECTION						30	WALL	ALUMINUM	COLOR BY ARCHITECT	
J	SA	DIFFUSER	24 X 6	NOTE 7	1/2	50	DOUBLE DEFLECTION						30	WALL	ALUMINUM	COLOR BY ARCHITECT	
L-1	OA	LOUVER	14 X 14	12 X 12	4	700	LOUVERED				0.50 SF	1000 FPM	30	LAY-IN	ALUMINUM	COLOR BY ARCHITECT	
L-2	OA	LOUVER	10 X 10	10 X 11	4	100	LOUVERED				0.10 SF	1000 FPM	30	LAY-IN	ALUMINUM	COLOR BY ARCHITECT	
L-3	EA	LOUVER	14 X 14	12 X 12	4	700	LOUVERED				0.42 SF	1200 FPM	30	LAY-IN	ALUMINUM	COLOR BY ARCHITECT	
L-4	EA	LOUVER	10 X 10	10 X 11	4	100	LOUVERED				0.08 SF	1200 FPM	30	LAY-IN	ALUMINUM	COLOR BY ARCHITECT	
L-5	EA	LOUVER	48 X 42	48 X 42	4	7000	LOUVERED				6.70 SF	1200 FPM	30	LAY-IN	ALUMINUM	COLOR BY ARCHITECT	
PH-1	OA	PENTHOUSE	48 X 36	48 X 36	4	6000	LOUVERED TIER				6.00 SF	1000 FPM	30	WALL	ALUMINUM	COLOR BY ARCHITECT	

NOTES:

1. PROVIDE OPPOSED BLADE DAMPER.
2. THE AIR DEVICE NOISE CRITERIA SHALL NOTE EXCEED 30, UNLESS OTHERWISE NOTED.
3. CONTRACTOR SHALL PAINT THE INSIDE OF THE DUCT CONNECTED TO THE AIR DEVICE FLAT BLACK SO THAT NO DUCTWORK IS VISIBLE THROUGH THE GRILL.
4. DEVICE SHALL BE PROVIDED WITH PLENUM BOOT.
5. THE MAXIMUM RUNOUT OF FLEXIBLE DUCT TO ANY AIR DEVICE SHALL NOT EXCEED 5'-0" IN LENGTH.
6. GRILLE/LOUVER SHALL BE MOUNTED 10'-0" A.F.F.
7. ALL NECK SIZES/FACE DIMENSIONS TO AIR DEVICES SHALL BE GREATER THAN OR EQUAL TO THE DUCTWORK RUN-OUT SHOWN ON THE PLANS.
8. LOUVER SHALL BE PROVIDED WITH WIRE MESH BIRD SCREEN.
9. LOUVER SHALL BE A DRAINABLE BLADE STATIONARY LOUVER TYPE.
10. LOUVER SHALL BE PROVIDED WITH FRONT/REAR SECURITY BARS.
11. PROVIDE GRILLE WITH SQUARE TO ROUND FITTING FROM THE MANUFACTURER.

BUFFER TANK SCHEDULE

MARK	TYPE	CONFIGURATION	SERVICE	TANK PRESSURE (PSI)	VOLUME (GAL)	DIMENSIONS		NOTES
						HEIGHT (IN.)	DIAMETER (IN.)	
BT-1	COMPRESSION	VERTICAL	CHILLED WATER		150			
BT-2	COMPRESSION	VERTICAL	HOT WATER		150			

EXPANSION TANK SCHEDULE

MARK	TYPE	CONFIGURATION	SERVICE	TANK PRESSURE	VOLUME (GAL)	ACCEPTANCE (GAL)	DIMENSIONS		NOTES
							HEIGHT (IN.)	DIAMETER (IN.)	
ET-1	DIAPHRAM	VERTICAL	CONDENSER WATER	15	50	25			
ET-2	DIAPHRAM	VERTICAL	CHILLED WATER	15	15	11			
ET-3	DIAPHRAM	VERTICAL	HOT WATER	15	15	11			

FAN SCHEDULE

MARK	DUTY	TYPE	SERVING	FAN	AIRFLOW (CFM)	EXT. S.P. (IN. WC)	FAN SPEED (RPM)	DRIVE TYPE	MOTOR (HP)	MAX. NC (SONES)	WEIGHT (LBS)	NOTES
EF-1	EXHAUST	INLINE	MECHANICAL ROOM	PROPELLER	420	0.75	1800	BELT	0.13		150	
EF-2	EXHAUST	INLINE	MECHANICAL ROOM	PROPELLER	420	0.75	1800	BELT	0.13		150	

NOTES:

1. PROVIDE BACKDRAFT DAMPER.
2. PROVIDE ROOF CURB, BIRD SCREEN, AND DISCONNECT.
3. FAN SHALL BE SPARK RESISTANT.
4. FAN SHALL BE EXPLOSION PROOF.
5. FAN SHALL BE AN UBLAST TYPE.
6. UTILITY SET SHALL BE PROVIDED WITH DISCHARGE DUCTWORK TO PROVIDE A MINIMUM DISCHARGE VELOCITY OF 3000 FT/S 20 FT ABOVE ROOF LINE.
7. FAN SHALL BE INVERTER DUTY TYPE WITH VFD.

HOT WATER BOILER SCHEDULE

Mark	LOCATION	FUEL TYPE	OUTPUT CAPACITY (MBH)	FUEL INPUT (MBH)	BOILER TYPE	WATER DATA				ELECTRICAL DATA		MIN. SERVICE EFFICIENCY	NOTES
						FLOW (GPM)	E.W.T. (F)	L.W.T. (F)	MAX. Δ P (FT H2O)	V/HZ/Φ	AMPS		
B-1	MECHANICAL ROOM	NATURAL GAS	975	1250	CONDENSING	65	45	75		460/60/3		89%	

PUMP SCHEDULE

MARK	LOCATION	SERVICE	TYPE		DISCHARGE CONNECTION (IN.)	SUCTION CONNECTION (IN.)	IMPELLER DIAMETER (IN.)	FLOW RATE (GPM)	PUMP HEAD (FT.)	MOTOR			V/HZ/Φ	NOTES
			MOUNTING	CONFIGURATION						SPEED (RPM)	SIZE (HP)	ENCLOSURE		
BP-1	MECHANICAL ROOM	PHW	PIPE MOUNTED	INLINE	2.0	2.0		65	30.0	1750	3	TEFC	120/60/1	
CHWP-1	MECHANICAL ROOM	PCHW	PIPE MOUNTED	INLINE	2.0	2.0		50	45.0	1750	2	TEFC	120/60/1	
HWP-1	MECHANICAL ROOM	PHW	PIPE MOUNTED	INLINE	2.0	2.0		20	45.0	1750	1	TEFC	120/60/1	
PCWP-1	MECHANICAL ROOM	CW	BASE MOUNTED	END SUCTION	2.5	2.5		195	50.0	1750	8	ODP	120/60/1	
SCWP-1	MECHANICAL ROOM	CW	BASE MOUNTED	END SUCTION	2.5	2.5		195	75.0	1750	8	ODP	120/60/1	
SCWP-2	MECHANICAL ROOM	CW	BASE MOUNTED	END SUCTION	2.5	2.5		195	75.0	1750	8	ODP	120/60/1	

NOTES:

1. PROVIDE PREMIUM EFFICIENCY MOTOR.
2. PROVIDE SUCTION DIFFUSER WITH SAND FILTER.
3. PROVIDE CONCRETE INERTIA BASE.
4. PROVIDE PUMP OPERATION THAT IS NON-OVERLOADING.
5. PUMP SEALS AND BEARINGS SHALL BE RATED FOR HIGH TEMPERATURE WATER OPERATION.

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL | DESCRIPTION | DATE | BY

DATE: 1 DEC 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
PLOT DATE: 6/6/2014 11:47:04 AM
PLOT SCALE:
FILE NAME:
SIZE: D 22" X 34"

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

HVAC SCHEDULES

PLATE REFERENCE NUMBER
M-601

WATER SOUCE HEAT PUMP SCHEDULE

MARK	SERVICE	ZONE O.A. (CFM)	SUPPLY FAN DATA AIRFLOW (CFM)	EXT. SP (IN. WC)	SPEED (RPM)	MOTOR (HP)	COIL PERFORMANCE (COOLING) TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	E.A.T. DB/WB (F)	L.A.T. DB/WB (F)	E.W.T./L.W.T. (F)	FLOW RATE (GPM)	EER	COIL PERFORMANCE (HEATING) CAPACITY (MBH)	E.A.T. DB (F)	L.A.T. DB (F)	E.W.T./L.W.T. (F)	FLOW RATE (GPM)	COP	WATER PRESSURE DROP (FT.)	REFR.	ELECTRICAL V/HZ/Φ	NOTES
WSHP-1	113 KITCHEN	175	300				9.1	7.0	76/63.3	54.5/52.7	85/95	2.3	18	10.1	68	99.2	55/48.2	2.3	4.8	3.3			1
WSHP-2	114 ATRIUM	280	850				25.0	20.0	76/63.3	55.9/53.0	85/95	7.0	18	25.2	68	94.5	55/47.7	6.0	5.7	4.3			1
WSHP-3	115 RECEPTION	115	600				18.0	13.0	76/63.3	54.5/51.4	85/95	6.0	18	26.8	68	98.3	55/47.9	6.0	5.7	4.3			1
WSHP-4	102 DIRECTOR	80	400				12.0	9.4	76/63.3	54.5/52.7	85/95	2.3	18	10.1	68	99.2	55/48.2	2.3	4.8	3.3			1
WSHP-5	140 COMPUTER LAB	115	1000				30.0	24.5	76/63.3	54.5/51.4	85/95	8.0	18	32.0	68	98.3	55/47.9	8.0	5.7	4.3			1
WSHP-6	139 HOMEWORK	215	400				12.0	9.4	76/63.3	54.5/52.7	85/95	2.3	18	10.1	68	99.2	55/48.2	2.3	4.8	3.3			1
WSHP-7	138 ACTIVITY ROOM	245	600				18.0	13.0	76/63.3	54.5/51.4	85/95	6.0	18	26.8	68	98.3	55/47.9	6.0	5.7	4.3			1
WSHP-8	144 LOBBY	300	850				25.0	20.0	76/63.3	55.9/53.0	85/95	7.0	18	25.2	68	94.5	55/47.7	6.0	5.7	4.3			1
WSHP-9	130 ACTIVITY ROOM	300	600				18.0	13.0	76/63.3	54.5/51.4	85/95	6.0	18	26.8	68	98.3	55/47.9	5.5	5.7	4.3			1
WSHP-10	129 ACTIVITY ROOM	290	850				25.0	20.0	76/63.3	55.9/53.0	85/95	7.0	18	25.2	68	94.5	55/47.7	6.0	5.7	4.3			1
WSHP-11	143 ATRIUM	455	2400				72.0	55.0	76/63.3	55.8/53.4	85/95	12.0	18	51.8	68	97.9	55/48.0	10.0	4.5	5.7			1
WSHP-12	124 MULTIPURPOSE ROOM	620	1600				48.0	35.0	76/63.4	55.8/53.5	85/96	10.0	18	38.8	68	97.9	55/48.0	6.0	4.5	4.3			1
WSHP-13	124 MULTIPURPOSE ROOM	570	1600				48.0	35.0	76/63.5	55.8/53.6	85/97	10.0	18	38.8	68	97.9	55/48.0	6.0	4.5	4.3			
WSHP-14	118 VIDEO	25	200				5.6	4.6	76/63.3	54.9/53.1	85/95	1.5	18	6.8	68	99.6	55/48.0	1.5	4.5	3.1			1
WSHP-15	120 COMMUNICATIONS ROOM	25	200				5.6	4.6	76/63.3	54.9/53.1	85/95	1.5	18	6.8	68	99.6	55/48.0	1.5	4.5	3.1			

NOTES:

1. PROVIDE PREMIUM EFFICIENCY MOTORS FOR THE COMPRESSORS.

WATER TO WATER HEAT PUMP SCHEDULE

MARK	LOCATION	TYPE	CAPACITY (MBH)	CONDENSER WATER E.W.T. (F)	L.W.T. (F)	FLOW RATE (GPM)	MAX PD (FT.)	LOAD WATER E.W.T. (F)	L.W.T. (F)	FLOW RATE (GPM)	MAX PD (FT.)	FOULING FACTOR	NOTES
WWHP-1	MECHANICAL ROOM	CHILLED WATER	362	85	95	72	9.5	45	55	70	7		
WWHP-2	MECHANICAL ROOM	HOT WATER	212.5	55	45	60	6.3	85	96.7	20	6.1		

AIR HANDLING UNIT SCHEDULE

MARK	LOCATION	SUPPLY FAN DATA AIRFLOW (CFM)	MIN. O.A. (CFM)	EXT. S.P. (IN. WC)	SPEED (RPM)	FAN TYPE	BLADE TYPE	DRIVE	VOLUME TYPE	MOTOR (HP)	COOLING COIL DATA TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	FACE VELOCITY (FPM)	EAT DB/WB (F)	LAT DB/WB (F)	EWT/LWT (F)	FLOW RATE (GPM)	PRE-HEAT COIL DATA TOTAL CAPACITY (MBH)	EAT/LAT (F)	EWT/LWT (F)	FLOW RATE (GPM)	RE-HEAT COIL DATA TOTAL CAPACITY (MBH)	EAT/LAT (F)	EWT/LWT (F)	FLOW RATE (GPM)	DIMENSIONS LxWxH	WEIGHT (LBS)	NOTES
DOAS-1	MECHANICAL ROOM	3800	4700	1	2900	CENTRIFUGAL	AIRFOIL	BELT	VARIABLE	7.5	248.23	100	460	81/71	54.4/54.0	45/55	50	102.6	47.4/70.8	96.7/85	20.5	85	54.7/75.0	96/85	16.5	180 X 72 X 47	3800	2, 3, 4, 5

NOTES:

1. PROVIDE VIBRATION ISOLATION ROOF CURB.
2. PROVIDE LONWORKS CONTROLLER/INTERFACE.
3. PROVIDE OUTSIDE AIR MEASURING STATION.
4. PROVIDE 2 SETS OF 2" PLEATED 25% EFFICIENT (MERV 6) PRE-FILTERS.
5. PROVIDE 2 SETS OF 12" 80% EFFICIENT (MERV 13) FINAL FILTERS.

ENERGY RECOVERY VENTILATING UNIT SCHEDULE

MARK	LOCATION	OUTDOOR AIR FAN DATA AIRFLOW (CFM)	EXT. S.P. (IN. WC)	SPEED (RPM)	VOLUME TYPE	MOTOR (HP)	EXHAUST FAN DATA AIRFLOW (CFM)	EXT. SP (IN. WC)	SPEED (RPM)	VOLUME TYPE	MOTOR (HP)	ENERGY RECOVERY DATA - SUMMER OUTDOOR AIR EAT DB/WB (F)	LAT DB/WB (F)	EXHAUST EAT DB/WB (F)	LAT DB/WB (F)	ENERGY RECOVERY DATA - WINTER OUTDOOR AIR EAT DB/WB (F)	LAT DB/WB (F)	EXHAUST EAT DB/WB (F)	LAT DB/WB (F)	WHEEL O.A. WHEEL EFF. (%)	E.A. WHEEL EFF. (%)	ELECTRICAL V/HZ/Φ	DIMENSIONS LxWxH	WEIGHT (LBS)	NOTES
ERV-1	INTEGRAL TO AHU-1	6800	1.5	1300	--	15	3000	1.5	1200	--	7.5	88/78		76/64		25/22		68/54		95	84	460/3/60	96 X 65 X 59	2000	

NOTES:

1. PROVIDE VIBRATION ISOLATION ROOF CURB.
2. PROVIDE LONWORKS CONTROLLER/INTERFACE.
3. PROVIDE OUTSIDE AIR MEASURING STATION.
4. PROVIDE 2 SETS OF 2" PLEATED 25% EFFICIENT (MERV 6) PRE-FILTERS.
5. PROVIDE 2 SETS OF 12" 80% EFFICIENT (MERV 13) FINAL FILTERS.
6. PROVIDE UNIT WITH ECONOMIZER. SEE CONTROL DRAWINGS FOR OPERATION OF ECONOMIZER.

