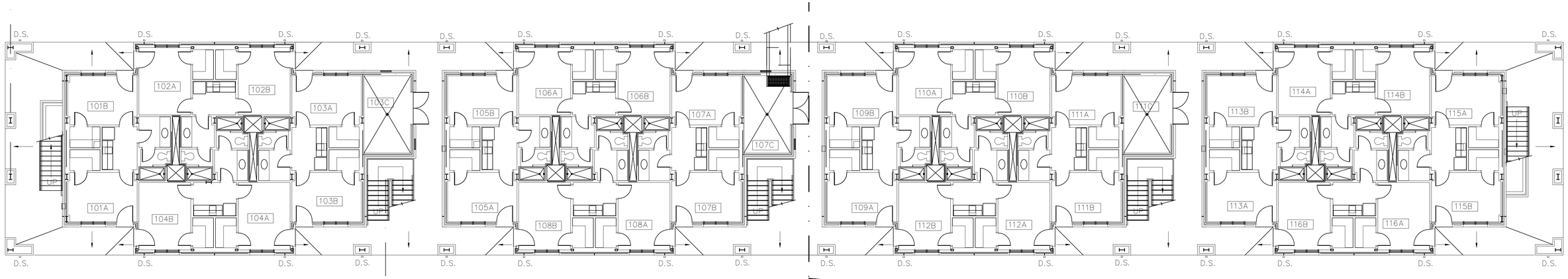
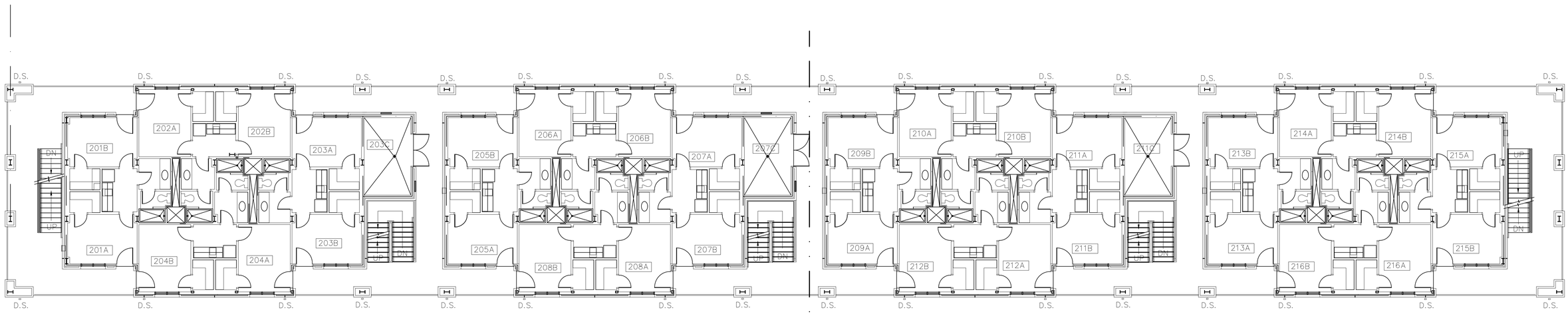


1 FIRST FLOOR PLAN

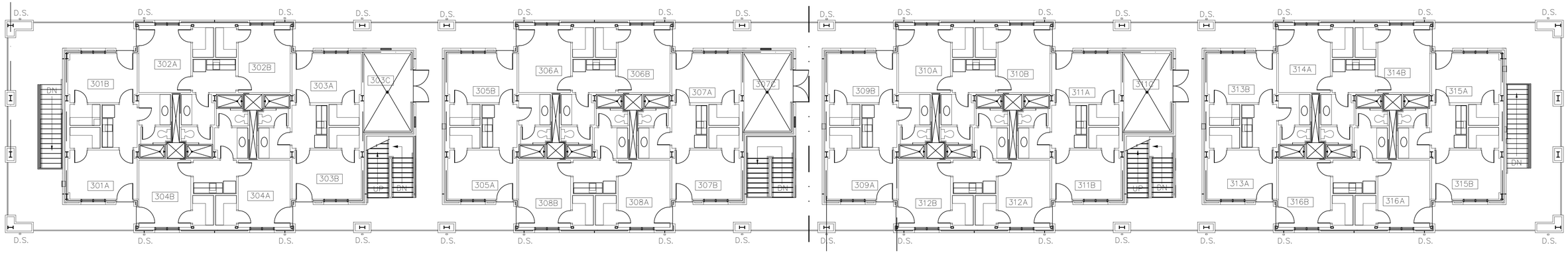
SCALE 1:200

GROSS BUILDING AREA – 2772.11 SQUARE METERS



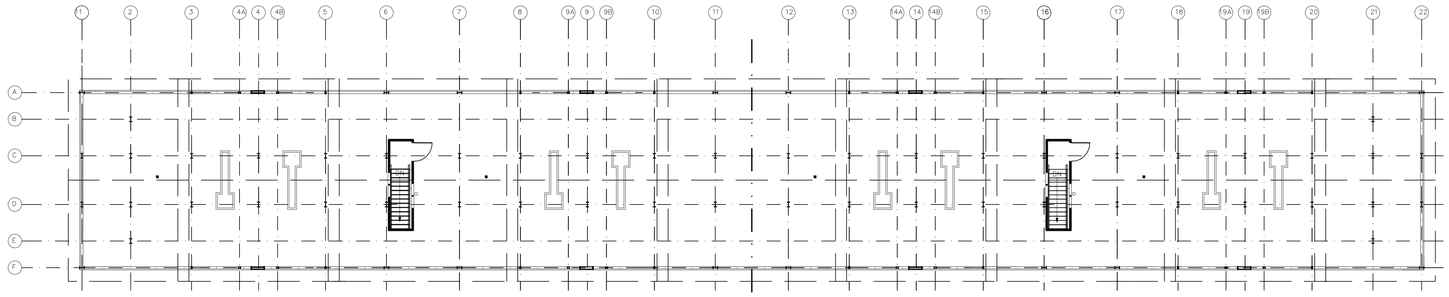
1 SECOND FLOOR PLAN

SCALE 1:200



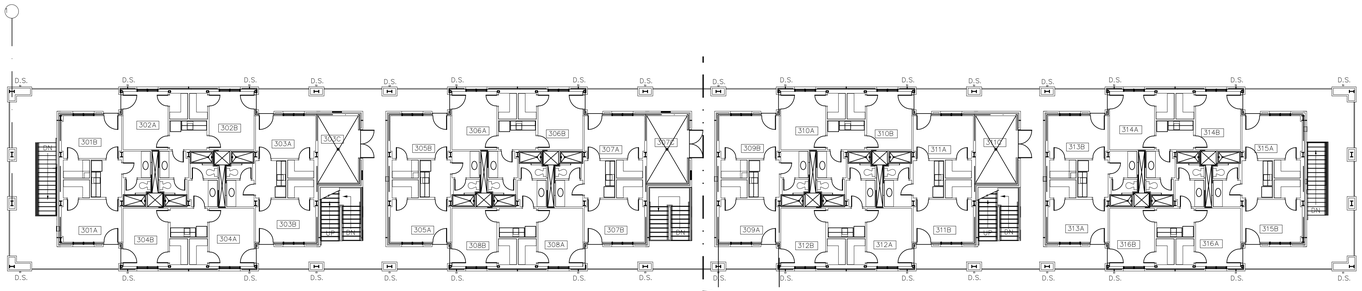
1 THIRD FLOOR PLAN

SCALE 1:200



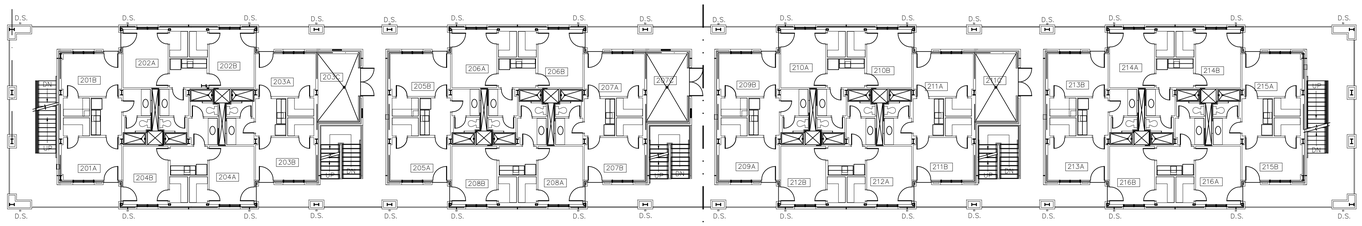
ATTIC FLOOR PLAN
SCALE 1:200

MATCH LINE WITH FLOOR PLAN BELOW



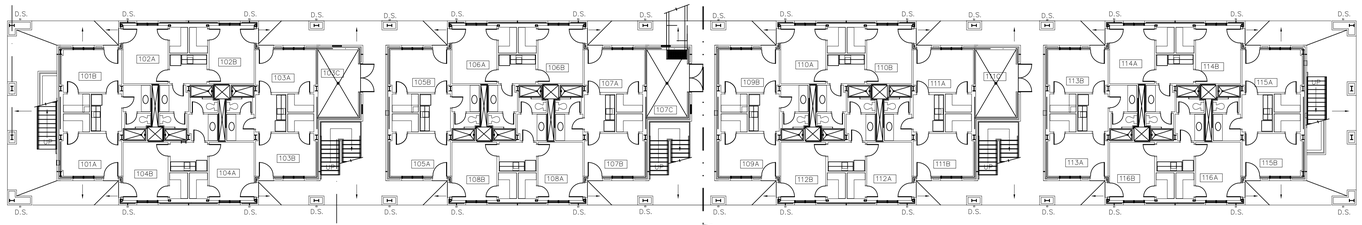
THIRD FLOOR PLAN
SCALE 1:200

MATCH LINE WITH FLOOR PLAN BELOW



SECOND FLOOR PLAN
SCALE 1:200

MATCH LINE WITH FLOOR PLAN BELOW



FIRST FLOOR PLAN
SCALE 1:200

MATCH LINE WITH FLOOR PLAN BELOW

GROSS BUILDING AREA – 2772.11 SQUARE METERS

AS-BUILT

4000 2000 0 8000 12000 16000 20000
GRAPHIC SCALE 1:200

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

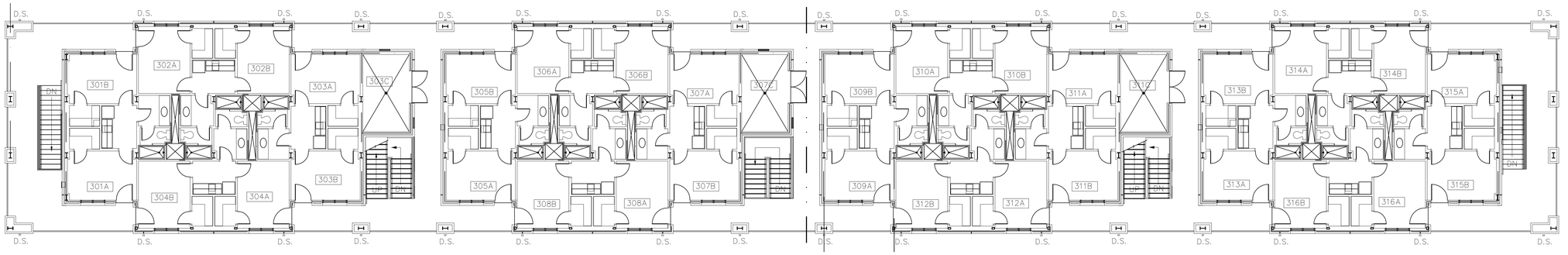
REV.	DESCRIPTION	DATE	BY
0002	AS-BUILT DRAWING NO REVISION THIS SHEET REVISED IN ACCORDANCE WITH AMENDMENT	02JUL99	CH
0001		FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS – 96 PERSONNEL
COMPOSITE
FLOOR PLANS

PLATE REFERENCE NUMBER:
A–1
SHEET 183

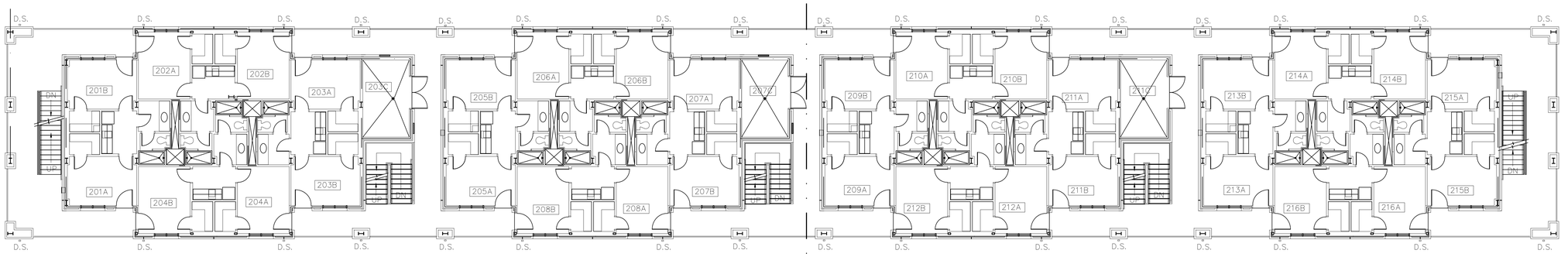
DESIGN FILE: D0NSPEC$$$$$



MATCH LINE WITH
FLOOR PLAN BELOW

1 THIRD FLOOR PLAN

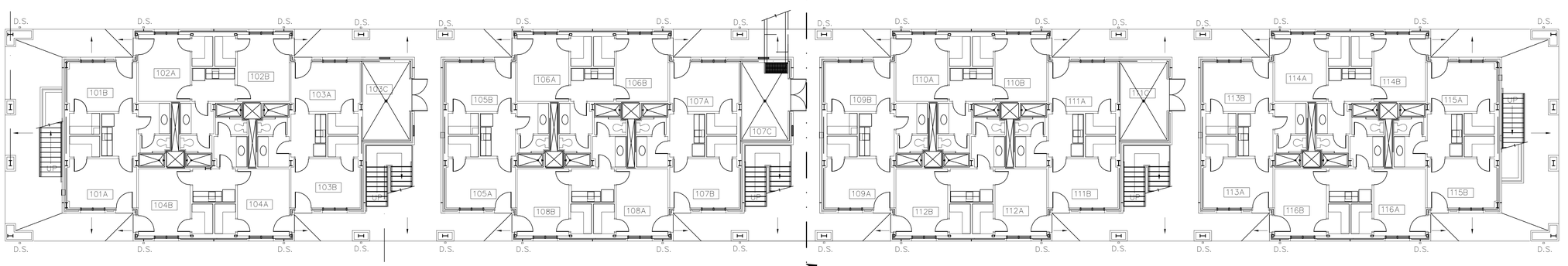
SCALE 1:200



MATCH LINE WITH
FLOOR PLAN BELOW

1 SECOND FLOOR PLAN

SCALE 1:200

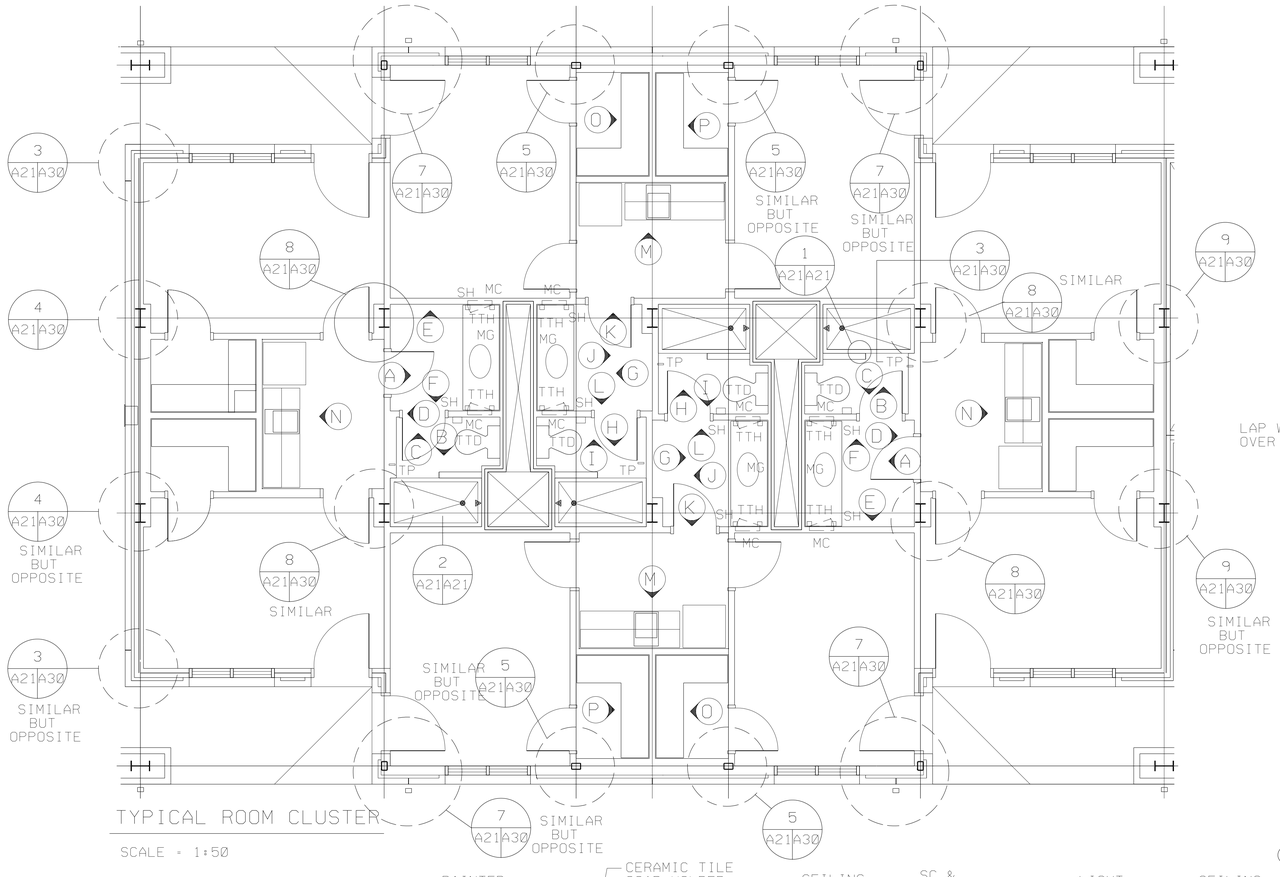


MATCH LINE WITH
FLOOR PLAN BELOW

1 FIRST FLOOR PLAN

SCALE 1:200

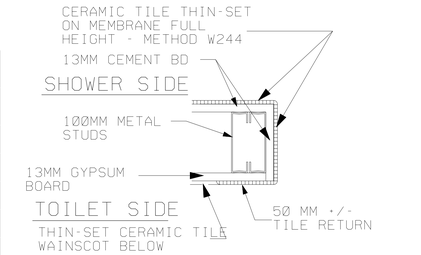
GROSS BUILDING AREA – 2772.11 SQUARE METERS



TYPICAL ROOM CLUSTER

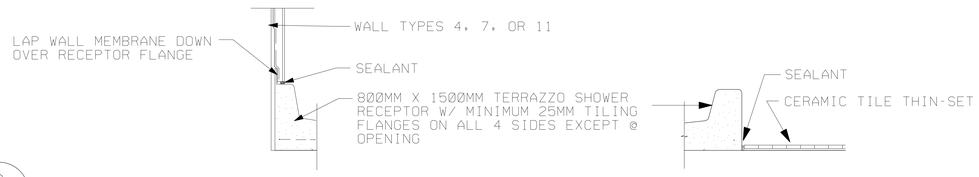
SCALE = 1:50

TOILET ACCESSORIES SCHEDULE			
AB.	NO.	ITEM	MOUNTING
MC		MED. CAB. (400MM X 650MM)	TOP @ 1800MM AFF
MG		MIRROR (1600MM W 1100MM H)	TOP @ 2000MM AFF
SC		SHOWER CURTAIN	
SCR		SHOWER CURTAIN ROD	CTR. @ 1850 MM AFF
SH		SOAP HOLDER	TOP @ 1000MM AFF
TB		TOWEL BAR 450 MM LONG	TOP @ 1000MM AFF
TP		TOWEL PIN	TOP @ 1500MM AFF
TTD		ROLL TLT. TISSUE DISP.	TOP @ 600MM AFF
TTH		TOOTHBRUSH HOLDER	TOP @ 1000MM AFF



1 A21A21 TYPICAL CERAMIC TILE JAMB @ SHOWER

N. T. S.

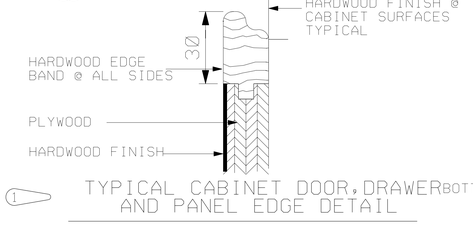


2 A21A21 CERAMIC TILE WALL @ SHOWER RECEPTOR DETAIL

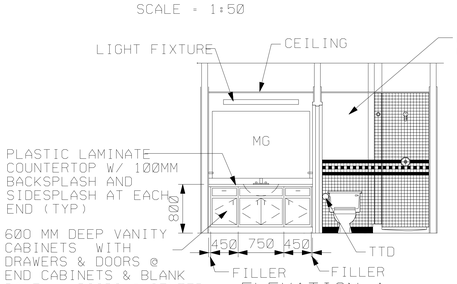
N. T. S.

3 A21A21 SHOWER RECEPTOR DETAIL @ OPENING

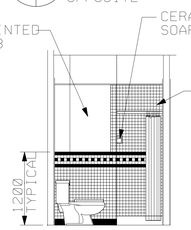
N. T. S.



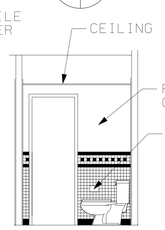
1 TYPICAL CABINET DOOR, DRAWER AND PANEL EDGE DETAIL



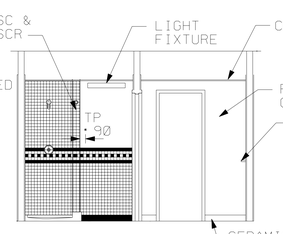
ELEVATION A



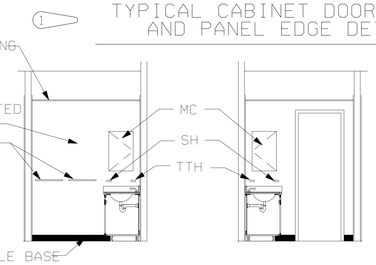
ELEVATION B



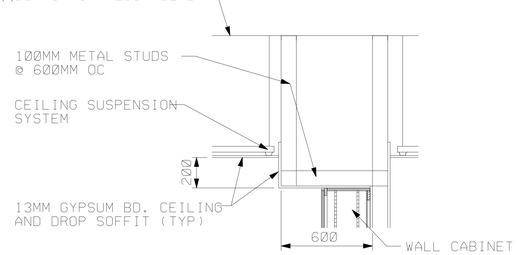
ELEVATION C



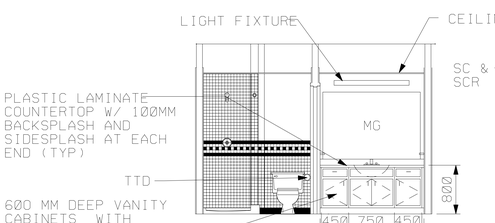
ELEVATION D



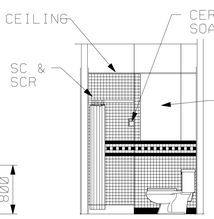
1 ELEVATION E 1 ELEVATION F



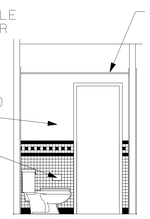
SERVICE AREA DROP SOFFIT DETAIL - A-A



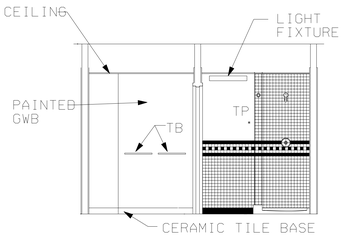
ELEVATION G



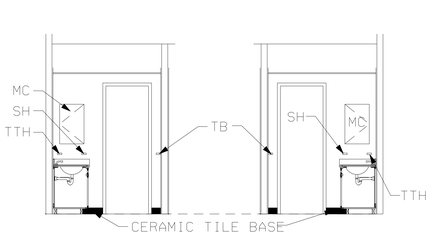
ELEVATION H



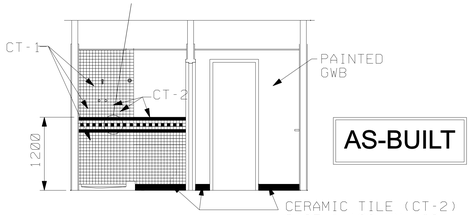
ELEVATION I



ELEVATION J



1 ELEVATION K 1 ELEVATION L

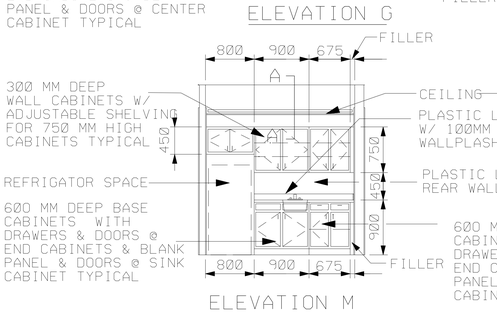


TYPICAL ENLARGED TILE PATTERN SHOWER WALLS

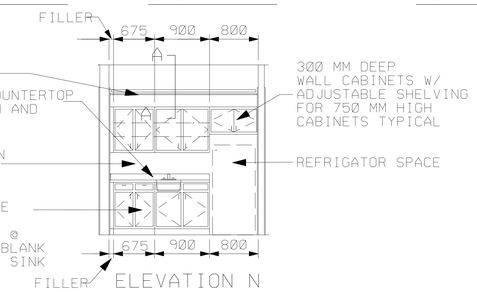
TYPICAL TILE PATTERN

1000 500 0 1000 2000 3000 4000 5000

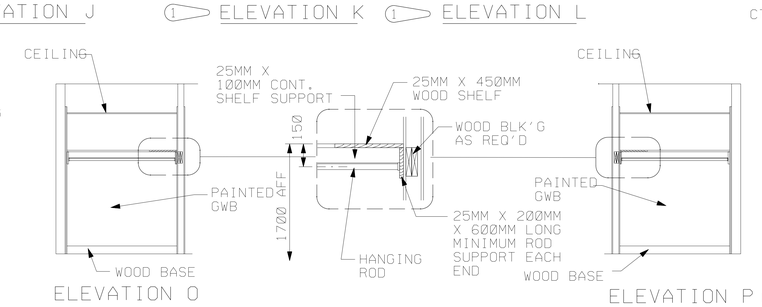
GRAPHIC SCALE 1:50



ELEVATION M



ELEVATION N



ELEVATION O ELEVATION P

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
CATEGORY CODE 721:11:12
SOLICITATION NO: DACA21-99-B-0034
REV.
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
0	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC
1	REVISED IN ACCORDANCE WITH AMENDMENT 0005	20JUL94	CH

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
ENLARGED BATH/SERVICE AREA PLANS, ELEVATIONS AND DETAILS

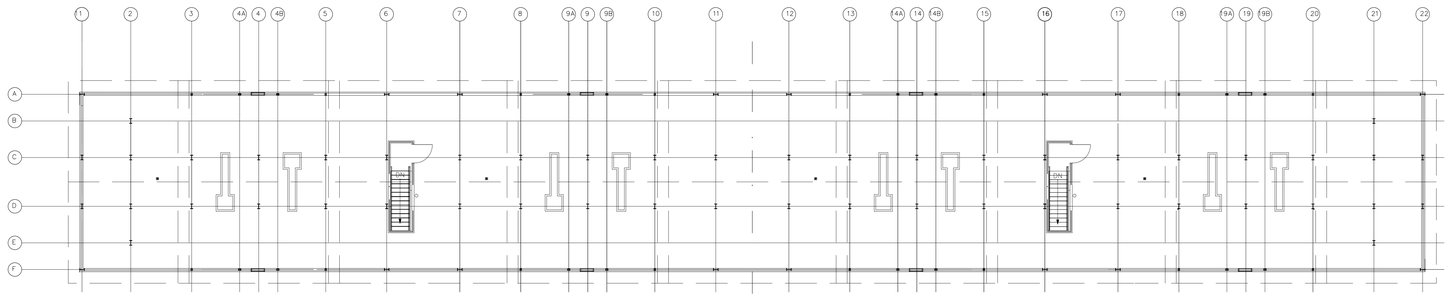
AS-BUILT

PLATE REFERENCE NUMBER: A-21

SHEET 203

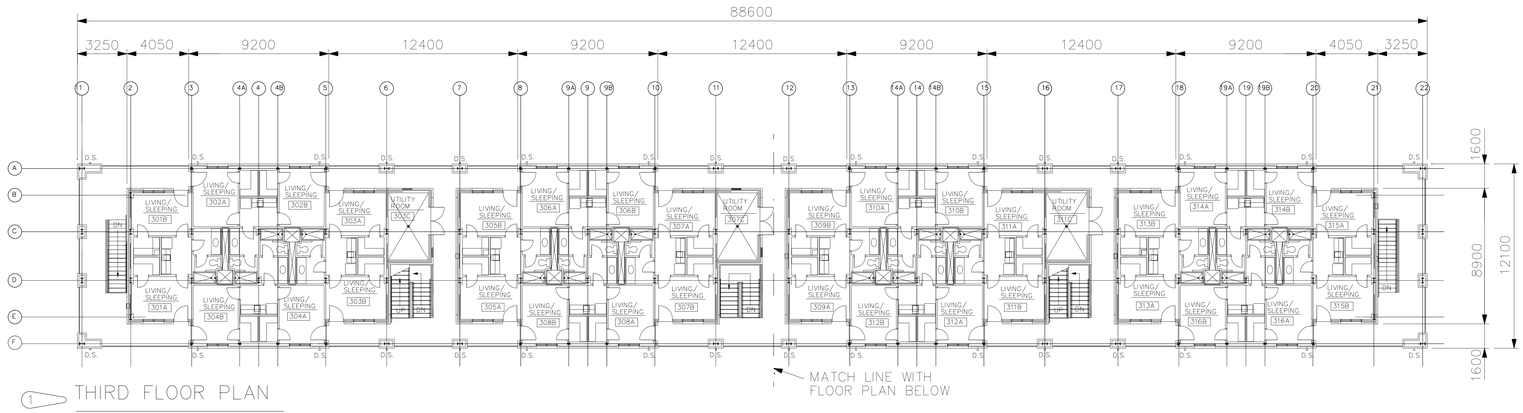
SAV-22148

DESIGN FILE\DONSPEC\$$$$$



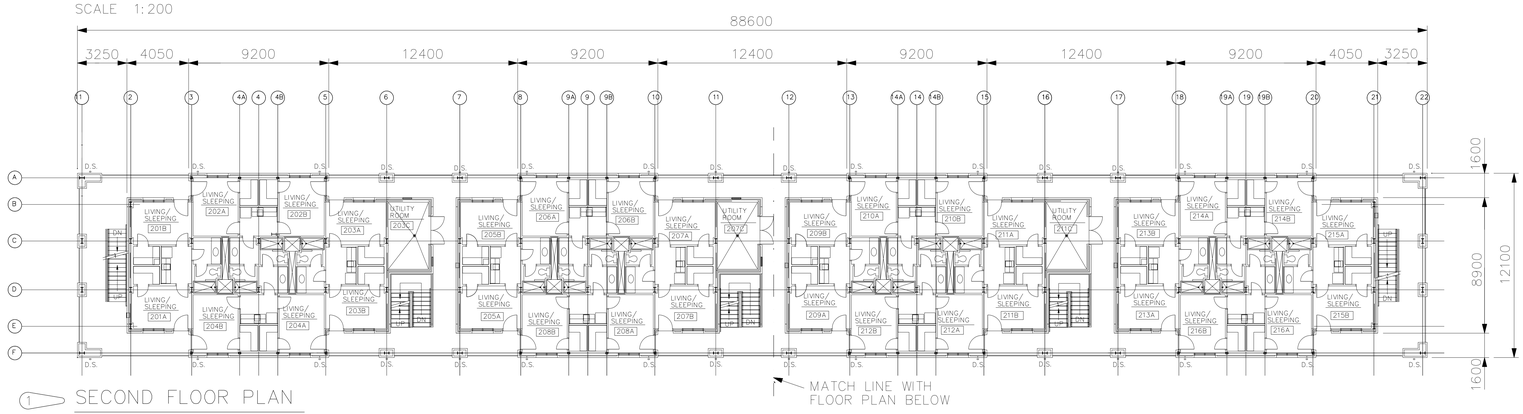
ATTIC FLOOR PLAN
SCALE 1:200

MATCH LINE WITH FLOOR PLAN BELOW



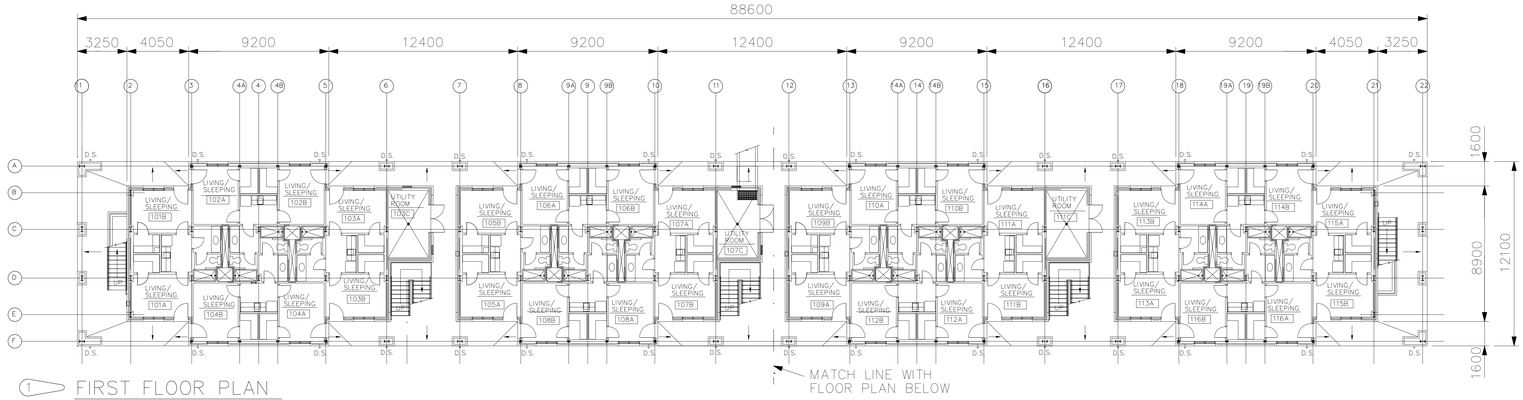
MATCH LINE WITH FLOOR PLAN BELOW

1 THIRD FLOOR PLAN
SCALE 1:200



MATCH LINE WITH FLOOR PLAN BELOW

1 SECOND FLOOR PLAN
SCALE 1:200



MATCH LINE WITH FLOOR PLAN BELOW

1 FIRST FLOOR PLAN
SCALE 1:200

GROSS BUILDING AREA = 2772.11 SQUARE METERS

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

DATE: 17JUN99
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:
REV.

SYMBOL	DESCRIPTION	DATE	BY
1	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC
2	REVISED IN ACCORDANCE WITH AMENDMENT 0002	02JUL99	CH

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
COMPOSITE
FLOOR PLANS

AS-BUILT

PLATE REFERENCE NUMBER:
A-1
SHEET 183

4000 2000 0 8000 12000 16000 20000
GRAPHIC SCALE 1:200

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

SAV-22148

DESIGN FILE: D:\NSPEC\$\$\$

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

LOUVER TYPE L1 WITH CENTER LOCATED 1700 MM FROM CORNER

LOUVER TYPE L1 WITH CENTER LOCATED 1700 MM FROM CORNER

SHALLOW TRENCH WALL LOCATIONS WITH METAL GRATING IN UTILITY ROOM- SEE PLATE S-13

LOUVER TYPE L2 WITH CENTER LOCATED 800 MM FROM CORNER

LOUVER TYPE L2 WITH CENTER LOCATED 800 MM FROM CORNER

MATCH LINE WITH FLOOR PLAN BELOW

1 FIRST FLOOR PLAN - LEFT END

SCALE 1:100

NOTES:

SEE PLATE A-20 FOR ENLARGED ROOM CLUSTER PLAN AND WALL TYPES

SEE ENLARGED FLOOR PLANS ON PLATES A-20 AND A-25 FOR BEJ LOCATIONS

FOR FEC - SEE DETAIL 10/A2/A30

1 ARROWS ON 1ST FLOOR EXTERIOR SLABS INDICATE DIRECTION OF SLOPE. SLABS TO SLOPE FROM WALL DOWN 13 MM TO EDGE.

WALL LEGEND

NON-RATED WALL WITH GYPSUM BOARD TO EXTEND 150 MM ABOVE CEILING UNLESS OTHERWISE NOTED.

1-HOUR RATED WALL TO UNDERSIDE OF STRUCTURE, SEAL WITH FIRESTOPPING

MATCH LINE WITH FLOOR PLAN ABOVE

SPRINKLER VALVE BOX SEE DETAIL 14/A2/A30

1 FIRST FLOOR PLAN - RIGHT END

SCALE 1:100

GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

AS-BUILT

REV.	DATE	DESCRIPTION
0	02JUL99	AS-BUILT DRAWING NO REVISION THIS SHEET
	FEB2003	REVISED IN ACCORDANCE WITH AMENDMENT 0002
SYMBOL	DATE	BY

DATE: 17JUN99
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: &&DATE&&&&&
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

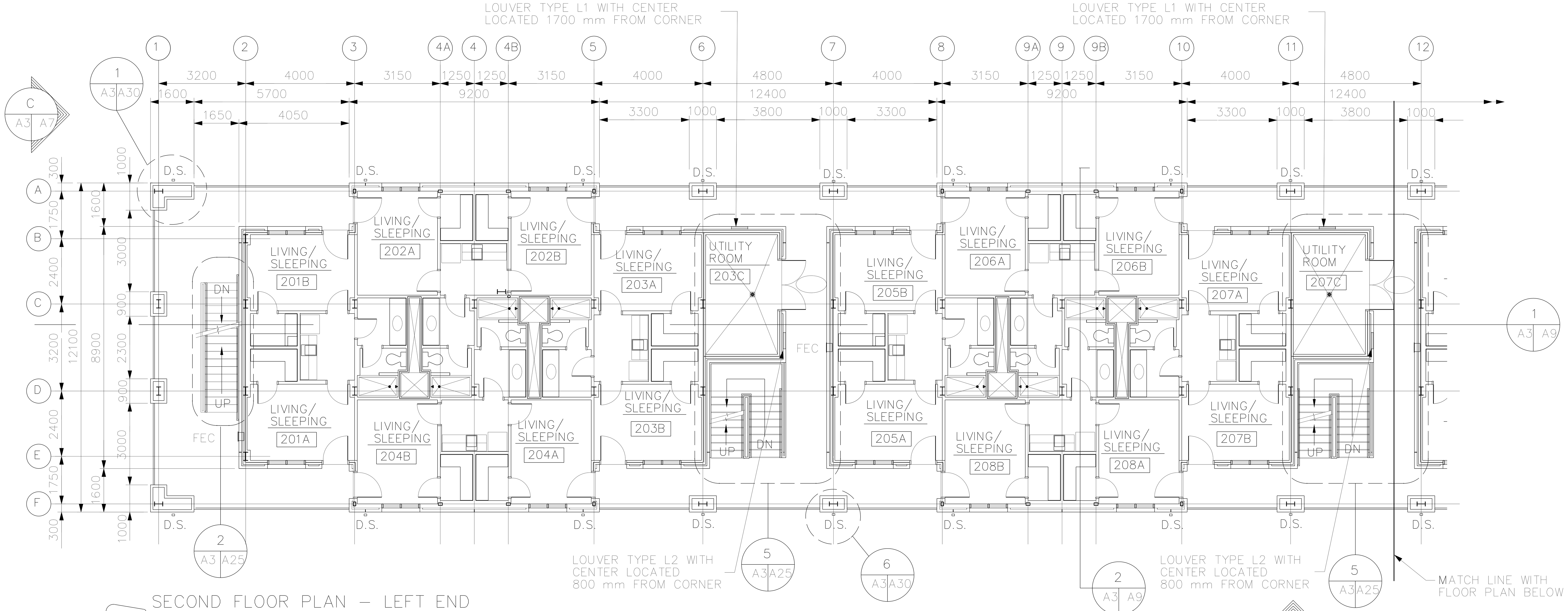
BARRACKS - 96 PERSONNEL

FIRST FLOOR PLAN

PLATE REFERENCE NUMBER:
A-2
SHEET 184

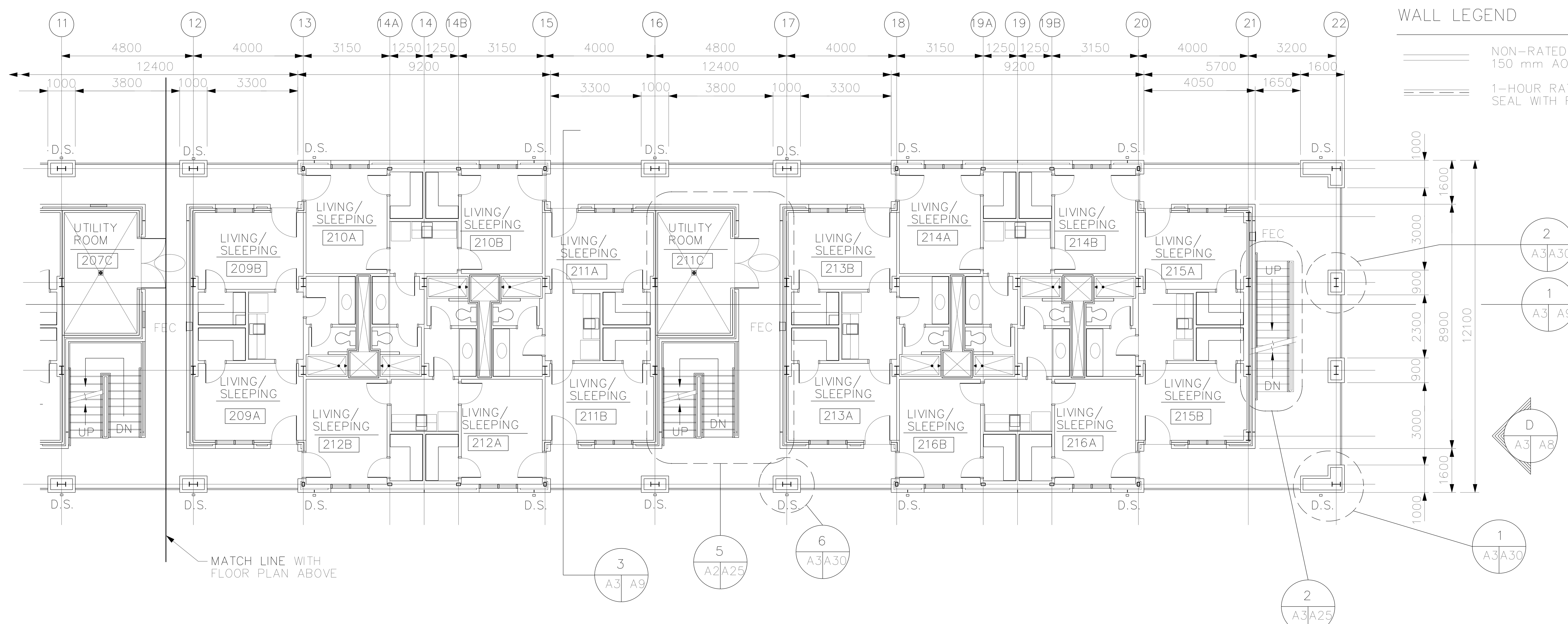
SAV-22148

DESIGN FILE=DONSPEC&&&&&



SECOND FLOOR PLAN – LEFT END

SCALE 1:100



SECOND FLOOR PLAN – RIGHT END

SCALE 1:100

NOTES:

SEE PLATE A–20 FOR ENLARGED ROOM CLUSTER PLAN AND WALL TYPES

SEE ENLARGED FLOOR PLANS ON PLATES A–20 AND A–25 FOR BEJ LOCATIONS

FOR FEC – SEE DETAIL 10/A3/A30

ARROWS ON 2ND FLOOR BALCONIES INDICATE DIRECTION OF SLOPE. SLABS TO SLOPE FROM WALL DOWN 13 mm TO EDGE.

WALL LEGEND

NON–RATED WALL WITH GYPSUM BOARD TO EXTEND 150 mm AOVE CEILING UNLESS OTHERWISE NOTED.

1–HOUR RATED WALL TO UNDERSIDE OF STRUCTURE, SEAL WITH FIRESTOPPING

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99	REV.
CATEGORY CODE 721–11–12	
SOLICITATION NO: DACA21–99–B–0034	
PLOT DATE: $$DATE$$$$	
PLOT SCALE:	

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS–BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC
	REVISED IN ACCORDANCE WITH AMENDMENT 0002	02JUL99	CH

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS – 96 PERSONNEL

SECOND FLOOR PLAN

PLATE REFERENCE NUMBER: A–3

SHEET 185

SAV-22148

DESIGN FILE: DGNSPEC$$

SB_DGN\BARRACKS72\G1A03FP2.DGN

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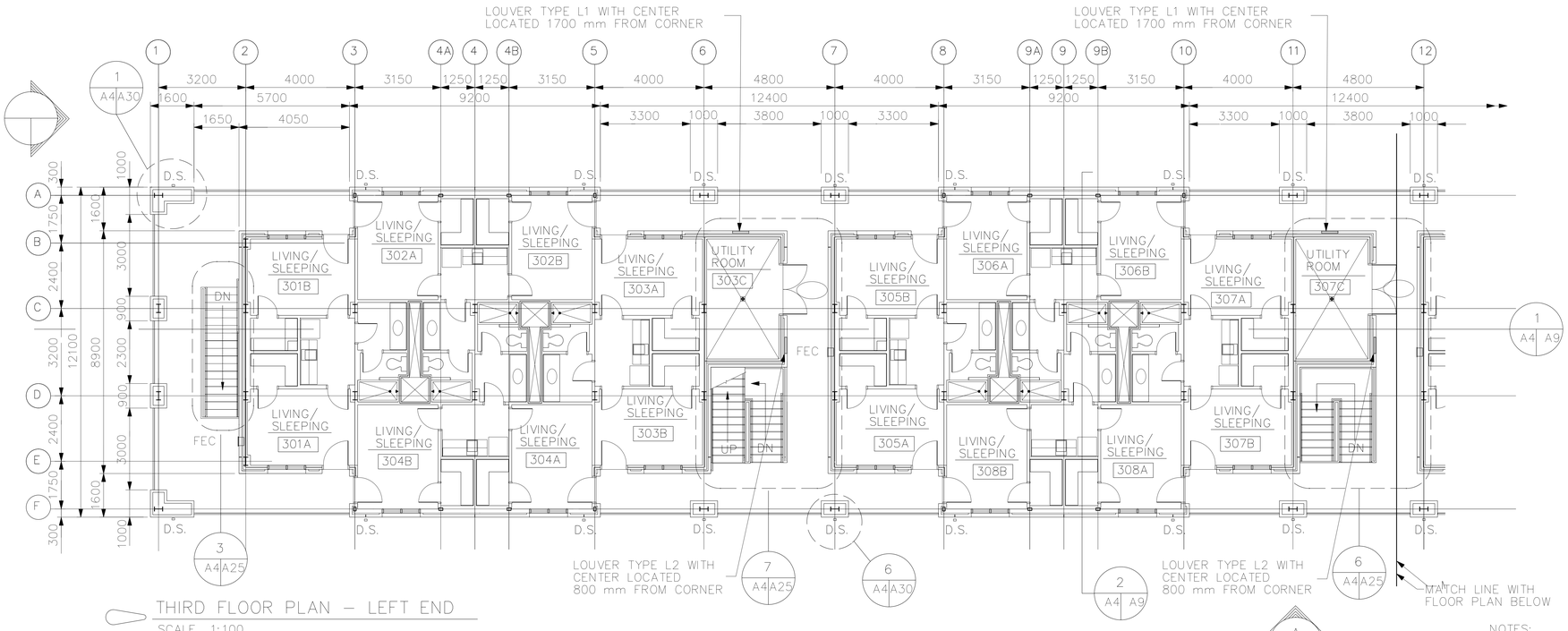
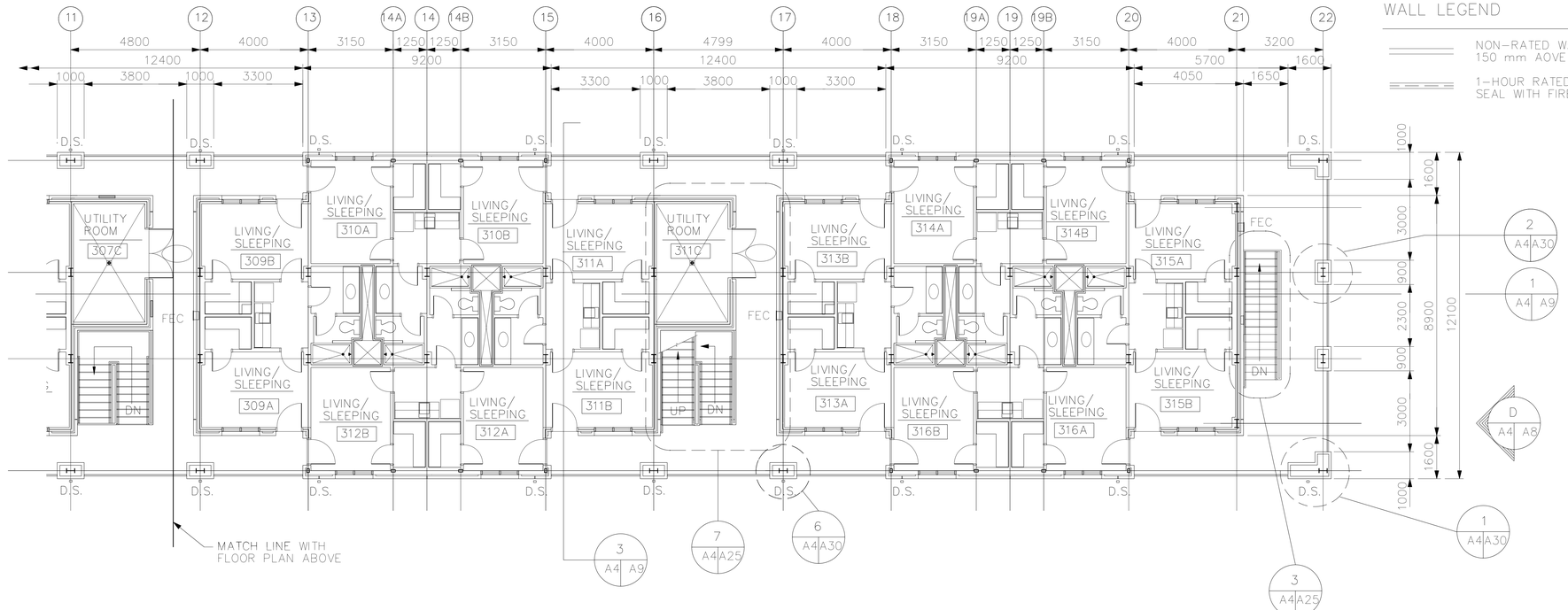


THIRD FLOOR PLAN – LEFT END

SCALE 1:100



THIRD FLOOR PLAN – RIGHT END

SCALE 1:100

NOTES:

SEE PLATE A–20 FOR ENLARGED ROOM CLUSTER PLAN AND WALL TYPES

SEE ENLARGED FLOOR PLANS ON PLATES A–20 AND A–25 FOR BEJ LOCATIONS

FOR FEC – SEE DETAIL 10/A4/A30

ARROWS ON 3RD FLOOR BALCONIES INDICATE DIRECTION OF SLOPE. SLABS TO SLOPE FROM WALL DOWN 13 mm TO EDGE.

WALL LEGEND

NON–RATED WALL WITH GYPSUM BOARD TO EXTEND 150 mm ABOVE CEILING UNLESS OTHERWISE NOTED.

1–HOUR RATED WALL TO UNDERSIDE OF STRUCTURE, SEAL WITH FIRESTOPPING

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99 | REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS–BUILT DRAWING NO REVISION THIS SHEET		
	REVISED IN ACCORDANCE WITH AMENDMENT 0002	02JUL99	CH
		FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS – 96 PERSONNEL

THIRD FLOOR PLAN

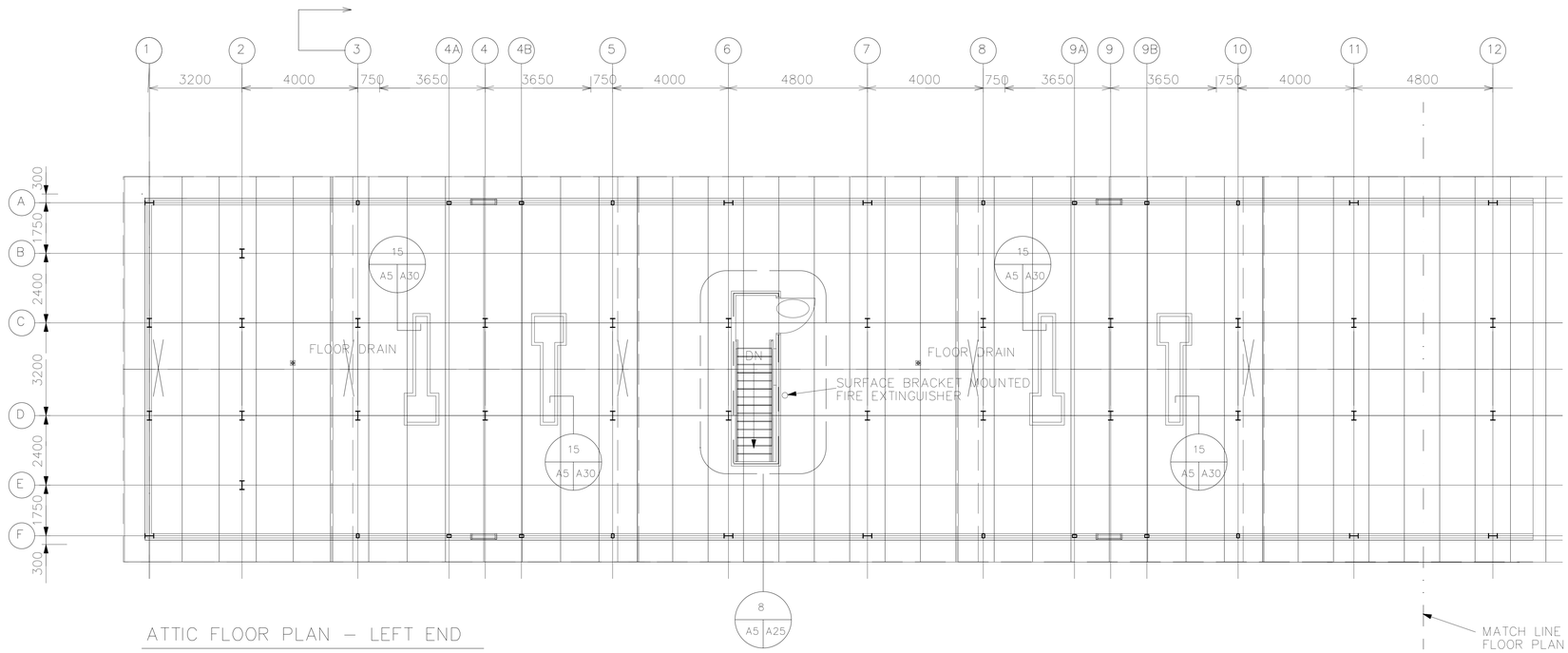
PLATE REFERENCE NUMBER: A–4

SHEET 186

SAV-22148

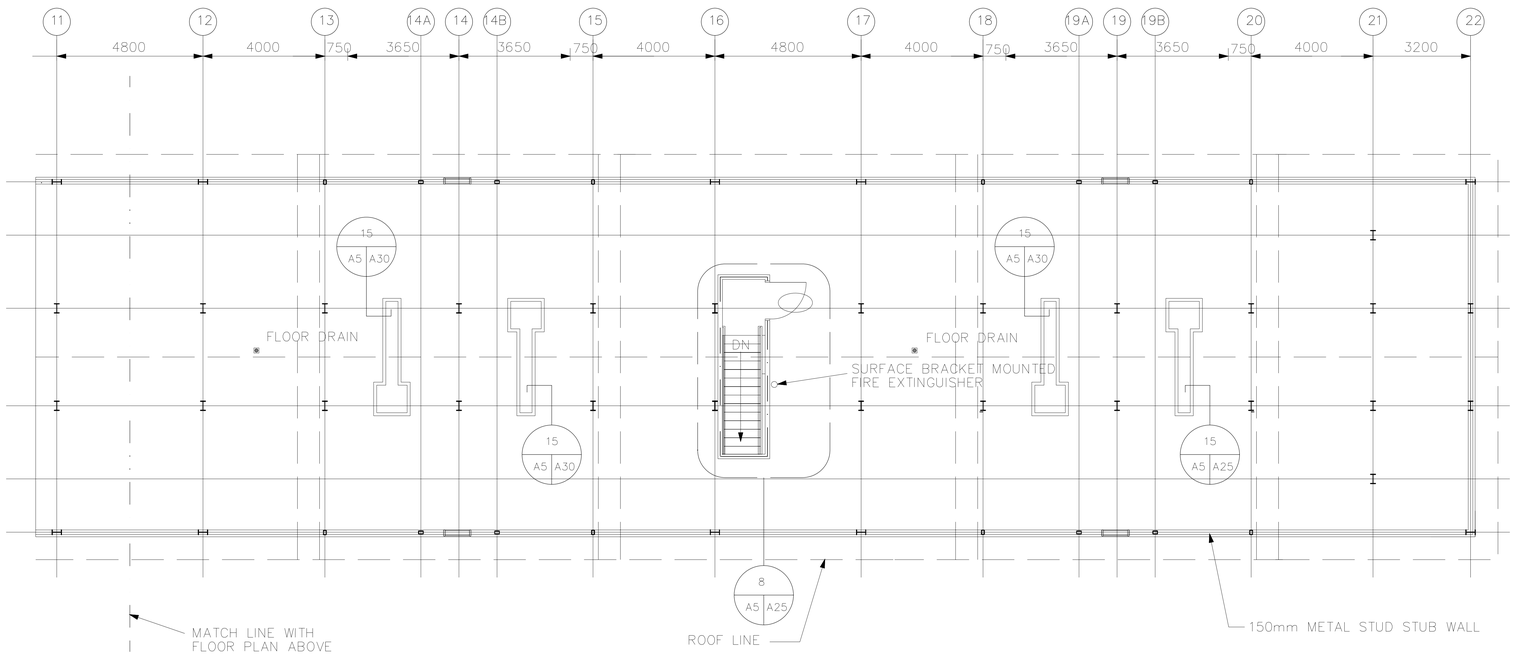
SB_DGN\BARRACKS72\G1A04FP3.DGN

..\SB_DGN\BARRACKS96\G1A04FP3.dgn 07/14/2004 01:03:27 PM



ATTIC FLOOR PLAN – LEFT END

SCALE = 1:100



ATTIC FLOOR PLAN – RIGHT END

SCALE = 1:100

WALL LEGEND

NON-RATED WALL WITH GYPSUM BOARD TO EXTEND 150 mm AOVE CEILING UNLESS OTHERWISE NOTED.

1-HOUR RATED WALL TO UNDERSIDE OF STRUCTURE, SEAL WITH FIRESTOPPING

STEEL COLUMNS ABOVE THE ATTIC FLOOR ARE SHOWN SOLID WITH STEEL COLUMN LOCATIONS BELOW THE ATTIC FLOOR SHOWN AS DOTTED TYPICAL

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

ATTIC NOTES:

1. ALIGN FLOOR PENETRATIONS WITH MECHANICAL CHASE ON FLOOR BELOW. SEE MECHANICAL DRAWINGS FOR EQUIPMENT.
2. INDIVIDUAL OPENINGS THROUGH THE ATTIC FLOOR ARE TO BE SURROUNDED BY A 100mm X 100mm CONCRETE CURB. SEE DETAIL 15/A5/A30
3. WITHIN A 1200 mm DIAMETER OF FLOOR DRAIN PROVIDE A 13 mm SLOPE TO DRAIN TYPICAL

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99 | REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS – 96 PERSONNEL

ATTIC PLAN

PLATE REFERENCE NUMBER: A-5

SHEET 187

SAV-22148

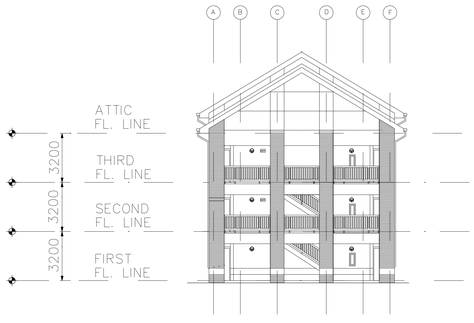
DESIGN FILE: DONSPEC$$$$$$

PARKING LOT ELEVATION

SCALE = 1:200

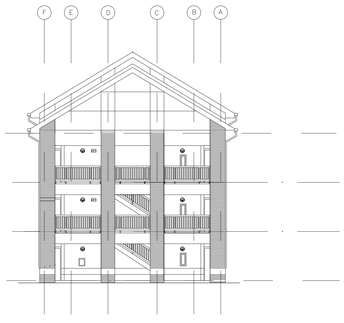
COURTYARD ELEVATION

SCALE = 1:200



LEFT SIDE ELEVATION

SCALE = 1:200



RIGHT SIDE ELEVATION

SCALE = 1:200

4000 2000 0 8000 12000 16000 20000

GRAPHIC SCALE 1:200

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

AS-BUILT

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

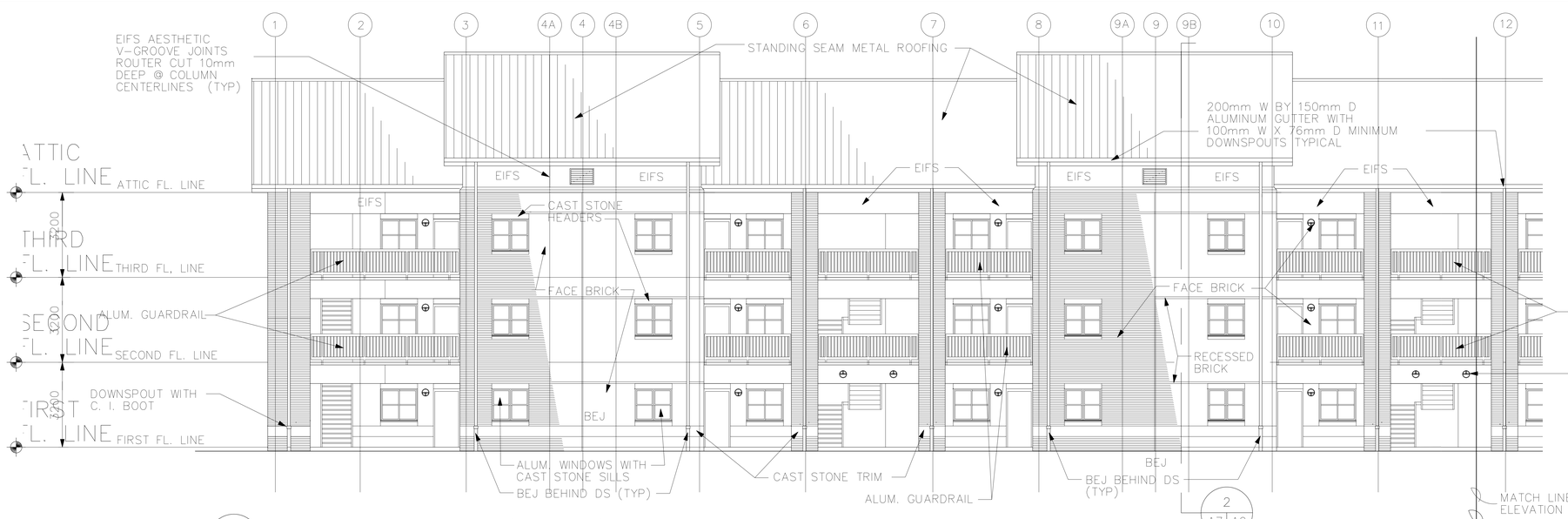
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
COMPOSITE BUILDING
ELEVATIONS

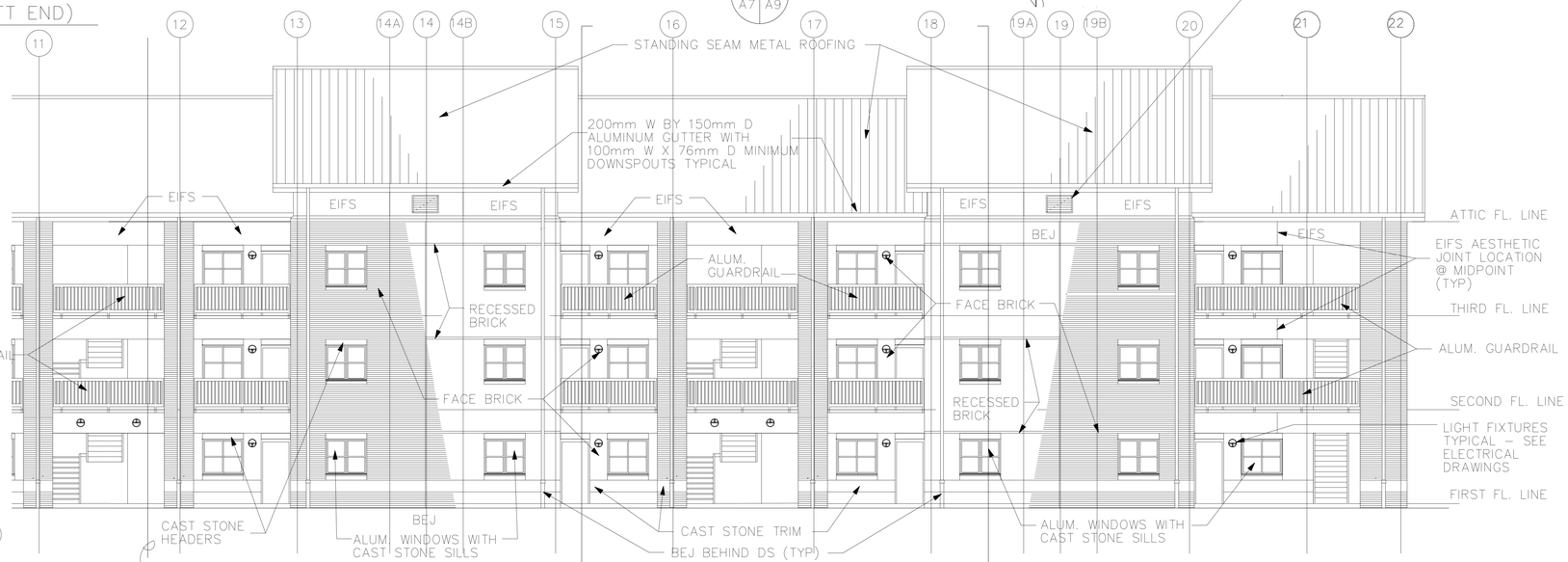
PLATE REFERENCE NUMBER:
A-6
SHEET 188

SAV-22148

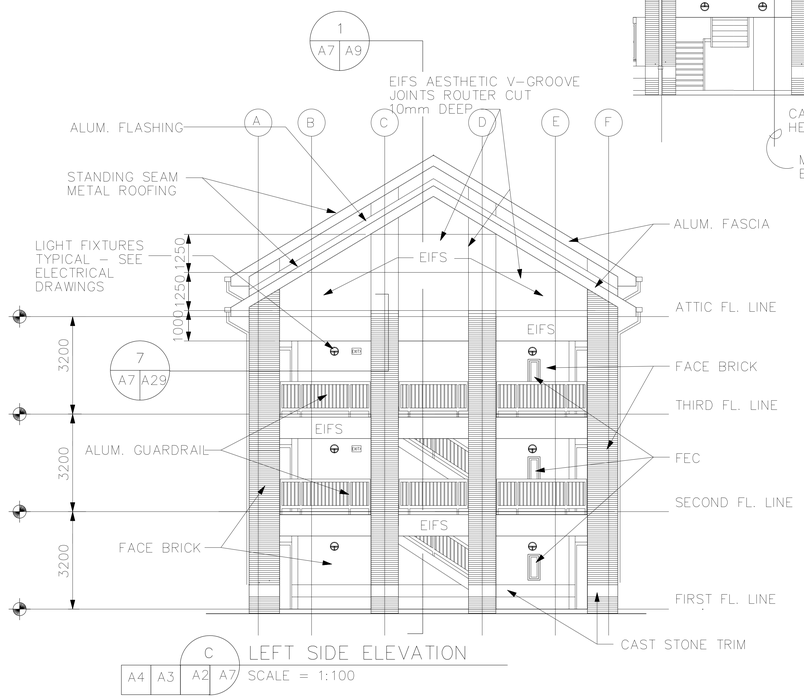
..\SB_DGN\BARRACKS96\G1A06BEL.dgn 07/14/2004 01:07:11 PM



A / A2 A7 / A3 / A4 PARKING LOT ELEVATION (LEFT END)
SCALE = 1:100



A / A2 A7 / A3 / A4 PARKING LOT ELEVATION (RIGHT END)
SCALE = 1:100



C / A4 A3 A2 A7 LEFT SIDE ELEVATION
SCALE = 1:100

NOTES:

1. SEE DETAIL 12/A30 FOR BEJ
2. SEE PLATE A-17 FOR CAST STONE PROFILES
3. SEE PLATE A-17 FOR ENLARGED LOUVER ELEVATIONS

AS-BUILT

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99 | REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

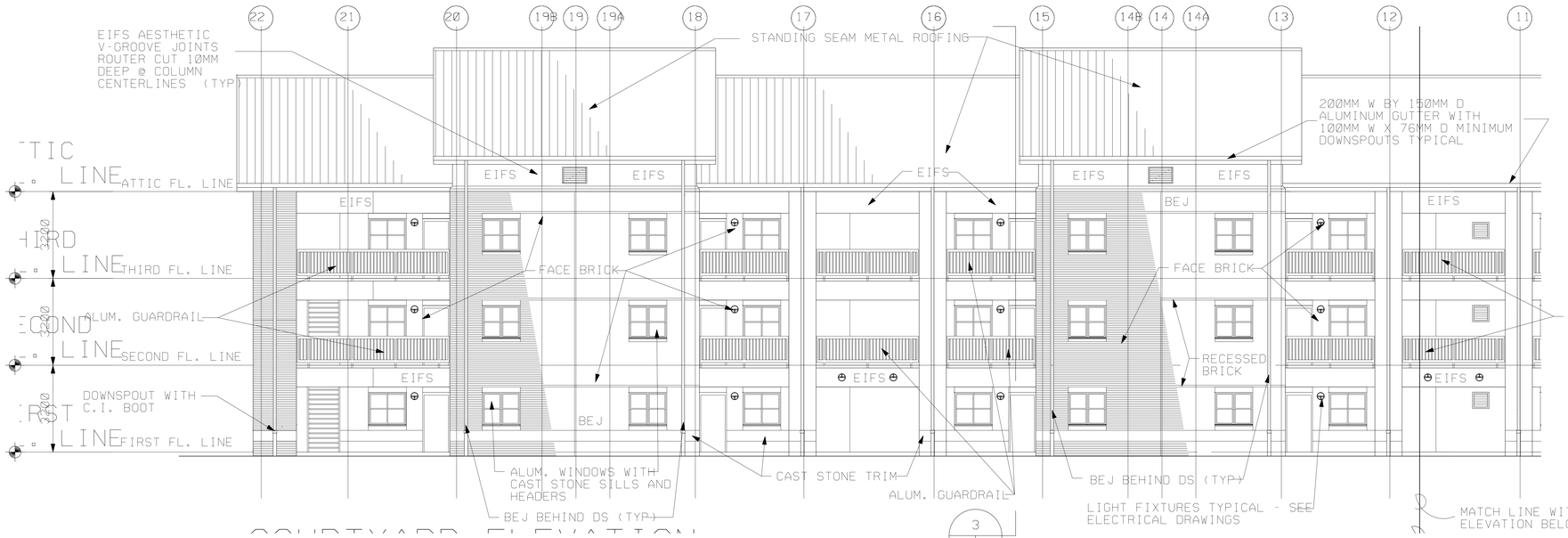
BUILDING ELEVATIONS

PLATE REFERENCE NUMBER: A-7

SHEET 189

SAV-22148

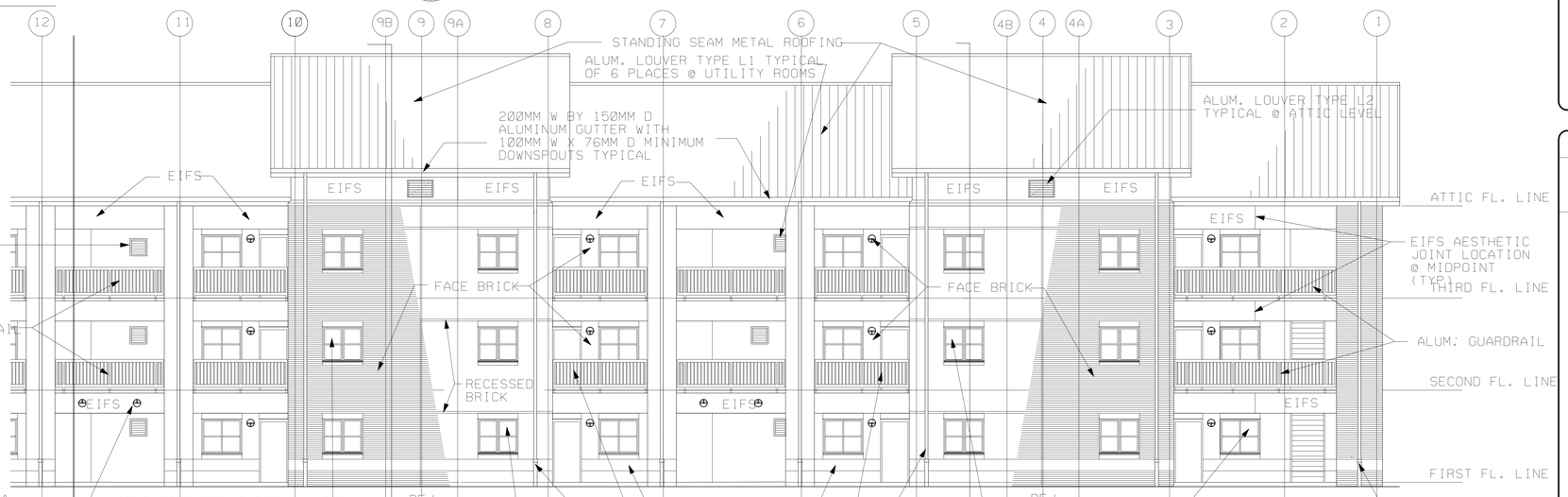
DESIGN FILE: DONSPEC$$$$$



B
A2 A8
A3
A4

COURTYARD ELEVATION (LEFT END)

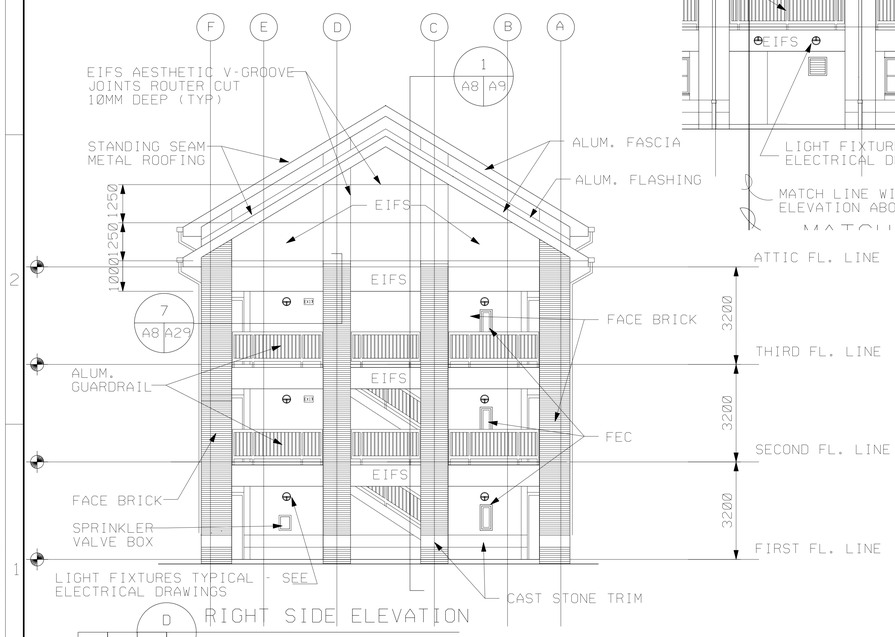
SCALE = 1:100



B
A2 A8
A3
A4

COURTYARD ELEVATION (RIGHT END)

SCALE = 1:100



D
A4 A3 A2 A8

RIGHT SIDE ELEVATION

SCALE = 1:100

NOTES:

1. SEE DETAIL 12/A30 FOR BEJ
2. SEE PLATE A-17 FOR CAST STONE PROFILES
3. SEE PLATE A-17 FOR ENLARGED LOUVER ELEVATIONS

AS-BUILT

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: &DATE&&&&&
PLOT SCALE:
REV.