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 605% DESIGN PACKAGE

DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
PLOT DATE: 6/6/2014 11:47:05 AM
PLOT SCALE:
FILE NAME:
SIZE: D 22" X 34"

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

HVAC SCHEDULES

PLATE REFERENCE NUMBER
M-602
SHEET 86 OF 107

W-X-Y-Z
##

DEVICE SYMBOL, GENERIC
USED TO REPRESENT SENSORS, INSTRUMENTS SAFETIES, AND OTHER CONTROL DEVICES
W-X-Y-Z : (SEE ABBREVIATIONS AND ACRONYMS)

GENERIC USAGE TO SHOW LOCATION OF DEVICE; PROCESS OR DEVICE BEING MEASURED OR CONTROLLED; SIGNAL TYPE; MODIFIERS AND OTHER APPLICATION INFORMATION

W-X-Y-Z
##

DEVICE SYMBOL, GENERIC
MULTIPLE OUTPUT DEVICE WHERE AT LEAST 1 OUTPUT IS ALWAYS SAFETY INTERLOCK

W-X-Y-Z
DDC
##
DIR
REV

DEVICE SYMBOL, CONTROLLER

DDC : DIRECT DIGITAL CONTROL
: DEVICE NUMBER
DIR : DIRECT CONTROL ACTION, OR
REV : REVERSE CONTROL ACTION

W-X-Y-Z : (SEE ABBREVIATIONS AND ACRONYMS)

GENERIC USAGE TO SHOW LOCATION OF DEVICE; PROCESS OR DEVICE BEING MEASURED OR CONTROLLED; SIGNAL TYPE; MODIFIERS AND OTHER APPLICATION INFORMATION

ACTUATOR, ELECTRIC

P

ACTUATOR, PNEUMATIC
WITH LOCALLY MOUNTED PRESSURE GAGE

P
PP
M

ACTUATOR, PNEUMATIC
WITH POSITIVE POSITIONER AND LOCALLY MOUNTED PRESSURE GAGE

AFMA

AIR FLOW MEASUREMENT ARRAY, WITH FLOW TRANSMITTER

SEE "DEVICE SYMBOL, GENERIC"

BOILER

CHILLER

C

COIL, COOLING

DX

COIL, COOLING, DIRECT-EXPANSION

HC

COIL, HEAT/COOL (DUAL TEMPERATURE)

H

COIL, HEATING

PC

COIL, PRECOOL

PH

COIL, PREHEAT

CONTACT, PRESSURE, HIGH LIMIT (HL)
SHOWN IN ACTIVATED POSITION
OPEN WHEN PRESSURE IS ABOVE SETPOINT
CLOSED WHEN PRESSURE IS BELOW SETPOINT

CONTACT, PRESSURE, HIGH LIMIT (HL)
SHOWN IN UNACTIVATED POSITION
OPEN WHEN PRESSURE IS ABOVE SETPOINT
CLOSED WHEN PRESSURE IS BELOW SETPOINT

CONTACT, PRESSURE, LOW LIMIT (LL)
SHOWN IN ACTIVATED POSITION
OPEN WHEN PRESSURE IS BELOW SETPOINT
CLOSED WHEN PRESSURE IS ABOVE SETPOINT

CONTACT, PRESSURE, LOW LIMIT (LL)
SHOWN IN UNACTIVATED POSITION
OPEN WHEN PRESSURE IS BELOW SETPOINT
CLOSED WHEN PRESSURE IS ABOVE SETPOINT

CONTACT, TEMPERATURE, HIGH LIMIT (HL)
SHOWN IN ACTIVATED POSITION
OPEN WHEN TEMPERATURE IS ABOVE SETPOINT
CLOSED WHEN TEMPERATURE IS BELOW SETPOINT

CONTACT, TEMPERATURE, HIGH LIMIT (HL)
SHOWN IN UNACTIVATED POSITION
OPEN WHEN TEMPERATURE IS ABOVE SETPOINT

CONTACT, TEMPERATURE, LOW LIMIT (LL)
SHOWN IN ACTIVATED POSITION
OPEN WHEN TEMPERATURE IS BELOW SETPOINT
CLOSED WHEN TEMPERATURE IS ABOVE SETPOINT

CONTACT, TEMPERATURE, LOW LIMIT (LL)
SHOWN IN UNACTIVATED POSITION
OPEN WHEN TEMPERATURE IS BELOW SETPOINT
CLOSED WHEN TEMPERATURE IS ABOVE SETPOINT

CONTROL SIGNAL LINE, LOW VOLTAGE

CURRENT TRANSFORMER/SWITCH

DAMPER, BALANCING

D-##

DAMPER, PARALLEL BLADE

NORMALLY OPEN OR CLOSED AS SHOWN
= DAMPER NUMBER AS SHOWN
IN DAMPER SCHEDULE

D-##

DAMPER, OPPOSED BLADE

NORMALLY OPEN OR CLOSED AS SHOWN
= DAMPER NUMBER AS SHOWN
IN DAMPER SCHEDULE

HEAT EXCHANGER

MAIN AIR

MAIN AIR

M#

MOTOR

MS-#

MOTOR STARTER

Rxx

RELAY COIL
xx = SEQUENTIAL RELAY
(SOLENOID NUMBER)

Rxx-YY

RELAY COIL CONTACT

NORMALLY OPEN
xx = RELAY COIL NUMBER
YY = CONTACT NUMBER

Rxx-YY

RELAY COIL CONTACT

NORMALLY CLOSED
xx = RELAY COIL NUMBER
YY = CONTACT NUMBER

EPS
##

ELECTRIC-TO-PNEUMATIC SWITCH
(SOLENOID ACTUATED PNEUMATIC VALVE)
= SEQUENTIAL NUMBER
(WHEN MORE THAN 1 EPS)

EP
##

ELECTRIC-TO-PNEUMATIC TRANSDUCER
VDC OR mA INPUT / 3-15 PSI OUTPUT
= SEQUENTIAL NUMBER

(WHEN MORE THAN 1 EP)

FAN

FILTER

LDP
##

LOCAL DISPLAY PANEL
= SEQUENTIAL NUMBER
(WHEN MORE THAN 1 LDP)

PP

POSITIVE POSITIONER
SEE "ACTUATOR, PNEUMATIC"

P

PRESSURE GAGE

P
H
L

PRESSURE SWITCH, DIFFERENTIAL, WITH GAGE
H = HIGH PRESSURE TAP
L = LOW PRESSURE TAP
SEE "DEVICE SYMBOL, GENERIC"

PUMP

RADIATOR

RST-BUT

RESET BUTTON FOR SAFETY RESET

SMOKE DETECTOR, DUCT-MOUNTED
SEE "DEVICE SYMBOL, GENERIC"

SWITCH, MANUAL

T

TEMPERATURE GAGE

V-##
COM
NO
NC

VALVE, 3-WAY DIVERTING
WITH SPRING RETURN FAILSAFE

NO = NORMALLY OPEN
NC = NORMALLY CLOSED
COM = COMMON PORT
= VALVE NUMBER AS SHOWN
IN VALVE SCHEDULE

V-##
NO
COM
NC

VALVE, 3-WAY MIXING
WITH SPRING RETURN FAILSAFE

NO = NORMALLY OPEN
NC = NORMALLY CLOSED
COM = COMMON PORT
= VALVE NUMBER AS SHOWN
IN VALVE SCHEDULE

VFD
XX-C
XX-SS
XX-S

VARIABLE FREQUENCY DRIVE
XX = PROCESS/DEVICE BEING CONTROLLED

SS = START/STOP COMMAND
S = STATUS FEEDBACK (ON/OFF)
C = 4-20 mA, VDC, or SNVT CONTROL SIGNAL

TEMPERATURE SENSOR, AVERAGING
or TEMPERATURE LOW LIMIT / FREEZESTAT
SEE "DEVICE SYMBOL, GENERIC"

TEMPERATURE SENSOR, POINT
SEE "DEVICE SYMBOL, GENERIC"

STAT

THERMOSTAT WITH SPECIFIED I/O FUNCTIONS

THERMOWELL IN PIPE

VALVE, BALANCING

V-##
NC

VALVE, NORMALLY CLOSED
WITH SPRING RETURN FAILSAFE

= VALVE NUMBER AS SHOWN
IN VALVE SCHEDULE

V-##
NO

VALVE, NORMALLY CLOSED
WITH SPRING RETURN FAILSAFE

= VALVE NUMBER AS SHOWN
IN VALVE SCHEDULE

GENERAL NOTES: TYPICAL ALL CONTROL DRAWINGS

1. CONTRACTOR SHALL AFFIX PERMANENT TAGS/LABELS TO ALL DEVICES AS SPECIFIED

2. CONTRACTOR SHALL LABEL ALL DDC I/O SIGNAL LINES: 4-20 mA, VDC, OR SNVT

3. CONTRACTOR SHALL SHOW A UNIQUE IDENTIFIER FOR EACH DEVICE. WHERE MULTIPLE IDENTICAL DEVICES ARE SHOWN (FOR EXAMPLE; DDC CONTROLLER, OA SENSOR,OR EP TRANSDUCER) EACH SHALL BE SEQUENTIALLY NUMBERED. WHERE SEPERATE DDC CONTROLLER BUBBLES ARE USED TO REPRESENT/SHOW A COMMON (OR SINGLE) CONTROLLER EACH BUBBLE SHALL USE THE SAME IDENTIFIER AND NUMBER. DEVICE AND SIGNAL IDENTIFIERS SHALL BE CONSISTENT BETWEEN DRAWINGS.

4. CONTRACTOR SHALL UNIQUELY NUMBER ALL ANSI 709.1 DEVICES. THIS NUMBERING SHALL BE CONSISTENT BETWEEN ALL DRAWINGS

CONTROL SCHEMATIC SYMBOLS

B
A
BINARY HARDWARE INPUT

A
ANALOG HARDWARE INPUT

B
BINARY HARDWARE OUTPUT

A
ANALOG HARDWARE OUTPUT

ANALOG OR BINARY SIGNAL INPUT

ANALOG OR BINARY SIGNAL OUTPUT
CONSTANT VALUE

IF
CONDITIONAL STATEMENT

IN
IN
MATH
OUT

GENERIC MATH FUNCTION AS DEFINED

IN
IN
MIN
OUT

MINIMUM SIGNAL SELECTOR

IN
IN
MAX
OUT

MAXIMUM SIGNAL SELECTOR

IN
IN
OUT

ADDITION FUNCTION

IN
IN
OUT

SUBTRACTION FUNCTION

IN
RESET
OUT

RESET SCHEDULE
(OUTPUT INCREASES AS INPUT INCREASES)

IN
RESET
OUT

RESET SCHEDULE
(OUTPUT DECREASES AS INPUT INCREASES)

IN
OUT

LOGICAL NOT FUNCTION

IN
IN
OUT

LOGICAL OR FUNCTION

IN
IN
OUT

LOGICAL AND FUNCTION

IN1
IN2
COMP
DB
OUT
DB= _ _ _

COMPARATOR WITH DEADBAND (DB).
WHEN IN1 > IN2
OUTPUT IS TRUE

IN
IN
S
LAT
R
B OUT

BINARY LATCH
S=SET
R=REST

IN
HAND
OFF
OUT

H-O-A SWITCH

IN
OCC
UNOCC
OUT

H-O-A SWITCH

CONTROL
IN
NO
IN
NC
OUT
COM

SWITCH

IN
T= _ _ _ SEC
OUT

ON DELAY TIMER
OUT=IN AFTER TIME DELAY

ENABLE
IN
VALUE
IN
SETPOINT
PID
OUT
DEFAULT OUTPUT

PID LOOP
WITH ENABLE AND DEFAULT OUTPUT
WHEN NOT ENABLED

CONTROL LOGIC DIAGRAM SYMBOLS

2P	TWO-POSITION (CONTROL SIGNAL)	I/O	INPUT/OUTPUT
ADJ	ADJUSTABLE	LDP	LOCAL DISPLAY PANEL
AFMA	AIRFLOW MEASUREMENT ARRAY	LL	LOW LIMIT
ALM	ALARM	M&C	MONITORING & CONTROL (SOFTWARE)
BA	BYPASS AIR	MA	MIXED AIR
BLDG	BUILDING	MINOA	MINIMUM OUTSIDE AIR
BUT	BUTTON	MS	MOTOR STARTER
C	COMMAND (MODULATING CONTROL SIGNAL)	MTHW	MEDIUM TEMPERATURE HOT WATER
CD	COLD DECK	N/A	NOT APPLICABLE
CHLR	CHILLER	NC	NORMALLY CLOSED
CLG	COOLING	NO	NORMALLY OPEN
CO2	CARBON DIOXIDE	OA	OUTSIDE AIR
COM	COMMON	OCC	OCCUPIED
COMP	COMPARATOR	ODT	ON DELAY TIMER
CR	CONDENSER WATER RETURN	OWS	OPERATOR WORKSTATION
CS	CONDENSER WATER SUPPLY	P	PRESSURE
CT	CURRENT TRANSFORMER/SWITCH	PC	PRE-COOLING
CWR	CHILLED WATER RETURN	PCW	PRIMARY CHILLER WATER
CWS	CHILLED WATER SUPPLY	PCWR	PRIMARY CHILLER WATER RETURN
CW	CHILLED WATER	PCWS	PRIMARY CHILLER WATER SUPPLY
D	DAMPER	PH	PREHEAT
DA	DISCHARGE AIR	PMP	PUMP
DB	DEADBAND	PP	POSITIVE POSITIONER
DDC	DIRECT DIGITAL CONTROL(LER)	R	RELAY
DIFF	DIFFERENCE	RA	RETURN AIR
DIR	DIRECT (CONTROL ACTION)	REV	REVERSE (CONTROL ACTION)
DIS	DISABLE	RF	RETURN FAN
DT	DUAL TEMP	RH	RELATIVE HUMIDITY
DTWR	DUAL TEMP WATER RETURN	RLA	RELIEF AIR
DTWS	DUAL TEMP WATER SUPPLY	RM	ROOM
DX	DIRECT EXPANSION (UNIT)	RST	RESET
EA	EXHAUST AIR	S	STATUS
ECO	ECONOMIZER	SA	SUPPLY AIR
EF	EXHAUST FAN	SEC	SECONDARY
ENA	ENABLE	SF	SUPPLY FAN
EP	ELECTRIC TO PNEUMATIC TRANSDUCER	SMK	SMOKE
EPS	ELECTRIC TO PNEUMATIC SWITCH	SP	SETPOINT
ESS	EMERGENCY SHUTOFF SWITCH	SS	START/STOP COMMAND
F	FLOW	STAT	THERMOSTAT
FAP	FIRE ALARM PANEL	SYS	SYSTEM
FLT	FILTER	SCHD	SCHEDULER
HD	HOT DECK	T	TEMPERATURE
HL	HIGH LIMIT	TAP	TAP, PRESSURE
HTG	HEATING	UNOCC	UNOCCUPIED
HTHW	HIGH TEMPERATURE HOT WATER	V	VALVE
HUM	HUMIDIFIER	VAV	VARIABLE AIR VOLUME
HW	HOT WATER	VFD	VARIABLE FREQUENCY DRIVE
HWR	HOT WATER RETURN	WB	WET BULB (TEMPERATURE)
HWS	HOT WATER SUPPLY	ZN	ZONE
HX	HEAT EXCHANGER		

ABBREVIATIONS AND ACRONYMS

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: DESIGN
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/6/2014
PLOT SCALE: 12" = 1'-0"
SIZE: D 22" x 34"
CATEGORY CODE: 65% DESIGN PACKAGE
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

HVAC CONTROLS LEGEND

PLATE REFERENCE NUMBER
MI801

DDC SYSTEM - GENERAL

1. DIRECT DIGITAL CONTROLS (DDC) SYSTEM SHALL BE PROVIDED TO OPERATE BUILDING MECHANICAL SYSTEMS AS DESCRIBED IN THE SEQUENCE OF OPERATION. ALL SOFTWARE SHALL BE LONWORKS COMPATIBLE.

2. ALL CONTROL DEVICES SHALL BE ELECTRICALLY OR ELECTRONICALLY OPERATED. PNEUMATIC CONTROL DEVICES SHALL NOT BE USED.

3. INDIVIDUAL CONTROLLERS SHALL BE PROVIDED FOR EACH PIECE OF EQUIPMENT OR SYSTEM. ALL CONTROLLERS SHALL COMMUNICATE WITH THE MASTER TEMPERATURE CONTROL PANEL. THE MASTER TEMPERATURE CONTROL PANEL SHALL BE CAPABLE OF INTERFACING WITH ALL EQUIPMENT AND SYSTEMS CONTROLLERS THROUGHOUT THE DDC SYSTEM. ALL SETPOINTS AND PARAMETERS SHALL BE ACCESSIBLE THROUGH THE MASTER TEMPERATURE CONTROL PANEL AND FRONT END TERMINAL.

4. EACH FACILITY'S BUILDING AUTOMATION SYSTEM SHALL COMMUNICATE WITH THE BASE WIDE ENERGY MANAGEMENT CONTROLS SYSTEM (EMCS). COMMUNICATION SHALL BE THROUGH A DSL ACCESS POINT AND COMMUNCATION LINE. THE DSL ACCESS POINT SHALL BE ACCESSIBLE FROM ANY OUTSIDE INTERNET CONNECTION. THE GOVERNMENT SHALL CONNECT THE BUILDING TO THE BASE WIDE FRONT END AT A LATER DATE.

5. PROVIDE EMERGENCY SHUT-DOWN SWITCHES AS SHOWN ON THE PLANS. THE SWITCH SHALL SHUT-DOWN ALL HVAC EQUIPMENT AND CLOSE ALL OUTSIDE AIR INTAKES. MANUAL RESET IS REQUIRED.

6. THE CONTROLS SYSTEM SHALL PROVIDE CONTINOUS METERING FOR THE FOLLOWING SYSTEMS AND/OR COMPONENTS. THIS MONITORING SHALL BE ACCOMPLISHED THROUGH EQUIPMENT SENSORS AND CONTROL DEVICES. PROVIDE ADDITIONAL DEVICES AS REQUIRED TO ACCOMPLISH THIS MONITORING. THE DDC SYSTEM SHALL BE CAPABLE OF DATA LOGGING THIS INFORMATION AND REPORTING TO THE EMCS.

   A. CONSTANT AND VARIABLE MOTOR LOADS
   B. VFD OPERATION
   C. COOLING LOADS
   D. AIR SYSTEM STATIC PRESSURE AND AIR VENTILATION VOLUMES
   E. DOMESTIC WATER METER (METER MONITORING AND REPORTING)

	DEFAULT SCHEDULE		SUPERVISORY MONITORING & CONTROL SCHEDULE			# OCC. SENSORS TO PUT AHU IN OCC. MODE
SYSTEM	OCCUPIED	UN-OCCUPIED	OCCUPIED	UN-OCCUPIED	WARM-UP / COOL DOWN	
ALL	M-F 0630-1800	OTHERWISE	M-F 0630-1800	OTHERWISE	M-F 0530-0630	TBD

SEQUENCE OF OPERATION: DOAS-1

1. GENERAL:

THE AIR HANDLING UNIT CONSISTS OF A HOT WATER PRE-HEAT COIL, CHILLED WATER COOLING COIL, HOT WATER RE-HEAT COIL, SUPPLY FAN SECTION, AND FILTER SECTION.

THE AIR HANDLING UNIT SHALL OPERATE AS A CONSTANT AIR VOLUME UNIT, UNLESS DEMAND CONTROLLED VENTILATION(DCV) IS UTILIZED.

[SUPPLY FAN SHALL BE OPERATED WITH VARIABLE FREQUENCY DRIVES. DRIVES SHALL BE FACTORY MOUNTED AND PROVIDED BY THE AIR HANDLING UNIT MANUFACTURER.]

ALL CONTROL DEVICES INTEGRAL TO THE AHU OPERATION SHALL BE FACTORY INSTALLED. THIS INCLUDES ALL SENSORS. DAMPERS. ACTUATORS AND WIRING. SYSTEM CONTROLLERS MAY BE FACTORY INSTALLED OR FIELD INSTALLED AT CONTRACTOR'S OPTION.

THE AHU CONTROLLER SHALL OPERATE THE AIR HANDLING UNIT IN OCCUPIED MODE AND UNOCCUPIED MODE

2. SUPPLY FAN OPERATION:

THE SUPPLY FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED MODE.

THE SUPPLY FAN SHALL BE OFF DURING UNOCCUPIED MODE.

[DCV: THE DUCT MOUNTED SYSTEM STATIC PRESSURE SENSOR SHALL MODULATE THE SUPPLY FAN VARIABLE FREQUENCY DRIVE TO MAINTAIN SUPPLY DUCT STATIC PRESSURE AT SETPOINT(TO BE DETERMINED DURING TEST AND BALANCE).]

SUPPLY FAN OPERATION SHALL BE VERIFIED THROUGH THE SUPPLY FAN MOTOR CURRENT SENSOR. IF THE SUPPLY AIR FLOW IS NOT PROVEN WITHIN 60 SECONDS (ADJUSTABLE) OF THE FAN START COMMAND, AN ALARM SIGNAL SHALL BE SENT TO THE AHU CONTROLLER TO SIGNAL THE SUPPLY FAN IS NOT OPERATIONAL.

THE FAN SHALL DE-ENERGIZE UPON ANY SIGNAL FROM FIRE ALARM SYSTEM OR EMERGENCY PUSH BUTTON STOP SWITCH.

3. COIL OPERATION:

SUMMER OPERATION

WHENEVER THE ENTERING AIR TEMPERATURE(OA-ENT-T) RISES ABOVE 66 DEGREES F(ADJUSTABLE)THE CHILLED WATER VALVE(V-2) SHALL MODULATE OPEN/CLOSED TO MAINTAIN THE COOLING COIL LEAVING AIR TEMPERATURE (CC-LA-T) AT A SETPOINT(CC-LAT-SP) OF 55 DEGRESS F(ADJUSTABLE). THE COOLING COIL SHALL NOT BE IN OPERATION WHEN THE OUTDOOR ENTERING AIR TEMPERATURE(OA-ENT-T) IS BETWEEN 55 AND 66 DEGREES F.

WHENEVER THE COOLING COIL LEAVING AIR TEMPERATURE(CC-LA-T) IS ABOVE 54 DEGREES F(ADJUSTABLE) THE RE-HEAT COIL VALVE(V-3) SHALL MODULATE OPEN/CLOSED TO MAINTAIN A SUPPLY AIR DISCHARGE TEMPERATURE OF 74 DEGREES F(ADJUSTABLE).

THE PRE-HEAT COIL VALVE(V-1) SHALL BE FULLY CLOSED TO THE COIL.

WINTER OPERATION

WHENEVER THE ENTERING AIR TEMPERATURE (OA-ENT-T) FALLS BELOW 54 DEGREES F(ADJUSTABLE) FOR 5 MINUTES OR LONGER(ADJUSTABLE) THE PRE-HEAT COIL VALVE(V-1) SHALL MODULATE OPEN/CLOSED TO MAINTAIN A SUPPLY AIR DISCHARGE TEMPERATURE OF 68 DEGREES F(ADJUSTABLE)

THE CHILLED WATER VALVE(V-2) SHALL FULLY CLOSE TO ITS COIL.

THE RE-HEAT COIL VALVE(V-3) SHALL FULLY CLOSE TO ITS COIL.

SEQUENCE OF OPERATION: DOAS-1 CONT.

4. FILTER MAINTENANCE:

DIFFERENTIAL PRESSURE SWITCH WITH SENSOR TAPS ON UPSTREAM AND DOWNSTREAM SIDE OF FILTER SHALL SIGNAL AHU CONTROLLER WHEN THE DIFFERENTIAL PRESSURE IS EQUAL TO OR GREATER THAN THE SET POINT. THE CONTROLLER SHALL INITIATE A MAINTENANCE ALARM SIGNAL INDICATING A DIRTY FILTER.

5. DUCT OVER-PRESSURIZATION:

THE DUCT OVER-PRESSURE SENSOR SHALL BE WIRED DIRECTLY TO THE SUPPLY FAN. WHEN THE SENSOR SENSES A PRESSURE 120% (ADJUSTABLE) HIGHER THAN THE DUCT DESIGN PRESSURE THE FAN SHALL BE DE-ENERGIZED. AN ALARM SHALL BE SENT TO THE DDC.

6. SMOKE DETECTOR:

DUCT SMOKE DETECTORS SHALL STOP THE SUPPLY AND EXHASUT FANS, AND DE-ENERGIZE CONTROLS THROUGH A FIRE ALARM CONTROL CIRCUIT. WHEN SMOKE DETECTOR SENSES SMOKE, A SIGNAL SHALL BE SENT TO THE DDC CONTROLLER AND BUILDING FIRE ALARM CONTROL PANEL. THE DDC CONTROLLER SHALL DE-ENERGIZE THE SUPPLY AND ERV FAN MOTORS. MANUAL RESET OF SMOKE DETECTOR IS REQUIRED.

7. OCCUPIED MODE:

SEE OCCUPANCY SCHEDULE ON THIS SHEET FOR OCCUPIED MODE DAYS AND HOURS.

THE AIR HANDLING UNIT AND ASSOCIATED ERV SHALL BE ENERGIZED AND RUN CONTINUOUSLY DURING OCCUPIED MODE.

THE AIR HANDLING UNIT SHALL BE CONTROLLED TO MAINTAIN A SETPOINT SUPPLY AIR TEMPERATURE(SA-T) TEMPERATURE OF 74 DEGREES F(ADJUSTABLE) IN THE SUMMER AND 68 DEGREES F(ADJUSTABLE) IN THE WINTER.

8. UN-OCCUPIED / NIGHT SETBACK MODE:

NIGHT SET-BACK MODE SHALL OPERATE AS SCHEDULED IN THE OCCUPANCY SCHEDULE ON THIS SHEET.

DURING THIS MODE THE OUTSIDE AIR DAMPER AND EXHAUST AIR DAMPER AT THE ERV SHALL BE FULLY CLOSED AND DEDICATED OUTDOOR AIR UNIT SHALL BE OFF.

THE DDC CONTROLS SHALL OVERRIDE ALL ZONE THERMOSTATS FOR ALL WSHP UNITS LOCATED IN THE BUILDING, EXCEPT WSHP UNIT SERVING THE COMM ROOM, TO A SETBACK SPACE TEMPERATURE SETPOINT OF 82 DEGREES F(ADJUSTABLE) FOR COOLING AND 55 DEGREES F (ADJUSTABLE) FOR HEATING. FACTORY MOUNTED CONTROLS FOR THE WSHP UNITS SHALL CYCLE UNITS TO MAINTAIN THE SETPOINT TEMPERATURES ABOVE.

9. WARM UP MODE:

THE WARM-UP MODE SHALL INITIATE ON A SCHEDULED START-UP ONE HOUR(ADJUSTABLE) PRIOR TO OCCUPIED MODE WHEN THE SPACE TEMPERATURE IS BELOW THE OCCUPIED MODE SPACE SETPOINT.

THE DEDICATED OUTDOOR AIR UNIT AND ERV SHALL BE OFF.

THE FACTORY MOUNTED WSHP CONTROLLERS SHALL RELEASE THE NIGHT SET-BACK OVERRIDE OF ALL ZONE THERMOSTATS AND SHALL CYCLE TO MAINTAIN A SPACE TEMPERATURE OF 68 DEGREES F(ADJUSTABLE) WHEN THE WARM-UP SCHEDULED TIME IS REACHED.

WHEN THE OCCUPIED SCHEDULE TIME IS REACHED THE ZONE WSHP UNITS SHALL THEN OPERATE AS REQUIRED IN OCCUPIED MODE.

10. COOL-DOWN MODE:

THE COOL-DOWN MODE SHALL INITIATE ON A SCHEDULED START-UP ONE HOUR (ADJUSTABLE) PRIOR TO OCCUPIED MODE WHEN THE SPACE TEMPERATURE IS ABOVE THE OCCUPIED MODE SPACE SETPOINT.

THE DEDICATED OUTDOOR AIR UNIT AND ERV SHALL BE OFF.

THE FACTORY MOUNTED WSHP CONTROLLERS SHALL RELEASE THE NIGHT SET-BACK OVERRIDE OF ALL ZONE THERMOSTATS AND SHALL CYCLE TO MAINTAIN A SPACE TEMPERATURE OF 78 DEGREES F(ADJUSTABLE) WHEN THE COOL-DOWN SCHEDULED TIME IS REACHED.

WHEN THE OCCUPIED SCHEDULE TIME IS REACHED THE ZONE WSHP UNITS SHALL THEN OPERATE AS REQUIRED IN OCCUPIED MODE.

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

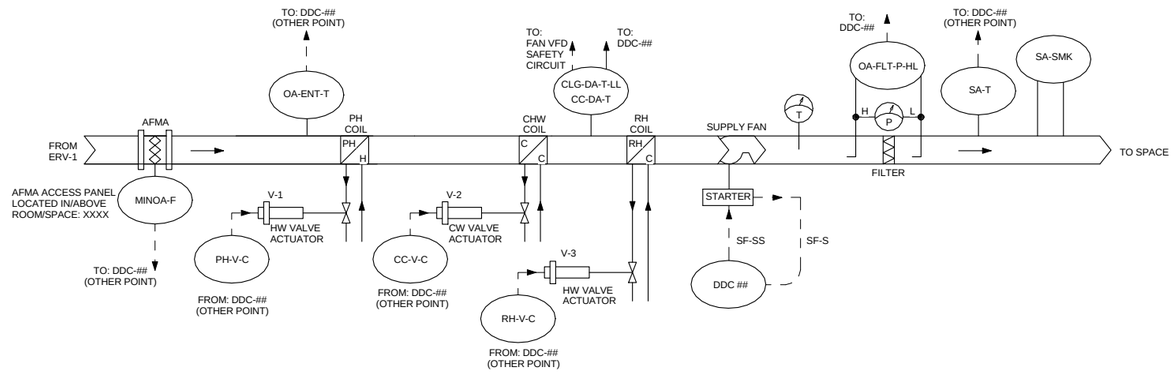
DESIGN BY: JCS | DATE: JUNE 2014
DRAWN BY: JCS | CKD BY: PLM | SOLICITATION NO.: N/A
SBMT BY: | PLOT DATE: 6/6/2014 11:47:30 AM | CONTRACT NO.: N/A
PLOT SCALE: 12" = 1'-0" | CATEGORY CODE: 1635 DESIGN PACKAGE
SIZE: 30" X 42" | FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

CONTROLS SCHEMATIC AND SEQUENCE

PLATE REFERENCE NUMBER
MI802



DEDICATED OUTDOOR AIR UNIT SCHEMATIC: DOAS-1

NOT TO SCALE

DEDICATED OUTDOOR AIR UNIT CONTROL POINTS (DOAS-1)

NODE: <DDC##>
NODE LOCATION: <___>
NODE ADDRESS: Domain = <___>, Subnet = <___>, Node = <___>
NODE ID: <___>

FUNCTION	NAME	DESCRIPTION	SETTING (WITH UNITS)	RANGE (WITH UNITS)	nci/CPT NAME	IO TYPE	HOA REQ'D	LDP AND M&C DISPLAY: LDP VIEW REQ'D	M&C: DISP REQ'D	M&C: TREND REQ'D	SNVT NAME	SNVT TYPE	OVERRIDES: LDP OVRD REQ'D	M&C OVRD REQ'D	SNVT NAME	SNVT TYPE	ALARMS: ALARM CONDITION (SEE NOTES)	ALARM PRIORITY	M&C ROUTING
PROOFS & SAFETIES	SF-S	SUPPLY FAN STATUS	~	ON/OFF	<___>	BI	~	[X]	X	[~]	<___>	<___>	~	~	~	~	SUPPLY FAN PROOF FAILED	[info] [crit]	[___]
	SA-SMK	SUPPLY AIR SMOKE	~	ALM/NORMAL	<___>	BI	~	~	~	~	~	~	~	~	~	~	ALM	[info] [crit]	[___]
	CLG-DA-T-LL	COOLING COIL DISCHARGE AIR TEMP LOW LIMIT	39 DEG F	ALM/NORMAL	<___>	BI	~	~	~	~	~	~	~	~	~	~	ALM	[info] [crit]	[___]
	SA-P-HL	SUPPLY AIR PRESSURE HIGH LIMIT	[___ IWC]	ALM/NORMAL	<___>	BI	~	~	~	~	~	~	~	~	~	~	ALM	[info] [crit]	[___]
	RST-BUT	SYSTEM RESET BUTTON (FOR SAFETIES)	~	~	<___>	[___]	~	~	~	~	~	~	~	~	~	~	~	~	[___]
START/STOP	BLDG-T	BUILDING TEMPERATURE (NIGHT STAT)	~	<___>	<___>	AI	~	[~]	X	[~]	<___>	TEMP_P	~	~	~	~	BLDG-T LESS THAN BLDG-T-LL	[info] [crit]	[___]
	BLDG-T-LL	BUILDING TEMPERATURE LOW LIMIT SETPOINT	[55 DEG F]	~	<___>	~	~	[~]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
	SYS-OCC	OCCUPANCY INPUT (FROM SYSTEM SCHEDULER)		<___>	<___>	NVI	~	[X]	X	[~]	<___>	<___>		SEE NOTES			~	~	~
	SF-SS	SUPPLY FAN START/STOP	~	ON/OFF	<___>	BO	[~]	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
	UNIT STATUS	UNIT STATUS (HTG AND/OR CLG REQUEST) (SEE NOTE)	~	HVAC_COOL/ [HVAC_HEAT]	<___>	NVO	~	[~]	[X]	[~]	<___>	HVAC_STATUS	~	~	~	~	~	~	~
VALVE CONTROL	PH-V-C	PRE-HEAT COIL HOT WATER VALVE(V-1) COMMAND	~	0-100% OPEN	<___>	AO	[~]	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
	CC-V-C	COOLING COIL CHILLED WATER VALVE(V-2) COMMAND	~	0-100% OPEN	<___>	AO	[~]	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
	RH-V-C	RE-HEAT COIL HOT WATER VALVE(V-3) COMMAND	~	0-100% OPEN	<___>	AO	[~]	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
	MINOA-F	ABSOLUTE MINIMUM OUTSIDE AIR FLOW	<_~_>	[0 - ___ CFM]	<___>	AI	~	[X]	X	X	<___>	<___>	~	~	~	~	MINOA-F LESS THAN 80% OF MINOA-F-SP	[info] [crit]	[___]
	MINOA-F-SP	ABSOLUTE MINIMUM OUTSIDE AIR FLOW SETPOINT(SETTING)	[___ CFM]	~	<___>	~	~	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
AIR TEMPERATURE	SA-T	SUPPLY AIR TEMPERATURE	~	<___>	<___>	AI	~	[X]	X	X	<___>	TEMP_P	~	~	~	~	*SA-T MORE THAN 10 DEG F ABOVE OR BELOW SETPOINT	[info] [crit]	[___]
	CC-LA-T	COOLING COIL LEAVING AIR TEMPERATURE	~	<___>	<___>	AI	~	[X]	X	X	<___>	TEMP_P	~	~	~	~	*CC-LA-T MORE THAN 10 DEG F ABOVE OR BELOW SETPOINT	[info] [crit]	[___]
	CC-LAT-SP	COOLING COIL LEAVING AIR TEMPERATURE SETPOINT	[55 DEG F]	~	<___>	~	~	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
	SA-T-SP	SUPPLY AIR TEMPERATURE SETPOINT	[55 DEG F]	~	<___>	~	~	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
	OA-ENT-T	ENTERING OUTDOOR AIR TEMPERATURE	~	<___>	<___>	AI	~	[X]	X	X	<___>	TEMP_P	~	~	~	~	~	[info] [crit]	[___]

Notes:

1) THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE POINTS SCHEDULE INSTRUCTIONS DRAWING.

2) UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.

3) SYS-OCC: AS DESCRIBED IN THE POINTS SCHEDULE INSTRUCTIONS, OVERRIDE OF SYS-OCC IS ACCOMPLISHED THROUGH THE SYSTEM SCHEDULER.

4) ALARM CONDITIONS MARKED WITH AN ASTERISK (*) SHALL BE ACTIVE ONLY WHEN THE SYSTEM IS IN OCCUPIED MODE AND HAS BEEN IN OCCUPIED MODE FOR MORE THAN: * = 5 MINUTES ** = 30 MINUTES

5) UNIT STATUS: SERVES AS A MONITORED POINT AT THE M&C SOFTWARE (FRONT-END) AND AS A HEATING/COOLING REQUEST TO THE BOILER, HEAT EXCHANGER, AND/OR CHILLER SERVING THIS SYSTEM.

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

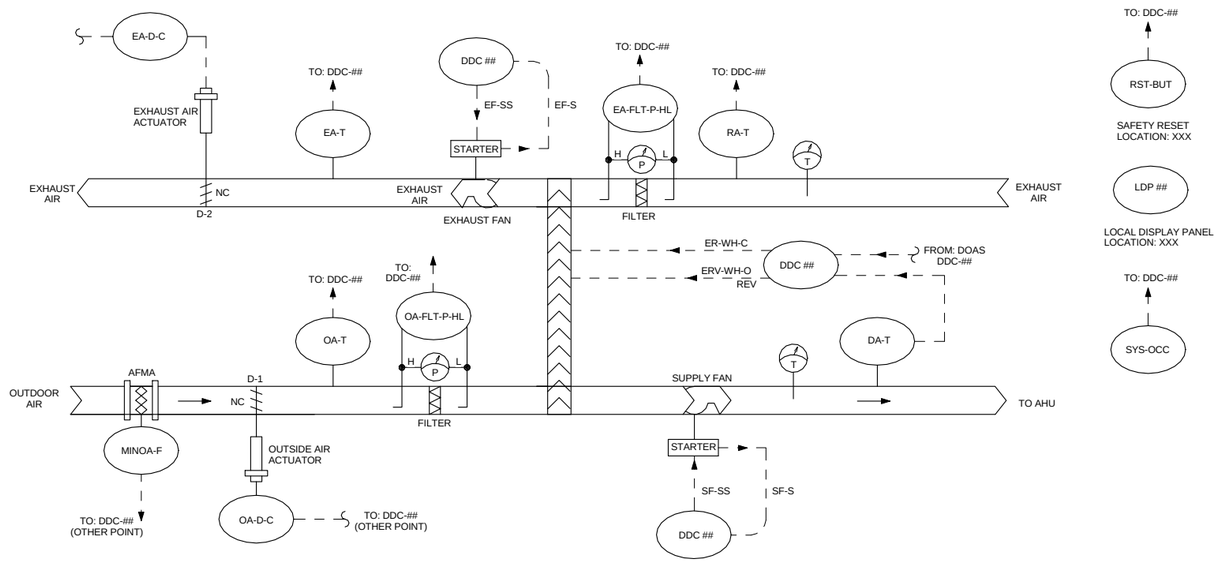
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
DATE: 1 JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/6/2014 11:47:32 AM
CATEGORY CODE: 635% DESIGN PACKAGE
PLOT SCALE: 12" = 1'-0"
SIZE: 22" X 34"
FILE NAME:

U.S. ARMY CORP'S OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

CONTROLS SCHEMATIC AND SEQUENCE

PLATE REFERENCE NUMBER
MI803
SHEET 89 OF 107



ENERGY RECOVERY VENTILATOR CONTROL SCHEMATIC:

NOT TO SCALE

SEQUENCE OF OPERATION: ERV-1

1. OCCUPIED MODE:

WHEN SWITCHING FROM UN-OCCUPIED TO OCCUPIED MODE THE ERV SHALL BE ENERGIZED, THE OUTSIDE AIR DAMPER(OA-D-C) SHALL FULLY OPEN TO ITS SETPOINT POSITION(DETERMINED DURING TEST AND BALANCE), AND THE EXHAUST DAMPER(EA-D-C) SHALL FULLY OPEN TO ITS SETPOINT CONDITION(DETERMINED DURING TEST AND BALANCE).