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	AS-BUILT DRAWING NO REVISION THIS SHEET DESCRIPTION	DATE	BY
		FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

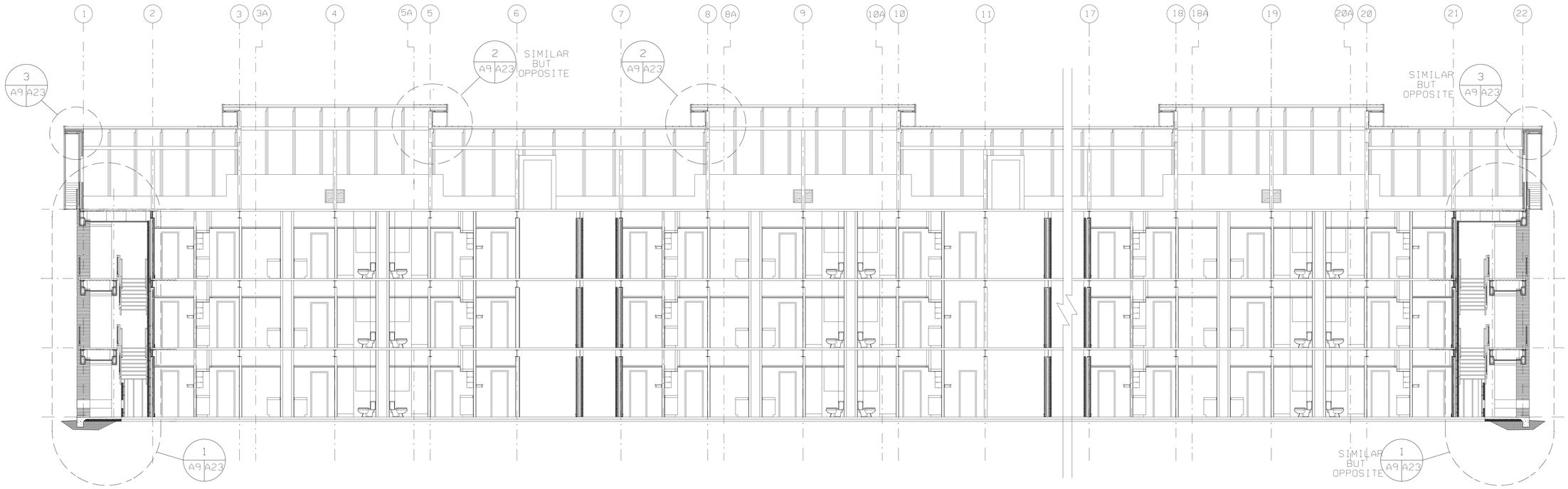
BUILDING ELEVATIONS

PLATE REFERENCE NUMBER:
A-8
SHEET 190

SAV-22148

SB_DGN\BARRACKS72\G1A08BEL.DGN

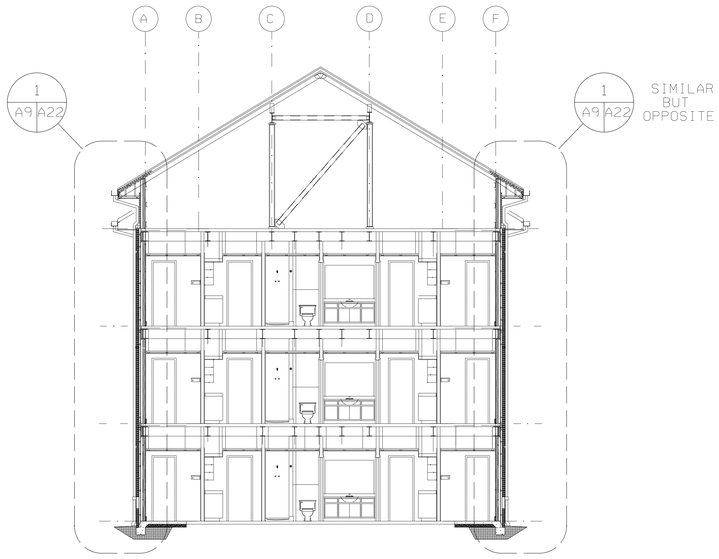
DESIGN FILE\DONSPEC&&&&&



1 A2 A9 A3 A4 A7 A8

LONGITUDINAL BUILDING SECTION

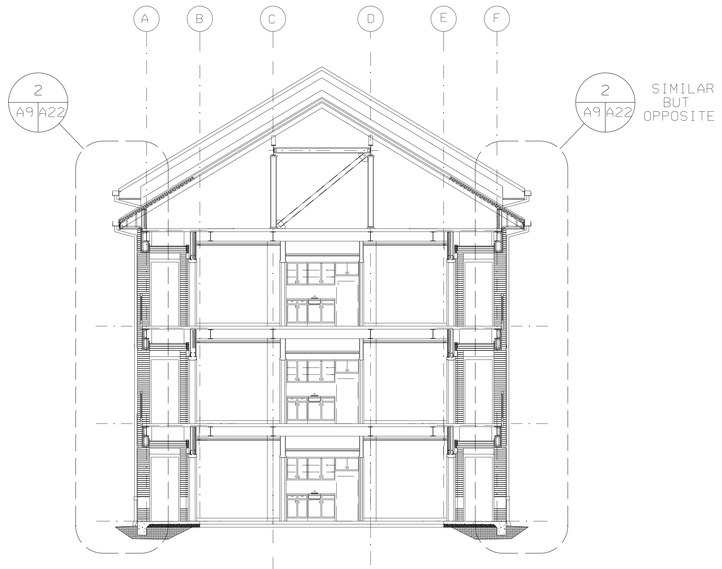
SCALE = 1:100



2 A2 A9 A3 A8 A7 A4

TRANSVERSE BUILDING SECTION

SCALE = 1:100



3 A2 A9 A3 A8 A7 A4

TRANSVERSE BUILDING SECTION

SCALE = 1:100

AS-BUILT

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

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PLOT DATE: &$DATE&&&&&
PLOT SCALE:
REV.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

BUILDING SECTIONS

PLATE REFERENCE NUMBER:
A-9

SHEET 191

SAV-22148

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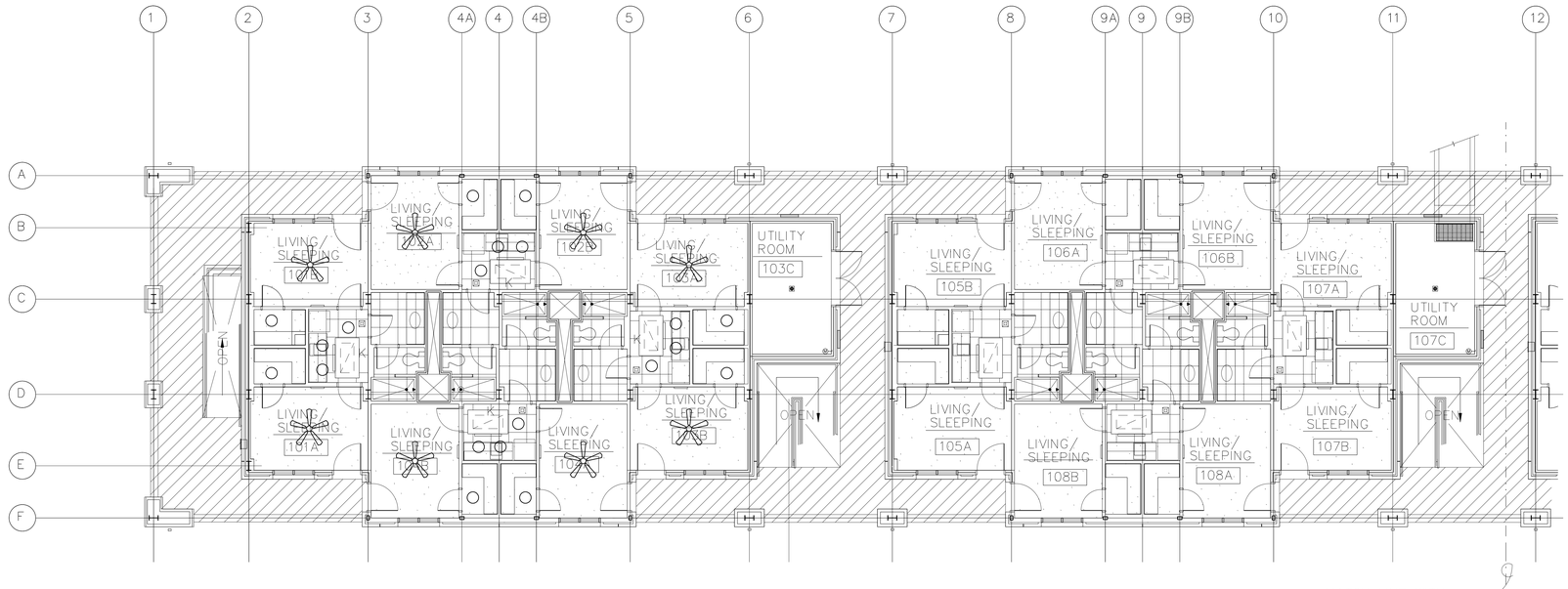
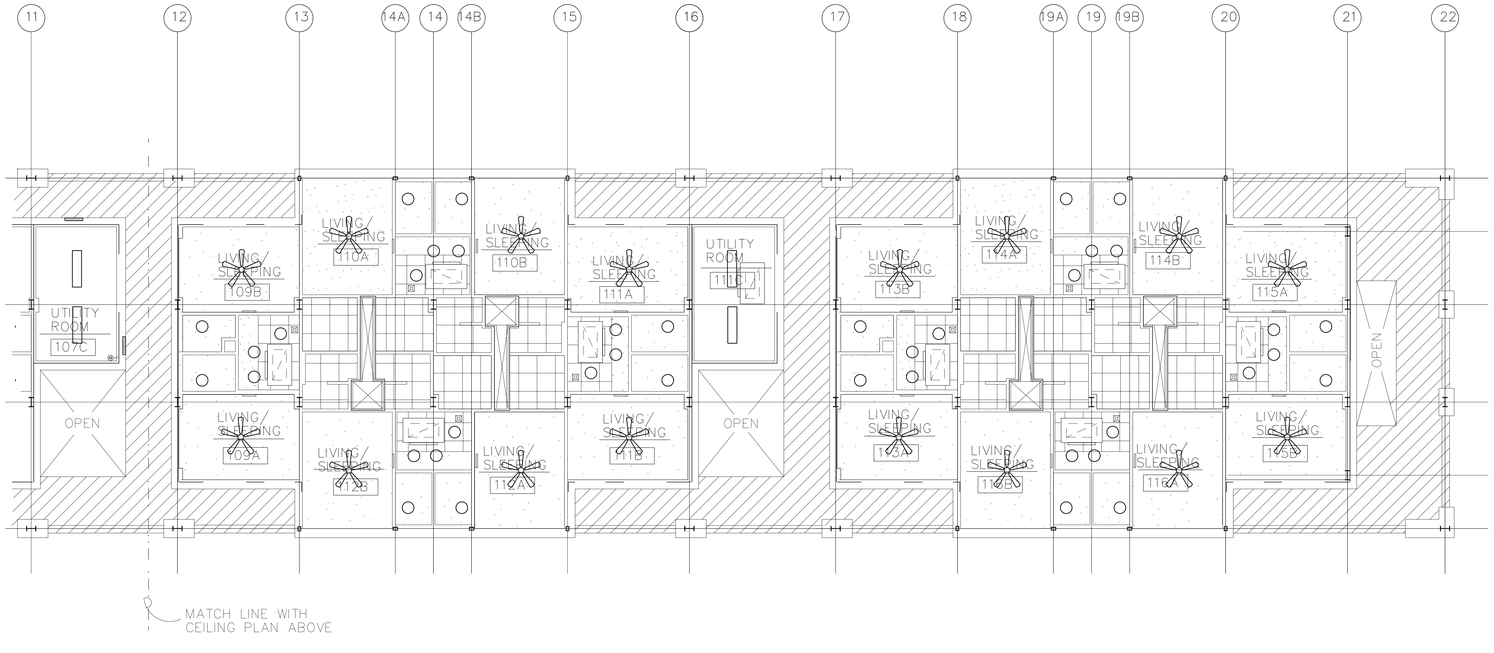


PARTIAL REFLECTED CEILING PLAN

SCALE = 1:100

MATCH LINE WITH CEILING PLAN BELOW



MATCH LINE WITH CEILING PLAN ABOVE

PARTIAL REFLECTED CEILING PLAN

SCALE = 1:100

REFLECTED CEILING PLAN LEGEND

- GYPSUM BOARD CEILING
- EXPOSED CONSTRUCTION
- EXTERIOR INSULATION AND FINISH SYSTEM CEILING
- METAL SOFFIT PANELS
- ACOUSTICAL TILE
- ROUND LIGHT FIXTURE
- FLUORESCENT LIGH FIXTURE
- NON-RATED WALL
- RETURN GRILL
- 1-HOUR RATED WALL TO UNDERSIDE OF STRUCTURE, ALL VOIDS SEALED WITH FIRESTOPPING
- CEILING FAN
- FAN COIL UNIT (BOTTOM PANEL OF RECESS UNIT FLUSH WITH CEILING - SEE MECHANICAL DRAWINGS)
- UNIT HEATER LOCATED IN ATTIC

NOTES:

1. AESTHETIC JOINTS IN EXTERIOR INSULATION AND FINISH SYSTEM(EIFS) SHALL BE V-GROOVE ROUTER CUT JOINTS @ 6 mm DEEP
2. ROUND LIGHT FIXTURES ARE NOT DRAWN TO SCALE AND ARE DRAWN LARGER THAN THEIR ACTUAL SIZE FOR GRAPHIC CLARITY
3. PROVIDE AESTHETIC JOINTS IN EIFS @ COLUMN CENTERLINES IN BALCONY AND BREEZEWAY SOFFITS TYPICAL

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
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PLOT DATE: $$DATE$$$$$
PLOT SCALE:
REV.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
FIRST FLOOR REFLECTED CEILING PLAN

AS-BUILT

2000 1000 0 2000 4000 6000 8000 10000

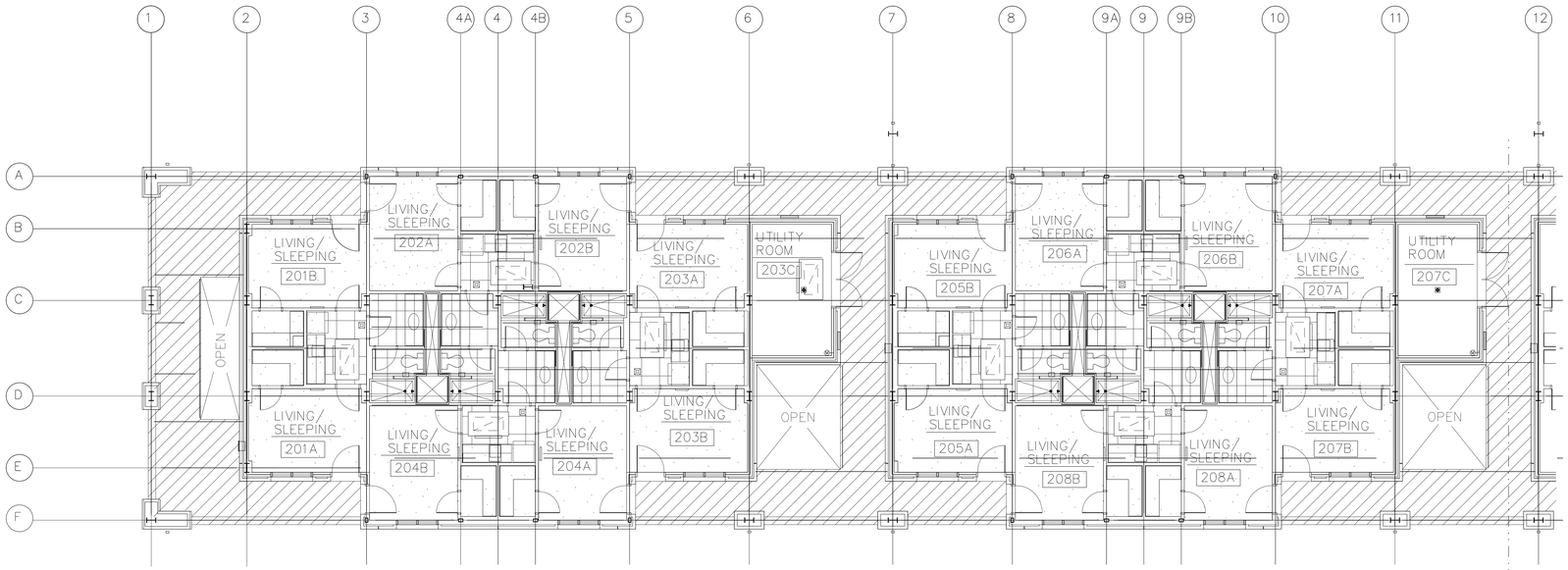
GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

PLATE REFERENCE NUMBER:
A-11
SHEET 193

SAV-22148

DESIGN FILE: D:\NSPEC\$$$$$



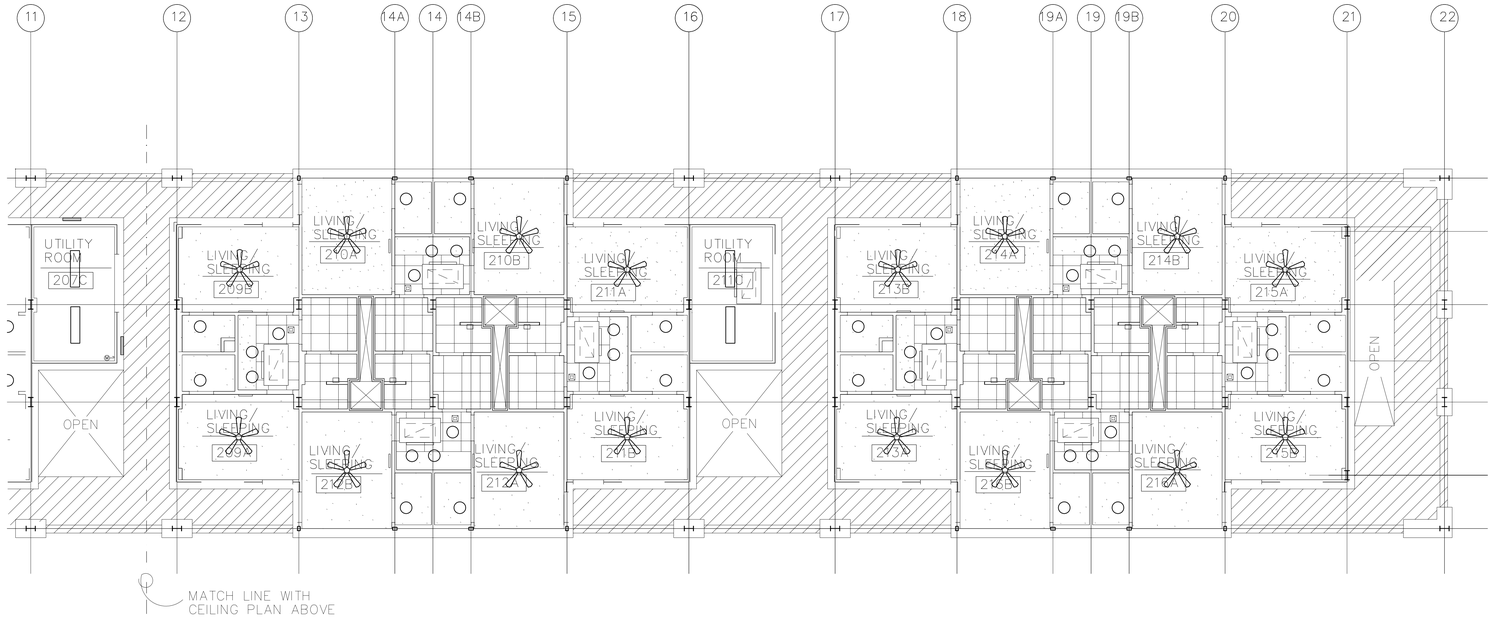
MATCH LINE WITH CEILING PLAN BELOW

PARTIAL REFLECTED CEILING PLAN

SCALE = 1:100

TYP SECOND FLOOR PLAN

SCALE: 1:100



MATCH LINE WITH CEILING PLAN ABOVE

PARTIAL REFLECTED CEILING PLAN

SCALE = 1:100

AS-BUILT

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99 | REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

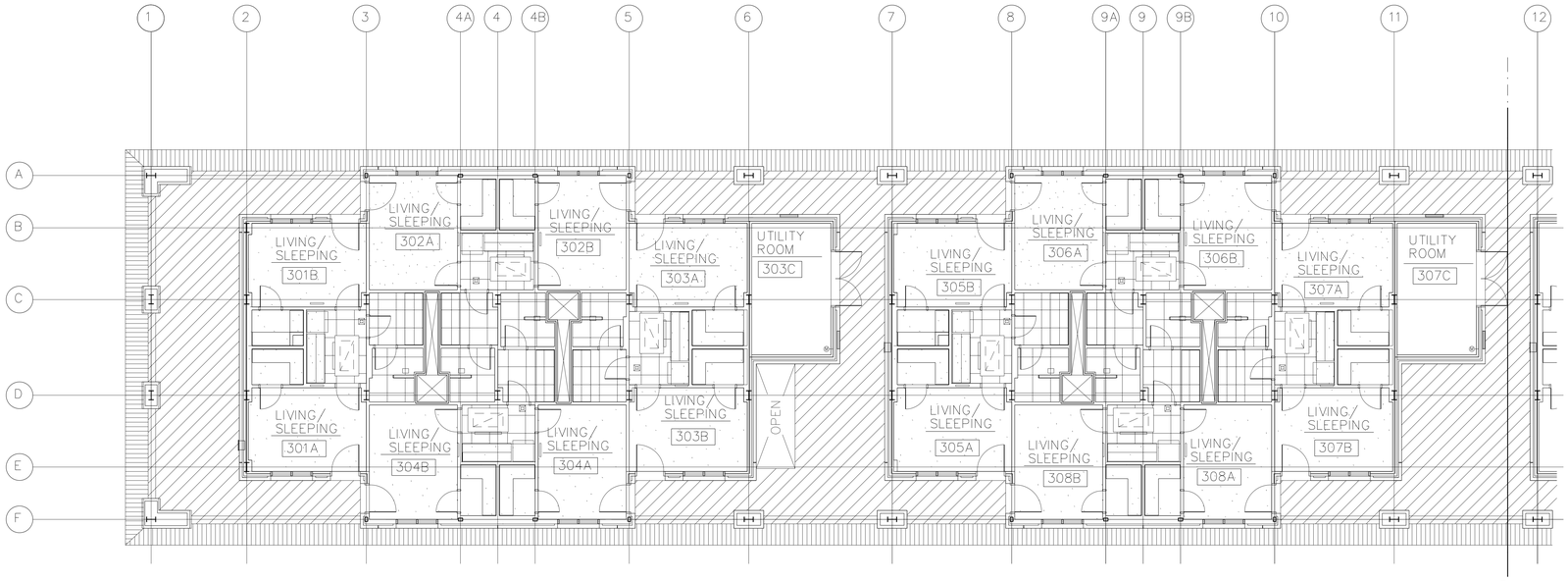
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
SECOND FLOOR REFLECTE D CEILING PLAN

PLATE REFERENCE NUMBER:
A-12
SHEET 194

SAV-22148

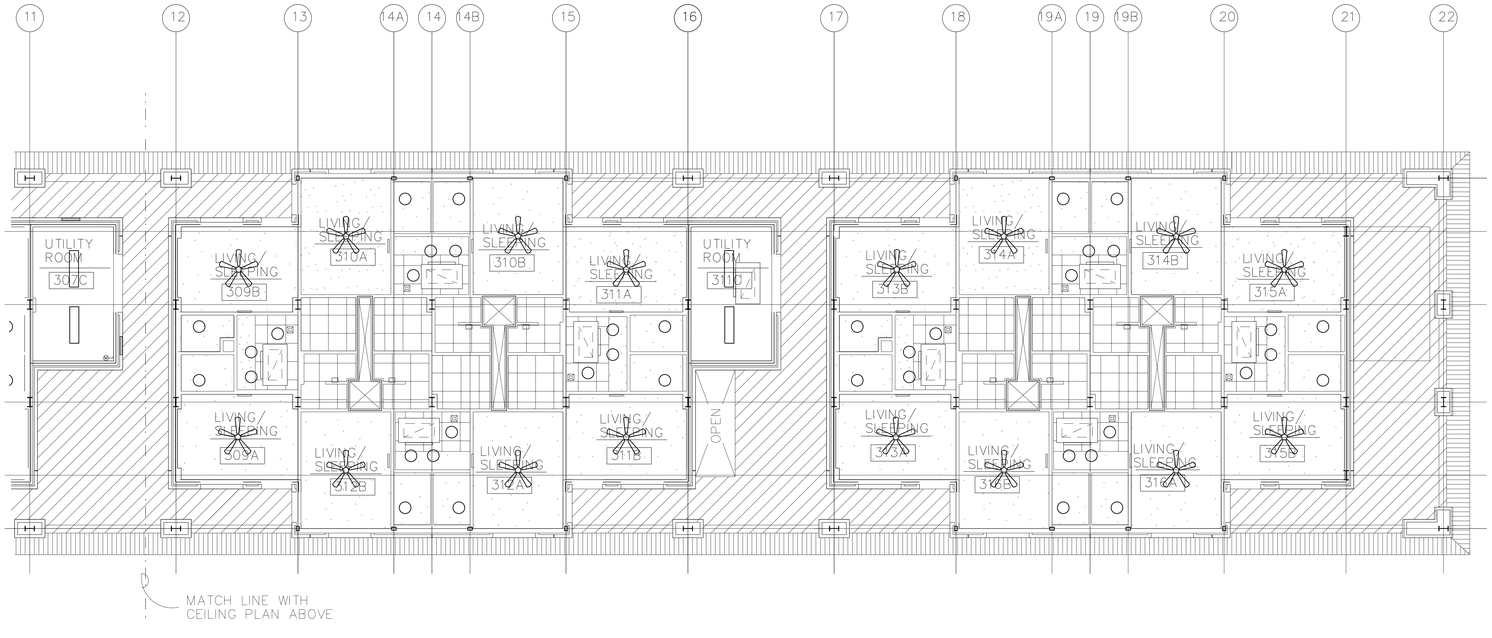
DESIGN FILE: DONSPEC$$$$$$



PARTIAL REFLECTED CEILING PLAN

SCALE = 1:100

MATCH LINE WITH CEILING PLAN BELOW



MATCH LINE WITH CEILING PLAN ABOVE

PARTIAL REFLECTED CEILING PLAN

SCALE = 1:100

AS-BUILT

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
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SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$$
PLOT SCALE:
REV.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

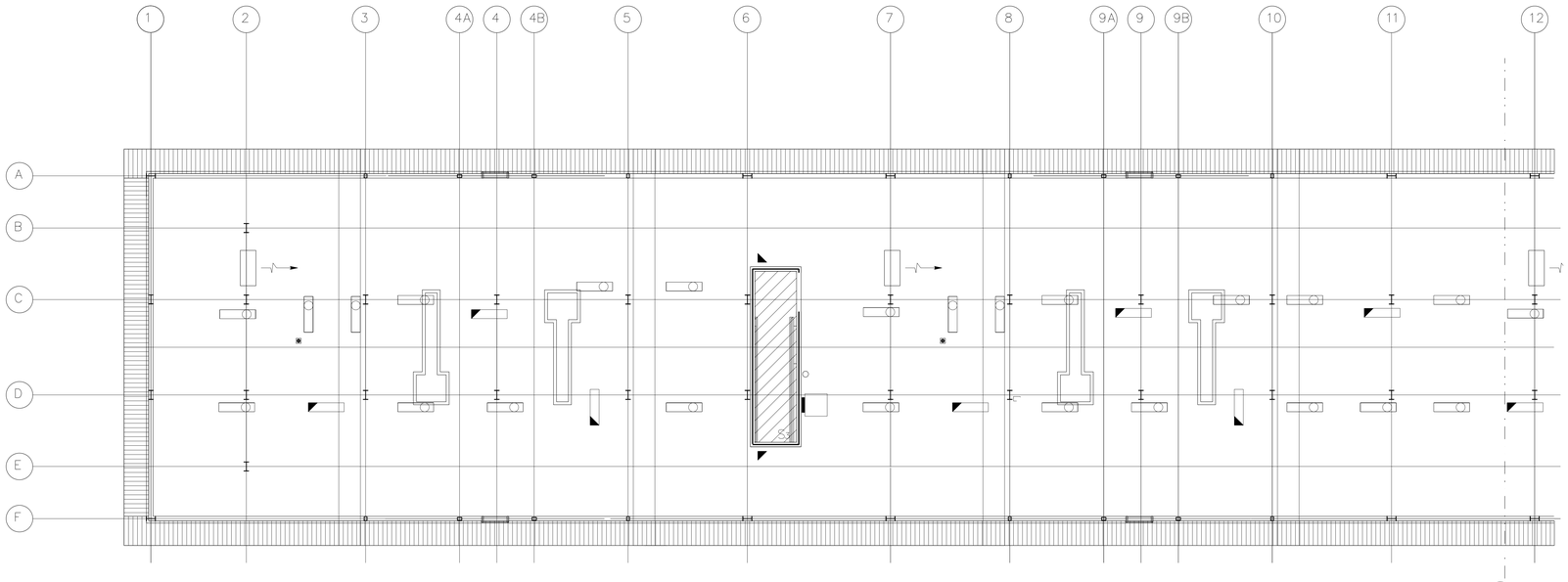
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
THIRD FLOOR REFLECTED CEILING PLAN

PLATE REFERENCE NUMBER:
A-13
SHEET 195

SAV-22148

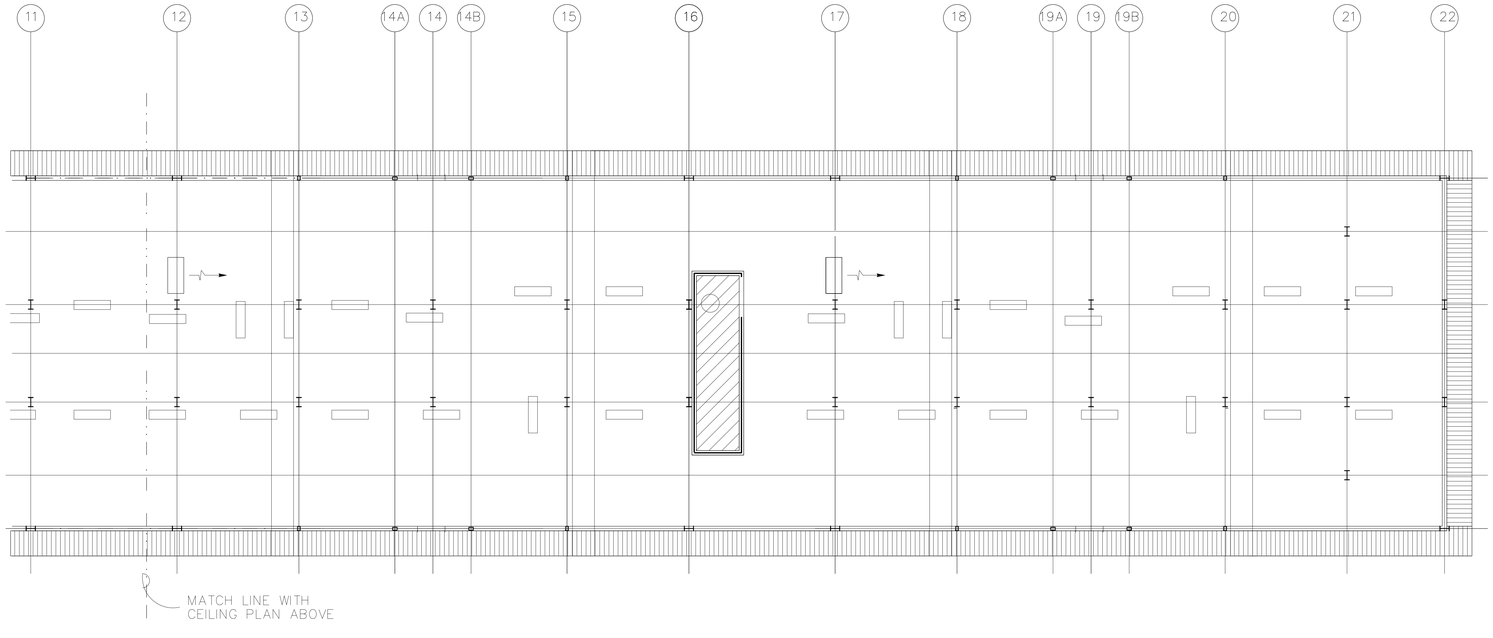
DESIGN FILE: D:\NSPEC\$$$$$$



PARTIAL REFLECTED CEILING PLAN

SCALE = 1:100

MATCH LINE WITH
CEILING PLAN BELOW



MATCH LINE WITH
CEILING PLAN ABOVE

PARTIAL REFLECTED CEILING PLAN

SCALE = 1:100

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99	REV.
CATEGORY CODE 721-11-12	SOLICITATION NO: DACA21-99-B-0034
	PLOT DATE: $$DATE$$$$$
	PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
ATTIC REFLECTED
CEILING PLAN

AS-BUILT

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

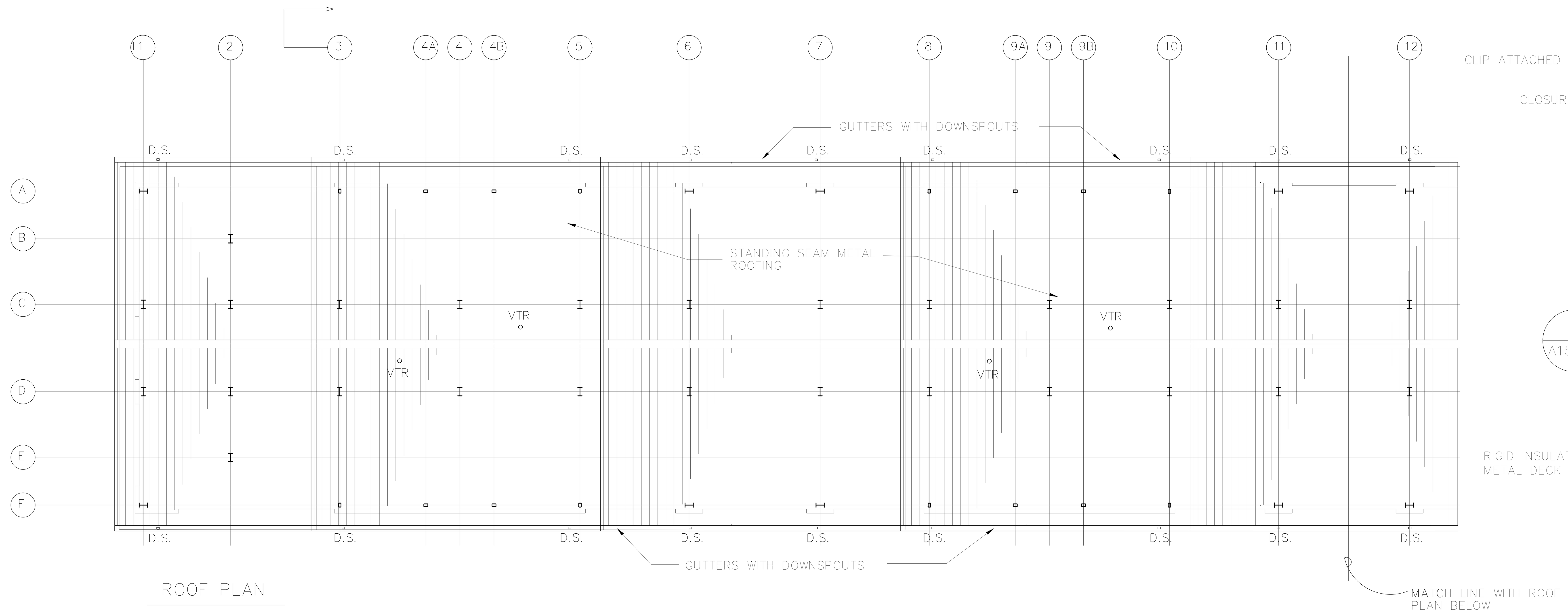
PLATE
REFERENCE
NUMBER:

A-14

SHEET 196

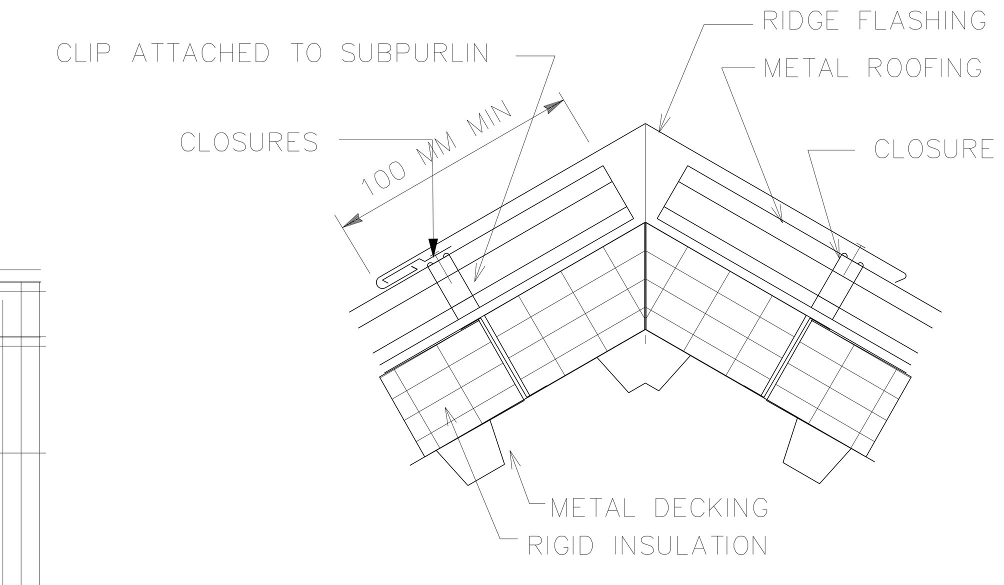
SAV-22148

DESIGN FILE: D:\NSPEC\$\$\$



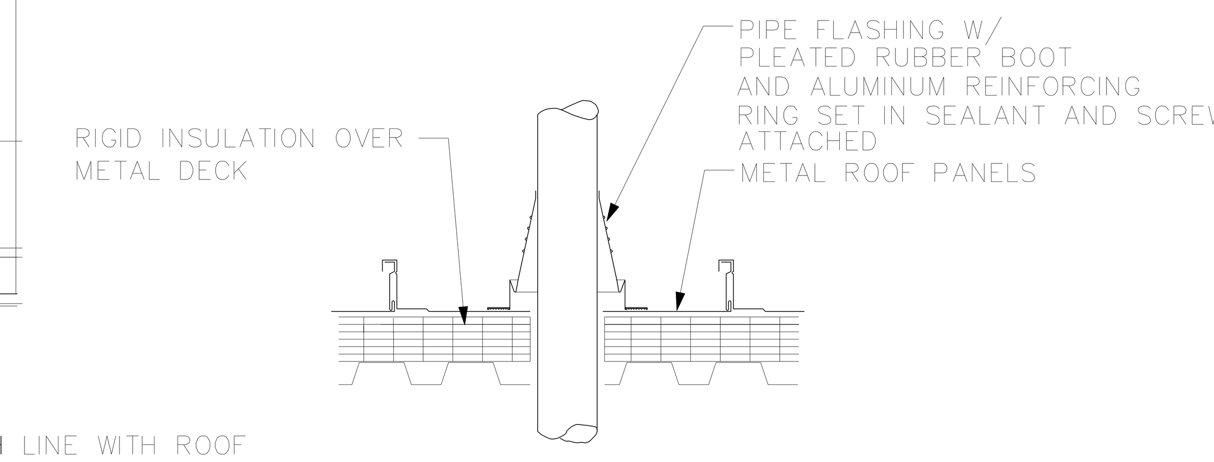
ROOF PLAN

SCALE = 1:100



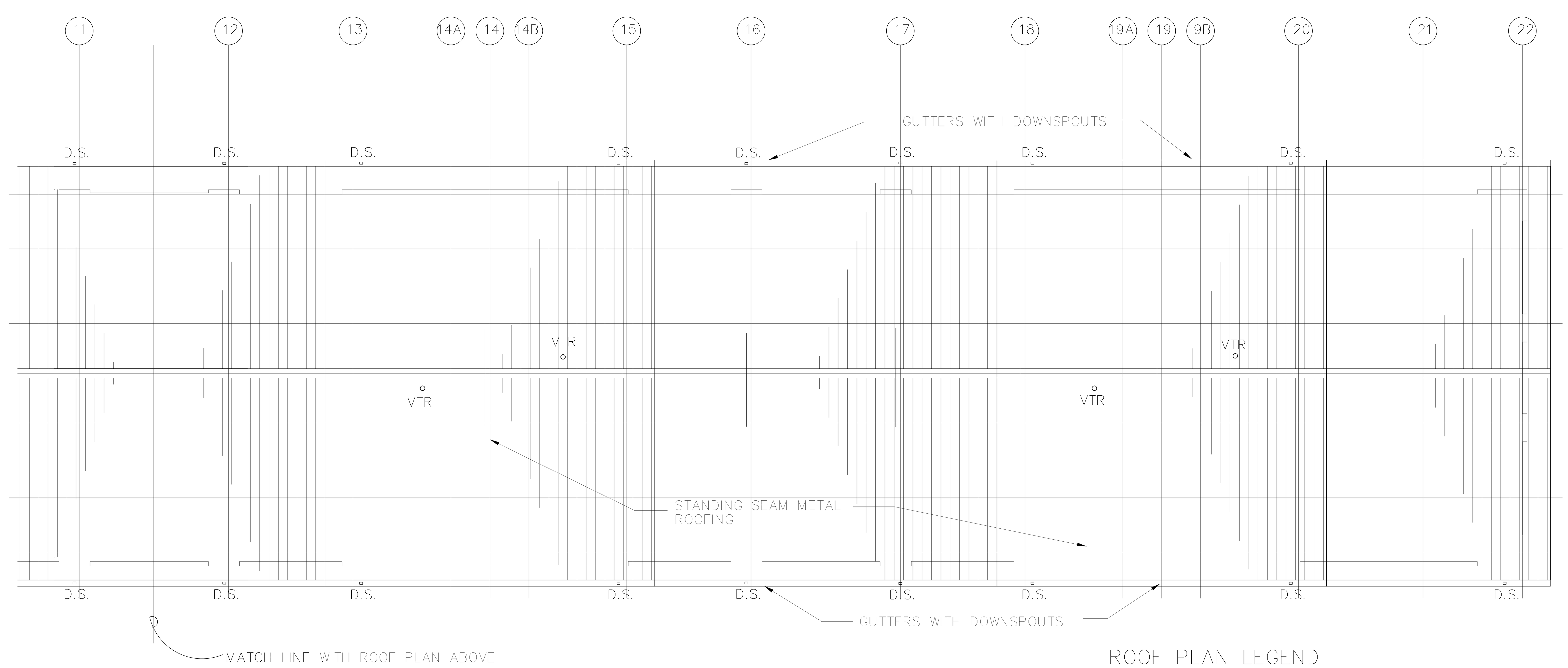
1 A15 A15 TYPICAL RIDGE DETAIL

NOT TO SCALE



2 A15 A15 VENT PIPE DETAIL

NOT TO SCALE



ROOF PLAN

SCALE = 1:100

ROOF PLAN LEGEND

∘	VTR – SEE DETAIL
D.S.	DOWNSPOUT

NOTE: SEE MECH. DRWGS FOR ACTUAL SIZES OF VENTS THRU ROOF

AS-BUILT

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99 | REV.

CATEGORY CODE 721-11-12

SOLICITATION NO: DACA21-99-B-0034

PLOT DATE: $$DATE$$$$

PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL FORT BENNING, GEORGIA

BARRACKS – 96 PERSONNEL

ROOF PLAN AND DETAILS

PLATE REFERENCE NUMBER: A–15

SHEET 197

SAV-22148

DESIGN FILE: DGNSPEC$$$

SB_DGN\BARRACKS72\G1A15RP.DGN

...\SB_DGN\BARRACKS96\G1A15RP.dgn 07/26/2004 01:00:15 PM

FINISH SCHEDULE

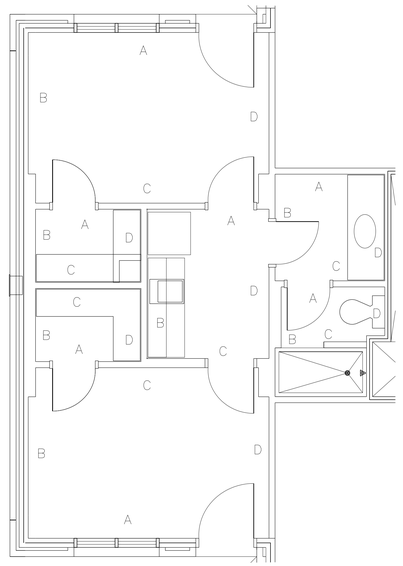
ROOM NO.	ROOM NAME	FLOOR	BASE	WAINSCOT MAT	WAINSCOT HEIGHT	WALL A	WALL B	WALL C	WALL D	CEILING MAT	CEILING HEIGHT	REMARKS
	ROOMS AT TYPICAL ROOM MODULE "A"											
	LIVING/SLEEPING	CPT	WOOD	–	–	PGWB	PGWB	PGWB	PGWB	PGWB	2650	
	CLOSET	CPT	WOOD	–	–	PGWB	PGWB	PGWB	PGWB	PGWB	2300	
	SERVICE AREA	VCT	WOOD	–	–	PGWB	PGWB	PGWB	PGWB	ATC	2300	
	LAVATORY	CT	CT	–	–	PGWB	PGWB	PGWB	PGWB	ATC	2300	
	BATH	CT	CT	CT *	1200	CT/PGWB	CT/PGWB	CT/PGWB	CT/PGWB	ATC	2300	*FULL HEIGHT CERAMIC TILE IN SHOWER AREA
	ROOMS AT TYPICAL ROOM MODULE "B"											
	LIVING/SLEEPING	CPT	WOOD	–	–	PGWB	PGWB	PGWB	PGWB	PGWB	2650	
	CLOSET	CPT	WOOD	–	–	PGWB	PGWB	PGWB	PGWB	PGWB	2300	
	SERVICE AREA	VCT	WOOD	–	–	PGWB	PGWB	PGWB	PGWB	ATC	2300	
	LAVATORY	CT	CT	–	–	PGWB	PGWB	PGWB	PGWB	ATC	2300	
	BATH	CT	CT	CT *	1200	CT/PGWB	CT/PGWB	CT/PGWB	CT/PGWB	ATC	2300	*FULL HEIGHT CERAMIC TILE IN SHOWER AREA
	ADITIONAL BARRACKS ROOMS											
103C	UTILITY ROOM	CONC/HARD	RESILIENT	–	–	PGWB	PGWB	PGWB	PGWB	EXP	–	
107C	UTILITY ROOM	CONC/HARD	RESILIENT	–	–	PGWB	PGWB	PGWB	PGWB	EXP	–	
111C	UTILITY ROOM	CONC/HARD	RESILIENT	–	–	PGWB	PGWB	PGWB	PGWB	EXP	–	
203C	UTILITY ROOM	CONC/HARD	RESILIENT	–	–	PGWB	PGWB	PGWB	PGWB	EXP	–	
207C	UTILITY ROOM	CONC/HARD	RESILIENT	–	–	PGWB	PGWB	PGWB	PGWB	EXP	–	
211C	UTILITY ROOM	CONC/HARD	RESILIENT	–	–	PGWB	PGWB	PGWB	PGWB	EXP	–	
303C	UTILITY ROOM	CONC/HARD	RESILIENT	–	–	PGWB	PGWB	PGWB	PGWB	EXP	–	
307C	UTILITY ROOM	CONC/HARD	RESILIENT	–	–	PGWB	PGWB	PGWB	PGWB	EXP	–	
311C	UTILITY ROOM	CONC/HARD	RESILIENT	–	–	PGWB	PGWB	PGWB	PGWB	EXP	–	

ABBREVIATIONS

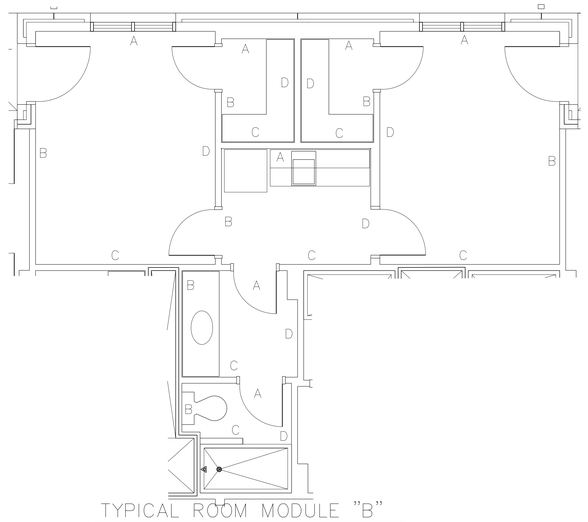
ATC	ACOUSTICAL TILE CEILING	GWB	GYPSUM WALLBORD
CONC/HARDNER	CONCRETE W/HARDNER	EXP	EXPOSED STRUCTURE
CPT	CARPET	PGWB	PAINTED GYPSUM WALLBOARD
CT	CERAMIC TILE		

GENERAL NOTES

1. SEE SPECIFICATION SECTION 09000 FOR ADDITIONAL INFORMATION
2. MINI BLINDS SHALL BE PROVIDED AT ALL EXTERIOR WINDOWS (TYPICAL
3. WOOD BASE IS 14mm BY 131mm. WOOD BASE AT VCT FLOORING SHALL HAVE A 13mm QUARTER ROUND AT FINISH FLOOR. QUARTER ROUND SHALL MATCH BASE.
4. EXPOSED CONCRETE SLABS IN BREEZEWAYS, STAIR TREADS, STAIR LANDINGS, AND EXTERIOR ENTRANCE PADS SHALL HAVE A BROOM FINISH. EXPOSED CONCRETE SLABS IN INTERIOR ROOMS AND SLABS TO RECEIVE CERAMIC TILE SHALL HAVE A TROWEL FINISH. CONCRETE SLABS TO RECEIVE CARPET AND RESILIENT TILE SHALL HAVE A FLOAT FINISH.
5. ONE–HOUR SPRAY–APPLIED FIREPROOFING SHALL BE APPLIED TO ALL STRUCTURAL STEEL FRAMING COMPONENTS AND THE UNDERSIDE OF THE STEEL FLOOR AND ROOF DECKS. FIREPROOFING IS NOT REQUIRED AT EXPOSED STEEL STAIRS, STAIR FRAMING AND METAL STUD FRAMING COMPONENTS. BALCONY COLUMN FIREPROOFING SHALL BE ONE–HOUR UL DESIGN NO. X772. COLUMN FIREPROOFING WITHIN THE LIVING MODULE SHALL BE ONE–HOUR UL DESIGN NO. X772 AS PER ACC RFI #42 & PO 0007. FLOOR–CEILING FIREPROOFING SHALL BE ONE–HOUR UL DESIGN NO. D780. ATTIC FRAMING FIREPROOFING SHALL BE UL DESIGN NO. X772. ROOF DECK AND FRAMING FIREPROOFING SHALL BE ONE–HOUR UL DESIGN NO. P732.
6. FLOOR TILE IN LAVATORY AND BATH AREAS SHALL BE INSTALL BY THIN–SET METHOD



TYPICAL ROOM MODULE "A"



TYPICAL ROOM MODULE "B"

TYPICAL ROOM WALL FINISH DESIGNATION KEY PLANS

NOTE:

SEE SPECIFICATION 09000 BUILDING COLOR AND FINISH SCHEDULE FOR FINISHES ON WALLS DESIGNATED ON KEY PLAN

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$$
PLOT SCALE:
REV.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
1	REVISED AS–BUILT DRAWING	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS – 96 PERSONNEL
ROOM FINSH SCHEDULE

PLATE REFERENCE NUMBER:
A–16
SHEET 198

SAV-22148

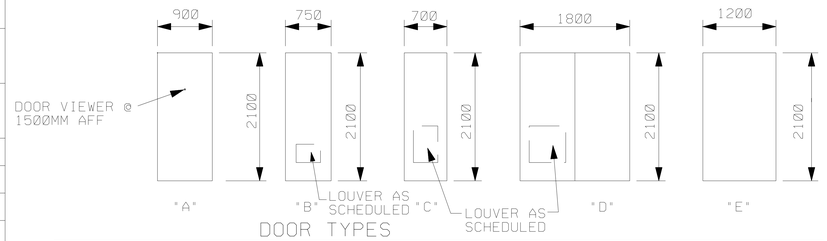
DESIGN FILE: DONSPEC$$$$$$

DOOR SCHEDULE

DOOR NO.	DOOR TYPE	FRAME TYPE	MATERIAL		SIZE			DETAILS			UL LABEL	LOUVER	HW SET	REMARKS
			FRAME	DOOR	WIDTH	HEIGHT	THICK	HEAD	JAMB	SILL				
DOORS @ TYPICAL ROOM CLUSTER FOR BARRACKS BUILDING														
01	A	1	METAL	METAL	900	2100	44	1	2	3	C	-	1	
02	A	1	METAL	METAL	900	2100	44	1	2	3	C	-	1	
03	A	1	METAL	METAL	900	2100	44	1	2	3	C	-	1	
04	A	1	METAL	METAL	900	2100	44	1	2	3	C	-	1	
05	A	1	METAL	METAL	900	2100	44	1	2	3	C	-	1	
06	A	1	METAL	METAL	900	2100	44	1	2	3	C	-	1	
07	A	1	METAL	METAL	900	2100	44	1	2	3	C	-	1	
08	A	1	METAL	METAL	900	2100	44	1	2	3	C	-	1	
09	C	3	METAL	WOOD	700	2100	44	4	5	6	-	-	3	
10	C	3	METAL	WOOD	700	2100	44	4	5	6	-	-	3	
11	B	2	METAL	WOOD	750	2100	44	16	17	7	-	400X300	2	
12	C	3	METAL	WOOD	700	2100	44	4	5	6	-	-	3	
13	C	3	METAL	WOOD	700	2100	44	4	5	6	-	-	3	
14	B	2	METAL	WOOD	750	2100	44	4	5	7	-	400X300	2	
15	C	3	METAL	WOOD	700	2100	44	4	5	8	-	400X300	4	
16	C	3	METAL	WOOD	700	2100	44	4	5	9	-	400X300	5	
17	B	2	METAL	WOOD	750	2100	44	16	17	7	-	400X300	2	
18	B	2	METAL	WOOD	750	2100	44	4	5	7	-	400X300	2	
19	C	3	METAL	WOOD	700	2100	44	4	5	8	-	400X300	4	
20	C	3	METAL	WOOD	700	2100	44	4	5	9	-	400X300	5	
21	C	3	METAL	WOOD	700	2100	44	4	5	9	-	400X300	5	
22	C	3	METAL	WOOD	700	2100	44	4	5	8	-	400X300	4	
23	B	2	METAL	WOOD	750	2100	44	4	5	7	-	400X300	2	
24	C	3	METAL	WOOD	700	2100	44	4	5	6	-	-	3	
25	C	3	METAL	WOOD	700	2100	44	4	5	6	-	-	3	
26	B	2	METAL	WOOD	750	2100	44	16	17	7	-	400X300	2	
27	B	2	METAL	WOOD	750	2100	44	16	17	7	-	400X300	2	
28	C	3	METAL	WOOD	700	2100	44	4	5	6	-	-	3	
29	C	3	METAL	WOOD	700	2100	44	4	5	6	-	-	3	
30	B	2	METAL	WOOD	750	2100	44	4	5	7	-	400X300	2	
31	C	3	METAL	WOOD	700	2100	44	4	5	8	-	400X300	4	
32	C	3	METAL	WOOD	700	2100	44	4	5	9	-	400X300	5	
ADDITIONAL DOORS FOR BARRACKS BUILDING														
101	D	4	METAL	METAL	PR 900	2100	44	1	2	3	C	-	6	
102	D	4	METAL	METAL	PR 900	2100	44	1	2	3	C	-	6	
103	D	4	METAL	METAL	PR 900	2100	44	1	2	3	C	-	6	
201	D	6	METAL	METAL	PR 900	2100	44	1	2	3	C	-	6	
202	D	4	METAL	METAL	PR 900	2100	44	1	2	3	C	-	6	
203	D	4	METAL	METAL	PR 900	2100	44	1	2	3	C	-	6	
301	D	4	METAL	METAL	PR 900	2100	44	1	2	3	C	-	6	
302	D	4	METAL	METAL	PR 900	2100	44	1	2	3	C	-	6	
303	D	4	METAL	METAL	PR 900	2100	44	1	2	3	C	-	6	
A01	E	5	METAL	METAL	1200	2100	44	1	2	3	B	-	7	
A02	E	5	METAL	METAL	1200	2100	44	1	2	3	B	-	7	

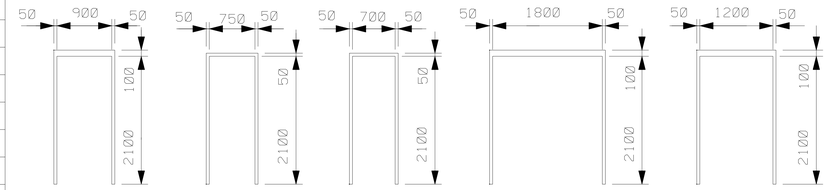
NOTES:

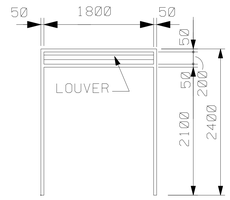
1. ALL DOOR HEAD, JAMB AND SILL DETAILS ARE SHOWN ON PLATE A-18 UNLESS NOTED OTHERWISE.
2. SEE PLATES A-2, A-3, A-3, A-5 AND A-20 FOR DOOR NUMBERS



DOOR TYPES

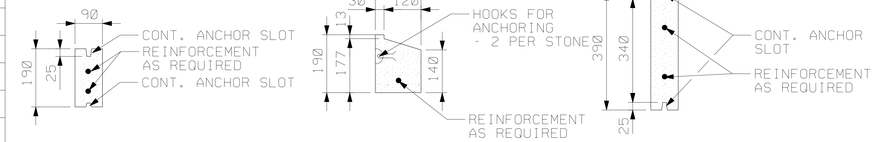
SCALE = 1:50





FRAME TYPES

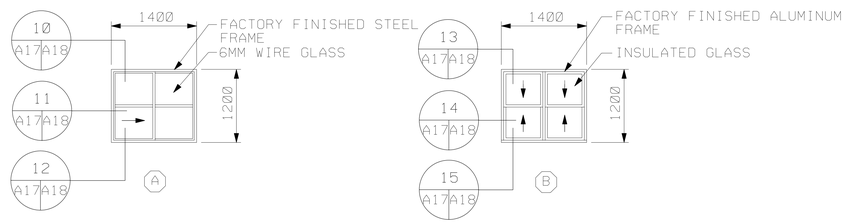
SCALE = 1:50



HEADER SILL ACCENT BAND

CAST STONE PROFILES

SCALE: 1:10



UL CLASS C LABELED ¾ HOUR FIRE RATED HORIZONTAL SINGLE SLIDE STEEL WINDOW

NON-RATED DOUBLE HUNG ALUMINUM WINDOW

WINDOW TYPES

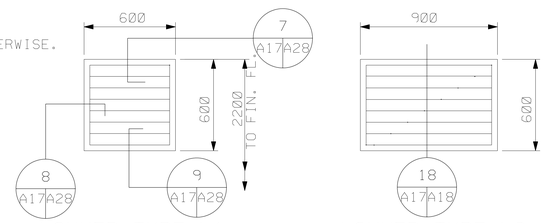
SCALE = 1:50

NOTES:

REFER TO PLATE A-20 FOR LOCATION OF WINDOW TYPES.

PROVIDE INSECT SCREENS FOR ALL WINDOWS.

AS-BUILT



200 100 0 200 400 600 800 1000

GRAPHIC SCALE 1:10

1000 500 0 1000 2000 3000 4000 5000

GRAPHIC SCALE 1:50

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
CATEGORY CODE 721:11:12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE= $$DATE$$$$$
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REV.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

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	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

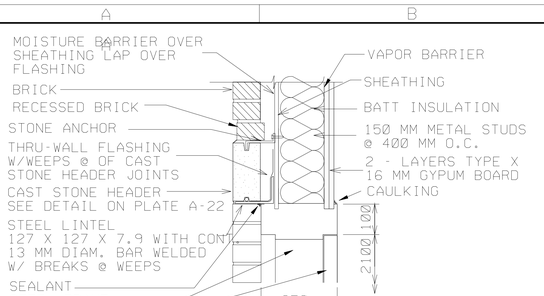
BARRACKS - 96 PERSONNEL
DOOR SCHEDULE AND MISCELLANEOUS DETAILS

PLATE REFERENCE NUMBER:
A-17

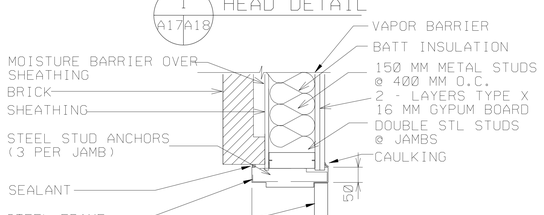
SHEET 199

SAV-22148

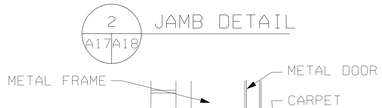
DESIGN FILE=DONSPEC$$$$$



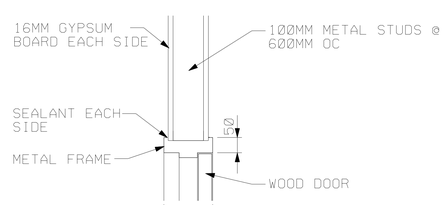
1 A17A18 HEAD DETAIL



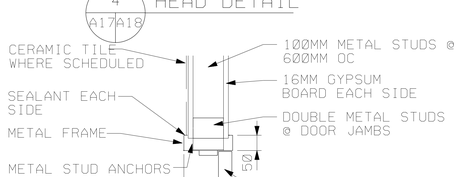
2 A17A18 JAMB DETAIL



3 A17A18 SILL DETAIL

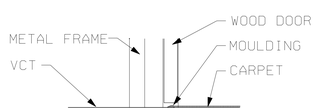


4 A17A18 HEAD DETAIL



5 A17A18 JAMB DETAIL

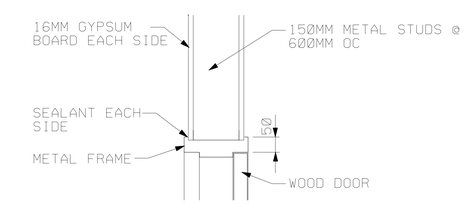
6 A17A18 SILL DETAIL



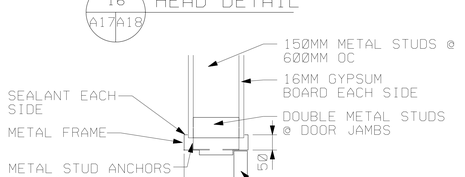
7 A17A18 SILL DETAIL

8 A17A18 SILL DETAIL

9 A17A18 SILL DETAIL



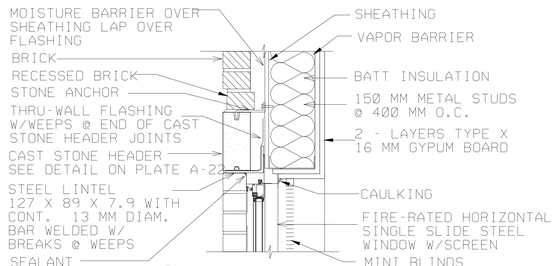
16 A17A18 HEAD DETAIL



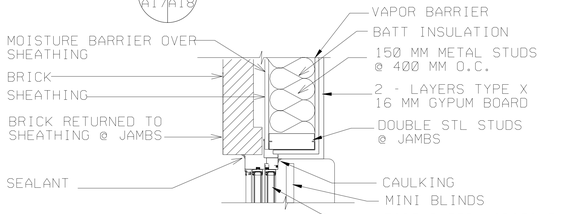
17 A17A18 JAMB DETAIL

DOOR DETAILS

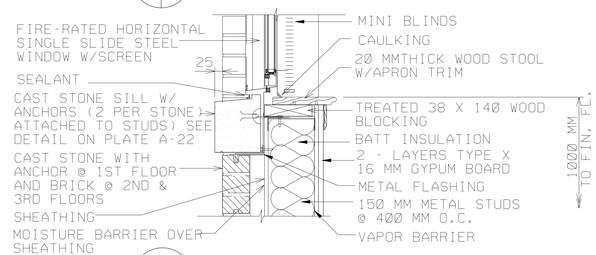
SCALE = 1:10



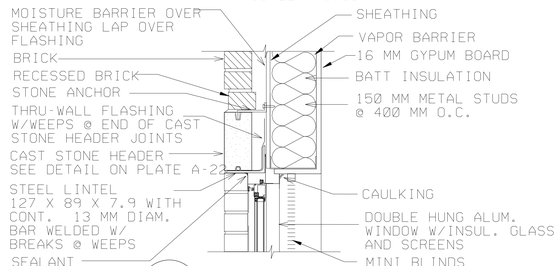
10 A17A18 HEAD DETAIL



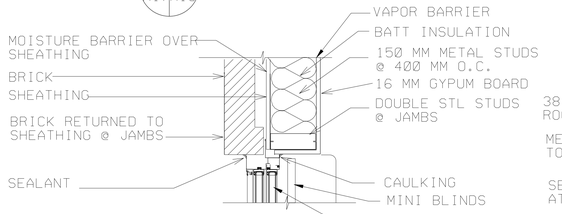
11 A17A18 JAMB DETAIL



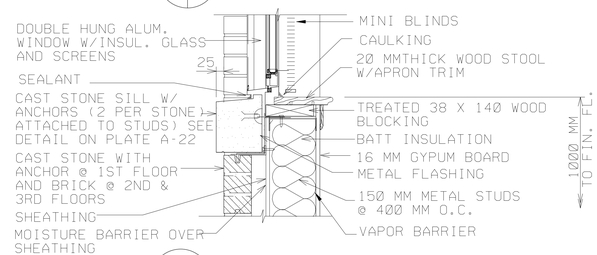
12 A17A18 SILL DETAIL



13 A17A18 HEAD DETAIL



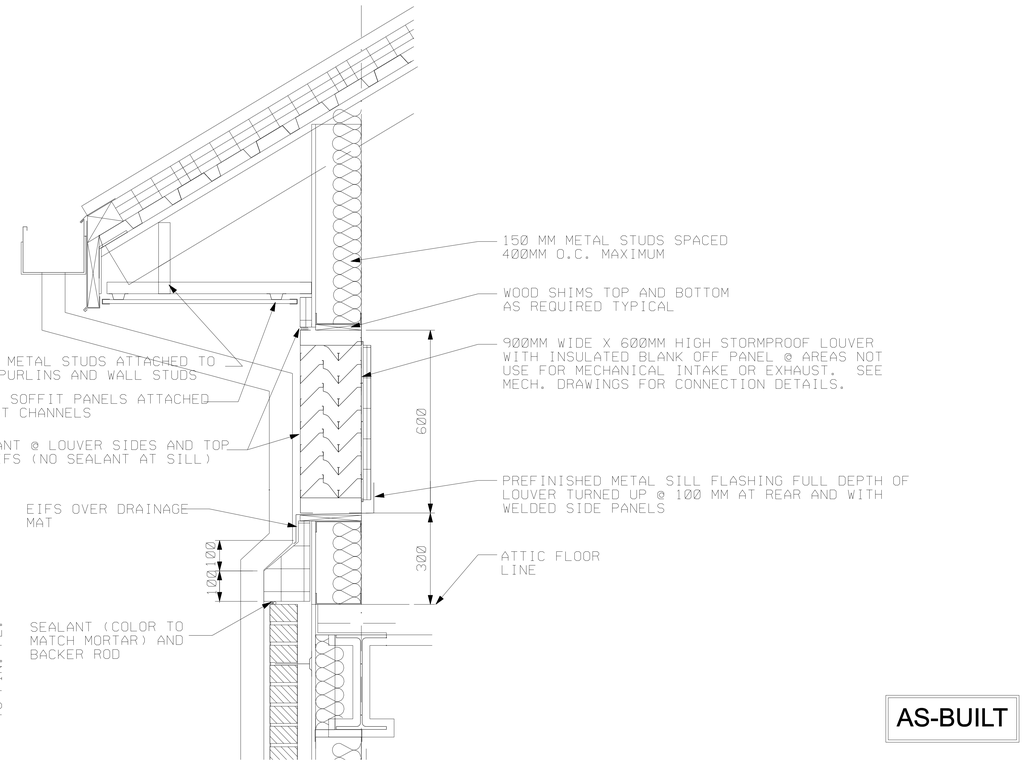
14 A17A18 JAMB DETAIL



15 A17A18 SILL DETAIL

WINDOW DETAILS

SCALE = 1:10



18 A17A-8 A-7A18 LOUVER DETAIL

SCALE = 1:10

200 100 0 200 400 600 800 1000

GRAPHIC SCALE 1:10

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99 | REV.
CATEGORY CODE 721:11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC
	REVISED IN ACCORDANCE WITH AMENDMENT 0002	02-JUL-94	CH

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

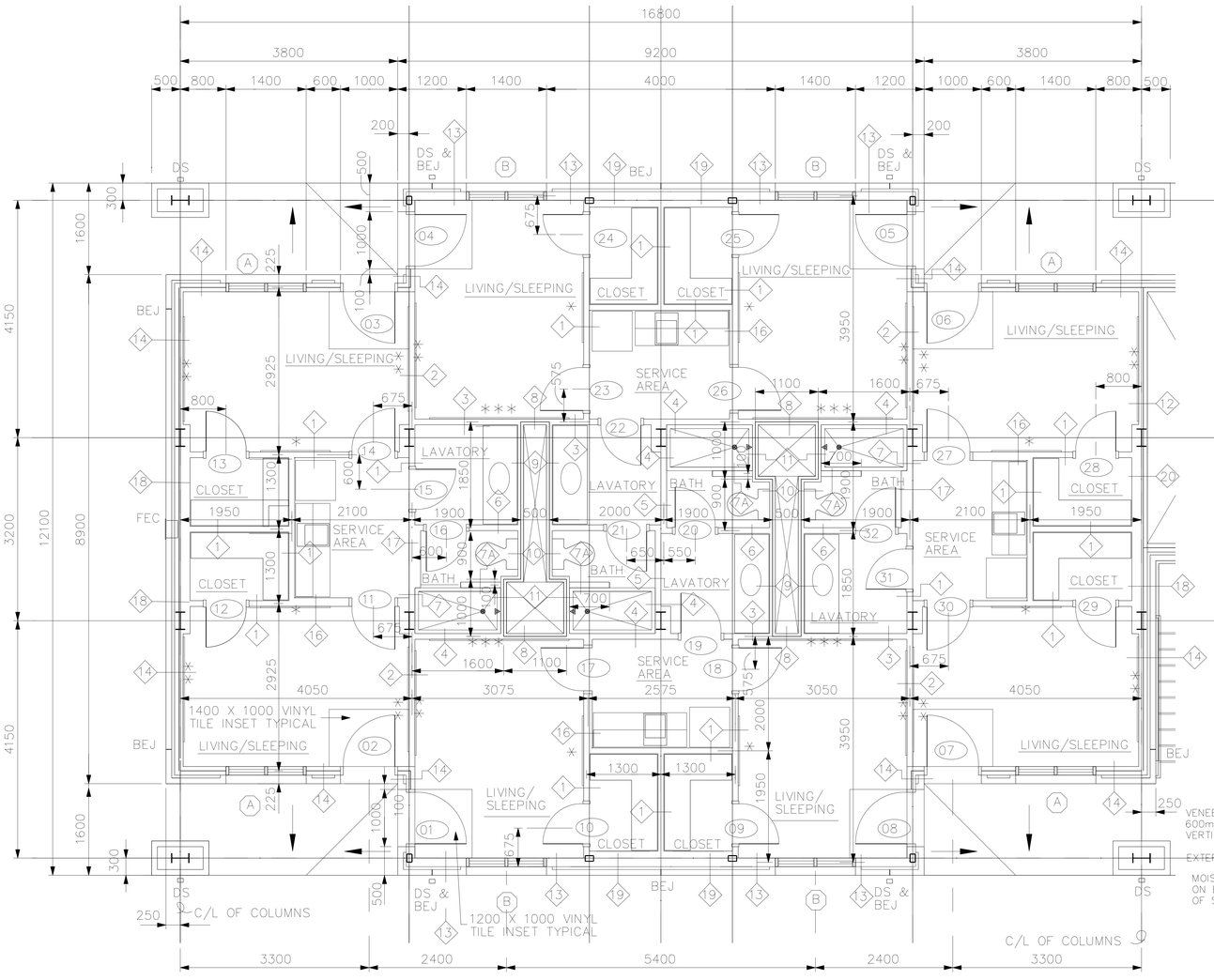
BARRACKS - 96 PERSONNEL
DOOR AND WINDOW DETAILS

AS-BUILT

PLATE REFERENCE NUMBER:
A-18
SHEET 200

SAV-22148

DESIGN FILE=DONSPEC$$$$

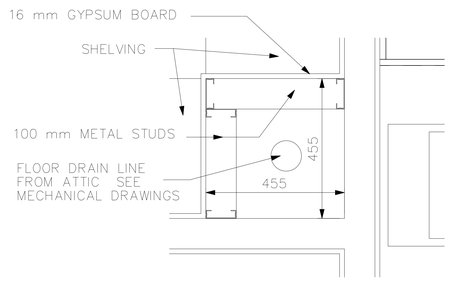


1 TYPICAL ROOM CLUSTER

SCALE = 1:50

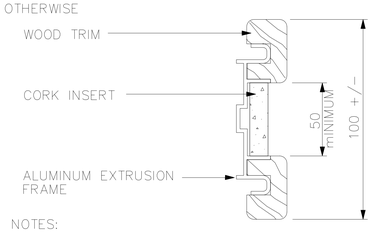
NOTES:

1. ALL INTERIOR DIMENSIONS ARE SHOWN TO CENTERLINE OF METAL STUD WALLS
2. WALL LEGEND:
   - NON-RATED WALL
   - 1 HOUR FIRE RATED WALL
3. LOCATE BEJ'S 600 mm FROM CORNER UNLESS OTHERWISE INDICATED - SEE DETAIL 12/A30/A30
4. FOR FEC - SEE DETAIL 10/A30/A30
5. ARROWS ON EXTERIOR SLABS INDICATES DIRECTION OF SLOPE. SLABS TO SLOPE 13 mm FROM WALL TO EDGE TYPICAL.



CLOSET CHASE DETAIL

SCALE = 1:10

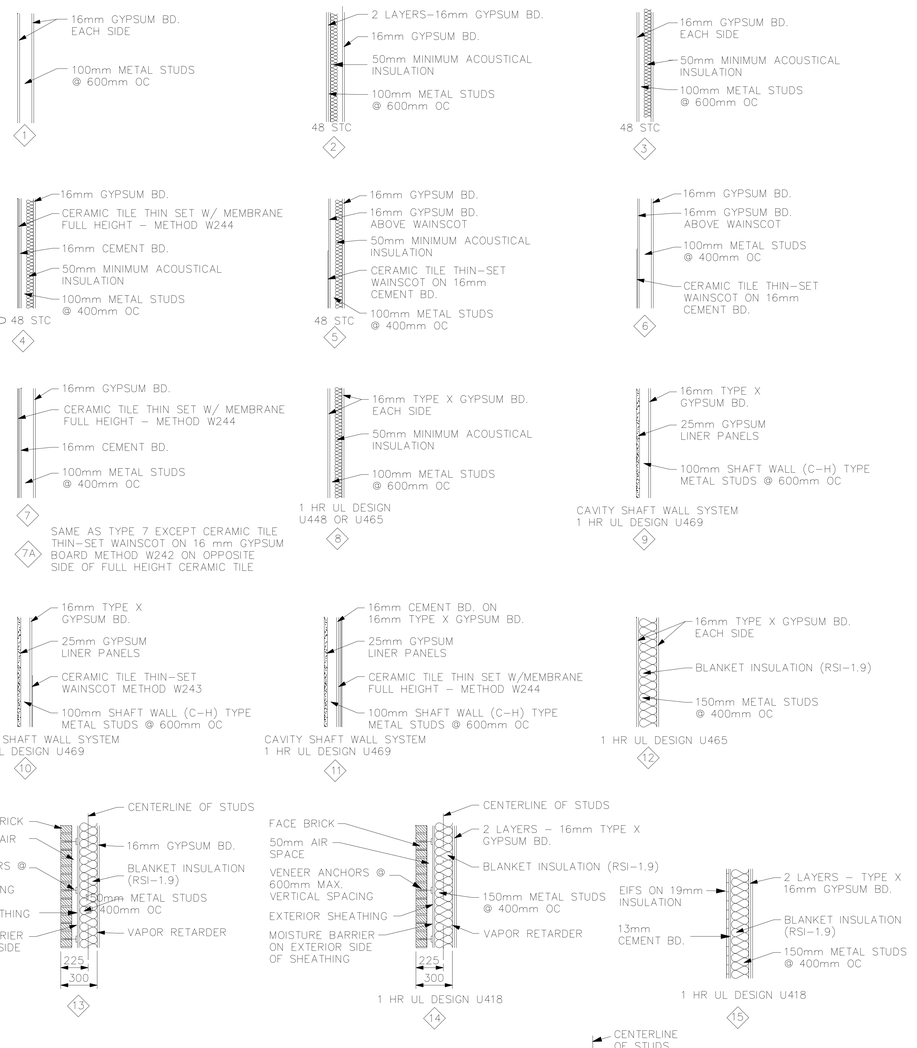


NOTES:

1. TACKSTRIP DISPLAY RAILS SHALL BE PROVIDED WITH END CAPS @ EACH END
2. TACKSTRIP DISPLAY RAILS SHALL BE MOUNTED WITH CENTER @ 2100 mm AFF
3. RAILS SHALL BE CENTERED ON 3 WALLS OF EACH LIVING/SLEEPING ROOM SPACE AS SHOWN IN THE FOLLOWING LENGHTS; * = 1220 mm; ** = 1830 mm; *** = 2440 mm

WOODEN TACKSTRIP DISPLAY RAIL DETAIL

NOT TO SCALE



WALL TYPES

NOT TO SCALE

WALL TYPES NOTES:

1. WALL TYPES SHOWN ON THIS SHEET PERTAIN TO THE BARRACKS BUILDING ONLY.
2. THE 50mm MINIMUM ACOUSTICAL INSULATION SHOWN IN THE WALL TYPES IS REPRESENTATIVE OF MINERAL WOOL INSULATION. 90mm GLASS FIBER INSULATION MAY BE USED IN PLACE OF THE MINERAL WOOL.

   ALL WALLS WITH AN STC RATING INDICATED SHALL BE EXTENDED TO THE UNDERSIDE OF STRUCTURE AND SEALED AT TOP AND BOTTOM WITH AN ACOUSTICAL SEALANT ON BOTH SIDES OF THE WALL.
4. ALL FIRE RATED WALLS SHALL BE EXTENDED TO THE UNDERSIDE OF STRUCTURE AND SEALED AT TOP AND BOTTOM WITH AN ACOUSTICAL SEALANT ON BOTH SIDES OF THE WALL.

AS-BUILT

1000 500 0 1000 2000 3000 4000 5000

GRAPHIC SCALE 1:50

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:
REV.

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
2	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC
1	REVISED IN ACCORDANCE WITH AMENDMENT 0005	20JUL99	CH
	REVISED IN ACCORDANCE WITH AMENDMENT 0002	02JUL99	CH

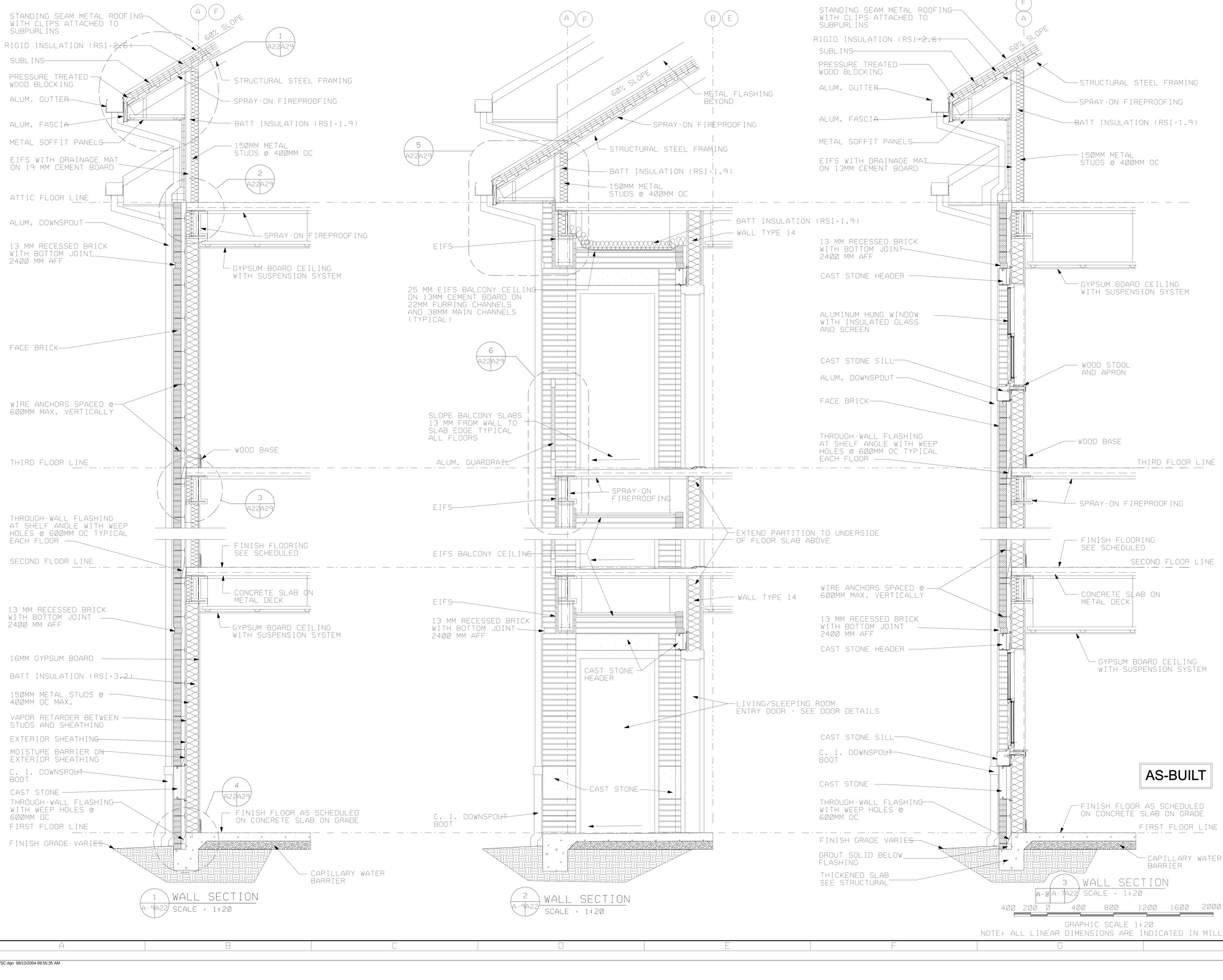
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

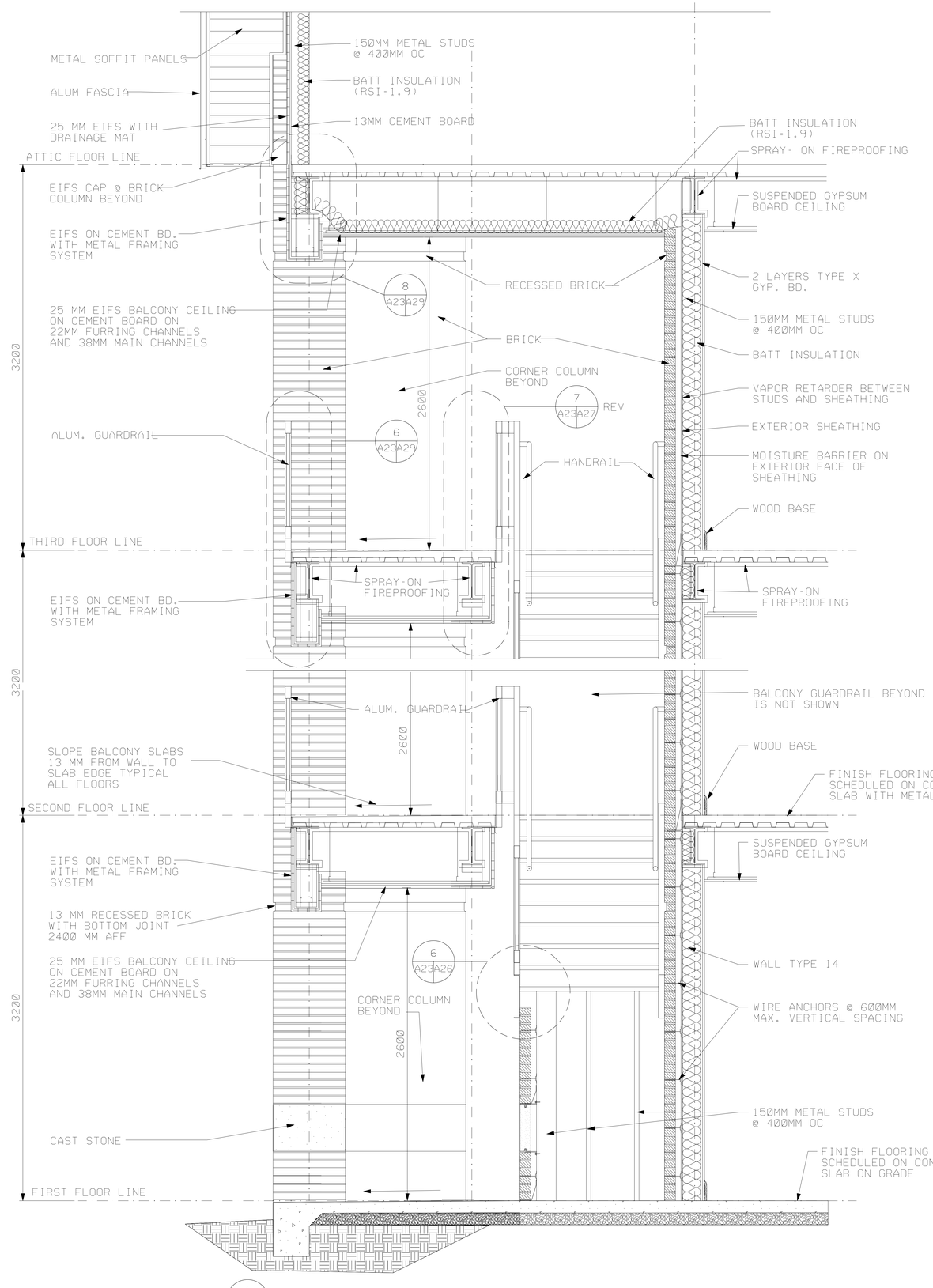
BARRACKS - 96 PERSONNEL
TYPICAL ENLARGED ROOM CLUSTER PLAN

PLATE REFERENCE NUMBER:
A-20
SHEET 202

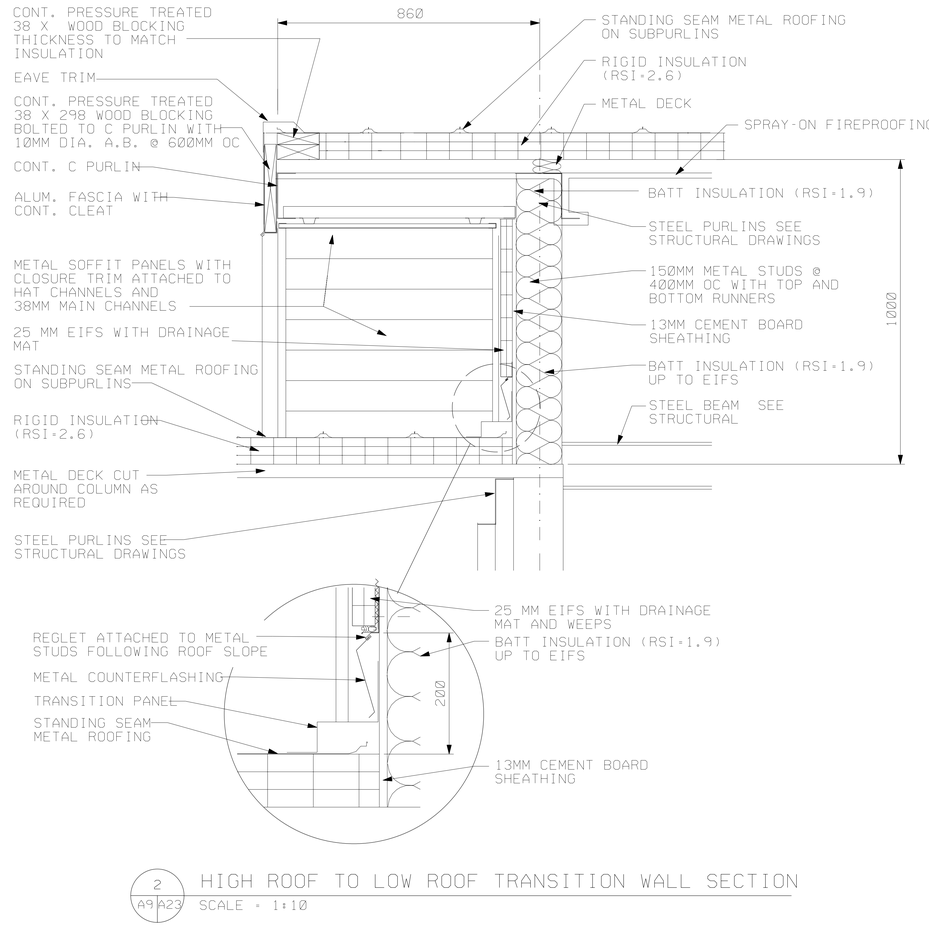
SAV-22148

DESIGN FILE: DONSPEC\$\$\$

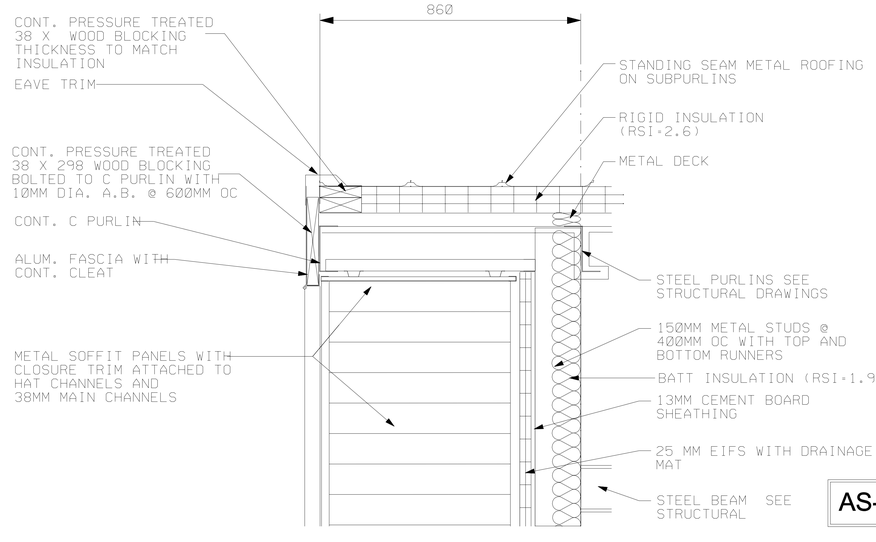

STANDING SEAM METAL ROOFING WITH CLIPS ATTACHED TO SUBPURLINS
RIGID INSULATION (RSI-2.6)
SUBLINS
PRESSURE TREATED WOOD BLOCKING
ALUM. GUTTER
ALUM. FASCIA
METAL SOFFIT PANELS
EIFS WITH DRAINAGE MAT ON 19 MM CEMENT BOARD
ATTIC FLOOR LINE
ALUM. DOWNSPOUT
13 MM RECESSED BRICK WITH BOTTOM JOINT 2400 MM AFF
FACE BRICK
WIRE ANCHORS SPACED @ 600MM MAX. VERTICALLY
THIRD FLOOR LINE
THROUGH-WALL FLASHING AT SHELF ANGLE WITH WEEP HOLES @ 600MM OC TYPICAL EACH FLOOR
SECOND FLOOR LINE
13 MM RECESSED BRICK WITH BOTTOM JOINT 2400 MM AFF
16MM GYPSUM BOARD
BATT INSULATION (RSI-3.2)
150MM METAL STUDS @ 400MM OC MAX.
VAPOR RETARDER BETWEEN STUDS AND SHEATHING
EXTERIOR SHEATHING
MOISTURE BARRIER ON EXTERIOR SHEATHING
C. I. DOWNSPOUT BOOT
CAST STONE
THROUGH-WALL FLASHING WITH WEEP HOLES @ 600MM OC
FIRST FLOOR LINE
FINISH GRADE VARIES
CAPILLARY WATER BARRIER
WOOD BASE
FINISH FLOORING SEE SCHEDULED
CONCRETE SLAB ON METAL DECK
GYPSUM BOARD CEILING WITH SUSPENSION SYSTEM
FINISH FLOOR AS SCHEDULED ON CONCRETE SLAB ON GRADE
STRUCTURAL STEEL FRAMING
SPRAY-ON FIREPROOFING
BATT INSULATION (RSI-1.9)
150MM METAL STUDS @ 400MM OC
SPRAY-ON FIREPROOFING
60% SLOPE
1 A22A29
2 A22A29
3 A22A29
4 A22A29
5 A22A29
6 A22A29
A F
1 A-9A22 WALL SECTION SCALE = 1:20
METAL FLASHING BEYOND
EIFS
25 MM EIFS BALCONY CEILING ON 13MM CEMENT BOARD ON 22MM FURRING CHANNELS AND 38MM MAIN CHANNELS (TYPICAL)
SLOPE BALCONY SLABS 13 MM FROM WALL TO SLAB EDGE TYPICAL ALL FLOORS
ALUM. GUARDRAIL
EIFS BALCONY CEILING
CAST STONE HEADER
B E
2 A-9A22 WALL SECTION SCALE = 1:20
WALL TYPE 14
EXTEND PARTITION TO UNDERSIDE OF FLOOR SLAB ABOVE
LIVING/SLEEPING ROOM ENTRY DOOR - SEE DOOR DETAILS
CAST STONE SILL
C. I. DOWNSPOUT BOOT
CAST STONE
THROUGH-WALL FLASHING WITH WEEP HOLES @ 600MM OC
FINISH GRADE VARIES
GROUT SOLID BELOW FLASHING
THICKENED SLAB SEE STRUCTURAL
ALUMINUM HUNG WINDOW WITH INSULATED GLASS AND SCREEN
WOOD STOOL AND APRON
3 A-8 A-7A22 WALL SECTION SCALE = 1:20
400 200 0 400 800 1200 1600 2000
GRAPHIC SCALE 1:20
NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.
AS-BUILT
US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT
DATE: 17JUN99
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:
REV.
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA
FEB2003 SRC
DATE BY
AS-BUILT DRAWING NO REVISION THIS SHEET
SYMBOL DESCRIPTION
WHOLE BARRACKS COMPLEX RENEWAL FORT BENNING, GEORGIA
BARRACKS - 96 PERSONNEL WALL SECTIONS
PLATE REFERENCE NUMBER: A-22
SHEET 204
SAV-22148
SB_DGN\BARRACKS72\G1A22WSC.DGN
..\SB_DGN\BARRACKS96\G1A22WSC.dgn 08/12/2004 09:55:35 AM



1 A9 A23 WALL SECTION
SCALE = 1:20



2 A9 A23 HIGH ROOF TO LOW ROOF TRANSITION WALL SECTION
SCALE = 1:10



AS-BUILT

3 A9 A23 RAKE DETAIL
SCALE = 1:10

200 100 0 200 400 600 800 1000
GRAPHIC SCALE 1:10

400 200 0 400 800 1200 1600 2000
GRAPHIC SCALE 1:20

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

DATE: 17JUN99
CATEGORY CODE 721:11:12
SOLICITATION NO: DACA21-99-B-0034
REV.
PLOT DATE: $$DATE$$$$
PLOT SCALE:

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
WALL SECTIONS

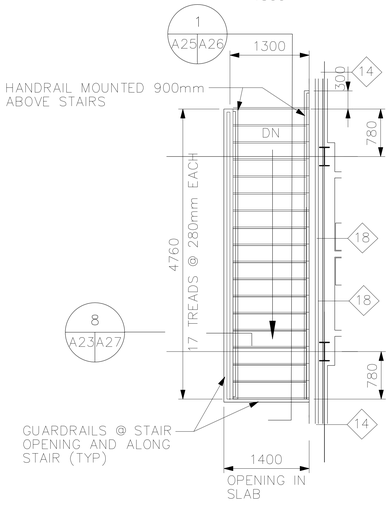
SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

PLATE REFERENCE NUMBER:
A-23
SHEET 205

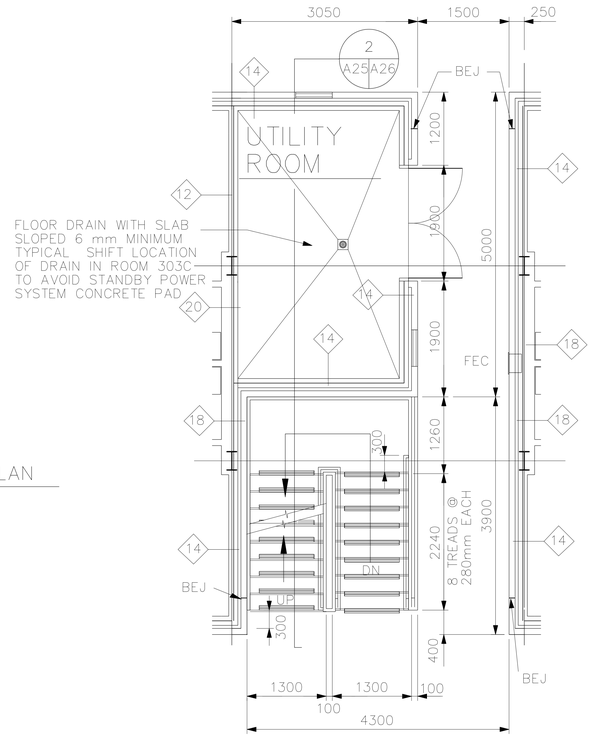
SAV-22148

SB_DGN:BARRACKS72\G1A23WSC.DGN

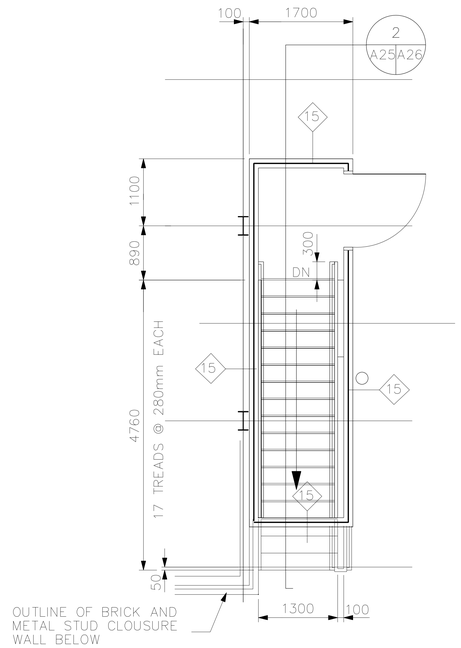
DESIGN FILE=DONSPEC$$$$



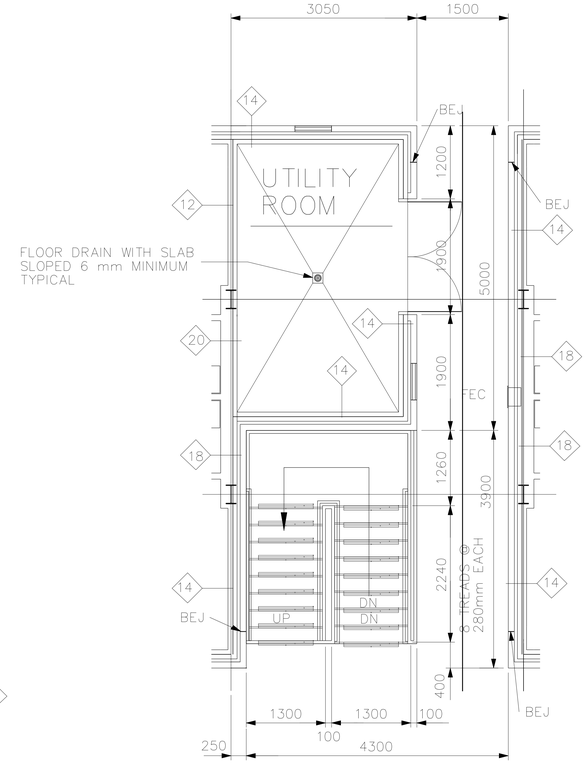
3 A4 A25 THIRD FLOOR BALCONY STAIR PLAN
SCALE = 1:20



5 A3 A25 SECOND FLOOR BREEZEWAY STAIR PLAN
SCALE = 1:20



8 A5 A25 ATTIC STAIR PLAN
SCALE = 1:20

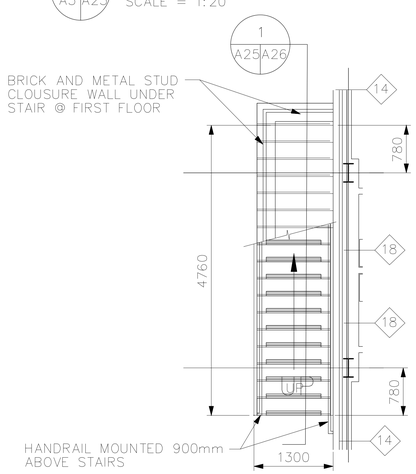


6 A4 A25 THIRD FLOOR BREEZEWAY STAIR PLAN WITH NO ATTIC ACCESS
SCALE = 1:20

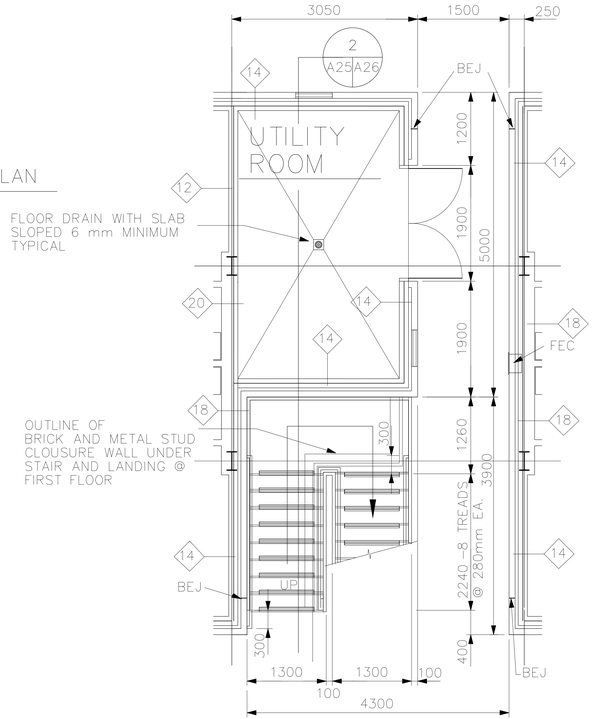
AS-BUILT

NOTES:

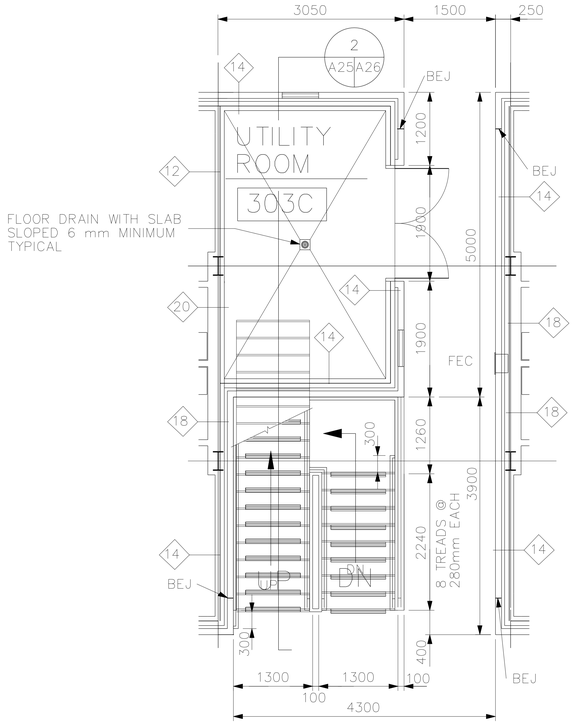
1. LOCATE BEJ'S 600 mm FROM CORNER UNLESS OTHERWISE INDICATED – SEE DETAIL 12/A25/A30
2. FOR FEC – SEE DETAIL 10/A25/A30
3. SEE FLOOR PLANS ON PLATES A–2 A–3 AND A–4 FOR UTILITY ROOMS WITH LOUVERS AND LOCATIONS OF LOUVERS. SEE PLATE A–28 FOR LOUVER DETAILS



1 A2 A25 FIRST FLOOR BALCONY STAIR PLAN
SCALE = 1:20



4 A2 A25 FIRST FLOOR BREEZEWAY STAIR PLAN
SCALE = 1:20



7 A4 A25 THIRD FLOOR BREEZEWAY STAIR PLAN WITH ATTIC ACCESS
SCALE = 1:20

1000 500 0 1000 2000 3000 4000 5000
GRAPHIC SCALE 1:50

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
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PLOT DATE: $$DATE$$$$$$
PLOT SCALE:
REV.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS – 96 PERSONNEL

ENLARGED STAIR PLANS

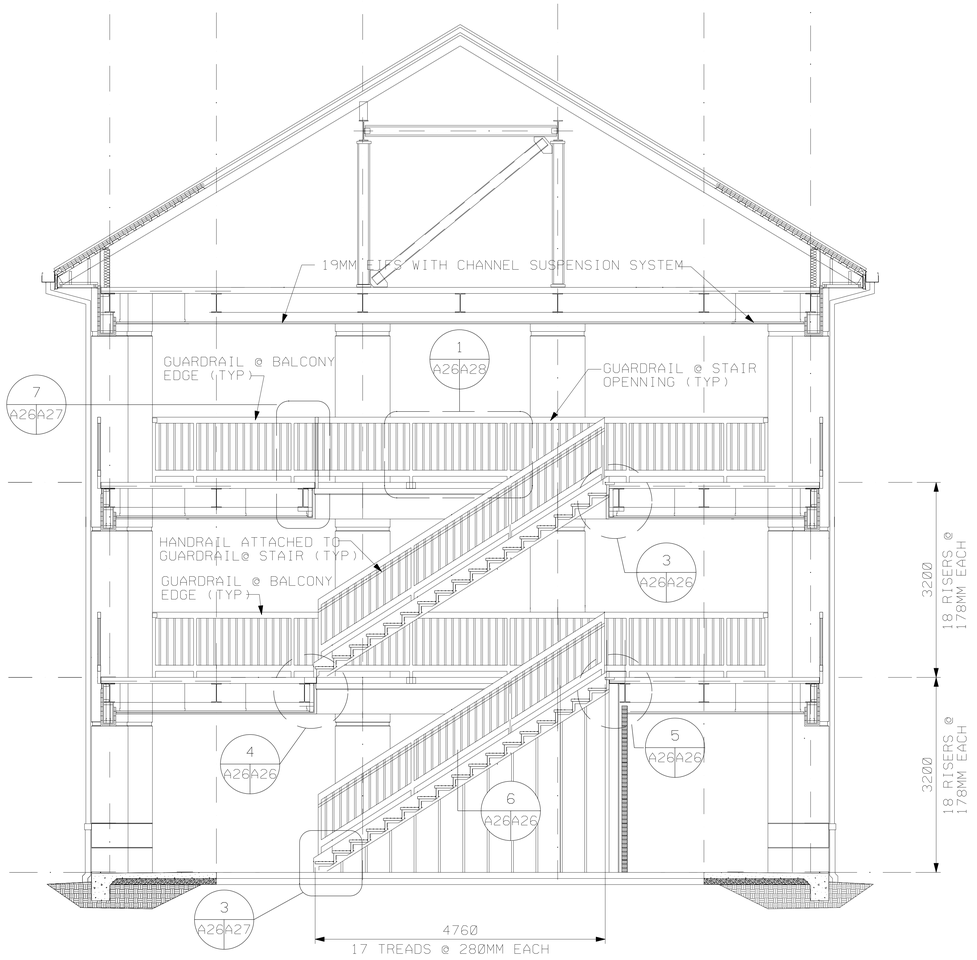
PLATE REFERENCE NUMBER:
A–25
SHEET 207

SAV-22148

SB_DGN\BARRACKS72\G1A25ESP.DGN

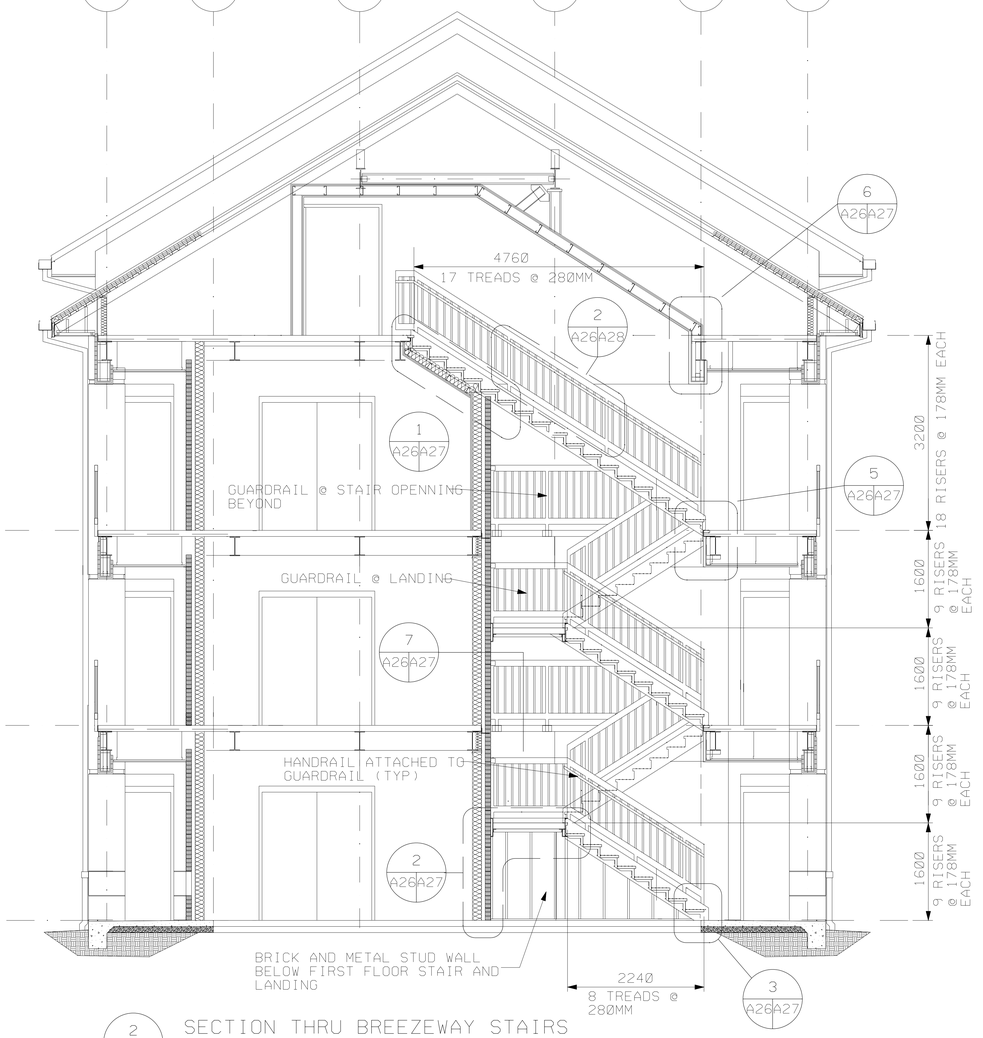
..\SB_DGN\BARRACKS96\G1A25ESP.dgn 08/12/2004 10:20:30 AM

DESIGN FILE: D:\NSPEC\$$$$$$



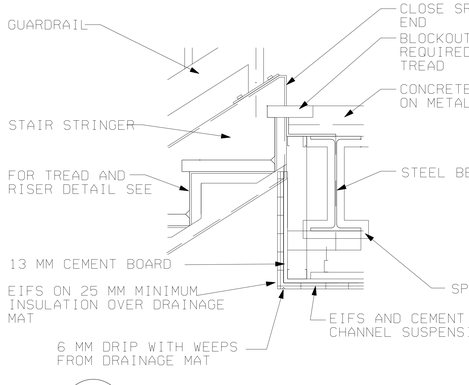
1 A25A26 SECTION THRU END BALCONY STAIRS

SCALE = 1:50



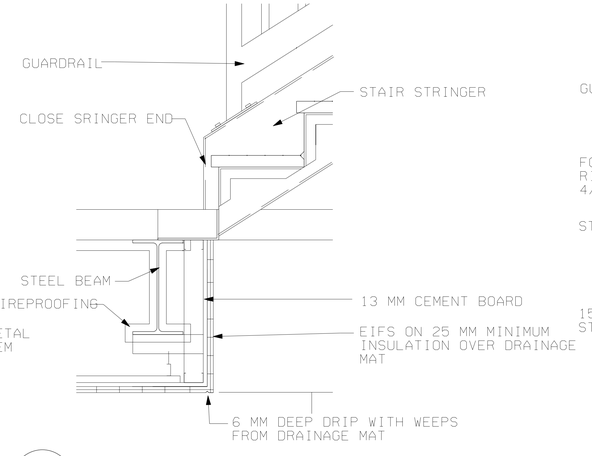
2 A25A26 SECTION THRU BREEZEWAY STAIRS

SCALE = 1:50



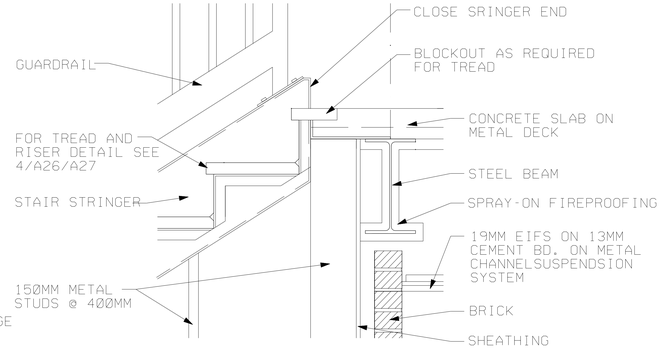
3 A26A26 STAIR SECTION @ 3RD FLOOR

SCALE = 1:10



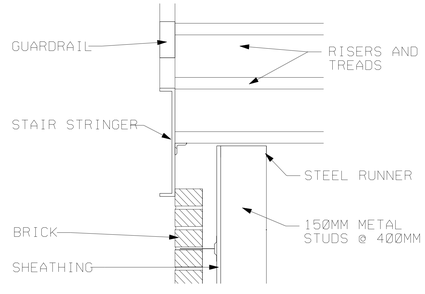
4 A26A26 STAIR SECTION @ 2ND FLOOR

SCALE = 1:10



5 A26A26 STAIR SECTION @ 2ND FLOOR

SCALE = 1:10



6 A26A25A26 STAIR SECTION @ 1ST FLOOR BRICK WALL

SCALE = 1:10

AS-BUILT

200 100 0 200 400 600 800 1000

GRAPHIC SCALE 1:10

1000 500 0 1000 2000 3000 4000 5000

GRAPHIC SCALE 1:50

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
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U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

REV.

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

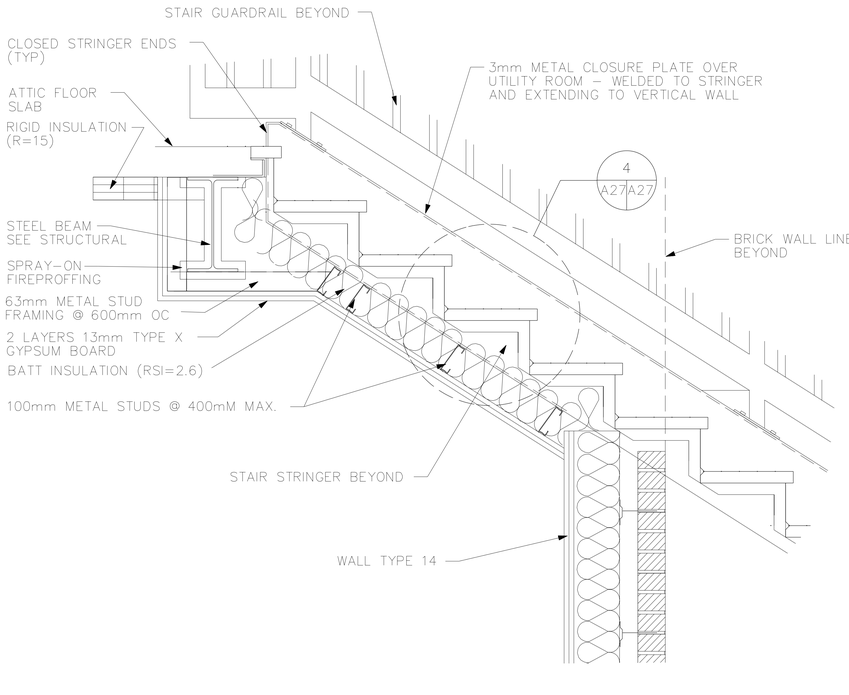
BARRACKS - 96 PERSONNEL
STAIR SECTIONS AND DETAILS

PLATE REFERENCE NUMBER:
A-26
SHEET 208

SAV-22148

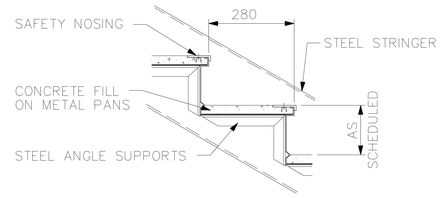
SB_DGN\BARRACKS72\G1A26SSC.DGN

...\SB_DGN\BARRACKS96\G1A26SSC.dgn 08/12/2004 10:56:26 AM



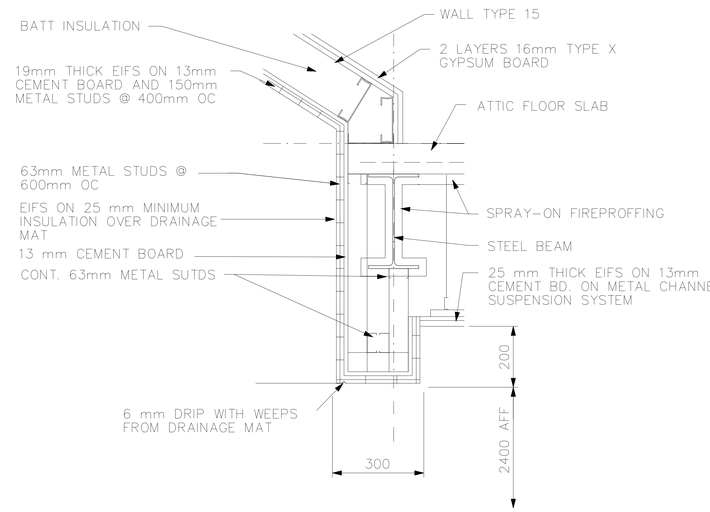
1 A26 A27 STAIR SECTION AT ATTIC ABOVE UTILITY

SCALE: 1:10



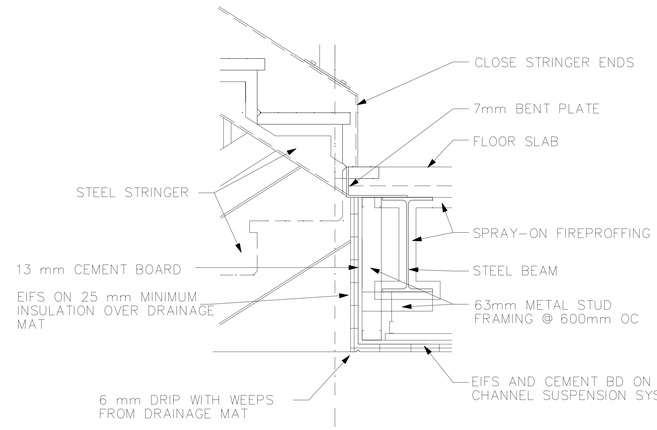
4 A26 A27 TYPICAL METAL PAN STAIR TREAD & RISER SECTION

SCALE: 1:10



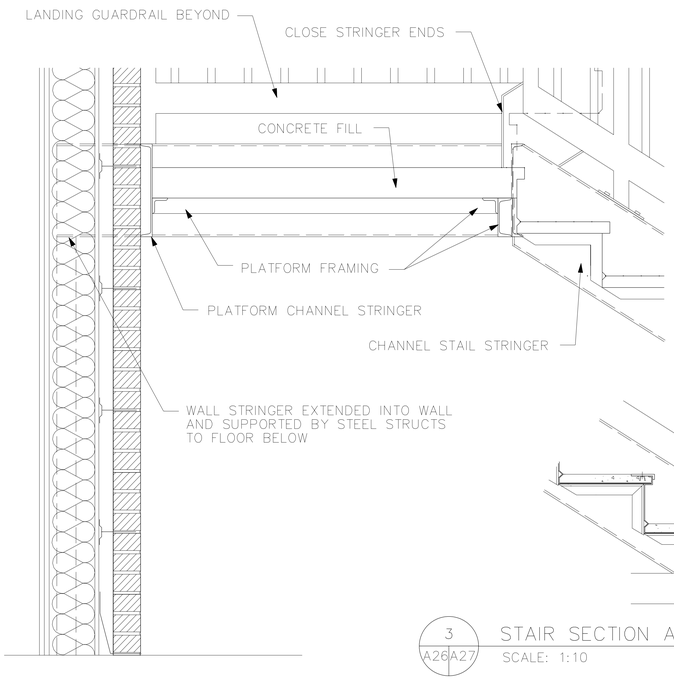
6 A26 A27 SOFFIT DETAIL @ ATTIC STAIRS

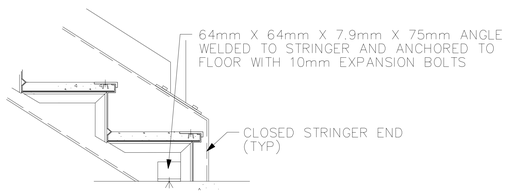
SCALE: 1:10



5 A26 A27 STAIR SECTION AT SECOND AND THIRD FLOOR

SCALE: 1:10



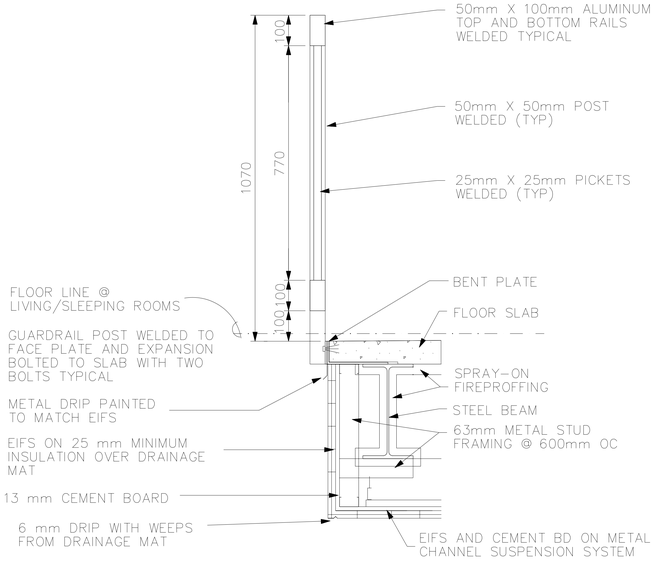


3 A26 A27 STAIR SECTION AT GROUND FLOOR SLAB

SCALE: 1:10

2 A26 A27 STAIR SECTION AT INTERMEDIATE LANDING

SCALE: 1:10



7 A28 A23 A27 A26 GUARDRAIL @ STAIR OPENNING DETAIL

SCALE: 1:10

200 100 0 200 400 600 800 1000

GRAPHIC SCALE 1:10

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
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PLOT DATE: $$DATE$$$$$$
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REV.

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS – 96 PERSONNEL

STAIR DETAILS

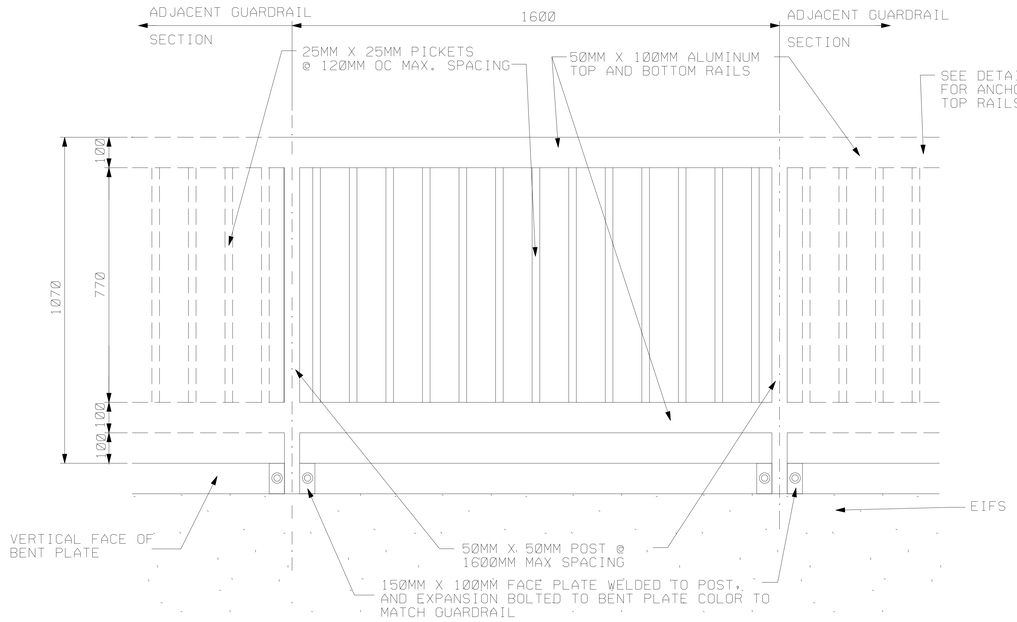
PLATE REFERENCE NUMBER: A–27

SHEET 209

AS-BUILT

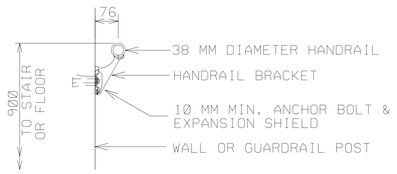
SAV-22148

DESIGN FILE: DONSPEC$$$$$$



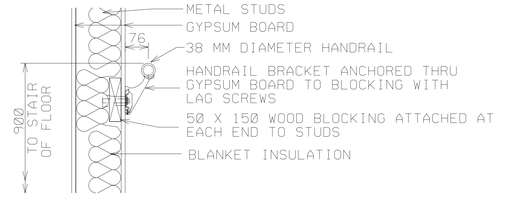
1 A26A28 TYPICAL BALCONY AND BREEZEWAY GUARDRAIL

SCALE = 1:10



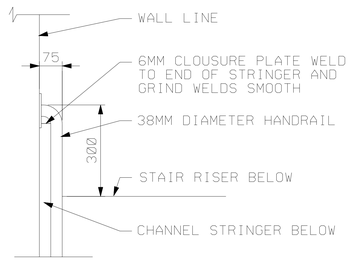
3 A28A28 WALL MOUNTED HANDRAIL & BRACKET DETAIL

SCALE: 1:10



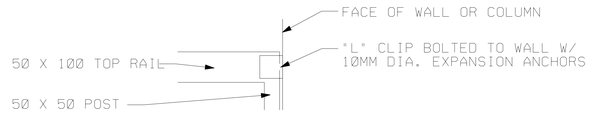
WALL MOUNTED HANDRAIL & BRACKET DETAIL @ ATTIC

3 A28A28 SCALE: 1:10

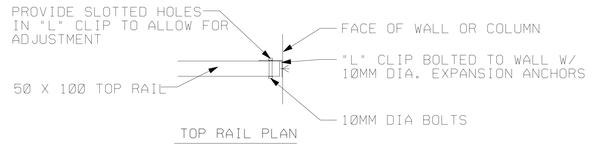


5 A26A28 TYPICAL HANDRAIL DETAIL

SCALE = 1:10



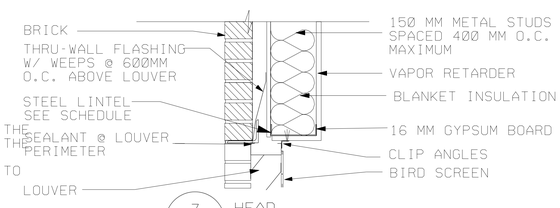
TOP RAIL SIDE ELEVATION



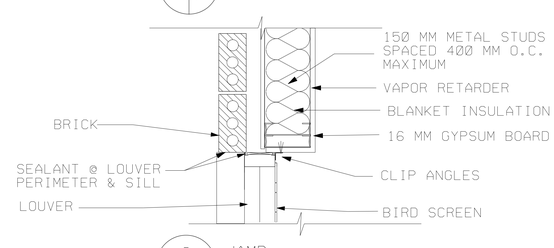
TOP RAIL PLAN

6 A28A28 GUARDRAIL WALL BRACKET DETAIL

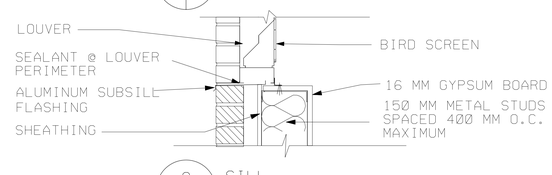
SCALE = 1:10



7 A17A28 HEAD



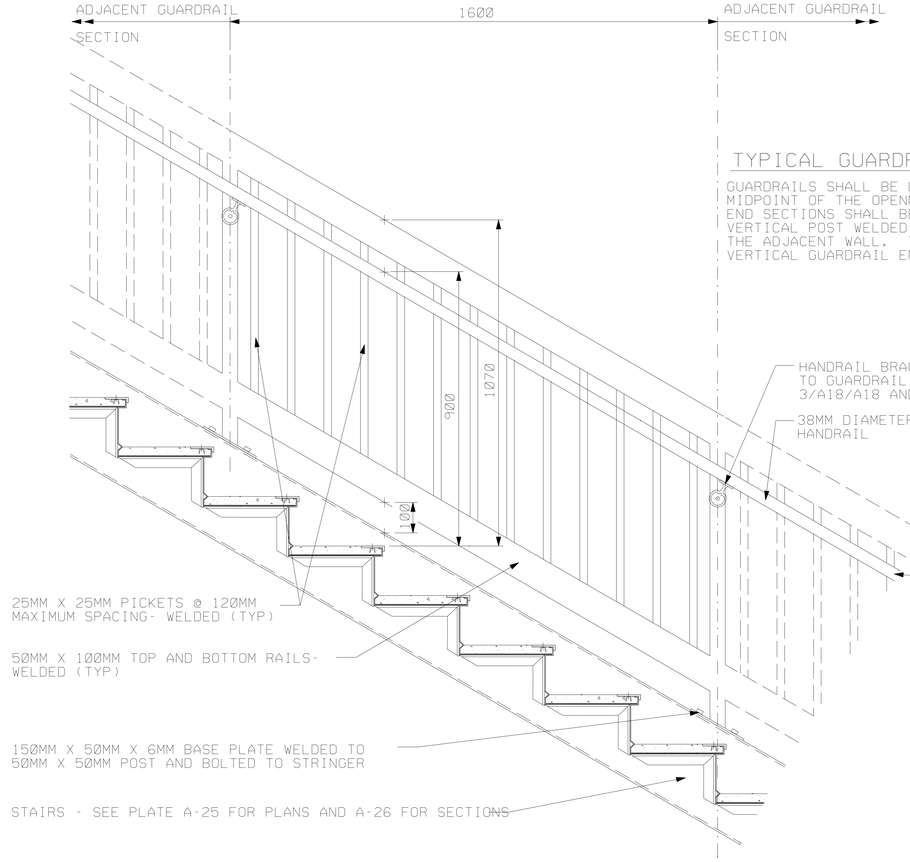
8 A17A28 JAMB



9 A17A28 SILL

LOUVER DETAILS

SCALE: 1:10



2 A26A28 TYPICAL GUARDRAIL SECTION @ STAIRS

SCALE = 1:10

TYPICAL GUARDRAIL AND HANDRAIL NOTES:

GUARDRAILS SHALL BE LAID OUT FROM THE CENTER OF THE OPENNING WITH ONE FULL SECTION BEGINNING AT THE MIDPOINT OF THE OPENNING AND WITH AN EQUAL NUMBER OF SECTIONS ADDED TO EACH END. THE LENGHT OF THE END SECTIONS SHALL BE ADJUSTED AS REQUIRED TO FIT THE OPENNING AND SHALL END WITH A 50MM X 50MM VERTICAL POST WELDED TO THE TOP AND BOTTOM RAILS. TOP END OF FRAMING MEMBERS SHALL BE ANCHORED TO THE ADJACENT WALL. THE END OF ALL HANDRAILS SHALL BE RETURNED WHEN ADJACENT TO A WALL OR A VERTICAL GUARDRAIL END MEMBER.

200 100 0 200 400 600 800 1000

GRAPHIC SCALE 1:10

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

AS-BUILT

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

REV.	DATE: 17JUN99	CATEGORY CODE 721:11:12	SOLICITATION NO: DACA21-99-B-0034	PLOT DATE: $$DATE$$$$$
				PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

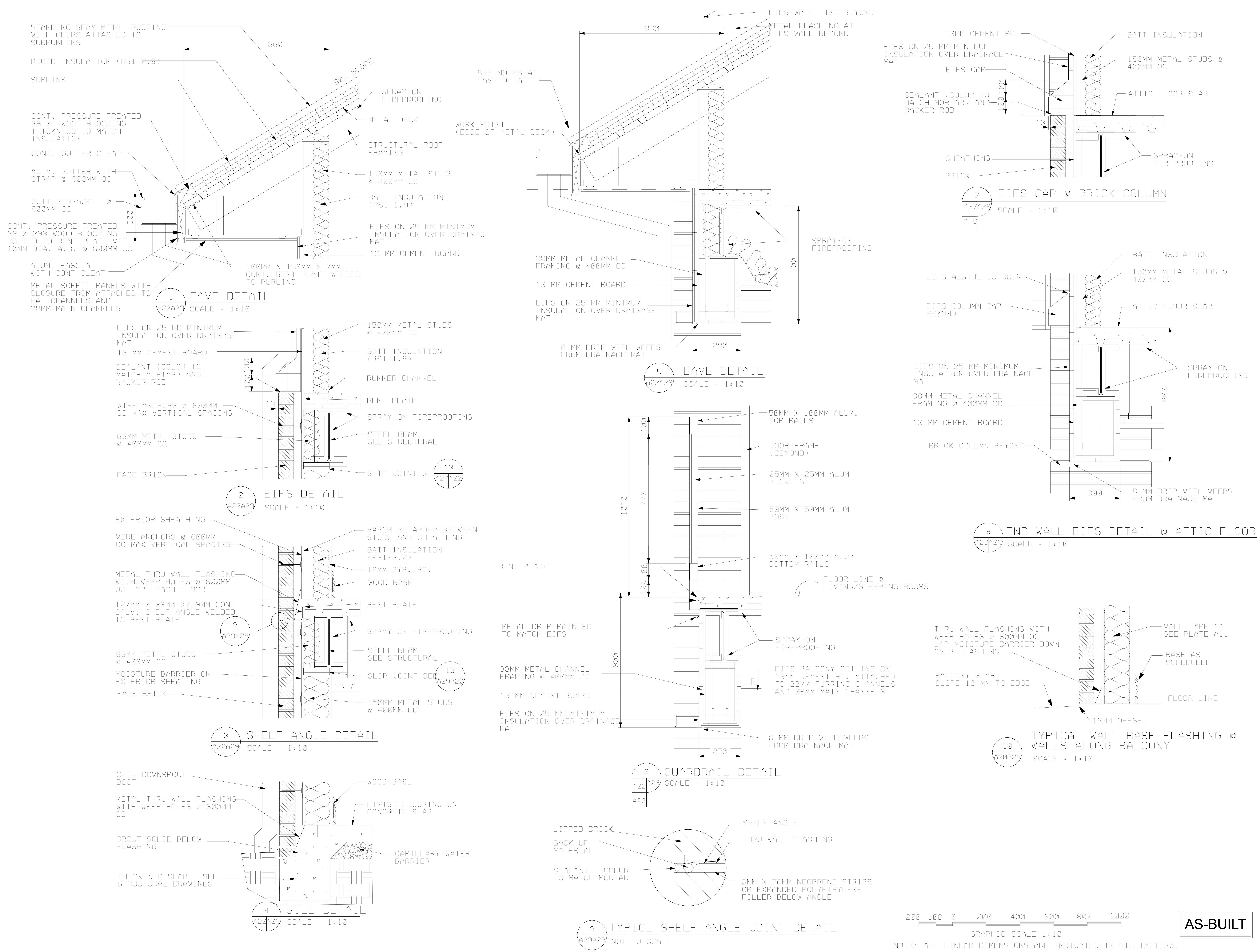
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
GUARDRAIL AND
HANDRAIL DETAILS

PLATE REFERENCE NUMBER:
A-28
SHEET 210

SAV-22148

DESIGN FILE\DONSPEC$$$$$



NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99	REV.
CATEGORY CODE 721-11-12	
SOLICITATION NO: DACA21-99-B-0034	
PLOT DATE: $$DATE$$$$	
PLOT SCALE:	

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
MISCELLANEOUS DETAILS

PLATE REFERENCE NUMBER: A-29
SHEET 211
SAV-22148

DESIGN FILE:DGNSPEC$$

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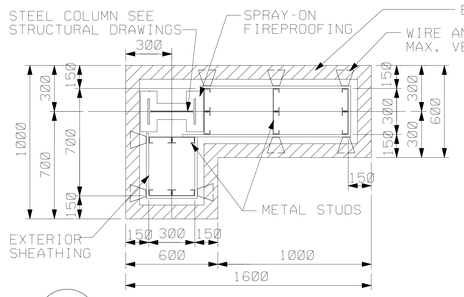
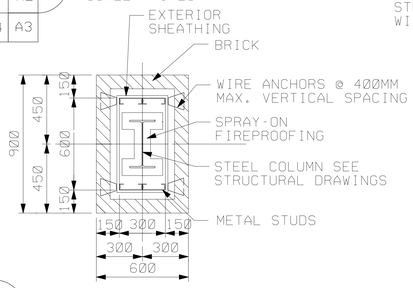
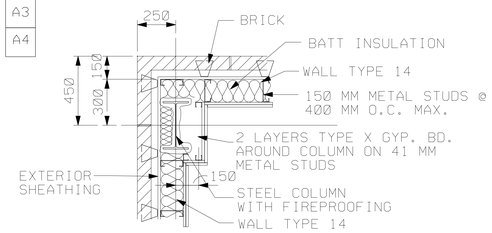


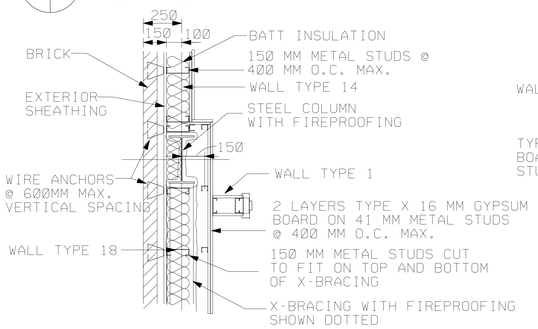
1 TYPICAL CORNER COLUMN
A2 A3 A4 A30
SCALE = 1:20



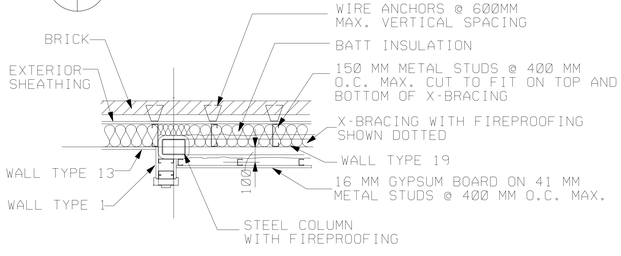
2 TYPICAL END BALCONY COLUMN
A2 A3 A4 A30
SCALE = 1:20



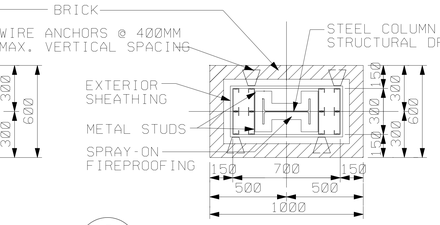
3 TYPICAL CORNER COLUMN @ LIVING UNIT AT END BALCONIES
A21 A30
SCALE = 1:20



4 TYPICAL CLOSET COLUMN @ END BALCONY
A21 A30
SCALE = 1:20



5 TYPICAL CLOSET COLUMN @ BREEZEWAY BALCONY
A21 A30



6 TYPICAL BREEZEWAY BALCONY COLUMN
A2 A3 A4 A30
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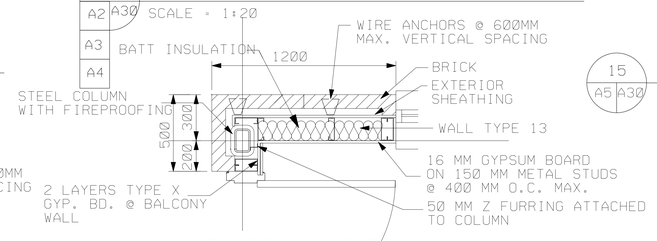
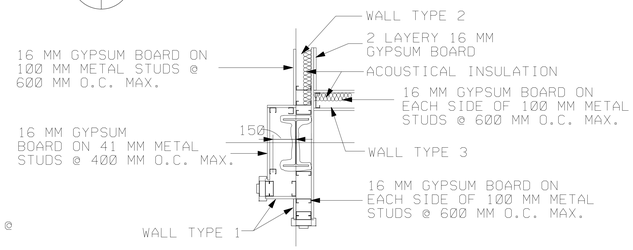
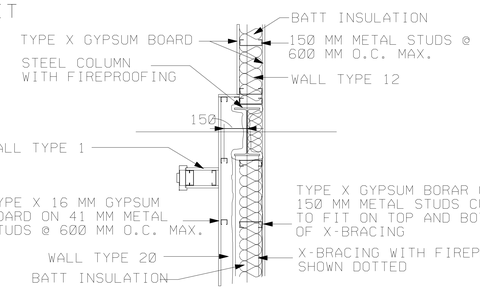


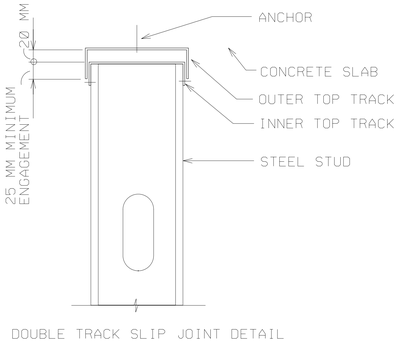
7 TYPICAL CORNER COLUMN @ LIVING UNIT ENTRY
A21 A30
SCALE = 1:20



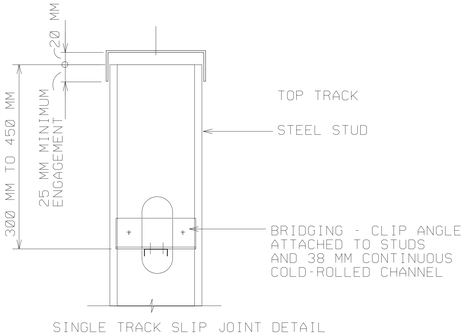
8 TYPICAL INTERIOR COLUMN @ LAVATORY
A21 A30
SCALE = 1:20



9 TYPICAL INTERIOR COLUMN @ UTILITY ROOM
A21 A30
SCALE = 1:20



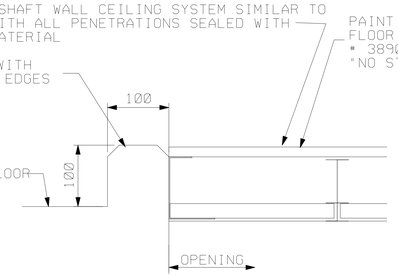
DOUBLE TRACK SLIP JOINT DETAIL



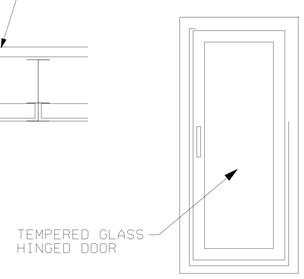
SINGLE TRACK SLIP JOINT DETAIL

NOTE: TYPE OF SLIP JOINT USED SHALL BE CONTRACTOR'S OPTION

13 TYPICAL MASONRY VENEER METAL STUD WALL FRAMING SLIP JOINT DETAILS
A29 A30
SCALE: 1:5

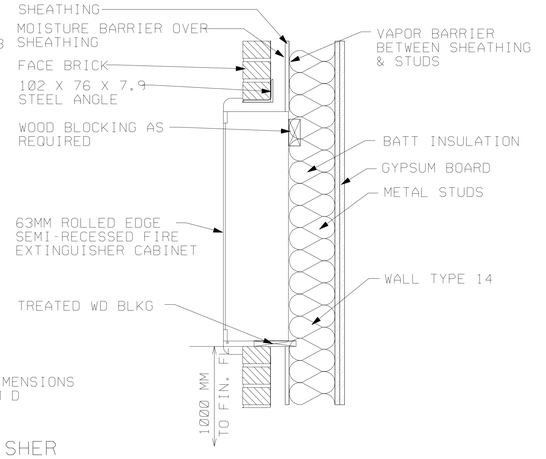


15 CONCRETE CURB @ ATTIC FLOOR OPENINGS
A5 A30
NOT TO SCALE



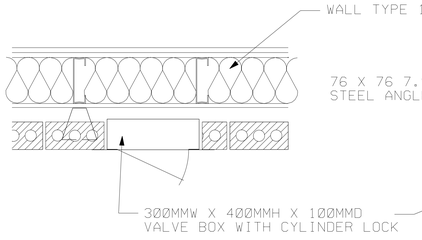
MINIMUM INTERIOR CABINET DIMENSIONS
750 MM H X 300 MM W X 200MM D

TYPICAL FIRE EXTINGUISHER CABINET FRONT ELEVATION



CABINET SECTION @ MASONRY VENEER METAL STUD WALL

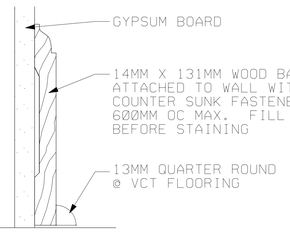
10 FIRE EXTINGUISHER CABINET DETAILS
A-4 A-2 A30 A20 A-3
NOT TO SCALE



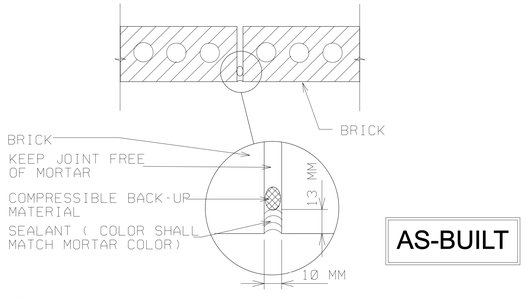
VALVE BOX PLAN

VALVE BOX SECTION

14 RECESSED SPRINKLER VALVE BOX
A2 A30
SCALE = 1:10



11 WOOD BASE DETAIL
A22 A23 A30
NOT TO SCALE



12 BRICK EXPANSION JOINT DETAIL (BEJ)
A20 A-7 A30 A25 A-8
NOT TO SCALE

100 50 0 100 200 300 400 500
GRAPHIC SCALE 1:5

200 100 0 200 400 600 800 1000
GRAPHIC SCALE 1:10

400 200 0 400 800 1200 1600 2000
GRAPHIC SCALE 1:20

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

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U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

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	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
MISCELLANEOUS DETAILS

PLATE REFERENCE NUMBER:
A-30
SHEET 212

SAV-22148

...\SB_DGN\BARRACKS96\G1A30MD.dgn 08/16/2004 10:04:33 AM

LIGHTING

BA	INCANDESCENT OR FLUORESCENT LIGHTING FIXTURE. LETTER DENOTES TYPE GIVEN IN FIXTURE SCHEDULE.
BA	FLUORESCENT LIGHTING FIXTURE CONNECTED TO SPS EMERGENCY POWER. LETTER DENOTES TYPE GIVEN IN FIXTURE SCHEDULE.
BA	WALL OR BRACKET MOUNTED FIXTURE. LETTER DENOTES TYPE GIVEN IN FIXTURE SCHEDULE.
BA	FLUORESCENT LIGHTING FIXTURE. LETTER DENOTES TYPE GIVEN IN FIXTURE SCHEDULE.
BA	FLUORESCENT LIGHTING FIXTURE CONNECTED TO SPS EMERGENCY POWER. LETTER DENOTES TYPE GIVEN IN FIXTURE SCHEDULE.
BA	FLUORESCENT LIGHTING FIXTURE, WALL MOUNTED. LETTER DENOTES TYPE GIVEN IN FIXTURE SCHEDULE.
BA	FLUORESCENT LIGHTING FIXTURE, WALL MOUNTED, CONNECTED TO SPS EMERGENCY POWER. LETTER DENOTES TYPE GIVEN IN FIXTURE SCHEDULE.
	EXIT LIGHT. SHADED AREA DENOTES LIGHTED FACE. ARROW DENOTES DIRECTIONAL ARROW IN LIGHTED FACE.
P	WALL MOUNTED PHOTO CELL
S	15 AMP SINGLE POLE WALL SWITCH. M.H.=1220 mm
S_3	15 AMP THREE WAY WALL SWITCH. M.H.=1220 mm
S_4	15 AMP FOUR WAY WALL SWITCH. M.H.=1220 mm
S_M	MOTOR RATED TOGGLE SWITCH.
S_F	FAN SPEED CONTROL

POWER

	15 AMP DUPLEX RECEPTACLE; M.H.=300mm AFF, UNLESS OTHERWISE INDICATED.
	20 AMP DUPLEX RECEPTACLE
	QUADRAPLEX RECEPTACLE (2 DUPLEX 15 AMP RECEPTACLES IN A 2 GANG BOX)
	QUADRAPLEX RECEPTACLE (2 DUPLEX 20 AMP RECEPTACLES IN A 2 GANG BOX)
J J	JUNCTION BOX SIZED AS REQUIRED BY N.E.C. MOUNTING HEIGHT SHALL BE AS INDICATED.
M	MOTOR CONNECTION. ESTIMATED WATTS INDICATED IN PANEL SCHEDULE.
30/3/NF/3R OR 30/3/F/3R	MOTOR DISCONNECT/SAFETY SWITCH. M.H. = 1500 mm TO TOP OF ENCLOSURE UNLESS OTHERWISE INDICATED. SWITCHES TO BE RATED 30/3/NF UNLESS OTHERWISE INDICATED. ENCLOSURES TO BE RATED NEMA 1 UNLESS OTHERWISE INDICATED. "30" DENOTES AMPERE RATING; "3" DENOTES NUMBER OF POLES; "NF" DENOTES NON-FUSED; "3R" DENOTES NEMA ENCLOSURE RATING "F" DENOTES FUSE RATING; SIZED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION
	MOTOR STARTER, FURNISHED BY OTHER SECTIONS UNLESS OTHERWISE NOTED.
	COMBINATION MOTOR DISCONNECT/SAFETY SWITCH AND MOTOR STARTER.
	CIRCUIT BREAKER PANELBOARD. MOUNT AS INDICATED IN SCHEDULE. SIZE AND RATINGS AS INDICATED IN SCHEDULE.
	SERVICE ENTRANCE MAIN SWITCHBOARD OR CIRCUIT BREAKER PANELBOARD. MOUNT AS INDICATED IN SCHEDULE. SIZE AND RATINGS AS INDICATED IN SCHEDULE.
	CEILING FAN

FIRE ALARM AND TELEPHONE

F	MANUAL PULL STATION. M.H.=1220 mm
	SINGLE PROJECTION ALARM HORN WITH STROBE. M.H.=2030 mm AFF UNLESS OTHERWISE NOTED.
	WALL MOUNTED STROBE. M.H.=300 mm BELOW CEILING
FACP	FIRE ALARM CONTROL PANEL
S	WALL MOUNTED SMOKE DETECTOR WITH SOUNDER\HORN
S	CEILING MOUNTED SMOKE DETECTOR
H	WALL MOUNTED HEAT DETECTOR
DS	DUCT MOUNTED SMOKE DETECTOR
TS	TAMPER SWITCH (FURNISHED UNDER OTHER SECTIONS)
FS	FLOW SWITCH (FURNISHED UNDER OTHER SECTIONS)
DH	DOORS EQUIPPED WITH ELECTROMAGNETIC DOOR HOLD-OPEN DEVICES

TELEPHONE AND CABLE T.V. SYSTEMS

	DUPLEX RJ-45 TELEPHONE WALL OUTLET, M.H.= 300 mm AFF. SEE DETAIL FOR TYPICAL DUAL COMMUNICATIONS OUTLET
W	SINGLE RJ-45 TELEPHONE WALL OUTLET, M.H.= 1320 mm AFF. SEE DETAIL FOR TYPE W OUTLET
	SINGLE CABLE TELEVISION OUTLET, M.H.= 300 mm AFF. SEE DETAIL FOR TYPICAL CATV OUTLET.
TTB	TELEPHONE TERMINAL BACKBOARD
TV	CABLE TV DISTRIBUTION BACKBOARD.

WIRING

C C	CABLE TRAY
— — —	BRANCH CIRCUIT EXPOSED
—— ——	BRANCH CIRCUIT CONCEALED IN WALLS, IN FLOORS OR UNDER FLOORS.
—— ——	BRANCH CIRCUIT CONCEALED ABOVE CEILINGS, OR IN WALLS.
P-1,3	HOMERUN TO PANELBOARD. NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. "P" INDICATES PANELBOARD THE HOMERUN IS SERVED FROM; "1,3" INDICATES THE CIRCUIT NUMBERS IN THE PANELBOARD FOR CONNECTION.
	HASH MARKS INDICATE NUMBER OF SIZE 12 AWG CURRENT CARRYING CONDUCTORS IN 16 mm RACEWAY, UNLESS OTHERWISE INDICATED. RACEWAYS WITHOUT HASH MARKS CONTAIN 2 #12 AWG CURRENT CARRYING CONDUCTORS IN 16 mm RACEWAY UNLESS OTHERWISE INDICATED. (NOTE: GROUNDING CONDUCTORS SHALL BE PROVIDED BUT ARE NOT INDICATED BY HASHMARKS.)
	CONDUIT TURNED UP
	CONDUIT TURNED DOWN
	SYSTEM GROUND (NEC ARTICLE 250-81)

LIGHTNING PROTECTION

SEE PL E-9

ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
BFC	BELOW FINISHED CEILING
C	CONDUIT
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CU	COPPER
DIA	DIAMETER
EF	EXHAUST FAN
EWC	ELECTRIC WATER COOLER
EXP	EXPLOSION PROOF
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
HPS	HIGH PRESSURE SODIUM
HT	HEIGHT
HZ	HERTZ
IDS	INTRUSION DETECTION SYSTEM
JB	JUNCTION BOX
LCD	LIQUID CRYSTAL DISPLAY
LED	LIGHT EMITTING DIODE
M	METERS
MM	MILLIMETERS
MCB	MOLDED CASE BREAKER
MH	MOUNTING HEIGHT
MLO	MAIN LUGS ONLY
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NF	NON FUSED
NIC	NOT IN CONTRACT
NO.	NUMBER
PH	PHASE
RSC	RIGID STEEL CONDUIT
SWD	SWITCHING DUTY
SPS	STANDBY POWER SYSTEM
UOI	UNLESS OTHERWISE INDICATED
V	VOLT
VA	VOLTAMPERE
W	WATTS
WH	WATER HEATER
WP	WEATHER PROOF

GENERAL NOTES:

1. COMBINATION STARTERS MAY BE FURNISHED AT CONTRACTOR'S OPTION WHERE DISCONNECT SWITCHES ARE REQUIRED ADJACENT TO MOTOR STARTERS.
2. THE LOCATION OF EXHAUST FANS, A/C UNITS, MOTOR STARTERS, AND OTHER MOTORS SHOWN ON THE ELECTRICAL DRAWINGS ARE GENERAL LOCATIONS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR FOR SPECIFIC LOCATIONS.
3. DETAILS, RISER DIAGRAMS, NOTES, ETC. APPLY TO ALL BUILDINGS UNLESS OTHERWISE INDICATED.
4. PROVIDE FIRE STOPPING FOR ALL CONDUITS (POWER, SIGNAL, ETC.) ON EACH FLOOR FOR CONDUITS THAT RUNS VERTICALLY FROM FLOOR TO FLOOR OR HORZONTALLY THROUGH FIRE WALLS..
5. ALL CONDUIT SIZES ARE BASED UPON THE NEMA DESIGNATION FOR METRIC SIZING OF CONDUIT AND ARE NOT INTENDED TO RESTRICT THE MATERIAL CHARACTERISTICS OF THE CONDUIT. (SEE PL E-10 FOR TABLE)
6. ALL BRANCH CIRCUIT WIRING SHALL INCLUDE A GREEN EQUIPMENT GROUNDING CONDUCTOR SIZED PER THE N.E.C. EVEN THOUGH THE GROUNDING CONDUCTORS ARE NOT INDICATE BY HASH MARKS ON THE FLOOR PLANS.
7. SEE PLATE E-18 FOR TYPICAL MOUNTING HEIGHTS OF WALL MOUNTED DEVICES.
8. ALL LINEAR DIMENSIONS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE INDICATED.
9. ALL WIRING SHALL BE CONCEALED UNLESS EXPLICITLY INDICATED OTHERWISE.
10. DRAWINGS ARE BASED ON CONDUCTORS IN CONDUIT. SEE SPECIFICATIONS SECTION 16415 PAR 3.2 FOR DIFFERENT OPTIONS ALLOWED.

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

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SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC
	REVISED IN ACCORDANCE WITH AMENDMENT 0005	20JUL99	DJT

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

INTERIOR LEGEND AND GENERAL NOTES

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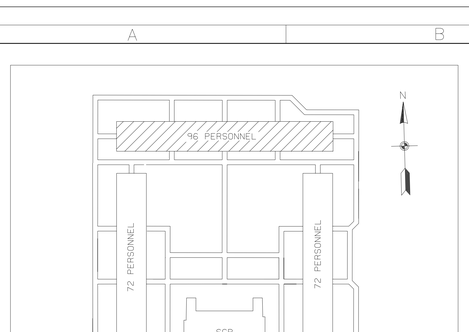
E-18 ENLARGED PLANS AND MISCELLANEOUS DETAILS
E-19 ENLARGED PLANS

AS-BUILT

PLATE REFERENCE NUMBER:
E-1
SHEET 266

DESIGN FILE: DGN\SPEC$$$$$



KEY MAP
NOT TO SCALE

NOTES, THIS SHEET:

1. CONNECT ALL EMERGENCY FIXTURE TYPES "BD" TO THE AC STANDBY POWER SYSTEM VIA A PHOTOCELL CONTROLLED LIGHTING CONTACTOR. THE STANDBY POWER SYSTEM AND LIGHTING CONTACTOR SHALL BE LOCATED IN ROOM 203C. THE PHOTOCELL SHALL BE FLUSH MOUNTED ON THE WALL INDICATED. WIRING BETWEEN THE PHOTOCELL AND THE STANDBY POWER SYSTEM SHALL BE INSTALLED IN THE FLOOR SLAB. SEE THE BALCONY LIGHTING CONTROL DIAGRAM, PLATE E-17. BRANCH CIRCUIT WIRING SHALL BE #10 AWG.

2. CONNECT ALL NORMAL FIXTURE TYPES "BD" TO THE CIRCUITS INDICATED VIA A PHOTOCELL CONTROLLED LIGHTING CONTACTOR. THE LIGHTING CONTACTOR SHALL BE LOCATED ADJACENT TO THEIR RESPECTIVE PANELBOARD. THE PHOTOCELL SHALL BE FLUSH MOUNTED ON THE WALL INDICATED. WIRING BETWEEN THE PHOTOCELL AND THE LIGHTING CONTACTOR SHALL BE RUN CONCEALED. SEE THE BALCONY AND SITE LIGHTING CONTROL DIAGRAM ON PLATE E-17 AND E-18. BRANCH CIRCUIT WIRING SHALL BE #10 AWG.

3. SURFACE MOUNT ALL TYPE "BF" FIXTURES.

4. SEE TYPES 'BD' MOUNTING DETAIL, PLATE E-18 (TYPICAL)

5. 2100 mm AFF TO FIXTURE CENTER (TYPICAL ALL STAIRWAY LANDINGS)

6. CONNECT ALL EMERGENCY FIXTURE TYPES "BF" TO SPS CIRCUIT PE-8 WITH 2#10, 1#10G IN 16 mm CONDUIT.

7. TYPE 'BD' FIXTURES SHALL BE MOUNTED AS UPLIGHTS UNLESS OTHERWISE INDICATED.

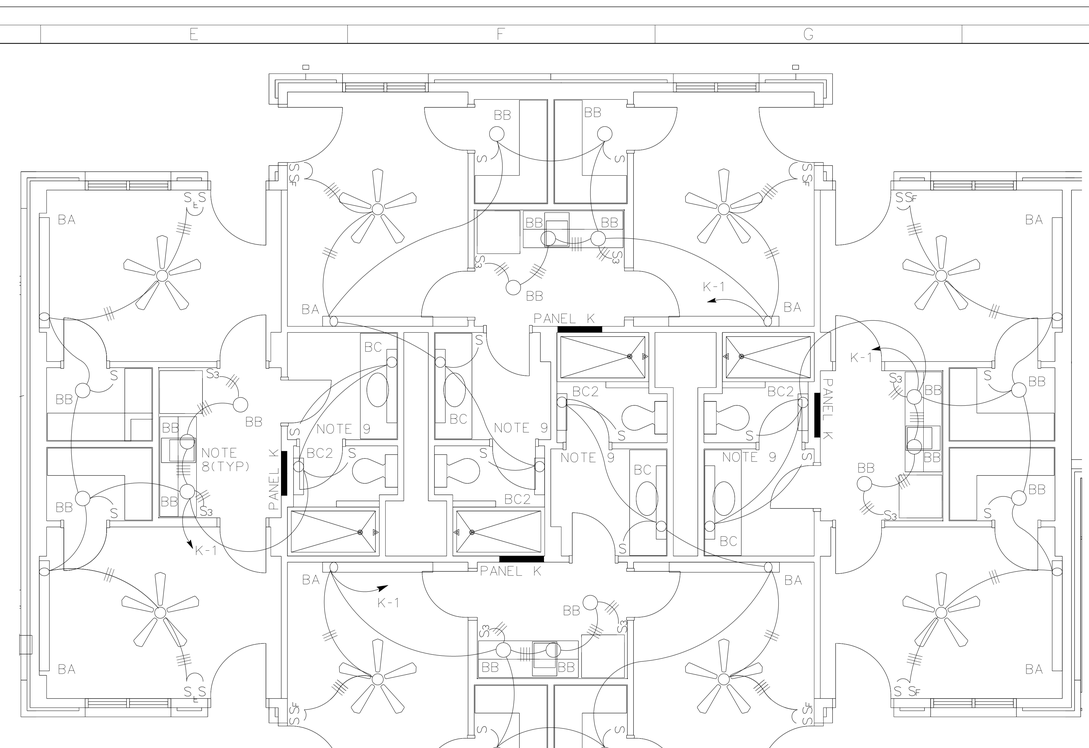
8. SEE KITCHEN MOUNTING DETAIL ON PL E-18 FOR LIGHTS MOUNTED IN THE SOFFIT.

9. MOUNT LIGHT SWITCHES IN THE BATHROOM/SHOWER AREA 1370 mm TO BE ABOVE THE WAINSCOT/TILE AREA.

10. MH=2645 mm AFG SPACE PE CELLS 200mm APART. (CENTER BETWEEN DOWNSPOUT AND WINDOW FRAME)

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

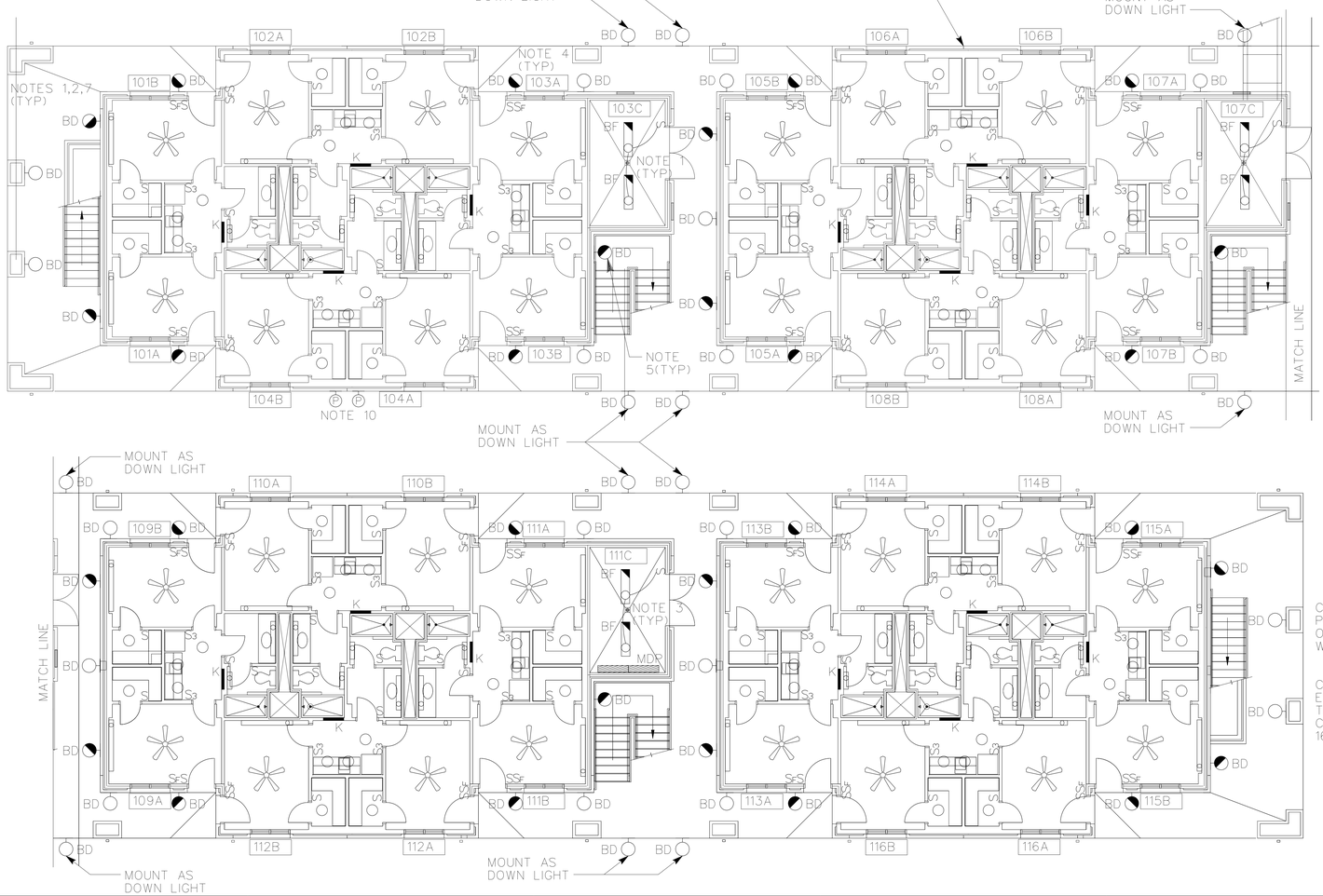
2500 1000 500 0 2500 5000
SCALE: 1 : 50



TYP ENLARGED PLAN SLEEPING\LIVING UNITS
SCALE: 1:50

CONNECT ALL TYPE "BD" NORMAL POWER FIXTURES ON THIS HALF OF FLOOR PLAN TO CIRCUIT PB-5 WITH 2#10, 1#10G IN 16 mm CONDUIT. (SEE NOTE 2)

CONNECT ALL TYPES "BD" EMERGENCY POWER FIXTURES ON THIS HALF OF FLOOR PLAN TO SPS CIRCUIT PE-1 WITH 2#10, 1#10G IN 16 mm CONDUIT (SEE NOTE 1).



CONNECT ALL TYPE "BD" NORMAL POWER FIXTURES ON THIS HALF OF FLOOR PLAN TO CIRCUIT PA-5 WITH 2#10, 1#10G IN 16 mm CONDUIT. (SEE NOTE 2)

CONNECT ALL TYPES "BD" EMERGENCY POWER FIXTURES ON THIS HALF OF FLOOR PLAN TO SPS CIRCUIT PE-2 WITH 2#10, 1#10G IN 16 mm CONDUIT (SEE NOTE 1).

TYP FIRST FLOOR PLAN
SCALE: 1:100

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99	REV:
CATEGORY CODE 721-11-12	SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$	
PLOT SCALE:	

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

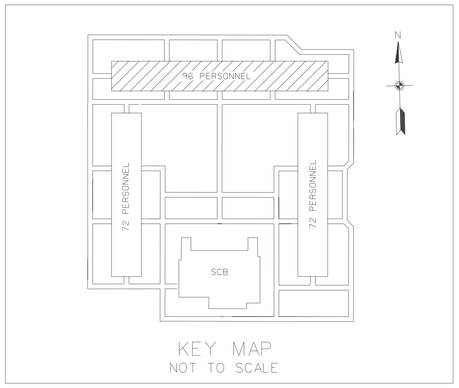
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA
BARRACKS - 96 PERSONNEL

LIGHTING PLAN
FIRST FLOOR

PLATE REFERENCE NUMBER:
E-2
SHEET 267

AS-BUILT

DESIGN FILE: D:\$$$$$



KEY MAP
NOT TO SCALE

NOTES, THIS SHEET:

1. CONNECT ALL EMERGENCY FIXTURE TYPES "BD" TO THE AC STANDBY POWER SYSTEM VIA A PHOTOCELL CONTROLLED LIGHTING CONTACTOR. THE STANDBY POWER SYSTEM AND LIGHTING CONTACTOR SHALL BE LOCATED IN ROOM 203C. THE PHOTOCELL SHALL BE FLUSH MOUNTED ON THE WALL INDICATED. WIRING BETWEEN THE PHOTOCELL AND THE STANDBY POWER SYSTEM SHALL BE INSTALLED IN THE FLOOR SLAB. SEE THE BALCONY LIGHTING CONTROL DIAGRAM, PLATE E-17 AND E-18. BRANCH CIRCUIT WIRING SHALL BE #10 AWG.

2. CONNECT ALL NORMAL FIXTURE TYPES "BD" TO THE CIRCUITS INDICATED VIA A PHOTOCELL CONTROLLED LIGHTING CONTACTOR. THE LIGHTING CONTACTOR SHALL BE LOCATED ADJACENT TO THEIR RESPECTIVE PANELBOARD. THE PHOTOCELL SHALL BE FLUSH MOUNTED ON THE WALL INDICATED. WIRING BETWEEN THE PHOTOCELL AND THE LIGHTING CONTACTOR SHALL BE RUN CONCEALED. SEE THE BALCONY AND SITE LIGHTING CONTROL DIAGRAM ON PLATE E-17. BRANCH CIRCUIT WIRING SHALL BE #10 AWG.

3. SURFACE MOUNT ALL TYPE "BF" FIXTURES.

4. SEE TYPES 'BD' MOUNTING DETAIL, PLATE E-18 (TYPICAL)

5. 2100 mm AFF TO FIXTURE CENTER (TYPICAL ALL STAIRWAY LANDINGS)

6. CONNECT ALL EXIT LIGHTS AND EMERGENCY FIXTURES TYPE "BF" TO SPS CIRCUIT PE-8 WITH 2#10, 1#10G IN 16 mm CONDUIT. EXIT LIGHTS SHALL BE 75mm BFC MEASURED FROM TOP OF FIXTURE.

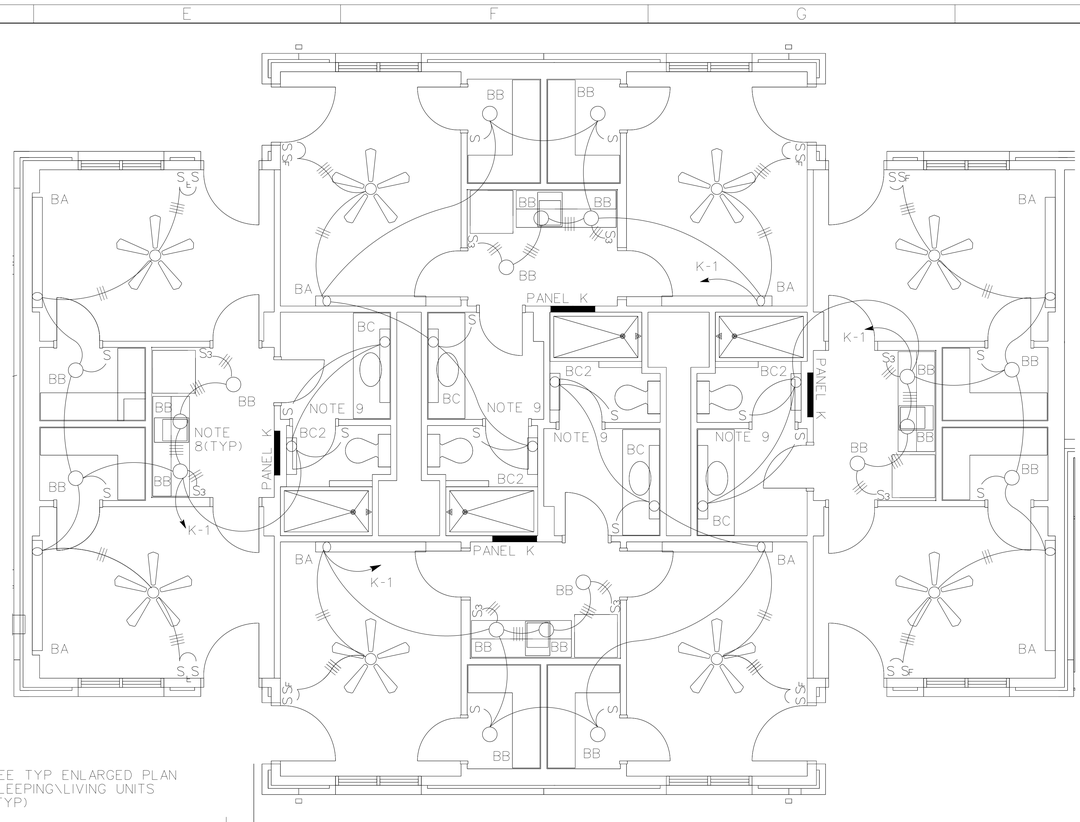
7. TYPE 'BD' FIXTURES SHALL BE MOUNTED AS UPLIGHTS UNLESS OTHERWISE INDICATED.

8. SEE KITCHEN MOUNTING DETAIL ON PL E-18 FOR LIGHTS MOUNTED IN THE SOFFIT.

9. MOUNT LIGHT SWITCHES IN THE BATHROOM/SHOWER AREA 1370 mm TO BE ABOVE THE WAINSCOT/TILE AREA.

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

2500 1000 500 0 2500 5000
SCALE: 1 : 50

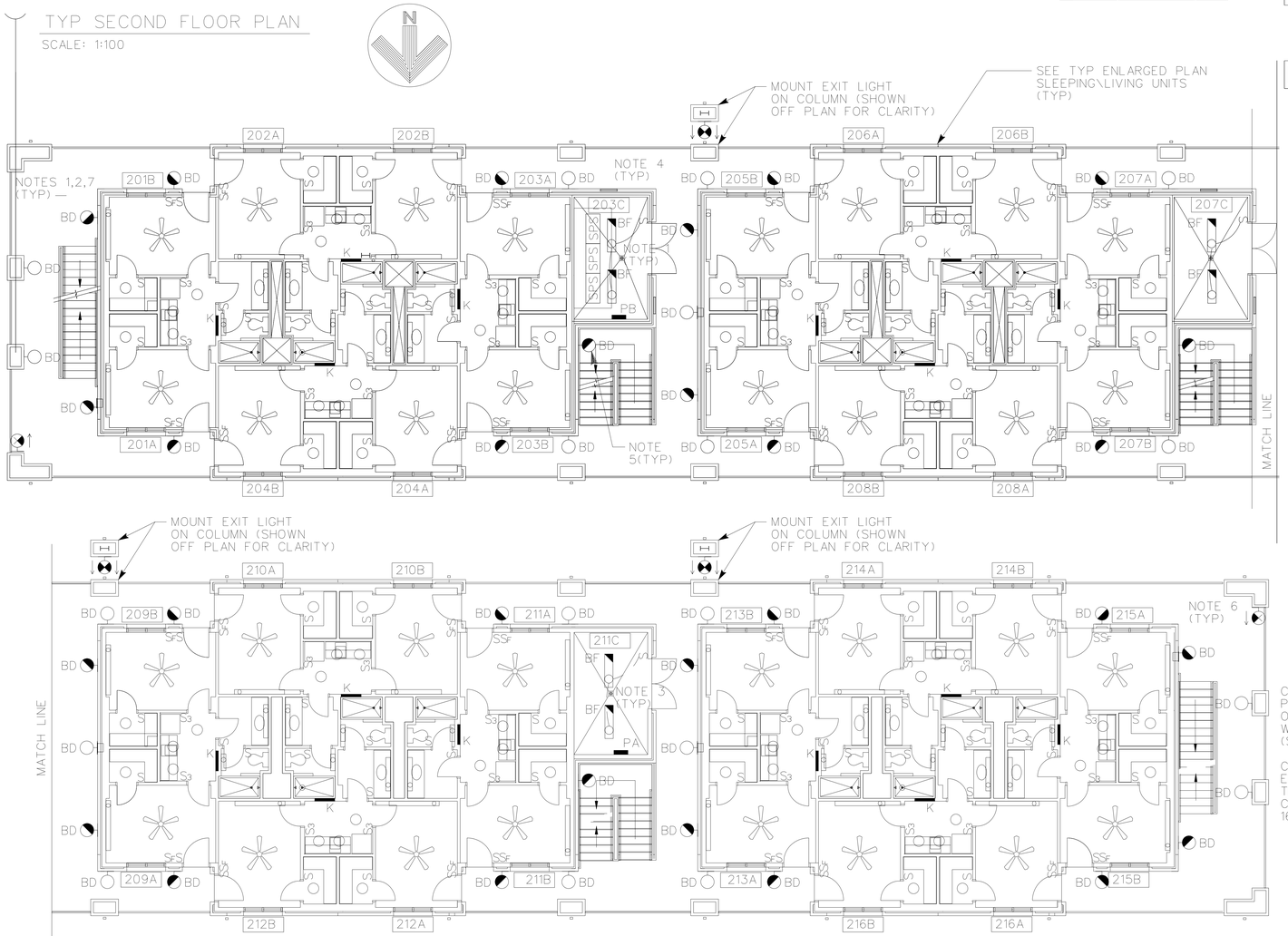


TYP ENLARGED PLAN SLEEPING\LIVING UNITS
SCALE: 1:50

CONNECT ALL TYPE "BD" NORMAL POWER FIXTURES ON THIS HALF OF FLOOR PLAN TO CIRCUIT PB-3 WITH 2#10, 1#10G IN 16 mm CONDUIT. (SEE NOTE 2)

CONNECT ALL TYPES "BD" EMERGENCY POWER FIXTURES ON THIS HALF OF FLOOR PLAN TO SPS CIRCUIT PE-3 WITH 2#10, 1#10G IN 16 mm CONDUIT (SEE NOTE 1) .

TYP SECOND FLOOR PLAN
SCALE: 1:100



CONNECT ALL TYPE "BD" NORMAL POWER FIXTURES ON THIS HALF OF FLOOR PLAN TO CIRCUIT PA-3 WITH 2#10, 1#10G IN 16 mm CONDUIT. (SEE NOTE 2)

CONNECT ALL TYPES "BD" EMERGENCY POWER FIXTURES ON THIS HALF OF FLOOR PLAN TO SPS CIRCUIT PE-4 WITH 2#10, 1#10G IN 16 mm CONDUIT (SEE NOTE 1).

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
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PLOT DATE: $$DATE$$$$$
PLOT SCALE:
REV.

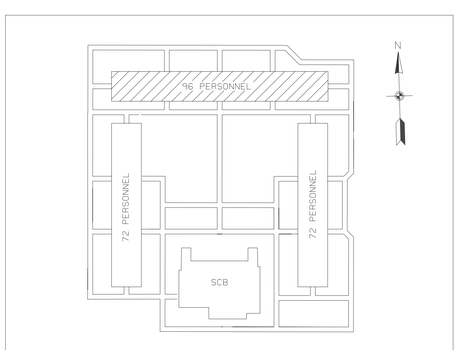
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA
BARRACKS - 96 PERSONNEL
LIGHTING PLAN
SECOND FLOOR

PLATE REFERENCE NUMBER:
E-3
SHEET 268

DESIGN FILE: DGNSPEC$$$$$



KEY MAP
NOT TO SCALE

NOTES, THIS SHEET:

1. CONNECT ALL EMERGENCY FIXTURE TYPES "BD" TO THE AC STANDBY POWER SYSTEM VIA A PHOTOCELL CONTROLLED LIGHTING CONTACTOR. THE STANDBY POWER SYSTEM AND LIGHTING CONTACTOR SHALL BE LOCATED IN ROOM 203C. THE PHOTOCELL SHALL BE FLUSH MOUNTED ON THE WALL INDICATED. WIRING BETWEEN THE PHOTOCELL AND THE STANDBY POWER SYSTEM SHALL BE INSTALLED IN THE FLOOR SLAB. SEE THE BALCONY LIGHTING CONTROL DIAGRAM, PLATE E-17 AND E-18. BRANCH CIRCUIT WIRING SHALL BE #10 AWG.

2. CONNECT ALL NORMAL FIXTURE TYPES "BD" TO THE CIRCUITS INDICATED VIA A PHOTOCELL CONTROLLED LIGHTING CONTACTOR. THE LIGHTING CONTACTOR SHALL BE LOCATED ADJACENT TO THEIR RESPECTIVE PANELBOARD. THE PHOTOCELL SHALL BE FLUSH MOUNTED ON THE WALL INDICATED. WIRING BETWEEN THE PHOTOCELL AND THE LIGHTING CONTACTOR SHALL BE RUN CONCEALED. SEE THE BALCONY AND SITE LIGHTING CONTROL DIAGRAM ON PLATE E-17. BRANCH CIRCUIT WIRING SHALL BE #10 AWG.

3. SURFACE MOUNT ALL TYPE "BF" FIXTURES.

4. SEE TYPES 'BD' MOUNTING DETAIL, PLATE E-18 (TYPICAL)

5. 2100 mm AFF TO FIXTURE CENTER (TYPICAL ALL STAIRWAY LANDINGS)

6. CONNECT ALL EXIT LIGHTS AND EMERGENCY FIXTURES TYPE "BF" TO SPS CIRCUIT PE-8 WITH 2#10, 1#10G IN 16 mm CONDUIT. EXIT LIGHTS SHALL BE 75mm BFC MEASURED FROM TOP OF FIXTURE.