WHENEVER THE OUTDOOR AIR DRY BULB TEMPERATURE(OA-T) IS GREATER THAN THE RETURN AIR TEMPERATURE(RA-T), THE VARIABLE SPEED HEAT RECOVERY WHEEL SHALL START AND MODULATE TO MAINTAIN A DISCHARGE AIR TEMPERATURE(DA-T) AT A SETPOINT (DAT-SP) OF 68 DEGREES F(ADJUSTABLE).

WHENEVER THE OUTDOOR AIR DRY BULB TEMPERATURE(OA-T) IS LESS THAN THE RETURN AIR TEMPERATURE(RA-T) BUT GREATER THAN THE DISCHARGE AIR TEMPERATURE SETPOINT(DAT-SP) THE WHEEL SHALL STOP [AND THE EXHAUST/OUTDOOR BYPASS DAMPERS(EA-BP-D AND OA-BP-D) SHALL OPEN TO BYPASS THE HEAT RECOVERY WHEEL.]

WHENEVER THE OUTDOOR AIR TEMPERATURE (OA-T) IS LESS THAN THE RETURN AIR TEMPERATURE (RA-T) AND DISCHARGE AIR TEMPERATURE SETPOINT(DAT-SP), THE VARIABLE SPEED HEAT RECOVERY WHEEL SHALL START AND MODULATE TO MAINTAIN THE DISCHARGE AIR TEMPERATURE(DA-T) AT SETPOINT(DAT-SP).

[WHENEVER THE EXHUAST AIR TEMPERATURE(EA-T) FALLS BELOW THE EXHAUST AIR TEMPERATURE SETPOINT(EAT-SP) OF 35 DEGREES F(ADJUSTABLE) FOR 5 MINUTES OR LONGER(ADJUSTABLE), THE WHEEL SHALL CHANGE INTO FREEZE PROTECTION MODE AND MODULATE THE WHEEL TO MAINTAIN THE EXHAUST AIR TEMPERATURE(EA-T) AT SETPOINT (EA-SP). WHEN THE EXHAUST AIR TEMPERATURE RISES 2 DEGREES F(ADJUSTABLE) ABOVE THE EXHAUST AIR TEMPERATURE SETPOINT(EAT-SP) FOR 5 MINUTES OR LONGER (ADJUSTABLE), THE WHEEL SHALL CHANGE BACK INTO NORMAL OPERATION MODE.] ONLY REQUIRED IN SITES WHERE FROST ON THE WHEEL MAY OCCUR.

[THE ABSOLUTE HUMIDITY RATIO OF THE SUPPLY AIR SHALL BE 0.008 LBS MOISTURE PER LB DRY AIR OR LESS.]

THE OUTDOOR AIRFLOW MEASURING STATION AT EACH ERV SHALL MONITOR THE OUTDOOR AIR FLOW RATE TO VERIFY THAT THE ABSOLUTE/DESIGN MINIMUM VENTILATION FLOW RATE IS BEING MET.

2. UNOCCUPIED MODE:

WHEN SWITCHING FROM OCCUPIED TO UNOCCUPIED MODE THE ERV SHALL BE DE-ENERGIZED, THE OUTSIDE AIR DAMPER(OA-D-C) SHALL FULLY CLOSE AND THE EXHUAST AIR DAMPER(EA-D-C) SHALL FULLY CLOSE.

3. ALARMS:

ALL ALARMS SHALL BE SENT TO THE USER INTERFACE/BUILDING MANAGEMENT SYSTEM IF THE FOLLOWING CONDITIONS OCCUR:

A. HIGH ZONE CARBON DIOXIDE CONCENTRATION: IF THE HIGHEST ZONE CO2 CONCENTRATION IS GREATER THAN 900 PPM (ADJUSTABLE).

B. THE EXHUAST FAN/SUPPLY FAN CURRENT STATUS IS 10% HIGHER OR LOWER THAN ITS SETPOINT FOR 5 MINUTES(ADJUSTABLE) OR LONGER.

C. THE SUPPLY AIR TEMPERATURE IS NOT AT SETPOINT FOR 10 MINUTES (ADJUSTABLE) OR LONGER.THE SUPPLY FAN SHALL RUN CONTINUOUSLY DURING OCCUPIED MODE.

D. THE OUTDOOR AIRFLOW MEASURING STATION SHALL MONITOR THE OUTDOOR AIR FLOW RATE. IF THE OUTDOOR AIR FLOW VARIES BY MORE THAN 10% FROM DESIGN, AN ALARM SHALL REGISTER IN THE UMCS SYSTEM.

ENERGY RECOVERY VENTILATION CONTROL POINTS (ERV-1)

NODE: <DDC##>
NODE LOCATION: <___>
NODE ADDRESS: Domain = <___>, Subnet = <___>, Node = <___>
NODE ID: <___>

FUNCTION	NAME	DESCRIPTION	SETTING (WITH UNITS)	RANGE (WITH UNITS)	nci/CPT NAME	IO TYPE	HOA REQ'D	LDP AND M&C DISPLAY: LDP VIEW REQ'D	M&C: DISP REQ'D	M&C: TREND REQ'D	M&C: SNVT NAME	M&C: SNVT TYPE	OVERRIDES: LDP OVRD REQ'D	M&C OVRD REQ'D	SNVT NAME	SNVT TYPE	ALARMS: ALARM CONDITION (SEE NOTES)	ALARM PRIORITY	M&C ROUTING
PROOFS & SAFETIES	SF-S	SUPPLY FAN STATUS	~	ON/OFF	<___>	BI	~	[X]	X	[~]	<___>	<___>	~	~	~	~	SUPPLY FAN PROOF FAILED	[info] [crit]	[___]
	EF-S	EXHAUST FAN STATUS	~	ON/OFF	<___>	BI	~	[X]	X	[~]	<___>	<___>	~	~	~	~	EXHAUST FAN PROOF FAILED	[info] [crit]	[___]
	ER-WH-S	ENTHALPY WHEEL STATUS	~	ON/OFF	<___>	BI	~	[X]	X	[~]	<___>	<___>	~	~	~	~	ENTHALPY WHEEL FAILED	[info] [crit]	[___]
	RST-BUT	SYSTEM RESET BUTTON (FOR SAFETIES)	~	~	<___>	[___]	~	~	~	~	~	~	~	~	~	~	~	~	[___]
START/STOP	SF-SS	SUPPLY FAN START/STOP	~	ON/OFF	<___>	BO	[~]	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
	EF-SS	EXHAUST FAN START/STOP	~	ON/OFF	<___>	BO	[~]	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
	SYS-OCC	OCCUPANCY INPUT (FROM SYSTEM SCHEDULER)		<___>	<___>	NVI	~	[X]	X	[~]	<___>	<___>	SEE NOTES				~	~	~
	ER-WH-SS	ENTHALPY WHEEL START/STOP	~	ON/OFF	<___>	BO	[~]	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
	UNIT STATUS	UNIT STATUS (HTG AND/OR CLG REQUEST) (SEE NOTE)	~	HVAC_COOL/ [HVAC_HEAT]	<___>	NVO	~	[~]	[X]	[~]	<___>	HVAC_STATUS	~	~	~	~	~	~	~
DAMPER CONTROL	OA-D-C	OUTSIDE AIR DAMPER COMMAND	~	0-100% OPEN	<___>	AO	[~]	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
	EA-D-C	EXHAUST AIR DAMPER COMMAND	~	0-100% OPEN	<___>	AO	[~]	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
		DAMPER PID LOOP SETTINGS	<___>	~	<___>	~	~	~	~	~	~	~	~	~	~	~	~	~	~
ERV WHEEL CONTROL	DA-T	SUPPLY AIR TEMPERATURE	~	<___>	<___>	AI	~	[X]	X	X	<___>	TEMP_P	~	~	~	~	*SA-T MORE THAN 10 DEG F ABOVE OR BELOW SETPOINT	[info] [crit]	[___]
	DA-T-SP	SUPPLY AIR TEMPERATURE SETPOINT	[55 DEG F]	~	<___>	~	~	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
	ERV-WH-C	ERV WHEEL SPEED COMMAND	~	0-100%	<___>	AO	[~]	[~]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
	EA-T	EXHAUST AIR TEMPERATURE	~	<___>	<___>	AI	~	[X]	X	X	<___>	TEMP_P	~	~	~	~	*EA-T MORE THAN 10 DEG F BELOW SETPOINT	[info] [crit]	[___]
	EA-T-SP	EXHAUST AIR TEMPERATURE SETPOINT	[55 DEG F]	~	<___>	~	~	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
		ERV PID LOOP SETTINGS	<___>	~	<___>	~	~	~	~	~	~	~	[~]	[~]	<___>	<___>	~	~	~
OTHER POINTS	MINOA-F	ABSOLUTE MINIMUM OUTSIDE AIR FLOW	~	[0 - ___ CFM]	<___>	AI	~	[X]	X	X	<___>	<___>	~	~	~	~	MINOA-F LESS THAN 80% OF MINOA-F-SP	[info] [crit]	[___]
	MINOA-F-SP	ABSOLUTE MINIMUM OUTSIDE AIR FLOW SETPOINT(SETTING)	[___ CFM]	~	<___>	~	~	[X]	X	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
	RA-T	RETURN AIR TEMPERATURE	~	<___>	<___>	AI	~	[X]	X	X	<___>	TEMP_P	~	~	~	~	~	~	~
	OA-T	OUTDOOR AIR TEMPERATURE	~	<___>	<___>	AI	~	[X]	X	X	<___>	TEMP_P	~	~	~	~	~	~	~
	EA-FLT-P-HL	ERV EXHAUST AIR FILTER PRESSURE HIGH LIMIT SWITCH	<___>	ALM/NORMAL	<___>	BI	~	[~]	~	~	<___>	<___>	~	~	~	~	TRUE	[info] [crit]	[___]
	OA-FLT-P-HL	ERV OUTDOOE AIR FILTER PRESSURE HIGH LIMIT SWITCH	<___>	ALM/NORMAL	<___>	BI	~	[~]	~	~	<___>	<___>	~	~	~	~	TRUE	[info] [crit]	[___]

Notes:
1) THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE POINTS SCHEDULE INSTRUCTIONS DRAWING.
2) UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.
3) SYS-OCC: AS DESCRIBED IN THE POINTS SCHEDULE INSTRUCTIONS, OVERRIDE OF SYS-OCC IS ACCOMPLISHED THROUGH THE SYSTEM SCHEDULER.
4) ALARM CONDITIONS MARKED WITH AN ASTERISK (*) SHALL BE ACTIVE ONLY WHEN THE SYSTEM IS IN OCCUPIED MODE AND HAS BEEN IN OCCUPIED MODE FOR MORE THAN: * = 5 MINUTES ** = 30 MINUTES
5) UNIT STATUS: SERVES AS A MONITORED POINT AT THE M&C SOFTWARE (FRONT-END) AND AS A HEATING/COOLING REQUEST TO THE BOILER, HEAT EXCHANGER, AND/OR CHILLER SERVING THIS SYSTEM.

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

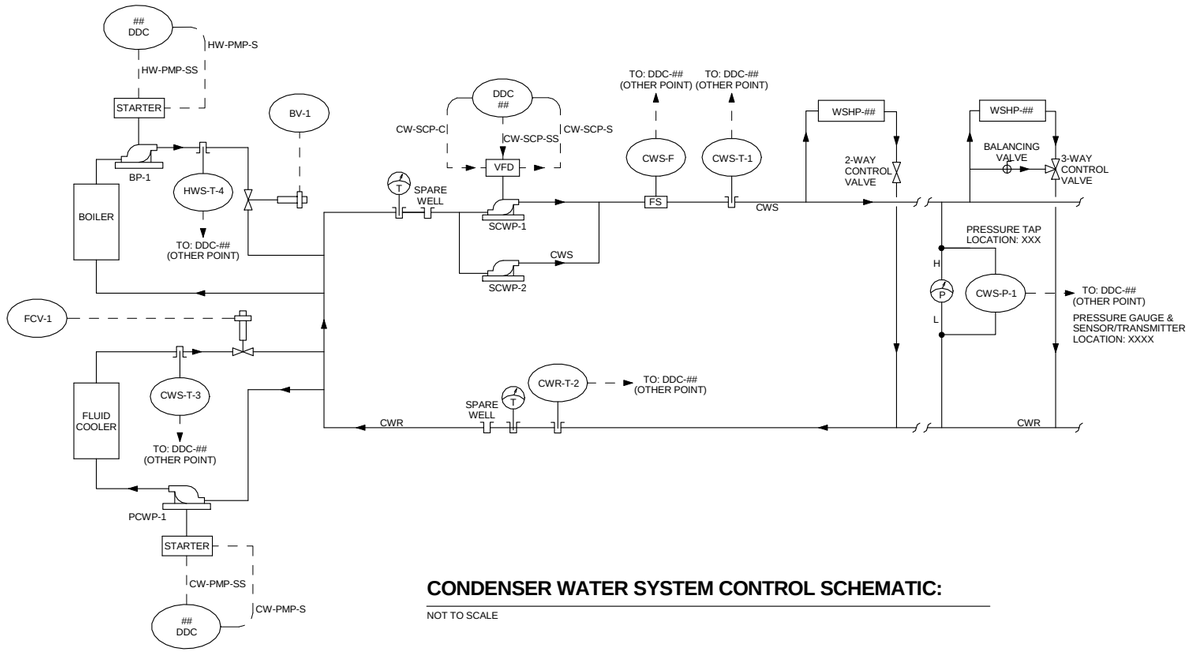
DESIGN BY: JCS | DATE: JUNE 2014 | SOLICITATION NO.: N/A
DRAWN BY: JCS | CKD BY: PLM | CONTRACT NO.: N/A
SBMT BY: | PLOT DATE: 6/6/2014 11:47:34 AM | CATEGORY CODE: 65% DESIGN PACKAGE
PLOT SCALE: 12" = 1'-0" | FILE NAME:
SIZE: 30" X 42"

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

CONTROLS SCHEMATIC AND SEQUENCE

PLATE REFERENCE NUMBER
MI804
SHEET 90 OF 107



CONDENSER WATER SYSTEM CONTROL SCHEMATIC:

NOT TO SCALE

SEQUENCE OF OPERATION: CONDENSER WATER LOOP

1. SECONDARY CONDENSER WATER PUMP OPERATION:

THE SECONDARY CW PUMPING SYSTEM CONSISTS OF TWO PUMPS IN PARALLEL WITH ONE OPERATING(LEAD) AND ONE AS BACK-UP(LAG). BOTH PUMPS SHALL BE CAPABLE OF VARIABLE FLOW WITH THE USE OF A VARIABLE FREQUENCY DRIVE.

THE LEAD PUMP SHALL RUN CONTINUOUSLY, REGARDLESS OF OCCUPANCY.

SHOULD THE LEAD PUMP FAIL TO PROVE FLOW THE LEAD PUMP SHALL BE DE-ENERGIZED AND AN ALARM SENT TO THE USER INTERFACE AND THE LAG PUMP SHALL THEN BE ENERGIZED AND OPERATE.

THE VARIABLE FREQUENCY DRIVE SHALL MODULATE THE PUMP TO MAINTAIN A SYSTEM DIFFERENTIAL PRESSURE AT SETPOINT(DETERMINED DURING TEST AND BALANCING). DIFFERENTIAL PRESSURE SENSOR SHALL BE INSTALLED 3/4 OF THE WAY DOWN THE MAIN PIPING.

THREE-WAY VALVE(S) SHALL BE INSTALLED AT ONE OR MULTIPLE WSHP UNITS TO KEEP THE PUMP FLOW RATE FROM FALLING BELOW THE NET POSITIVE SUCTION HEAD OF THE SECONDARY PUMP.

2. FLUID COOLER OPERATION:

WHENEVER THE CONDENSER WATER RETURN TEMPERATURE (CWR-T-2) RISES ABOVE 85 DEGRESS(ADJUSTABLE) FOR 10 MINUTES(ADJUSTABLE) OR LONGER; THE COOLING TOWER SHALL BE ENERGIZED, THE ISOLATION VALVE(FCV-1) SHALL FULLY OPEN, AND THE PUMP (PCWP-1) SHALL START.

THE FLUID COOLER'S FACTORY MOUNTED CONTROLS SHALL OPERATE TO MAINTAIN A CONDENSER WATER SUPPLY TEMPERATURE(CWS-T-1) SETPOINT OF 85 DEGREES F (ADJUSTABLE).

WHENEVER THE CONDENSER WATER RETURN TEMPERATURE (CWR-T-2) FALLS BELOW 83 DEGRESS(ADJUSTABLE); THE COOLING TOWER SHALL BE DE-ENERGIZED, THE PUMP (PCWP-1) SHALL STOP AND THE ISOLATION VALVE(FCV-1) SHALL FULLY CLOSE.

3. BOILER OPERATION:

WHENEVER THE CONDENSER WATER RETURN TEMPERATURE (CWR-T-2) FALLS BELOW 55 DEGREES F(ADJUSTABLE) FOR 10 MINUTES(ADJUSTABLE) OR LONGER; THE ISOLATION VALVE(BV-1) SHALL FULLY OPEN, THE PUMP (BP-1) SHALL START, AND THE BOILER SHALL BE ENERGIZED.

THE BOILER'S FACTORY MOUNTED CONTROLS SHALL OPERATE TO MAINTAIN A CONDENSER WATER SUPPLY TEMPERATURE(CWS-T-1) SETPOINT OF 55 DEGREES F (ADJUSTABLE).

WHENEVER THE CONDENSER WATER RETURN TEMPERATUER (CWR-T-2) RISES ABOVE 57 DEGREES F(ADJUSTABLE); THE BOILER SHALL BE DE-ENERGIZED, THE PUMP(BP-1) SHALL STOP AND THE ISOLATION VALVE(BV-1) SHALL FULLY CLOSE.