7. TYPE 'BD' FIXTURES SHALL BE MOUNTED AS UPLIGHTS UNLESS OTHERWISE INDICATED.

8. SEE KITCHEN MOUNTING DETAIL ON PL E-18 FOR LIGHTS MOUNTED IN THE SOFFIT.

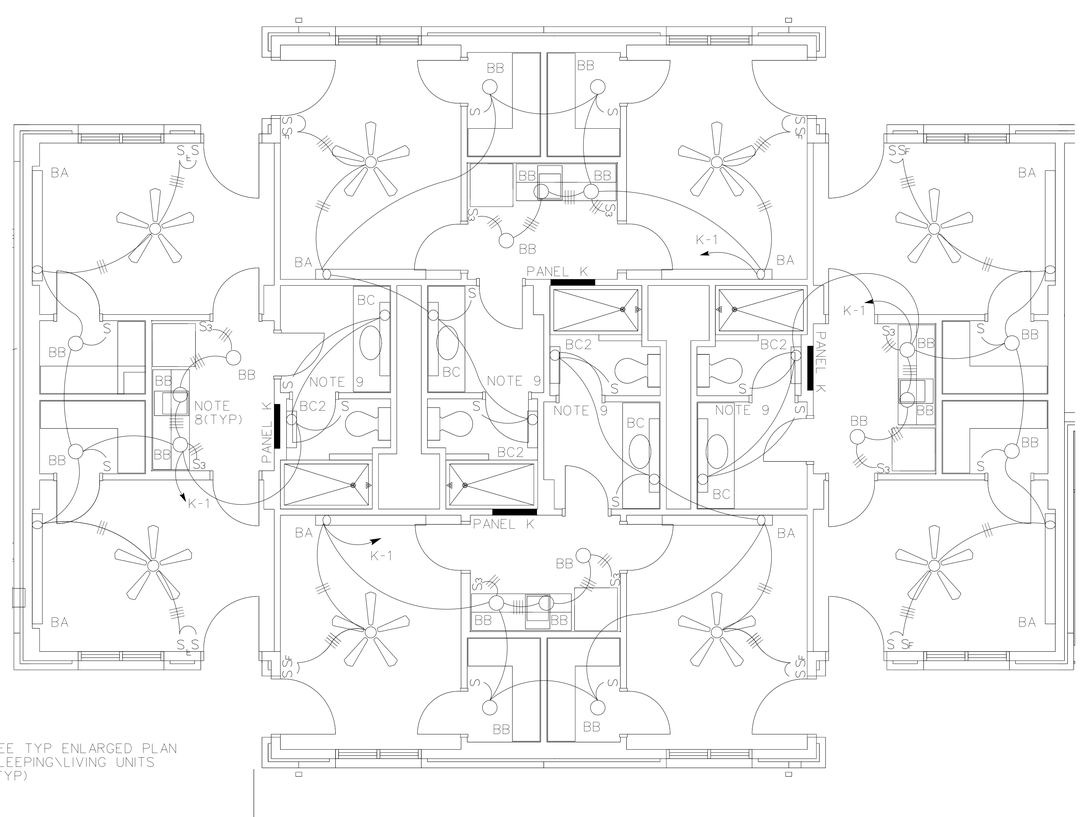
9. MOUNT LIGHT SWITCHES IN THE BATHROOM/SHOWER AREA 1370 mm TO BE ABOVE THE WAINSCOT/TILE AREA.

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

2500 1000 500 0 2500 5000

SCALE: 1 : 50

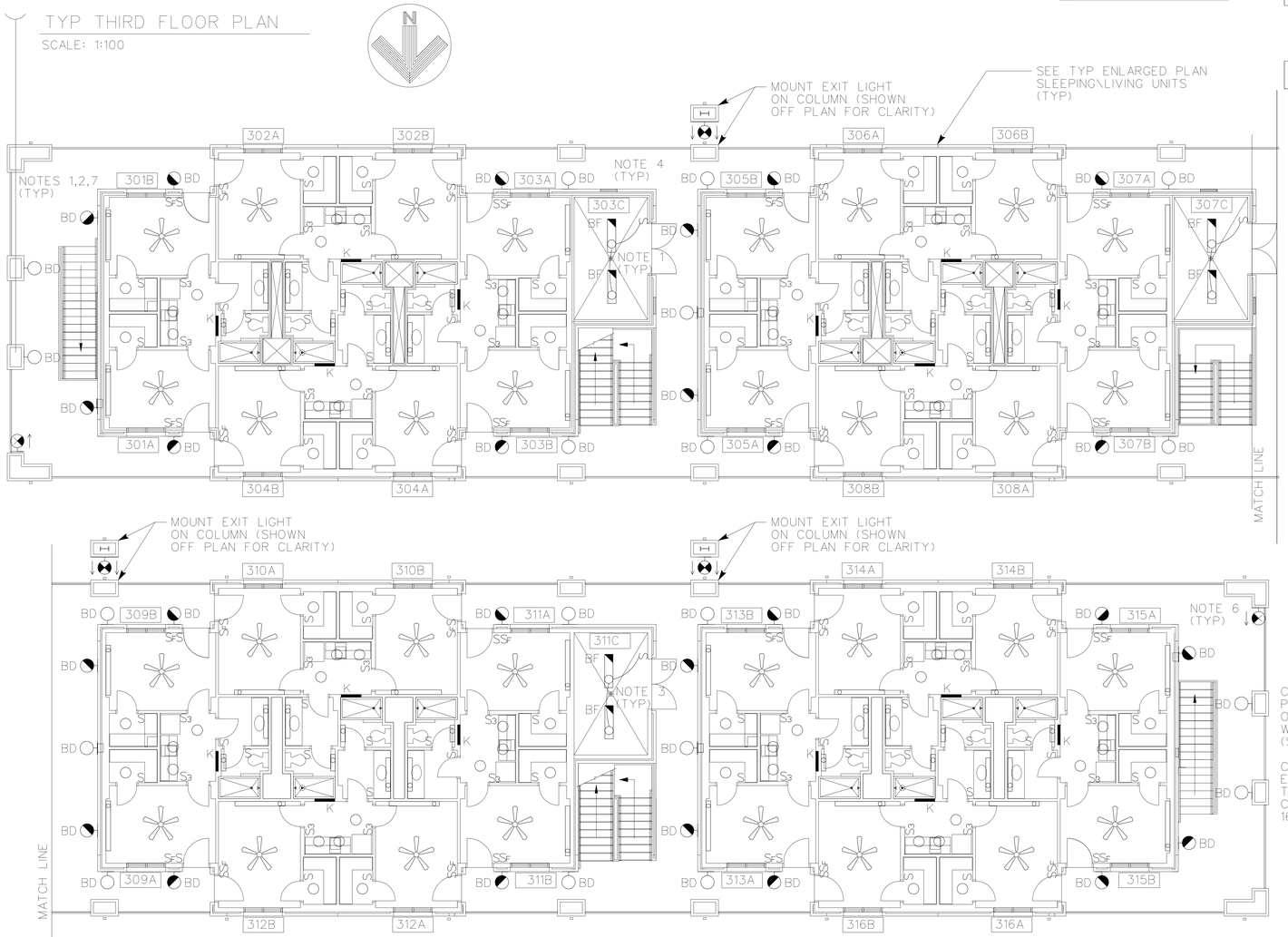


TYP ENLARGED PLAN SLEEPING\LIVING UNITS

SCALE: 1:50

TYP THIRD FLOOR PLAN

SCALE: 1:100



CONNECT ALL TYPE "BD" NORMAL POWER FIXTURES ON THIS HALF OF FLOOR PLAN TO CIRCUIT PB-1 WITH 2#10, 1#10G IN 16 mm CONDUIT. (SEE NOTE 2)

CONNECT ALL TYPES "BD" EMERGENCY POWER FIXTURES ON THIS HALF OF FLOOR PLAN TO SPS CIRCUIT PE-5 WITH 2#10, 1#10G IN 16 mm CONDUIT (SEE NOTE 1).

CONNECT ALL TYPE "BD" NORMAL POWER FIXTURES ON THIS HALF OF FLOOR PLAN TO CIRCUIT PA-1 WITH 2#10, 1#10G IN 16 mm CONDUIT. (SEE NOTE 2)

CONNECT ALL TYPES "BD" EMERGENCY POWER FIXTURES ON THIS HALF OF FLOOR PLAN TO SPS CIRCUIT PE-6 WITH 2#10, 1#10G IN 16 mm CONDUIT (SEE NOTE 1).

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99 | REV:
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PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

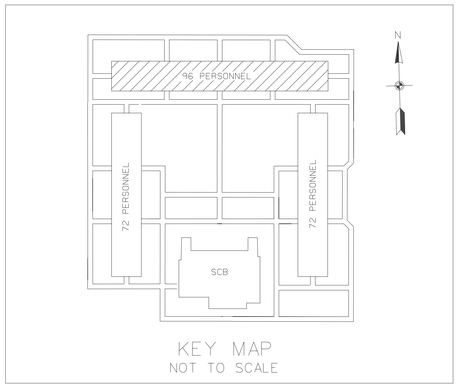
BARRACKS - 96 PERSONNEL

LIGHTING PLAN
THIRD FLOOR

PLATE REFERENCE NUMBER:
E-4

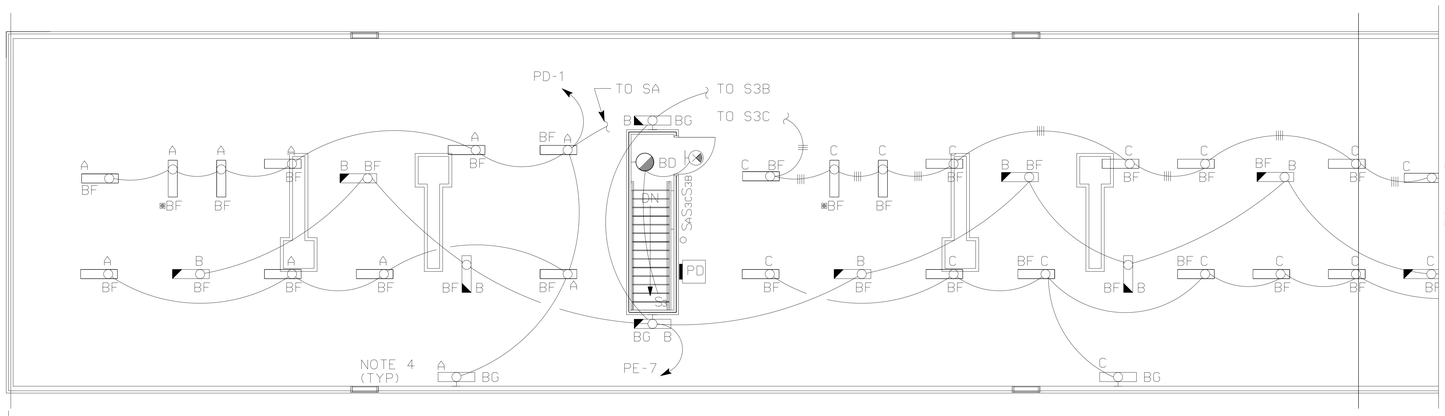
SHEET 269

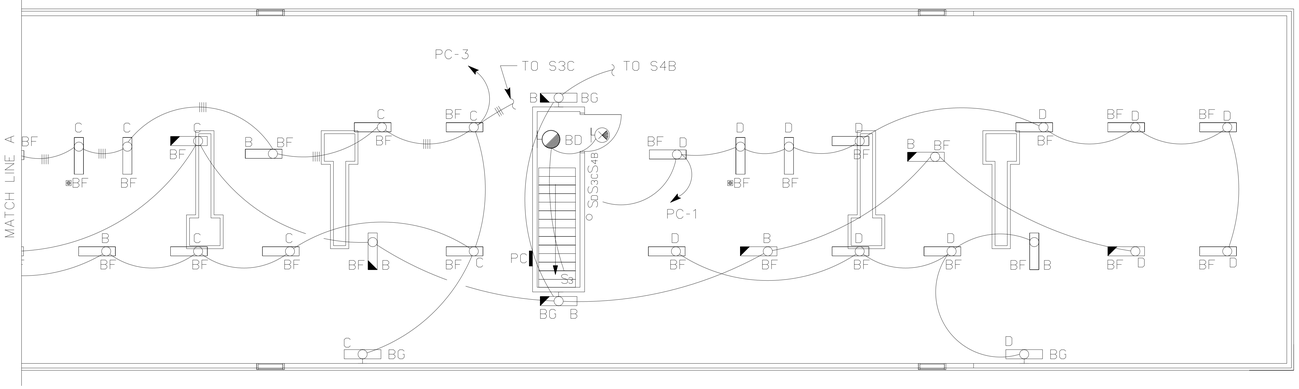
DESIGN FILE: D:\NSPE\$$$$$



KEY MAP
NOT TO SCALE

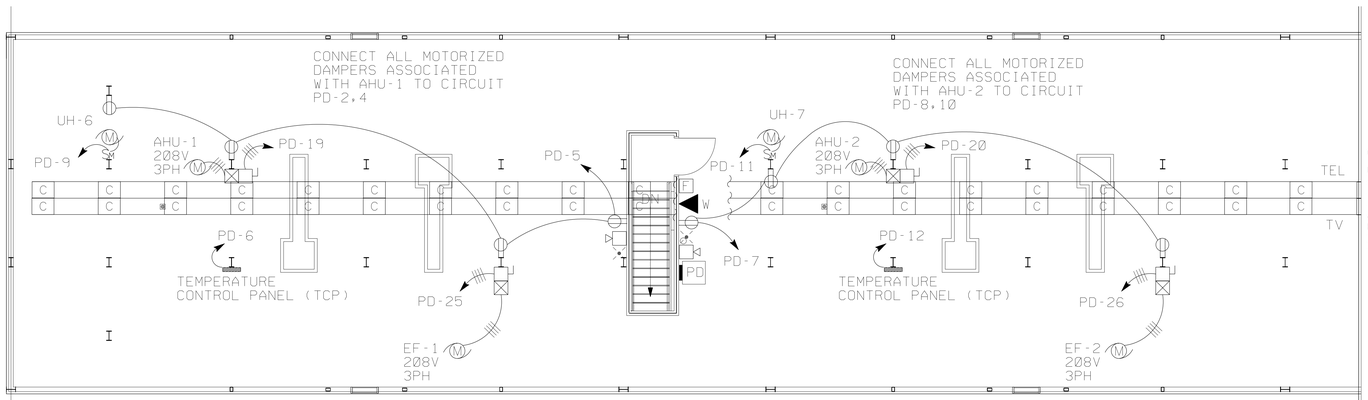
2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

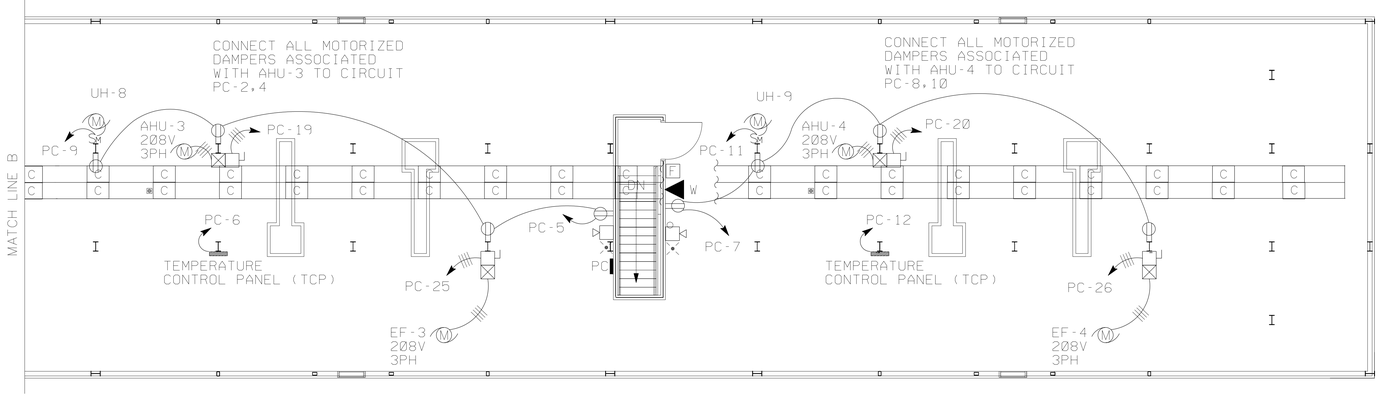




TYP ATTIC PLAN - POWER & SIGNAL

SCALE: 1:100





NOTES, ATTIC LIGHTING PLAN:

1. COORDINATE INSTALLATION OF LIGHT FIXTURES WITH INSTALLATION OF MECHANICAL EQUIPMENT AND LOCATION OF STRUCTURAL MEMBERS. LIGHT FIXTURE LOCATIONS AND MOUNTING HEIGHTS SHALL BE ADJUSTED AS NECESSARY AND AS APPROVED BY THE CONTRACTING OFFICER'S REPRESENTATIVE.

2. ALL WIRING IN ATTIC AREA SHALL BE #10 AWG CONDUCTORS WITH #10 AWG GROUND IN 16 mm EMT CONDUIT. WIRE COUNT IS INDICATED ON THE PLAN OR BY NOTE.

3. WIRE COUNT FOR EMERGENCY LIGHTING CIRCUITS ARE NOT SHOWN ON THE PLAN. SEE ATTIC EMERGENCY LIGHT SWITCHING SCHEMATIC DIAGRAM ON PLATE E-17 FOR WIRE COUNT.

4. MOUNT TYPE BG FIXTURE AT HIGHEST POINT POSSIBLE ON WALL.

5. TYPE 'BD' FIXTURES SHALL BE MOUNTED 2050mm AFF.

TYP ATTIC PLAN - LIGHTING

SCALE: 1:100

NOTES, ATTIC POWER PLAN:

1. COORDINATE INSTALLATION OF CABLE TRAYS WITH INSTALLATION OF LIGHT FIXTURES, MECHANICAL EQUIPMENT AND LOCATION OF STRUCTURAL MEMBERS. CABLE TRAYS LOCATIONS AND MOUNTING HEIGHTS SHALL BE ADJUSTED AS NECESSARY AND AS APPROVED BY THE CONTRACTING OFFICER'S REPRESENTATIVE.

2. ALL WIRING IN ATTIC AREA SHALL BE #10 AWG CONDUCTORS WITH #10 AWG GROUND IN 16 mm EMT CONDUIT.

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

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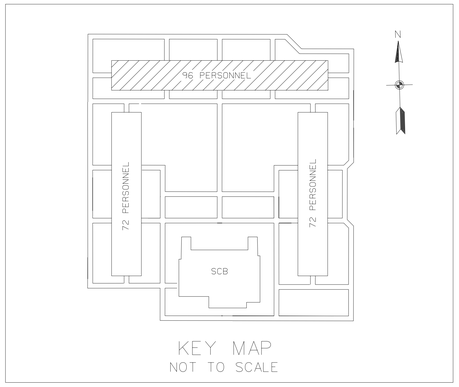
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA
BARRACKS - 96 PERSONNEL
LIGHTING, POWER & SIGNAL PLAN ATTIC

PLATE REFERENCE NUMBER:
E-5
SHEET 270

AS-BUILT

DESIGN FILE: DGN\SPEC$$$$$



KEY MAP
NOT TO SCALE

NOTES:

1. SEE PL E-19 FOR ADDITIONAL LAYOUTS OF EQUIPMENT IN ROOM.

2. SEE PL E-18 FOR TYPICAL LAYOUT OF KITCHEN AND BATHROOMS.

3. WALL FURRED OUT TO AVOID CONFLICT WITH STRUCTURAL BEAMS AND CONDUIT RUNNING VERTICALLY BETWEEN LOADCENTERS.

4. DO NOT INSTALL RECEPTACLES BACK TO BACK. MAINTAIN A MINIMUM 155 mm OFFSET BETWEEN BOXES.

2000 1000 0 2000 4000 6000 8000 10000

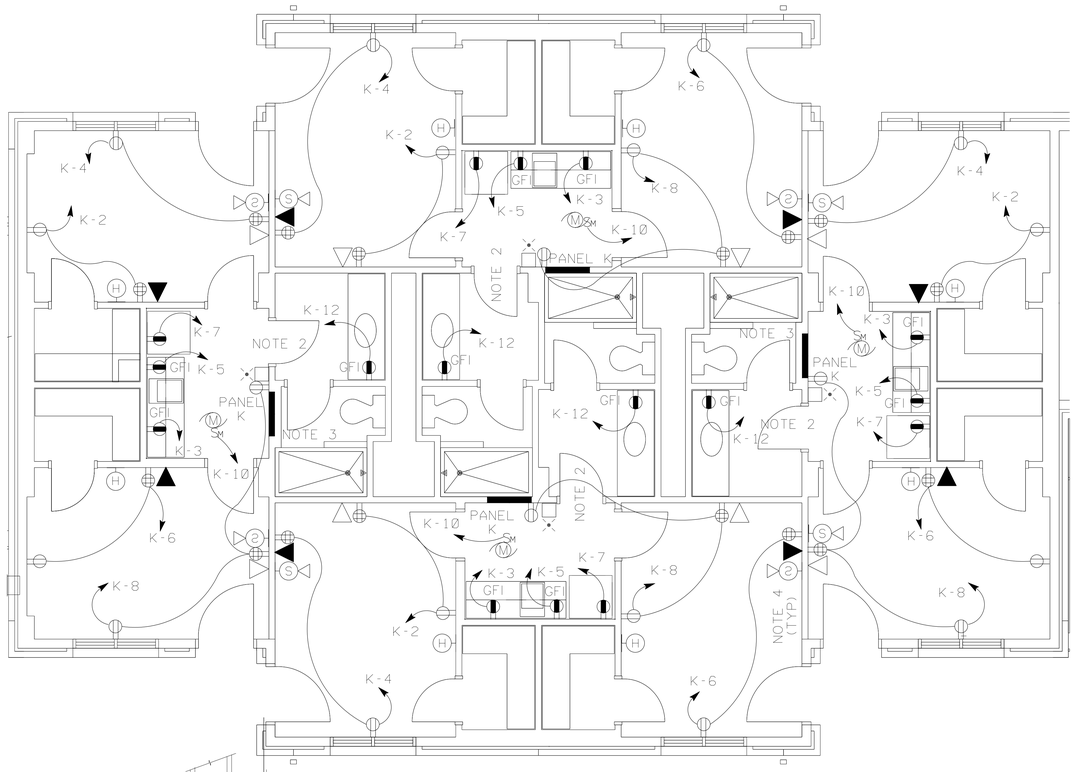
GRAPHIC SCALE 1:100

2500 1000 500 0 2500 5000

SCALE: 1 : 50

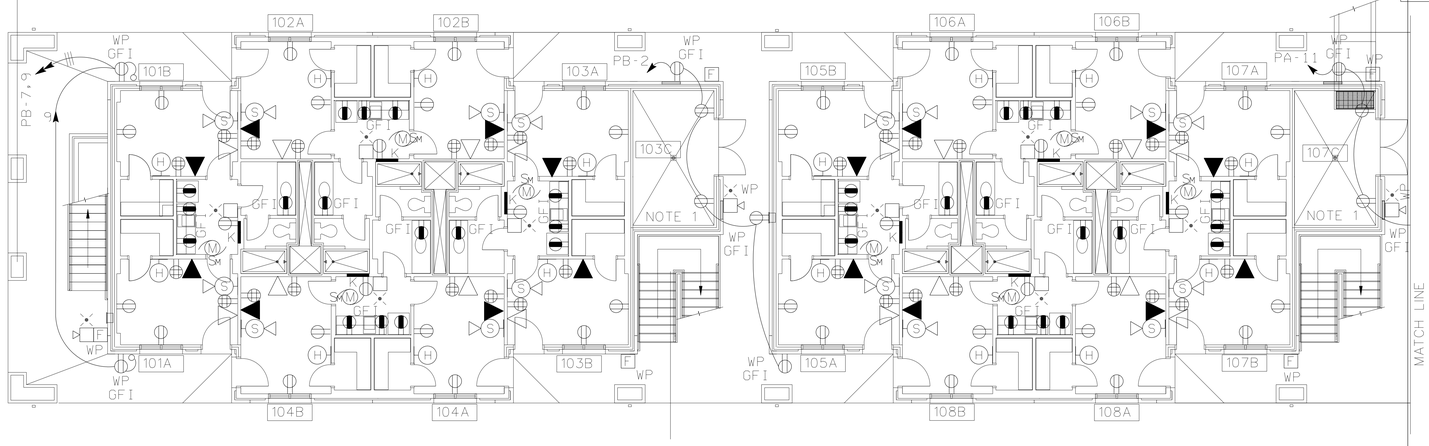
TYP FIRST FLOOR PLAN

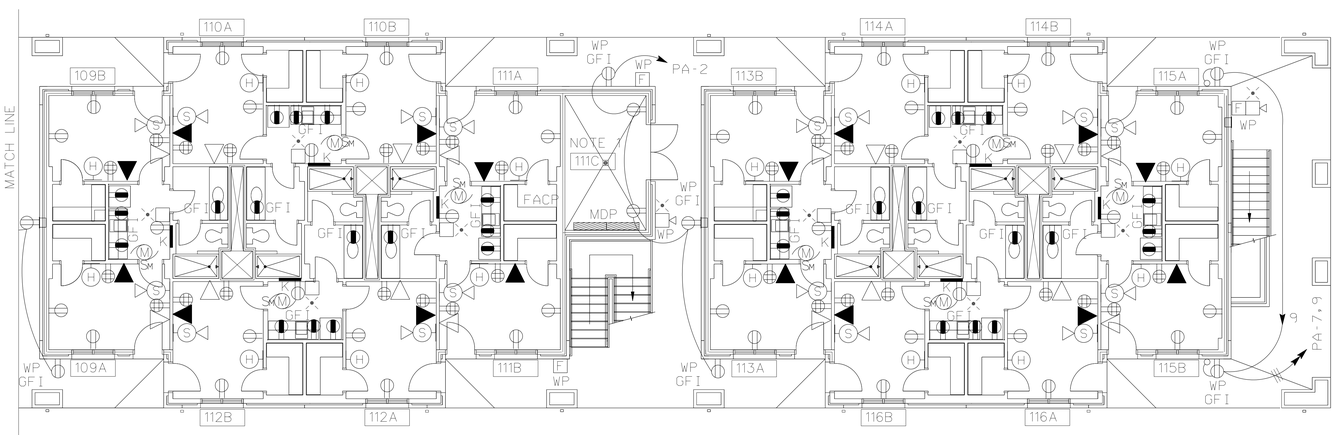
SCALE: 1:100



TYP ENLARGED PLAN SLEEPING\LIVING UNITS

SCALE: 1:50





US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

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SAVANNAH, GEORGIA

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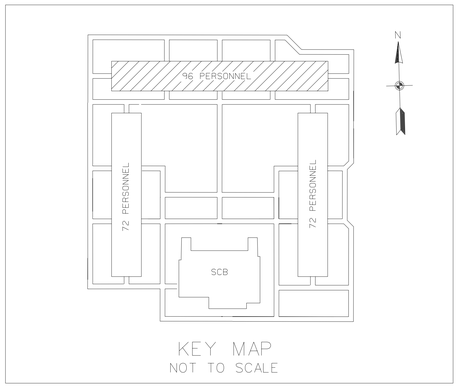
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA
BARRACKS - 96 PERSONNEL
POWER AND SIGNAL PLAN
FIRST FLOOR

PLATE REFERENCE NUMBER:
E-6
SHEET 271

AS-BUILT

DESIGN FILE: D:\$$$$$



KEY MAP
NOT TO SCALE

NOTES:

1. SEE PL E-19 FOR ADDITIONAL LAYOUTS OF EQUIPMENT IN ROOM.

2. SEE PL E-18 FOR TYPICAL LAYOUT OF KITCHEN AND BATHROOMS.

3. WALL FURRED OUT TO AVOID CONFLICT WITH STRUCTURAL BEAMS AND CONDUIT RUNNING VERTICALLY BETWEEN LOADCENTERS.

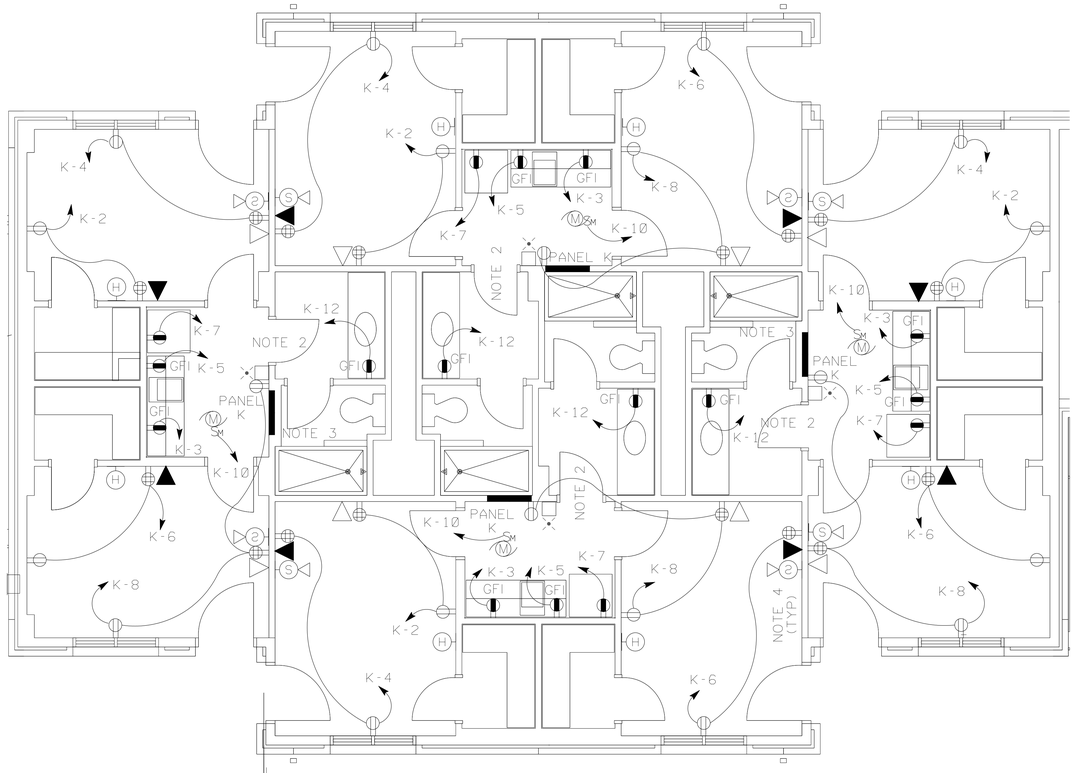
4. DO NOT INSTALL RECEPTACLES BACK TO BACK. MAINTAIN A MINIMUM 155 mm OFFSET BETWEEN BOXES.

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

2500 1000 500 0 2500 5000

SCALE: 1 : 50



TYP ENLARGED PLAN SLEEPING\LIVING UNITS

SCALE: 1:50

TYP SECOND FLOOR PLAN

SCALE: 1:100

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

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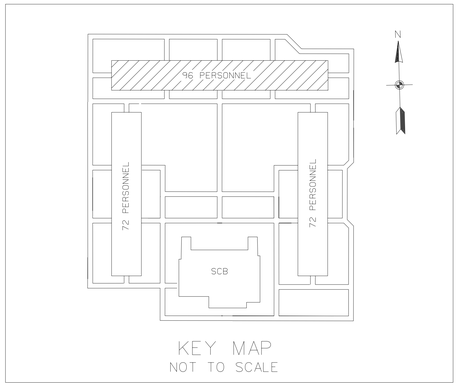
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

DESIGN FILE: DGNSPEC$$$$$$



KEY MAP
NOT TO SCALE

NOTES:

1. SEE PL E-19 FOR ADDITIONAL LAYOUTS OF EQUIPMENT IN ROOM.

2. SEE PL E-18 FOR TYPICAL LAYOUT OF KITCHEN AND BATHROOMS.

3. WALL FURRED OUT TO AVOID CONFLICT WITH STRUCTURAL BEAMS AND CONDUIT RUNNING VERTICALLY BETWEEN LOADCENTERS.

4. DO NOT INSTALL RECEPTACLES BACK TO BACK. MAINTAIN A MINIMUM 155 mm OFFSET BETWEEN BOXES.

2000 1000 0 2000 4000 6000 8000 10000

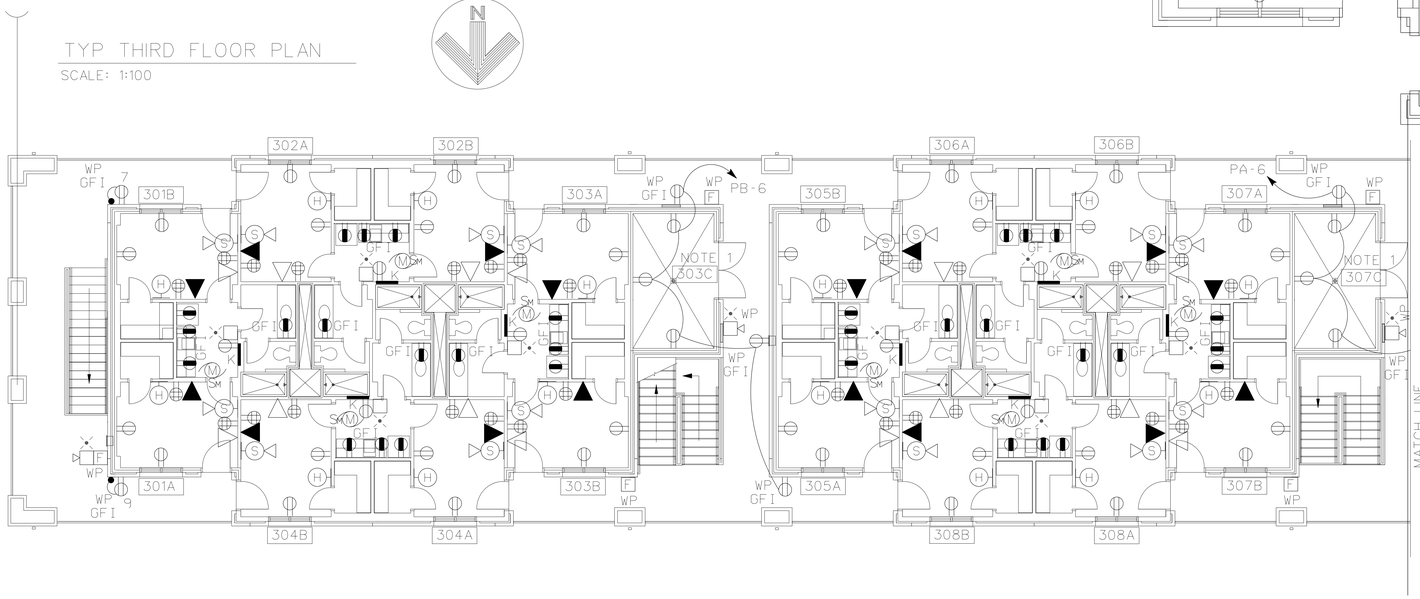
GRAPHIC SCALE 1:100

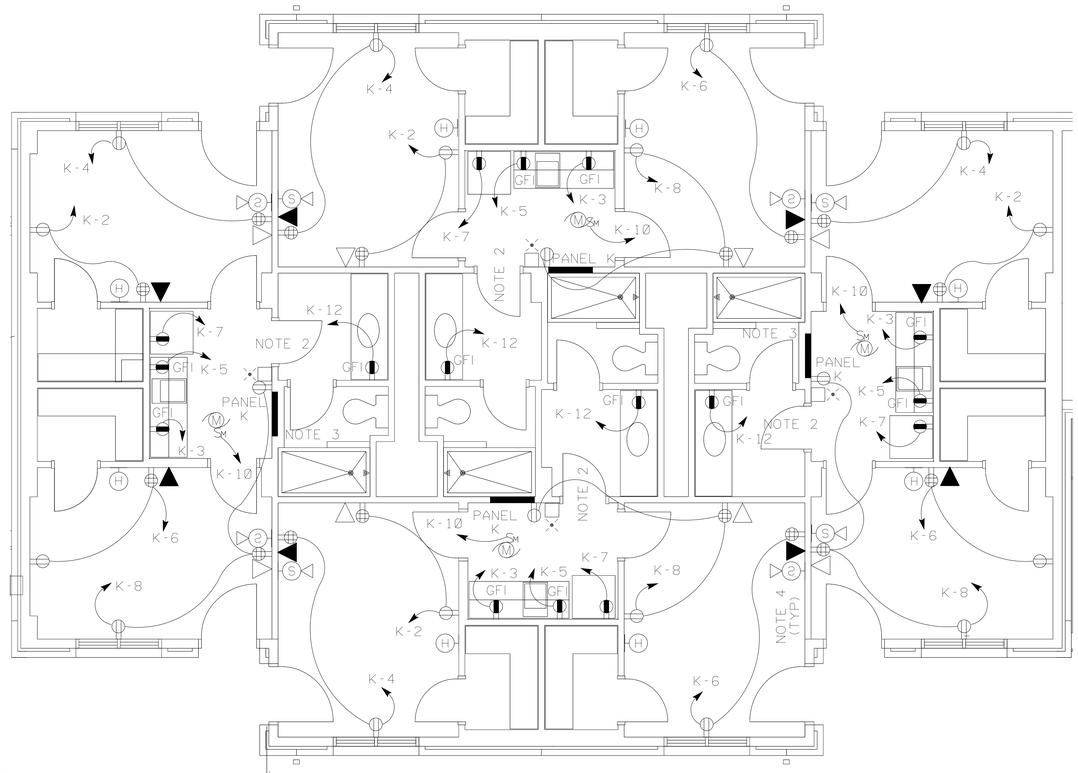
2500 1000 500 0 2500 5000

SCALE: 1 : 50

TYP THIRD FLOOR PLAN

SCALE: 1:100





TYP ENLARGED PLAN SLEEPING\LIVING UNITS

SCALE: 1:50

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:
REV:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
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WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

POWER AND SIGNAL PLAN
THIRD FLOOR

PLATE REFERENCE NUMBER:
E-8
SHEET 273

AS-BUILT

SB_DGN\BARRACKS96\G1E08PP3.DGN

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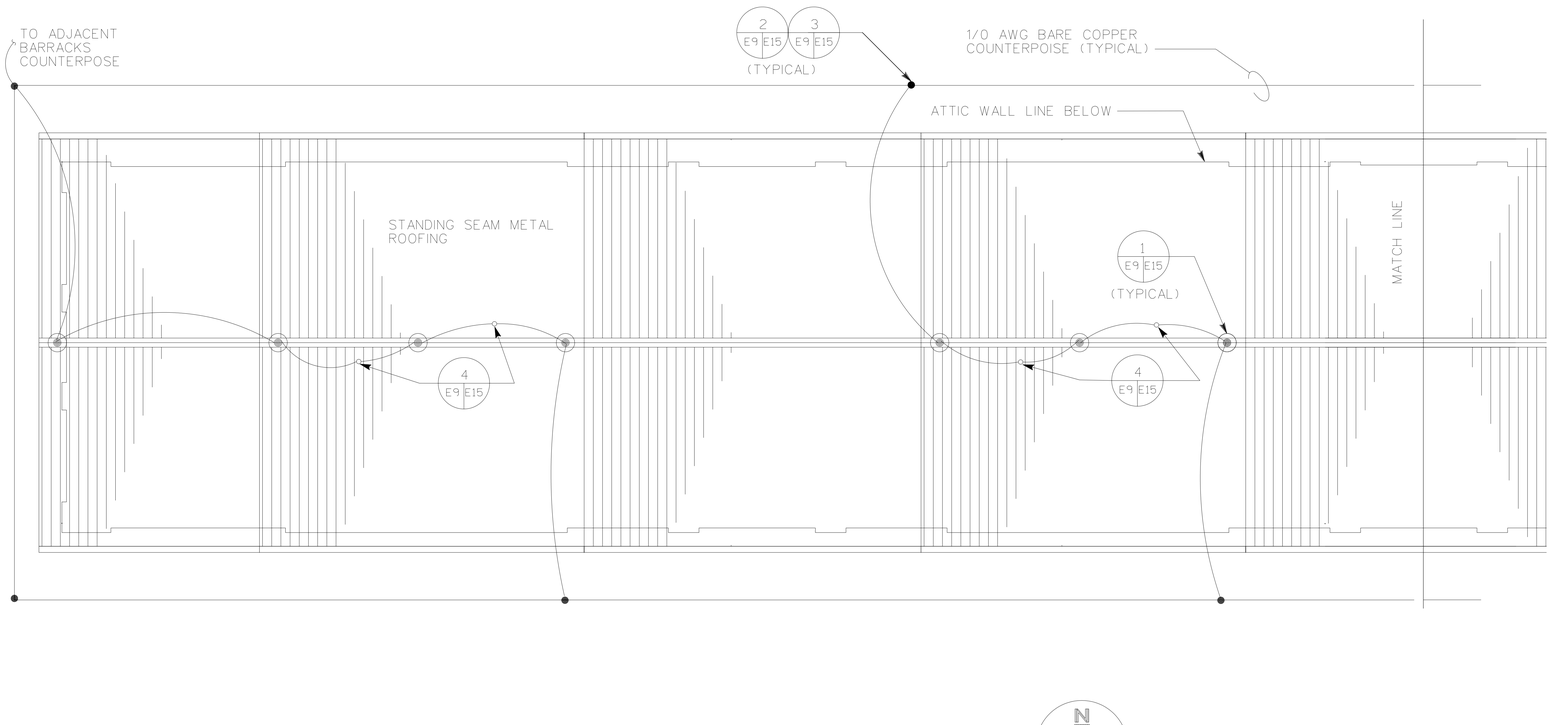
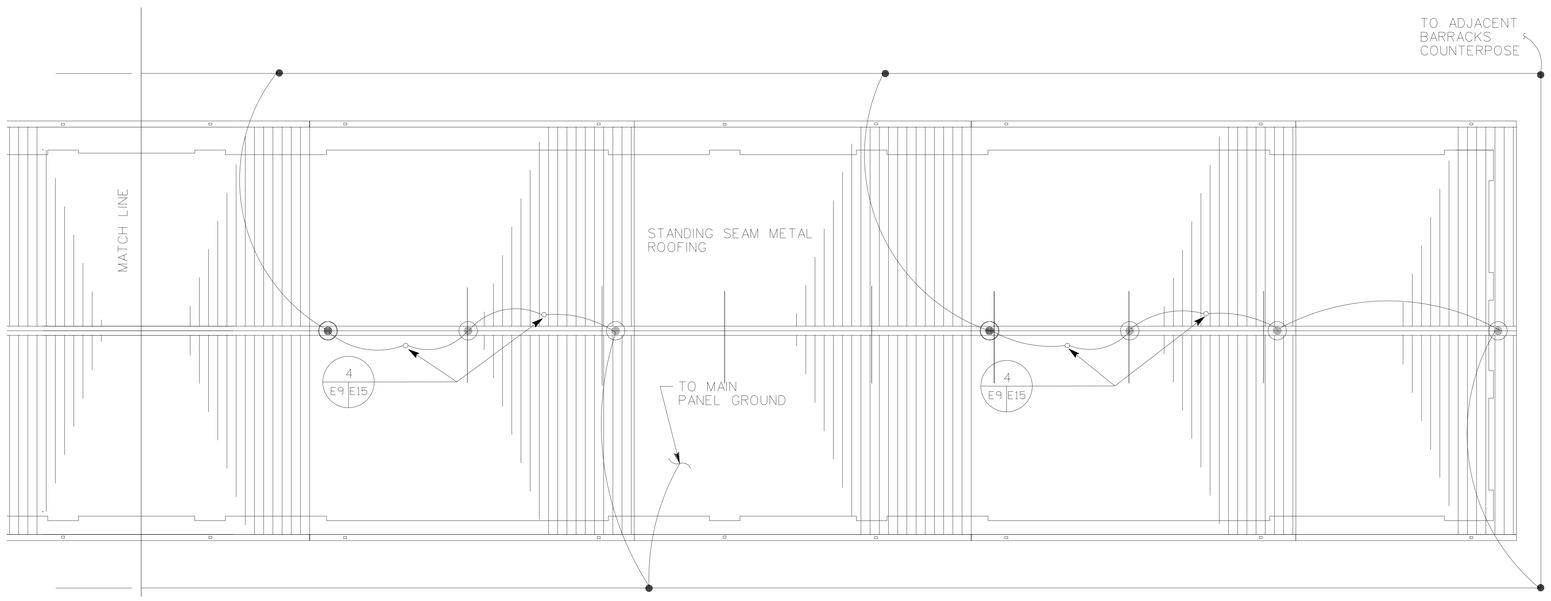


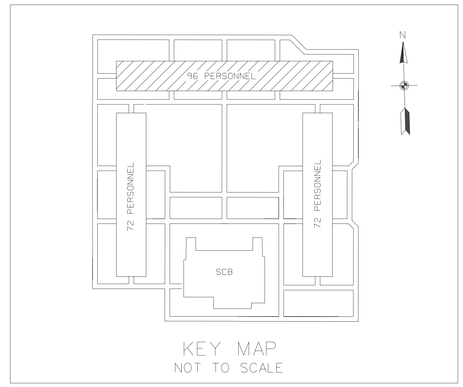
BARRACKS LIGHTNING PROTECTION PLAN

SCALE: 1:100



2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100



KEY MAP
NOT TO SCALE

LIGHTNING PROTECTION NOTES:

1. CLASS 1 MATERIALS AS DEFINED IN NFPA 780, TABLE 3-4, SHALL BE USED.

2. ALL BUILDING STRUCTURAL STEEL SHALL BE MADE ELECTRICALLY CONTINUOUS.

3. DOWN CONDUCTORS ADJACENT TO STEEL COLUMNS SHALL BE ELECTRICALLY BONDED TO THE STEEL COLUMNS AT BOTH THE TOP AND THE BOTTOM.

4. ALL METALLIC ROOF PENETRATIONS SHALL BE BONDED TO THE LIGHTNING PROTECTION SYSTEM.

5. ALL LIGHTNING PROTECTION CONDUCTORS SHALL BE RUN CONCEALED.

LEGEND (THIS SHEET ONLY):

- ROOF/DOWN CONDUCTOR, CLASS I
- COUNTERPOISE
- AIR TERMINAL
- GROUND ROD

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99 | REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

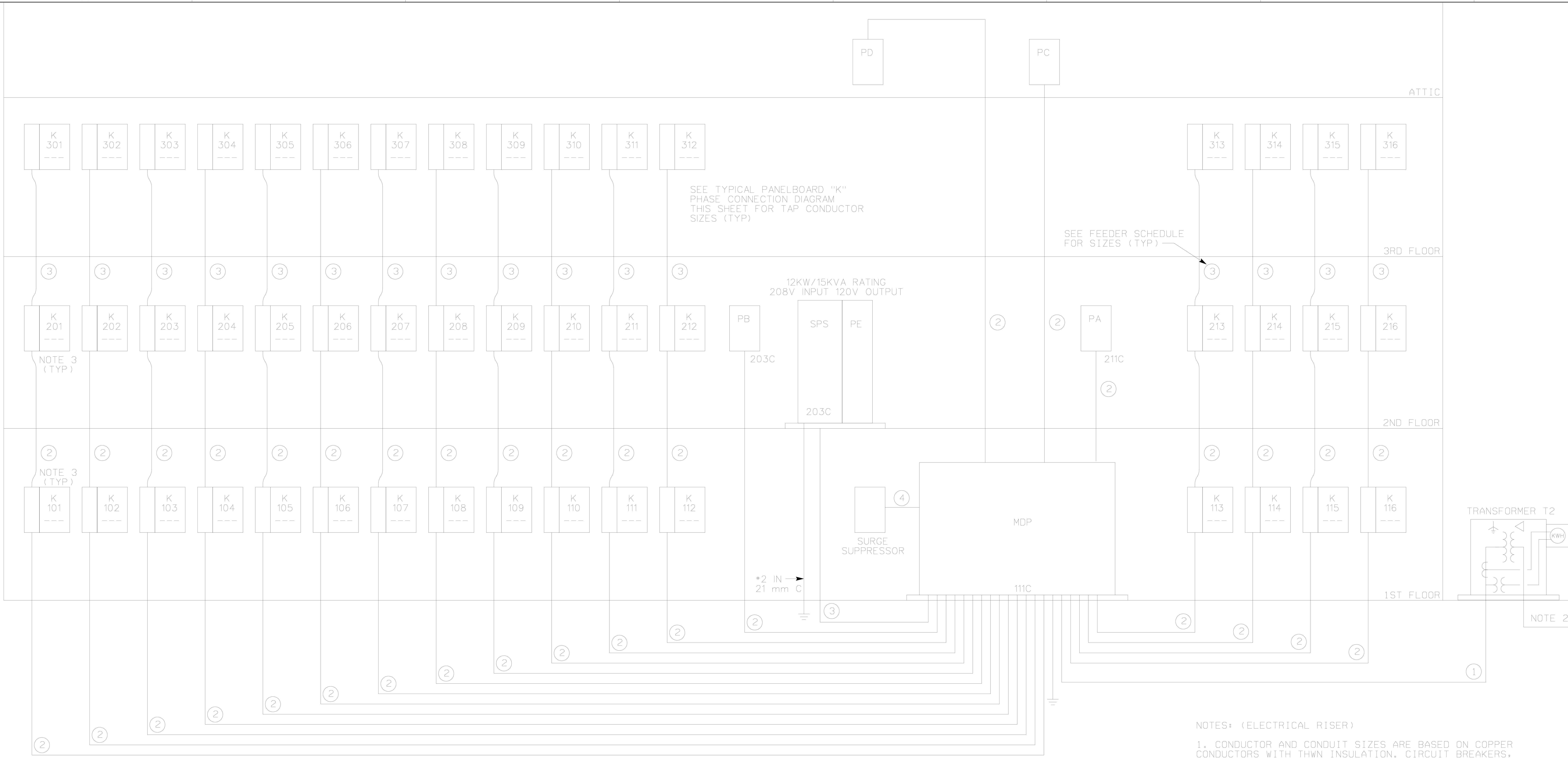
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
LIGHTNING PROTECTION PLAN

AS-BUILT

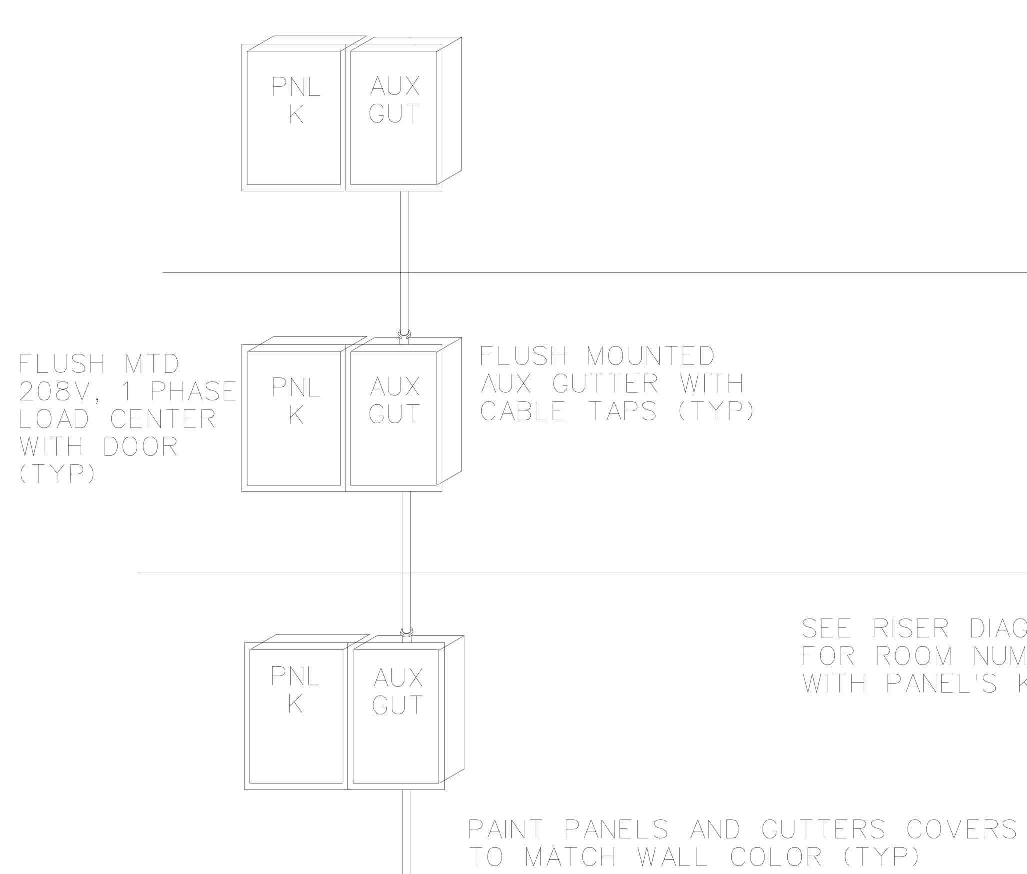
PLATE REFERENCE NUMBER:
E-9
SHEET 274

DESIGN FILE: DGNSPEC$$$$$



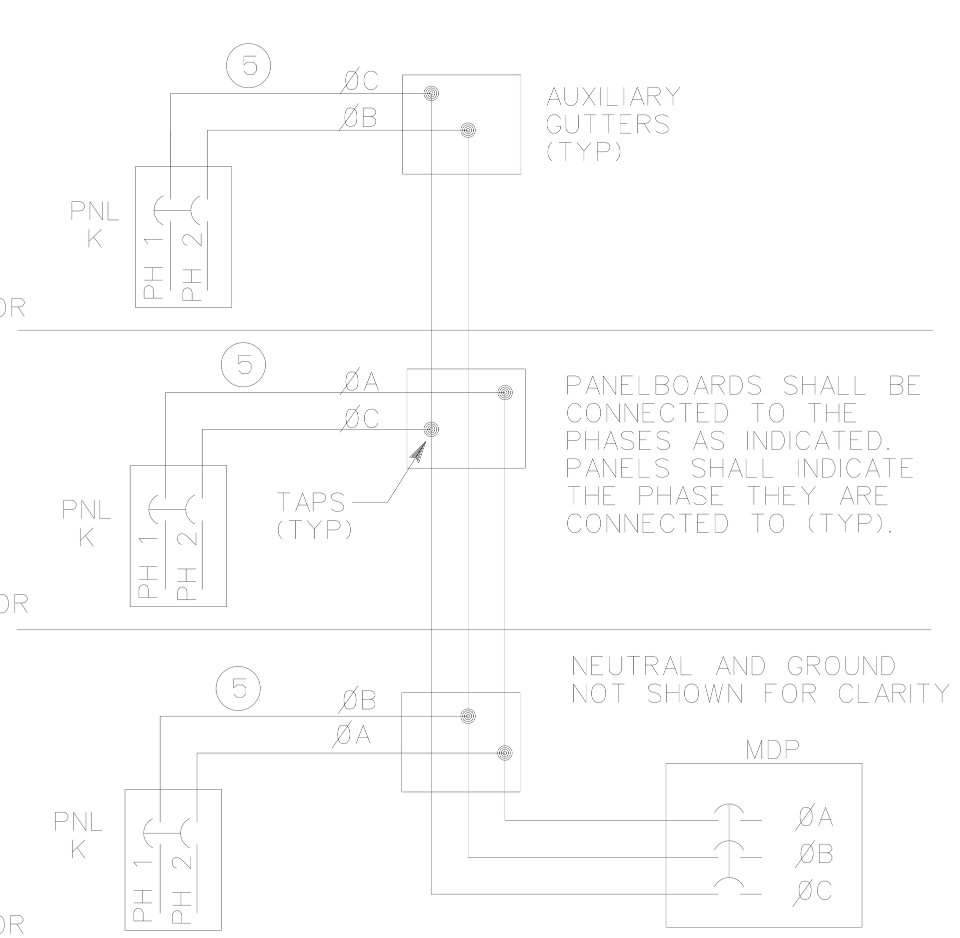
ELECTRICAL RISER DIAGRAM
NOT TO SCALE

TABLE B-1 NEMA APPROVED METRIC SIZE	
USA TRADE SIZE	METRIC SIZE DESIGNATION
½"	16 MM
¾"	21 MM
1"	27 MM
1-1/4"	35 MM
1-1/2"	41 MM
2"	53 MM
2-1/2"	63 MM
3"	78 MM
3-1/2"	91 MM
4"	103 MM
5"	129 MM
6"	155 MM



TYPICAL PANELBOARD "K"
RISER FOR LIVING UNITS
NOT TO SCALE

ROOM NUMBERS NOT SHOWN FOR CLAIRTY



TYPICAL PANELBOARD "K"
PHASE CONNECTION DIAGRAM
NOT TO SCALE

NOTES: (ELECTRICAL RISER)

1. CONDUCTOR AND CONDUIT SIZES ARE BASED ON COPPER CONDUCTORS WITH THWN INSULATION. CIRCUIT BREAKERS, TERMINALS, ETC. SHALL BE RATED AND MARKED FOR 75 DEGREES MINIMUM.

2. SEE SITE POWER PLAN FOR SIZE OF PRIMARY CONDUCTORS, ROUTING OF DUCTBANK AND TRANSFORMER CHARACTERISTICS.

3. USE CONDUIT OFFSETS AS NECESSARY TO AVOID CONFLICT WITH STRUCTURAL BEAM. SEE ARCHITECT DRAWINGS FOR DETAILS ON FURRED OUT WALL.

4. PROVIDE PIPE SLEEVES FOR POWER AND COMMUNICATIONS ENTRANCE AND EXIT CONDUITS THROUGH THE FOUNDATION WALL AT THE TIME OF THE CONSTRUCTION OF THE FOUNDATION WALLS. NO DRILLING OR PUNCHING THROUGH THE FOUNDATION WALL WILL BE ALLOWED.

FEEDER SCHEDULE (NOTE 1)	
FEEDER DESIGNATION	FEEDER SIZE
1	4 RUNS 4#500 MCM IN 103 MM C
2	4#2, 1#6G IN 35 MM C
3	3#2, 1#6G IN 35 MM C
4	4#6, 1#8G IN 27 MM C
5	3#6, 1#8G IN 27 MM C

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

ELECTRICAL RISER DIAGRAM, DETAILS AND NOTES

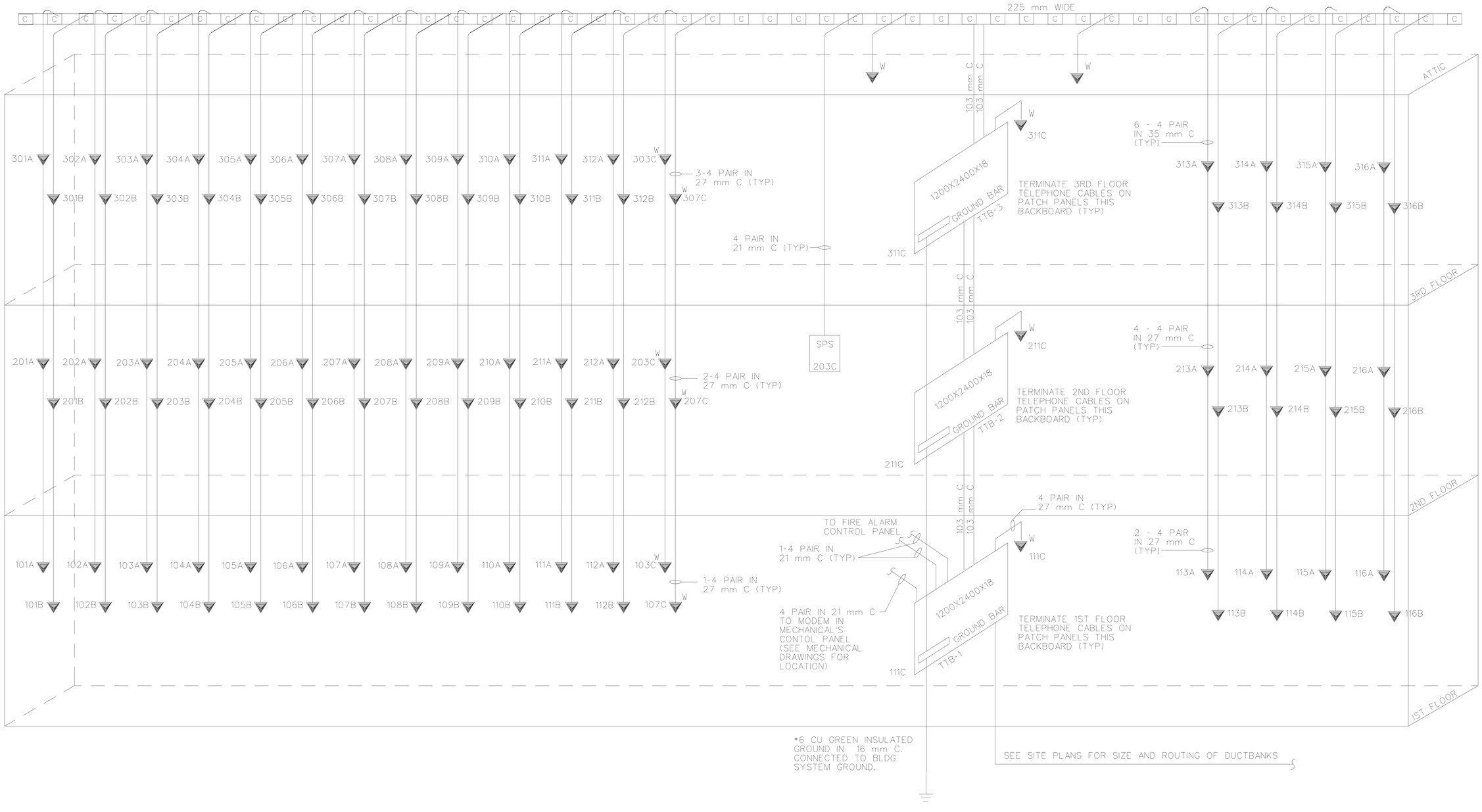
PLATE REFERENCE NUMBER:
E-10
SHEET 275

DESIGN FILE: DGNSPEC$$

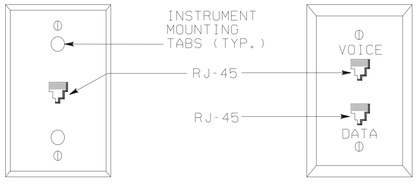
SB_DGN\BARRACKS96\G1E10PRS.DGN

...\SB_DGN\BARRACKS96\G1E10PRS.dgn 6/2/2006 9:23:08 AM

COORDINATE LOCATION OF PENETRATIONS THRU ATTIC FLOOR WITH EQUIPMENT, ETC IN ATTIC.



TELEPHONE RISER DIAGRAM
NOT TO SCALE



TYPE W WALL MOUNTED VOICE OUTLET
NOT TO SCALE

TYPICAL DUAL COMMUNICATIONS OUTLET
NOT TO SCALE

NOTES:

1. ALL TELEPHONE OUTLETS AND CABLE SHALL BE RATED FOR CATEGORY 5 AS PER TIA/EIA 568-A STANDARD. MODULAR JACK PIN/PAIR CONFIGURATION SHALL BE T568B PER TIA/EIA-568-A STANDARD. ALL TELEPHONE CONDUIT INSIDE THE BUILDING SHALL BE ELECTRICAL METALLIC TUBING (EMT).

2. TELEPHONE CABLE TO EACH DUPLEX OUTLET SHALL BE 2-4 PAIR CABLE (CATEGORY 5) IN CONDUIT SIZED AS INDICATED. TELEPHONE CABLE TO EACH SINGLE OUTLET OR CONTROL PANEL SHALL BE A 4 PAIR CABLE (CATEGORY 5) IN CONDUIT SIZED AS INDICATED.

3. TERMINATE ALL TELEPHONE COPPER CABLES ON WALL MOUNTED MODULAR 110 PATCH PANELS.

4. RUN 100 PAIR FROM BACKBOARD ON FIRST FLOOR TO EACH BACKBOARD.

5. LABEL CONDUIT AND/OR CABLES AT THE CABLE TRAY AS TO THE ROOM THEY ARE SERVING.

6. A 3mm X 25mm COPPER BUS BAR WITH STAND-OFF INSULATORS AND ACCESSORIES SHALL BE RUN ALONG THE ENTIRE LENGTH OF THE BACKBOARDS AND SHALL BE CONNECTED TO THE MAIN BUILDING GROUNDING SYSTEM.

7.6. PROVIDE PIPE SLEEVES FOR POWER AND COMMUNICATIONS ENTRANCE AND EXIT CONDUITS THROUGH THE FOUNDATION WALL AT THE TIME OF THE CONSTRUCTION OF THE FOUNDATION WALLS. NO DRILLING OR PUNCHING THROUGH THE FOUNDATION WALL WILL BE ALLOWED.

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99 | REV.
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U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
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WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

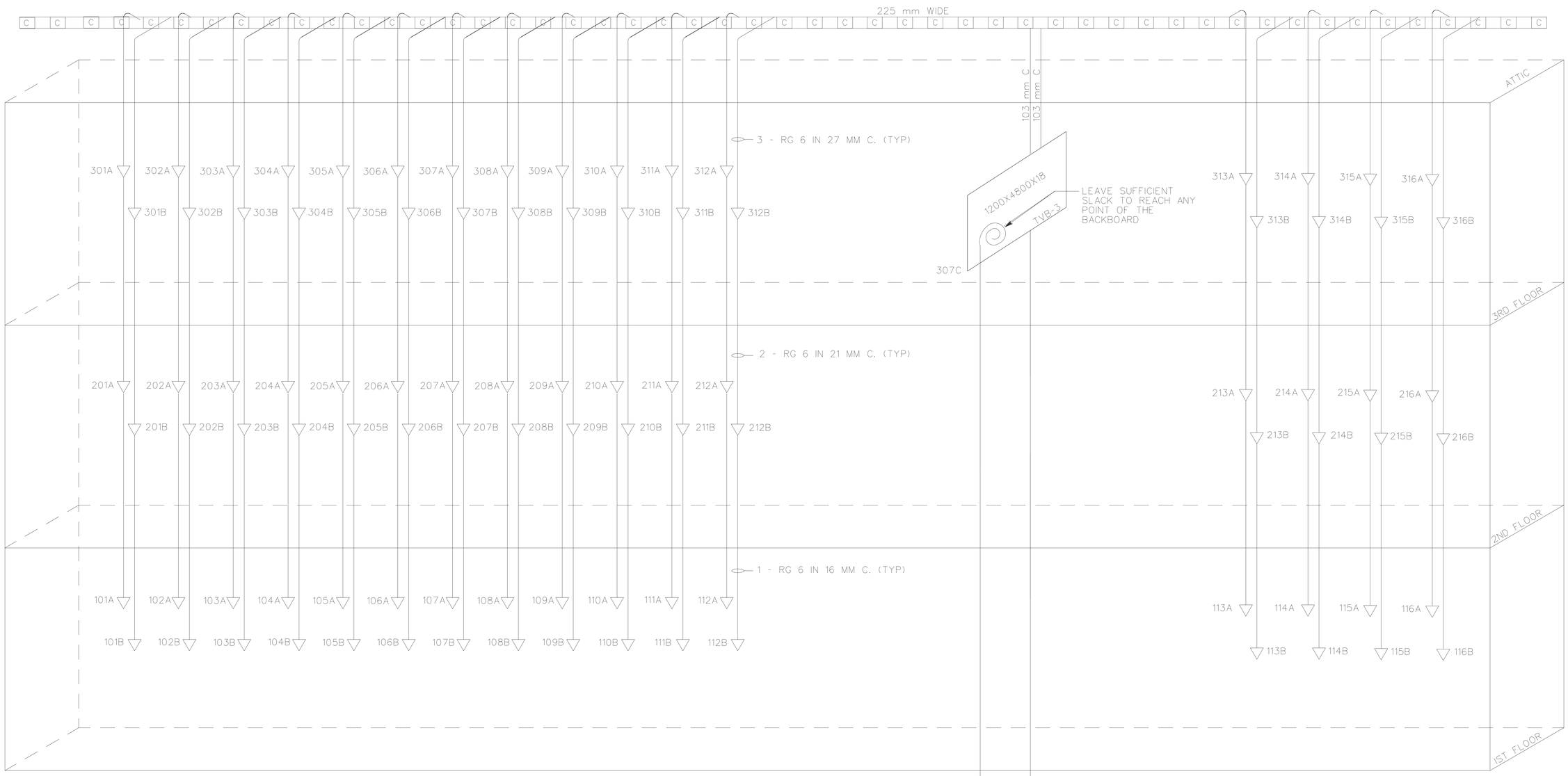
BARRACKS - 96 PERSONNEL

TELEPHONE RISER, NOTES AND DETAILS

PLATE REFERENCE NUMBER:
E-11
SHEET 276

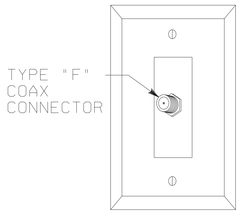
DESIGN FILE: DONSPEC$$$$$

COORDINATE LOCATION OF PENETRATIONS THRU ATTIC FLOOR WITH EQUIPMENT, ETC IN ATTIC.



CABLE TV RISER DIAGRAM

NOT TO SCALE



TYPICAL CABLE TELEVISION OUTLET

NOT TO SCALE

NOTES:

1. CONNECT CABLE TO EACH TV OUTLET. EXTEND CABLE (RG 6) IN CONDUIT SIZED AS INDICATED FROM EACH OUTLET TO THE MAIN BACKBOARD LOCATION. LEAVE CABLE SLACK TO REACH THE FLOOR LEVEL WITH EACH CABLE. CABLE TO BE PERMANTELY MARKED INDICATING THE OUTLET LOCATION TO WHICH IT IS CONNECTED (METHOD OF CABLE MARKING TO BE APPROVED BY CONTRACTING OFFICER). CABLES TO HAVE END CONNECTORS AND ARE TO BE COILED NEATLY ABOVE THE BACKBOARD.

2. ALL CABLE TV CONDUIT INSIDE THE BUILDING SHALL BE ELECTRICAL METALLIC TUBING (EMT).

3. PROVIDE PIPE SLEEVES FOR POWER AND COMMUNICATIONS ENTRANCE AND EXIT CONDUITS THROUGH THE FOUNDATION WALL AT THE TIME OF THE CONSTRUCTION OF THE FOUNDATION WALLS. NO DRILLING OR PUNCHING THROUGH THE FOUNDATION WALL WILL BE ALLOWED.

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

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U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	AS-BUILT DRAWING NO REVISION THIS SHEET DESCRIPTION	DATE	BY
		FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

CABLE TV RISER, NOTES AND DETAILS

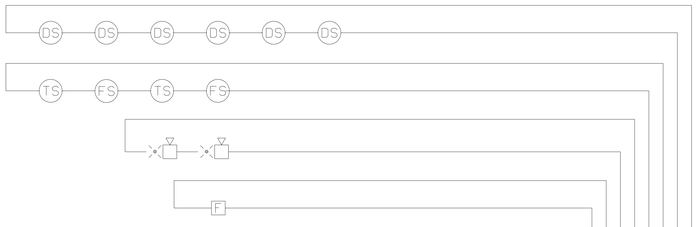
PLATE REFERENCE NUMBER: E-12

SHEET 277

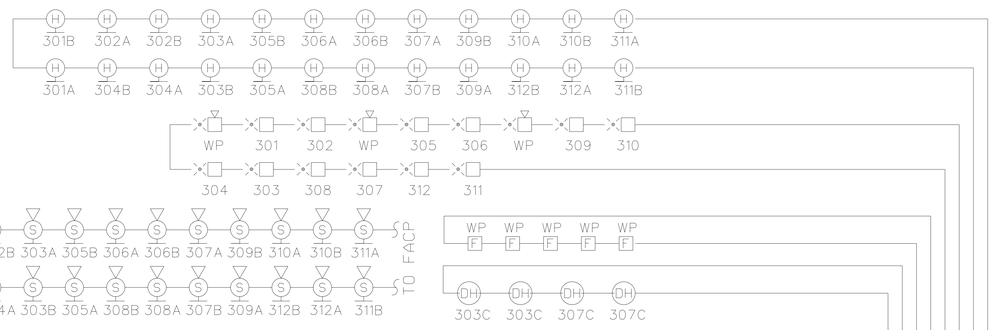
DESIGN FILE: DGNSPEC$$$$$

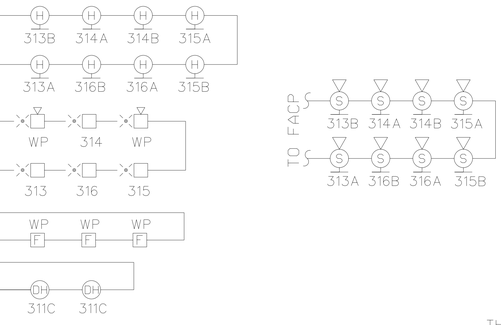
REFER TO MECHANICAL DRAWINGS AND SPECIFCATIONS FOR NUMBER AND LOCATION OF DUCT SMOKE DETECTORS.

REFER TO SPRINKLER DRAWINGS AND SPECIFCATIONS FOR NUMBER AND LOCATION OF TAMPER AND FLOW SWITCHES (TYP).

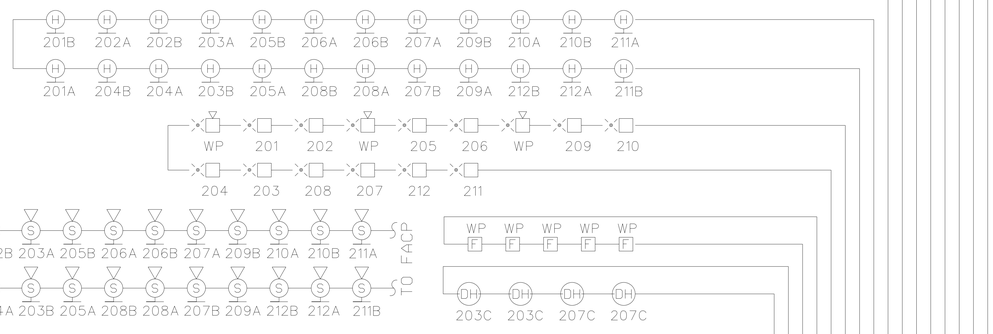


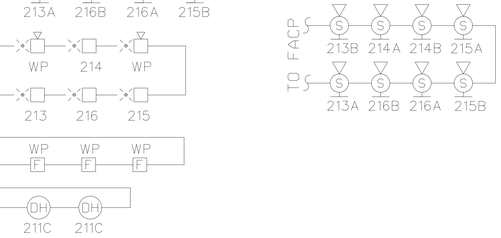
ATTIC



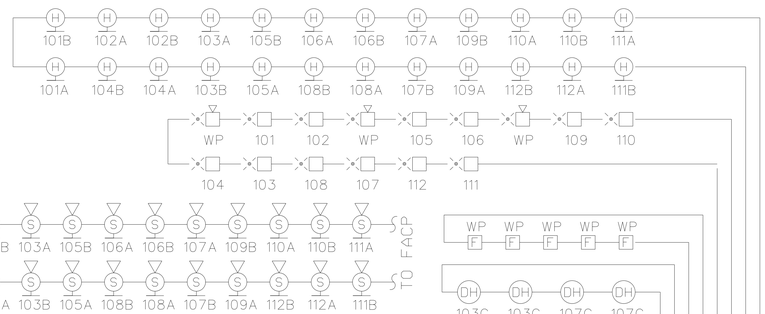


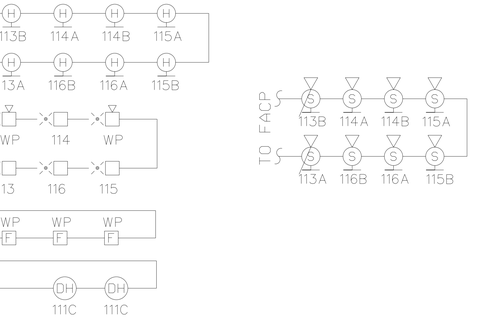
THIRD FLOOR





SECOND FLOOR





NOTES ON FIRE ALARM:

1. THE FIRE ALARM SYSTEM SHALL BE A COMPLETELY SUPERVISED SYSTEM EMPLOYING ANALOG ADDRESSABLE INITIATING DEVICES AND MULTIPLEX COMMUNCIATION TECHNIQUES. EACH DETECTION, MONITOR AND CONTROL DEVICE SHALL BE INDIVIDUALLY ADDRESSABLE. DEVICES WHICH ARE NOT INHERENTLY ADDRESSABLE (i.e. TAMPER, FLOW SWITCHES) SHALL BE EQUIPPED WITH ADDRESSABLE MONITOR AND CONTROL MODULES.

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

3. 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 AND TRANSMITTED TO THE CENTRAL RECEIVING UNIT.

4. FOR LOCATIONS AND NUMBER OF STATIONS REFER TO DRAWINGS AND SPECIFICATIONS.

5. CONTRACTOR TO INSTALL CONDUIT AND WIRING IN ACCORDANCE WITH THE FIRE ALARM MANUFACTURER'S SHOP DRAWINGS REQUIREMENTS AND NFPA STANDARDS. TWO CONDUIT LOOP SYSTEM SHALL BE PROVIDED.

6. ROUTING OF FIRE ALARM DEVICE CIRCUITS SHOWN ON THE RISER DIAGRAM IS NOT MANDATORY. UNLESS OTHERWISE INDICATED, ALTERNATE ROUTING OF WIRE BETWEEN DEVICES SHALL BE ACCEPTABLE IF IN COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

7. ALL ADDRESSABLE DEVICES EXCEPT ROOM SMOKE DETECTORS SHALL TRANSMIT THEIR ALARMS AND/OR TROUBLES TO THE FIRE DEPARTMENT OR AS DIRECTED BY THE CONTRACTING OFFICER'S REPRESENTATIVE.

8. ACTIVATION OF INDIVIDUAL SMOKE DETECTOR WILL ALARM IN AFFECTED LIVING/SLEEPING ROOM ONLY AND DOES NOT ACTIVATE THE BUILDING FIRE ALARM SYSTEM. WHEN THE BUILDING FIRE ALARM SYSTEM IS IN ALARM, ALL LIVING/SLEEPING ROOM SMOKE DETECTORS HORNS/SOUNDERS AND THE BUILDING FIRE ALARM HORNS WILL SOUND.

FIRE ALARM CONTROL PANEL
(FACP) WITH LCD READOUT

111C

DIGITAL ALARM COMMUNICATING TRANSMITTER (DACT) TO BE COMPATIBLE WITH THE FBI CP-220 CONTROL PANEL AT THE FIRE DEPT.

DACT

SHUTDOWN OF HVAC AIR HANDLERS
TROUBLE (POWER)
TROUBLE (SUPERVISORY)
4 PAIR IN 21 mm C
4 PAIR IN 21 mm C

CONNECT TO TTB-1 IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

MDP-1
MDP-1
POWER FOR DOOR HOLDERS

TS
PIV

FIRST FLOOR

PROVIDE PIPE SLEEVES FOR COMMUNICATIONS ENTRANCE AND EXIT CONDUITS THROUGH THE FOUNDATION WALL AT THE TIME OF THE CONSTRUCTION OF THE FOUNDATION WALLS. NO DRILLING OR PUNCHING THROUGH THE FOUNDATION WALL WILL BE ALLOWED.

FIRE ALARM RISER
NOT TO SCALE

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JAN99
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:
REV.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	REVISED PER AS-BUILT DRAWING	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

FIRE ALARM RISER AND NOTES

PLATE REFERENCE NUMBER:
E-13
SHEET 278

DESIGN FILE: DONSPEC$$$$$

PANEL PA — TYPE SURFACE — MAIN BUS RATING 225
MAIN BREAKER: NO OF POLES 3 — FRAME 100 — TRIP 100 — TYPE MCB
VOLTAGE 208/120 — MIN. BREAKER INTERRUPTING CAPACITY (RMS SYM AMPS) 14,000

DEVICE AMPS TRIP	P	BRANCH CIRCUIT DESCRIPTION	VOLT AMPS	NO	PHASE LOAD VOLT-AMPS PHASE A	PHASE B	PHASE C	NO	BRANCH CIRCUIT VOLT AMPS	DESCRIPTION	P	DEVICE AMPS TRIP
20	1	LTG 3RD FLR	1020	1	1920			2	900	RECEPT 1ST FLR	1	20
20	1	LTG 2ND FLR	1020	3		2100		4	1080	RECEPT 2ND FLR	1	20
20	1	LTG 1ST FLR	1632	5			2712	6	1080	RECEPT 3RD FLR	1	20
20	1	RECEPT 1-3 FLRS	540	7	1440			8	900	RECEPT 2ND FLR	1	20
20	1	RECEPT 1-3 FLRS	540	9		1440		10	900	RECEPT 3RD FLR	1	20
20	1	RECEPT 1ST FLR	900	11			1900	12	1000	RECEPT TTB-1	1	20
20	1	RECEPT TVB-3	1000	13	2000			14	1000	RECEPT TTB-2	1	20
20	1	RECEPT TVB-3	1000	15		2000		16	1000	RECEPT TTB-3	1	20
20	1	EF-6	528	17			1224	18	696	FCU-A	1	20
20	1	EF-8	528	19	1224			20	696	FCU-A	1	20
20	1	EF-10	528	21		1224		22	696	FCU-B	1	20
20	1	DWRP-3	528	23			648	24	120	UH-2	1	20
20	1	DWRP-4	1176	25	1296			26	120	UH-3	1	20
20	1	CONTROL PNLS	500	27		620		28	120	UH-5	1	20
20	1	CONTROL PNLS	1000	29			1720	30	720	EXTERIOR LTG	2	20
20	1	CHILL HT. TAPE 96	1000	31	1720				720	"		
20	1	CHILL HT. TAPE 96	1200	33		1770		34	570	EXTERIOR LTG	2	20
20	2	NOTE 1	520	35			1090		570	"		
		"	520		520			38		WTR HTR CONTROLS		
20	2	NOTE 1	960	39		960		40		WTR HTR CONTROLS		
		"	960				960	42		SPACE		
		TOTAL			10120	10114	10254	CONNECTED	30.488	KVA		
								DEMAND	21.200	KVA		

PANEL PB — TYPE SURFACE — MAIN BUS RATING 225
MAIN BREAKER: NO OF POLES 3 — FRAME 100 — TRIP 100 — TYPE MCB
VOLTAGE 208/120 — MIN. BREAKER INTERRUPTING CAPACITY (RMS SYM AMPS) 10,000

DEVICE AMPS TRIP	P	BRANCH CIRCUIT DESCRIPTION	VOLT AMPS	NO	PHASE LOAD VOLT-AMPS PHASE A	PHASE B	PHASE C	NO	BRANCH CIRCUIT VOLT AMPS	DESCRIPTION	P	DEVICE AMPS TRIP
20	1	LTG 3RD FLR	918	1	1818			2	900	RECEPT 1ST FLR	1	20
20	1	LTG 2ND FLR	918	3		1818		4	900	RECEPT 2ND FLR	1	20
20	1	LTG 1ST FLR	1530	5			2610	6	1080	RECEPT 3RD FLR	1	20
20	1	RECEPT 1-3 FLRS	540	7	1068			8	528	EF-5	1	20
20	1	RECEPT 1-3 FLRS	540	9		1068		10	528	EF-7	1	20
20	1	DWRP-1	528	11			1056	12	528	EF-9	1	20
20	1	DWRP-2	1176	13	1296			14	120	UH-1	1	20
20	1	FCU-H	696	15		816		16	120	UH-4	1	20
20	1	SPARE	1200	17			1200	18		SPACE		
20	1	SPARE	600	19	600			20		"		
20	1	SPARE	1000	21		1000		22		"		
		SPACE		23				24		"		
		"		25				26		"		
		"		27				28		"		
		"		29				30		"		
		"		31				32		"		
		"		33				34		"		
		"		35				36		"		
		"		37				38		"		
		"		39				40		"		
		"		41				42		"		
		TOTAL			4782	4702	4866	CONNECTED	14.350	KVA		
								DEMAND	11.500	KVA		

PANEL PC — TYPE SURFACE — MAIN BUS RATING 225
MAIN BREAKER: NO OF POLES 3 — FRAME 100 — TRIP 100 — TYPE MCB
VOLTAGE 208/120 — MIN. BREAKER INTERRUPTING CAPACITY (RMS SYM AMPS) 10,000

DEVICE AMPS TRIP	P	BRANCH CIRCUIT DESCRIPTION	VOLT AMPS	NO	PHASE LOAD VOLT-AMPS PHASE A	PHASE B	PHASE C	NO	BRANCH CIRCUIT VOLT AMPS	DESCRIPTION	P	DEVICE AMPS TRIP
20	1	LIGHING	819	1	1069			2	250	SPARE	1	20
20	1	LIGHTING	1579	3		1829		4	250	SPARE	1	20
20	1	RECEPTACLES	720	5			1220	6	500	TCP (AHU-3)	1	20
20	1	RECEPTACLES	720	7	970			8	250	SPARE	1	20
20	1	UH-8	120	9		370		10	250	SPARE	1	20
20	1	UH-9	120	11			620	12	500	TCP (AHU-4)	1	20
20	1	SPARE	1000	13	1276			14	276	SPARE	3	20
20	1	SPARE	900	15		1176			276	AHU-4		
20	1	SPARE	1200	17			1476		276	"		
20	3	AHU-3	938	19	1876			20	938	"	3	20
		"	938			1876			938	EF-4		
		"	938				1876		938	"		
20	3	EF-3	276	25	552			26	276	"	3	20
		"	276			552			276	SPACE		
		"	276				552		276	"		
		SPACE		31				32		"		
		"		33				34		"		
		"		35				36		"		
		"		37				38		"		
		"		39				40				
		"		41				42				
		TOTAL			5743	5803	5744	CONNECTED	17.290	KVA		
								DEMAND	13.200	KVA		

PANEL PD — TYPE SURFACE — MAIN BUS RATING 225
MAIN BREAKER: NO OF POLES 3 — FRAME 100 — TRIP 100 — TYPE MCB
VOLTAGE 208/120 — MIN. BREAKER INTERRUPTING CAPACITY (RMS SYM AMPS) 10,000

DEVICE AMPS TRIP	P	BRANCH CIRCUIT DESCRIPTION	VOLT AMPS	NO	PHASE LOAD VOLT-AMPS PHASE A	PHASE B	PHASE C	NO	BRANCH CIRCUIT VOLT AMPS	DESCRIPTION	P	DEVICE AMPS TRIP
20	1	LIGHING	819	1	1069			2	250	SPARE	1	20
20	1	SPARE	1200	3		1450		4	250	SPARE	1	20
20	1	RECEPTACLES	720	5			1220	6	500	TCP (AHU-1)	1	20
20	1	RECEPTACLES	720	7	970			8	250	SPARE	1	20
20	1	UH-6	120	9		370		10	250	SPARE	1	20
20	1	UH-7	120	11			620	12	500	TCP (AHU-2)	1	20
20	1	SPARE	1000	13	1276			14	276	SPARE	3	20
20	1	SPARE	1200	15		1476			276	"		
20	1	SPARE	1200	17			1476		276	"		
20	3	AHU-1	938	19	1876			20	938	AHU-2	3	20
		"	938			1876			938	"		
		"	938				1876		938	"		
20	3	EF-1	276	25	552			26	276	EF-2	3	20
		"	276			552			276	"		
		"	276				552		276	"		
		SPACE		31				32		SPACE		
		"		33				34		"		
		"		35				36		"		
		"		37				38		"		
		"		39				40		"		
		"		41				42		"		
		TOTAL			5743	5724	5744	CONNECTED	17.211	KVA		
								DEMAND	12.000	KVA		

PANEL PE — INTEGRAL TO SPS — MAIN BUS RATING 100
MAIN BREAKER: NO OF POLES — FRAME — TRIP — TYPE MLO
VOLTAGE 120 — MIN. BREAKER INTERRUPTING CAPACITY (RMS SYM AMPS) 10,000

DEVICE AMPS TRIP	P	BRANCH CIRCUIT DESCRIPTION	VOLT AMPS	NO	PHASE LOAD VOLT-AMPS PHASE A	PHASE B	PHASE C	NO	BRANCH CIRCUIT VOLT AMPS	DESCRIPTION	P	DEVICE AMPS TRIP
20	1	LTG 1ST FLR	1680	1		3336		2	1656	LTG 1ST FLR	1	20
20	1	LTG 2ND FLR	1688	3		3356		4	1668	LTG 2ND FLR	1	20
20	1	LTG 3RD FLR	1484	5		3050		6	1566	LTG 3RD FLR	1	20
20	1	LTG ATTIC	1279	7		1779		8	500	EMERG&EXIT LTS	1	20
20	1	SPARE	1739	9		3479		10	1740	SPARE	1	20
												20
		TOTAL				15000		CONNECTED	15.000	KVA		
								DEMAND	15.000	KVA		

PANEL K — TYPE FLUSH — MAIN BUS RATING 125
MAIN BREAKER: NO OF POLES 2 — FRAME 100 — TRIP 60 — TYPE MCB
VOLTAGE 208/120, 1Ø — MIN. BREAKER INTERRUPTING CAPACITY (RMS SYM AMPS) NOTE 3

DEVICE AMPS TRIP	P	BRANCH CIRCUIT DESCRIPTION	VOLT AMPS	NO	PHASE LOAD VOLT-AMPS PHASE 1	PHASE 2	NO	BRANCH CIRCUIT VOLT AMPS	DESCRIPTION	P	DEVICE AMPS TRIP
20	1	LIGHTING	800	1	1160		2	360	RECEPTACLES	1	20
20	1	APPLIANCE	1200	3		1740	4	540	RECEPTACLES	1	20
20	1	MICROWAVE	1200	5	1740		6	540	RECEPTACLES	1	20
20	1	REFRIGERATOR	900	7		1620	8	720	RECEPTACLES	1	20
20	1	SPARE	600	9	1296		10	696	FCU	1	20
20	1	SPARE	450	11		810	12	360	RECEPTACLES	1	20
		SPACE		13			14		SPACE		
		"		15			16		"		
		"		17			18		"		
		"		19			20		"		
		TOTAL			4196	4170	CONNECTED	8.366	KVA		
							DEMAND	6.400	KVA		

NOTES: (PANELS K)

1. LABEL EACH PANEL WITH A UNIQUE NAME IN THE SCHEDULE DIRECTORY (SEE RISER DIAGRAM)
2. SEE TYPICAL PHASE CONNECTION DIAGRAM FOR THE PHASE LEGS CONNECTION FOR THE PANEL'S FEEDERS.
3. THE FOLLOWING LOADCENTERS SHALL HAVE A MINIMUM INTERRUPTING CAPACITY (RMS SYM AMPS) OF 14,000 AMPS: K111, K211, K311, K113, K213, K313. ALL OTHER LOADCENTERS SHALL HAVE A MINIMUM INTERRUPTING CAPACITY (RMS SYM AMPS) OF 10,000 AMPS.