2. ALARMS:

ALL ALARMS SHALL BE SENT TO THE USER INTERFACE/BUILDING MANAGEMENT SYSTEM IF THE FOLLOWING CONDITIONS OCCUR:

A. THE CONDENSER WATER SUPPLY TEMPERATURE(CWS-T-1) RISES ABOVE 100 DEGREES F FOR 5 MINUTES(ADJUSTABLE) OR LONGER THE CONTROLS SYSTEM SHALL ALARM THE USER INTERFACE AND DE-ENERGIZE THE PUMP.
B. THE CONDENSER WATER SUPPLY TEMPERATURE(CWS-T-1) FALLS BELOW 40 DEGREES F FOR 5 MINUTES(ADJUSTABLE) OR LONGER
C. THE DIFFERENTIAL PRESSURE SENSOR IS 25% HIGHER OR LOWER THAN ITS SETPOINT PRESSURE FOR 10 MINUTES(ADJUSTABLE) OR LONGER.

CONDENSER WATER SYSTEM CONTROL POINTS

NODE: <DDC##>
NODE LOCATION: <___>
NODE ADDRESS: Domain = <___>, Subnet = <___>, Node = <___>
NODE ID: <___>

FUNCTION	NAME	DESCRIPTION	SETTING (WITH UNITS)	RANGE (WITH UNITS)	nci/CPT NAME	IO TYPE	HOA REQ'D	LDP AND M&C DISPLAY: LDP VIEW REQ'D	M&C: DISP REQ'D	M&C: TREND REQ'D	SNVT NAME	SNVT TYPE	OVERRIDES: LDP OVRD REQ'D	M&C OVRD REQ'D	SNVT NAME	SNVT TYPE	ALARMS: ALARM CONDITION (SEE NOTES)	ALARM PRIORITY	M&C ROUTING
START/STOP	SYS-ENA	SYSTEM ENABLE	~	~	<___>	<NVI>	~	[~]	X	[~]	<___>	<___>	[~]	[~]	<___>	<___>	~	~	~
	CW-SCP-SS	CONDENSER WATER PUMP START/STOP(SECONDARY PUMP)	~	START/STOP	<___>	BO	[~]	[~]	X	[~]	<___>	<___>	[~]	[~]	<___>	<___>	~	~	~
	CW-SCP-S	CONDENSER WATER PUMP STATUS(SECONDARY PUMP)	~	ON/OFF	<___>	BI	~	[~]	X	[~]	<___>	<___>	~	~	~	~	~	~	~
	CW-PMP-SS	CONDENSER WATER PUMP START/STOP(PRIMARY PUMP)	~	START/STOP	<___>	BO	[~]	[~]	X	[~]	<___>	<___>	[~]	[~]	<___>	<___>	~	~	~
	CW-PMP-S	CONDENSER WATER PUMP STATUS(PRIMARY PUMP)	~	ON/OFF	<___>	BI	~	[~]	X	[~]	<___>	<___>	~	~	~	~	~	~	~
	HW-PMP-SS	CONDENSER WATER PUMP START/STOP(BOILER PUMP)	~	START/STOP	<___>	BO	[~]	[~]	X	[~]	<___>	<___>	[~]	[~]	<___>	<___>	~	~	~
	HW-PMP-S	CONDENSER WATER PUMP STATUS(BOILER PUMP)	~	ON/OFF	<___>	BI	~	[~]	X	[~]	<___>	<___>	~	~	~	~	~	~	~
PRESSURE CONTROL	CW-SCP-C	CONDENSER WATER VFD PUMP SPEED COMMAND	~	<0-100%>	<___>	AO	[~]	[~]	X	[~]	<___>	<___>	**[~]**	**[~]**	<___>	<___>	[~]	~	[~]
	CWS-P-1	CONDENSER WATER SUPPLY PRESSURE	~	<___>	<___>	AI	~	~	[~]	[~]	<___>	<___>	~	~	~	~	* HWS-P MORE THAN 25% ABOVE OR BELOW CWS-P-SP	[info] [crit]	[___]
	CWS-P-SP	CONDENSER WATER SUPPLY PRESSURE SETPOINT	[___]	~	<___>	~	~	[~]	[~]	[~]	<___>	<___>	[~]	X	<___>	<___>	~	~	~
		CONDENSER WATER PUMP PID LOOP SETTINGS (SECONDARY PUMPS)	<___>	~	<___>	~	~	~	~	~	~	~	~	~	~	~	~	~	~
OTHER POINTS	CWS-T-1	CONDENSER WATER SUPPLY TEMPERATURE	~	<___>	<___>	AI	~	[~]	X	[~]	<___>	TEMP_P	~	~	~	~	[~]	~	[___]
	CWR-T-2	CONDENSER WATER RETURN TEMPERATURE	~	<___>	<___>	AI	~	[~]	X	[~]	<___>	TEMP_P	~	~	~	~	[~]	~	[___]
	CWS-T-3	FLUID COOLER SUPPLY TEMPERATURE	~	<___>	<___>	AI	~	[~]	X	[~]	<___>	TEMP_P	~	~	~	~	[~]	~	[___]
	HWS-T-4	HOT WATER SUPPLY TEMPERATURE	~	<___>	<___>	AI	~	[~]	X	[~]	<___>	TEMP_P	~	~	~	~	[~]	~	[___]
	B-V-1	BOILER ISOLATION VALVE	~	<___>	<___>	BO	~	[~]	X	[~]	<___>	<___>	~	~	~	~	[~]	~	[___]
	FC-V-2	FLUID COOLER ISOLATION VALVE	~	<___>	<___>	BO	~	[~]	X	[~]	<___>	<___>	~	~	~	~	[~]	~	[___]
	CWS-F	CONDENSER WATER SUPPLY FLOW SWITCH	~	<___>	<___>	AI	~	[~]	X	[~]	<___>	<___>	~	~	~	~	[~]	~	[___]

Notes:

1) THE CONTRACTOR SHALL COMPLETE THE POINTS SCHEDULE AS SPECIFIED AND AS DESCRIBED IN THE POINTS SCHEDULE INSTRUCTIONS DRAWING.

2) UNIT MANUFACTURERS PROOFS AND SAFETIES: THE CONTRACTOR SHALL SHOW EACH PROOF AND SAFETY AS A SEPARATE ROW.

3) SYS-OCC: AS DESCRIBED IN THE POINTS SCHEDULE INSTRUCTIONS, OVERRIDE OF SYS-OCC IS ACCOMPLISHED THROUGH THE SYSTEM SCHEDULER.

4) ALARM CONDITIONS MARKED WITH AN ASTERISK (*) SHALL BE ACTIVE ONLY WHEN THE SYSTEM IS IN OCCUPIED MODE AND HAS BEEN IN OCCUPIED MODE FOR MORE THAN: * = 5 MINUTES ** = 30 MINUTES

5) UNIT STATUS: SERVES AS A MONITORED POINT AT THE M&C SOFTWARE (FRONT-END) AND AS A HEATING/COOLING REQUEST TO THE BOILER, HEAT EXCHANGER, AND/OR CHILLER SERVING THIS SYSTEM.

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 163% DESIGN PACKAGE
DESIGN BY: JCS
DRAWN BY: JCS
CKD BY: PLM
SBMT BY:
PLOT DATE: 6/9/2014
PLOT SCALE: 1:147.36 AM
PLOT SCALE: 12" = 1'-0"
SIZE: 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

CONTROLS SCHEMATIC AND SEQUENCE

PLATE REFERENCE NUMBER
MI805

ELECTRICAL LEGEND

- LOWER CASE DENOTES THE SWITCH THAT CONTROLS FIXTURE
- a — A2 — LUMINAIRE TYPE DESIGNATION
- SYMBOL DENOTES GENERAL TYPE OF LUMINAIRE
- NT — UNSWITCHED NIGHT LIGHT (ON 24 HOURS)

COMPACT FLUORESCENT, LED OR HID LIGHTING FIXTURE, CEILING OR PENDANT MOUNTED AS INDICATED

COMPACT FLUORESCENT LIGHTING FIXTURE WITH INTEGRAL EMERGENCY BATTERY BALLAST

COMPACT FLUORESCENT LIGHTING FIXTURE WALL MOUNTED MOUNTING HEIGHT AS INDICATED

COMPACT FLUORESCENT LIGHTING FIXTURE WITH INTEGRAL EMERGENCY BATTERY BALLAST

LED WALL MOUNTED LIGHT FIXTURE

FLUORESCENT LIGHTING FIXTURE

FLUORESCENT LIGHTING FIXTURE WITH INTEGRAL EMERGENCY BATTERY BALLAST

FLUORESCENT LIGHTING FIXTURE

FLUORESCENT LIGHTING FIXTURE WITH INTEGRAL EMERGENCY BATTERY BALLAST

FLUORESCENT LIGHTING FIXTURE

FLUORESCENT LIGHTING FIXTURE

FLUORESCENT LIGHTING FIXTURE WITH INTEGRAL EMERGENCY BATTERY BALLAST

WALL MOUNTED FLUORESCENT LIGHTING FIXTURE

WALL MOUNTED FLUORESCENT LIGHTING FIXTURE WITH INTEGRAL EMERGENCY BATTERY BALLAST

PENDANT MOUNTED FLUORESCENT FIXTURE WITH WIRE GUARD

SURFACE MOUNTED FLUORESCENT FIXTURE

PHOTOELECTRIC SENSOR, CEILING MOUNTED

CEILING MOUNTED OCCUPANCY SENSOR

EXIT LIGHT, CEILING MOUNTED, SHADING INDICATES FACES DIRECTIONAL ARROWS WHERE INDICATED

EXIT LIGHT, WALL MOUNTED, SHADING INDICATES FACES, DIRECTIONAL ARROWS WHERE INDICATED. MOUNT BOTTOM OF FIXTURE 6" ABOVE TOP OF DOOR UNLESS OTHERWISE NOTED

EMERGENCY LIGHTING UNIT

$ — WALL SWITCH. WHERE NO SUBSCRIPT PRESENT, SINGLE POLE 20A SWITCH. WHERE SUBSCRIPT IS PRESENT, SUBSCRIPT DENOTES THE FOLLOWING:

- 3 - THREE WAY SWITCH, (LINE VOLTAGE, 20A)
- 4 - FOUR WAY SWITCH, (LINE VOLTAGE, 20A)
- a - SINGLE LOWER CASE LETTER (EXCEPT LETTERS 'd' AND 'm') DENOTES THE SWITCH THAT CONTROLS THE FIXTURES (LINE VOLTAGE, 20A)
- D - DIMMING SWITCH
- 3D - THREE WAY DIMMING SWITCH
- WP - WEATHERPROOF (GASKETED)
- T - TIME SWITCH WITH MANUAL "ON", TIMED "OFF", OPERATION AND MANUAL "OFF" OVERRIDE.
- M - MOTOR RATED SWITCH
- K - KEYED SWITCH

LC — LIGHTING CONTROL CABINET

SYSTEM GROUND, SIZE IN ACCORDANCE WITH NEC ARTICLE 250

TW — GROUND ROD, TW INDICATES TEST WELL

LIGHTNING PROTECTION CONDUCTORS. SEE EG DRAWINGS

AIR TERMINAL

PANELBOARD - MH IN ACCORDANCE WITH NEC

TR# — DRY TYPE TRANSFORMER

SPD — SURGE PROTECTIVE DEVICE

20 AMP DUPLEX RECEPTACLE, SUBSCRIPTS DENOTE THE FOLLOWING:

- TR - TAMPER-RESISTANT
- 1 - ABOVE COUNTER
- 2 - UNDER COUNTER-REFRIGERATOR, PROVIDE GROUND FAULT CIRCUIT INTERRUPTER PROTECTION FROM LOAD SIDE OF GFI MOUNTED ABOVE COUNTER
- 3 - WEATHER PROOF, WET LOCATION, UOI
- GFI - GROUND FAULT CIRCUIT INTERRUPTER
- 4 - FOR ELECTRIC WATER COOLER. COORDINATE MOUNTING WITH EQUIPMENT PROVIDED AND FEED POWER FROM GFI CIRCUIT BREAKER
- TV - FOR TELEVISION. COORDINATE MOUNTING WITH TV OUTLET

20 AMP QUAD RECEPTACLE, MH 1'-6", UON OR UOI. SUBSCRIPTS DENOTE SAME AS ABOVE FOR DUPLEX.

20 AMP QUAD RECEPTACLE, FLUSH MOUNTED IN FLOOR.

C — 20 AMP CEILING MOUNTED RECEPTACLE OUTLET

V — VGA CEILING OUTLET FOR CONNECTING THE USER'S PROJECTOR

RT — RECESSED COMBINATION FLOOR DUPLEX RECEPTACLE (20 AMP) AND DUPLEX TELEPHONE OUTLET

J — JUNCTION BOX, WALL MTD. MH 1'-6" U.O.N.

MOTOR DISCONNECT/SAFETY SWITCH SHALL BE RATED 30/3/NF/1 UNLESS OTHERWISE INDICATED.

'30' DENOTES SWITCH AMPERE RATING;
'3' DENOTES NUMBER OF POLES;
'NF' DENOTES NON-FUSED ('F' DENOTES FUSED);
'1' DENOTES SWITCH ENCLOSURE'S RATING;
FUSE RATING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

MOTOR STARTER, FURNISHED BY OTHER SECTIONS UON/UOI

ES — EMERGENCY SHUT-OFF

TBB — TELEPHONE BACK BOARD.

GENERAL NOTES

1. SEE PLATE G-002 TO G-002A FOR GENERAL ABBREVIATIONS AND GENERAL LEGEND.

2. MOUNTING HEIGHT, UNLESS OTHERWISE NOTED, IS TO CENTER LINE OF EQUIPMENT.

3. MOUNT OUTLET BOXES SO THAT NONE OCCUR BACK TO BACK IN WALLS.

4. COORDINATE THE LOCATIONS AND MOUNTING HEIGHTS OF LIGHTING FIXTURES IN MECHANICAL AND ELECTRICAL ROOMS WITH THE FINAL LOCATIONS OF PIPES, DUCTS AND OTHER EQUIPMENT FOR BEST ARRANGEMENT. FIXTURES SHALL BE EASILY ACCESSIBLE FOR RELAMPING.

5. ALL WIRING SHALL BE CONCEALED UNLESS EXPLICITLY INDICATED OTHERWISE. CONDUITS SHALL NOT BE RUN IN ANY UL RATED SLAB.

6. PROVIDE NAMEPLATES ON THE EXTERIOR OF ALL ELECTRICAL PANELS AND ENCLOSURES AS FOLLOWS: DEVICE ID, DEVICE RATING, POWER SOURCE, ARC FAULT DATA.

7. FOR DISCONNECT SWITCHES AND MOTOR STARTERS THE TOP LINE SHALL BE THE NAME/DESIGNATIONOF THE EQUIPMENT BEING FED BY THE SWITCH/STARTER.

8. PROVIDE SEPARATE NEUTRALS FOR EACH CIRCUIT UTILIZING A NEUTRAL CONDUCTOR (DO NOT COMBINE NEUTRALS).

9. PROVIDE GROUNDING CONDUCTORS IN ALL CONDUITS.

10. UNLESS OTHERWISE NOTED, RECEPTACLES THAT HAVE GFI PROTECTION ARE TO BE WIRED SUCH THAT THE LOSS OF POWER ON ONE RECEPTACLE DOES NOT AFFECT DOWNSTREAM RECEPTACLES.

11. POWER PLANS DO NOT INDICATE ALL ITEMS REQUIRED FOR A COMPLETED POWER SYSTEM. COORDINATE WITH CRITERIA AND ACTUAL MECHANICAL AND ARCHITECTURAL FEATURES THAT ARE UTILIZED IN THE SPECIFIC DESIGN.

12. REFER TO KITCHEN CRITERIA FOR POWER AND TELECOMMUNICATIONS SYSTEMS FOR KITCHEN SPACE.

13. COORDINATE THE LOCATION AND MOUNTING HEIGHT FOR THE ELECTRONIC LOCK SYSTEM MANUAL OVERRIDE AT THE ENTRANCE INTO THE BUILDING.