GENERAL NOTES:

1. FAULT CURRENT RATINGS INDICATED MAY NOT CORRESPOND TO A STANDARD BREAKER RATING, CONTRACTOR TO SELECT NEXT HIGHER STANDARD RATING.
2. PROVIDE GROUND BUS IN EACH PANELBOARD OR LOADCENTER.
3. SEE PLATE E-15 FOR ADDITIONAL PANEL SCHEDULES.
4. CIRCUITS 2, 4, 8, AND 10 OF PD PANEL AND CIRCUITS 2, 4, 8, AND 10 OF PC PANEL WAS CHANGED DUE TO HVAC DRAWINGS.

NOTES: (PANEL PA)

1. IF ADDITIVE 1 IS AWARDED "SPARE".
   IF ADDITIVE 1 IS NOT AWARDED "EXTERIOR LTG".

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99 | REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	REVISED PER AS-BUILT DRAWINGS	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

PANELBOARD SCHEDULES

AS-BUILT

PLATE REFERENCE NUMBER: E-14

SHEET 279

DESIGN FILE: DGNSPEC$$$$$

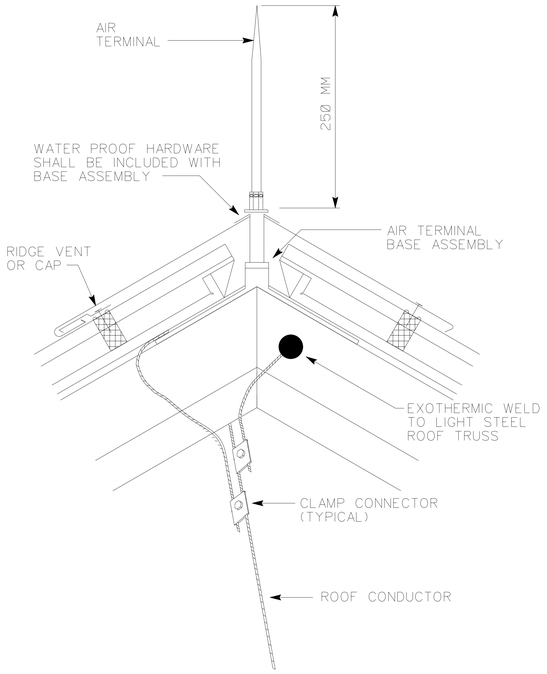
PANEL MDP — FLOOR (2 SECTIONS) — MAIN BUS RATING 1,200
MAIN BREAKER: NO OF POLES 3 — FRAME 1,200 TRIP 1,200 TYPE MCB
VOLTAGE: 120/208 — MIN. BREAKER INTERRUPTING CAPACITY (RMS SYM AMPS) 14,000

CKT NO	BREAKER RATING	POLES	CONNECTED KVA	DESCRIPTION OR LOAD SERVED	REMARKS
1	20	1	1.000	FIRE ALARM CONTROL	RED LOCKABLE BREAKER
2	20	1	1.000	DOOR HOLDERS OR SPARE	RED LOCKABLE BREAKER
3	20	1	1.000	SPARE	
4	100	2	15.000	SPS (PANEL PE)	
5	60	3	------	SURGE SUPPRESSOR	
6	60	3	9.108	DTP-1	
7	60	3	0.000	DTP-2 (STAND-BY)	
8	100	3	30.000	SPARE	
9	100	3	30.488	PANEL PA	
10	100	3	14.350	PANEL PB	
11	100	3	17.290	PANEL PC	
12	100	3	17.211	PANEL PD	
13	100	3	25.098	PANEL K'S (101-301)	
14	100	3	25.098	PANEL K'S (102-302)	
15	100	3	25.098	PANEL K'S (103-303)	
16	100	3	25.098	PANEL K'S (104-304)	
17	100	3	25.098	PANEL K'S (105-305)	
18	100	3	25.098	PANEL K'S (106-306)	
19	100	3	25.098	PANEL K'S (107-307)	
20	100	3	25.098	PANEL K'S (108-308)	
21	100	3	25.098	PANEL K'S (109-309)	
22	100	3	25.098	PANEL K'S (110-310)	
23	100	3	25.098	PANEL K'S (111-311)	
24	100	3	25.098	PANEL K'S (112-312)	
25	100	3	25.098	PANEL K'S (113-313)	
26	100	3	25.098	PANEL K'S (114-314)	
27	100	3	25.098	PANEL K'S (115-315)	
28	100	3	25.098	PANEL K'S (116-316)	
29				KVA	
30				KVA	
	CONNECTED		538.0		
	DEMAND		337.8		

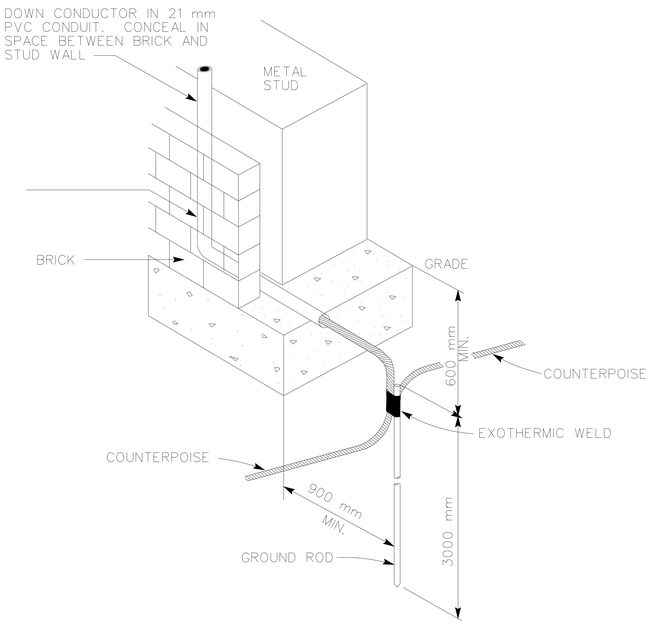
GENERAL NOTES:

1. FAULT CURRENT RATINGS INDICATED MAY NOT CORRESPOND TO A STANDARD BREAKER RATING. CONTRACTOR TO SELECT NEXT HIGHER STANDARD RATING.

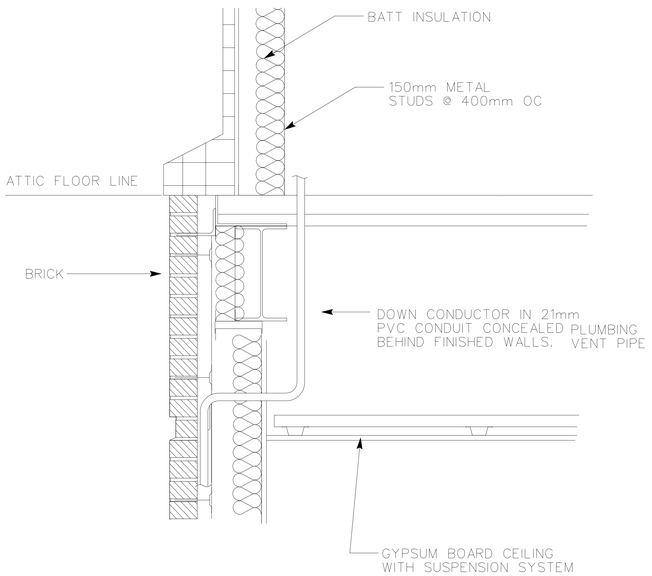
2. PROVIDE GROUND BUS IN EACH PANELBOARD OR LOADCENTER.



1 E9 E15 ROOF RIDGE AIR TERMINAL DETAIL
NOT TO SCALE



2 E9 E15 DOWN CONDUCTOR GROUNDING - DETAIL
NOT TO SCALE



3 E9 E15 DOWN CONDUCTOR DETAIL
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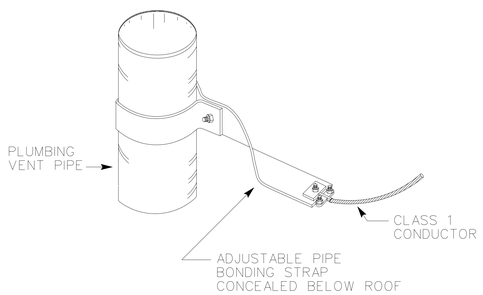


4 E9 E15 PLUMBING VENT PIPE BONDING DETAIL
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99 | REV.:
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

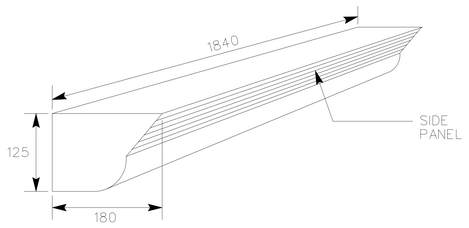
BARRACKS - 96 PERSONNEL

PANELBOARD SCHEDULES AND LIGHTNING PROTECTION DETAILS

PLATE REFERENCE NUMBER:
E-15
SHEET 280

AS-BUILT

DESIGN FILE: DONSPEC$$$$$$

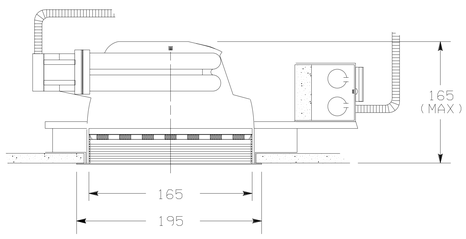


TYPE BA
WALL MOUNTED FLUORESCENT UP-LIGHT FRONT-LIGHT

HOUSING: THE FIXTURE HOUSING SHALL BE CONSTRUCTED OF MINIMUM 3MM THICK EXTRUDED ALUMINUM. THE SURFACE SHALL BE SANDBLASTED AND FINISHED WITH BAKED ENAMEL AFTER FABRICATION TO ELIMINATE BLEMISHES AND MARKS ON EXPOSED SURFACES. ALL FASTENERS SHALL BE CONCEALED.

OPTICAL ASSEMBLY: THE SIDE PANEL SHALL BE CONSTRUCTED OF PERFORATED METAL WITH APPROXIMATELY ONE 2MM HOLE PER 10 SQUARE MILLIMETERS OF SURFACE. THE INSIDE OF THE PANEL SHALL BE LINED WITH A WHITE UNDERLAY DIFFUSER.

ELECTRICAL: THE FIXTURE SHALL INCLUDE A CLASS P, HIGH POWER FACTOR, ELECTRONIC BALLAST UL LISTED AND CBM CERTIFIED FOR THE APPLICATION.



TYPE BB
FLUORESCENT DOWNLIGHT

HOUSING: THE FIXTURE SHALL BE A RECESSED, PRE-WIRED, DOWNLIGHT WITH ONE HORIZONTALLY MOUNTED COMPACT FLUORESCENT TRIPLE TUBE LAMP. THE SOCKET CAP SHALL BE A ONE PIECE DIECAST ALUMINUM HEATSINK. THE INJECTION MOLDED SOCKET SHALL BE DESIGNED FOR POSITIVE LAMP LATCHING AND POSITIONING. THE FLAT ALUMINUM TRIM FLANGE SHALL BE WHITE. THE GALVANIZED STEEL MOUNTING FRAME SHALL INCLUDE A THROUGH-WIRE JUNCTION BOX (MIN 670 CUBIC CENTIMETERS) AND EXPANDABLE SELF-LOCKING MOUNTING BARS TO PROVIDE HORIZONTAL AND VERTICAL ADJUSTMENT. THE JUNCTION BOX SHALL BE FULLY ACCESSIBLE FROM BELOW THE CEILING LEVEL.

OPTICAL ASSEMBLY: THE UPPER REFLECTOR SHALL BE SEMI-SPECULAR CLEAR ANODIZED ALUMINUM. THE C73T PRISMATIC GLASS LENS SHALL BE REGRESS MOUNTED ABOVE A WHITE BAFFLE AND FLANGE.

ELECTRICAL: THE FIXTURE SHALL INCLUDE A CLASS P, HIGH POWER FACTOR, ELECTRONIC BALLAST AND SHALL BE UL LISTED AND ETL CERTIFIED FOR THROUGH WIRING, RECESSED MOUNTING AND DAMP LOCATIONS. THE SPACING CRITERIA (SC) SHALL BE NO LESS THAN ONE.

TYPES BC,BC2
FLUORESCENT VANITY LIGHT

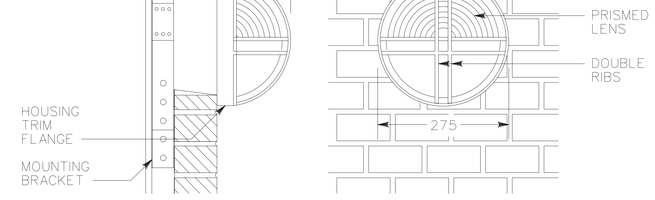
HOUSING: THE HOUSING SHALL BE STEEL AND THE END CAPS SHALL BE CHROME.

OPTICAL ASSEMBLY: THE SNAP-ON LENS SHALL BE WHITE ACRYLIC.

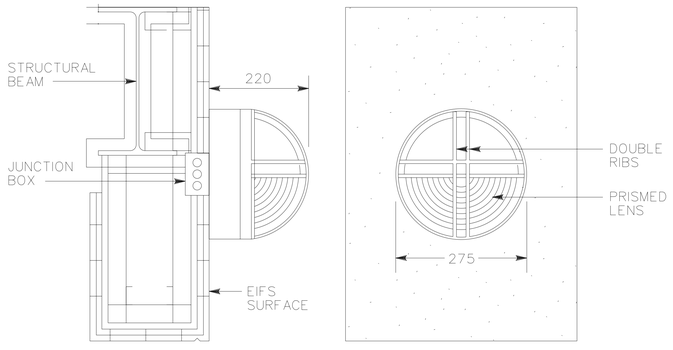
ELECTRICAL: THE FIXTURE SHALL BE A PREWIRED INTEGRALLY BALLASTED LAVATORY FIXTURE. THE BALLAST SHALL BE THE CLASS P, HIGH POWER FACTOR, ELECTRONIC TYPE. THE FIXTURE SHALL BE UL LISTED FOR DAMP LOCATIONS.

LIGHTING FIXTURE AND CEILING FAN SCHEDULE

FIXTURE MARK	LAMPS TYPE	NO.	LAMP WATTAGE	FIXTURE VOLTAGE	MOUNTING HEIGHT	REMARKS
BA	PLL50W/30	3	50	120	460 BFC	CLEAR DOORSWING BY 75MM MIN
BB	PLT32W/30	1	32	120	RECESSED	
BC	F32T8/TL730	2	32	120	2150 AFF	MOUNTED AS INDICATED
BC2	F17T8/TL730	2	17	120	2225 AFF	MOUNTED AS INDICATED
BD	CDM70/C/U/M	1	70	120	SEE DETAIL	NOTE 11
BE	N/A	0	N/A	N/A	SURFACE	CEILING FAN
BF	F32T8/TL730	2	32	120	NOTE 8	LOW TEMPERATURE BALLAST
BG	F32T8/TL730	2	32	120	NOTE 9	LOW TEMPERATURE BALLAST
EXIT	LED	-	--	---	2435	NOTE 10



TYPE BD SEMI-RECESS MOUNTED ON BRICK SURFACE
WALL MOUNTED SPHERE



TYPE BD SURFACE MOUNTED ON EIFS SURFACE
WALL MOUNTED SPHERE

HOUSING: THE FACEPLATE SHALL BE DIE CAST ALUMINUM WITH A SOLID UPPER HALF. VERTICAL AND HORIZONTAL DOUBLE-RIBS (MINIMUM 15MM DEPTH AND 4MM THICKNESS) SHALL COVER THE FULL HEMISPHERE. THE HOUSING SHALL BE DIE CAST LOW COPPER ALUMINUM WITH CLEAR ANODIZE UNDER POWDER COAT TO MATCH THE FACEPLATE. FOUR CAPTIVE STAINLESS STEEL SOCKET HEAD SCREWS SHALL SECURE THE FACEPLATE TO THE HOUSING. THE FINISH SHALL BE DARK BRONZE THERMOSET POLYESTER POWDER COAT PAINT. THE POWDER COATING SHALL BE 2.5 MIL NOMINAL THICKNESS OVER A CHROMATE PRETREATED SURFACE AND SHALL BE RATED FOR 2500 HOUR SALT SPRAY TEST.

OPTICAL ASSEMBLY: THE LENS SHALL BE HEAT TREATED GLASS (4.7MM MINIMUM THICKNESS) WITH INTERNAL PRISMS. THE LENS SHALL BE RETAINED IN THE FACEPLATE AND SEALED WITH A ONE-PIECE MOLDED SILICONE GASKET. THE LAMP ORIENTATION SHALL BE AXIAL.

ELECTRICAL: ALL ELECTRICAL COMPONENTS SHALL BE MOUNTED ON A SINGLE PLATE AND SHALL BE FACTORY PREWIRED WITH QUICK DISCONNECT PLUGS. THE BALLAST SHALL BE OF THE HIGH POWER FACTOR TYPE AND SHALL RELIABLY START THE LAMP IN AMBIENT TEMPERATURES AS LOW AS -30 DEGREES CELSIUS. THE FIXTURE SHALL CONFORM TO UL 1572 FOR WET LOCATIONS. BUILDING INSULATION (WHERE APPLICABLE) SHALL BE SEPARATED FROM THE FIXTURE IN ACCORDANCE WITH THE FIXTURE MANUFACTURER'S RECOMMENDATIONS.

NOTE: SEE TYPICAL EXTERIOR LIGHT FIXTURE MOUNTING DETAIL ON PLATE E-18 FOR MOUNTING HEIGHTS.

NOTES, LIGHTING FIXTURE SCHEDULE:

1. (GENERAL): LAMP TYPE DESIGNATIONS CORRESPOND TO THOSE OF PHILLIPS LIGHTING COMPANY UNLESS OTHERWISE INDICATED. EQUIVALENT LAMPS MANUFACTURED BY OTHER LIGHTING COMPANIES SHALL BE ACCEPTABLE.

2. (GENERAL): THE COLOR TEMPERATURE AND MINIMUM CRI OF ALL FLUORESCENT T8 LAMPS SHALL BE 3000 DEGREES KELVIN AND 75 RESPECTIVELY, UNLESS OTHERWISE INDICATED. THE COLOR TEMPERATURE AND MINIMUM CRI OF ALL COMPACT FLUORESCENT LAMPS SHALL BE 3000 DEGREES KELVIN AND 82 RESPECTIVELY, UNLESS OTHERWISE INDICATED. ALL LAMPS SHALL BE APPROVED BY THE LAMP MANUFACTURER FOR THE INDICATED BALLAST TYPE.

3. (GENERAL): MOUNTING HEIGHTS AND MOUNTING METHODS ARE TYPICAL FOR THE INDICATED FIXTURE TYPES. SPECIFIC METHODS AND HEIGHTS INDICATED ON THE PLANS SHALL GOVERN WHERE CONTRARY TO THE LIGHTING FIXTURE SCHEDULE.

4. (GENERAL): ALL FIXTURES SHALL BE FACTORY PREWIRED WITH HIGH TEMPERATURE WIRE, AND SHALL BE COMPLETELY ASSEMBLED AND TESTED PRIOR TO SHIPMENT. ALL FIXTURE LENSES SHALL BE MADE OF VIRGIN ACRYLIC UNLESS OTHERWISE INDICATED, AND SHALL BE WARRANTED NOT TO DISCOLOR OR BRITTLE.

5. (GENERAL): INDICATED MOUNTING HEIGHTS FOR WALL MOUNTED FIXTURES ARE MEASURED FROM THE FINISHED SURFACE TO THE FIXTURE CENTERLINE UNLESS OTHERWISE INDICATED.

6. (GENERAL): DIFFERENCES IN FIXTURE DIMENSIONS OF LESS THAN 5% SHALL BE ALLOWED UNLESS OTHERWISE INDICATED.

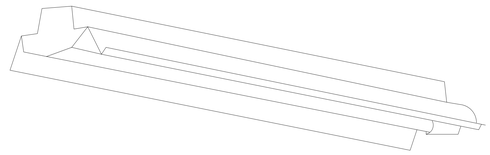
7. (GENERAL): ALL FLUORESCENT FIXTURES SHALL BE EQUIPPED WITH ELECTRONIC BALLAST UNLESS OTHERWISE INDICATED. BALLASTS FOR ALL COMPACT FLUORESCENT FIXTURES SHALL INCLUDE END-OF-LIFE CIRCUIT SHUTDOWN PREOTECTION.

8. CHAIN MOUNT TYPE BF FIXTURES 2400MM AFF EXCEPT AS INDICATED IN NOTE 1 OF PLATE E-5. ADJUST MOUNTING HEIGHT TO PRECLUDE HVAC DUCTS FROM OBSTRUCTING LIGHT DISTRIBUTION.

9. WALL MOUNT TYPE BG FIXTURES AS INDICATED IN NOTE 4 OF PLATE E-5.

10. EXIT LIGHTS SHALL BE MOUNTED AS INDICATED EXCEPT MOUNTING HEIGHTS SHALL BE ADJUSTED AS NECESSARY AND APPROVED BY THE CONTRACTING OFFICER TO ASSURE A SECURE AND PLUMB FIT TO THE WALL.

11. TYPE 'BD' FIXTURES SHALL BE MOUNTED AS UPLIGHTS UNLESS OTHERWISE NOTED.

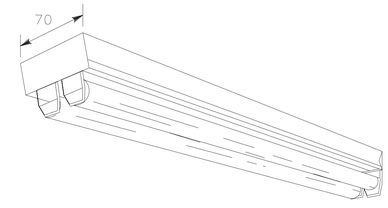


TYPE BF
INDUSTRIAL STRIP FIXTURE

HOUSING: THE HOUSING SHALL BE CONSTRUCTED FROM CODE-GAUGE STEEL AND SHALL BE PUNCHED WITH NUMEROUS KNOCKOUTS FOR MOUNTING. END PLATE KNOCKOUTS SHALL ALLOW CONTINUOUS ROW MOUNTING. THE FINISH SHALL BE A HIGH GLOSS, BAKED WHITE THERMOSETTING POWDER COATING WITH A MINIMUM AVERAGE REFLECTANCE OF 90%. THE FINISHING PROCESS SHALL INCLUDE AN IRON PHOSPHATE PRETREATMENT FOR SUPERIOR PAINT ADHESION AND RUST RESISTANCE. ALL PARTS SHALL BE PAINTED AFTER FABRICATION.

OPTICAL ASSEMBLY: THE FIXTURE REFLECTOR SHALL BE CONSTRUCTED FROM 22 GAUGE COLD ROLLED STEEL AND FINISHED WITH A WHITE THERMOSETTING POWDER COATING. THE REFLECTOR SHALL BE APERTURED FOR 20% UPLIGHT.

ELECTRICAL: THE FIXTURE SHALL INCLUDE A CLASS P, HIGH POWER FACTOR, ELECTRONIC BALLAST UL LISTED AND ETL CERTIFIED FOR THE APPLICATION. FIXTURE SHALL BE UL LISTED FOR DAMP LOCATIONS. LAMPS SHALL BE PROTECTED WITH A BAKED WHITE ENAMEL WIREGUARD (MINIMUM 14 GAUGE WIRE).



TYPE BG
FLUORESCENT STRIP LIGHT

HOUSING: THE HOUSING, CHANNEL, CHANNEL COVER, END PLATES AND YOKE SHALL BE CONSTRUCTED FROM CODE-GAUGE STEEL. THE HOUSING SHALL BE PUNCHED WITH NUMEROUS KNOCKOUTS FOR MOUNTING. THE WIREWAY SHALL BE EASILY ACCESSIBLE AND OPENED WITHOUT THE USE OF TOOLS. THE FINISH SHALL BE A HIGH GLOSS, BAKED WHITE ENAMEL FINISH WITH A MINIMUM AVERAGE REFLECTANCE OF 90%. THE FINISH SHALL BE APPLIED AFTER FIXTURE FABRICATION. THE FINISHING PROCESS SHALL INCLUDE AN IRON PHOSPHATE PRETREATMENT FOR SUPERIOR PAINT ADHESION AND RUST RESISTANCE. THE FIXTURE SHALL BE APPROVED FOR WALL MOUNTING.

LAMPS: LAMPS SHALL BE PROTECTED BY A BAKED WHITE ENAMEL WIREGUARD (MINIMUM 14 GAUGE WIRE).

ELECTRICAL: THE FIXTURE SHALL INCLUDE A CLASS P, HIGH POWER FACTOR, ELECTRONIC BALLAST UL LISTED AND CBM CERTIFIED FOR THE APPLICATION. THE FIXTURE SHALL BE UL LISTED FOR DAMP LOCATIONS.

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

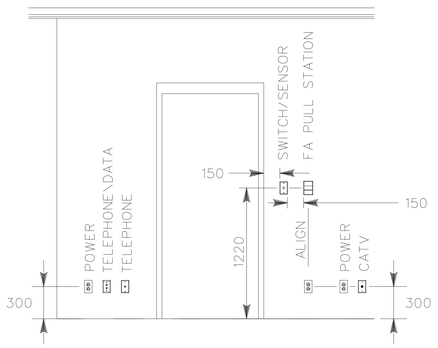
AS-BUILT

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
LIGHTING FIXTURE
SCHEDULE & DETAILS

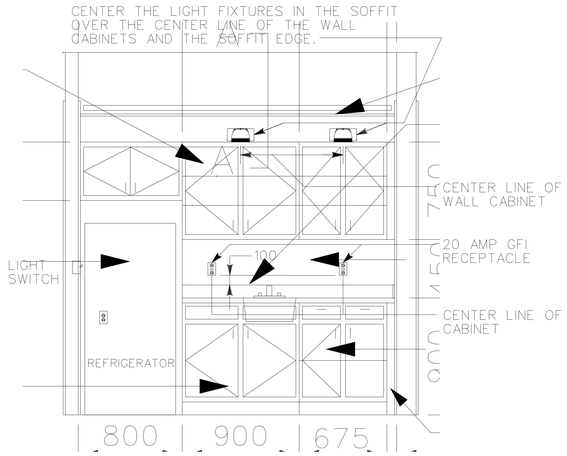
PLATE REFERENCE NUMBER:
E-16
SHEET 281

DESIGN FILE: DGN\SPEC$$$$$



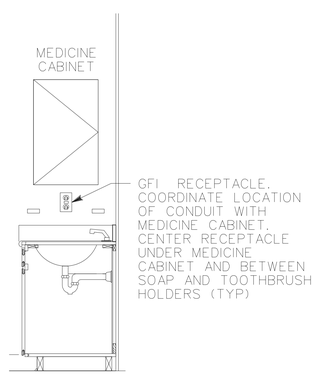
TYPICAL MOUNTING HEIGHT AND DEVICE ALIGNMENT DETAIL (UOI)

NO SCALE



TYPICAL DEVICE MOUNTING HEIGHT IN KITCHEN AREA

NO SCALE



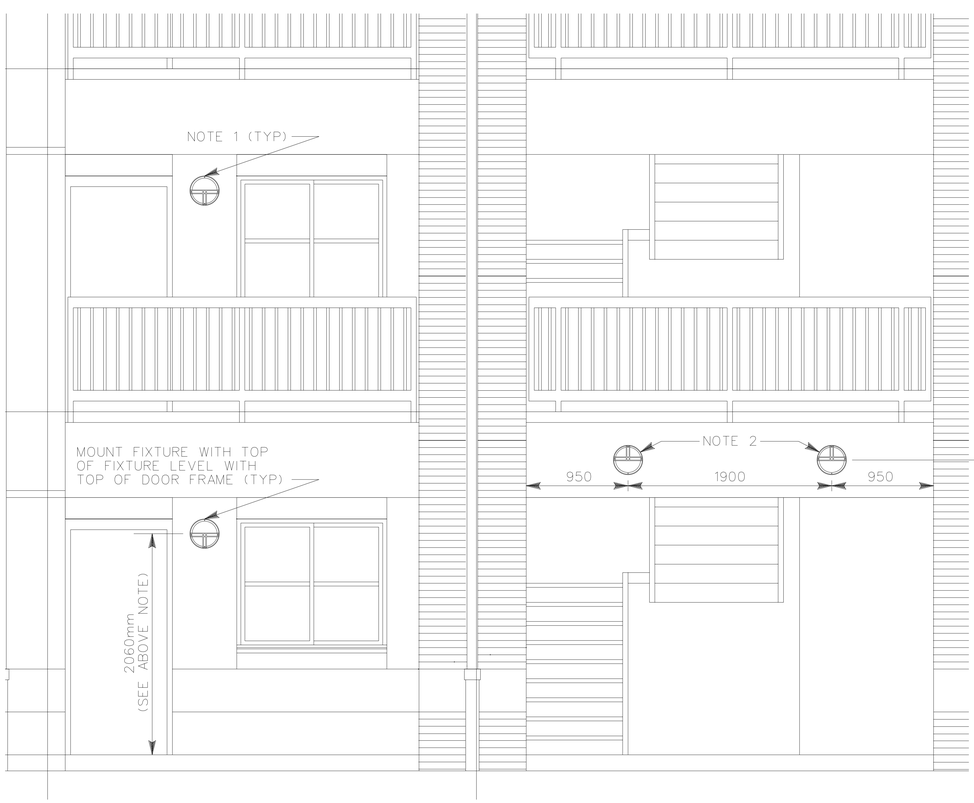
TYPICAL BATHROOM ELEVATION

NO SCALE

NOTES, THIS SHEET:

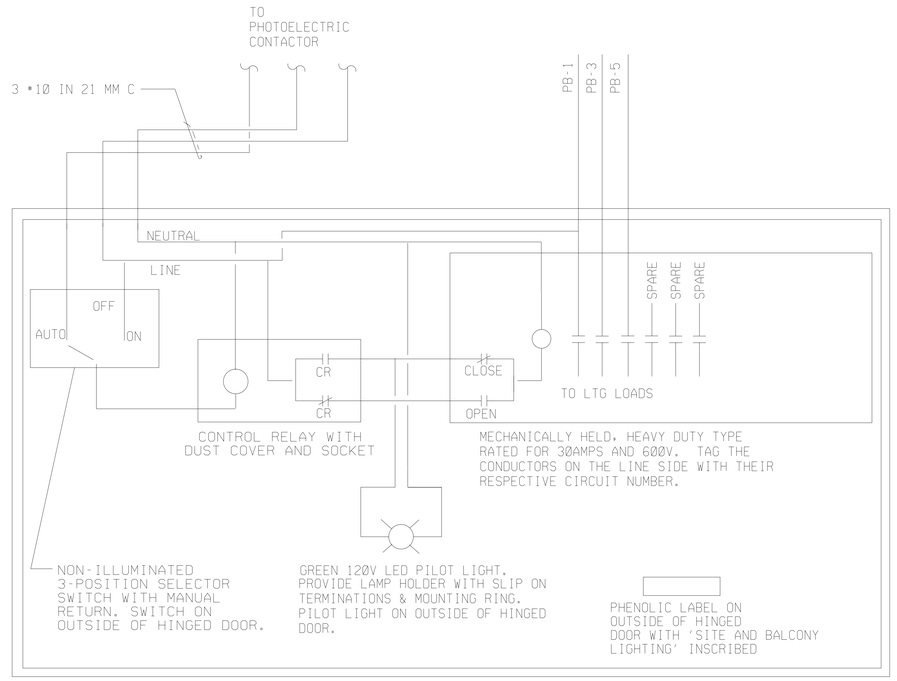
1. ALL TYPE 'BD' FIXTURES SHALL BE SEMI-RECESS MOUNTED AND SHALL BE POSITIONED AS UPLIGHTS (I.E., GLASS LENS POINTING UPWARD) UNLESS OTHERWISE NOTED.

2. ALL TYPE 'BD' FIXTURES MOUNTED ON THE EIFS COVERED BEAMS SHALL BE SURFACE MOUNTED AND SHALL BE POSITIONED AS DOWNLIGHTS (I.E., GLASS LENS POINTING DOWNWARD). THE SUPPORTING JUNCTION BOX (50mm MAXIMUM DEPTH) SHALL BE RECESSED IN THE EIFS AND SHALL BE SECURELY MOUNTED TO THE STRUCTURE. A BEAD OF SILICONE SEALANT SHALL BE APPLIED AROUND THE JUNCTION BOX PERIMETER TO SEAL THE FIXTURE/WALL INTERFACE.



TYPICAL EXTERIOR LIGHT FIXTURE MOUNTING DETAIL

NO SCALE



BALCONY CONTROL DIAGRAM

NO SCALE

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99 | REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	AS-BUILT DRAWING NO REVISION THIS SHEET DESCRIPTION	DATE	BY
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WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

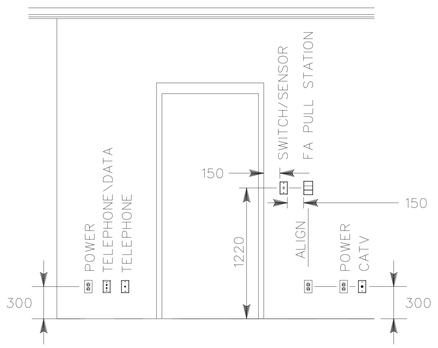
BARRACKS - 96 PERSONNEL

ENLARGED PLANS AND MISCELLANEOUS DETAILS

PLATE REFERENCE NUMBER:
E-18

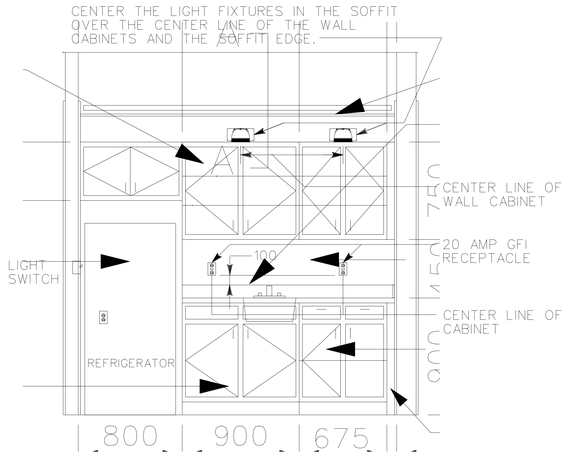
SHEET 283

DESIGN FILE: DONSPEC$$$$$



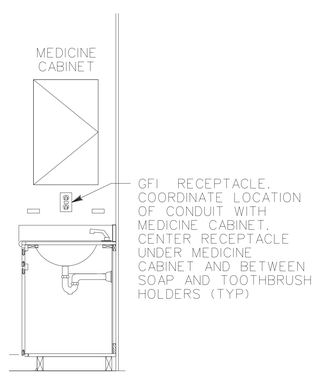
TYPICAL MOUNTING HEIGHT AND DEVICE ALIGNMENT DETAIL (UOI)

NO SCALE



TYPICAL DEVICE MOUNTING HEIGHT IN KITCHEN AREA

NO SCALE



TYPICAL BATHROOM ELEVATION

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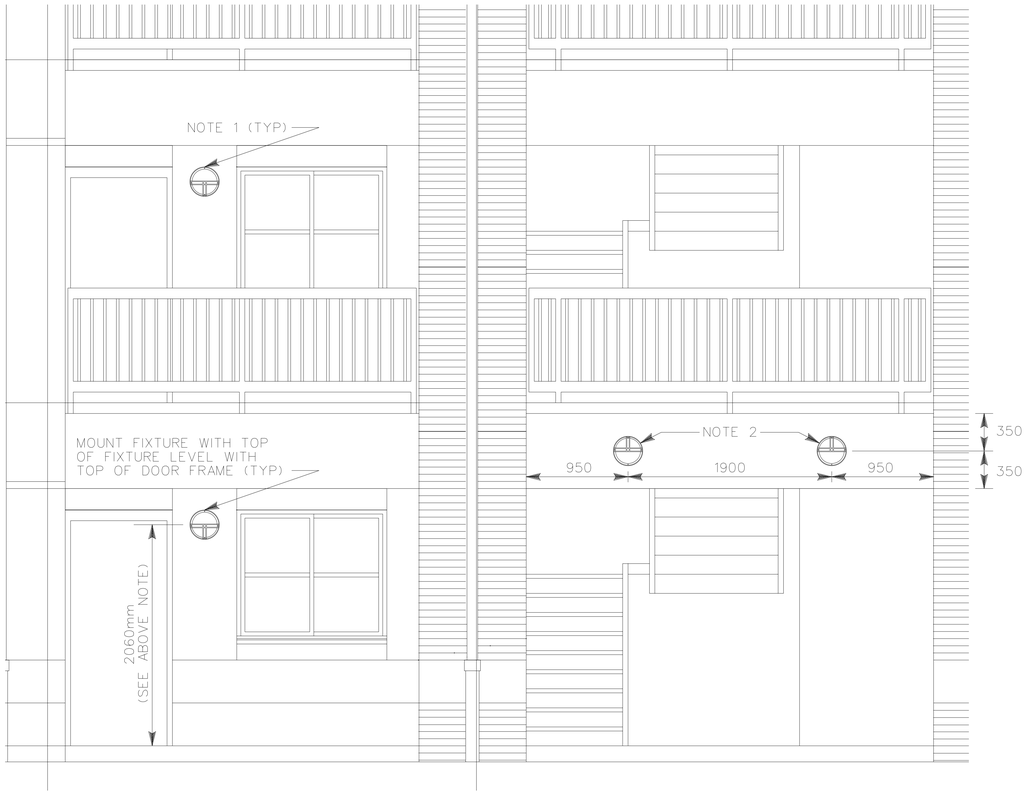
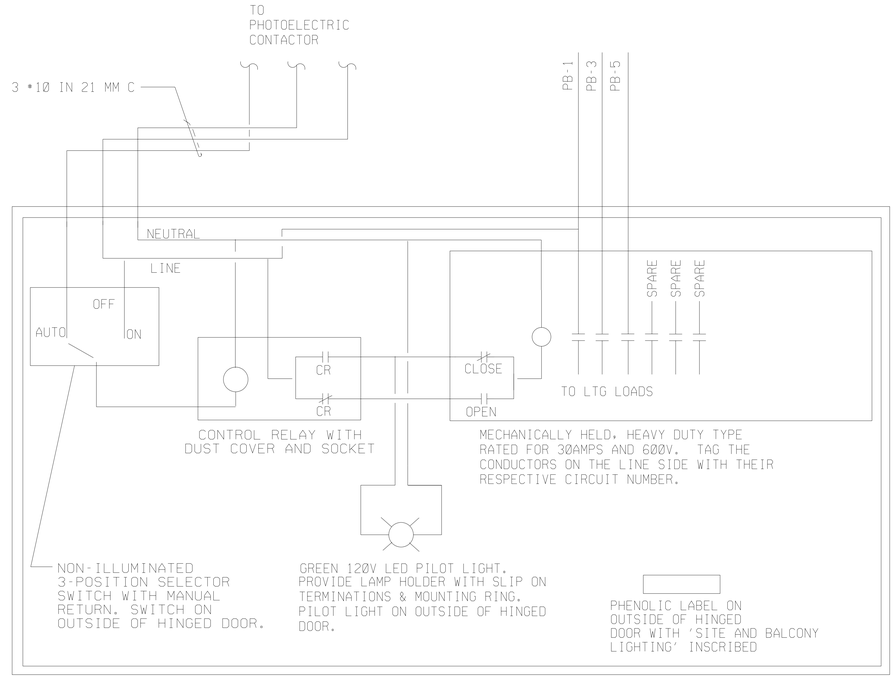


TYPICAL EXTERIOR LIGHT FIXTURE MOUNTING DETAIL

NO SCALE



BALCONY CONTROL DIAGRAM

NO SCALE

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	AS-BUILT DRAWING NO REVISION THIS SHEET DESCRIPTION	DATE	BY
		FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

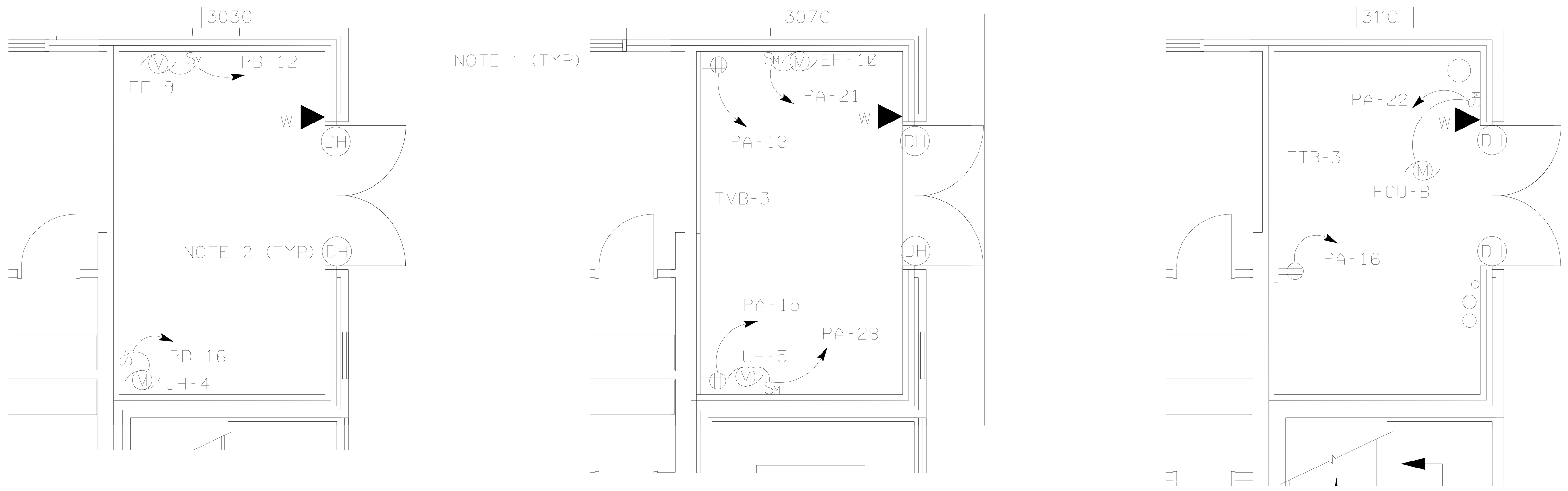
ENLARGED PLANS AND MISCELLANEOUS DETAILS

PLATE REFERENCE NUMBER:

E-18

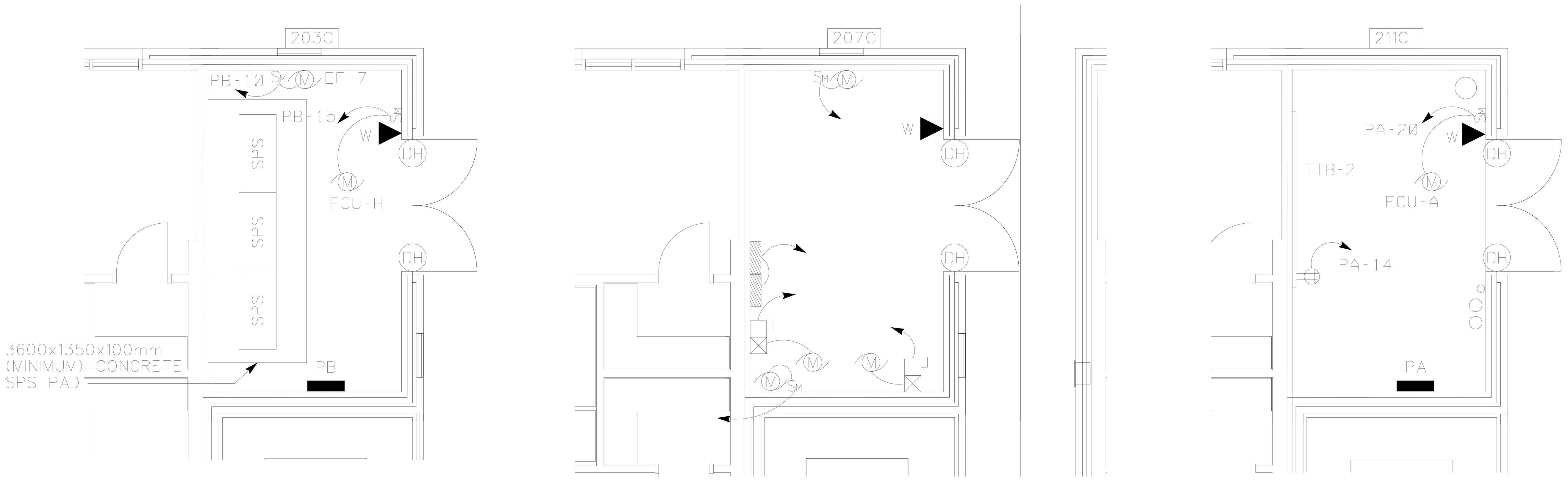
SHEET 283

DESIGN FILE: DONSPEC$$$$$



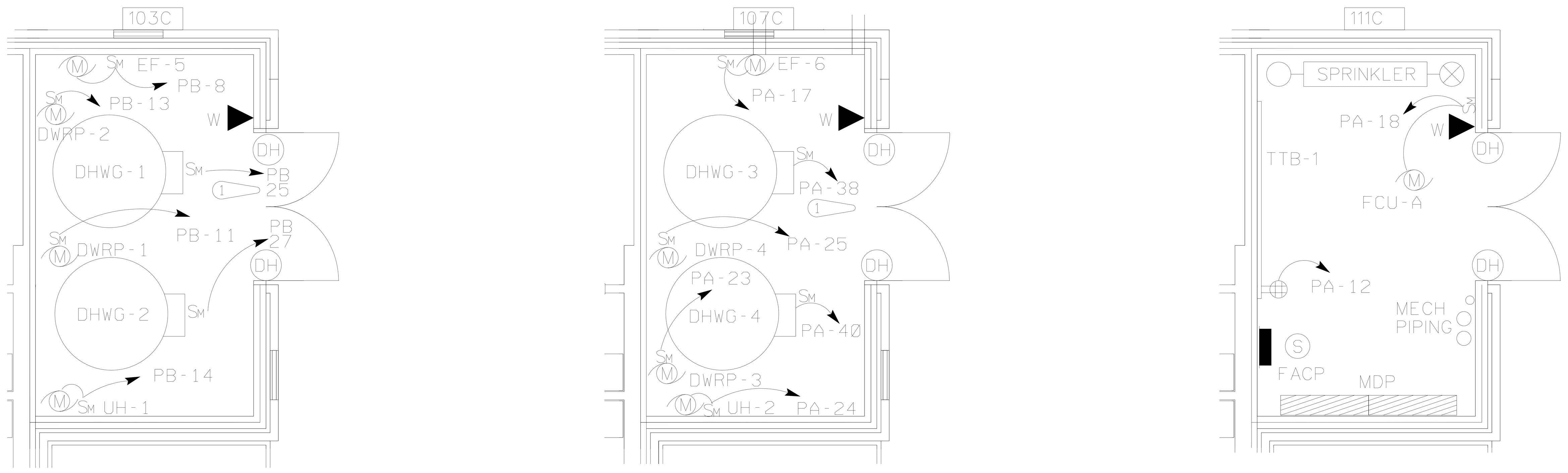
ENLARGED PLANS (THIRD FLOOR)

SCALE 1:50



ENLARGED PLANS (SECOND FLOOR)

SCALE 1:50



ENLARGED PLANS (FIRST FLOOR)

SCALE 1:50

NOTES

1. DISTANCE BETWEEN ROOMS ARE NOT TO SCALE.

2. CONNECT ALL DOOR HOLDERS TO CIRCUIT MDP-2, IF 120 VOLT POWER IS REQUIRED TO ADDITION TO BEING CONNECTED TO THE FIRE ALARM SYSTEM.

2500 1000 500 0 2500 5000

SCALE: 1 : 50

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
1	REVISED PER AS-BUILT	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

ENLARGED PLANS

PLATE REFERENCE NUMBER:

E-19

SHEET 284

DESIGN FILE: DGNSPEC$$

BARRACKS96\G1E19DTLS.DGN

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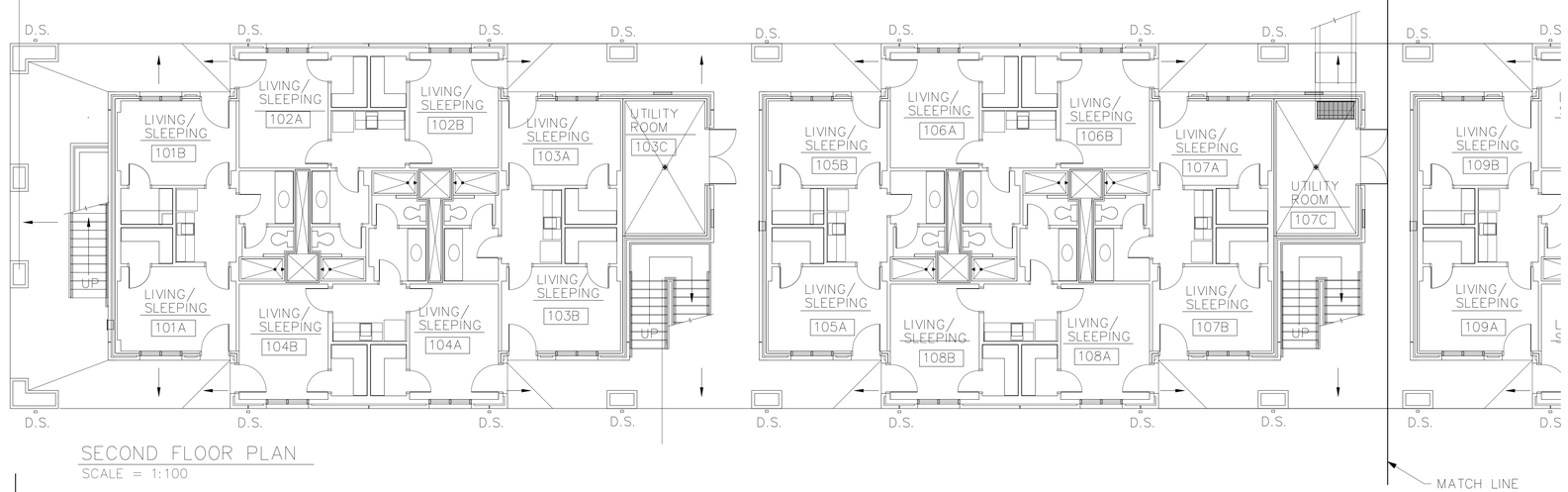
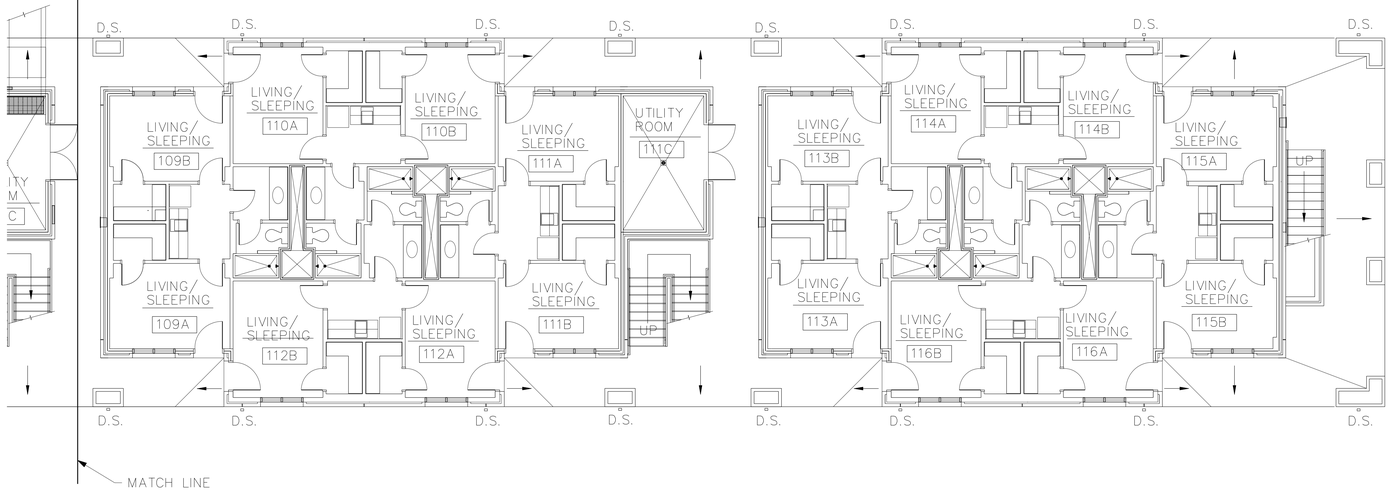


SECOND FLOOR PLAN

SCALE = 1:100



FIRST FLOOR PLAN

SCALE = 1:100

FIRE PROTECTION ANALYSIS

1. THE THREE STORY, FOUR CLUSTER BARRACKS BUILDING CONTAINS 2792 SQUARE METERS.
2. GROUP OCCUPANCY: UBC – SECTION 310.1 AND TABLE 3A – GROUP R–1 (HOTELS AND APARTMENTS HOUSES)
3. TYPE OF OCCUPANCY: NFPA 101 – NEW HOTELS AND DORMITORIES
4. TYPE OF CONSTRUCTION: UBC, TABLE 5–B, TYPE II – ONE HOUR
5. ALLOWABLE FLOOR AREA

   A. ALLOWABLE FLOOR AREA, UBC – TABLE 5–B – FOR BUILDINGS ONE STORY IN HEIGHT 1254 SQUARE METERS PER BUILDING.

   B. ALLOWABLE INCREASE IN FLOOR AREA FOR BUILDINGS OVER ONE STORY: UBC – SECTION 504.2 INCREASE MAY BE TWICE THAT PERMITTED BY TABLE 5–B FOR ONE STORY BUILDINGS: 2 X 1254 = 2508 SQUARE METERS PER BUILDING.

   C. ALLOWABLE INCREASE IN FLOOR AREAS SPECIFIED IN SECTION 504 FOR SEPARATION ON THREE SIDES, UBC – SECTION 505.1.2: WHERE PUBLIC WAYS OR YARDS MORE THAN 6096mm IN WIDTH EXTEND ALONG AND ADJOIN THREE SIDES OF THE BUILDING, FLOOR AREAS MAY BE INCREASED AT A RATE OF 2.5 PERCENT FOR EACH 305mm BY WHICH THE MINIMUM WIDTH EXCEEDS 6096mm, BUT THE INCREASE SHALL NOT EXCEED 100 PERCENT. THERE ARE NO STRUCTURES LOCATED WIHTIN 18296mm ON THREE SIDES OF THE FOUR CLUSTER STRUCTURE, ALLOWING A 100 PERCENT INCREASE IN THE FLOOR AREA. THE ALLOWED FLOOR AREA FOR THE FOUR CLUSTER STRUCTURE IS 2508 X 2 = 5016 SQUARE METERS.
6. AUTOMATIC SPRINKLER SYSTEM REQUIRED, NFPA 101, PARAGRAPH 16–2.4 WITH EXCEPTION TO PERMIT USE OF SINGLE EXITS.
7. FIRE RESISTIVE REQUIREMENTS FOR TYPE II, ONE HOURCONSTRUCTION (UBC, TABLE 6–A)

STRUCTURAL FRAME	1
PARTITIONS	*1
SHAFT ENCLOSURES	1
FLOOR/CEILING	1
ROOF/CEILING	1

   * EXCEPTION: MIL – HDBK 1008B, SECTION 2.1.2 – THE UBC REQUIREMENT FOR PERMANENT PARTITIONS SHALL NOT APPLY TO NON–BEARING PARTITIONS IN TYPE I OR TYPE II CONSTRUCTION. CONSTRUCTION SHALL COMPLY WITH NFPA 101

8. REQUIRED EXITS: NFPA 101, PARAGRAPH 16–2.4 EXCEPTION AND 5–4.1.1 EXCEPTION 1 AND 2: ONE, WHEN BUILDING IS FOUR STORIES OR LESS AND EXIT SERVES NOT MORE THAN FOUR LIVING UNITS PER FLOOR.

   ASSUMPTION: SINCE ALL STAIRWAYS AND BALCONIES ARE COMPLETELY SEPARATED BY EXTERIOR BUILDING WALLS WITH A FIRE PROTECTION RATING OF AT LEAST ONE–HOUR ALONG WITH PROTECTION AT ALL OPENINGS, ONCE AN OCCUPANT PASSES THRU THE LIVING/SLEEPING ROOM ENTRANCE DOOR TO THE BALCONY THEY ARE CONSIDERED TO HAVE REACHED THE EXIT AND THE TRAVEL DISTANCE TO THE EXIT IS 0 METERS FROM ALL ROOMS.

   ASSUMPTION: IN DETERMINING THE TOTAL UNIT COUNT PER EXIT THE LIVING/SLEEPING UNITS BEING SERVED BY THE SINGLE EXIT CAN BE COUNTED AS WHOLE UNITS OR AS ONE–HALF UNITS DEPENDING ON THE UNIT AND DOOR ARRANGEMENT ON THE BALCONY. FOR THE EXITS UTILIZING THE BREEZEWAYS THERE ARE TWO WHOLE UNITS PLUS FOUR HALF UNITS WHICH IS CONSIDERED TO BE THE EQUILIVANT OF TWO WHOLE UNITS COMPRISING THE FOUR UNITS PER EXIT.
9. TRAVEL DISTANCE TO EXIT: NFPA 101, PARAGRAPH 16–2.6.1 EXCEPTION: TRAVEL DISTANCE WITHIN A ROOM OR SUITE TO A CORRIDOR DOOR SHALL NOT EXCEED 38000mm. PARAGRAPH 5–12.1 EXCEPTION: COMMOM PATH OF TRAVEL FOR MECHANICAL ROOMS (ATTIC) 30000mm.
10. SEPARATION AND PROTECTION OF OUTSIDE STAIRS: NFPA 101, PARAGRAPH 5–2.2.6.3
11. TRAVEL DISTANCE TO FIRE EXTINGUISHER: NFPA 10, MAXIMUM 22860mm
12. EMERGENCY LIGHTING SHALL BE PROVIDED IN ALL BALCONIES, STAIRWAYS AND UTILITY.
13. DUCT SMOKE DETECTORS SHALL BE PROVIDED IN SUPPLY AND RETURN DUCTS AT EACH AIR HANDLER.

WALL LEGEND

NON–RATED WALL WITH GYPSUM BOARD TO EXTEND 150 mm AOVE CEILING UNLESS OTHERWISE NOTED.

1–HOUR RATED WALL TO UNDERSIDE OF STRUCTURE, SEAL WITH FIRESTOPPING

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS–BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

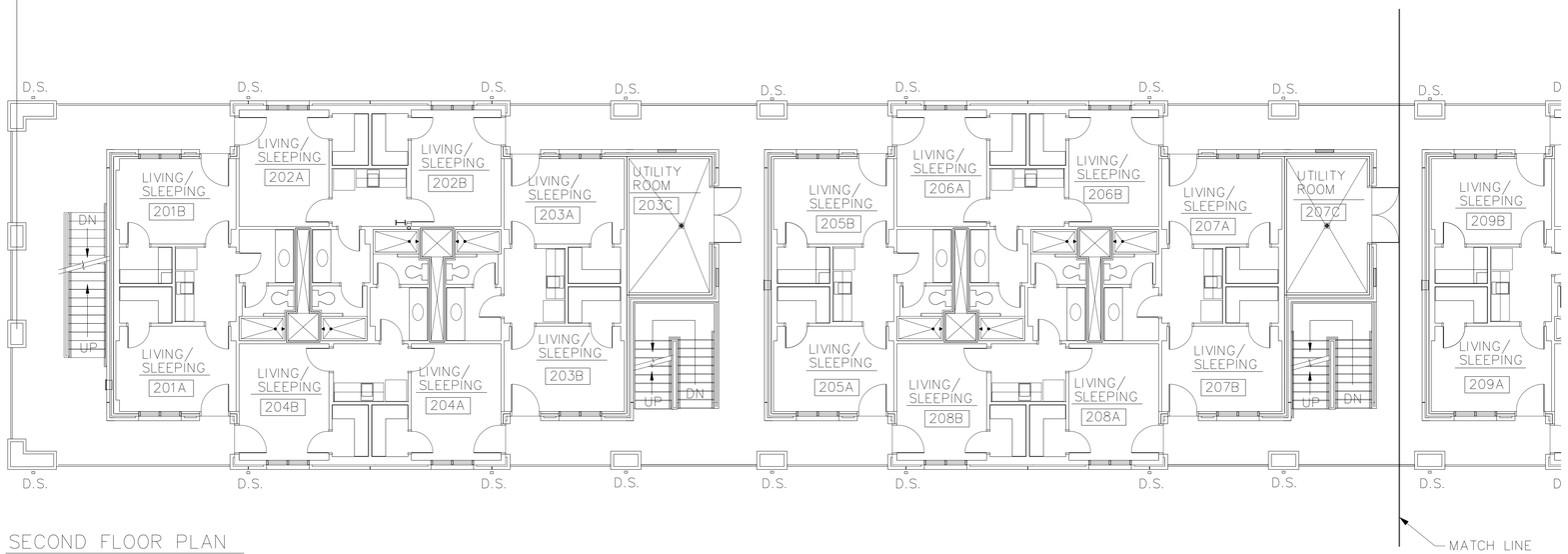
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS – 96 PERSONNEL
FIRST FLOOR
FIRE PROTECTION/LIFE SAFETY PLAN

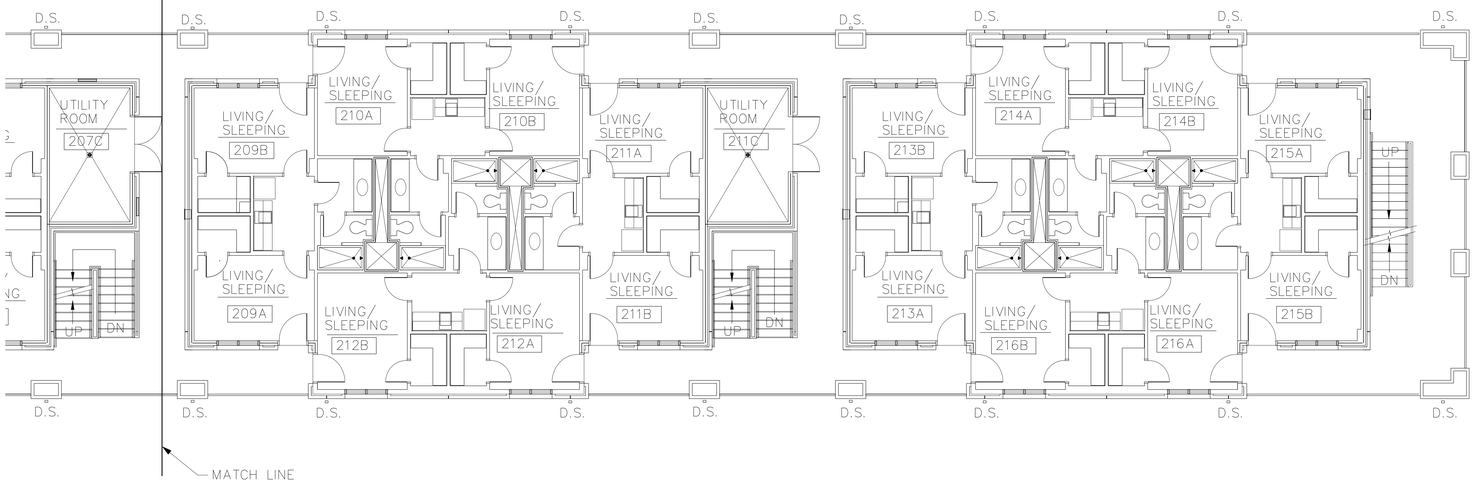
PLATE REFERENCE NUMBER:
F–1
SHEET 213

SAV-22148

DESIGN FILE: D:\NSPEC\$$$$$$



SECOND FLOOR PLAN
SCALE = 1:100



FIRST FLOOR PLAN
SCALE = 1:100

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100
NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
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REV.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

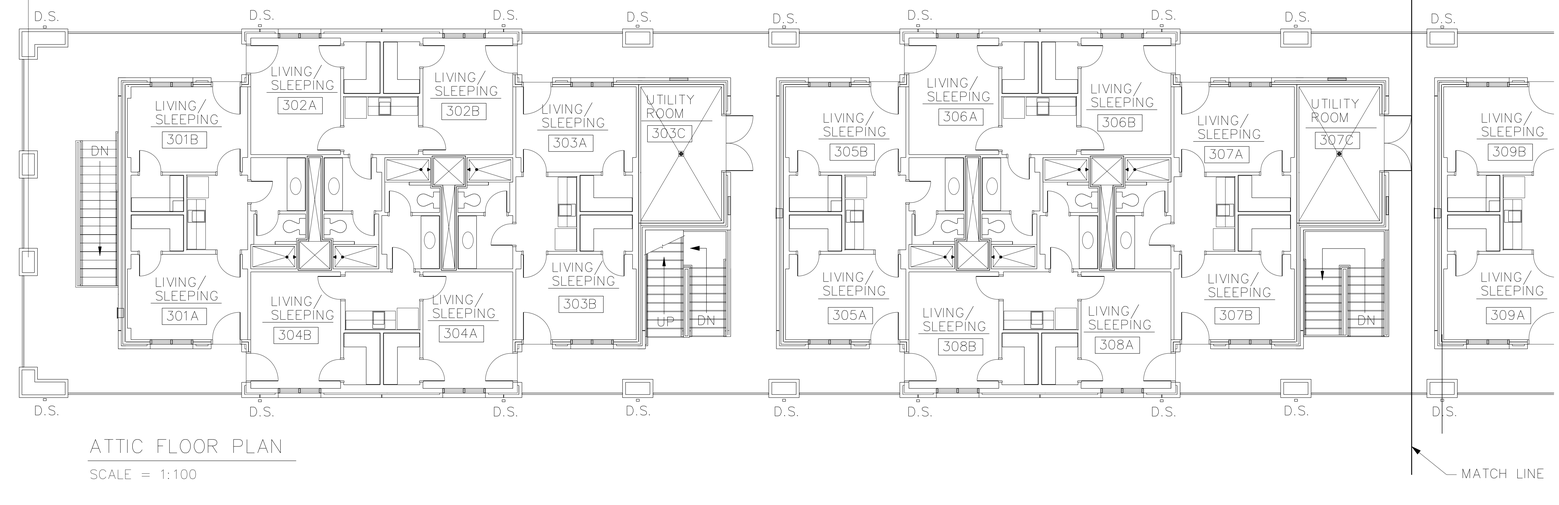
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
SECOND FLOOR
FIRE PROTECTION/LIFE
SAFETY PLAN

PLATE REFERENCE NUMBER:
F-2
SHEET 214

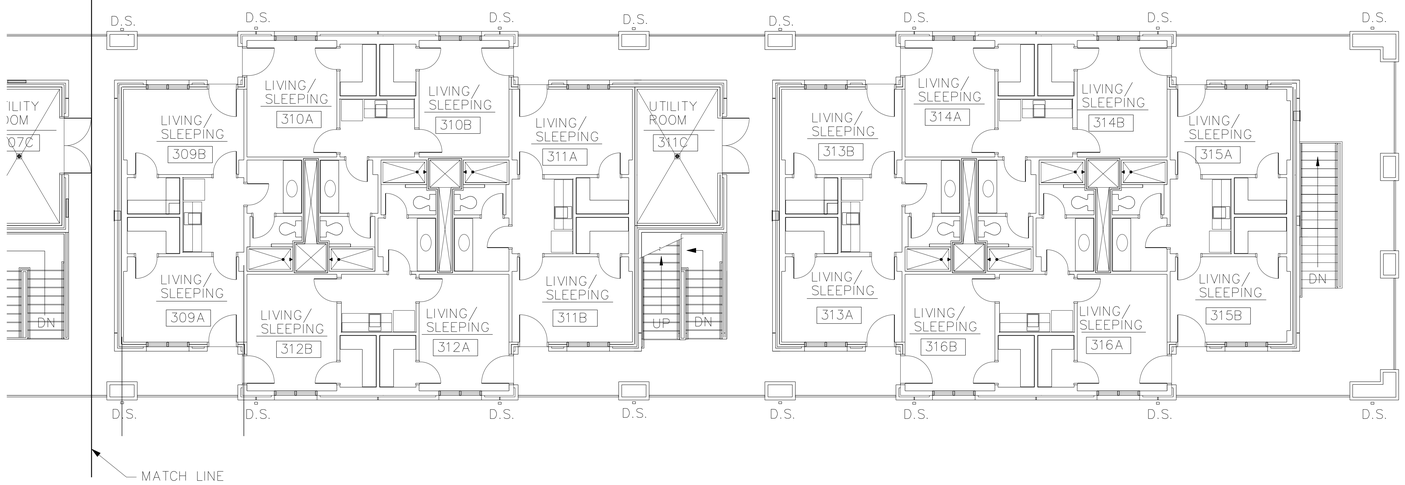
SAV-22148

DESIGN FILE: D:\NSPEC\$$$$$$



ATTIC FLOOR PLAN

SCALE = 1:100



THIRD FLOOR PLAN

SCALE = 1:100

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

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SOLICITATION NO: DACA21-99-B-0034	
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
THIRD FLOOR
LIFE SAFETY/FIRE
PROTECTION PLAN

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

AS-BUILT

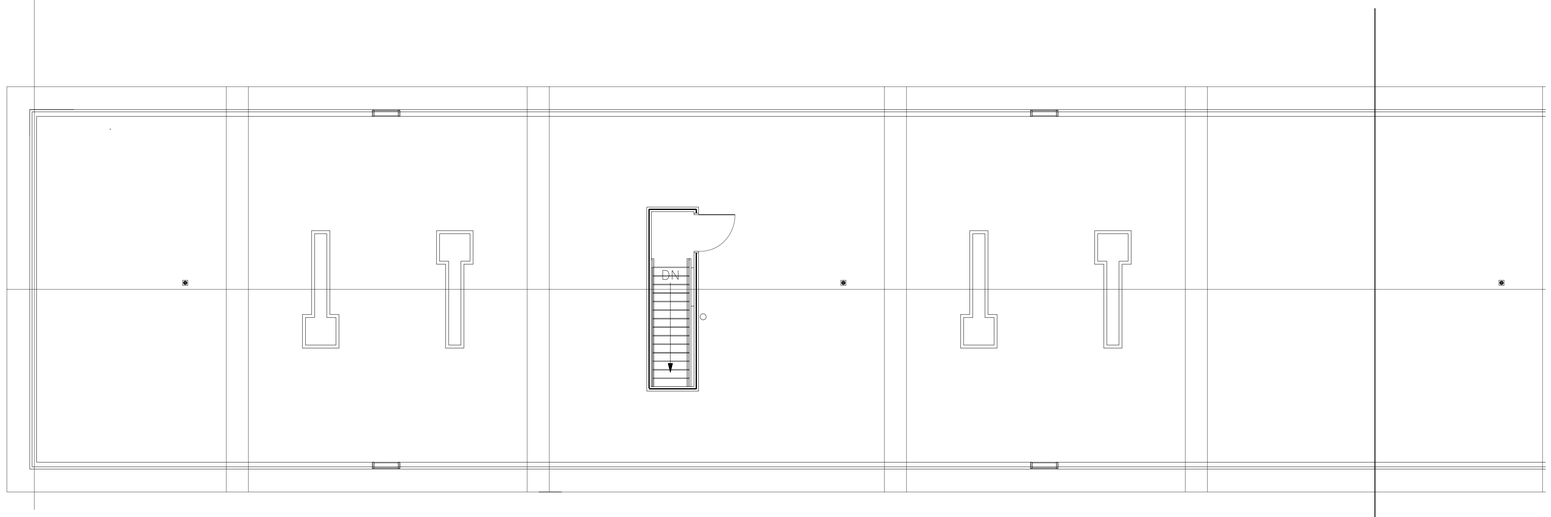
PLATE REFERENCE NUMBER:

F-3

SHEET 215

SAV-22148

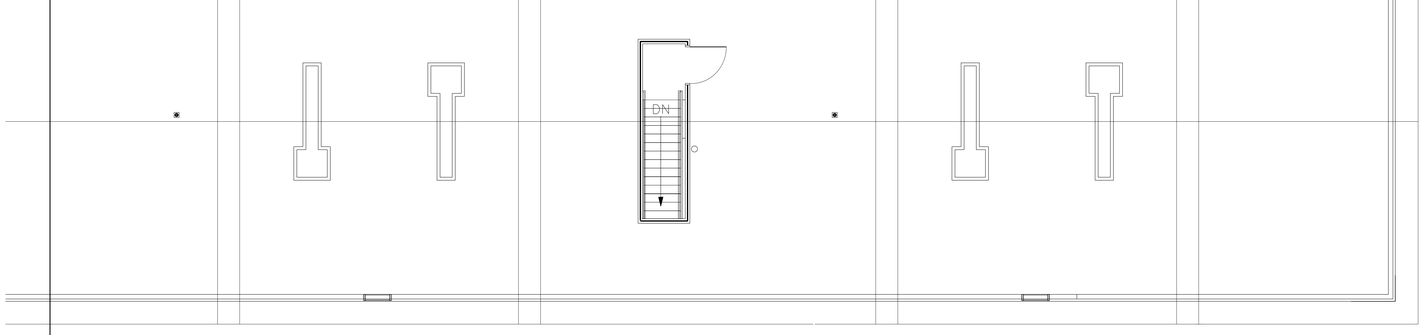
DESIGN FILE: DONSPEC$$$$$$



ATTIC FLOOR PLAN

SCALE = 1:100

MATCH LINE



MATCH LINE

THIRD FLOOR PLAN

SCALE = 1:100

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

AS-BUILT

US ARMY CORPS
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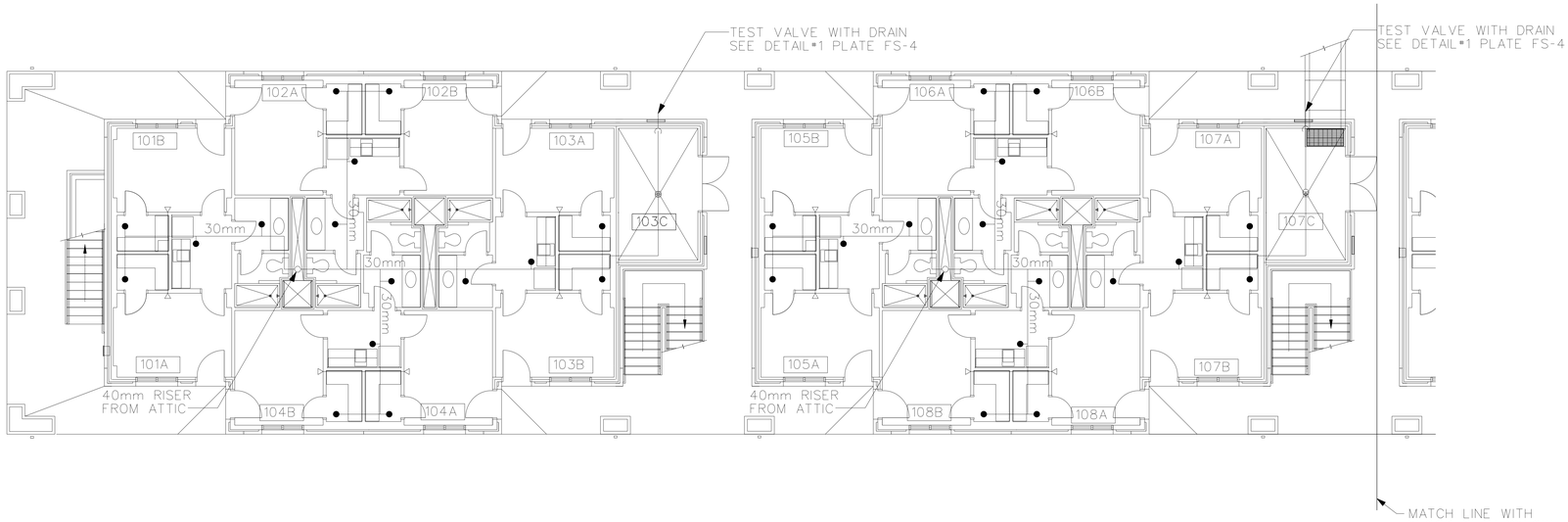
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
ATTIC
FIRE PROTECTION/LIFE SAFETY PLAN

PLATE REFERENCE NUMBER:
F-4
SHEET 216

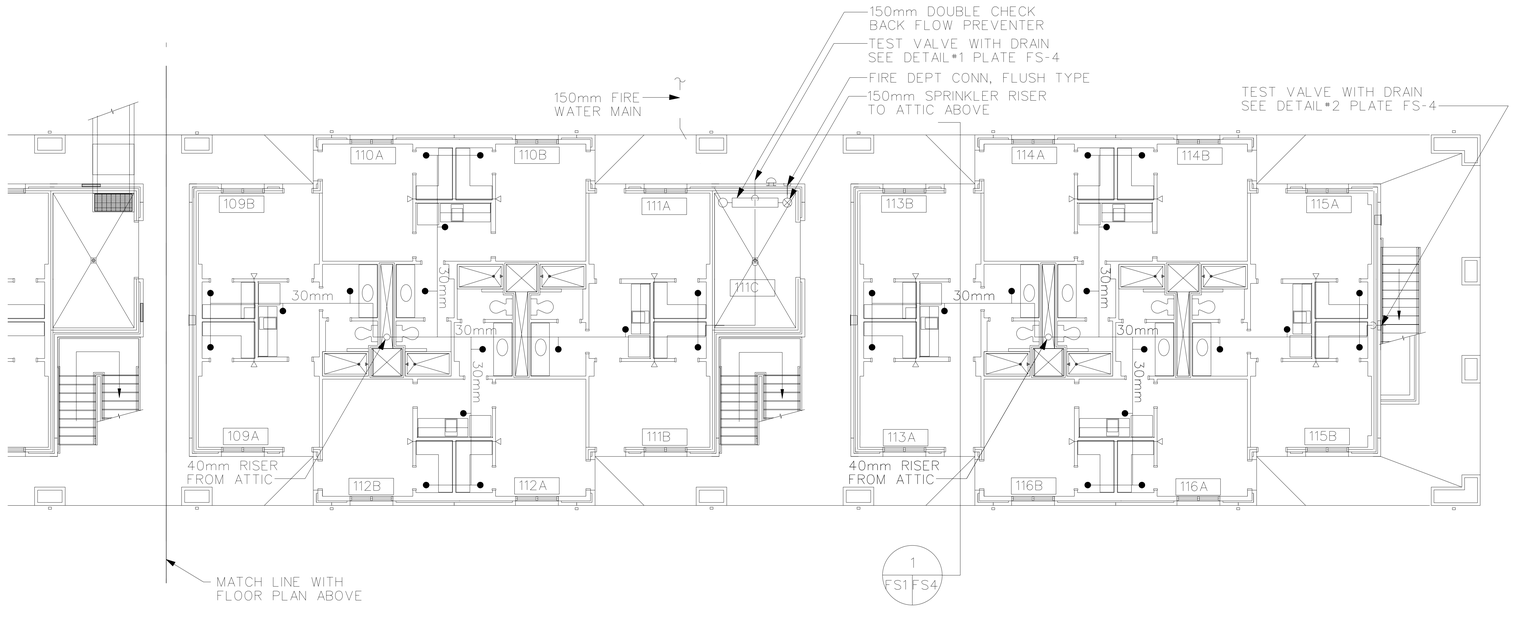
SAV-22148

DESIGN FILE: DONSPEC$$$$$$



FIRST FLOOR PLAN - LEFT END

SCALE 1:100



FIRST FLOOR PLAN - RIGHT END

SCALE 1:100

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

AS-BUILT

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

DATE: 17JUN99
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:
REV.

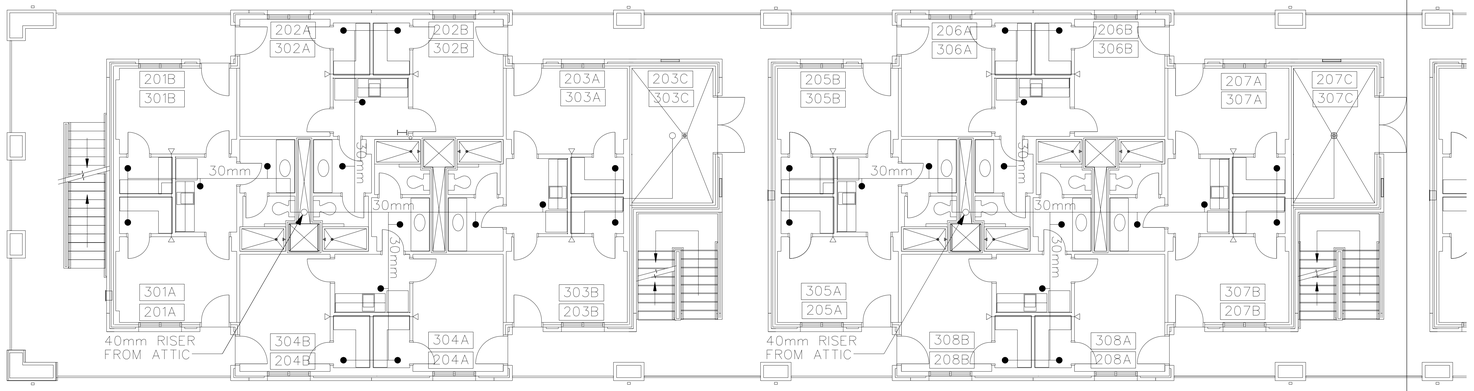
SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
SPRINKLER SYSTEM
FIRST FLOOR

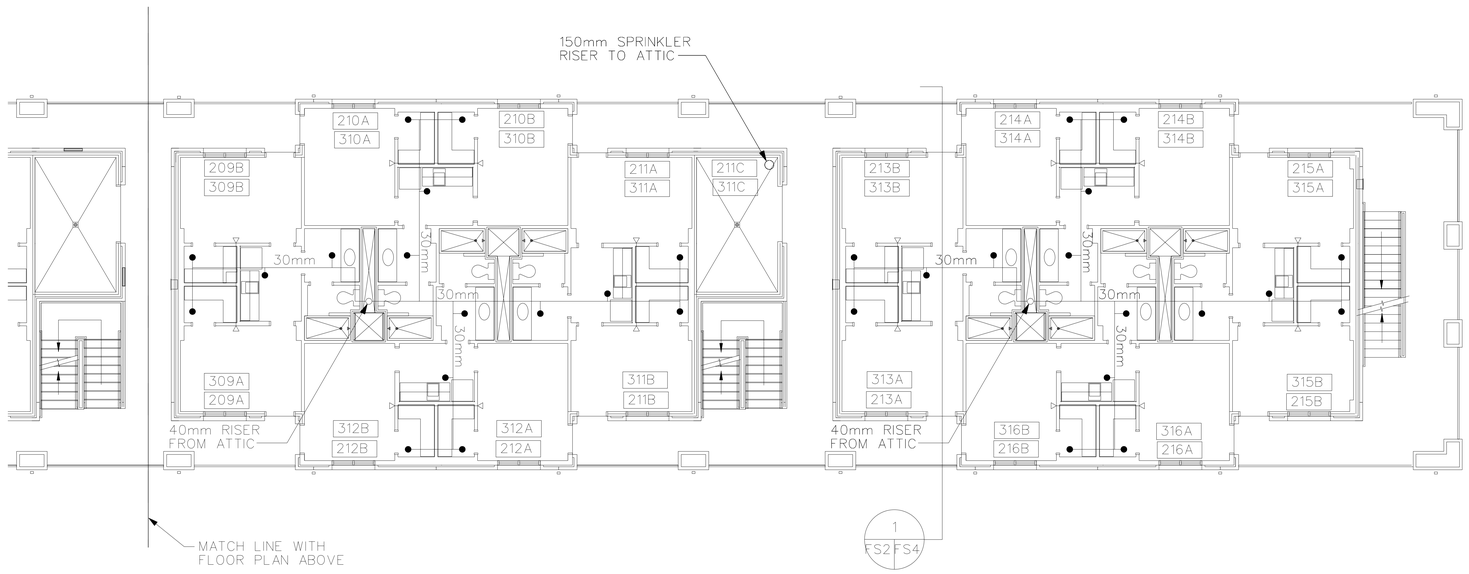
PLATE REFERENCE NUMBER:
FS-1
SHEET 261

DESIGN FILE: DGNSPEC$$$$$



UPPER FLOOR PLAN - LEFT END

SCALE 1:100



UPPER FLOOR PLAN - RIGHT END

SCALE 1:100

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

AS-BUILT

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99 | REV:
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

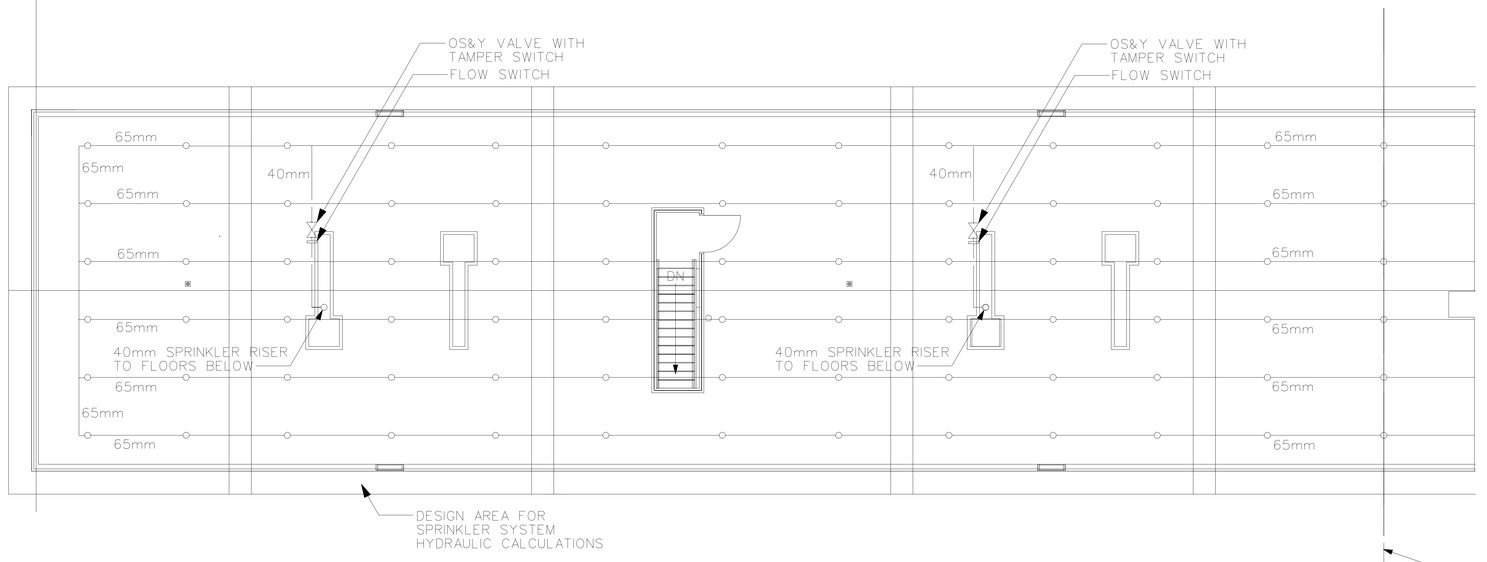
SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
SPRINKLER SYSTEM
UPPER FLOORS

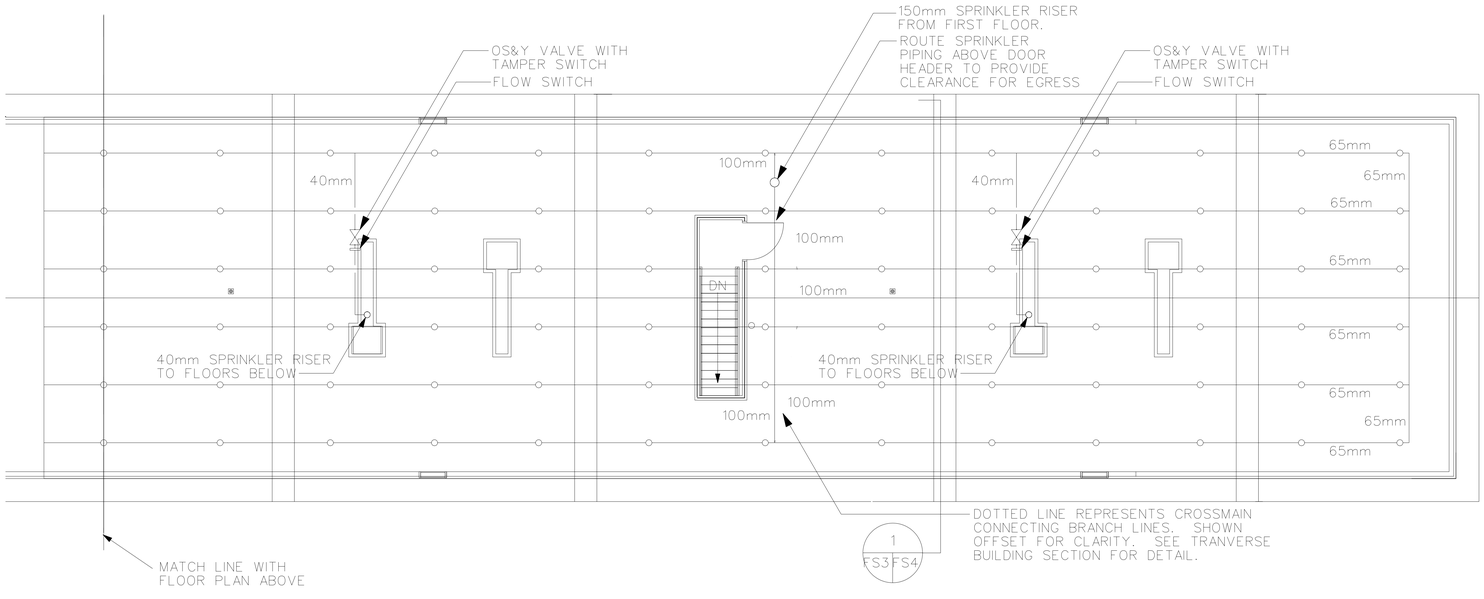
PLATE REFERENCE NUMBER:
FS-2
SHEET 262

DESIGN FILE: DONSPEC$$$$$



ATTIC FLOOR PLAN - LEFT END

SCALE = 1:100



ATTIC FLOOR PLAN - RIGHT END

SCALE = 1:100

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

AS-BUILT

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC
3	REVISED IN ACCORDANCE WITH AMENDMENT NO. 0003	9JUL99	MAF

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
SPRINKLER SYSTEM
ATTIC

PLATE REFERENCE NUMBER:
FS-3

SHEET 263

DESIGN FILE: DGNSPEC$$$$$

BARRACKS BUILDING - SPRINKLER SYSTEM

THE BARRACKS BUILDING SHALL BE FULLY PROTECTED WITH AN AUTOMATIC WET PIPE SPRINKLER SYSTEM DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13R, NFPA 13, AND THE DESIGN DATA BELOW. THE CONTRACTOR SHALL SUBMIT DESIGN CALCULATIONS AND PLANS TO THE CONTRACTING OFFICER FOR REVIEW AND APPROVAL. SPRINKLER PROTECTION SHALL BE PROVIDED FOR ALL AREAS OF THE FACILITY AND ALL FLOORS, INCLUDING THE CORRIDORS. THE APPROXIMATE LOCATION OF THE WATER MAIN ENTRANCE, SPRINKLER RISER, FLOOR SUPPLY CROSS MAINS, AND FIRE DEPARTMENT CONNECTION ARE SHOWN ON THE PLANS.

THE SPRINKLER SYSTEM SHALL BE CONFIGURED TO HAVE FOUR ZONES, ONE FOR THE ATTIC AND ONE FOR EACH OF THE THREE VERTICAL STACKS OF ROOMS. A ZONE OS&Y VALVE, TAMPER SWITCH, AND FLOW SWITCH SHALL BE PROVIDED FOR EACH ZONE. EACH ZONE SHALL BE PROVIDED WITH A TEST VALVE AND DRAIN LOCATED AS INDICATED ON THE PLANS. WHERE MECHANICAL ROOMS ARE PRESENT TEST VALVES SHALL BE LOCATED IN THE ROOM. WHERE MECHANICAL ROOMS ARE NOT PRESENT THE DRAIN LINE SHALL BE CONCEALED IN THE EXTERIOR WALL AND THE TEST VALVE SHALL BE LOCATED IN A LOCKING BOX AS SHOWN ON THE PLANS. THE DRAIN LINE SHALL BE ROUTED DOWN AND DRAIN TO THE EXTERIOR.

TAMPER SWITCHES SHALL BE PROVIDED ON THE OS&Y GATE VALVES ON THE BACKFLOW PREVENTER AND A FLOW SWITCH SHALL BE PROVIDED ON THE PRIMARY SPRINKLER RISER.

SPRINKLER GUARDS SHALL BE PROVIDED FOR ALL PENDANT SPRINKLERS LOCATED IN CLOSETS IN LIVING UNITS.

HAZARD CLASSIFICATIONS AND DESIGN REQUIREMENTS

LIGHT HAZARD . . . FACILITY, ALL AREAS EXCEPT AS NOTED BELOW

ORD HAZ I . . . . . ATTIC, ELEC/COMM ROOMS/ MECH ROOMS

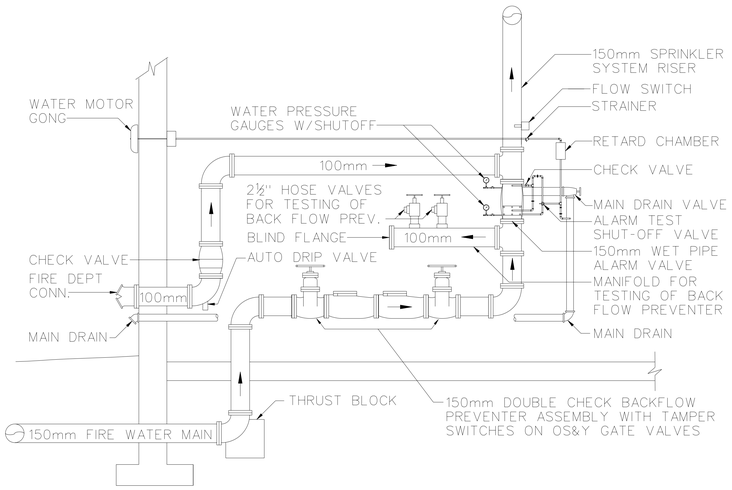
HAZARD	DENSITY	AREA
LIGHT	4.1 L/MIN/M2	280 M2
ORD HAZ 1	6.1 L/MIN/M2	280 M2
ORD HAZ II	8.1 L/MIN/M2	280 M2

THESE DENSITIES AND DESIGN AREAS APPLY TO THOSE AREAS DESIGNED USING NFPA 13. DWELLING UNITS AND ASSOCIATED SPACES AS IDENTIFIED IN NFPA 13R SHALL BE DESIGNED PER THE CRITERIA IN NFPA 13R. SPRINKLERS IN ALL DWELLING UNITS SHALL BE RESIDENTIAL TYPE PER NFPA 13R, 2-4.5, AND NFPA 101, 16-3.5.3. ALL SPRINKLERS IN OCCUPIED SPACES SHALL BE RECESSED TYPE. THE CONTRACTOR SHALL LOCATE THE SYSTEM WITHIN THE INSULATED ENVELOPE OF THE BUILDING.

THE EXTERIOR HOSE STREAM REQUIREMENT BASED ON LIGHT HAZARD IS 946 L/MIN. THE HOSE STREAM SHALL BE INCLUDED IN THE HYDRAULIC CALCULATIONS.

FIRE FLOW DATA

FIRE FLOW DATA FOR THIS SITE: STATIC: 5.38 BAR, RESIDUAL: 4.41 BAR, FLOW: 4682 L/MIN. THIS FLOW DATA WAS OBTAINED ON INFANTRY BRIGADE LOOP ROAD BETWEEN SIGHTSEEING AND DIXIE ROADS AT THE DINING FACILITY, BLDG. #2889, ELEVATION 328.6 FT.



WET PIPE SPRINKLER RISER SCHEMATIC

NOT TO SCALE

NOTE: SCHEMATIC SHOWS THE REQUIRED EQUIPMENT AND MINIMUM SIZES OF COMPONENTS. THE LOCATION OF COMPONENTS AND ROUTING OF PIPING MAY BE ALTERED BY THE CONTRACTOR IN ACCORDANCE WITH NFPA 13 TO SUIT SPECIFIC INSTALLATIONS. THE INSTALLATION AND ANY CHANGES MADE SHALL BE COORDINATED WITH ALL OTHER TRADES TO ASSURE ADEQUATE SPACE IS PROVIDED. THE HOSE VALVES FOR BACKFLOW PREVENTER TESTING SHALL BE LOCATED AND ORIENTED TO FACILITATE THE ROUTING OF HOSES OUT OF THE MECHANICAL ROOM.

THE FIRE WATER MAIN, BACKFLOW PREVENTER, SPRINKLER EQUIPMENT, INTERIOR MAINS, RISER ASSEMBLY, SPRINKLER RISERS, AND DRAIN LINES SHALL BE SIZED AND LOCATED AS SHOWN. THE CONTRACTOR SHALL COMPLETE THE DESIGN BY LOCATING AND SIZING THE SPRINKLER SYSTEM BRANCH LINES, ADDITIONAL CROSSMAINS, AND SPRINKLERS. ALL PIPING SHALL BE SIZED WITH HYDRAULIC CALCULATIONS. THE CONTRACTOR SHALL COORDINATE THE SPRINKLER SYSTEM INSTALLATION WITH ALL OTHER DISCPLINES.

SYMBOL LEGEND

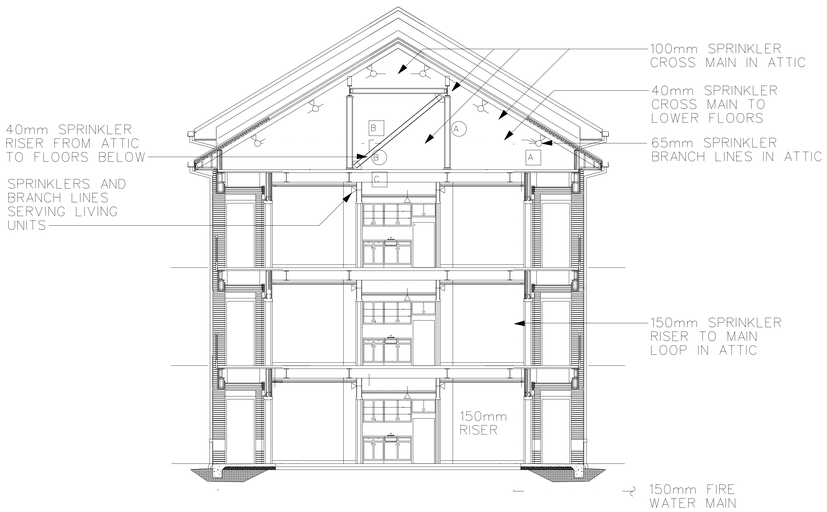
- SPRINKLER RISER
- PIV VALVE
- SPRINKLER ALARM
- PENDANT SPRINKLER
- UPRIGHT SPRINKLER
- SIDEWALL SPRINKLER
- FIRE DEPT CONNECTION
- FIRE DEPT CONNECTION FLUSH TYPE

TABLE I

PIPE, VALVES AND FITTINGS IP AND METRIC DESIGNATIONS

NOMINAL PIPE SIZE (INCHES)	METRIC IDENTIFICATION MILLIMETER (mm)
1	25
1-1/4	32
1-1/2	40
2	50
2-1/2	65
3	80
3-1/2	90
4	100
4-1/2	115
5	125
6	150

NOTE: THE METRIC DESIGNATION FOR ALL PIPE, VALVES AND FITTINGS OVER 6 INCHES WILL BE 25 mm PER INCH.

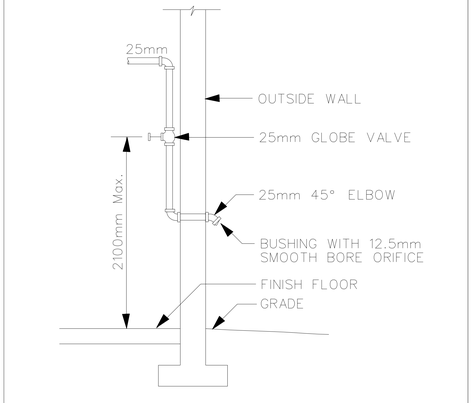


1 FS1 FS4 FS2 FS3

TRANSVERSE BUILDING SECTION

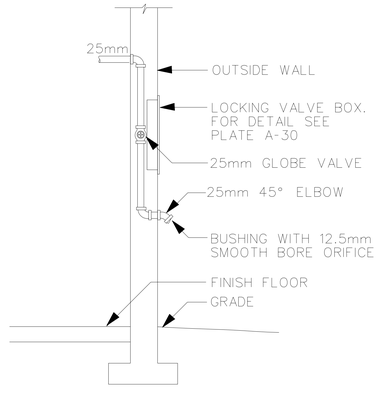
SCALE = 1:100

NOTE: SPRINKLER LINES ARE SHOWN AS DASHED AND ARE LOCATED BEYOND THE SECTION CUT LINE. LINES ARE SHOWN FOR TO ILLUSTRATE RELATIVE LOCATION.



DETAIL #1: SYSTEM TEST CONNECTION LOCATED IN MECH/ELEC ROOMS

NOT TO SCALE



DETAIL #2: SYSTEM TEST CONNECTION LOCATED ADJACENT TO LIVING UNITS

NOT TO SCALE

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99 | REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT INFORMATION AND FLOW TEST DATA ADDED	FEB 2005	SAC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

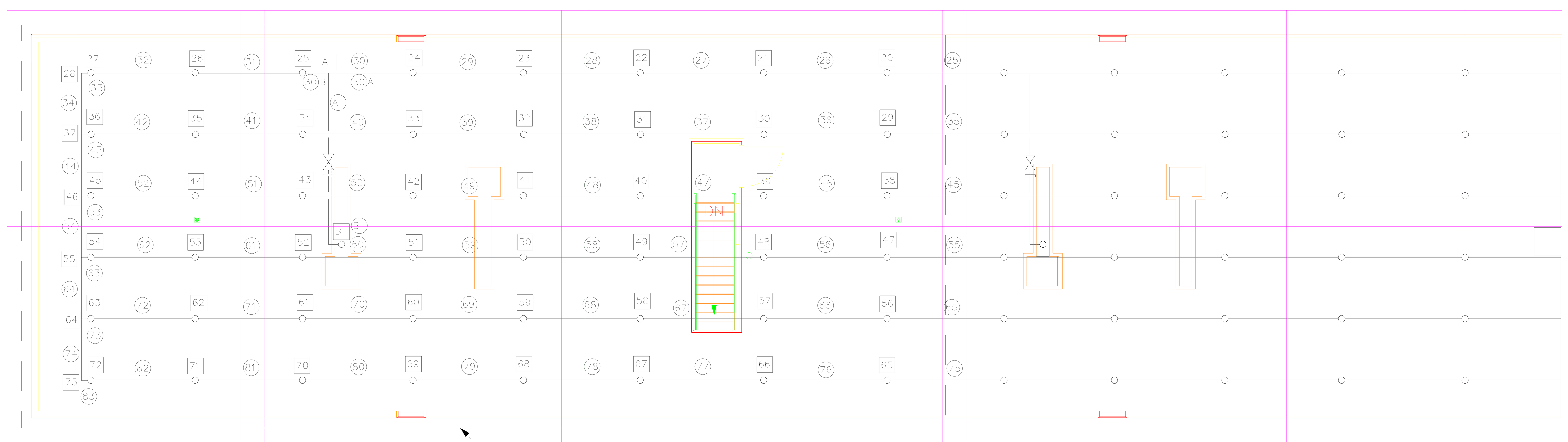
BARRACKS - 96 PERSONNEL
SPRINKLER SYSTEM DETAILS

PLATE REFERENCE NUMBER:
FS-4

SHEET 264

DESIGN FILE: DGNSPEC$$$$$

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

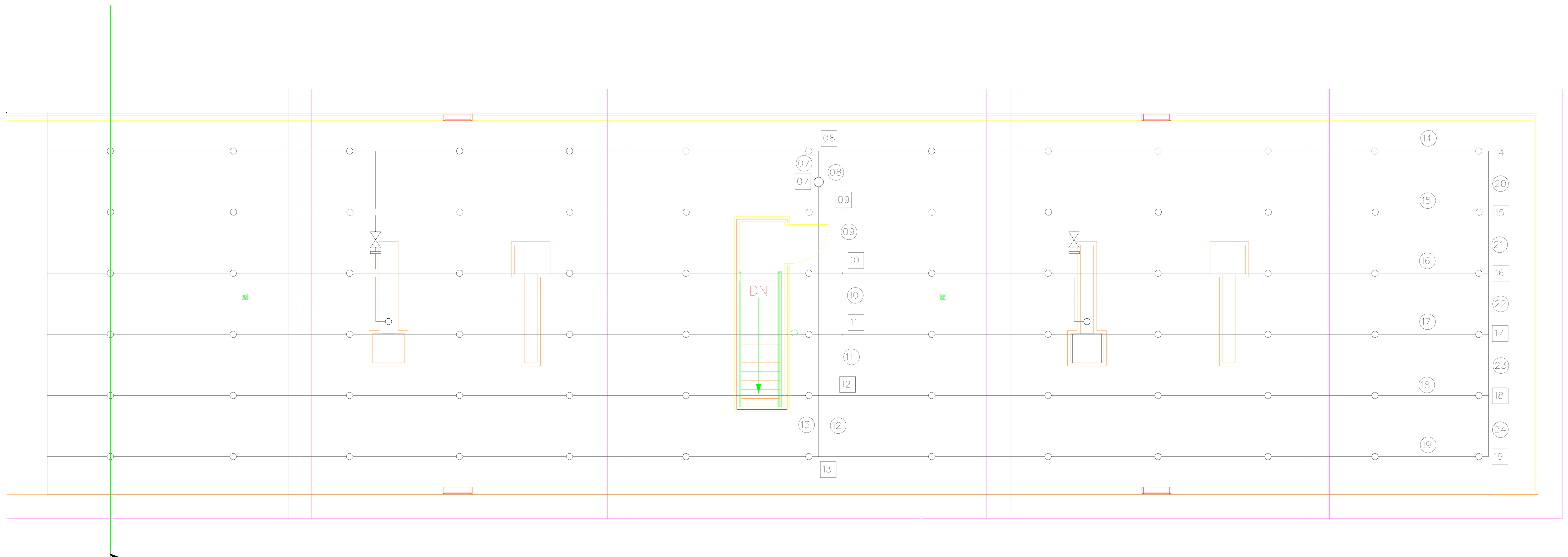


WET PIPE SPRINKLER SYSTEM DESIGN AREA - 280 m2

MATCH LINE WITH
FLOOR PLAN BELOW

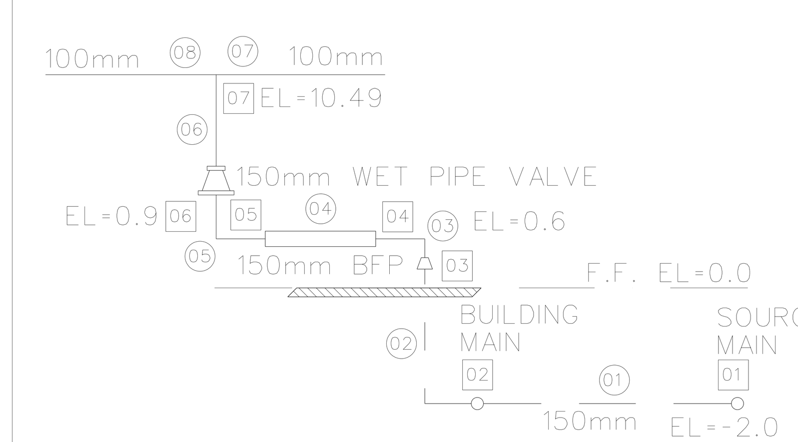
ATTIC FLOOR PLAN - LEFT END
SCALE = 1:100

NOTE: THIS SHEET IS NOT A CONTRACT DRAWING. THIS SHEET INDICATES THE NODE AND PIPE IDENTIFICATION FOR THE HYDRAULIC CALCULATIONS PROVIDED IN THE DESIGN ANALYSIS. THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE THE FINAL DETAILED SYSTEM LAYOUT AND HYDRAULIC CALCULATIONS.



MATCH LINE WITH
FLOOR PLAN ABOVE

ATTIC FLOOR PLAN - RIGHT END
SCALE = 1:100



NODE/PIPE SCHEMATIC
NOT TO SCALE

SPRINKLER SYSTEM NODE AND PIPE IDENTIFICATION FOR HYDRAULIC CALCULATIONS

- 01 SPRINKLER NODE - SQUARE TAG
- 01 SPRINKLER PIPE - CIRCLE TAG

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

AS-BUILT

DATE: 17JUN99	REV.
CATEGORY CODE 721-11-12	
SOLICITATION NO: DACA21-99-B-0034	
PLOT DATE: $$DATE$$$$	
PLOT SCALE:	

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
SPRINKLER SYSTEM
NODE/PIPE IDENTIFICATION

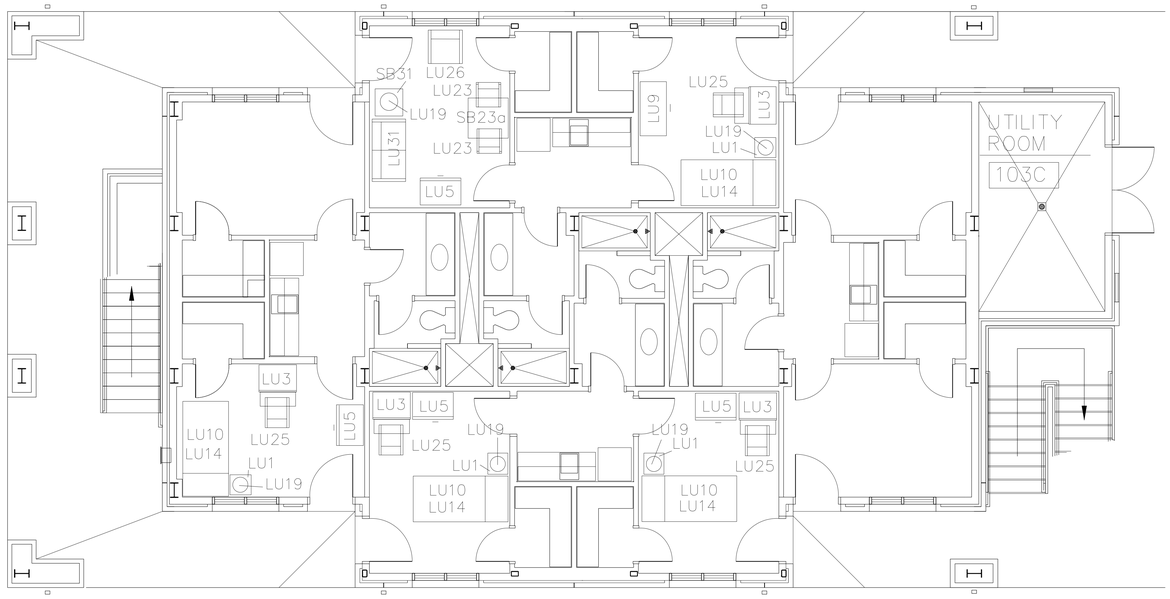
PLATE REFERENCE NUMBER:
FS-5
SHEET 265

DESIGN FILE: DGNSPEC$$$
SB_DGN\BARRACKS96\G1FS05PA.DGN
...\SB_DGN\BARRACKS96\g1fs05pa.dgn 6/2/2006 8:21:57 AM

NORTH FOR THE WEST BUILDING

NORTH FOR THE EAST BUILDING

TYPICAL MODULE WITH ONE SOLDIER FURNITURE LAYOUT



TYPICAL MODULE WITH TWO SOLDIER FURNITURE LAYOUT

FURNITURE LEGEND

LU1 – NIGHTSTAND
LU3 – COMPUTER DESK WITH KEYBOARD SURFACE
LU5 – TV ARMOIRE WITH THREE DRAWERS
LU9 – CHEST WITH THREE DRAWERS
LU10 – STACKABLE BED
LU14 – MATTRESS
LU19 – TABLE LAMP
LU23 – CHAIR WITH LEGS
LU25 – CHAIR WITH TWO POSITIONS
LU26 – RECLINER
LU31 – TWO SEAT SOFA
SB23a – DINING TABLE 36"
SB31 – END TABLE

FURNITURE PLACEMENT PLAN – TYPICAL

NOT TO SCALE

GENERAL NOTE:

THE FURNITURE LAYOUTS ARE A VISUAL ILLUSTRATION OF THE SPACE BETWEEN THE ARCHITECTURE OF THE BUILDING AND THE FURNITURE AND WILL NOT BE CONSIDERED PART OF THE CONTRACT DOCUMENTS

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
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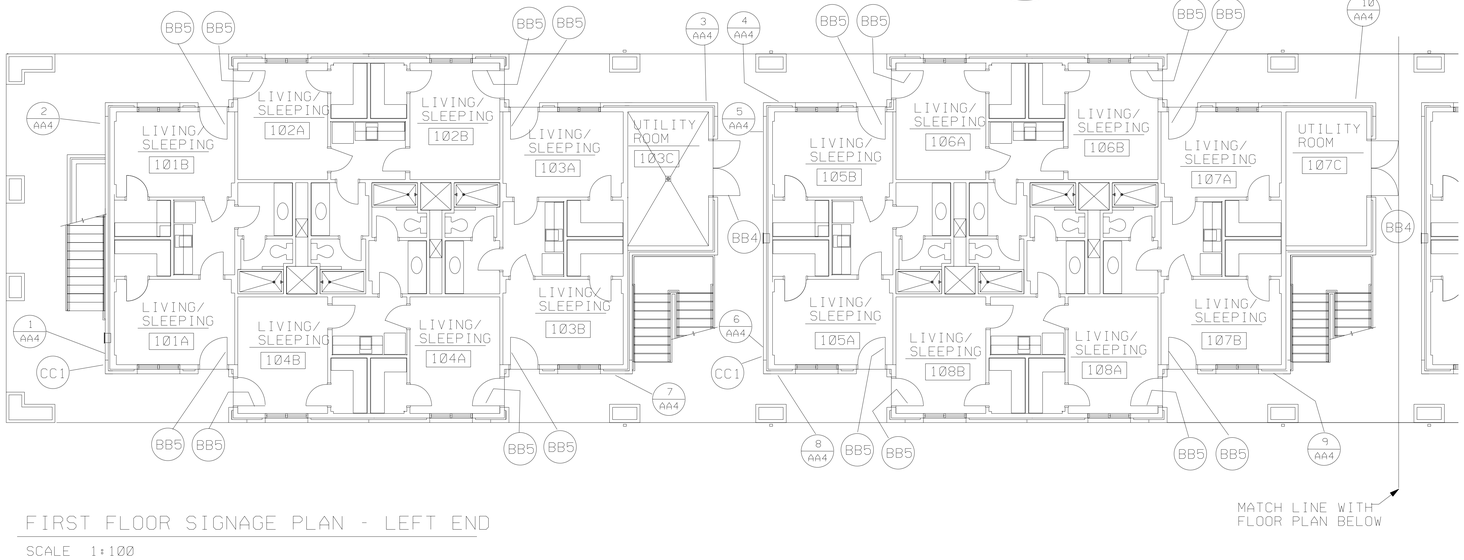
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
FURNITURE PLACEMENT PLAN
ONE/TWO PERSON TYPICAL

PLATE REFERENCE NUMBER:
I-1
SHEET 217

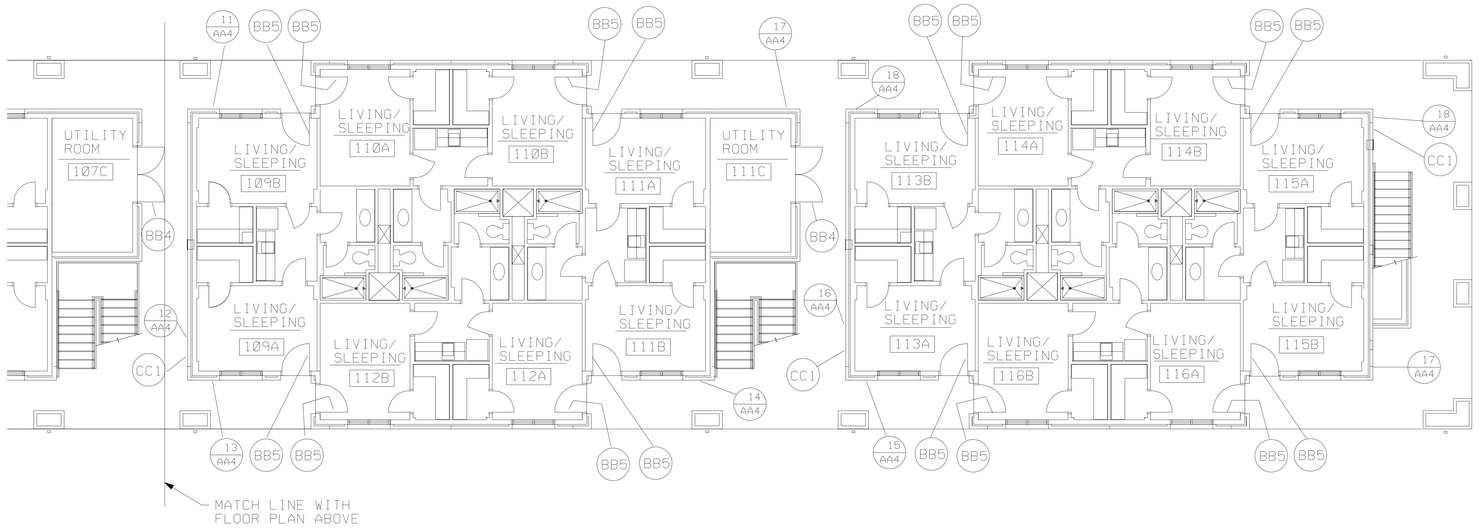
SAV-22148

DESIGN FILE: D:\NSPEC\$$$$$$



FIRST FLOOR SIGNAGE PLAN - LEFT END

SCALE 1:100



FIRST FLOOR SIGNAGE PLAN - RIGHT END

SCALE 1:100

SIGNAGE LEGEND

- (BB4) ROOM NAME - IDENTIFIES MECHANICAL, ELECTRICAL, ETC.
- (BB5) ROOM NUMBER - IDENTIFIES ROOM/OCCUPANT INSERT PANEL
- (CC1) BUILDING MAP
- (1 / AA4) DIRECTIONAL SIGNS - GUIDES TRAVEL TO DESTINATION WITH NUMBER AND ARROW DIRECTION

NOTE:

1. SEE SPECIFICATIONS SECTION 10440 FOR SPECIFIC DESCRIPTIONS OF THE INDIVIDUAL SIGNAGE PLAQUES. EXTERIOR SIGNAGE AA4, BB4, BB5, AND CC1 ARE FOUND IN SECTION 100440, INTERIOR SIGNAGE.
2. SEE SECTION 10440 FOR COLOR OF THE SIGNAGE.
3. SIGNAGE MESSAGE SHALL BE COORDINATED WITH THE USER AND CONTRACTING OFFICE BEFORE ORDERING THE SIGNAGE.
4. THE SECOND AND THIRD FLOOR ROOM NUBERS ARE IDENTICAL EXCEPT THE FIRST NUMBER OF THE ROOMS SHALL BE THE NUMBER OF THE FLOOR. I.E. SECOND (2) THIRD (3).
5. SIGN CONTRACTOR SHALL ADJUST THE DIRECTIONAL ARROWS ON SIGNS 1, 7, 9, 14, AND 20 ON THE SECOND AND THIRD FLOORS TO REFLECT THE FLOOR DIRECTIONS.

AA4 DIRECTIONAL SIGN SCHEDULE

(1 / AA4)
← ROOM 101B, 102A
→ ROOM 101A, 104B
↑ ROOM 201A, 201B, 202A, 204B
↑ ROOM 301A, 301B, 302A, 304B

(2 / AA4) ← ROOM 101A, 104B

(3 / AA4) → ROOM 102B, 103A

(4 / AA4) ← ROOM 105B, 106A

(5 / AA4) ← ROOM 102B, 103A,105B, 106A

(6 / AA4)
← ROOM 102B, 103A,105B, 106A
→ ROOM 103B,104A, 105A, 108B

(7 / AA4)
← ROOM 103B, 104A
↑ ROOM 203A, 203B, 202B, 204A
↑ ROOM 205A, 205B, 206A, 208B
↑ ROOM 303A, 303B, 302B, 304A
↑ ROOM 305A, 305B, 306A, 308B

(8 / AA4) → ROOM 105A, 108B

(9 / AA4)
← ROOM 107B, 108A
↑ ROOM 206B, 207A, 207B, 208A
↑ ROOM 209A, 209B, 210A, 212B
↑ ROOM 306B, 307A, 307B, 308A
↑ ROOM 309A, 309B, 310A, 312B

(10 / AA4) ← ROOM 106B, 107A

(11 / AA4) → ROOM 109B, 110A

(12 / AA4)
← ROOM 106B, 107A, 109B, 110A
→ ROOM 107B, 108A, 109A, 112B

(13 / AA4) ← ROOM 109A, 112B

(14 / AA4)
← ROOM 111B, 112A
↑ ROOM 210B, 211A, 211B, 212A
↑ ROOM 213A, 213B, 214A, 216B
↑ ROOM 310B, 311A, 311B, 312A
↑ ROOM 313A, 313B, 314A, 316B

(15 / AA4) → ROOM 113A, 116B

(16 / AA4)
← ROOM 110B, 111A, 113B, 114A
→ ROOM 111B, 112A, 113A, 116B

(17 / AA4) → ROOM 110B, 111A

(18 / AA4) ← ROOM 113B, 114A

(19 / AA4) ← ROOM 115B, 116A

(20 / AA4)
→ ROOM 114B, 115A
↑ ROOM 214B, 215A, 215B, 216A
↑ ROOM 314B, 315A, 315B, 316A

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

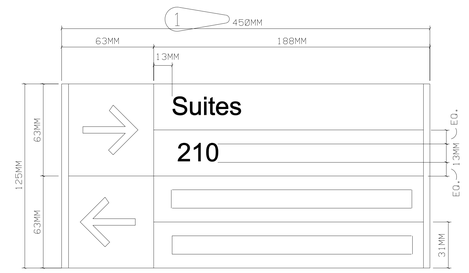
BARRACKS - 96 PERSONNEL

FIRST FLOOR PLAN SIGNAGE PLAN

PLATE REFERENCE NUMBER:
I-2
SHEET 218

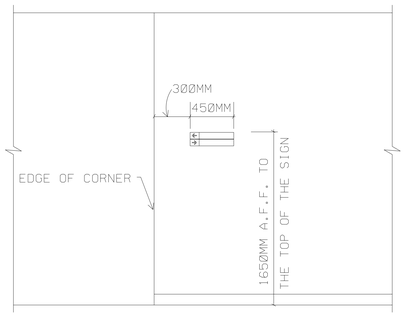
SAV-22148

DESIGN FILE=DONSPEC$$$$



AA4 - DIRECTIONAL INDENTIFICATION W/NUMBER

NTS

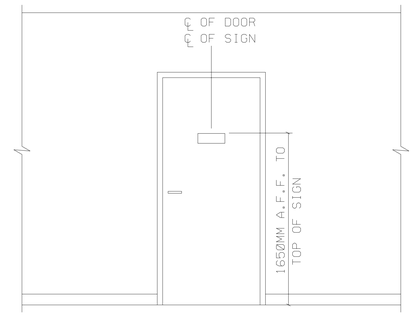


MOUNTING LOCATION FOR SIGN AA4

NTS

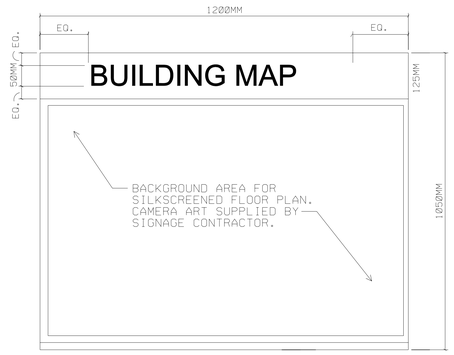
BB4 - ROOM IDENTIFICATION - NAME

NTS



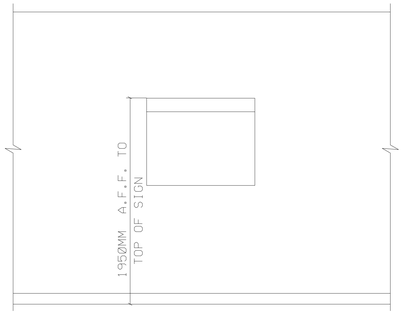
MOUNTING LOCATION FOR SIGN BB4

NTS



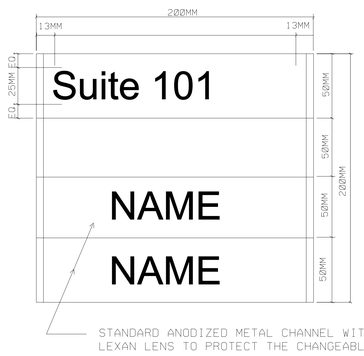
CC1 - BUILDING MAP

NTS



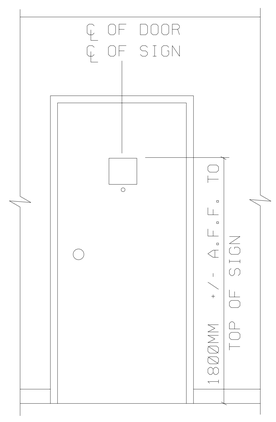
MOUNTING LOCATION FOR SIGN CC1

NTS



BB5 - ROOM/OCCUPANT IDENTIFICATION

NTS



MOUNTING LOCATION FOR SIGN BB5

NTS

NOTE: SIGN HEIGHT SHALL BE ADJUSTED AND SIGN INSTALLED ABOVE THE DOOR VIEWER.

NOTE:

1. SEE SPECIFICATIONS SECTION 10440 FOR SPECIFIC DESCRIPTIONS OF THE INDIVIDUAL SIGNAGE PLAQUES

2. SEE SECTION 10440 FOR COLOR OF THE SIGNAGE.

3. SIGNAGE MESSAGE SHALL BE COORDINATED WITH THE USER AND CONTRACTING OFFICE BEFORE ORDERING THE SIGNAGE.

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99	REV.
CATEGORY CODE 721:11:12	
SOLICITATION NO: DACA21-99-B-0034	
PLOT DATE: $$DATE$$$$$	
PLOT SCALE:	

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
1	AS-BUILT DRAWING NO REVISION THIS SHEET REVISED IN ACCORDANCE WITH AMENDMENT 0003	FEB2003	SRC
		09JUL99	PR

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

SIGNAGE DETAILS

PLATE REFERENCE NUMBER:
I-3
SHEET 219

AS-BUILT

SAV-22148

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MECHANICAL SYMBOLS AND ABBREVIATIONS

SYMBOL	DESCRIPTION
	PRESSURE AND TEMP TEST PORT WITH CAP AND CHAIN
—CHS—	CHILLED WATER SUPPLY
—CHR—	CHILLED WATER RETURN
—G—	NATURAL GAS
—HWS—	HEATING HOT WATER SUPPLY
—HWR—	HEATING HOT WATER RETURN
—MTWS—	MEDIUM TEMP WATER SUPPLY
—MTWR—	MEDIUM TEMP WATER RETURN
	ELBOW TURNING DOWN
	ELBOW TURNING UP
	GATE VALVE
	CHECK VALVE
	GLOBE VALVE
	BALANCING VALVE
	FLEXIBLE CONNECTION
	3-WAY CONTROL VALVE
	2-WAY CONTROL VALVE
	UNION CONNECTION
	FLANGE CONNECTION
—FD	FIRE DAMPER
—MOD	MOTORIZED DAMPER

SYMBOL	DESCRIPTION
MD	MANUAL DAMPER
	SUPPLY DUCT SECTION
	EXHAUST RETURN OR OUTSIDE AIR DUCT SECTION
12 MM	ROUND DUCT SIZE, MILLIMETERS
20X10	RECTANGULAR DUCT SIZE (FIRST DIM. IS SIDE VIEWED)
	ELBOW UP, (SUPPLY)
	ELBOW DOWN, (SUPPLY)
	ELBOW W/TURNING VANES
	FLEXIBLE CONNECTION
	THERMOMETER
	PRESSURE GAUGE
	DIRECTION OF FLOW
	Y STRAINER WITH BLOW-OFF VALVE
	PRESSURE RELIEF VALVE
	PRESSURE REGULATING/ REDUCING VALVE
T	THERMOSTAT/TEMPERATURE SENSOR (SEE CONTROLS)
F	FIRESTAT
	MANUAL AIR VENT
A	SUPPLY DIFFUSER, TYPE A, (REFER TO DIFFUSER SCHEDULE)
B	EXHAUST REGISTER, TYPE B, (REFER TO DIFFUSER SCHEDULE)
	FLEXIBLE DUCT

SYMBOL	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AFMS	AIR FLOW MEASURING STATION
CHP	CHILLED WATER PUMP
°C	DEGREES CELSIUS
DB/WB	DRY BULB/WET BULB
DDC	DIRECT DIGITAL CONTROL
DHW	DOMESTIC HOT WATER
DHX	DOMESTIC HOT WATER HEAT EXCHANGER
DMTW	DOMESTIC MEDIUM TEMPERATURE WATER
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EF	EXHAUST FAN
ESP	EXTERNAL STATIC PRESSURE
ER	EXHAUST REGISTER
ET	EXPANSION TANK
EWT	ENTERING WATER TEMPERATURE
FD	FIRE DAMPER
HWP	HOT WATER PUMP
KPA	KILOPASCALS (PRESSURE)
KW	KILOWATTS (HEAT FLOW RATE)
LAT	LEAVING AIR TEMPERATURE
LWT	LEAVING WATER TEMPERATURE
L/S	LITERS PER SECOND
MOD	MOTOR OPERATED DAMPER
MVD	MANUAL AIR VOLUME DAMPER
MER	MECHANICAL EQUIPMENT ROOM
MAX	MAXIMUM
MIN	MINIMUM
MTW	MEDIUM TEMPERATURE HEATING WATER
OA	OUTSIDE AIR
OBD	MANUAL VOLUME DAMPER
PA	PASCALS (PRESSURE)
PD	PRESSURE DROP
PLTD	PLEATED
PRV	PRESSURE REDUCING VALVE
RA	RETURN AIR
RAR	RETURN AIR REGISTER
RD	RELIEF AIR DAMPER
RH	RELIEF HOOD
SA	SUPPLY AIR
TA	THROW AWAY
TEMP	TEMPERATURE
T'STAT	THERMOSTAT
UH	UNIT HEATER
VAV	VARIABLE AIR VOLUME
WC	WATER COLUMN
W.G.	WATER GAUGE

LOUVER SCHEDULE

SYMBOL	LOCATION	SERVICE	•DIMENSIONS (NOM. SIZE)	FREE AREA (MIN.)	FACE VELOCITY (MAX M/S)	L/S (MAX)	ΔP (MAX)	ACCESSORIES	REMARKS
L-1	UTILITY ROOM	INTAKE & EXHAUST	600X600 MM	45%	2.54	200.4	12.4 PA	MOTOR-OPERATED DAMPER, BIRD SCREEN	STORM LOUVER TYPE. SEE PLATE M-2 FOR NOTES
L-2	ATTIC	INTAKE & EXHAUST	900X600 MM	45%	2.54	283.2	12.4 PA	MOTOR-OPERATED DAMPER, BIRD SCREEN	

•NOMINAL SIZES INCLUDE LOUVER FRAMING

HVAC PUMP SCHEDULE

SYMBOL	L/S	TOTAL HEAD KPA	FLUID TEMP °C	MAXIMUM (KW)	SERVICE (MIN) EFFICIENCY	TYPE	REMARKS
DTP-1	8.248	328.8	7.2-93.3°C	5.6	65%	FLR-MTD, END SUCTION, CENTRIFUGAL, FRAME-MOUNTED ASSEMBLY	PRIMARY PUMP
DTP-2	8.248	328.8	7.2-93.3°C	5.6	65%		BACKUP PUMP

FAN COIL UNIT SCHEDULE

SUPPLY FAN	NUMBER	FCU-A	FCU-B	FCU-C	FCU-D	FCU-E	FCU-F	FCU-G	FCU-H	FCU-I	FCU-J
	LOCATION	UTILITY RMS 111C & 211C	UTILITY RM 311C	SLEEPING RM SERVICE AREA	SLEEPING RM SERVICE AREA	SLEEPING RM SERVICE AREA	SLEEPING RM SERVICE AREA	SLEEPING RM SERVICE AREA	SLEEPING RM SERVICE AREA	SLEEPING RM SERVICE AREA	UTILITY RM 203C
	TOTAL AIR VOLUME L/S	20.0	30.0	141.6	151.0	184.0	188.8	193.4	191.1	198.2	203.0
	O.A. L/S	0	0	0	0	0	0	0	0	0	23.6
	EXTERNAL STATIC PRESS	12.5 PA	12.5 PA	74.7 PA	74.7 PA	74.7 PA	74.7 PA	74.7 PA	74.7 PA	74.7 PA	49.8 PA
	FAN SPEED	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
	TYPE	2-PIPE HORIZONTAL CABINET, EXPOSED	2-PIPE HORIZONTAL CABINET, EXPOSED	2-PIPE HORIZONTAL RECESSED	2-PIPE HORIZONTAL RECESSED	2-PIPE HORIZONTAL RECESSED	2-PIPE HORIZONTAL RECESSED	2-PIPE HORIZONTAL RECESSED	2-PIPE HORIZONTAL RECESSED	2-PIPE HORIZONTAL RECESSED	2-PIPE HORIZONTAL CABINET, EXPOSED
DUAL-TEMP COIL COOLING	TOTAL LOAD KW	0.30	0.40	1.88	2.28	2.35	2.70	2.52	2.84	2.98	2.81
	SENSIBLE HEAT RATIO	0.95	0.95	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.95
	EAT (DB/WB) °C	25.5/18.3	25.5/18.3	25.5/17.6	27.2/18.1	25.5/17.6	27.2/18.0	25.5/17.5	27.2/18.1	27.2/18.1	25.8/19.0
	LAT (DB) °C	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5	15.5
	EWT-LWT °C	7.2/12.8	7.2/12.8	7.2/12.8	7.2/12.8	7.2/12.8	7.2/12.8	7.2/12.8	7.2/12.8	7.2/12.8	7.2/12.8
DUAL-TEMP COIL HEATING	TOTAL LOAD KW	0.30	0.50	2.10	2.60	2.80	3.20	3.00	3.40	3.30	3.10
	EAT (DB) °C	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.7	20.0	17.2
	EWT-LWT °C	93.3/87.8	93.3/87.8	93.3/87.8	93.3/87.8	93.3/87.8	93.3/87.8	93.3/87.8	93.3/87.8	93.3/87.8	93.3/87.8
DUAL-TEMP COIL WATER	WATER FLOW L/S	0.013	0.019	0.082	0.101	0.101	0.114	0.107	0.120	0.126	0.121
	MAX. FACE VEL. M/S	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
	MAX. WATER PD KPA	15	15	29.5	29.5	29.5	29.5	29.5	44.8	29.5	44.8
	MIN ROWS	2	2	2	2	2	2	2	2	2	2
FILTER		50 MM UNIT MOUNTED THROW AWAY	50 MM UNIT MOUNTED THROW AWAY	50 MM UNIT MOUNTED THROW AWAY	50 MM UNIT MOUNTED THROW AWAY	50 MM UNIT MOUNTED THROW AWAY	50 MM UNIT MOUNTED THROW AWAY	50 MM UNIT MOUNTED THROW AWAY	50 MM UNIT MOUNTED THROW AWAY	50 MM UNIT MOUNTED THROW AWAY	50 MM UNIT MOUNTED THROW AWAY
REMARKS		AIRFLOWS FOR FCU'S SHALL BE SELECTED BASED ON WET COILS, AND AT HIGH FAN SPEED. ALL CAPACITY FIGURES ARE ACTUAL CALCULATED VALUES.									

AIR HANDLING UNIT SCHEDULE

		AHU-1	AHU-2	AHU-3	AHU-4
SUPPLY FAN	SERVICE	OUTSIDE AIR	OUTSIDE AIR	OUTSIDE AIR	OUTSIDE AIR
	LOCATION	ATTIC	ATTIC	ATTIC	ATTIC
	SYSTEM TYPE	CONSTANT VOL.	CONSTANT VOL.	CONSTANT VOL.	CONSTANT VOL.
		339.8	339.8	339.8	339.8
	O.A. (L/S)	339.8	339.8	339.8	339.8
	* EXTERNAL STATIC PRESS	373.26 PA	373.26 PA	373.26 PA	373.26 PA
	REMARKS	HORIZONTAL DRAW THRU	HORIZONTAL DRAW THRU	HORIZONTAL DRAW THRU	HORIZONTAL DRAW THRU
DUAL TEMPERATURE COIL COOLING	TOTAL LOAD (KW)	16.1	16.1	16.1	16.1
	SENSIBLE LOAD (KW)	8.91	8.91	8.91	8.91
	EAT (DB/WB)	33.9/24.4	33.9/24.4	33.9/24.4	33.9/24.4
	LAT (DB/WB)	12.8/12.3	12.8/12.3	12.8/12.3	12.8/12.3
	EWT-LWT	7.2/12.8	7.2/12.8	7.2/12.8	7.2/12.8
	WATER FLOW (L/S)	0.757	0.757	0.757	0.757
	MAX. FACE VEL. (M/S)	2.794	2.794	2.794	2.794
	MIN ROWS	6	6	6	6
	MAX PD (KPA)				
DUAL TEMPERATURE COIL PREHEATING	TOTAL LOAD (KW)	10.5	10.5	10.5	10.5
	EAT	-12.2	-12.2	-12.2	-12.2
	LAT	12.8	12.8	12.8	12.8
	WATER FLOW (L/S)	0.757	0.757	0.757	0.757
	EWT-LWT	93.3/87.8	93.3/87.8	93.3/87.8	93.3/87.8
		2.794	2.794	2.794	2.794
	MAX PD (KPA)				
REHEAT COIL	TOTAL LOAD (KW)	3.5	3.5	3.5	3.5
	EAT	12.8	12.8	12.8	12.8
	LAT	21.1	21.1	21.1	21.1
	WATER FLOW (L/S)	0.076	0.076	0.076	0.076
	EWT-LWT	115.5/104.4	115.5/104.4	115.5/104.4	115.5/104.4
		2.794	2.794	2.794	2.794
	MAX PD (KPA)	15.0	15.0	15.0	15.0
FILTER ****	PRE-FILTER TYPE	50MM PLEATED	50MM PLEATED	50MM PLEATED	50MM PLEATED
	MAX. FACE VEL. (M/S)	1.524	1.524	1.524	1.524
	MAX. PD CLEAN	9 MM W.G.	9 MM W.G.	9 MM W.G.	9 MM W.G.
	FINAL FILTER TYPE	600MM PLEATED	600MM PLEATED	600MM PLEATED	600MM PLEATED
		2.54	2.54	2.54	2.54
	MAX. PD CLEAN	11.4 MM W.G.	11.4 MM W.G.	11.4 MM W.G.	11.4 MM W.G.

REMARKS: FILTERS SHALL BE THROWAWAY TYPE. PREFILTER SHALL BE 30-35% EFFICIENT. FINAL FILTER SHALL BE 80-85% EFFICIENT.

* EXTERNAL STATIC PRESSURE DROP INCLUDES 125 PA FOR DIRTY AIR FILTER.
**** FILTERS FOR ALL AHU'S SHALL USE THE SAME SIZE CARTRIDGE.

TABLE I

PIPE, VALVES AND FITTINGS IP AND METRIC DESIGNATION

NOMINAL PIPE SIZE (INCHES)	METRIC IDENTIFICATION MILLIMETER (MM)	NOMINAL PIPE SIZE (INCHES)	METRIC IDENTIFICATION MILLIMETER (MM)
*	6	8	200
*	7	10	250
*	8	12	300
*	10	14	350
*	15	16	400
*	18	18	450
*	20	20	500
1	25	24	600
1-*	32	28	700
1-*	40	30	750
2	50	32	800
2-*	65	36	900
3	80	40	1000
3-*	90	44	1100
4	100	48	1200
4-*	115	52	1300
5	125	56	1400
6	150	60	1500

AIR TERMINAL DEVICE SCHEDULE

SYMBOL	SERVICE	NECK SIZE (MM)	FACE SIZE (MM)	L/S (MAX)	NOTES
A	SUPPLY	250X200	300X250	125	1.4.6.8
B	OA SUPPLY	150X150	200X200	35	1.4.5.6
C	EXHAUST	150X150	200X200	35	1.2.5.6
D	SUPPLY	NOTE 9	NOTE 9	VARIES	1.4.7.9

NOTES
1 OPPOSED-BLADE VOLUME DAMPER, SCREWDRIVER ADJUSTABLE, TAMPER-PROOF
2 SINGLE 45 DEGREE DEFLECTION
3 45 DEGREE FIXED VANES
4 TWO-WAY HORIZONTAL DISCHARGE PATTERN
5 CEILING SURFACE MOUNT INSTALLATION
6 NECK AND FACE SIZES ARE NOMINAL DIMENSIONS
7 UNIT-MOUNTED
8 SIDEWALL-MOUNT INSTALLATION
9 NECK SIZE TO MATCH FAN COIL UNIT OUTLET CONNECTION

UNIT HEATER SCHEDULE

SYMBOL	CAPACITY KILOWATTS	AIR FLOW L/S	EAT °C	EWT °C	LWT °C	WATER FLOW L/SEC	MOTOR WATTS	TYPE	LOCATION	REMARKS
UH-1, UH-2, UH-3 UH-4, UH-5, UH-6	0.5 KW	70.0	4.4°	115.5°	104.4°	0.016	50	DISCRETE HORIZONTAL	103C, 107C, 203C, 207C 303C, 307C UTIL. RMS	THERMOSTATICALLY CONTROLLED, SETPOINT
UH-7, UH-8, UH-9, UH-10	0.5 KW	141	4.4°	115.5°	104.4°	0.032	75		ATTIC	@ 4.4 °C

EXHAUST FAN SCHEDULE

SYMBOL	SERVICE	LOCATION	DESCRIPTION	AIR FLOW L/SEC	ESP PA	DRIVE TYPE	MAXIMUM RPM	REMARKS
EF-1	BATH EXHAUST	ATTIC	FLR-MTD, CENTRIFUGAL, UTILITY FAN	283.2	498.2	BELT	1150	INTERLOCK W/AHU-1
EF-2	BATH EXHAUST	ATTIC		283.2	498.2	BELT	1150	INTERLOCK W/AHU-2
EF-3	BATH EXHAUST	ATTIC		283.2	498.2	BELT	1150	INTERLOCK W/AHU-3
EF-4	BATH EXHAUST	ATTIC		283.2	498.2	BELT	1150	INTERLOCK W/AHU-4
EF-5	UTIL. RM. EXHAUST	RM 103C	WALL-MOUNTED, PROPELLER	100.2/200.4	93.4	DIRECT	1750	SEE NOTE BELOW
EF-6	UTIL. RM. EXHAUST	RM 107C		100.2/200.4	93.4	DIRECT	1750	SEE NOTE BELOW
EF-7	UTIL. RM. EXHAUST	RM 203C		90.3	93.4	DIRECT	1750	SEE NOTE BELOW
EF-8	UTIL. RM. EXHAUST	RM 207C		100.2/200.4	93.4	DIRECT	1750	SEE NOTE BELOW
EF-9	UTIL. RM. EXHAUST	RM 303C		100.2/200.4	93.4	DIRECT	1750	SEE NOTE BELOW
EF-10	UTIL. RM. EXHAUST	RM 307C		100.2/200.4	93.4	DIRECT	1750	SEE NOTE BELOW

•FOR EXHAUST FANS EF-5 THRU EF-10, ASSOCIATED INTAKE AND EXHAUST WALL-MTD DAMPERS SHALL BE INTERLOCKED W/ EHAUST FAN

CHILLER SCHEDULE

SYMBOL	NET OUTPUT CAPACITY (KW)	CHILLED WATER DATA •LPS	TEMP. ENT. (°C)	TEMP. LVG. (°C)	MAX ΔP (KPA HEAD)	CONDENSER AIR TEMP (MIN C)	REMARKS
CH-3	186.1	8.248	12.78	7.22	74.7	35	AIR-COOLED, MINIMUM 4-STE CAPACITY REDUCTION, 30% GLYCOL SOLUTION

•FLOW LPS INCLUDES 30% GLYCOL SOLUTION
•CONTRACTOR SHALL PROVIDE THE REQUIRED 30% GLYCOL SOLUTION FOR THE CHILLED WATER.

EXPANSION TANK SYSTEM

SYMBOL	SYSTEM	APPROX. SYSTEM VOLUME (L)	SYSTEM TEMP. RANGE °C MIN.		INITIAL PRESS AT TANK MAX (KPAG)	MAX. OPER. PRESSURE AT RELIEF VALVE (KPAG)	MIN. VOLUME (L)	MINIMUM ACCEPTANCE VOLUME (L)	PIPE SIZE TO TANK	COLD WATER FILL SIZE	REMARKS
ET-1	COOLING	475	4	32.2	150	239.1	130	56.8	20	20	FLR-MTD

PRECHARGE TO MAINTAIN 5 PSIG STATIC PRESSURE AT HIGHEST SYSTEM POINT.

AIR SEPARATOR SCHEDULE

UNIT NUMBER	FLOW (LPS)	MEDIUM	PIPE SIZE	MAX OPERATING TEMP	MAX OPERATING KPA
AS-1	8.248	CHILLED WATER	100 MM	32.2°C	350

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

REV.	DATE	DESCRIPTION	BY
	FEB2003	AS-BUILT DRAWING NO REVISION THIS SHEET	SRC
	7/9/99	REVISED NOTE 1 (AIR TERMINAL DEVICE SCHEDULE)	AMF
SYMBOL	DATE		BY

DATE: 17JUN99
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: &&DATE&&&&&
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

HVAC LEGEND AND SCHEDULES

PLATE REFERENCE NUMBER: M-1

SHEET 233

SAV-22148

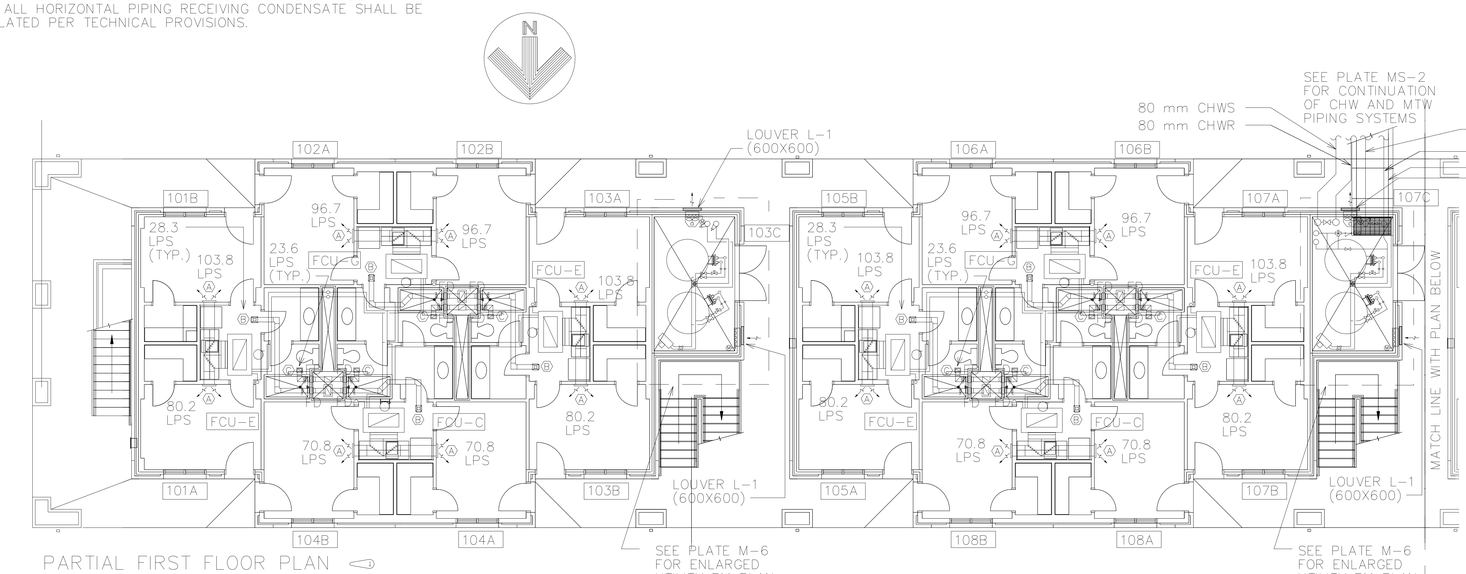
DESIGN FILE=DONSPEC&&&&&

GENERAL HVAC NOTES:

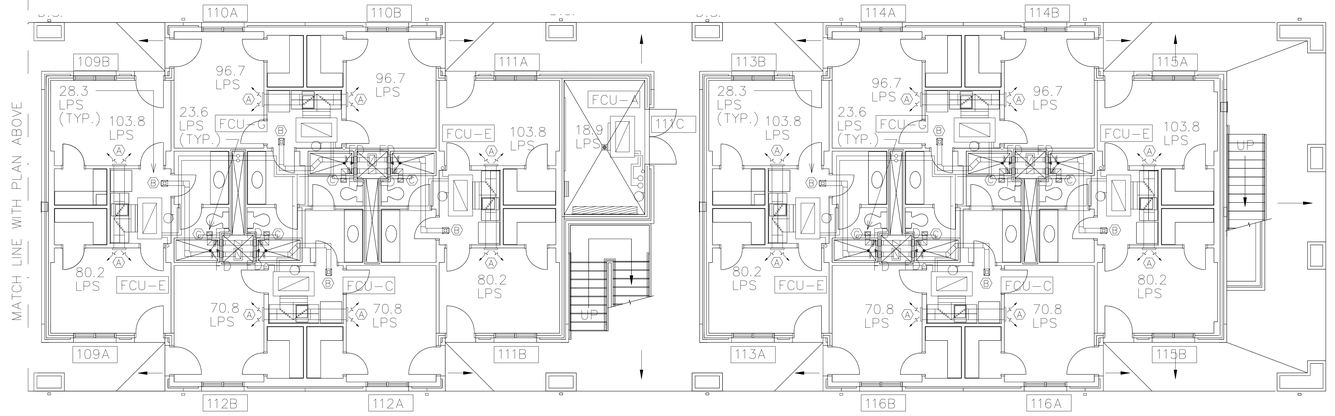
1. SEE ENLARGED PLANS ON M-6.
2. SEE M-5, M-6, & M-8 FOR MTW, DTW, CHW, AND HW PIPING LAYOUTS.
3. SEE M-8 FOR MTW, DTW, CHW, HW, AND SUPPLY & EXHAUST DUCT RISERS AND PIPING SCHEMATICS.
4. ALL PIPING, DUCTING, AND EQUIPMENT SHALL BE PAINTED, INSULATED, AND/OR SUPPORTED AS SPECIFIED IN THE TECHNICAL PROVISIONS.
5. PAINT ALL EXPOSED BARE METAL SURFACES AS SPECIFIED IN THE TECHNICAL PROVISION SPECIFICATION SECTION 09900.
6. DUCT INSULATION SHALL NOT EXTEND THROUGH FIRE-RATED WALLS/FLOORS/CEILINGS.
7. PROVIDE ACCESS DOORS IN CEILING FOR ACCESS TO FIRE DAMPERS.
8. PROVIDE CONDENSATE DRAIN (FULL SIZE OF UNIT CONNECTION) FOR AIR HANDLERS LOCATED IN THE ATTICS. FLOOR DRAIN SHALL BE TRAPPED BELOW THE ATTIC FLOOR ABOVE THE THIRD FLOOR CEILING. TRAP AND ALL HORIZONTAL PIPING RECEIVING CONDENSATE SHALL BE INSULATED PER TECHNICAL PROVISIONS.
9. METRIC DUCT SIZES INDICATED ON DRAWINGS ARE NOMINAL DIMENSIONS. REFERENCE SMACNA DUCT CONSTRUCTION HANDBOOK.
10. ALL PIPING IN ATTIC AND MECHANICAL ROOM FROM FINISHED FLOOR TO 1.5m A.F.F. SHALL HAVE INSULATION PROTECTED AS CALLED FOR IN HIGH ABUSE AREAS IN SPECIFICATION 15080.
11. NO PLASTIC PIPING SHALL BE INSTALLED IN MECHANICAL CHASES.
12. ALL LOUVERS ARE TO BE ANODIZED.
13. ALL FLOOR MOUNTED EQUIMENT SHALL BE MOUNTED ON 150mm HIGH HOUSEKEEPING PADS. THE PADS SHALL EXTEND 150mm FROM THE EDGE OF THE EQUIPMENT IN ALL DIRECTIONS.
14. SEE SPECIFICATION SECTION 09000 (BUILDING COLOR AND FINISH SCHEDULE) FOR COLORS AND FINISHES OF EXPOSED METAL SURFACES LOCATED IN WALLS (I.E. LOUVERS, FANS, VENTS, ETC.) AND ROOFS (VENTS, FANS, GOOSENECKS, ETC.).
15. SUPPLY AIRFLOW FROM FAN COIL UNITS SHALL BE BALANCED AT AIR TERMINAL DEVICES.

GENERAL NOTES FOR LOUVER SCHEDULE ON M-1 (TYP. FOR ALL LOUVERS):

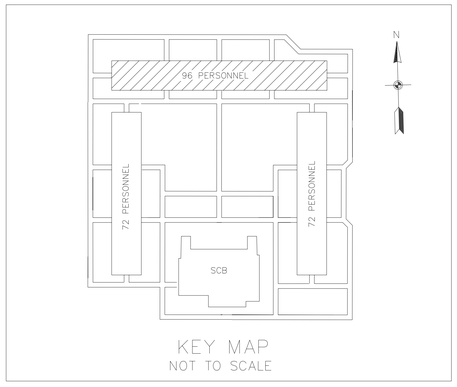
1. LOUVER SHALL BE CERTIFIED BY THE BUILDING SERVICES RESEARCH AND INFORMATION ASSOCIATION (BSRIA) AS BEING 99% EFFECTIVE AT 7.25 m/s FACE VELOCITY WHEN TESTED AT AN EXTERIOR WIND VELOCITY OF 13 m/s AND A SIMULATED RAINFALL OF 75 mm/hr FOR 60 MINUTES IN ACCORDANCE WITH THE HEVAC TECHNICAL SPECIFICATION, "LABORATORY TESTING AND RATING OF WEATHER LOUVERS WHEN SUBJECTED TO SIMULATED RAIN."
2. LOUVER SHALL BE RATED 100% EFFECTIVE AGAINST WATER PENETRATION WHEN TESTED AT AN EXTERIOR WIND VELOCITY OF 100 m/s AND A RAINFALL RATE OF 110 mm/hr FOR 60 MINUTES UNDER TEST CONDITIONS AND APPARATUS CONFIGURED IN ACCORDANCE WITH THE HEVAC TECHNICAL STANDARD.
3. SEE SPECIFICATION SECTION 09000 (BUILDING COLOR AND FINISH SCHEDULE) FOR COLORS AND FINISHES OF EXPOSED METAL SURFACES LOCATED IN WALLS (I.E. LOUVERS, FANS, VENTS, ETC.) AND ROOFS (VENTS, FANS, GOOSENECKS, ETC.).



PARTIAL FIRST FLOOR PLAN
SCALE: 1:100



PARTIAL FIRST FLOOR PLAN
SCALE: 1:100



KEY MAP
NOT TO SCALE

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE INDICATED.

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

REV.	DATE: 17JUN99	CATEGORY CODE 721-11-12	SOLICITATION NO: DACA21-99-B-0034	PLOT DATE: $$DATE$$$$$$
				PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
1	ADDED DAMPERS IN SA & EA DUCT AND ADDED NOTE 15 IN ACCORDANCE WITH AMM #3	7/9/99	AMF

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

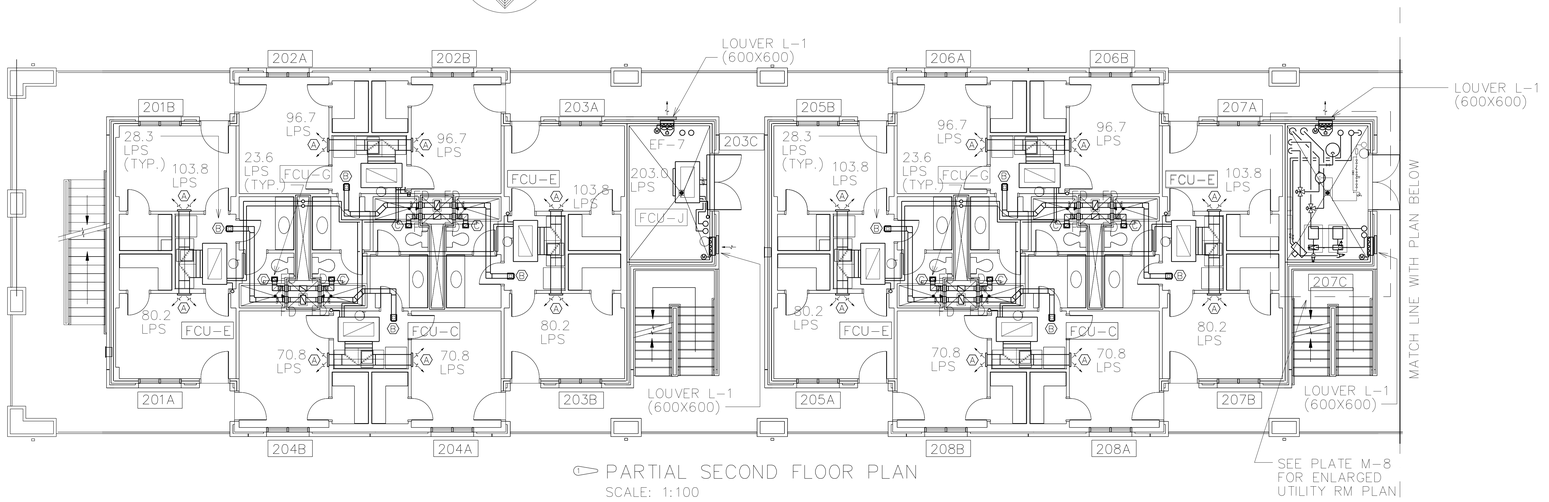
HVAC PLAN - 1ST FLOOR

PLATE REFERENCE NUMBER:
M-2
SHEET 234

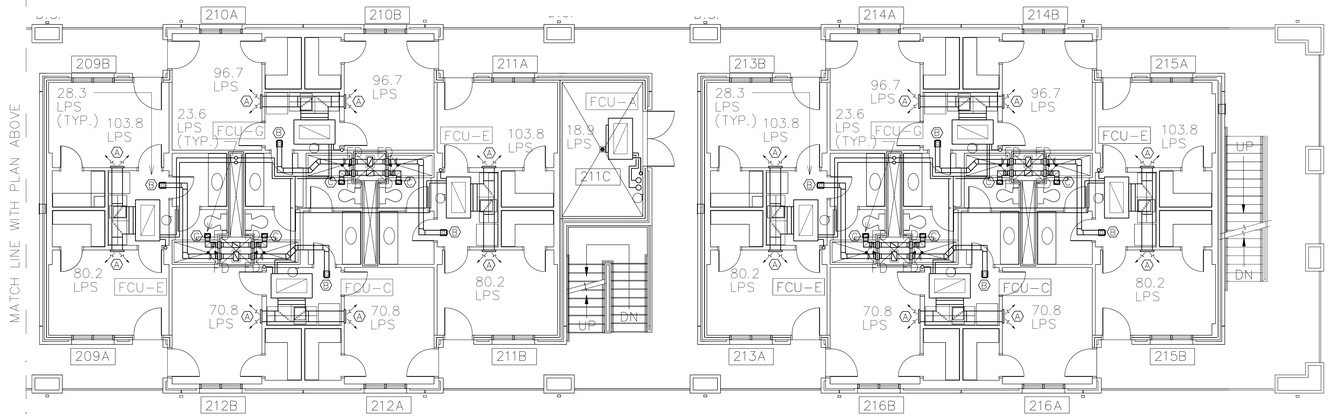
DESIGN FILE: D:\NSPE\$$$$$$

NOTE:

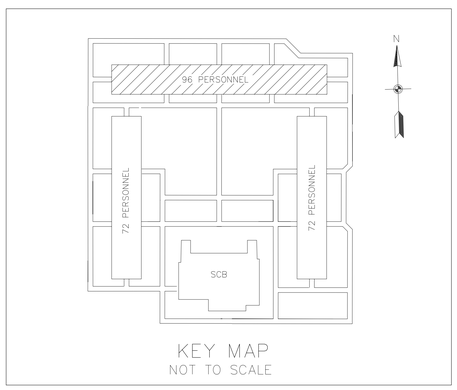
SEE PLATE M-2 FOR GENERAL HVAC NOTES:



① PARTIAL SECOND FLOOR PLAN
SCALE: 1:100



① PARTIAL SECOND FLOOR PLAN
SCALE: 1:100



KEY MAP
NOT TO SCALE

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.

AS-BUILT

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99	REV.
CATEGORY CODE 721-11-12	
SOLICITATION NO: DACA21-99-B-0034	
PLOT DATE: $$DATE$$$$$$	
PLOT SCALE:	

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
C	ADDED DAMPERS IN SA & EA DUCT IN ACCORDANCE WITH AMM #3	7/9/99	AMF

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

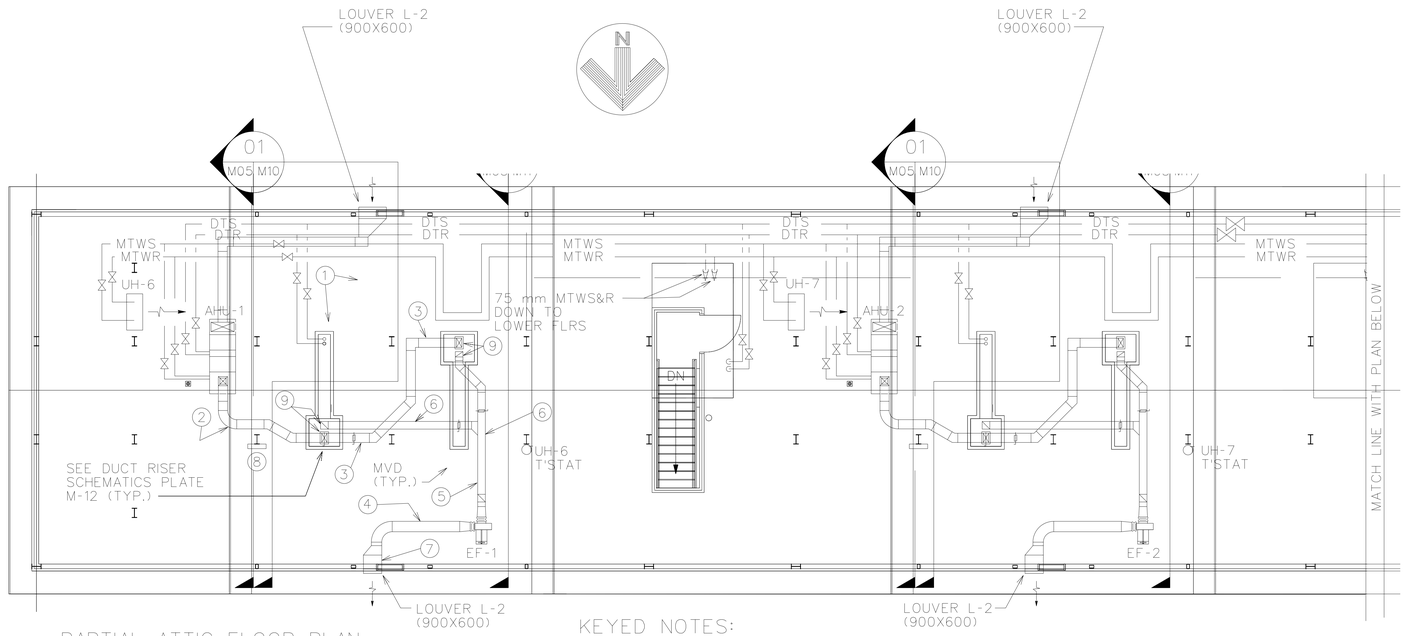
BARRACKS - 96 PERSONNEL

HVAC PLAN - 2ND FLOOR

PLATE REFERENCE NUMBER:
M-3
SHEET 235

SAV-22148

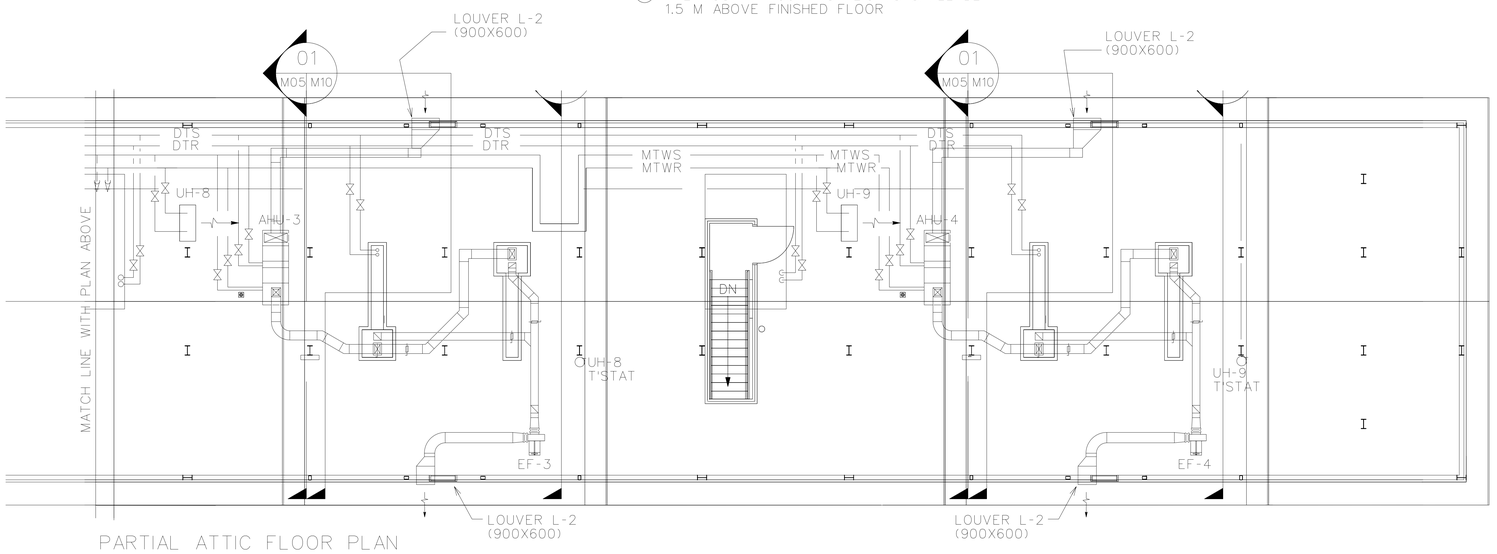
DESIGN FILE: D:\NSPEC\$$$$$$



PARTIAL ATTIC FLOOR PLAN
SCALE: 1:100

KEYED NOTES:

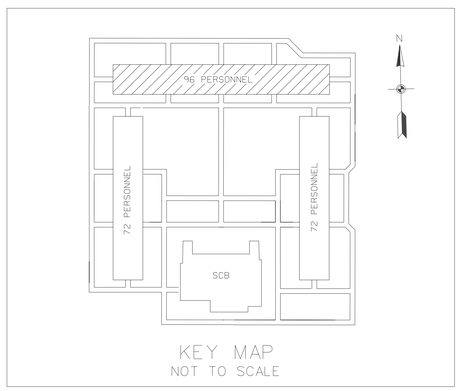
1. 400X350 OA DUCT (TYP.)
2. 400X350 SA DUCT (TYP.)
3. 300X200 SA DUCT (TYP.)
4. 400X350 EA DUCT (TYP.)
5. 400X350 EA DUCT (TYP.)
6. 300X200 EA DUCT (TYP.)
7. 900X600 EA DUCT (TYP.)
8. TEMPERATURE CONTROL PANEL (TYPICAL LOCATION)
9. PROVIDE FIRE DAMPER AT CHASE PENETRATION FOR BOTH SUPPLY & RETURN DUCTS (TYP.). PROVIDE ACCESS DOOR IN DUCT FOR FIRE DAMPER ACCESS (TYP.)
10. THERMOSTAT MOUNTING HEIGHTS SHALL BE 1.5 M ABOVE FINISHED FLOOR



PARTIAL ATTIC FLOOR PLAN
SCALE: 1:100

GENERAL NOTES:

1. SEE PLATE M-9 FOR MTW AND DTW PIPE SIZES.



KEY MAP
NOT TO SCALE

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.