ABBREVIATIONS

A	AMPERS
AFF	ABOVE FINISHED FLOOR
C	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CKT	CIRCUIT
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CU	COPPER
EF	EXHAUST FAN
ELU	EMERGENCY LIGHT UNIT
EWC	ELECTRIC WATER COOLER
FACP	FIRE ALARM CONTROL PANEL
GFCI	GOVERNMENT FURNISHED, CONTRACTOR INSTALLED
G	GROUND
GFI	GROUND FAULT INTERRUPTER
GFP	GROUND FAULT INTERRUPTER
GND	GROUND
HACR	HEATING AND AIR CONDITIONING REFRIGERATION
HP	HORSEPOWER
HZ	HERTZ
IDS	INTRUSION DETECTION SYSTEM
IMC	INTERMEDIATE METAL CONDUIT
KWH	KILOWATT HOUR
LED	LIGHT EMITTING DIODE
LT	LIGHT
LVS	LOW VOLTAGE SWITCH
MCB	MOLDED CASE BREAKER
MD	MOUNTING DISTANCE
MFR	MANUFACTURER
MH	MOUNTING HEIGHT
MLO	MAIN LUGS ONLY
MNS	MASS NOTIFICATION SYSTEM
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NF	NON FUSED
NO	NUMBER
NTS	NOT TO SCALE
OS	OCCUPANCY SENSOR
PAF	PAINTED AFTER FABRICATION
PH	PHASE
PIR	PASSIVE INFRARED
R/W	RACEWAY
SER	SERVICE ENTRANCE RATED
SPD	SURGE PROTECTIVE DEVICE
TR	TRANSFORMER
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
UOI	UNLESS OTHERWISE INDICATED
UON	UNLESS OTHERWISE NOTED
V	VOLT
VT	VARIABLE AIR VOLUME TERMINAL UNIT
W, WP	WEATHERPROOF

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

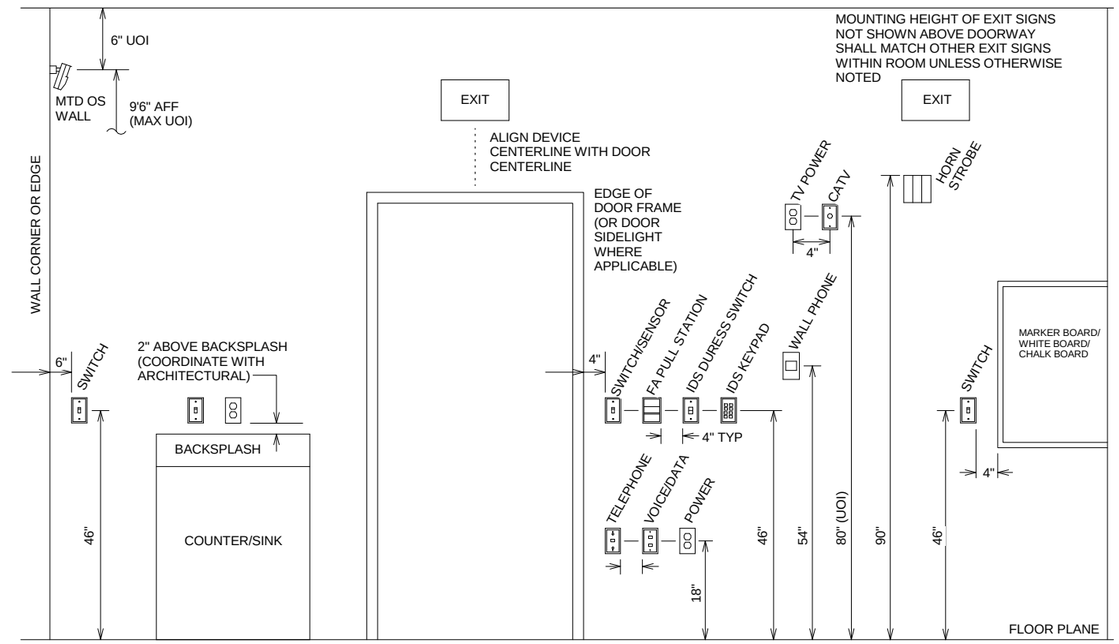
DESIGN BY: JTP
DRAWN BY: JTP
SBMT BY:
CKD BY:
PLOT SCALE: 12" = 1'-0"
SIZE D: 22" x 34"
PLOT DATE: 6/4/2014 10:41:05 AM
FILE NAME:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

LEGEND AND NOTES

PLATE REFERENCE NUMBER
E-001



TYPICAL MOUNTING HEIGHTS

(NOT TO SCALE)

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: 1 JAN. 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 1635 DESIGN PACKAGE

DESIGN BY: KS
DRAWN BY: CR
CKD BY:
SBMT BY:
PLOT DATE: 6/4/2014 10:41:06 AM
PLOT SCALE: 12" = 1'-0"
SIZE: 30" X 42"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE

4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

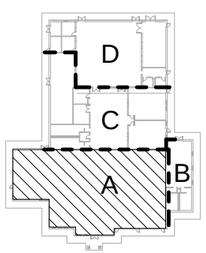
CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

TYPICAL MOUNTING HEIGHTS

PLATE REFERENCE NUMBER
E-501

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

PLAN NORTH



LIGHTING PLAN - AREA A

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: KS
DRAWN BY: CR
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/4/2014 10:41:11 AM
PLOT SCALE: As indicated
SIZE: D - 22" X 34"
CATEGORY CODE: 85% DESIGN PACKAGE
FILE NAME:

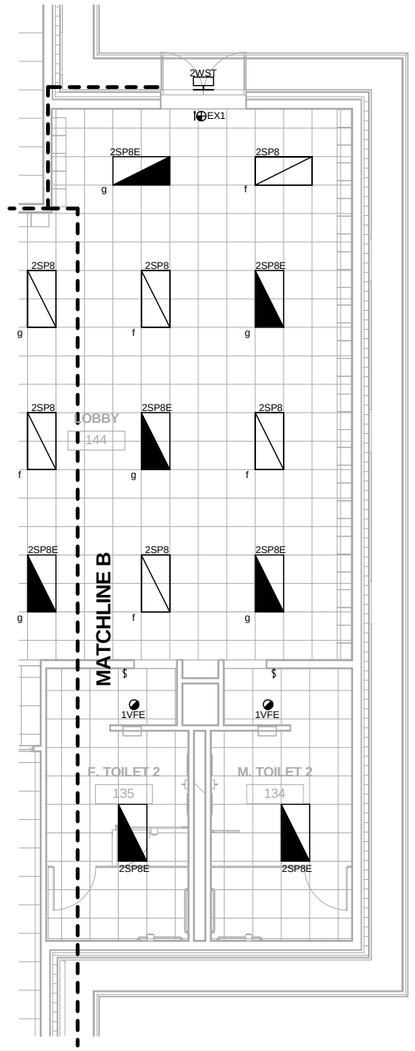
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

LIGHTING PLAN - AREA A

PLATE REFERENCE NUMBER
EL101

SHEET 98 OF 107

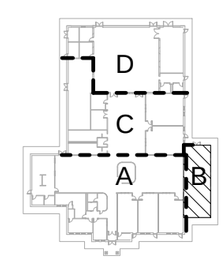


LIGHTING PLAN - AREA B

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

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

PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

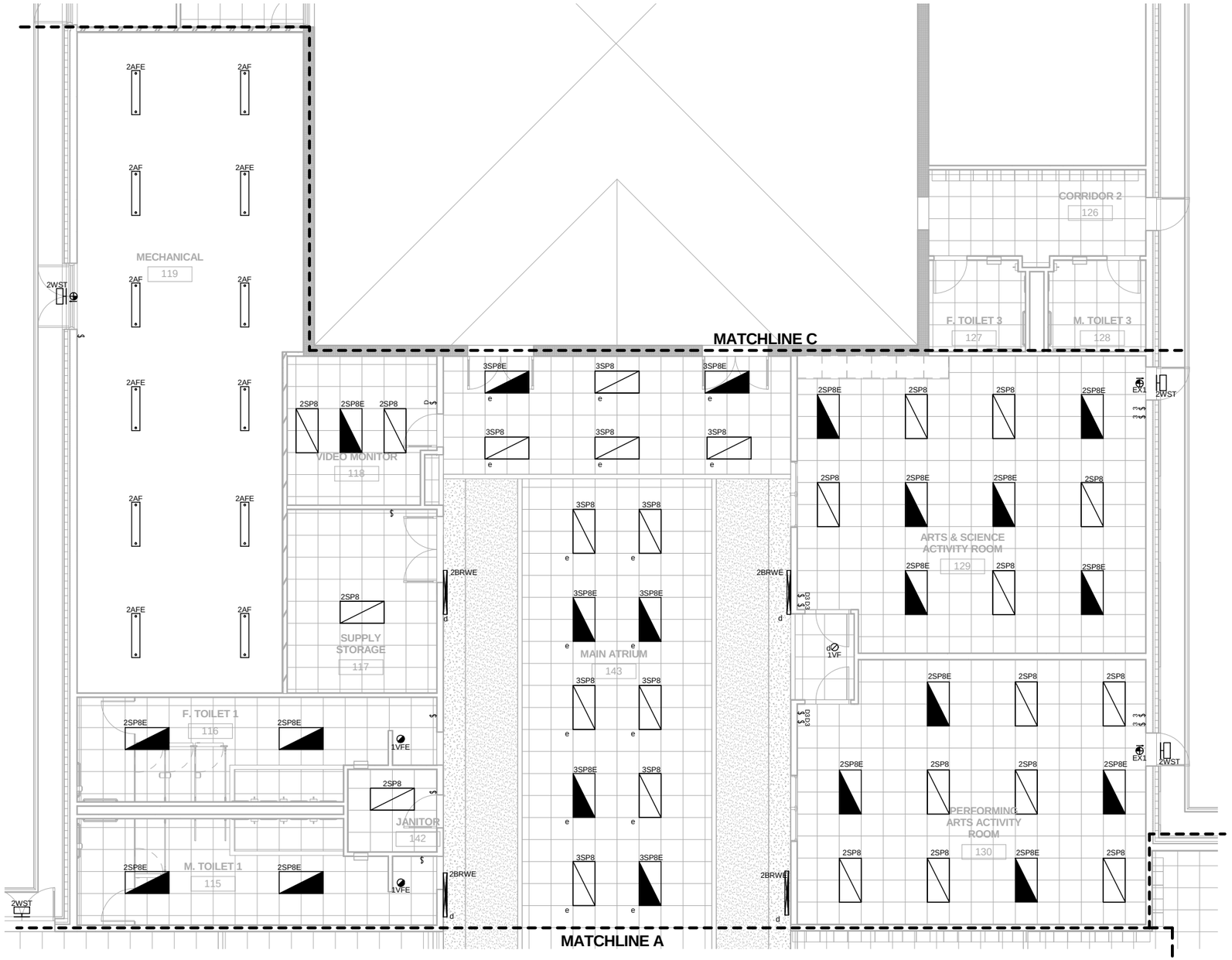
DESIGN BY: KS
DRAWN BY: CR
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE
PLOT DATE: 6/4/2014 10:41:13 AM
PLOT SCALE: As indicated
SIZE: 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

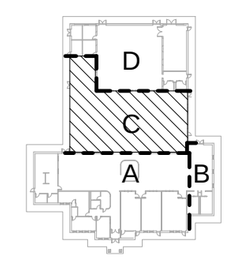
LIGHTING PLAN - AREA B

PLATE REFERENCE NUMBER
EL102



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

PLAN NORTH



LIGHTING PLAN - AREA C

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

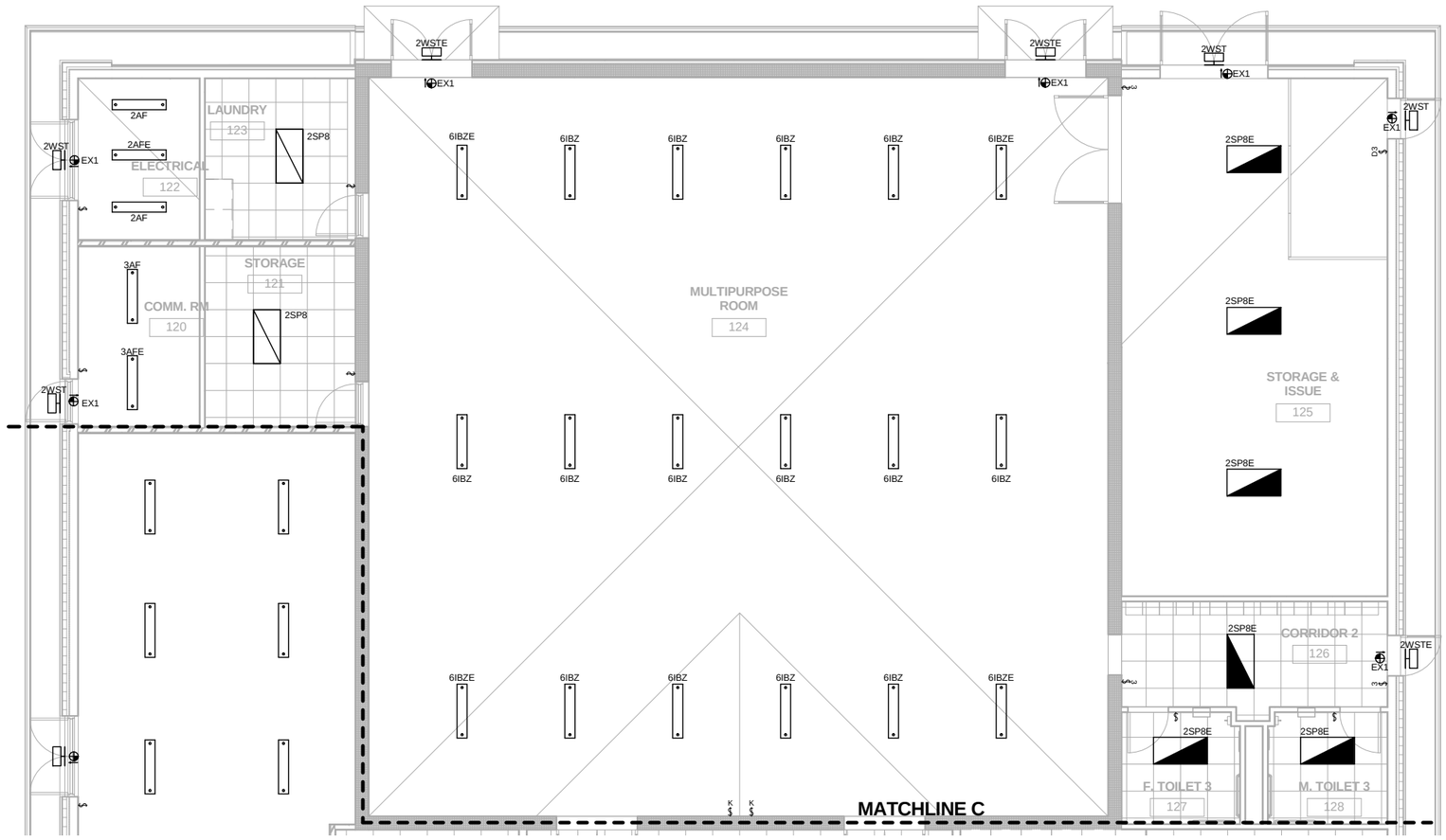
DESIGN BY: CS
DRAWN BY: CR
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
PLOT DATE: 6/4/2014 10:41:17 AM
PLOT SCALE: As indicated
SIZE: 22" x 34"
FILE NAME:
CATEGORY CODE: 65% DESIGN PACKAGE

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

LIGHTING PLAN - AREA C

PLATE REFERENCE NUMBER
EL103
SHEET 100 OF 107

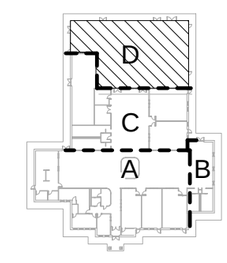


LIGHTING PLAN - AREA D

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

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

PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: KS
DRAWN BY: CR
SBMT BY:
CKD BY:
PLOT DATE: 6/4/2014 10:41:22 AM
PLOT SCALE: As indicated
SIZE: 22" X 34"
FILE NAME:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 163% DESIGN PACKAGE

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

LIGHTING PLAN - AREA D

PLATE REFERENCE NUMBER
EL104
SHEET 101 OF 107

LUMINAIRE SCHEDULE

TYPE MARK	LAMP	LAMP NUMBER	LAMP WATTS	VOLTAGE	CCT	CU	REMARKS	Count
1RT8	T8	1	30 W	277 V	4100 K	0.73	CU AT RCR=2/80-50-20	1
1VF	CF	1	26 W	277 V	4100 K	0.42	CU AT RCR=2/80-50-20	4
1VFE	CF	1	26 W	277 V	4100 K	0.42	EMERG 800 LUMEN CU AT RCR=2/80-50-20	7
2AF	T8	2	32 W	277 V	4100 K	0.8	RCR=2/80-50-20 with Wire Guard	9
2AFE	T8	2	32 W	277 V	4100 K	0.8	EMERG 1100 LUMEN CU AT RCR=2/80-50-20 with Wire Guard	6
2BRWE	T8	2	56 W	277 V	4100 K	0.56	EMERG 1100 LUMEN CU AT RCR=2/80-50-20	8
2RT8	T8	2	56 W	277 V	4100 K		CU AT RCR=2/80-50-20	7
2RT8E	T8	2	56 W	277 V	4100 K		EMERG 1100 LUMEN CU AT RCR=2/80-50-20	9
2SP8	T8	2	56 W	277 V	4100 K	0.8	CU AT RCR=2/80-50-20	38
2SP8E	T8		56 W	277 V	4100 K		EMERG 1100 LUMEN CU AT RCR=2/80-50-20	43
2WRT	T8	2	56 W	277 V	4100 K	0.68	WET LOCATION RECESSED CU AT RCU=2/80-50-20	6
2WRTE	T8	2	56 W	277 V	4100 K	0.68	WET LOCATION RECESSED EMERG 1100 LUMEN CU AT RCR=2/80-50-20	4
2WST	LED	2	47 W	277 V	4100 K		TYPE III DIST, CU=MIN LUMEN MAINT FACTOR AT 100,000 HRS	15
2WSTE	LED	2	47 W	277 V	4100 K		TYPE III DIST EMERG, CU=MIN LUMEN MAINT FACTOR AT 100,000 HRS	5
3AF	T8	3	72 W	277 V	4100 K	0.78	CU AT RCR=2/80-50-20 with Wire Guard	1
3AFE	T8	3	72 W	277 V	4100 K	0.78	EMERG 1100 LUMEN CU AT RCR=2/80-50-20	1
3SP8	T8	3	72 W	277 V	4100 K	0.76	CU AT RCR=2/80-50-20	26
3SP8E	T8	3	72 W	277 V	4100 K	0.76	EMERG 1100 LUMEN CU AT RCR=2/80-50-20	20
3VT8	T8	3	72 W	277 V	4100 K	0.65	CU AT RCR=2/80-50-20	1
3VT8E	T8	3	72 W	277 V	4100 K	0.65	EMERG 1100 LUMEN CU AT RCR=2/80-50-20	1
6IBZ	T8	6	214 W	277 V	4100 K	0.81	CU AT RCR=2/80-50-20	14
6IBZE	T8	6	214 W	277 V	4100 K	0.81	EMERG 1100 LUMEN CU AT RCR=2/80-50-20	4
EX1	LED			277 V			SINGLE FACE	19
EX2	LED			277 V		1		1

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: 13-JUNE-2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 835% DESIGN PACKAGE