AS-BUILT

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
REV.
CATEGORY CODE
721-11-12
SOLICITATION NO:
DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	REVISED PER AS-BUILT DRAWING	15DEC02	AMF

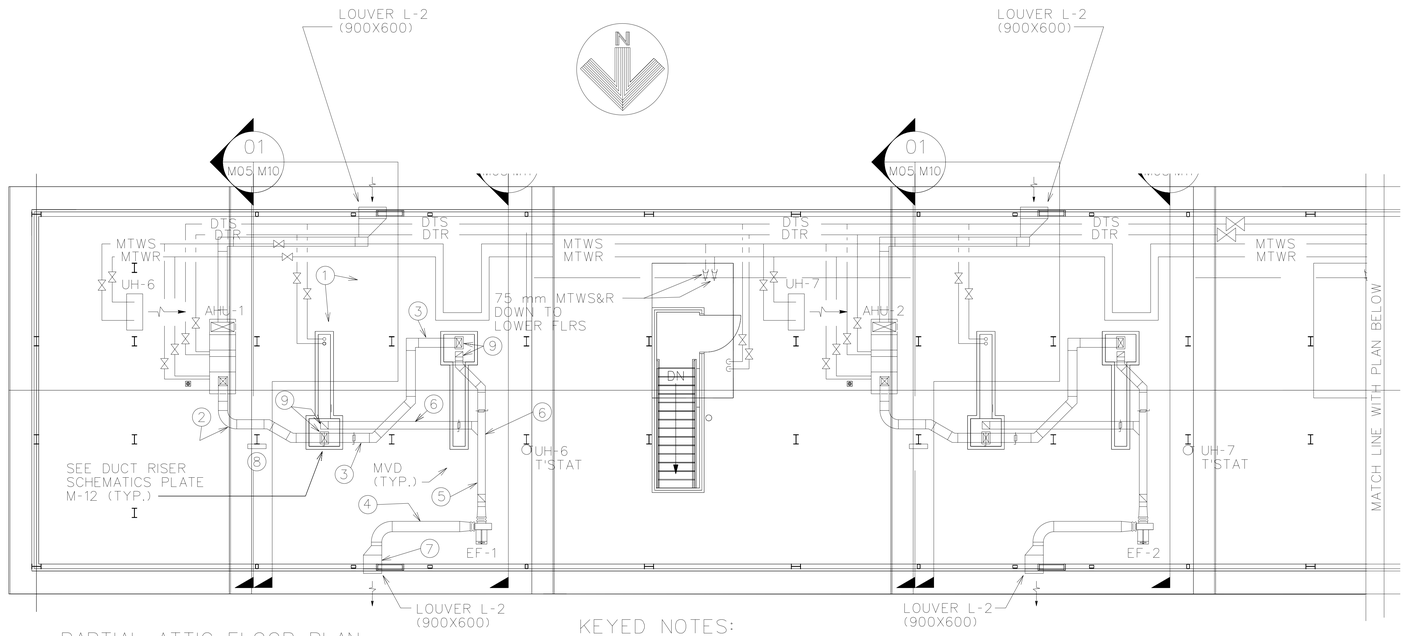
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

HVAC PLAN - ATTIC FLOOR

PLATE REFERENCE NUMBER:
M-5
SHEET 237

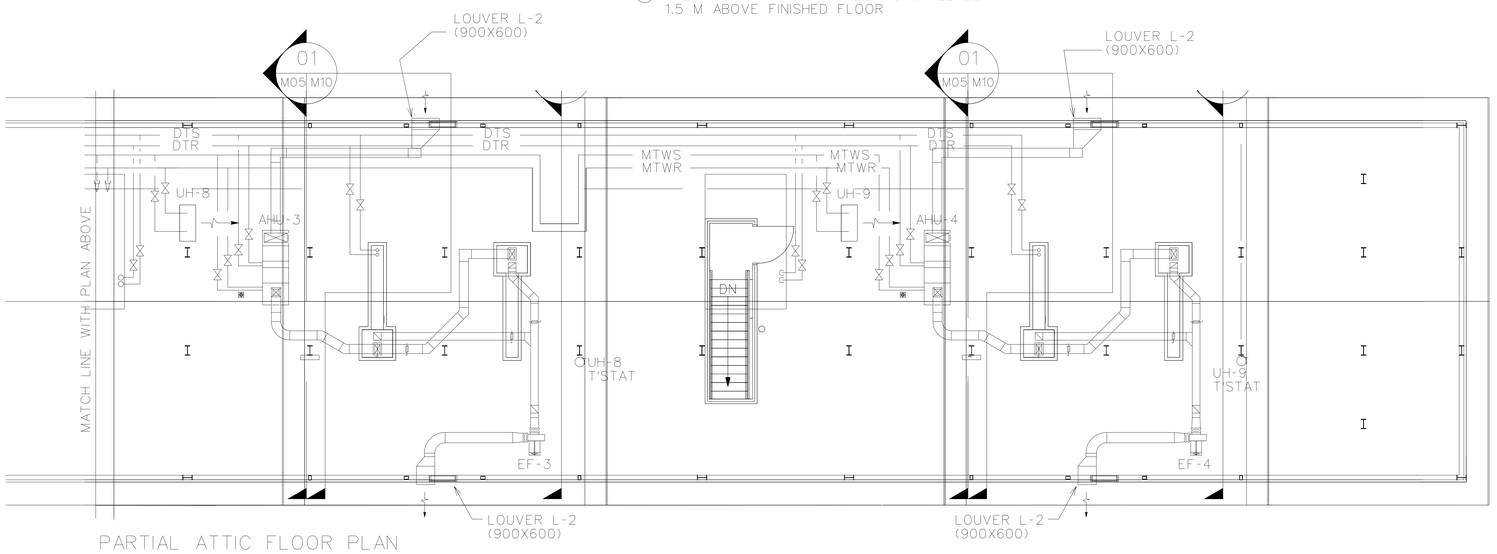
DESIGN FILE: DONSPEC$$$$$



PARTIAL ATTIC FLOOR PLAN
SCALE: 1:100

KEYED NOTES:

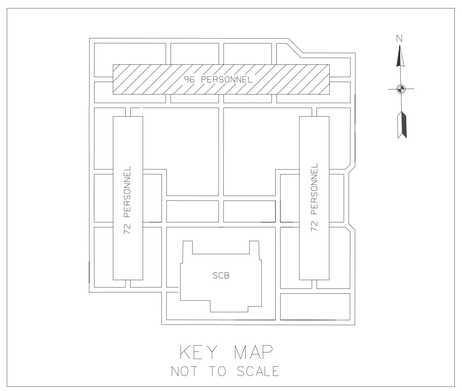
1. 400X350 OA DUCT (TYP.)
2. 400X350 SA DUCT (TYP.)
3. 300X200 SA DUCT (TYP.)
4. 400X350 EA DUCT (TYP.)
5. 400X350 EA DUCT (TYP.)
6. 300X200 EA DUCT (TYP.)
7. 900X600 EA DUCT (TYP.)
8. TEMPERATURE CONTROL PANEL (TYPICAL LOCATION)
9. PROVIDE FIRE DAMPER AT CHASE PENETRATION FOR BOTH SUPPLY & RETURN DUCTS (TYP.). PROVIDE ACCESS DOOR IN DUCT FOR FIRE DAMPER ACCESS (TYP.)
10. THERMOSTAT MOUNTING HEIGHTS SHALL BE 1.5 M ABOVE FINISHED FLOOR



PARTIAL ATTIC FLOOR PLAN
SCALE: 1:100

GENERAL NOTES:

1. SEE PLATE M-9 FOR MTW AND DTW PIPE SIZES.



KEY MAP
NOT TO SCALE

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

NOTE: ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.

AS-BUILT

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

DATE: 17JUN99
REV.
CATEGORY CODE
721-11-12
SOLICITATION NO:
DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

SYMBOL	DESCRIPTION	DATE	BY
	REVISED PER AS-BUILT DRAWING	15DEC02	AMF

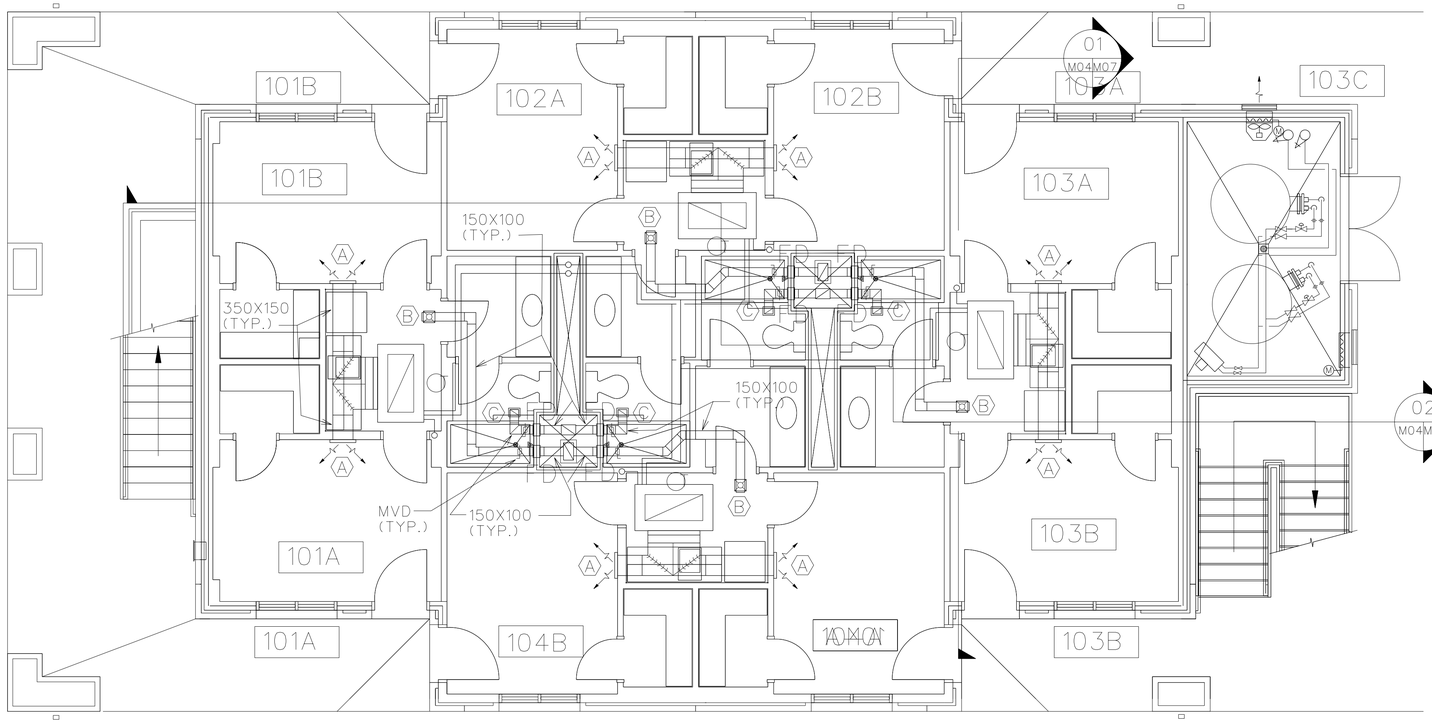
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

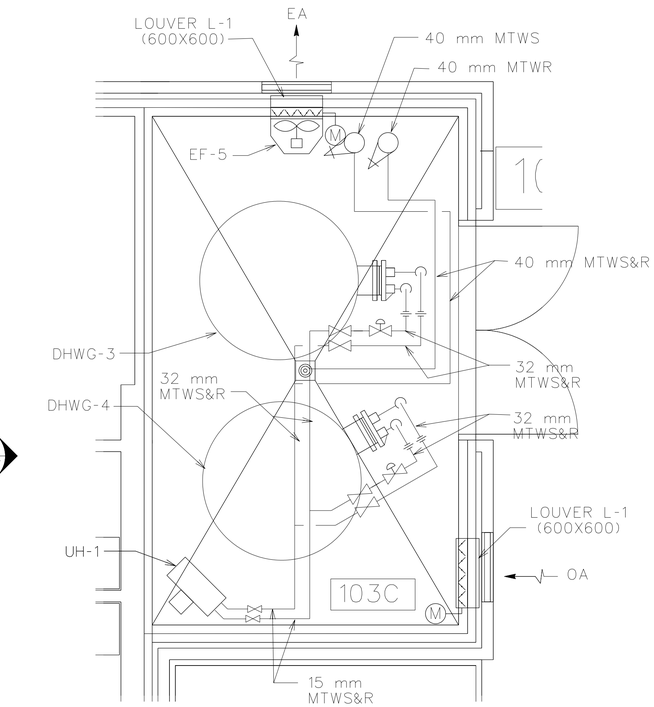
HVAC PLAN - ATTIC FLOOR

PLATE REFERENCE NUMBER:
M-5
SHEET 237

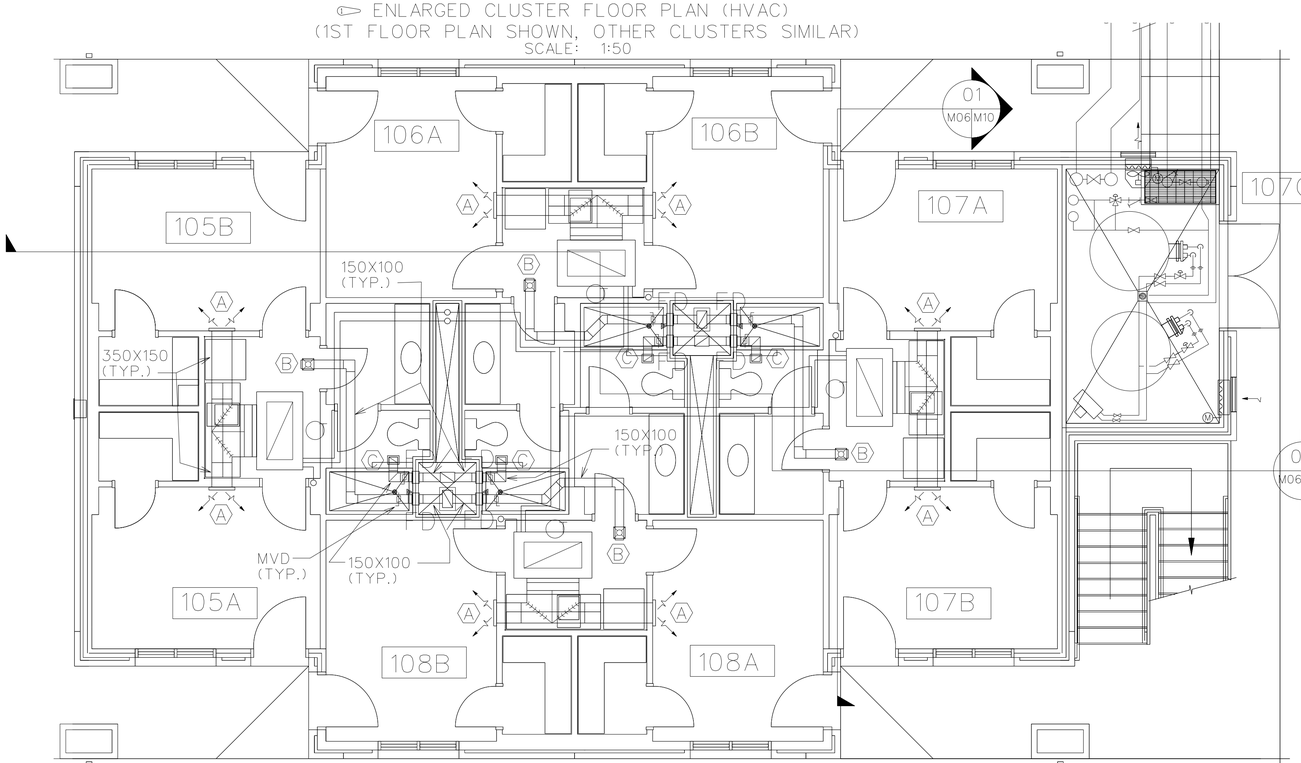
DESIGN FILE: DONSPEC$$$$$



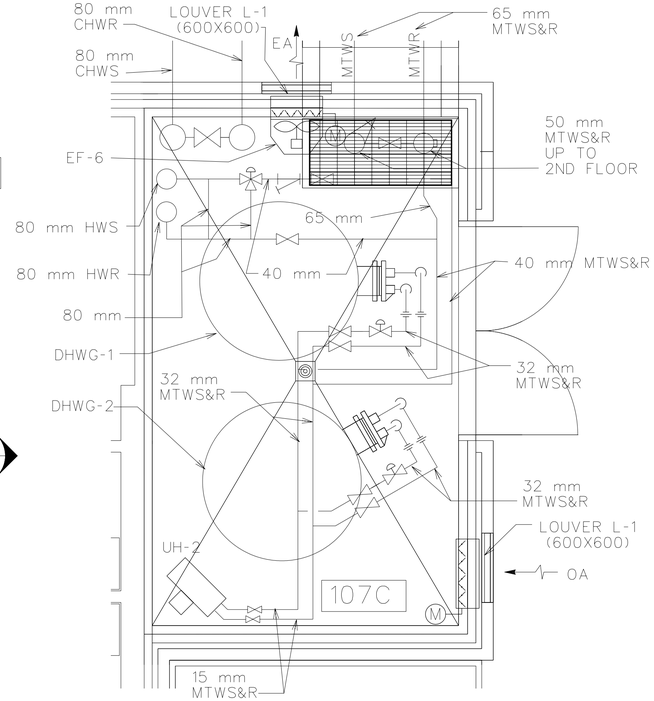
ENLARGED CLUSTER FLOOR PLAN (HVAC)
(1ST FLOOR PLAN SHOWN, OTHER CLUSTERS SIMILAR)
SCALE: 1:50



ENLARGED MECH RM PLAN
SCALE: 1:25



ENLARGED CLUSTER FLOOR PLAN (HVAC)
(2ND FLOOR PLAN SHOWN, OTHER CLUSTERS & THIRD FLOOR SIMILAR))
SCALE: 1:50



ENLARGED MECH RM PLAN
SCALE: 1:25

GENERAL NOTE:
COMPLETE VALVING ARRANGMENT AT EQUIPMENT IS NOT SHOWN FOR CLARITY. SEE EQUIPMENT DETAILS AND PIPING SCHEMATICS FOR COMPLETE VALVING AND PIPING ARRANGEMENTS.

AS-BUILT

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

DATE: 17JUN99
CATEGORY CODE
721-11-12
SOLICITATION NO:
DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

REV.	DATE	BY
AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC
ADDED DAMPERS IN SA & EA DUCT	7/9/99	AMF
DESCRIPTION	DATE	BY
SYMBOL		

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

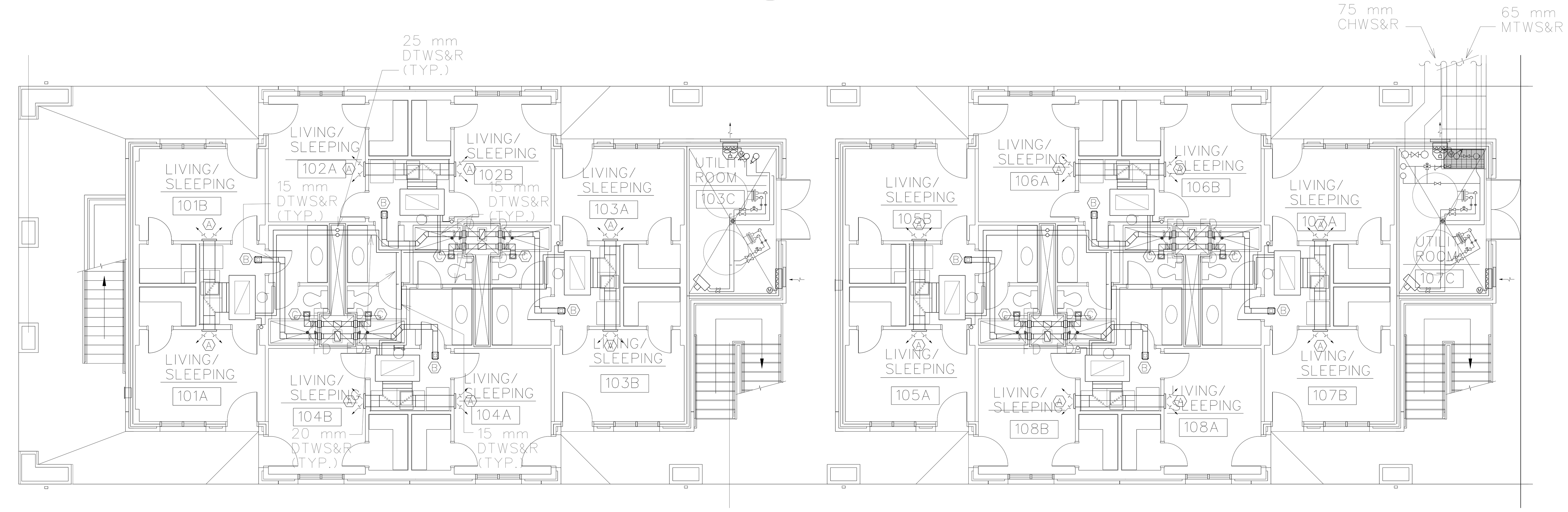
BARRACKS - 96 PERSONNEL
HVAC ENLARGED
CLUSTER PLANS

PLATE
REFERENCE
NUMBER:
M-6
SHEET 238

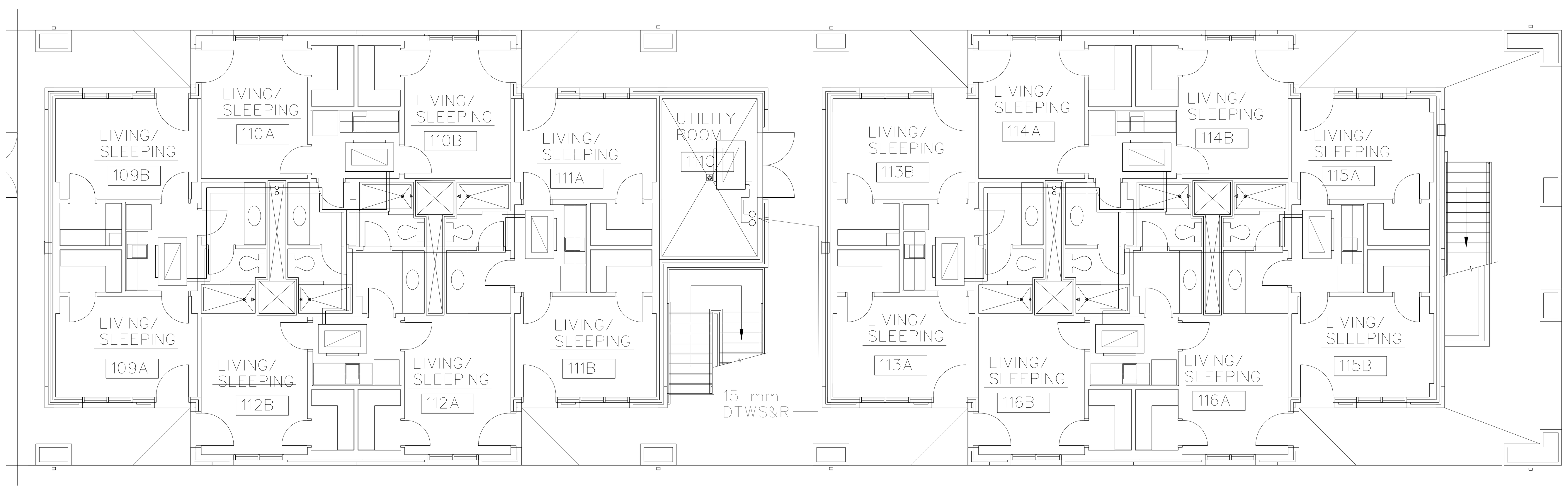
DESIGN FILE: DONSPEC$$$$$

NOTES:

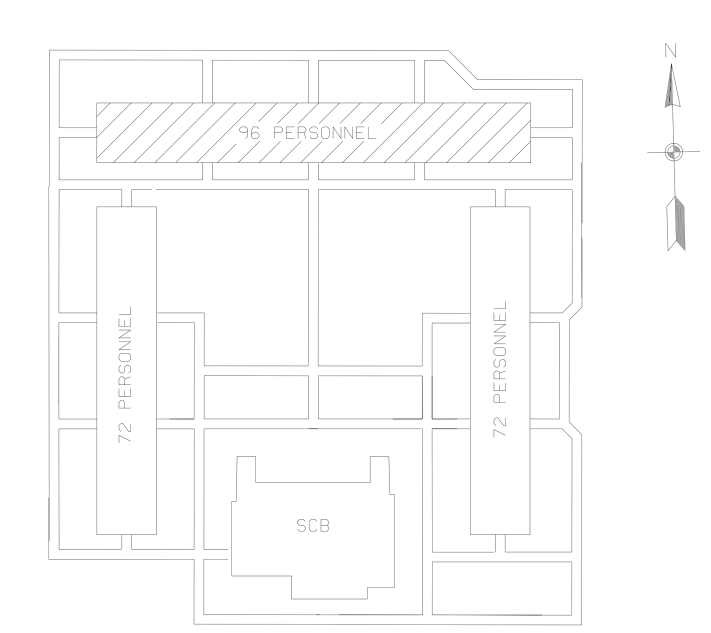
1. SEE PLATE M-2 FOR GENERAL NOTES.
2. SEE M-11 FOR MTW AND DTW PIPING RISER SCHEMATIC.



PARTIAL 1ST FLOOR PLAN
SCALE: 1:100



PARTIAL 1ST FLOOR PLAN
SCALE: 1:100



KEY MAP
NOT TO SCALE

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

AS-BUILT

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
HW & DTW PLAN
(1ST FLOOR)

PLATE
REFERENCE
NUMBER:
M-7
SHEET 239

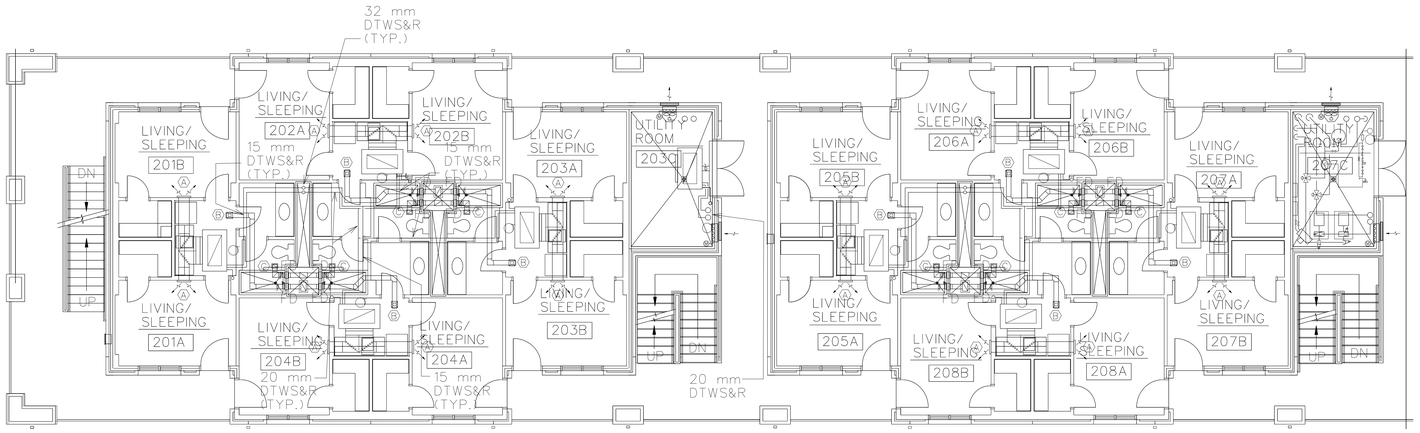
DESIGN FILE: DGNSPEC$$$

SB_DGN\BARRACKS96\G1M07HP1.DGN

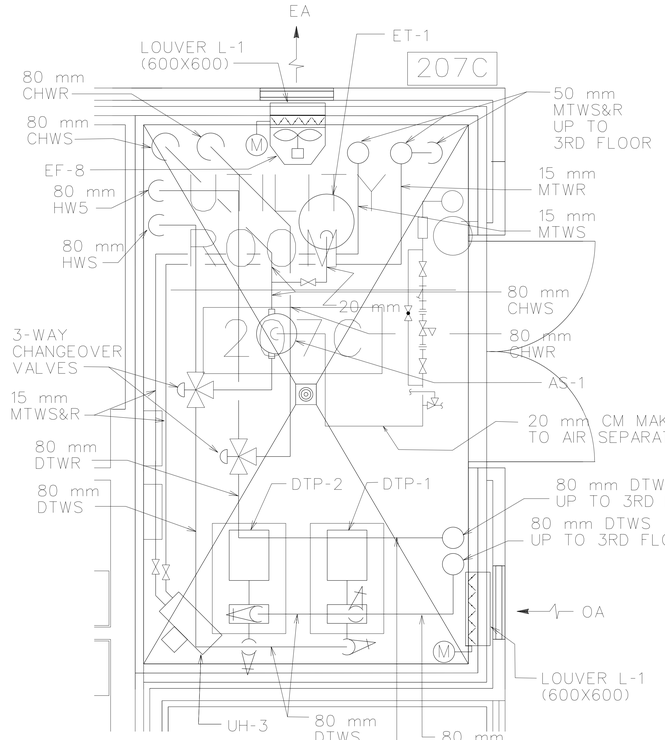
...\SB_DGN\BARRACKS96\G1M07HP1.dgn 6/1/2006 8:06:36 AM

NOTES:

1. SEE PLATE M2 FOR GENERAL NOTES.
2. SEE M-11 FOR MTW AND DTW PIPING RISER SCHEMATIC.

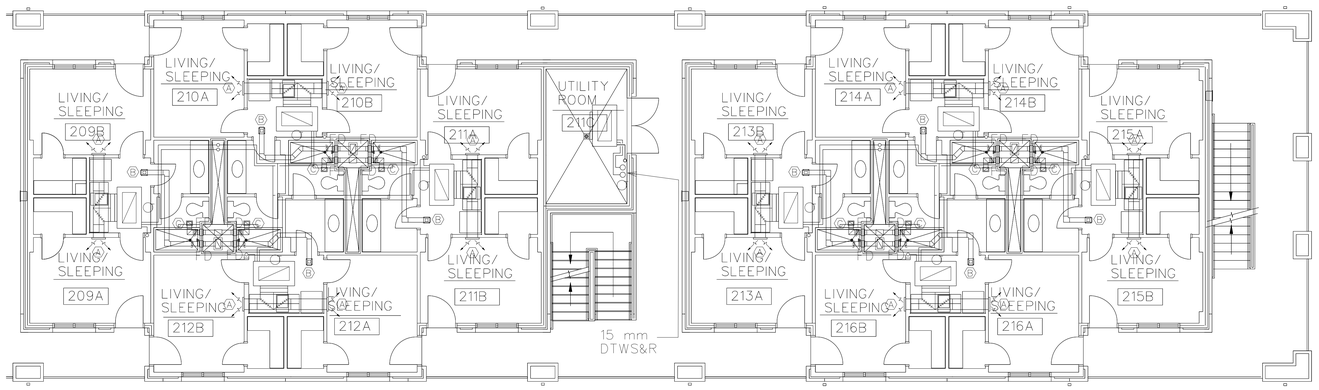


PARTIAL 2ND FLOOR PLAN (SHOWN)
(3RD FLOOR PLAN SIMILAR)
SCALE: 1:100



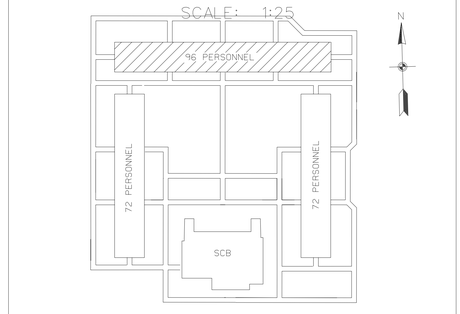
GENERAL NOTE:

COMPLETE VALVING ARRANGMENT AT EQUIPMENT IS NOT SHOWN FOR CLARITY. SEE EQUIPMENT DETAILS AND PIPING SCHEMATICS FOR COMPLETE VALVING AND PIPING ARRANGEMENTS.



PARTIAL 2ND FLOOR PLAN (SHOWN)
(3RD FLOOR PLAN SIMILAR)
SCALE: 1:100

ENLARGED UTILITY RM PLAN
SCALE: 1:25



KEY MAP
NOT TO SCALE

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100
NOTE: ALL UNITS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE INDICATED.

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

REV.	DATE: 17JUN99	CATEGORY CODE 721-11-12	SOLICITATION NO: DACA21-99-B-0034	PLOT DATE: $$DATE$$$$$ PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

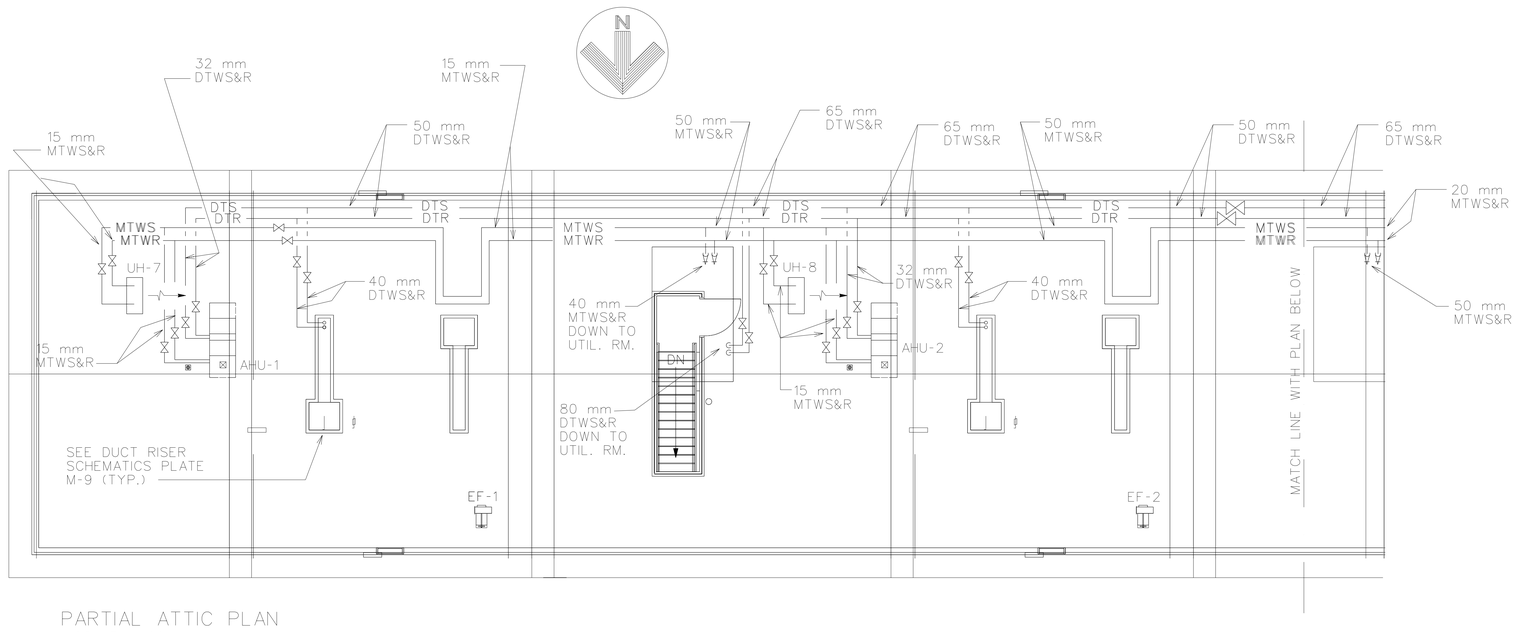
SYMBOL	AS-BUILT DRAWING NO REVISION THIS SHEET DESCRIPTION	DATE	BY
		FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
HW & DTW PLANS
(2ND & 3RD FLOORS)

PLATE REFERENCE NUMBER:
M-8
SHEET 240

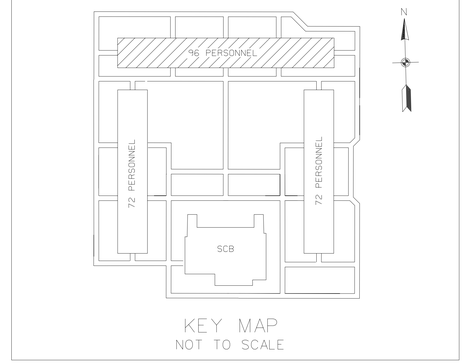
DESIGN FILE: DGNSPEC$$$$$



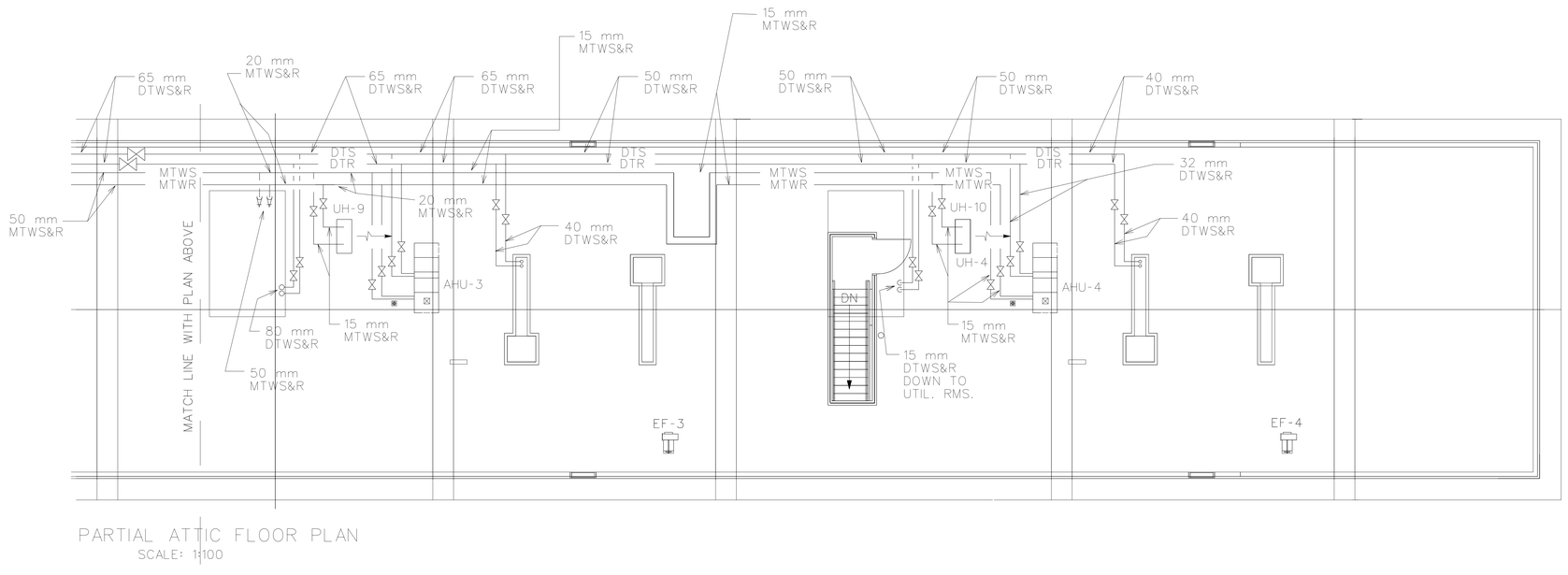
PARTIAL ATTIC PLAN
SCALE: 1:100

NOTES:

1. SEE PLATE M-2 FOR GENERAL NOTES.
2. SEE M-11 FOR MTW AND DTW PIPING RISER SCHEMATIC.



KEY MAP
NOT TO SCALE



PARTIAL ATTIC FLOOR PLAN
SCALE: 1:100

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

NOTE: ALL UNITS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE INDICATED.

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

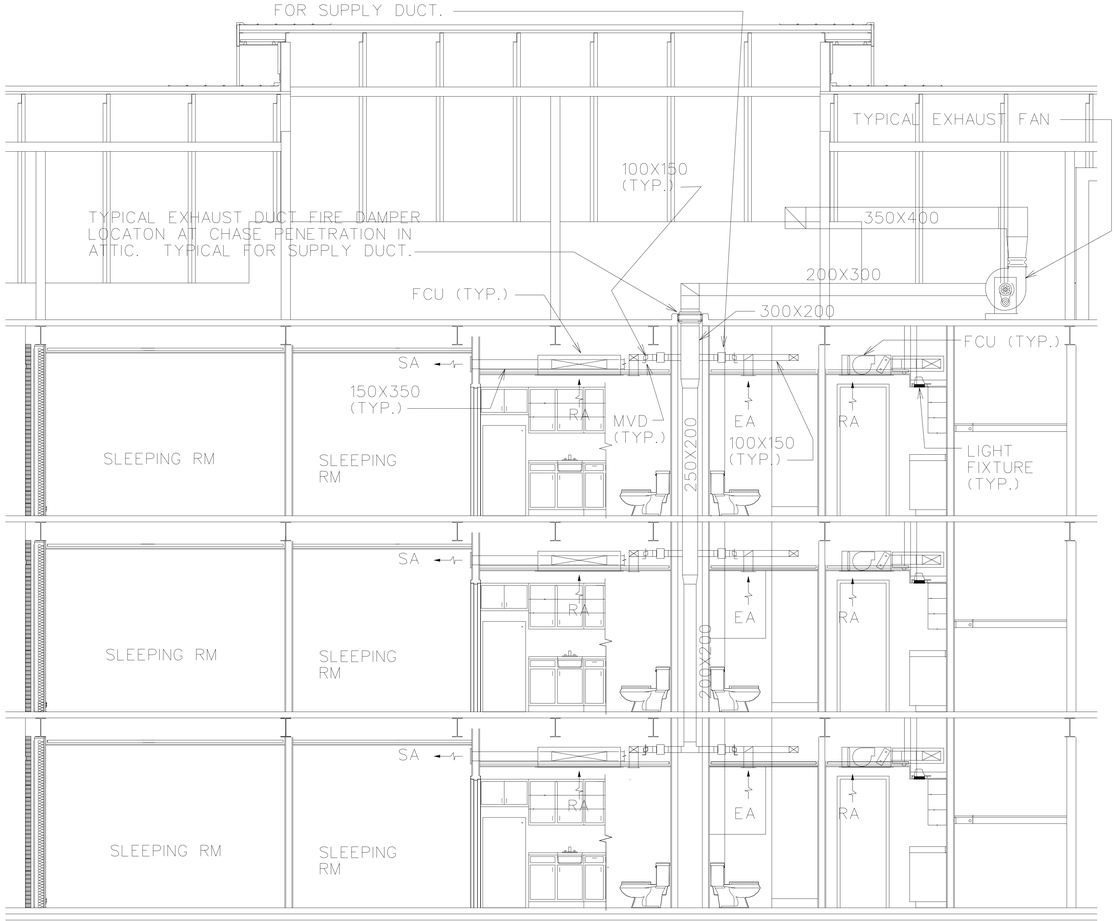
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

HW & DTW PLAN
(ATTIC FLOOR)

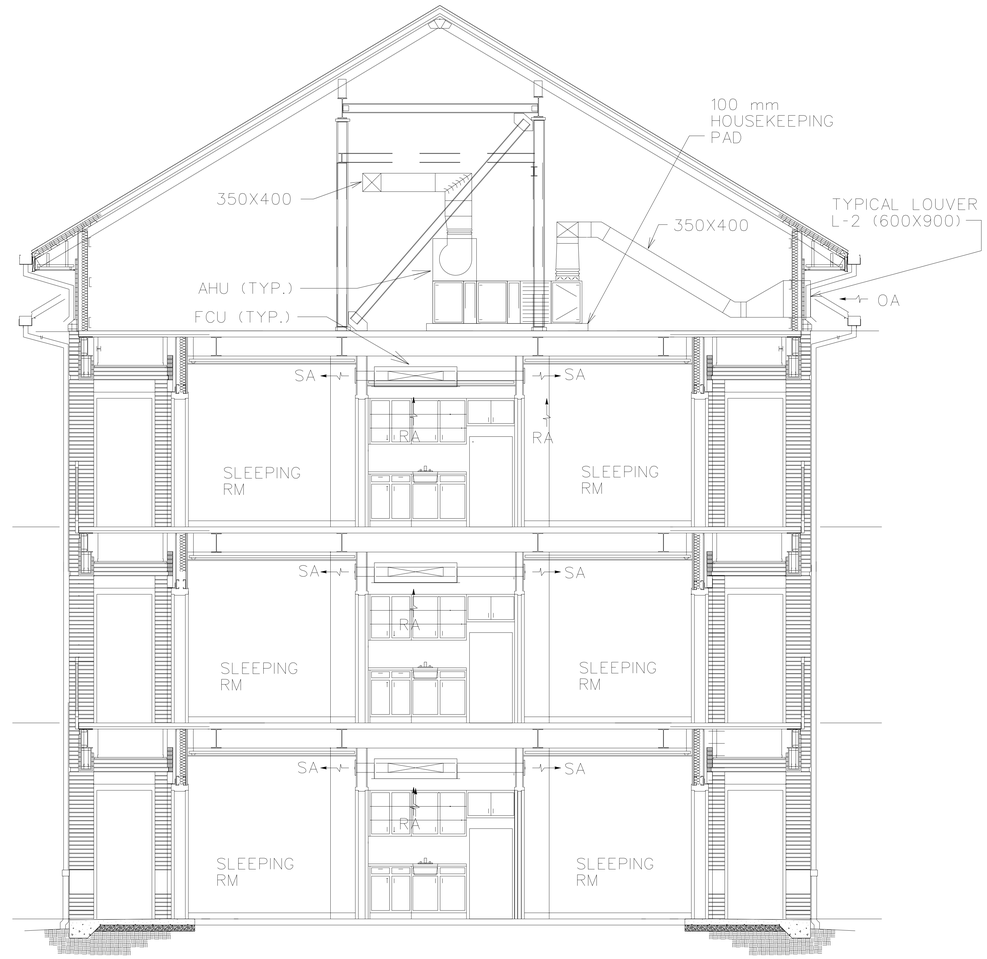
PLATE REFERENCE NUMBER:
M-9
SHEET 241

DESIGN FILE: DONSPEC$$$$$



02 M06/M10 TRANSVERSE BUILDING SECTION (TYP. CLUSTER)

SCALE: 1:50



01 M06/M10 HVAC BUILDING SECTION

SCALE: 1:50

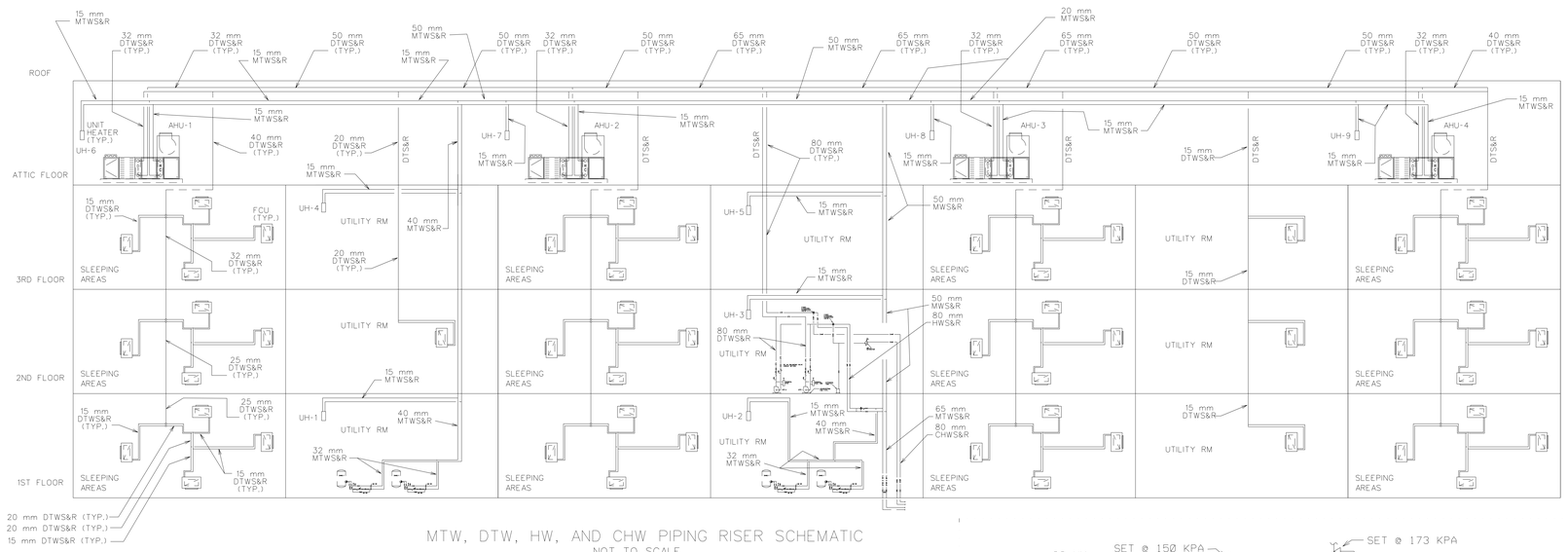
US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:
REV.

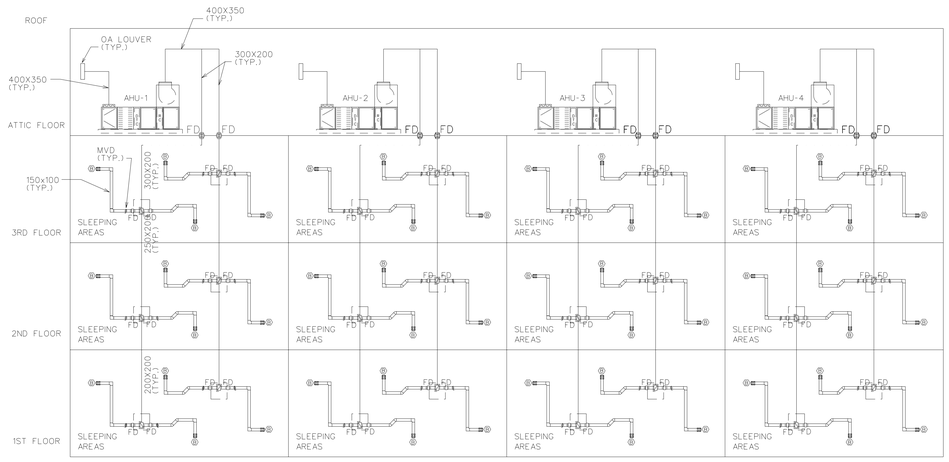
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET		
	ADDED DAMPERS IN EA DUCT	FEB2003	SRC
		7/9/99	AMF

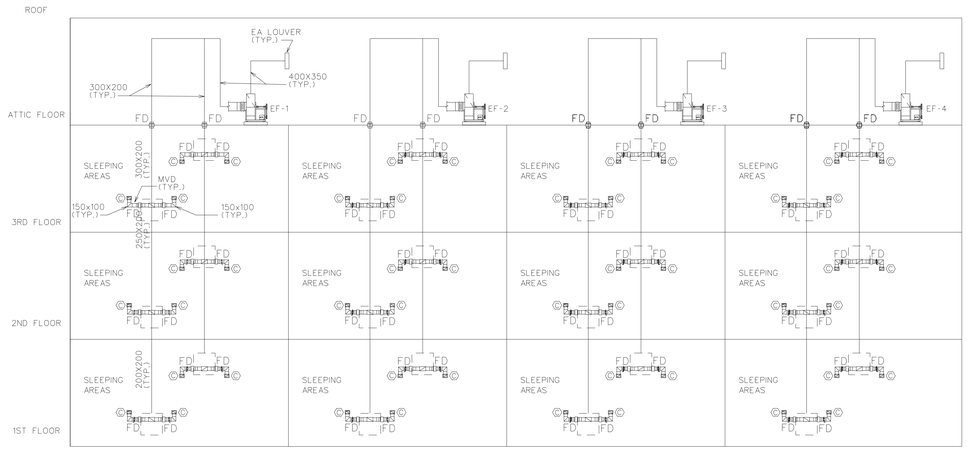
DESIGN FILE: DONSPEC$$$$$



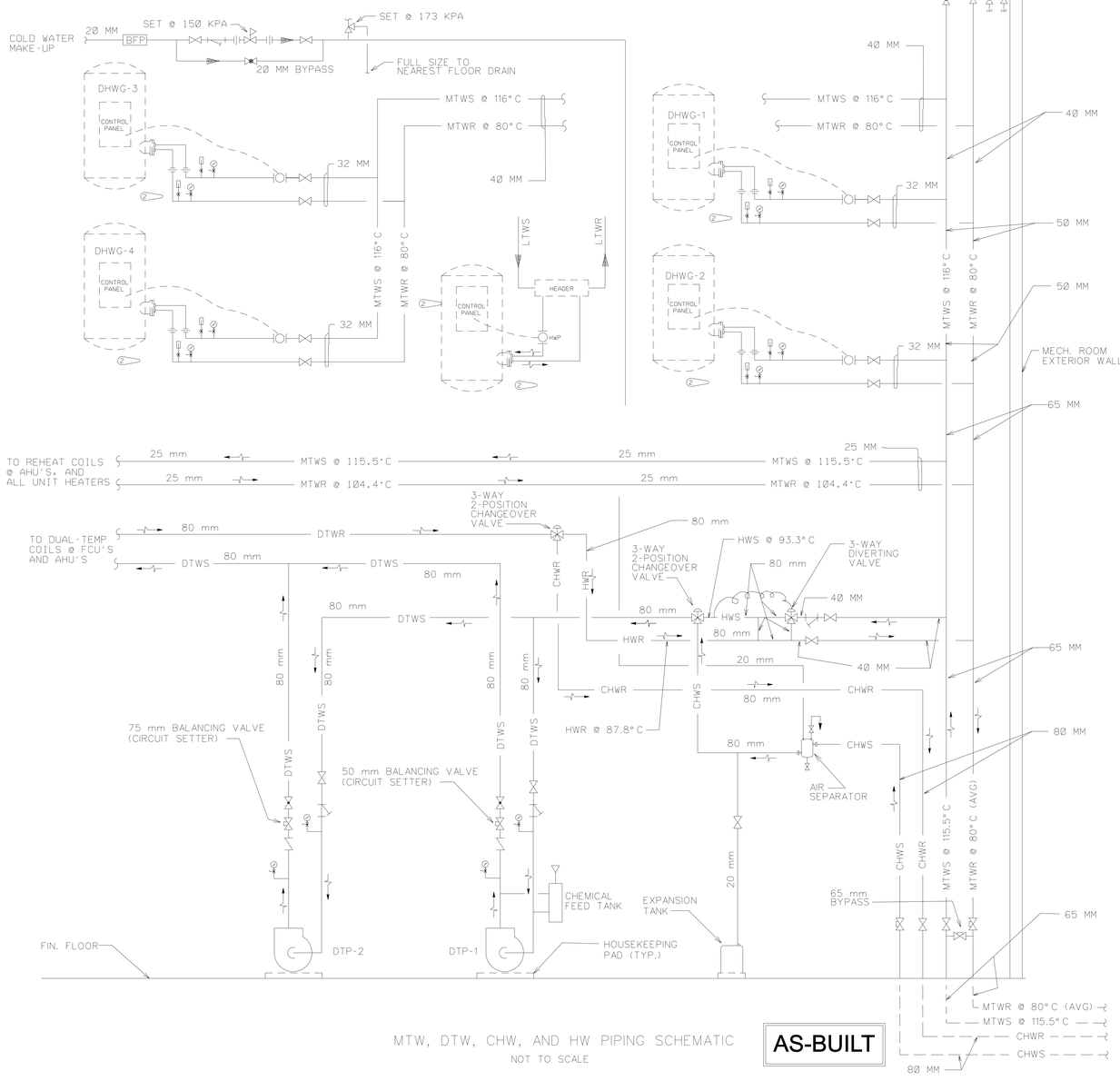
MTW, DTW, HW, AND CHW PIPING RISER SCHEMATIC
NOT TO SCALE



① HVAC OA SUPPLY DUCT RISER SCHEMATIC
NOT TO SCALE



① HVAC EXHAUST DUCT RISER SCHEMATIC
NOT TO SCALE



MTW, DTW, CHW, AND HW PIPING SCHEMATIC
NOT TO SCALE

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

REV.	
DATE: 17JUN99	
CATEGORY CODE 721-11-12	
SOLICITATION NO: DACA21-99-B-0034	
PLOT DATE: $$DATE$$$$$	
PLOT SCALE:	

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
2	REVISED PER AS-BUILT DRAWINGS	FEB2003	SRC
1	ADDED DAMPERS IN SA & EA DUCT	7/9/99	AMF

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

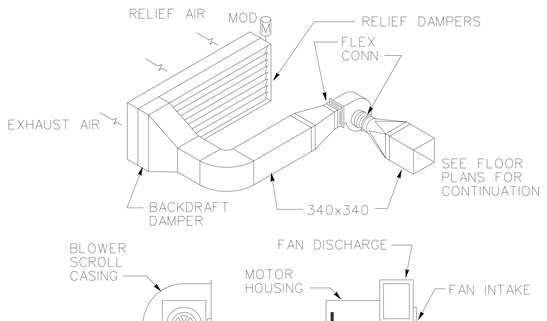
BARRACKS - 96 PERSONNEL

HVAC RISER SCHEMATICS

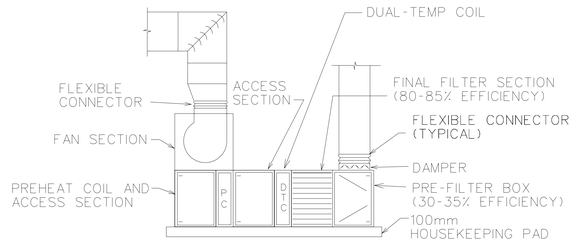
PLATE REFERENCE NUMBER:
M-11

SHEET 243

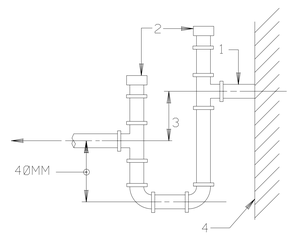
DESIGN FILE: DGNSPEC$$$$$



TYPICAL EXHAUST FAN DETAIL
NOT TO SCALE

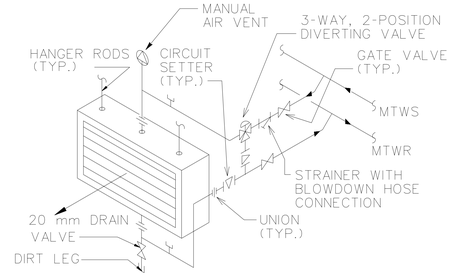


TYPICAL AIR HANDLING UNIT DETAIL
NOT TO SCALE

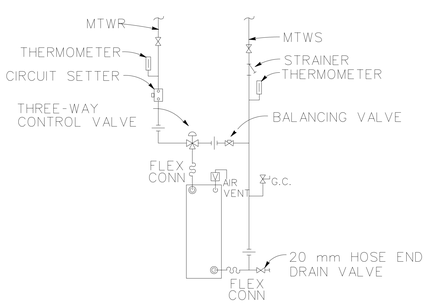


1. PIPE FULL SIZE OF AIR UNIT DRAIN CONNECTION
2. CAPS
3. 80MM
4. AIR UNIT CASING

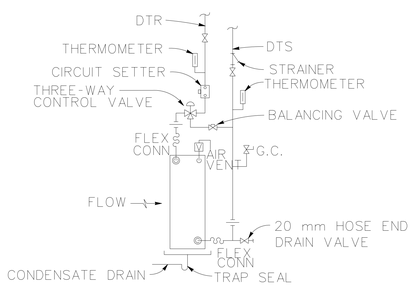
AHU CONDENSATE DRAIN TRAP DETAIL
NOT TO SCALE



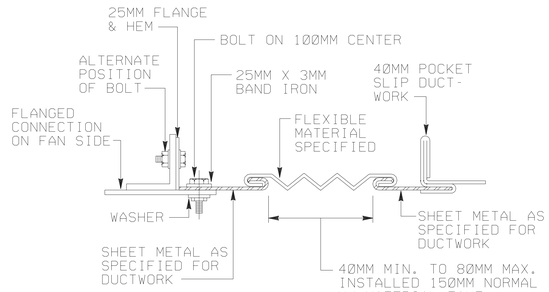
HOT WATER UNIT HEATER PIPING DETAIL
NOT TO SCALE



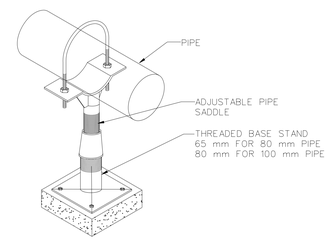
AHU RE-HEAT COIL PIPING SCHEMATIC
NOT TO SCALE



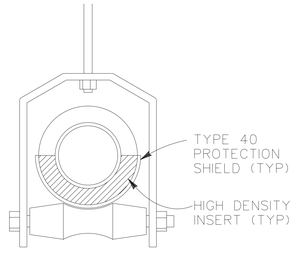
AHU DUAL-TEMP COIL PIPING SCHEMATIC
NOT TO SCALE



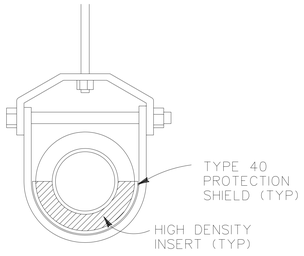
FLEXIBLE CONNECTOR
NOT TO SCALE



FLOOR MOUNTED PIPE SUPPORT DETAIL
NOT TO SCALE



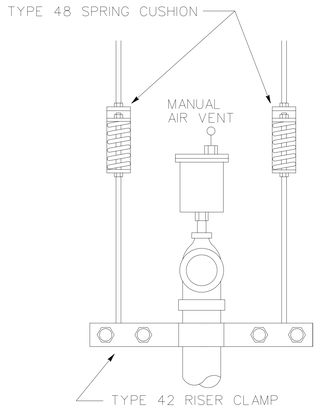
TYPE 43
ROLLER HANGER
NOT TO SCALE



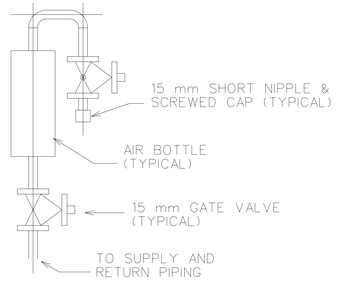
TYPE 1
PIPE HANGER
NOT TO SCALE

09
TYP M09

10
TYP M09



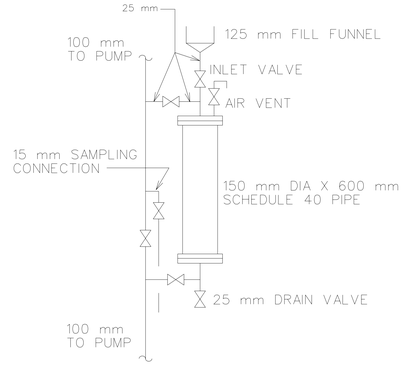
TOP OF RISER DETAIL
NOT TO SCALE



TYPICAL AIR VENT BOTTLE DETAIL
NOT TO SCALE

NOTE:

PROVIDE AIR VENT BOTTLES AT HIGHEST POINTS IN HOT WATER AND CHILLED WATER SUPPLY AND RETURN PIPING SYSTEMS



SHOT-TYPE CHEMICAL FEEDER DETAIL
NOT TO SCALE

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET		
	REVISED UNIT HEATER PIPING DETAIL	20JUL99	AMF
		FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

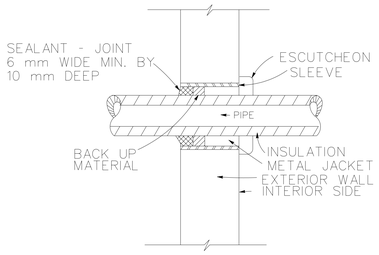
HVAC DETAILS

PLATE REFERENCE NUMBER:
M-12

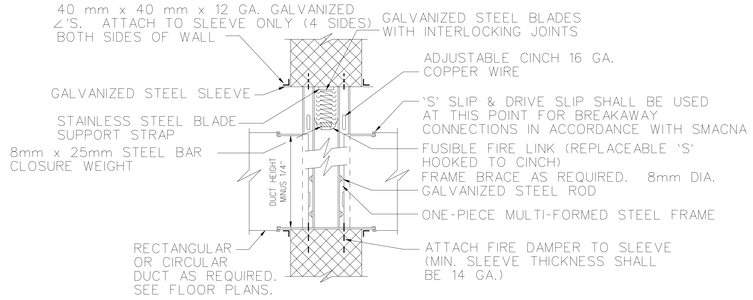
SHEET 244

DESIGN FILE: DGNSPEC$$$$$

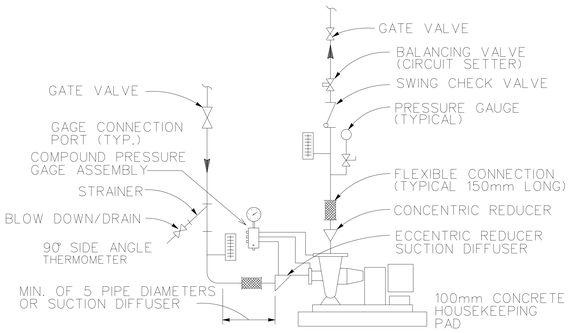
NOTE:
SEE ARCHITECTURAL PLATES
FOR WALL COMPOSITION



DETAIL - PIPE SLEEVE FOR INSULATED PIPE
THROUGH WALL - ABOVE GRADE
NOT TO SCALE

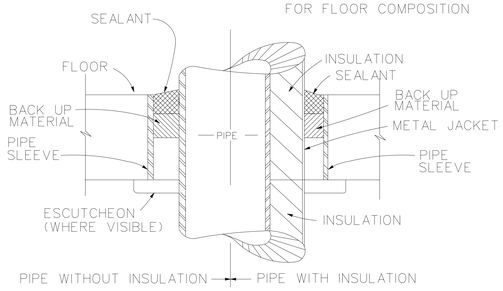


DETAIL - FIRE DAMPER THROUGH WALL
NOT TO SCALE



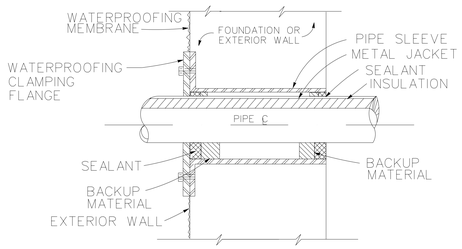
DUAL TEMP PUMP PIPING SCHEMATIC
NOT TO SCALE

NOTE:
SEE ARCHITECTURAL PLATES
FOR FLOOR COMPOSITION

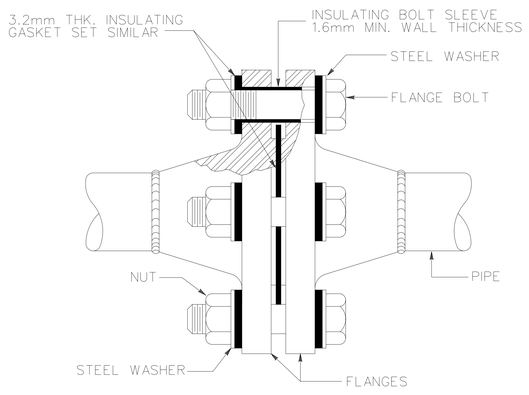


DETAIL - PIPE SLEEVE THROUGH FLOOR
NOT TO SCALE

NOTE:
SEE ARCHITECTURAL PLATES
FOR WALL COMPOSITION

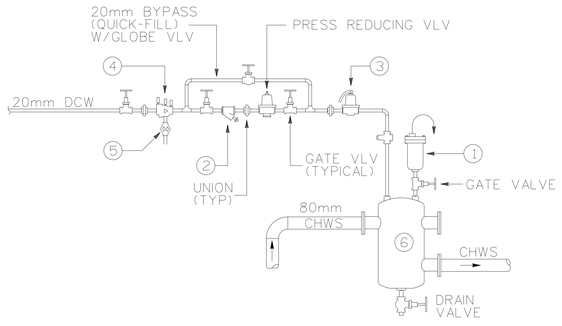


DETAIL - PIPE SLEEVE THROUGH EXTERIOR WALL
OR FOUNDATION WALL - BELOW GRADE
NOT TO SCALE



ISOLATION FLANGE ASSEMBLY
N.T.S.

NOTE:
CONTRACTOR SHALL COMPLY WITH THE ISOLATION FLANGE MANUFACTURER'S RECOMMENDATIONS FOR BOLT TORQUES AND BOLTING PATTERN. CONTRACTOR SHALL ALSO RECHECK BOLT TORQUES 72 HOURS AFTER SYSTEM STARTUP.



MAKE-UP WATER CONNECTION ①
NOT TO SCALE

① AUTOMATIC AIR VENT
② STRAINER
③ PRESSURE RELIEF VALVE
④ REDUCED-PRESSURE BACKFLOW PREVENTOR
⑤ AIR GAP FITTING
⑥ AIR SEPERATOR

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
REV.
CATEGORY CODE
721-11-12
SOLICITATION NO:
DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

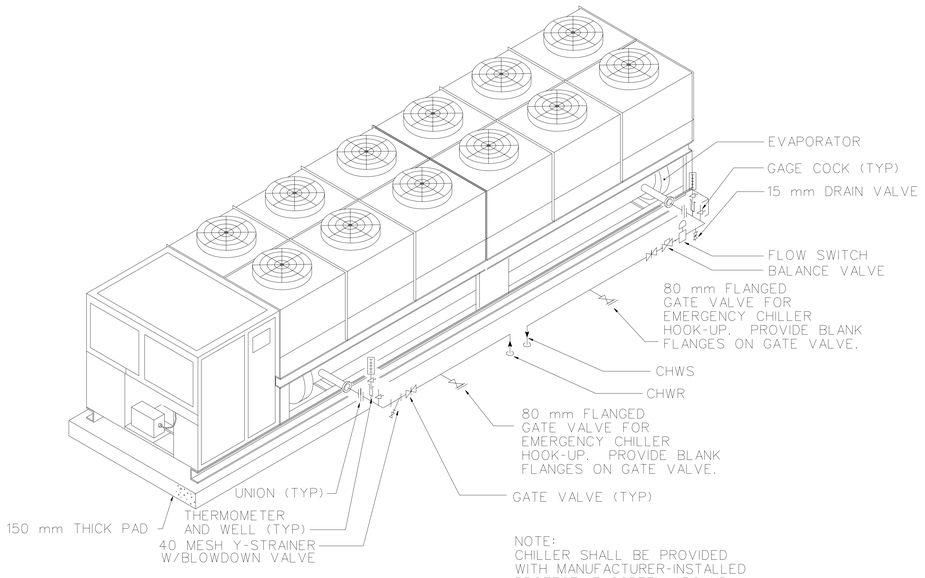
SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC
	REVISED MAKEUP WATER CONNECTION DETAIL	7/9/99	AMF

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA
BARRACKS - 96 PERSONNEL
HVAC DETAILS

PLATE
REFERENCE
NUMBER:
M-13
SHEET 245

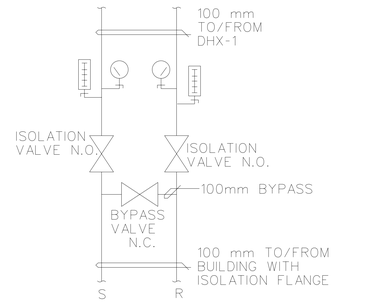
AS-BUILT

DESIGN FILE: DGNSPEC$$$$$

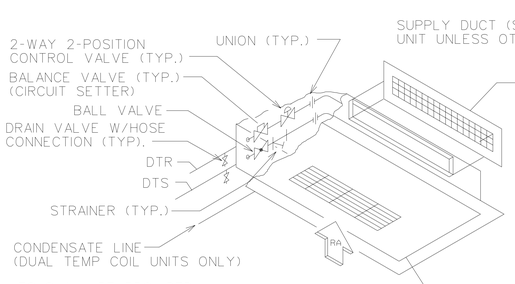


NOTE:
CHILLER SHALL BE PROVIDED WITH MANUFACTURER-INSTALLED PROTECTIVE SCREEN AROUND BOTTOM PERIMETER OF UNIT.

AIR COOLED CHILLER DETAIL
NOT TO SCALE



CHILLED WATER ENTRANCE DETAIL
NOT TO SCALE



NOTE:

SEE HVAC FLOOR PLANS FOR SUPPLY DUCT ROUTING FROM FAN COIL UNIT.

NOTE:

FAN-COIL UNITS SHALL BE PROVIDED COMPLETE WITH INTEGRAL FACTORY-BUILT PIPING PACKAGE WHICH INCLUDES ALL OF THE PIPING COMPONENTS INDICATED IN DETAIL AND REQUIRED BY SPECIFICATIONS. PIPING PACKAGE SHALL BE INTEGRAL TO UNIT ENCLOSURE.

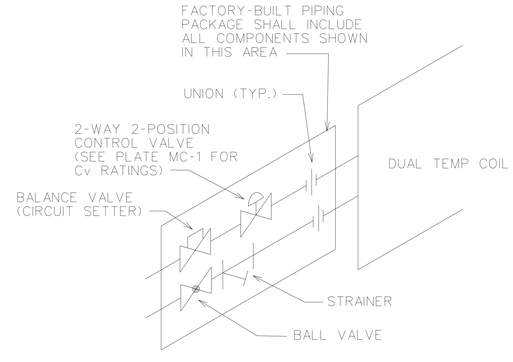
RECESSED (CONCEALED) TYPE: HINGED BOTTOM PANEL INSTALLED IN CEILING WITH R.A. GRILLE (COLOR SHALL MATCH ADJACENT CEILING COLOR).

CABINET TYPE SIMILAR TO DETAIL EXCEPT AS SPECIFIED.

TYPICAL HORIZONTAL RECESSED (CONCEALED) FAN COIL UNIT DETAIL
NOT TO SCALE

NOTE:

SEE FAN COIL UNIT SCHEDULE (PLATE M-1) FOR FCU TYPE (I.E. RECESSED OR CABINET)



NOTE:

MANUAL AIR VENTS SHALL BE PROVIDED WITH PIPING PACKAGE AND LOCATED IN PIPING OR AT COIL PER MANUFACTURER'S RECOMMENDATION. PROVIDE DRAIN VALVE W/HOSE BIBB CONNECTION.

TYPICAL FAN COIL UNIT PIPING PACKAGE (DUAL TEMP COIL)
NOT TO SCALE

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
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	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

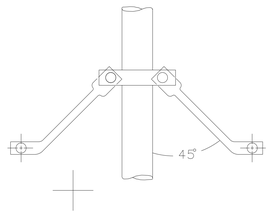
BARRACKS - 96 PERSONNEL

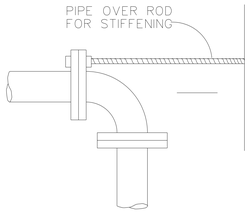
HVAC DETAILS

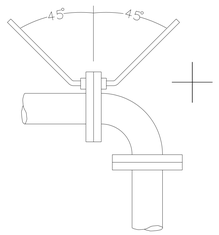
PLATE REFERENCE NUMBER:
M-14
SHEET 246

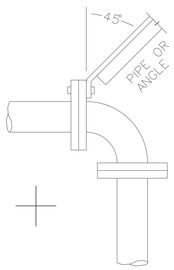
AS-BUILT

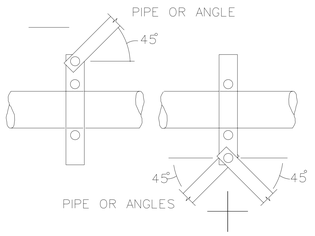
DESIGN FILE: DONSPEC$$$$$

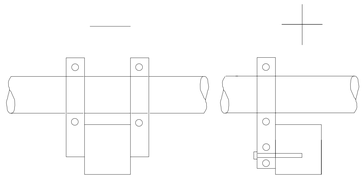


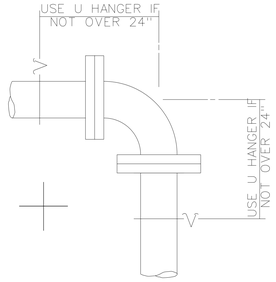


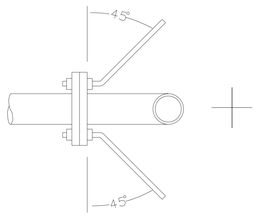


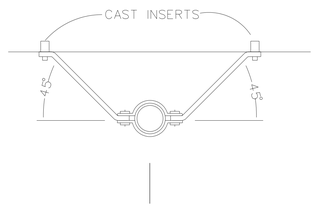


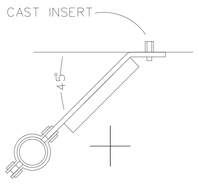


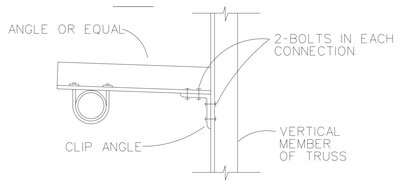


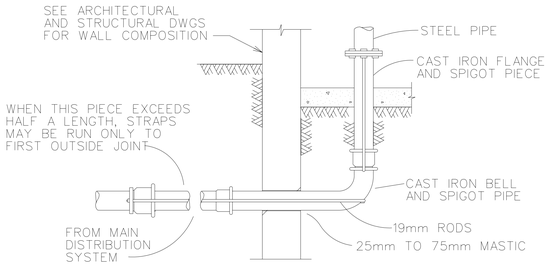




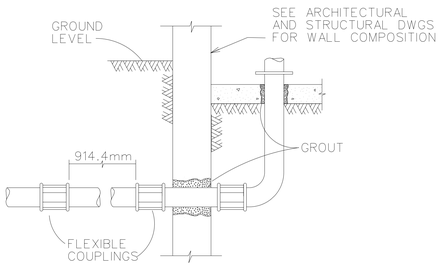




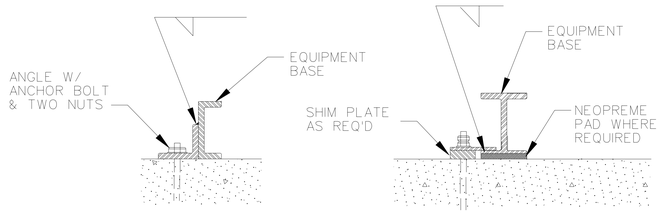




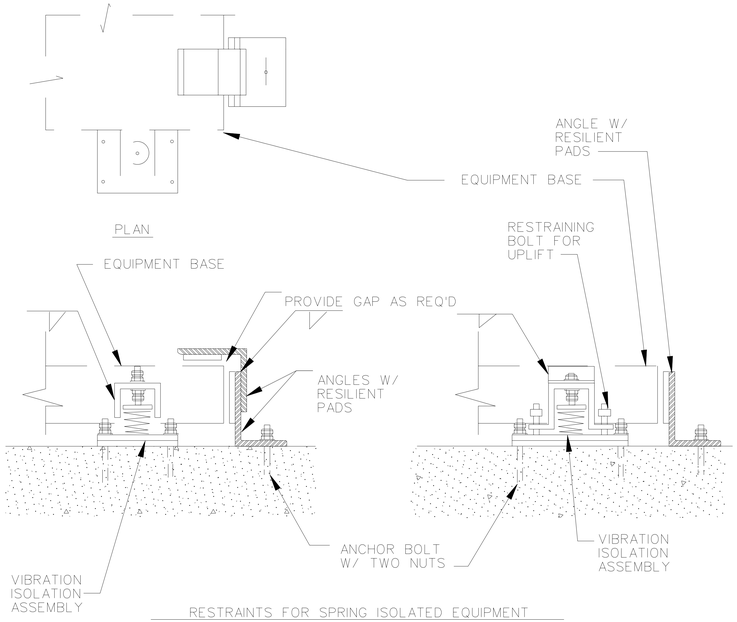
UNGROUTED PIPE



PIPE GROUTED IN WALL

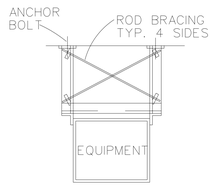


RESTRAINTS OF RIGIDLY MOUNTED MECHANICAL EQUIPMENT

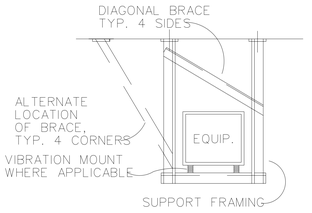


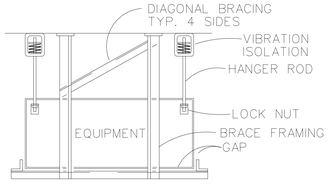
RESTRAINTS FOR SPRING ISOLATED EQUIPMENT

SEISMIC RESTRAINTS FOR MECHANICAL EQUIPMENT
NOT TO SCALE



SUSPENDED EQUIPMENT





SUSPENDED EQUIPMENT
WITH VIBRATION MOUNT

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

SYMBOL	AS-BUILT DRAWING NO REVISION THIS SHEET DESCRIPTION	DATE	BY
		FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

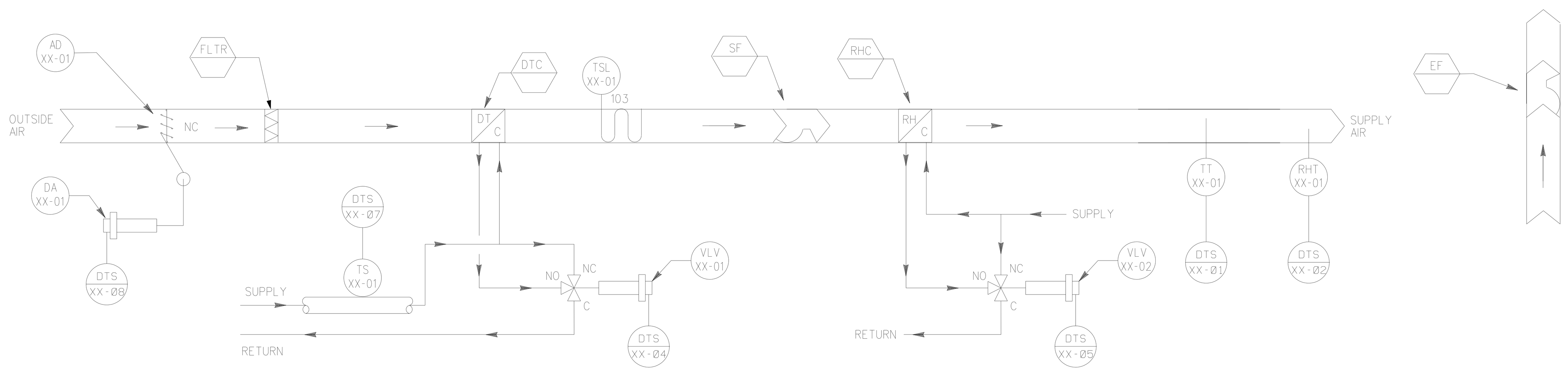
SEISMIC DETAILS

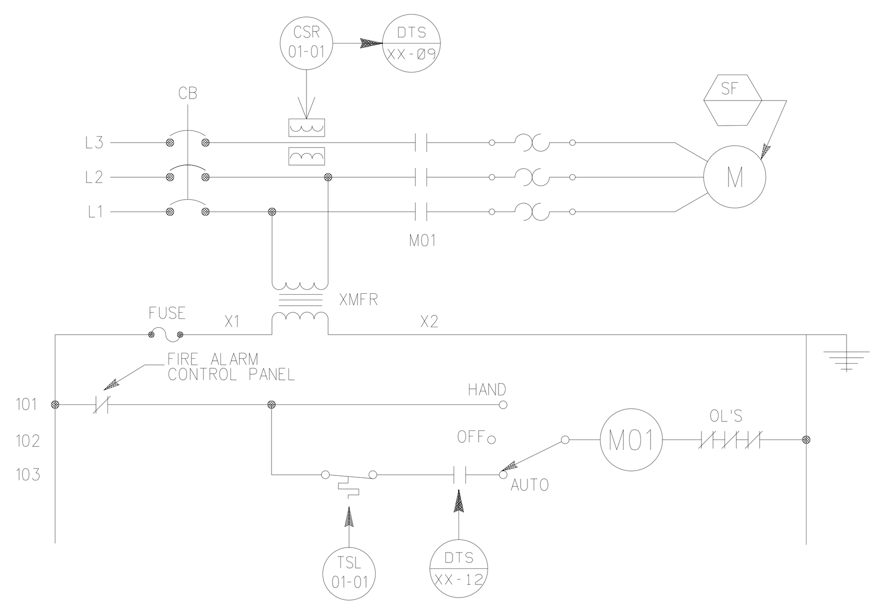
AS-BUILT

PLATE REFERENCE NUMBER:
M-15
SHEET 247

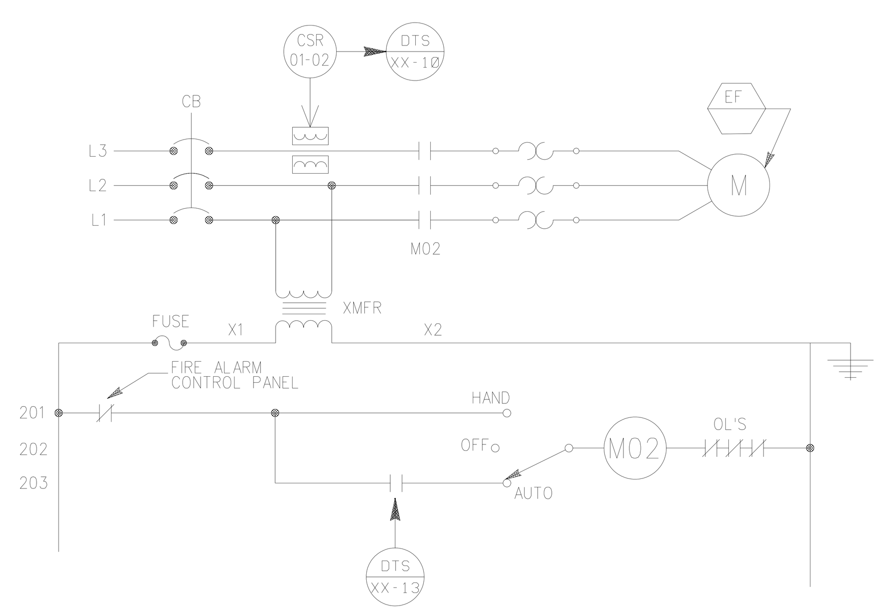
DESIGN FILE: DGNSPEC$$$$$

VENTILATION SUPPLY UNIT CONTROL SYSTEM SCHEMATIC (TYPICAL OF 4)





SUPPLY FAN STARTER



EXHAUST FAN STARTER

CONTROL VALVE SCHEDULE

IDENTIFIER	FUNCTION	TYPE	Kv *	CLOSE-OFF RATING
VLV-01-01	DUAL-TEMP COIL VALVE	3-WAY, MODULATING	6.5	345 kPa
VLV-01-02	REHEAT COIL VALVE	3-WAY, MODULATING	0.9	345 kPa

* m3/hr @ delta P = 100 kPa

CONTROL DAMPER SCHEDULE

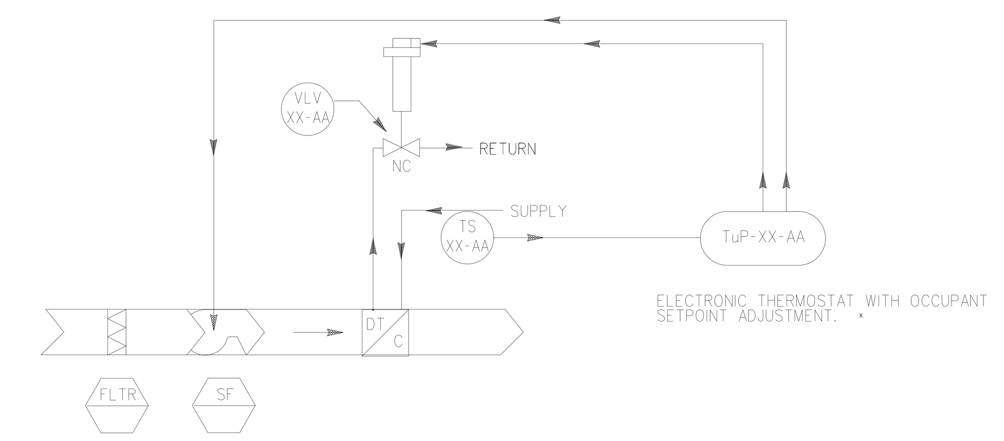
IDENTIFIER	FUNCTION	TYPE
AD-01-01	OUTSIDE AIR	2-POSITION, PARALLEL BLADE

OPERATING PARAMETERS

FUNCTION	SETPOINT	REMARKS
SUPPLY TEMPERATURE	21 °C	
SUPPLY HUMIDITY	50 %	
DUAL-TEMP CHANGEOVER	24 °C	
FREEZESTAT	3 °C	

SENSOR SCHEDULE

IDENTIFIER	FUNCTION	RANGE
TT-XX-01	SUPPLY AIR TEMPERATURE TRANSMITTER	5 TO 60 DEG C
RHT-XX-01	SUPPLY AIR RELATIVE HUMIDITY TRANSMITTER	0 TO 100 % RH



CONTROL VALVE SCHEDULE

IDENTIFIER	FUNCTION	TYPE	Kv	CLOSE-OFF RATING
VLV-XX-AA	DUAL-TEMP COIL VALVE	TWO-WAY, TWO POSITION	LINE SIZE	345 kPa

OPERATING PARAMETERS

FUNCTION	SETPOINT	REMARKS
SPACE TEMPERATURE	21 °C 24 °C	(HEATING, ADJUSTABLE) (COOLING, ADJUSTABLE)
DUAL-TEMP CHANGEOVER	24 °C	

FAN COIL UNIT CONTROL SYSTEM (TYPICAL)

* Fan-coil units shall be supplied with electronic thermostats with three speed fan switch and automatic heating/cooling mode changeover feature and occupant setpoint adjustment

SEQUENCE OF OPERATION

Ventilation supply unit shall be manually started and stopped from an operator input to the DDC system. The outside air damper shall be open when the fan is on and closed when the fan is off.