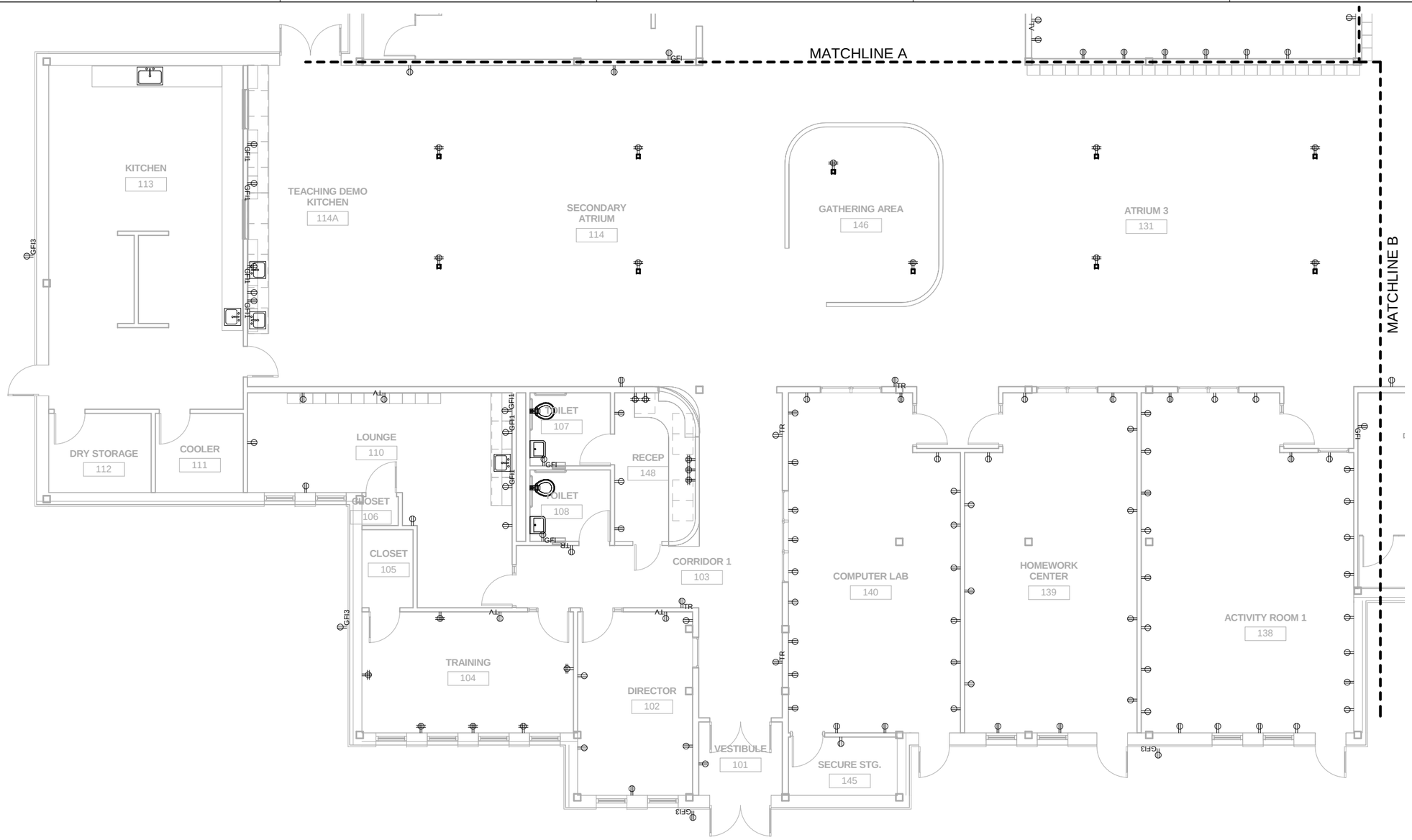
DESIGN BY: KS
DRAWN BY: CR
CKD BY:
SBMT BY:
PLOT DATE: 6/4/2014 10:41:25 AM
PLOT SCALE:
SIZE: D 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

LIGHT FIXTURE SCHEDULE AND DETAILS

PLATE REFERENCE NUMBER
EL501
SHEET 102 OF 107

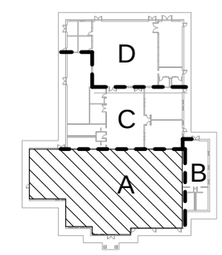


SCALE: 3/16"=1'-0"

PLAN NORTH

POWER PLAN - AREA A

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



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 85% DESIGN PACKAGE

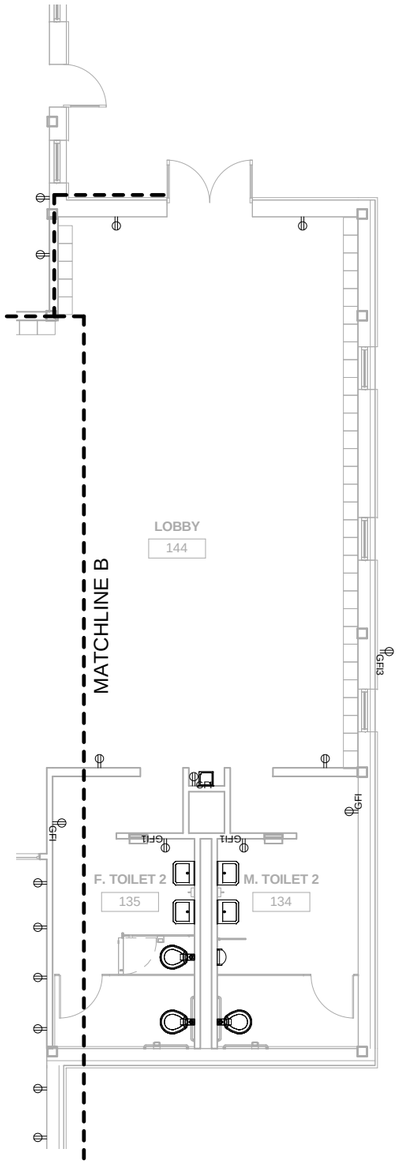
DESIGN BY: KS
DRAWN BY: CR
CKD BY:
SBMT BY:
PLOT DATE: 6/4/2014 10:41:28 AM
PLOT SCALE: As indicated
SIZE: D 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

POWER PLAN - AREA A

PLATE REFERENCE NUMBER
EP101
SHEET 94 OF 107

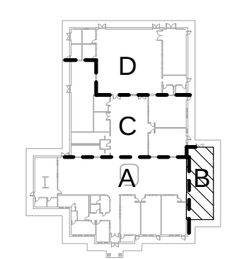


POWER PLAN - AREA B

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

8 4 0 8
SCALE: 3/16"=1'-0"

N
PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

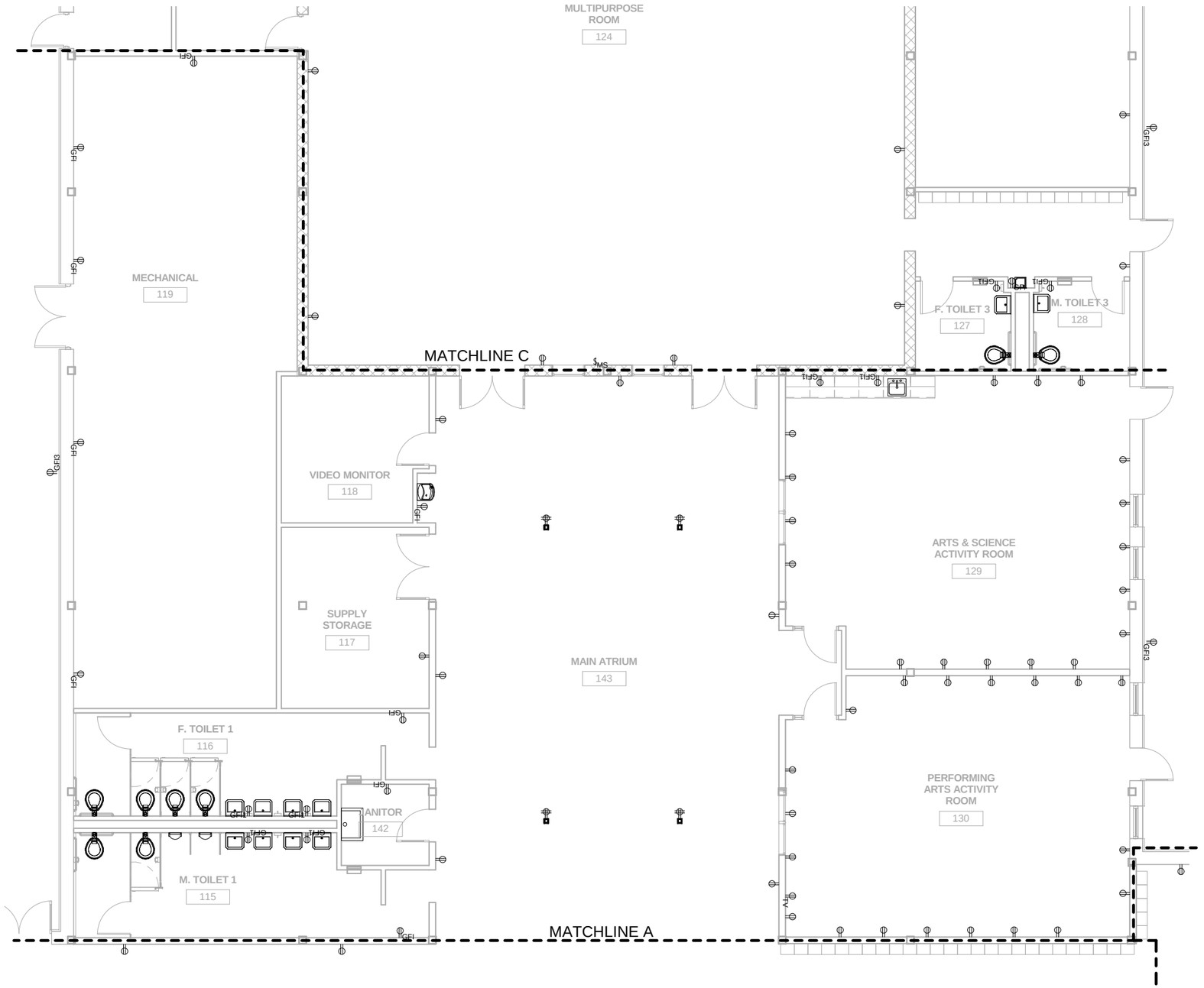
DESIGN BY: KS
DRAWN BY: CR
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 635% DESIGN PACKAGE
PLOT DATE: 6/4/2014 10:41:30 AM
PLOT SCALE: As indicated
SIZE: 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

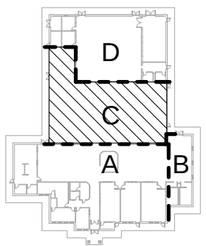
POWER PLAN - AREA B

PLATE REFERENCE NUMBER
EP102
SHEET 95 OF 107



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

PLAN NORTH



POWER PLAN - AREA C

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: 13 JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 635% DESIGN PACKAGE

DESIGN BY: KS
DRAWN BY: CR
CKD BY:
SBMT BY:
PLOT DATE: 6/4/2014 10:41:33 AM
PLOT SCALE: As indicated
SIZE: 22" X 34"
FILE NAME:

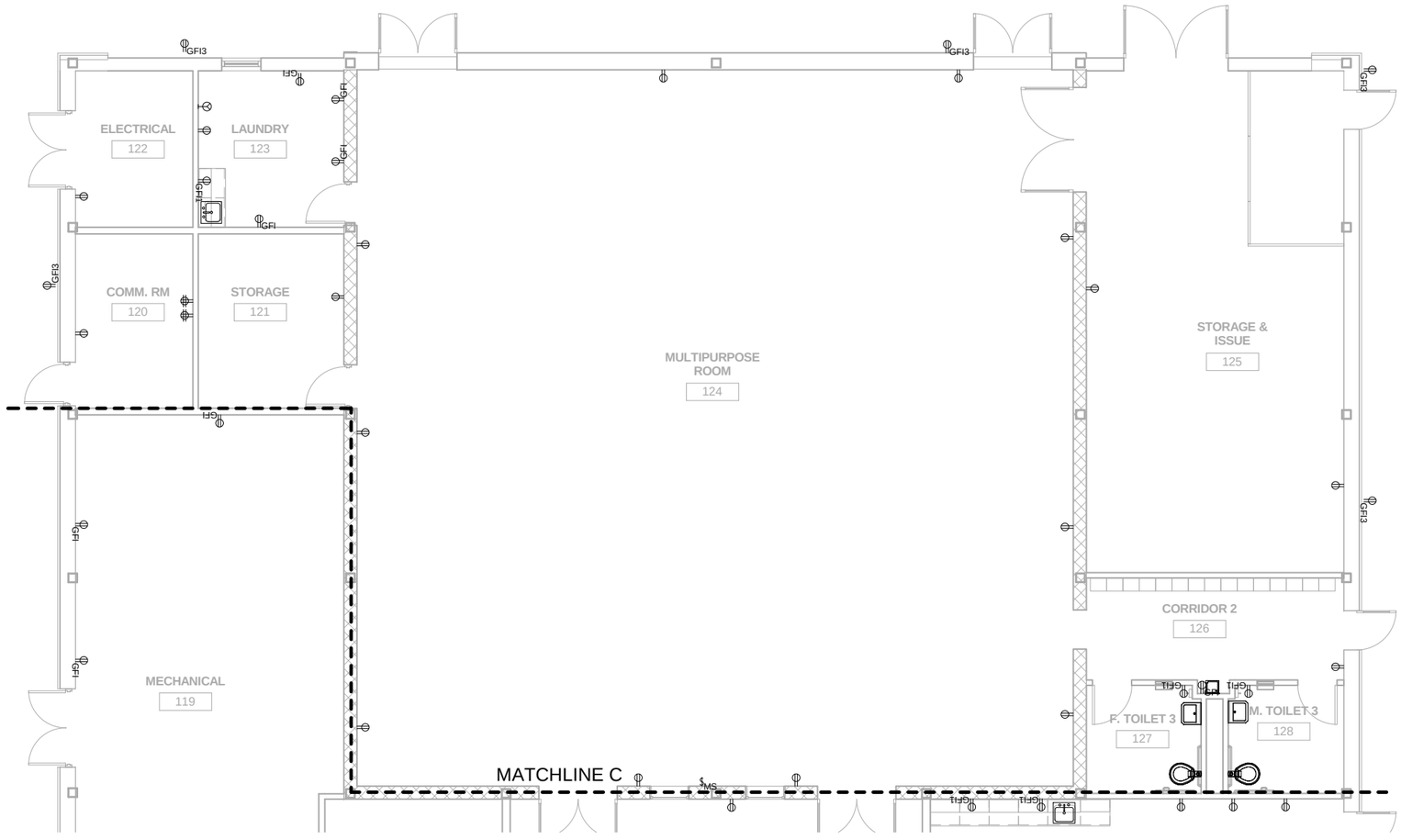
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

POWER PLAN - AREA C

PLATE REFERENCE NUMBER
EP103

SHEET 96 OF 107

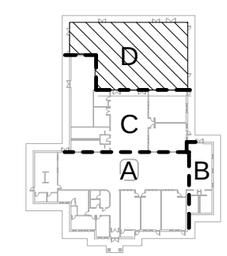


POWER PLAN - AREA D

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

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

PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: CES
DRAWN BY: CR
SBMT BY:
CKD BY:
PLOT SCALE: As indicated
PLOT DATE: 6/4/2014 10:41:35 AM
SIZE: 36" X 24"
FILE NAME:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 85% DESIGN PACKAGE

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

POWER PLAN - AREA D

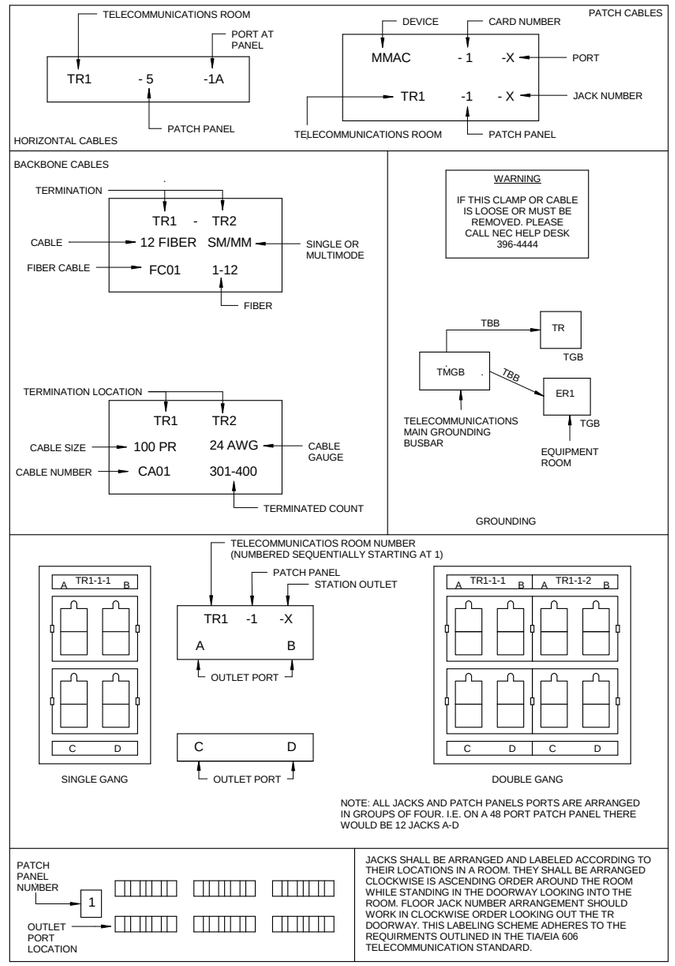
PLATE REFERENCE NUMBER
EP104

SHEET 97 OF 107

SIGNAL LEGEND

- WP — RJ-45 TELEPHONE WALL OUTLET WITH WEATHERPROOF COVER.
- P — SINGLE GANG RJ-45 WALL OUTLET (WITHOUT SUBSCRIPT) UOI. SUBSCRIPT INDICATES
  - D - DOUBLE GANG RJ-45 WALL OUTLET
  - P - NETWORK PRINTER/FAX.
- W — RJ-45 TELEPHONE WALL OUTLET.
- VGA WALL OUTLET FOR CONNECTING THE USER LAPTOP AND PROJECTOR.
- C — CEILING MOUNTED RECEPTACLE.
- V — CEILING MOUNTED VGA OUTLET.
- TV — SINGLE CABLE TELEVISION OUTLET.
- TTB, CTB — FIRE-RETARDANT PLYWOOD BACKBOARD WITH NO ADDED UREA FORMALDEHYDE. SEE SPECIFICATIONS FOR FSC CERTIFICATION REQUIREMENTS.
- TER — TELECOMMUNICATIONS EQUIPMENT RACK. FLOOR MOUNTED.
- CABLE TRAY, SEE RISER FOR TYPES
- TMGB — TELECOMMUNICATIONS MAIN GROUND BAR, MH 18" A.F.F.
- TGB — TELECOMMUNICATIONS GROUND BAR, MH 18" A.F.F.
- CGB — CABLE TV GROUND BAR, MH 18" A.F.F.
- C — BALANCE MAGNETIC DOOR CONTACT SWITCHES. (GFGI) COORDINATE MOUNTING HEIGHT WITH DOOR
- MS — MOTION SENSOR (GFGI).
- PIR — PASSIVE INFRARED SENSOR (GFGI)
- KP — KEY PAD (GFGI)
- RADC — REMOTE AREA DATA COLLECTOR (GFGI)
- R T — RECESSED COMBINATION FLOOR BOX WITH DUPLEX RECEPTACLE AND DUPLEX TELEPHONE OUTLET UON.
- J — JUNCTION BOX, WALL MTD. MH 1'-6" U.O.N.
- J — JUNCTION BOX

COMMUNICATION LABELING SCHEME



GENERAL NOTES

GENERAL NOTES, COMMUNICATIONS:

1. SEE CRITERIA FOR SCHOOL AGE CHILDREN CHILD DEVELOPMENT CENTER FOR BUZZER/INTERCOM SYSTEM IN VESTIBULE.

2. IN GENERAL, TO MINIMIZE SOUND TRANSMISSION, DO NOT INSTALL "BACK TO BACK" OUTLET BOXES.

3. SEAL PENETRATIONS THROUGH FLOORS OR FIRE WALLS TO MAINTAIN THE INTEGRITY OF THE FIRE AND ACOUSTIC RATINGS OF THE WALLS AND FLOORS.

4. SEE ELECTRICAL LEGEND AND NOTES FOR TYPICAL DEVICE MOUNTING HEIGHTS.

NOTES, CATV:

1. THE CONTRACTOR SHALL PROVIDE CATV AMPLIFIERS, SPLITTERS, COMBINERS, LINE TAPS, CABLES, OUTLETS, TILT COMPENSATORS, AND ALL OTHER PARTS, COMPONENTS, AND EQUIPMENT NECESSARY TO PROVIDE A COMPLETE AND USABLE CATV SYSTEM.

2. THE CATV SYSTEM SHALL PROVIDE A HIGH-QUALITY SIGNAL TO ALL OUTLETS WITH A RETURN PATH FOR INTERACTIVE TELEVISION AND CABLE MODEM ACCESS.

3. THE CATV SYSTEM SHALL OPERATE WITHIN THE 5 TO1000 MHz BANDWIDTH USING 1000 MHZ PASSIVE DEVICES AND A MINIMUM OF 750 MHz ACTIVE DEVICES.

4. EACH CATV OUTLET SHALL HAVE A MINIMUM SIGNAL LEVEL OF 0 DECIBEL MILLIVOLTS (dBmV)(1000 MICROVOLTS) AND A MAXIMUM OF 15 dBmV AT 55 AND 750 MHz.

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

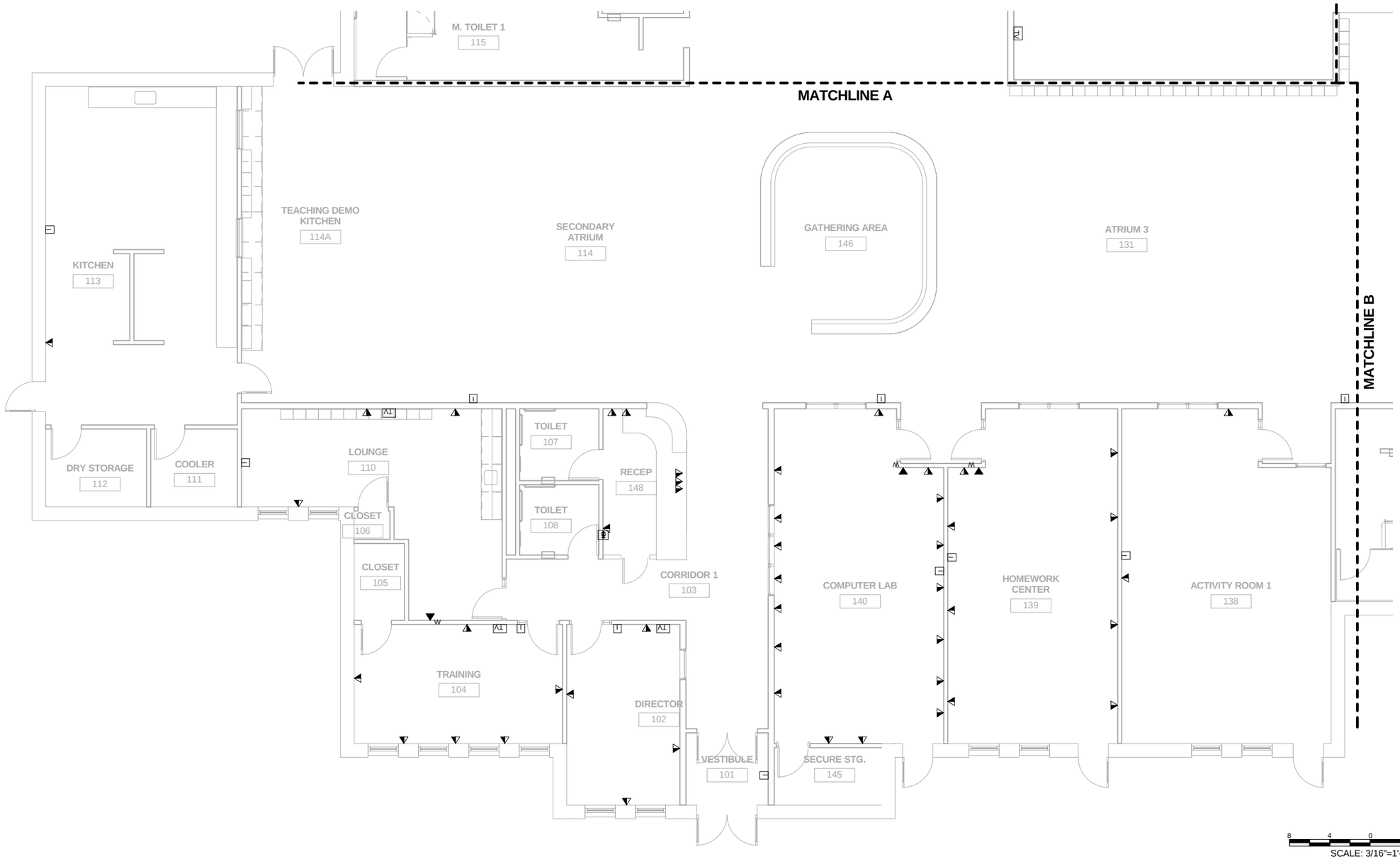
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE
DESIGN BY: KS
DRAWN BY: CR
CKD BY:
SBMT BY:
PLOT DATE: 6/4/2014 10:44:01 AM
PLOT SCALE: 12" = 1'-0"
SIZE: D 22" x 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

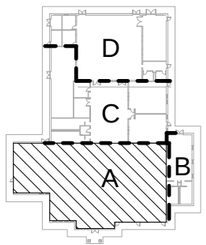
COMMUNICATIONS LEGEND AND GENERAL NOTES

PLATE REFERENCE NUMBER
T-001



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

PLAN NORTH



TELECOMMUNICATIONS - AREA A

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: KS
DRAWN BY: CR
CKD BY:
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 85% DESIGN PACKAGE
PLOT DATE: 6/4/2014 10:42:04 AM
PLOT SCALE: As indicated
SIZE: D 22" X 34"
FILE NAME:

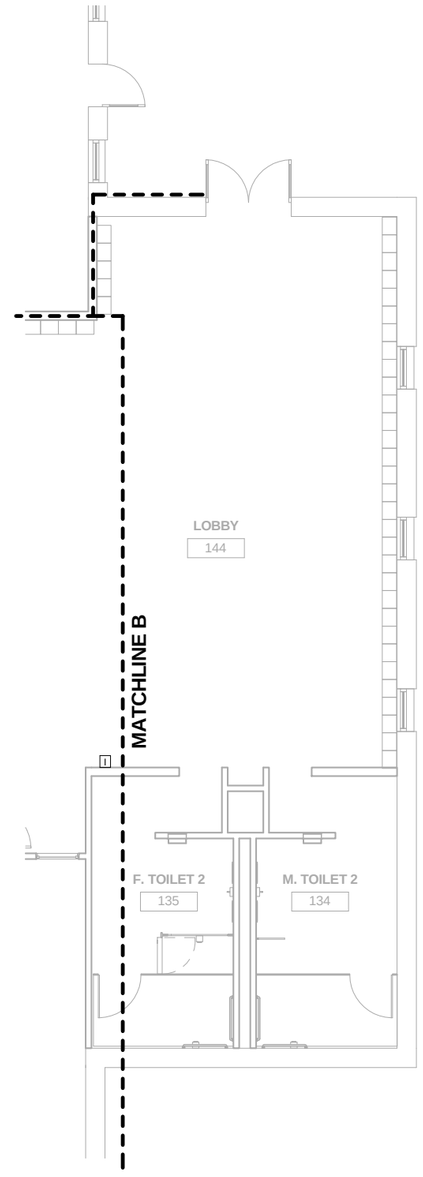
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

COMMUNICATIONS PLAN - AREA A

PLATE REFERENCE NUMBER
T-101

SHEET 104 OF 107

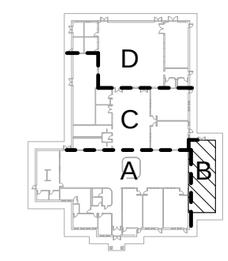


TELECOMMUNICATIONS - AREA B

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

8 4 0 8
SCALE: 3/16"=1'-0"

N
PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 65% DESIGN PACKAGE

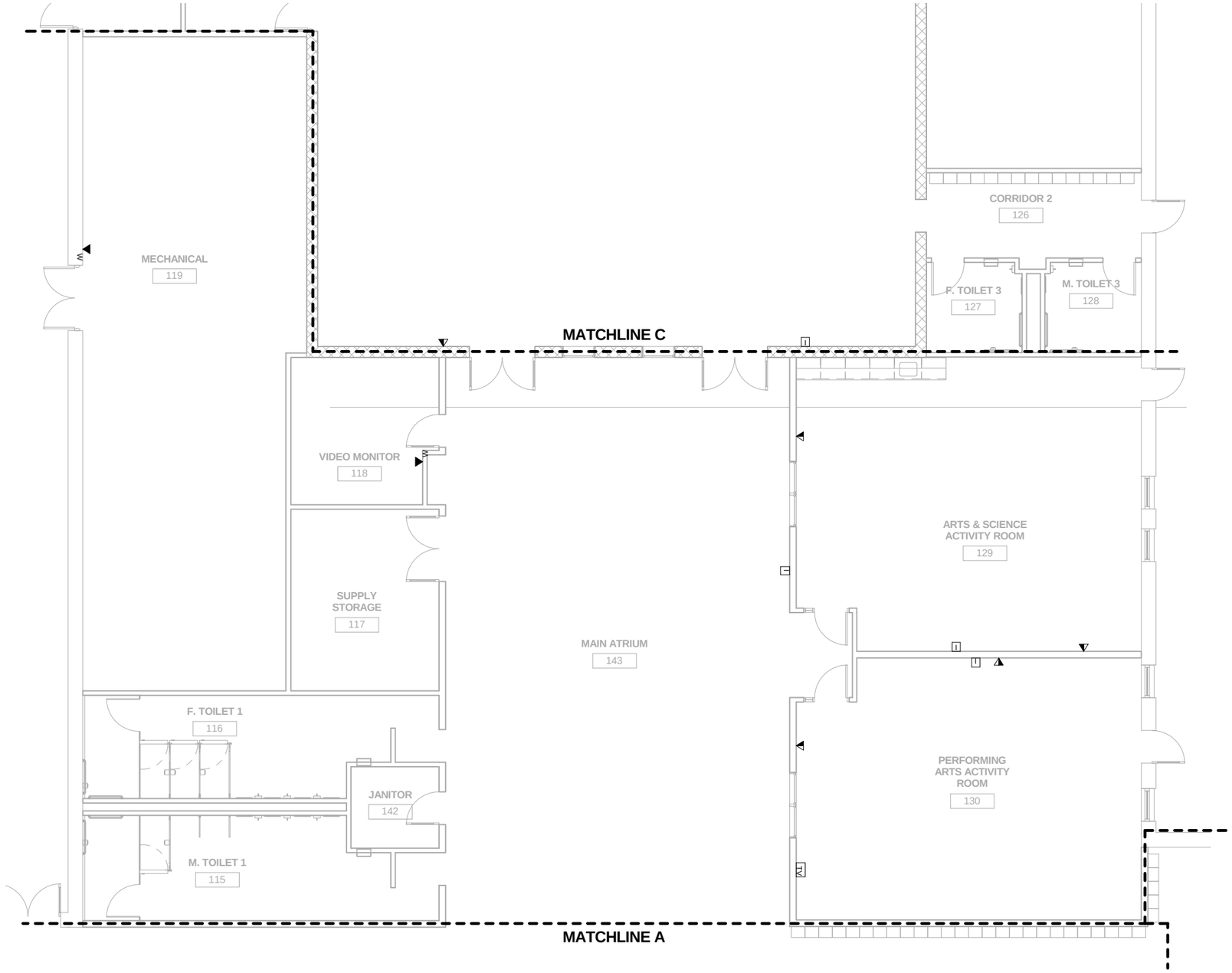
DESIGN BY: KS
DRAWN BY: CR
CKD BY:
SBMT BY:
PLOT DATE: 6/4/2014 10:42:07 AM
PLOT SCALE: As indicated
SIZE: 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

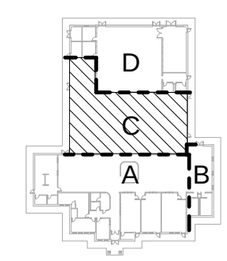
COMMUNICATIONS PLAN - AREA B

PLATE REFERENCE NUMBER
T-102
SHEET 105 OF 107



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

PLAN NORTH



TELECOMMUNICATIONS - AREA C

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

US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DATE: JUNE 2014
SOLICITATION NO.: N/A
CONTRACT NO.: N/A
CATEGORY CODE: 635% DESIGN PACKAGE

DESIGN BY: KS
DRAWN BY: CR
CKD BY:
SBMT BY:
PLOT DATE: 6/4/2014 10:42:09 AM
PLOT SCALE: As indicated
SIZE: 22" X 34"
FILE NAME:

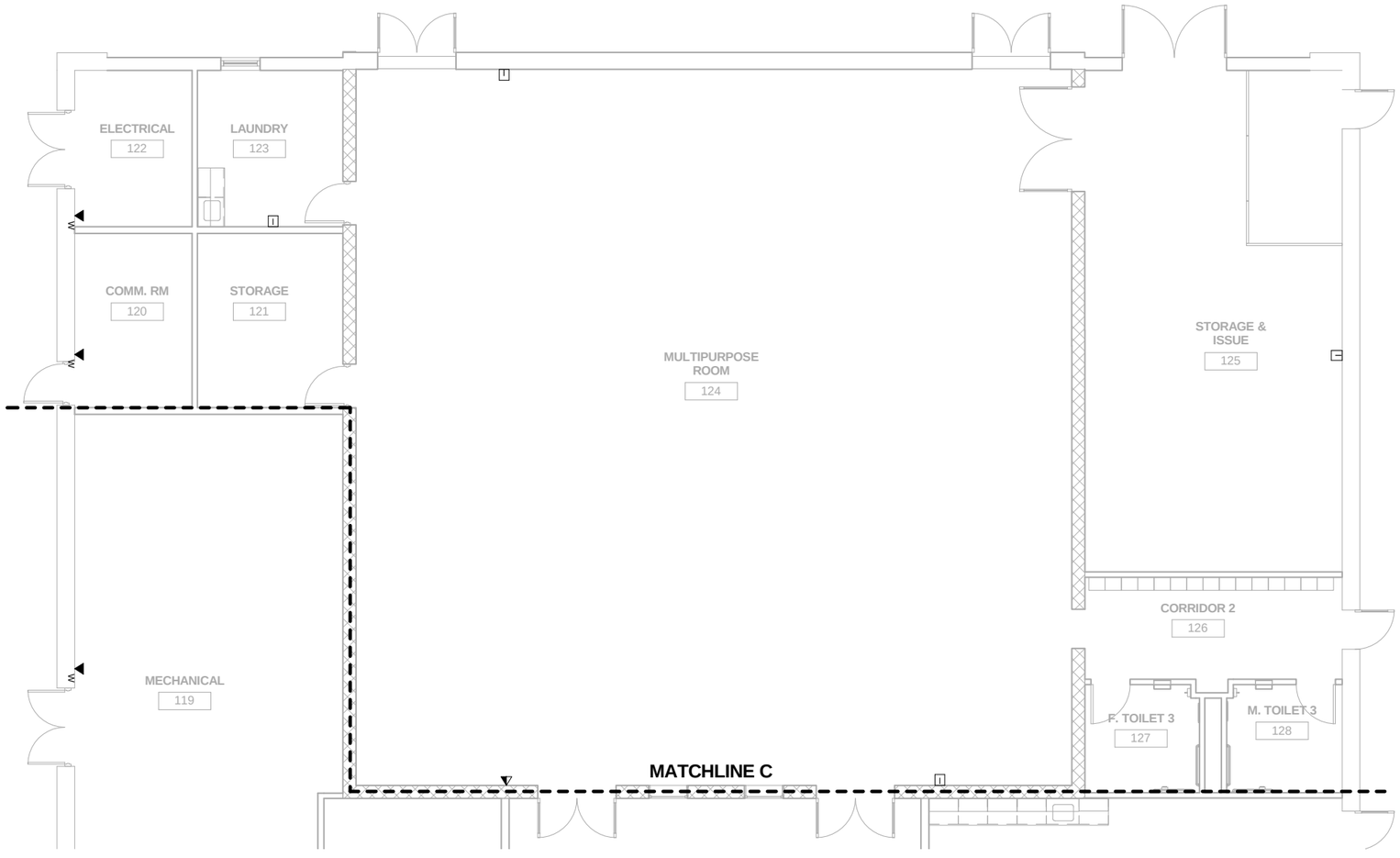
U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

COMMUNICATIONS PLAN - AREA C

PLATE REFERENCE NUMBER
T-103

SHEET 106 OF 107

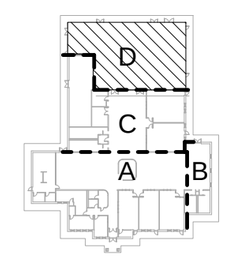


TELECOMMUNICATIONS - AREA D

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

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

PLAN NORTH



US Army Corps of Engineers ®
HUNTSVILLE CENTER

SYMBOL	DESCRIPTION	DATE	BY

DESIGN BY: KS
DRAWN BY: CR
SBMT BY:
DATE: JUNE 2014
SOLICITATION NO.: N/A
CKD BY:
CONTRACT NO.: N/A
PLOT DATE: 6/4/2014 10:42:12 AM
CATEGORY CODE: 65% DESIGN PACKAGE
PLOT SCALE: As indicated
SIZE: 22" X 34"
FILE NAME:

U.S. ARMY CORPS OF ENGINEERS
ENGINEERING AND SUPPORT CENTER, HUNTSVILLE
4820 UNIVERSITY SQ.
HUNTSVILLE, AL 35816

CHILD DEVELOPMENT CENTER
STANDARD DESIGN, MEDIUM
6 YEARS - 10 YEARS OLD

TELECOMMUNICATIONS - AREA D

PLATE REFERENCE NUMBER
T-104

SHEET 107 OF 107