Dual-Temperature Coil Changeover Control

The DDC controller shall monitor the supply water temperature, through an aquastat mounted on the supply water piping to the unit, to determine if heating or cooling mode is required.

Dual Temperature Coil Control

Heating Mode - A supply air temperature sensor acting through the DDC controller shall modulate the three-way valve to maintain the heating supply air temperature setpoint.

Cooling Mode - The DDC controller shall compare the signals of the supply air temperature sensor and the supply air relative humidity sensor to modulate the three-way valve. Based on the highest signal received, the DDC controller shall modulate the valve to maintain the cooling supply air temperature or the supply air relative humidity setpoint.

Reheat Coil Control

The DDC controller shall modulate the three-way valve to maintain the supply air temperature setpoint.

Freezestat

A freezestat in the discharge-air side of the dual-temp coil shall stop the supply fan and close the outside air damper if the temperature drops below the freezestat's setpoint.

Emergency Fan Shutdown

Activation of a contact from the fire alarm panel shall cause the air handling unit to shut down in accordance with NFPA 90A.

Exhaust Fan Interlock - Exhaust fan associated with each air handler shall be interlocked with air handling unit such that when the air handler is running, the exhaust fan also runs; and the exhaust fan is off when the air handler is off.

DDC DATA TERMINAL STRIP LAYOUT (TYPICAL OF FOUR)

	DEVICE NO.	DESCRIPTION	TYPE
1	TT-XX-01	SUPPLY AIR TEMPERATURE	AI
2	RHT-XX-01	SUPPLY AIR RELATIVE HUMIDITY	AI
3			
4	VLV-XX-01	DUAL-TEMP COIL VALVE	AO
5	VLV-XX-02	REHEAT COIL VALVE	AO
6			
7	TS-XX-01	HEATING/COOLING MODE	DI
8	DA-XX-01	OUTSIDE AIR DAMPER	DI
9	CSR-XX-01	SUPPLY FAN STATUS	DI
10	CSR-XX-02	EXHAUST FAN STATUS	DI
11			
12	SF-XX-01	SUPPLY FAN START/STOP	DO
13	EF-XX-01	EXHAUST FAN START/STOP	DO
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

I/O SUMMARY (TYPICAL OF FOUR)

	HARDWARE: OUTPUT DIGITAL: CONTROL RELAY	HARDWARE: OUTPUT ANALOG: POSITION ADJUSTMENT	HARDWARE: INPUT DIGITAL: AUXILIARY CONTACT	HARDWARE: INPUT DIGITAL: CONTACT CLOSURE	HARDWARE: INPUT ANALOG: TEMPERATURE	HARDWARE: INPUT ANALOG: % RELATIVE HUMIDITY	HARDWARE: INPUT ANALOG: PSIG, PSIA, PSID	HARDWARE: INPUT ANALOG: FLOW	SOFTWARE: ALARMS DIGITAL: CONTACT CLOSURE	SOFTWARE: ALARMS ANALOG: HIGH LIMIT	SOFTWARE: ALARMS ANALOG: LOW LIMIT	SOFTWARE: ALARMS ANALOG: RUN TIME	APPLICATION PROGRAMS: SCHEDULED START/STOP	APPLICATION PROGRAMS: OPTIMUM START/STOP	APPLICATION PROGRAMS: DUTY CYCLING	APPLICATION PROGRAMS: DEMAND LIMITING	APPLICATION PROGRAMS: DAY/NIGHT SETBACK	APPLICATION PROGRAMS: ECONOMIZER	APPLICATION PROGRAMS: VENTILATION/RECIRCULATION	FAILURE MODE **
SUPPLY FAN	1			1					X			X			X	X				F
EXHAUST FAN EF-1	1			1					X			X			X	X				F
SUPPLY AIR					1	1				X	X									
OUTSIDE AIR DAMPER	1																			F
DUAL-TEMP COIL VALVE		1																		O
REHEAT COIL VALVE		1																		F
FREEZESTAT			1						X											

** C - LAST COMMAND
H - HIGH VALUE
L - LOW VALUE
O - ON (OPEN)
F - OFF (CLOSED)

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99 | REV.
CATEGORY CODE 721-11-12
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U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL FORT BENNING, GEORGIA
BARRACKS - 96 PERSONNEL
HVAC CONTROLS

PLATE REFERENCE NUMBER:
MC-1
SHEET 259

DESIGN FILE: DGNSPEC$$$

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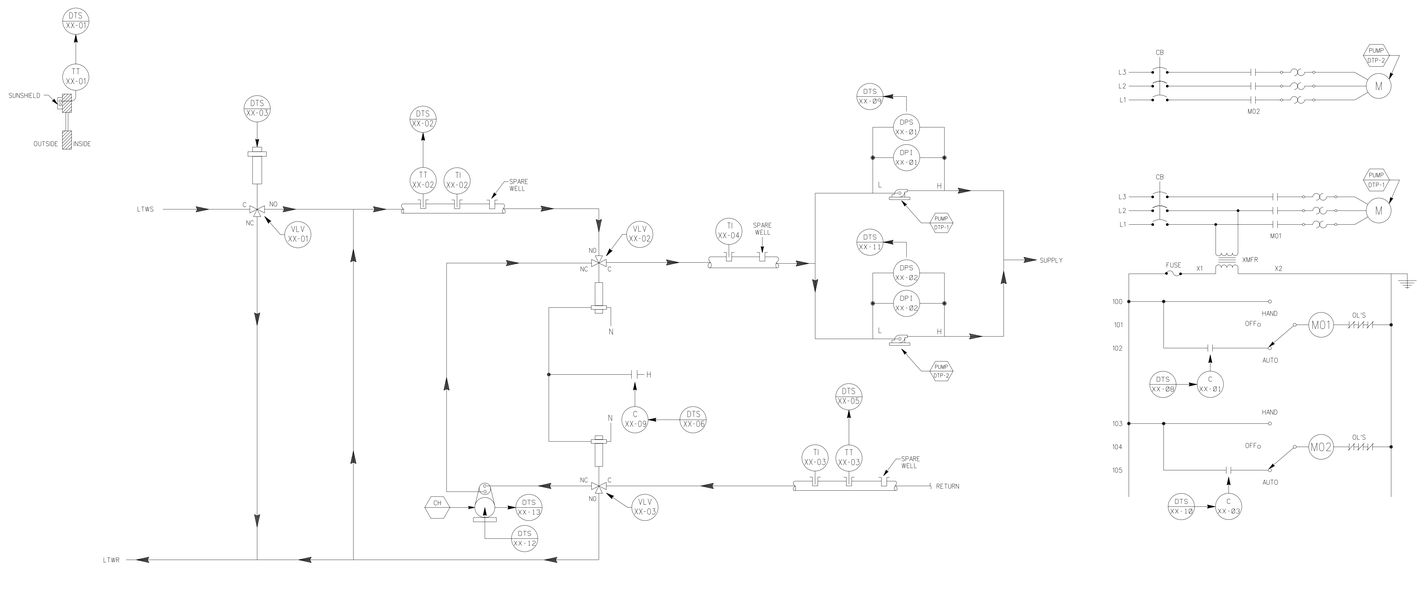

DUAL-TEMP HYDRONIC CONTROL SYSTEM SCHEMATIC

DDC DATA TERMINAL STRIP LAYOUT

	DEVICE NO.	DESCRIPTION	TYPE
1	TT-XX-01	OUTSIDE AIR TEMPERATURE	AI
2	TT-XX-02	HW SUPPLY TEMPERATURE	AI
3	VLV-XX-01	HW SUPPLY VALVE	AO
4			
5	TT-XX-03	DUAL-TEMP RETURN TEMP.	AI
6	C-XX-07	DUAL-TEMP CHANGEOVER	DO
7			
8	C-XX-01	DUAL-TEMP PUMP START/STOP	DO
9	DPS-XX-01	DUAL-TEMP PUMP STATUS	DI
10	C-XX-03	DUAL-TEMP PUMP START/STOP	DO
11	DPS-XX-02	DUAL-TEMP PUMP STATUS	DI
12	C-XX-05	CHILLER START/STOP	DO
13	C-XX-06	CHILLER STATUS	DI
14			
15			
16			
17			
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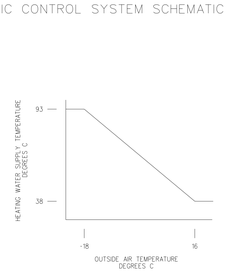
30			

SENSOR SCHEDULE

IDENTIFIER	FUNCTION	RANGE
TT-XX-01	OUTSIDE AIR TEMPERATURE TRANSMITTER	-35 TO +55 DEG C
TT-XX-02	HEATING WATER SUPPLY TEMPERATURE TRANSMITTER	38 TO 121 DEG C
TT-XX-03	DUAL-TEMP RETURN WATER TEMPERATURE TRANSMITTER	-1 TO 116 DEG C



HW SUPPLY TEMPERATURE RESET SCHEDULE

OPERATING PARAMETERS

FUNCTION	SETPOINT	REMARKS
HEATING WATER SUPPLY TEMPERATURE		OA TEMP = -18 DEG C: HEATING WATER SUPPLY SETPOINT = 93 DEG C OA TEMP = 16 DEG C: HEATING WATER SUPPLY SETPOINT = 38 DEG C
DUAL-TEMP CHANGEOVER	24 DEG C	DIFFERENTIAL = 3 DEG C
OCCUPIED MODE		24 HRS/DAY, 7 DAYS/WK

CONTROL VALVE SCHEDULE

IDENTIFIER	FUNCTION	TYPE	RANGE	Kv	CLOSE-OFF RATING	REMARKS
VLV-XX-01	HW SUPPLY VALVE	3-WAY, MODULATING	4 - 20 mA	——	345 kPa	LINE SIZE
VLV-XX-02	DUAL-TEMP SUPPLY CHANGEOVER VALVE	3-WAY, 2-POSITION		——	345 kPa	LINE SIZE
VLV-XX-03	DUAL-TEMP RETURN CHANGEOVER VALVE	3-WAY, 2-POSITION		——	345 kPa	LINE SIZE

	HARDWARE																SOFTWARE													
	OUTPUT								INPUT								ALARMS				APPLICATION PROGRAMS									
	DIGITAL						ANALOG					DIGITAL					ANALOG													
	CONTROL RELAY						POSITION ADJUSTMENT	CONTROL POINT ADJUST.				AUXILIARY CONTACT CONTACT CLOSURE					TEMPERATURE	CONTROL POINT ADJUST.	PSIG, PSIA, PSID	FLOW	CONTACT CLOSURE			HIGH LIMIT	LOW LIMIT	RUN TIME	SCHEDULED START/STOP	OPTIMUM START/STOP	DUAL-TEMP	DEMAND LIMITING	HW OA RESET		FAILURE MODE	**
OUTSIDE AIR																	1								X				X			
HW SUPPLY																	1							X	X					X			
HW SUPPLY VALVE							1																							X			
DUAL-TEMP RETURN																	1							X	X								
DUAL-TEMP CHANGEOVER VALVE	1																																F
DUAL-TEMP PUMP	2											2									X					X		X	X	X	X			O
CHILLER	1																									X		X	X	X			F

** C - LAST COMMAND O - ON (OPEN)
H - HIGH VALUE F - OFF (CLOSED)
L - LOW VALUE

SEQUENCE OF OPERATION

HEATING AND COOLING MODES SHALL BE MANUALLY SELECTED BY AN OPERATOR INPUT TO THE DDC SYSTEM. DUAL-TEMP DISTRIBUTION PUMPS SHALL BE MANUALLY STARTED AND STOPPED BY AN OPERATOR INPUT TO THE DDC SYSTEM.

HEATING MODE

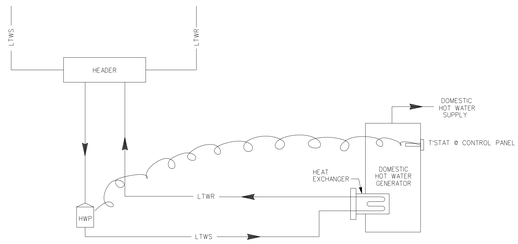
WHEN THE HEATING MODE IS SELECTED, CHILLER SHALL BE STOPPED. AT THE EXPIRATION OF A TIME DELAY, AS RECOMMENDED BY THE CHILLER MANUFACTURER, THE SYSTEM CHANGEOVER VALVES SHALL CLOSE TO FLOW THROUGH THE CHILLER AND SHALL OPEN TO FLOW FROM THE HEATING PLANT. THE DDC SYSTEM SHALL ACCEPT A SIGNAL FROM A SUNSHIELDED OUTSIDE AIR TEMPERATURE SENSING ELEMENT AND TRANSMITTER LOCATED AS SHOWN. THE DDC SYSTEM SHALL RESET THE HYDRONIC HEATING SUPPLY TEMPERATURE SETPOINT IN A LINEAR SCHEDULE BASED ON THE OUTSIDE AIR TEMPERATURE AS SHOWN. THE DDC SYSTEM SHALL ACCEPT A SIGNAL FROM A TEMPERATURE SENSING ELEMENT AND TRANSMITTER LOCATED IN THE HYDRONIC SUPPLY LINE AND THE DDC SYSTEM OUTPUT SHALL MODULATE THE HYDRONIC HEATING SYSTEM CONTROL VALVE TO MAINTAIN THE RESET SCHEDULE SETPOINT IN THE HYDRONIC HEATING SUPPLY LINE.

COOLING MODE

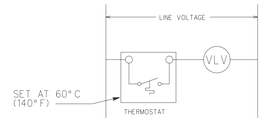
WHEN THE COOLING MODE IS SELECTED, THE HYDRONIC HEATING SYSTEM CONTROL VALVE SHALL BE POSITIONED TO PROVIDE FULL FLOW TO THE BYPASS BACK TO THE HEATING PLANT. THE DDC SYSTEM SHALL ACCEPT A SIGNAL FROM A TEMPERATURE SENSING ELEMENT AND TRANSMITTER LOCATED IN THE DUAL-TEMP SYSTEM RETURN AS SHOWN. WHEN THE DUAL-TEMP SYSTEM RETURN WATER TEMPERATURE DROPS BELOW THE SETPOINT SHOWN, THE DDC SYSTEM SHALL ALLOW THE CHANGEOVER VALVES TO CHANGE POSITION TO THE COOLING MODE TO ALLOW FLOW THROUGH THE CHILLER.

PUMP ALTERNATION

THE TWO DUAL-TEMP DISTRIBUTION PUMPS SHALL BE OPERATED AS A PRIMARY AND A STANDBY. IF THE PUMP DESIGNATED AS PRIMARY FAILS TO START WHEN COMMANDED, AS DETECTED BY A DIFFERENTIAL PRESSURE SWITCH, IT SHALL BE LABELED AS UNAVAILABLE AND AN ALARM SHALL BE GENERATED. THE DDC SYSTEM SHALL THEN ATTEMPT TO START THE STANDBY PUMP AND IT SHALL BECOME THE PRIMARY PUMP. IF IT FAILS TO START WHEN COMMANDED, AS DETECTED BY A DIFFERENTIAL PRESSURE SWITCH, IT SHALL ALSO BE LABELED AS UNAVAILABLE AND ANOTHER ALARM SHALL BE GENERATED. PRIMARY/STANDBY DESIGNATIONS SHALL BE ALTERNATED BETWEEN PUMPS MONTHLY.



DOMESTIC HOT WATER GENERATOR SCHEMATIC



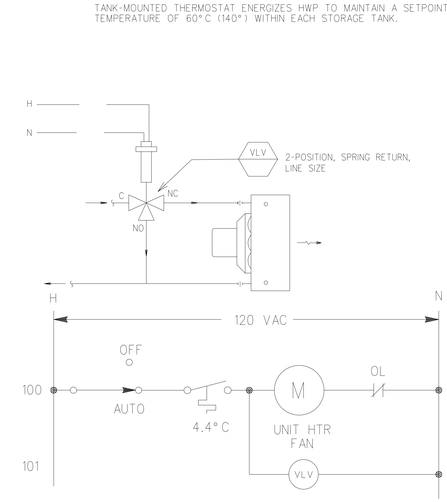
LADDER DIAGRAM - DOMESTIC HW GENERATOR

CONTROL VALVE SCHEDULE (DOMESTIC HOT WATER GENERATOR)

IDENTIFIER	FUNCTION	TYPE	VOLTAGE	Kv	CLOSE-OFF RATING
VLV	HEAT EXCHANGER CONTROL VALVE	NORMALLY CLOSED 2-WAY 2-POSITION, SPRING RETURN	120	LINE SIZE	CLOSE AGAINST 345 kPa (50 PSIG)

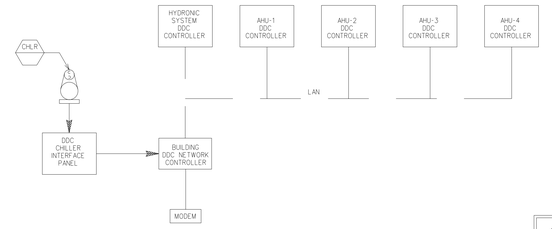
SEQUENCE-OF-OPERATION

TANK-MOUNTED THERMOSTAT ENERGIZES HWP TO MAINTAIN A SETPOINT TEMPERATURE OF 60° C (140°) WITHIN EACH STORAGE TANK.



UNIT HEATER (UH-1) SEQUENCE OF OPERATION:

A WALL-MOUNTED THERMOSTAT WITH AN "AUTO-OFF" SWITCH SHALL CYCLE THE FAN AND POSITION THE VALVE TO ALLOW FLOW TO THE COIL TO MAINTAIN THE SETPOINT WHEN THE SWITCH IS IN THE "AUTO" POSITION. WHEN THE SWITCH IS IN THE "OFF" POSITION, THE FAN SHALL BE STOPPED AND THE VALVE SHALL BE POSITIONED TO BYPASS THE COIL.



AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99 | REV.
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PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	REVISED PER AS-BUILT DRAWING	20JUL99	AMF
	ADDED UNIT HEATER CONTROL SCHEMATIC	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA
BARRACKS - 96 PERSONNEL
HVAC CONTROLS

PLATE REFERENCE NUMBER:
MC-2
SHEET 260

DESIGN FILE: D:\$$$$$

MECHANICAL PLUMBING SYMBOLS AND ABBREVIATIONS

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	COLD WATER SUPPLY		GATE VALVE	AFF	ABOVE FINISHED FLOOR
	DOMESTIC HOT WATER		CHECK VALVE	AD	AREA DRAIN
	HOT WATER RETURN		GLOBE VALVE	C.I.	CAST IRON
— 60°—	HOT WATER (60° C)		BALANCING VALVE	CO	CLEAN OUT
— SS —	SANITARY SEWER		FLEXIBLE CONNECTION	CONN	CONNECT
	SANITARY SEWER VENT		3-WAY CONTROL VALVE	DCW	DOMESTIC COLD WATER
— CWV —	COMBINATION WASTE & VENT		2-WAY CONTROL VALVE	DHW	DOMESTIC HOT WATER
— MTWR —	MEDIUM TEMP WATER RETURN		UNION CONNECTION	DTL	DETAIL
— MTWS —	MEDIUM TEMP WATER SUPPLY		FLANGE CONNECTION	DF	DRINKING FOUNTAIN
— G —	GAS PIPING		THERMOMETER	EFF	EFFICIENCY
	PITCH DN IN DIR OF ARROW		PRESSURE GAUGE	EWT	ENTERING WATER TEMP
	ELBOW TURNING UP		DIRECTION OF FLOW	FCO	FLOOR CLEAN OUT
	ELBOW TURNING DOWN		Y STRAINER WITH BLOW-OFF VALVE	FD	FLOOR DRAIN
			PRESSURE/TEMPERATURE RELIEF VALVE	HB	HOSE BIBB
			PRESSURE REGULATING/REDUCING VALVE	INV	INVERT
			MANUAL AIR VENT	LWT	LEAVING WATER TEMP
			VACUUM RELIEF VALVE	LAV	LAVATORY
		WH	WALL HYDRANT (FROST PROOF)	P	PLUMBING FIXTURE
		HB	HOSE BIBB	PD	PRESSURE DROP
		NC	NORMALLY CLOSED	VTR	VENT THRU ROOF
		NO	NORMALLY OPEN	WH	WATER HEATER
				WCO	WALL CLEAN OUT
				WC	WATER CLOSET
				WHA	WATER HAMMER ARRESTOR

TABLE I

PIPE, VALVES AND FITTINGS IP AND METRIC DESIGNATIONS

NOMINAL PIPE SIZE (INCHES)	METRIC IDENTIFICATION MILLIMETER (mm)		NOMINAL PIPE SIZE (INCHES)	METRIC IDENTIFICATION MILLIMETER (mm)
1/8	6		8	200
3/16	7		10	250
1/4	8		12	300
3/8	10		14	350
1/2	15		16	400
5/8	18		18	450
3/4	20		20	500
1	25		24	600
1-1/4	32		28	700
1-1/2	40		30	750
2	50		32	800
2-1/2	65		36	900
3	80		40	1000
3-1/2	90		44	1100
4	100		48	1200
4-1/2	115		52	1300
5	125		56	1400
6	150		60	1500

NOTE: THE METRIC DESIGNATION FOR ALL PIPE, VALVES AND FITTINGS OVER 60 INCHES WILL BE 25 mm PER INCH.

GENERAL NOTES:

1. DOUBLE CHECK VALVES AND REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTERS SHALL BE INSTALLED AT NOT LESS THAN 305 mm ABOVE THE FLOOR WITH THE MAXIMUM OF 1524 mm ABOVE THE FINISHED FLOOR
2. ROUTE PRESSURE RELIEF VALVE DISCHARGE AND REDUCED PRESSURE BACKFLOW PREVENTER DRAIN TO FLOOR DRAIN WITH REQUIRED AIR GAP
3. ALL PIPING IN ATTIC AND MECHANICAL ROOM FROM FLOOR TO 1.5m A.F.F. SHALL HAVE INSULATION PROTECTED AS CALLED FOR IN HIGH ABUSE AREAS IN SPECIFICATION 15250.
4. NO PLASTIC PIPING SHALL BE INSTALLED IN MECHANICAL CHASES.
6. SEE SPECIFICATION SECTION 09000 (BUILDING COLOR AND FINISH SCHEDULE) FOR COLORS AND FINISHES OF EXPOSED METAL SURFACES LOCATED IN WALLS (I.E. LOUVERS, FANS, VENTS, ETC.) AND ROOFS (VENTS, FANS, GOOSENECKS, ETC.).

DOMESTIC HOT WATER GENERATOR SCHEDULE

SYMBOL	SPEC. TYPE	HEATING SOURCE	STORAGE CAPACITY (LITERS,)	RECOVERY CAPACITY (L/M)	TEMP RISE °C	MAX. TANK DIMENSIONS (METERS)	CAPACITY (KW)	TUBE SIDE (MTHW)					REMARKS
								PASSES	EWT	LWT	L/M	MAX PD	
DHWG-1	U-TUBE HEAT EXCHANGER	MTW	2271	85.2	44.4	1.4 DIA.X 2.2 HT.	131.8	MULTI	115.5°C	79.4°C	52.4	29.9 KPA	DOUBLE WALL HEAT EXCHANGER, 90/10 CU-NI TUBING
DHWG-2		MTW	2271	85.2	44.4	1.4 DIA.X 2.2 HT.	131.8	MULTI	115.5°C	79.4°C	52.4	29.9 KPA	
DHWG-3		MTW	2271	85.2	44.4	1.4 DIA.X 2.2 HT.	131.8	MULTI	115.5°C	79.4°C	52.4	29.9 KPA	
DHWG-4		MTW	2271	85.2	44.4	1.4 DIA.X 2.2 HT.	131.8	MULTI	115.5°C	79.4°C	52.4	29.9 KPA	

DOMESTIC HOT WATER PUMP SCHEDULE

SYMBOL	L/s	TOTAL HEAD	FLUID TEMP	MAXIMUM WATTS	SERVICE (MIN) EFFICIENCY	TYPE	LOCATION	REMARKS
DWRP-1	1.26	30 kPa	60° C	124	40%	IN-LINE	UTIL. RM.	DHWG-1 & DHWG-2 TANK RECIRC PUMP
DWRP-2	0.44	75 kPa	60° C	372	35%	IN-LINE	UTIL. RM.	BLDG RECIRC PUMP (2-CLUSTERS)
DWRP-3	1.26	30 kPa	60° C	124	40%	IN-LINE	UTIL. RM.	DHWG-3 & DHWG-4 TANK RECIRC PUMP
DWRP-4	0.44	75 kPa	60° C	372	35%	IN-LINE	UTIL. RM.	BLDG RECIRC PUMP (2-CLUSTERS)

PLUMBING FIXTURE SCHEDULE

ITEM	FIXTURE	CW (mm)	HW (mm)	WASTE (mm)	VENT (mm)	REMARKS
P-1A	WATER CLOSET	15	-	100	50	FLUSH TANK
P-3A	LAVATORY	15	15	32	32	COUNTER TOP
P-4A	BAR SINK	15	15	40	32	STAINLESS STEEEL
P-6A	SHOWER	15	15	40	32	ANTI-SCALD, THERMOSTATIC MIXING CONTROL VALVE

DOMESTIC HOT WATER EXPANSION TANK SYSTEM

SYMBOL	SYSTEM	APPROX. SYSTEM VOLUME (L)	SYSTEM TEMP. RANGE °C		INITIAL PRESS AT TANK MAX. (kPag)	MAX. OPER. PRESSURE AT RELIEF VALVE (kPag)	MAX. TANK DIMENSIONS (METERS)	MINIMUM ACCEPTANCE VOLUME (L)	PIPE SIZE TO TANK	COLD WATER FILL SIZE	REMARKS
			MIN.	MAX.							
DET-1	DOMESTIC HOT WATER	11356	4.44	60.0	413.6	723.9	1.0 DIA. BY 1.8 HEIGHT	408.8	20	20	FLR-MTD, FDA APPROVED MATERIALS, SUITABLE FOR POTABLE WATER APPLICATIONS

PLUMBING FIXTURE SCHEDULE

ITEM	FIXTURE	CW (mm)	HW (mm)	WASTE (mm)	VENT (mm)	REMARKS
P-1A	WATER CLOSET	15	-	100	50	FLUSH TANK
P-3A	LAVATORY	15	15	32	32	COUNTER TOP
P-4A	BAR SINK	15	15	40	32	STAINLESS STEEL
P-6A	SHOWER	15	15	40	32	ANTI-SCALD, THERMOSTATIC MIXING CONTROL VALVE
FD	FLOOR DRAINS	-	-	SIZED AS SHOWN	-	150mm TRAP SEALS

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

DATE: 17JUN99 | REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

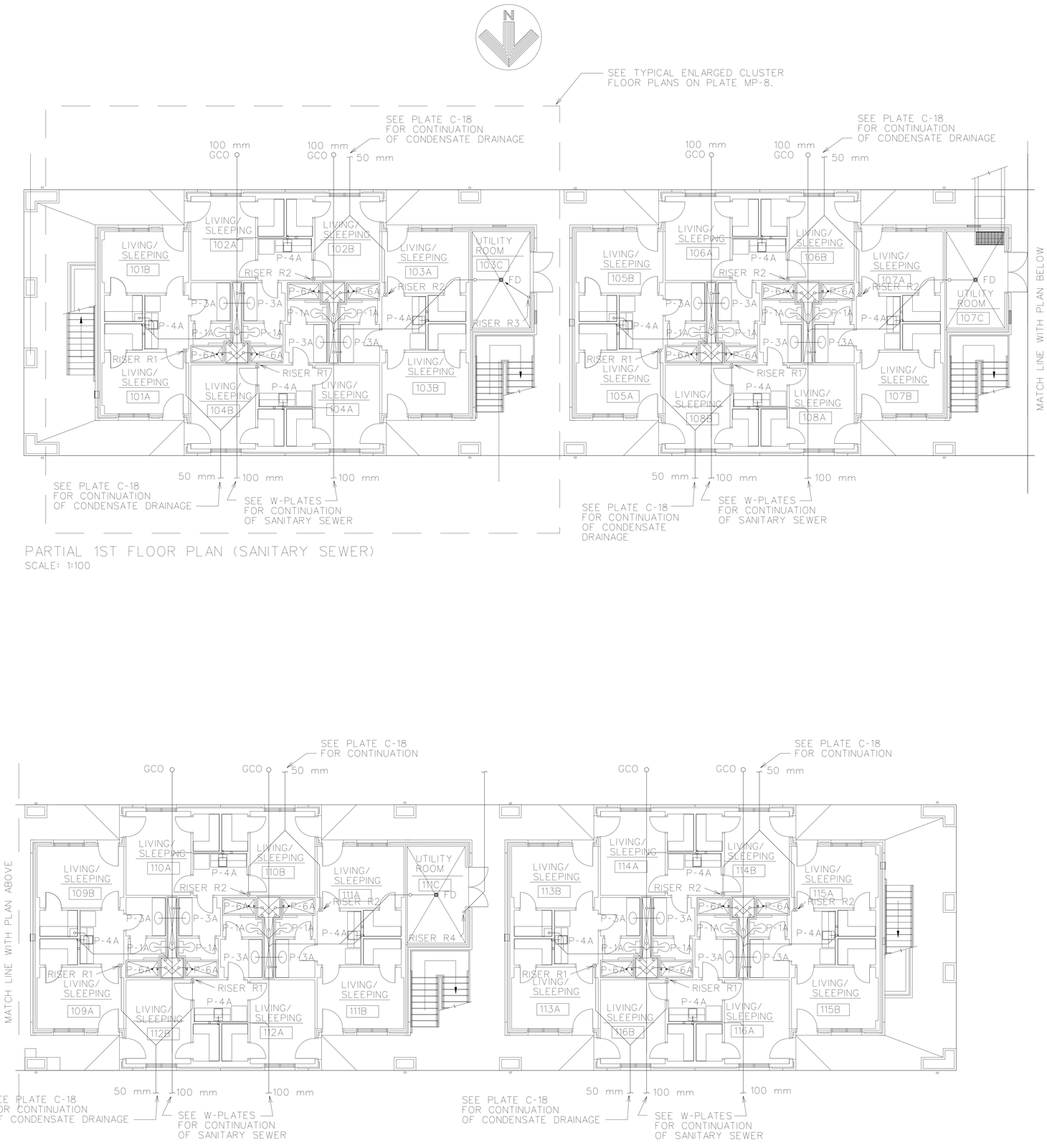
BARRACKS - 96 PERSONNEL

PLUMBING LEGEND, SCHEDULES AND DETAILS

AS-BUILT

PLATE REFERENCE NUMBER:
MP-1
SHEET 248

DESIGN FILE: DGNSPEC$$$$$

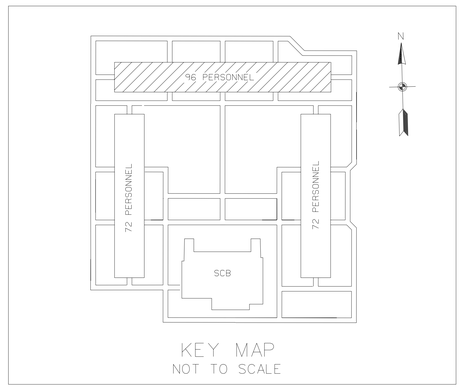


PARTIAL 1ST FLOOR PLAN (SANITARY SEWER)
SCALE: 1:100

PARTIAL 1ST FLOOR PLAN (SANITARY SEWER)
SCALE: 1:100

GENERAL NOTES:

1. SEE PLATES W-1 & C-18 FOR CONTINUATION OF PIPING.
2. SEE MP-10 AND MP-11 FOR RISER DIAGRAMS.
3. ATTIC FLOOR TO BE DEPRESSED 6 mm WITH A RADIUS OF 1200 mm TO ATTIC FLOOR DRAINS.
4. FLOOR DRAIN TRAP AND CONNECTED HORIZONTAL WASTE PIPE FROM ATTIC SHALL BE INSULATED TO PREVENT CONDENSATION.
5. COORDINATE FLOOR DRAINS WITH AIR HANDLING UNIT CONDENSATE DRAINS.
6. FOR FAN COIL UNIT CONDENSATE DRAIN RISER, SEE PLATE MP-11.
7. SEE PLATE MP-1 FOR GENERAL NOTES.



KEY MAP
NOT TO SCALE

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

NOTE: ALL UNITS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE INDICATED.

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$$
PLOT SCALE:

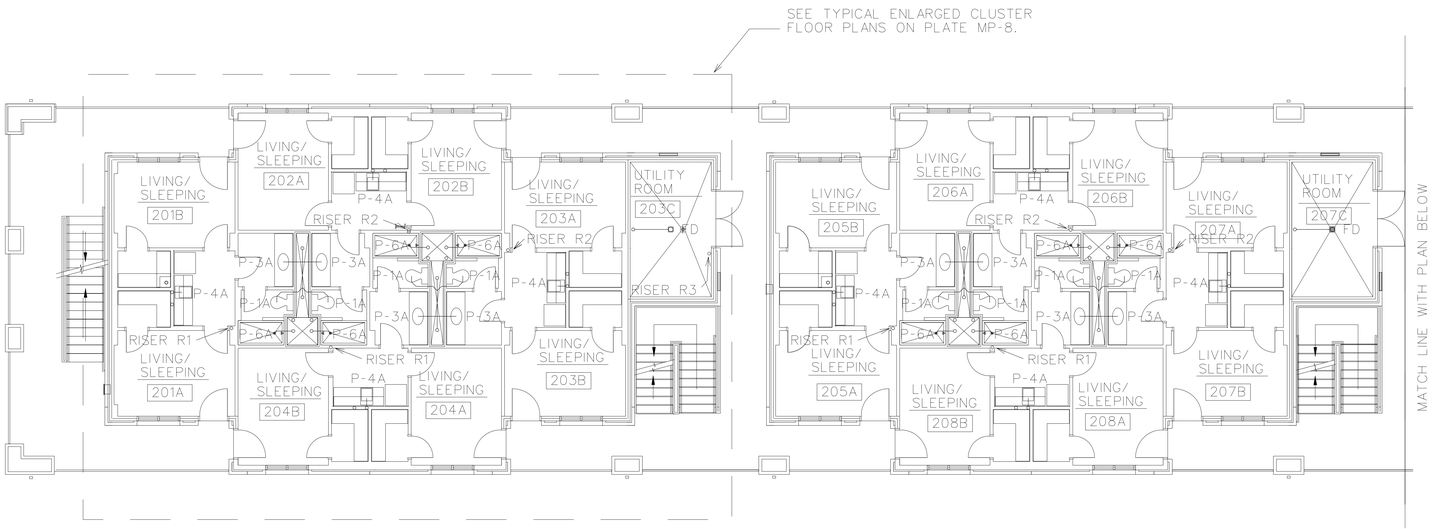
U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA
BARRACKS - 96 PERSONNEL
PLUMBING-SANITARY SEWER (1ST FLOOR PLAN)

PLATE REFERENCE NUMBER:
MP-2
SHEET 249

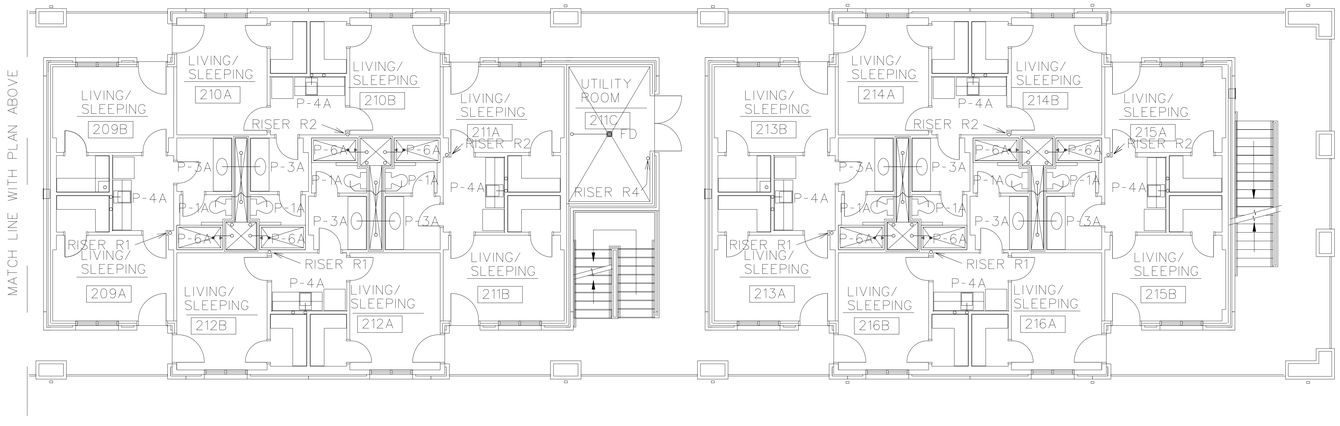
DESIGN FILE: DGNSPEC$$$$$$



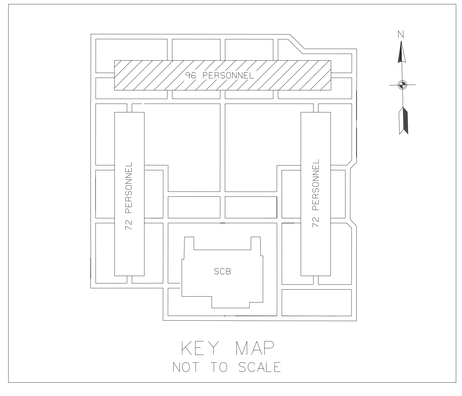
PARTIAL 2ND FLOOR PLAN (SANITARY SEWER)
(NOTE: PLAN TYPICAL FOR 3RD FLOOR)
SCALE: 1:100

NOTES:

1. SEE PLATES MP-1 AND MP-2 FOR GENERAL NOTES.



PARTIAL 2ND FLOOR PLAN (SANITARY SEWER)
(NOTE: PLAN TYPICAL FOR 3RD FLOOR)
SCALE: 1:100



KEY MAP
NOT TO SCALE

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100
NOTE: ALL UNITS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE INDICATED.

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

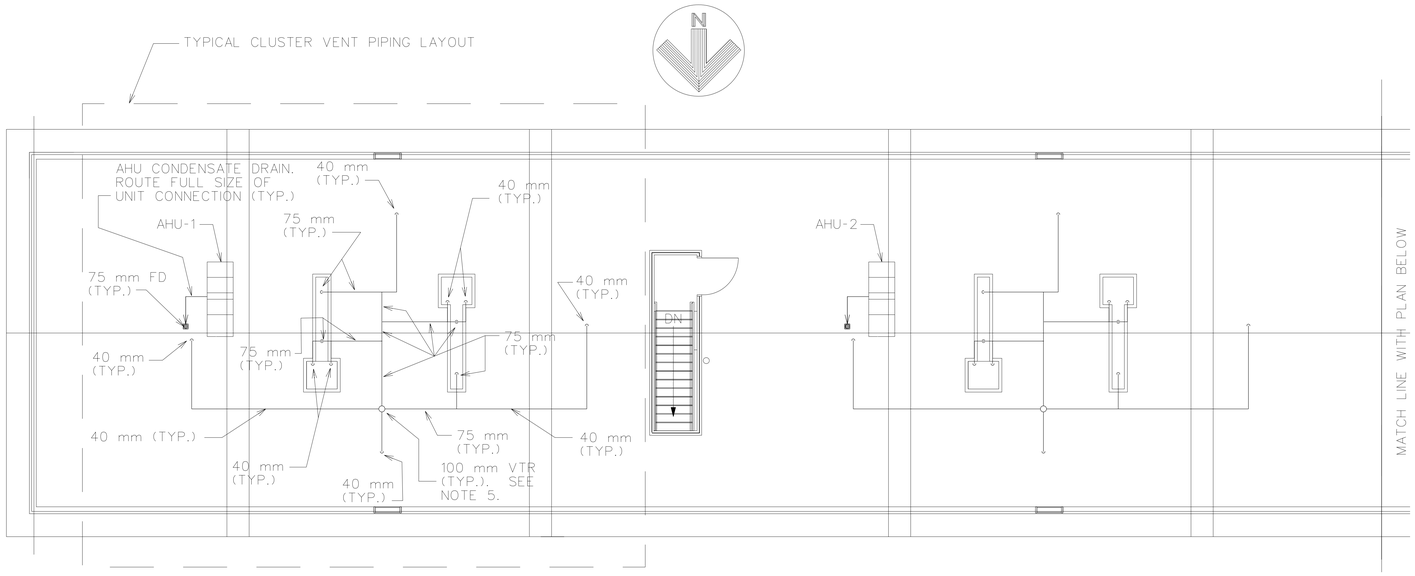
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA
BARRACKS - 96 PERSONNEL
PLUMBING-SANITARY SEWER
(2ND & 3RD FLOOR PLANS

PLATE REFERENCE NUMBER:
MP-3
SHEET 250

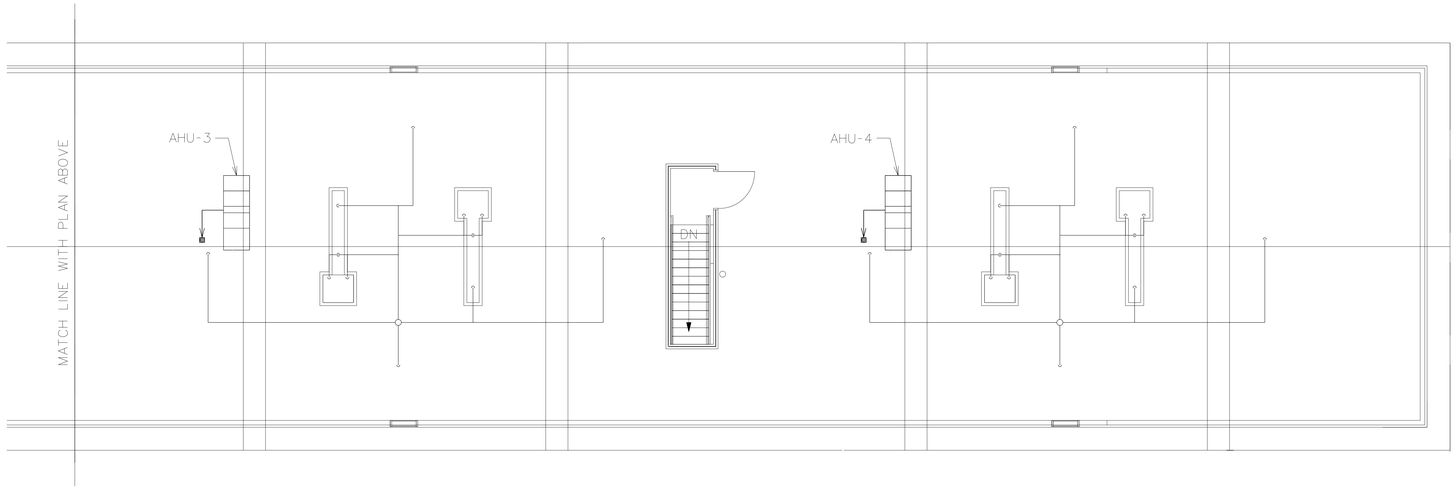
DESIGN FILE: DGNSPEC$$$$$



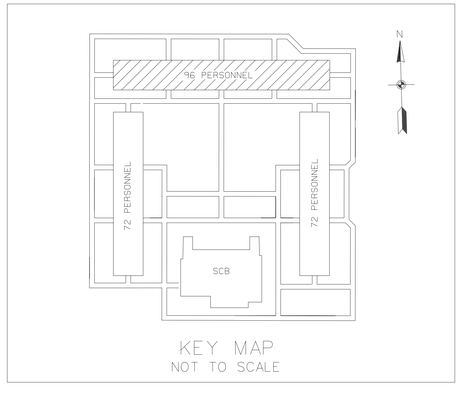
PARTIAL ATTIC FLOOR PLAN (SANITARY SEWER)
SCALE: 1:100

NOTES:

1. ATTIC FLOOR TO BE SLOPED TO AREA FLOOR DRAINS. SEE PLATES S-5 AND A-5.
2. FLOOR DRAIN TRAPS AND CONNECTED HORIZONTAL WASTE PIPE FROM ATTIC SHALL BE INSULATED TO PREVENT CONDENSATION.
3. COORDINATE AHU CONDENSATE DRAIN PIPE ROUTING WITH ATTIC FLOOR DRAIN LOCATION.
4. SEE PLATES MP-1 AND MP-2 FOR GENERAL NOTES.
5. SEE SPECIFICATION SECTION 09000 (BUILDING COLOR AND FINISH SCHEDULE) FOR COLORS AND FINISHES OF EXPOSED METAL SURFACES LOCATED IN WALLS (I.E. LOUVERS, FANS, VENTS, ETC.) AND ROOFS (VENTS, FANS, GOOSENECKS, ETC.).



PARTIAL ATTIC FLOOR PLAN (SANITARY SEWER)
SCALE: 1:100



KEY MAP
NOT TO SCALE

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100
NOTE: ALL UNITS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE INDICATED.

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99 | REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

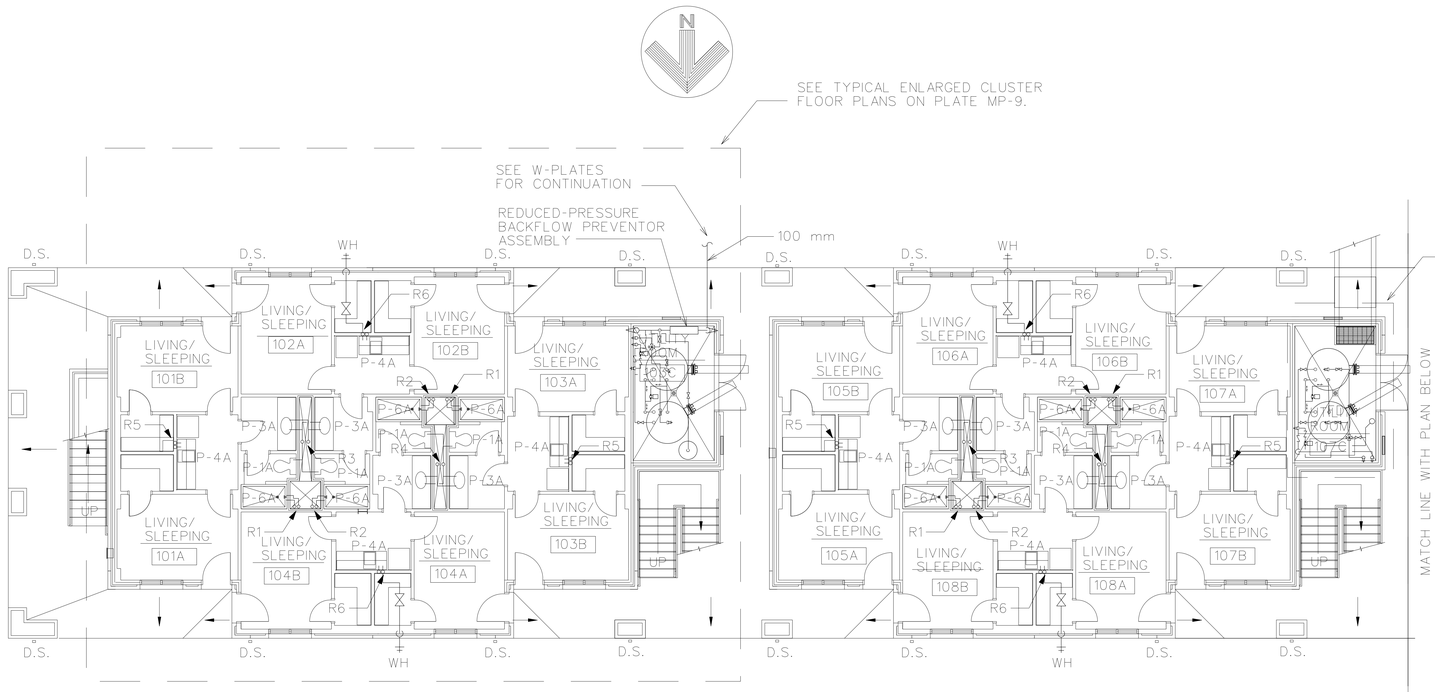
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

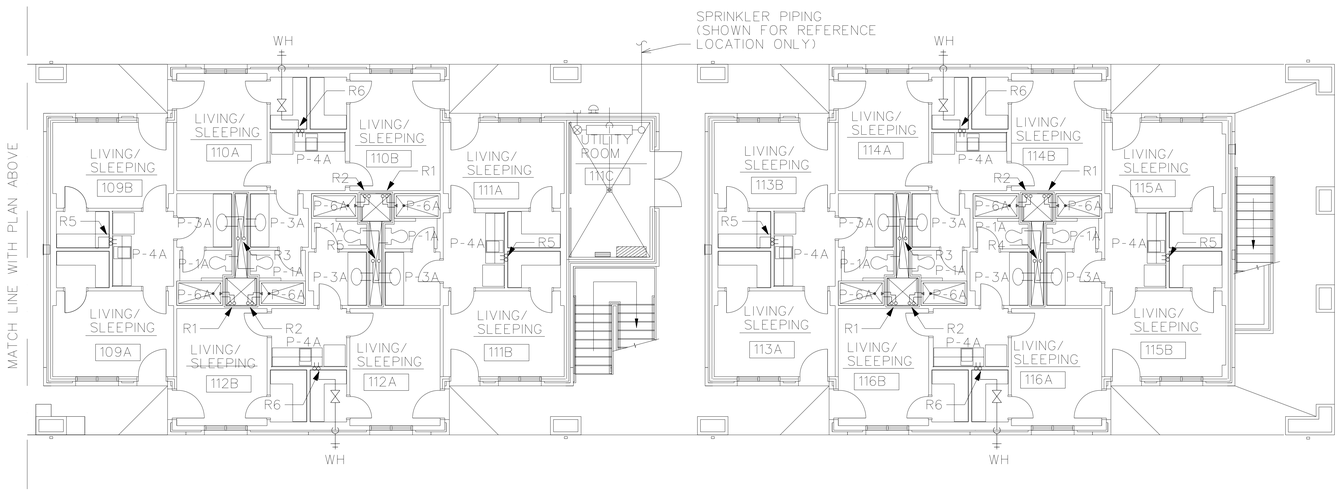
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA
BARRACKS - 96 PERSONNEL
PLUMBING-SANITARY SEWER (ATTIC FLOOR PLAN)

PLATE REFERENCE NUMBER:
MP-4
SHEET 251

DESIGN FILE: D0NSPEC$$$$$



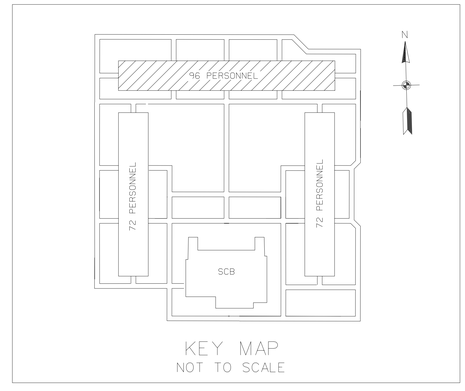
PARTIAL 1ST FLOOR PLAN (WATER)
SCALE: 1:100



PARTIAL 1ST FLOOR PLAN (WATER)
SCALE: 1:100

GENERAL NOTES:

1. SEE W-PLATES FOR CONTINUATION OF PIPING.
2. SEE MP-10 FOR RISER DIAGRAMS.
3. SEE PLATES MP-1 AND MP-2 FOR GENERAL NOTES.



KEY MAP
NOT TO SCALE

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100
NOTE: ALL UNITS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE INDICATED.

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:
REV.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

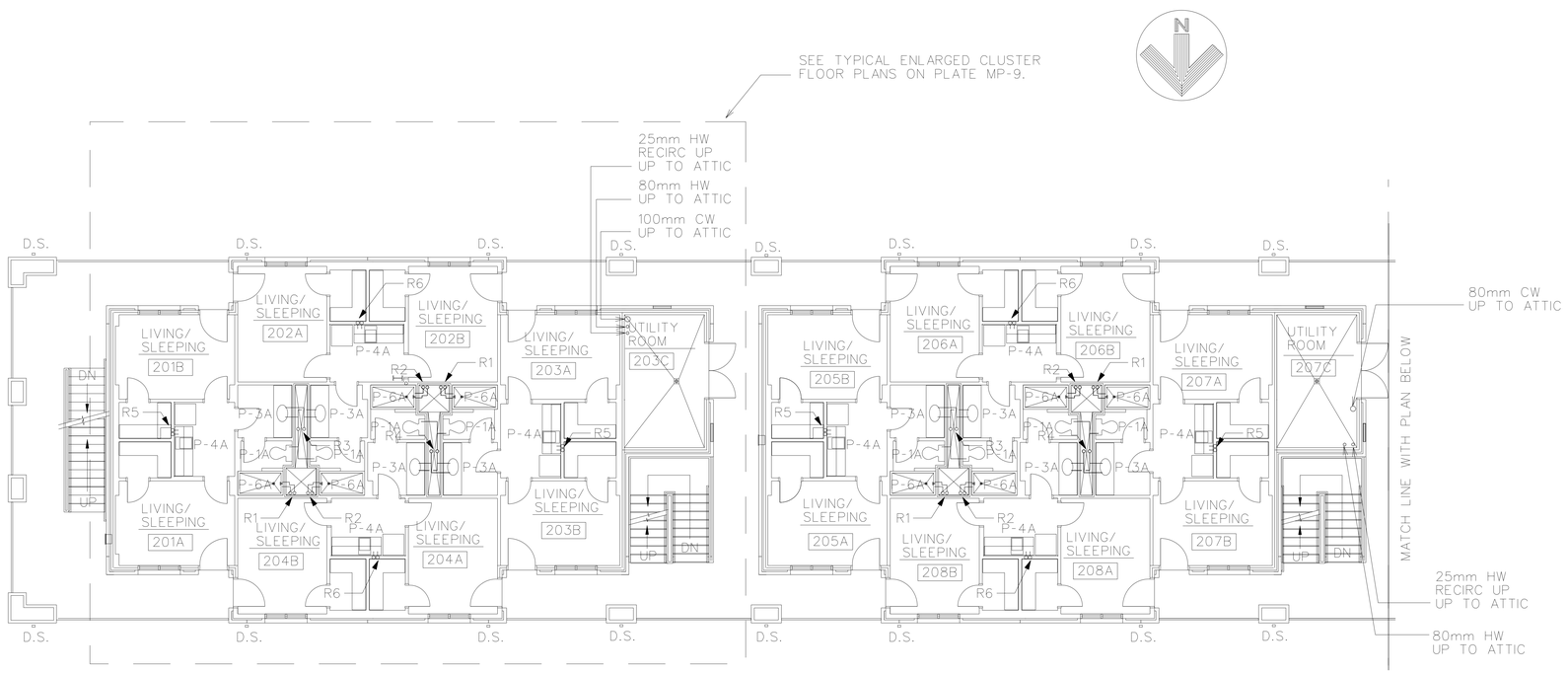
SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
PLUMBING - WATER
(1ST FLOOR PLAN)

PLATE REFERENCE NUMBER:
MP-5
SHEET 252

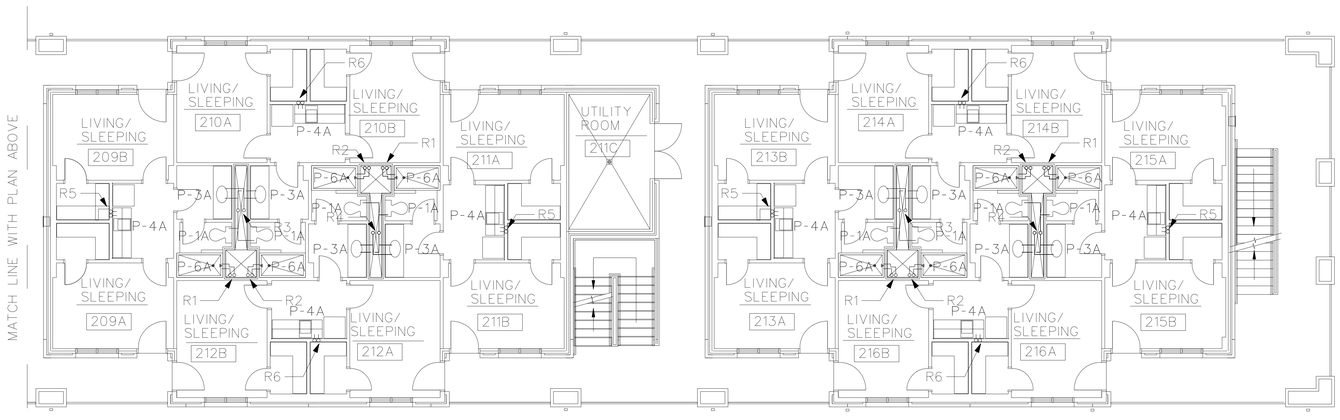
DESIGN FILE: DGNSPEC$$$$$



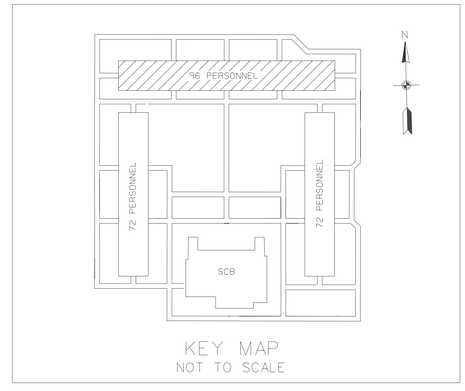
PARTIAL 2ND FLOOR PLAN (WATER)
(NOTE: PLAN TYPICAL FOR THIRD FLOOR)
SCALE: 1:100

NOTES:

1. SEE PLATE MP-10 FOR RISER DIAGRAMS.
2. SEE PLATES MP-1 AND MP-2 FOR GENERAL NOTES.



PARTIAL 2ND FLOOR PLAN (WATER)
(NOTE: PLAN TYPICAL FOR THIRD FLOOR)
SCALE: 1:100



KEY MAP
NOT TO SCALE

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100
NOTE: ALL UNITS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE INDICATED.

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

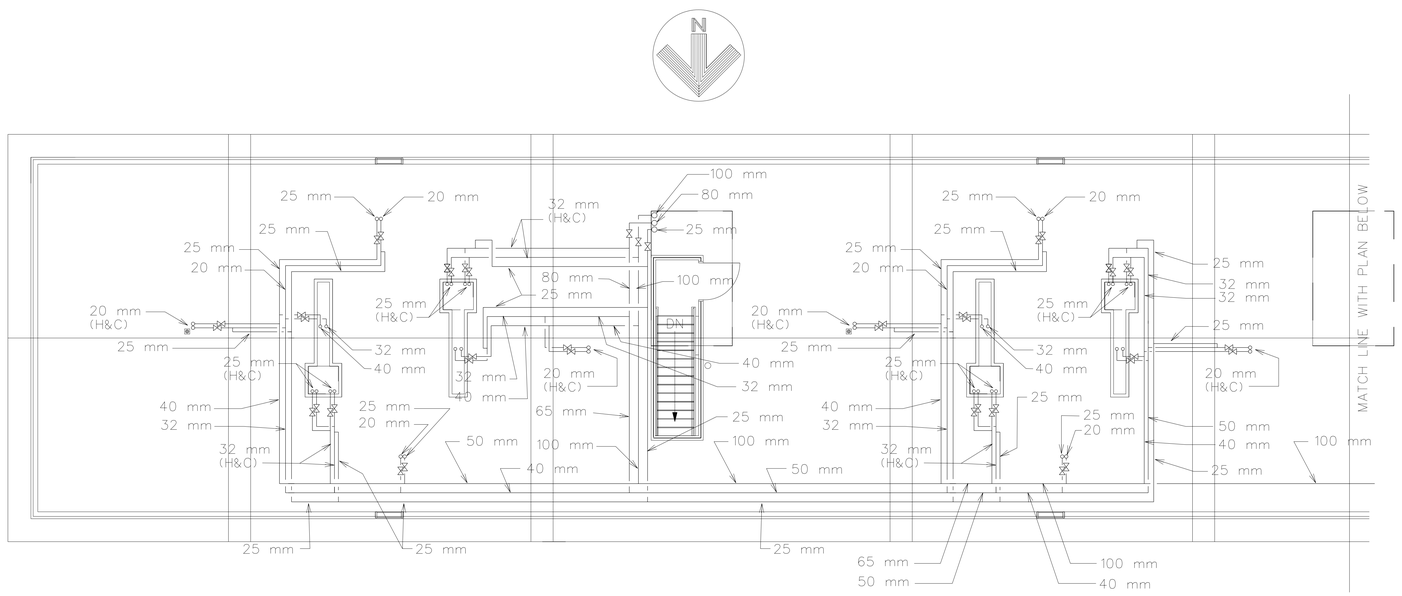
BARRACKS - 96 PERSONNEL

PLUMBING - WATER
(2ND & 3RD FLOOR PLANS)

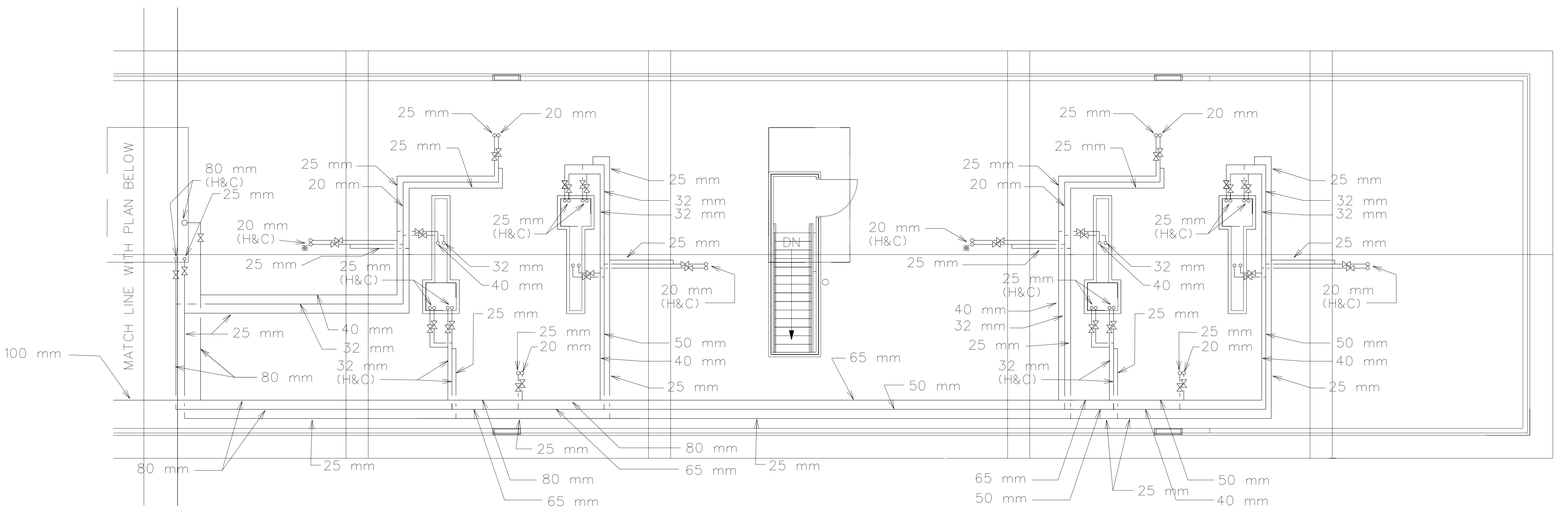
PLATE REFERENCE NUMBER:
MP-6

SHEET 253

DESIGN FILE: DGNSPEC$$$$$



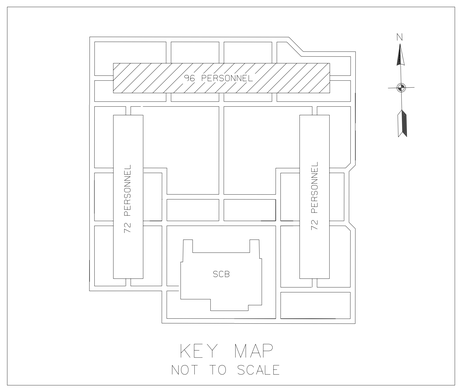
PARTIAL ATTIC FLOOR PLAN (WATER)
SCALE: 1:100



PARTIAL ATTIC FLOOR PLAN (WATER)
SCALE: 1:100

NOTES:

1. SEE PLATE MP-10 FOR RISER DIAGRAMS
2. PIPE MOUNTING HEIGHTS IN ATTIC SHALL BE 3.0M MINIMUM ABOVE FINISHED FLOOR WHERE POSSIBLE DUE TO ROOF SLOPE, OTHERWISE PIPE MOUNTING HEIGHTS SHALL BE LOCATED HIGH NEAR UNDERSIDE OF ATTIC ROOF. PROVIDE RACK SUPPORTS FOR MULTIPLE RUNS OF PIPING LOCATED DIRECTLY ADJACENT TO EACH OTHER.
3. SEE PLATES MP-1 AND MP-2 FOR GENERAL NOTES.



KEY MAP
NOT TO SCALE

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

NOTE: ALL UNITS ARE IN MILLIMETERS (mm) UNLESS OTHERWISE INDICATED.

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99	REV.
CATEGORY CODE 721-11-12	
SOLICITATION NO: DACA21-99-B-0034	
PLOT DATE: $$DATE$$$$$	
PLOT SCALE:	

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

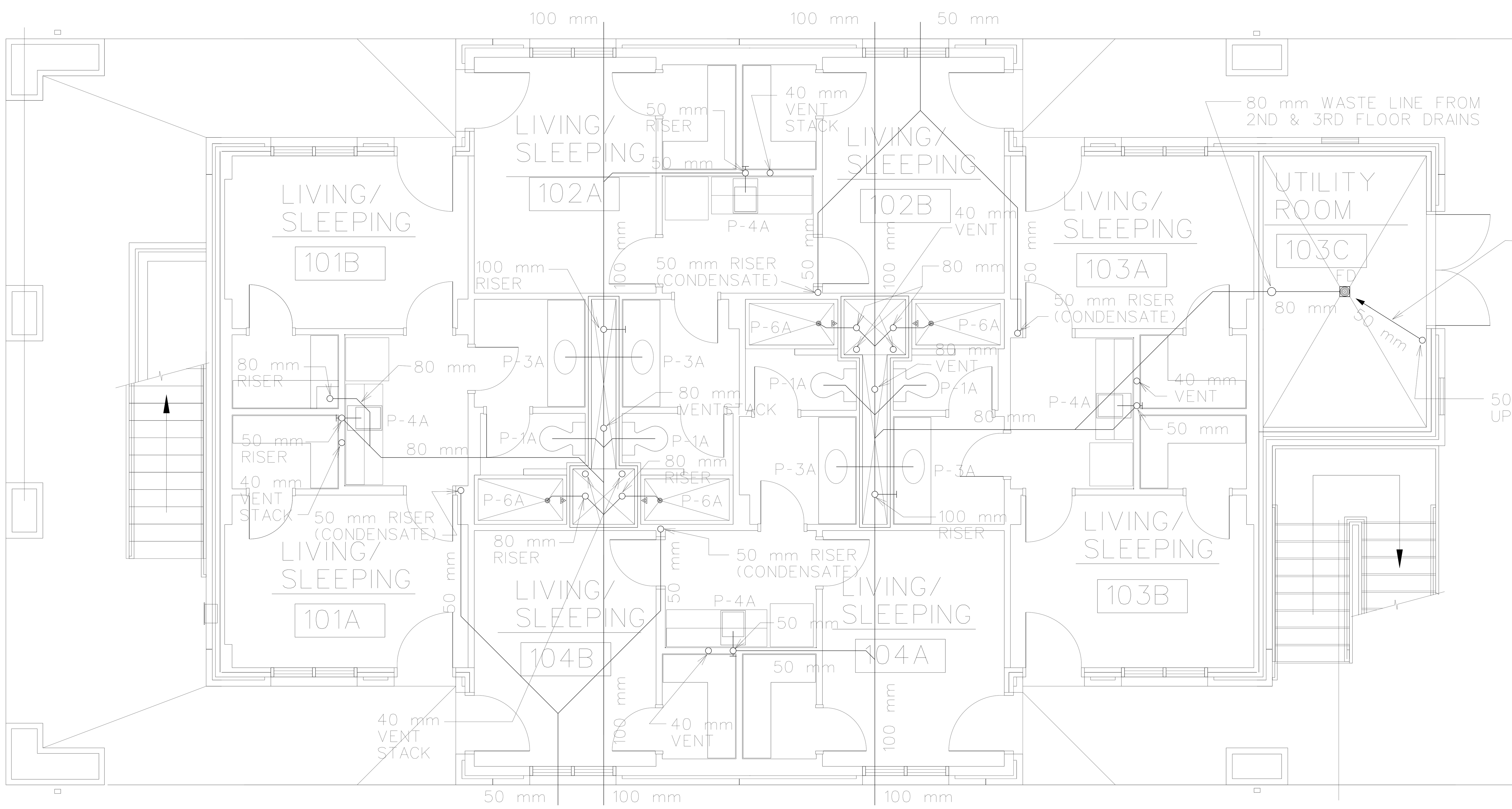
BARRACKS - 96 PERSONNEL

PLUMBING - WATER
(ATTIC FLOOR PLAN)

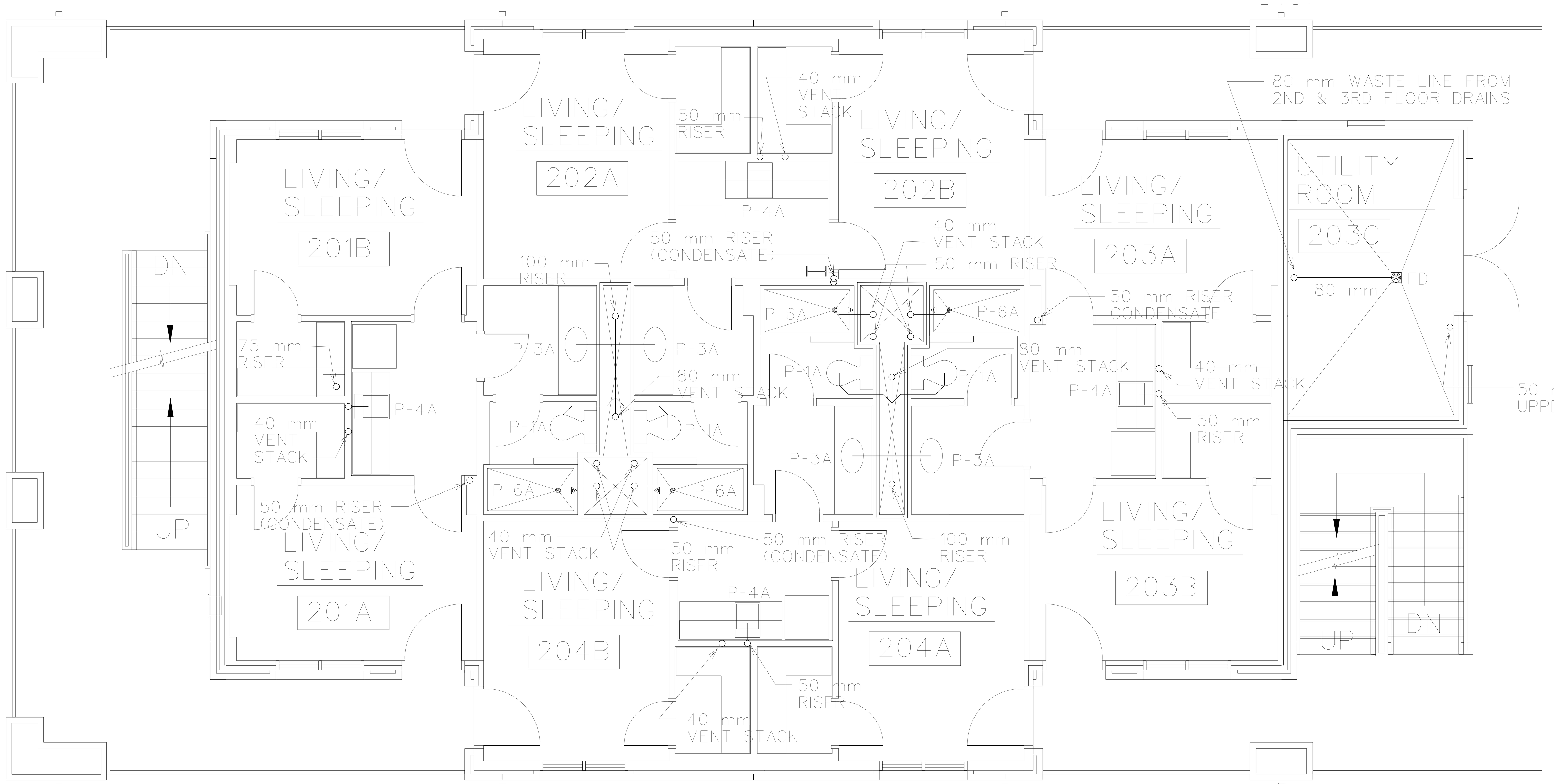
PLATE REFERENCE NUMBER:
MP-7

SHEET 254

DESIGN FILE: DGNSPEC$$$$$



ENLARGED CLUSTER FLOOR PLAN (SANITARY SEWER)
(1ST FLOOR PLAN SHOWN, OTHER 1ST FLOOR CLUSTERS SIMILAR))
SCALE: 1:50



ENLARGED CLUSTER FLOOR PLAN (SANITARY SEWER)
(2ND FLOOR PLAN SHOWN, OTHER 2ND & 3RD FLOOR CLUSTERS SIMILAR))
SCALE: 1:50

NOTES:

1. SEE PLATES MP-1 AND MP-2 FOR GENERAL NOTES.

2. SEE RISER DIAGRAMS AND FIXTURE SCHEDULE FOR ADDITIONAL PIPE SIZES.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
PLUMBING - ENLARGED FL. PLANS - SANITARY SEWER

AS-BUILT

PLATE REFERENCE NUMBER:
MP-8
SHEET 255

DESIGN FILE: DGNSPEC$$

SB_DGN\BARRACKS96\G1P08SPD.DGN

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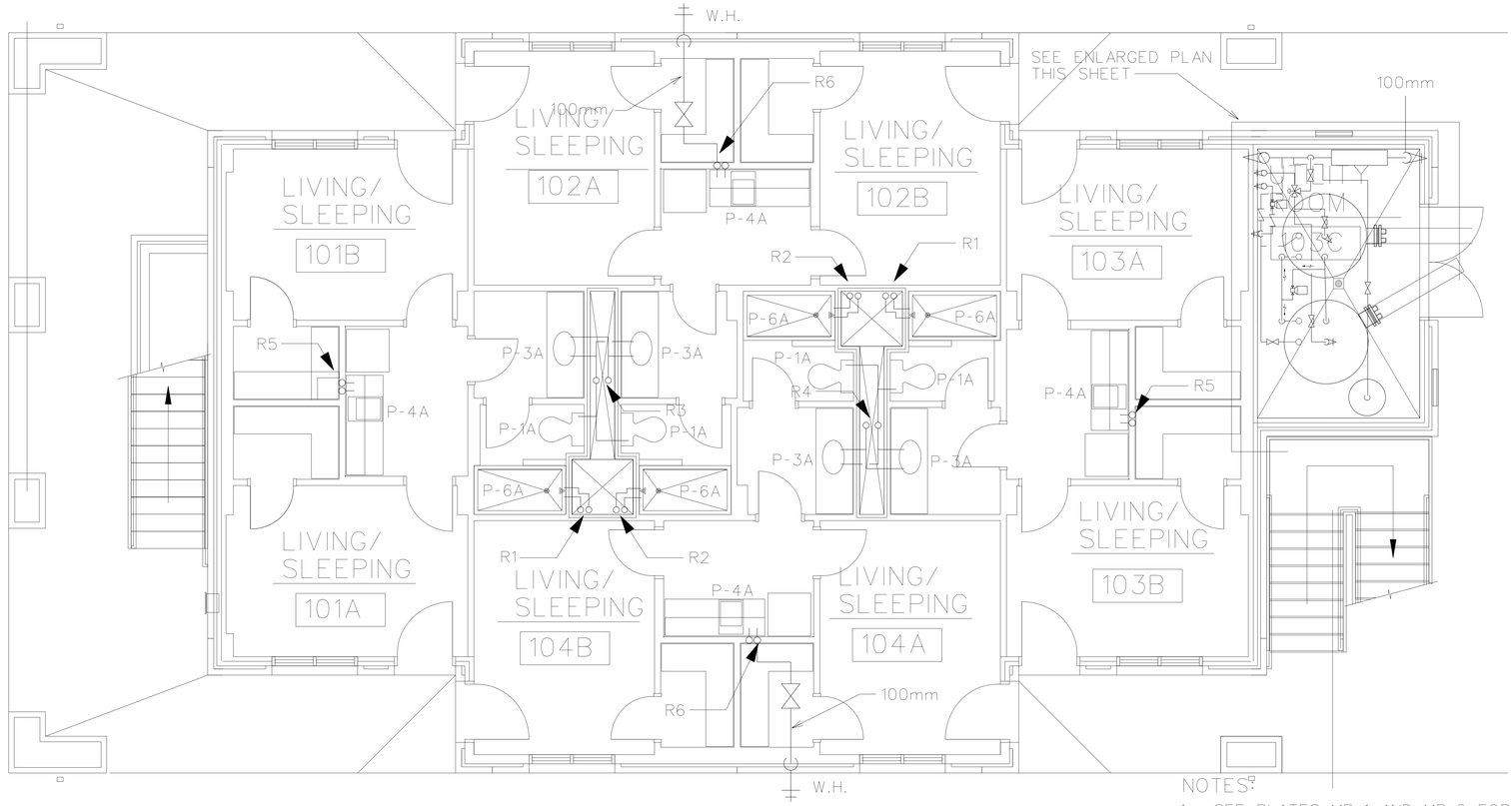
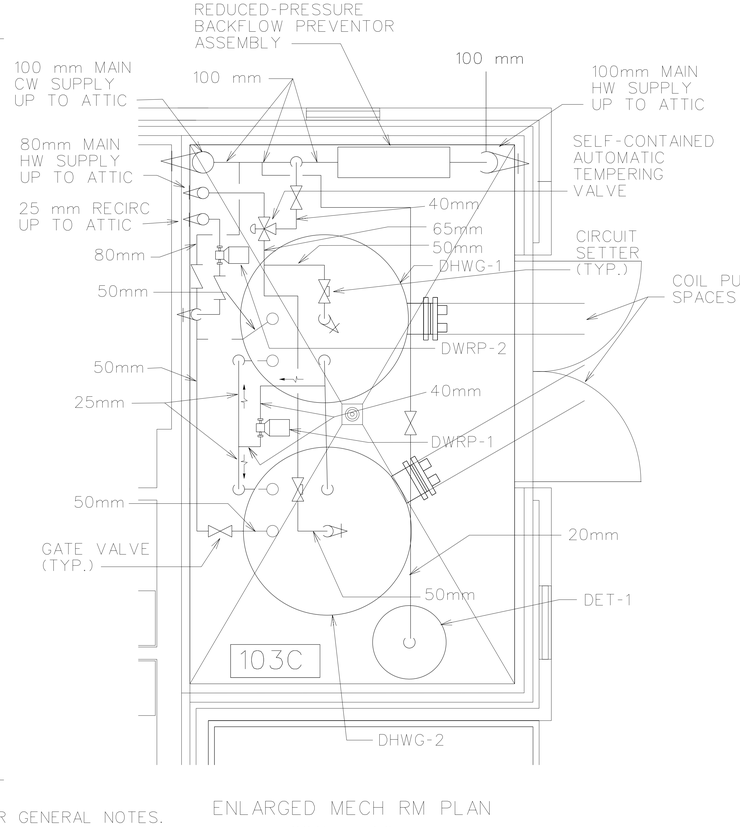


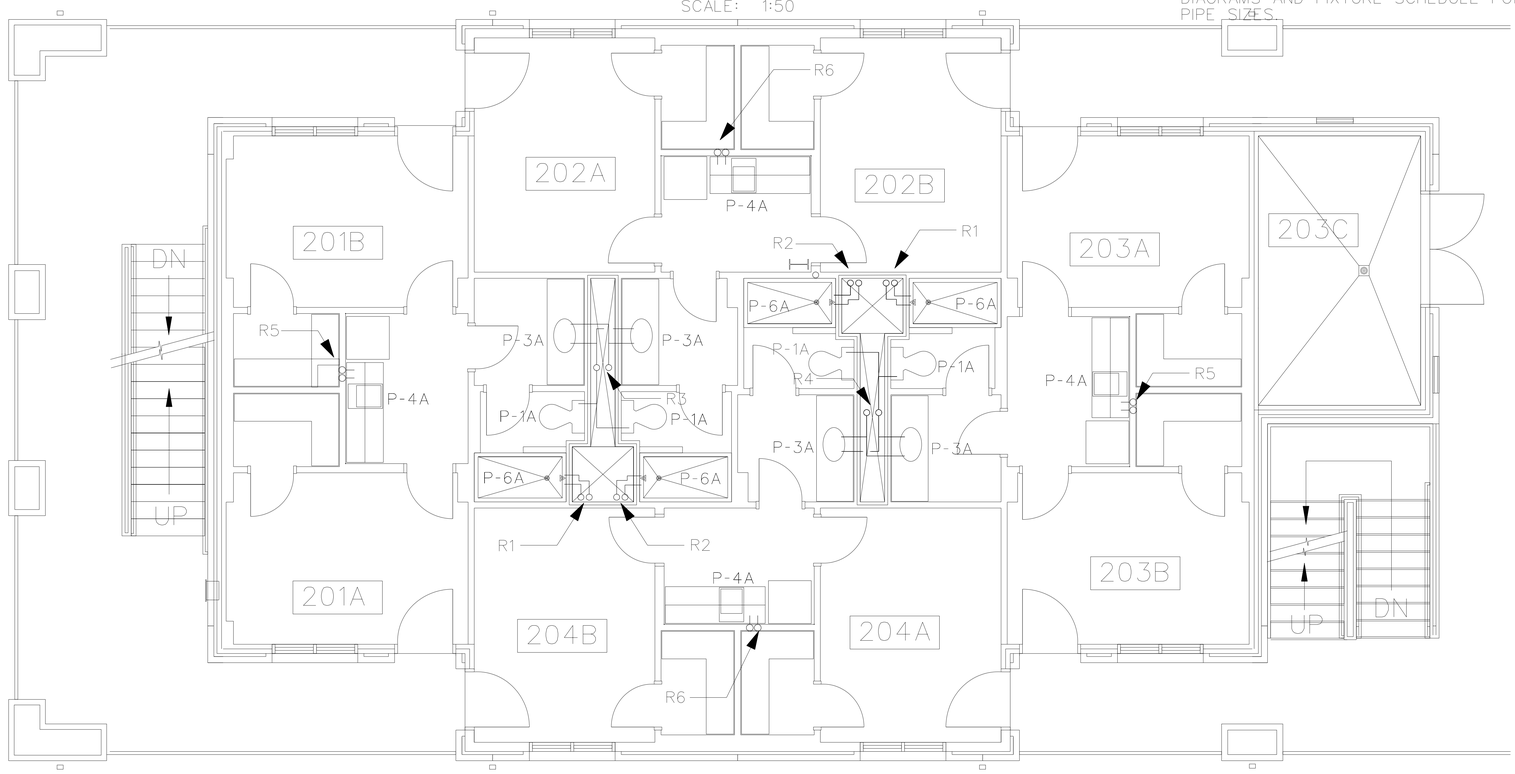
ENLARGED CLUSTER FLOOR PLAN (WATER)
(1ST FLOOR PLAN SHOWN, OTHER 1ST FLOOR CLUSTERS SIMILAR))
SCALE: 1:50

NOTES:

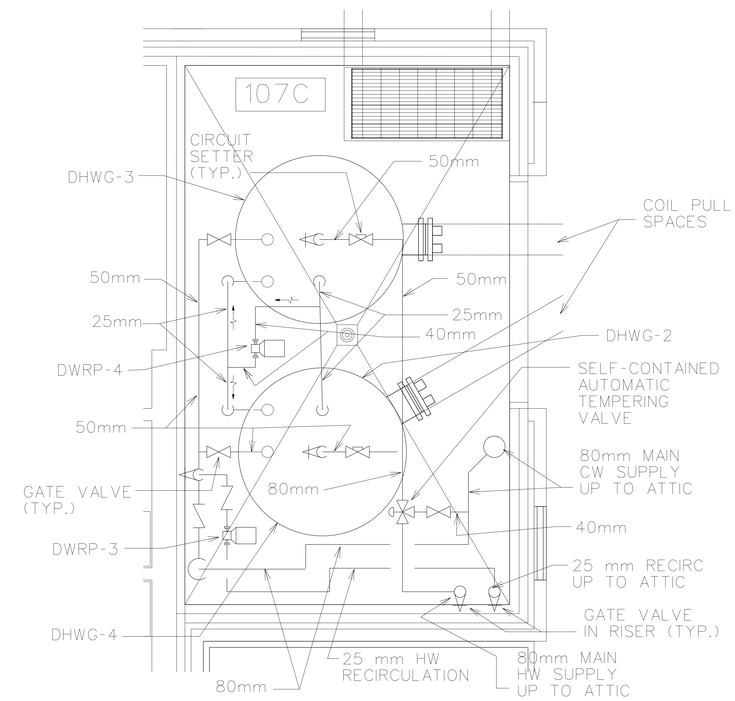
1. SEE PLATES MP-1 AND MP-2 FOR GENERAL NOTES.
2. SEE PLATES M-1 & M-10 FOR RISER DIAGRAMS AND FIXTURE SCHEDULE FOR PIPE SIZES.



ENLARGED MECH RM PLAN
SCALE: 1:25



ENLARGED CLUSTER FLOOR PLAN (WATER)
(2ND FLOOR PLAN SHOWN, OTHER 2ND & 3RD FLOOR CLUSTERS SIMILAR))
SCALE: 1:50



ENLARGED MECH RM PLAN
SCALE: 1:25

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

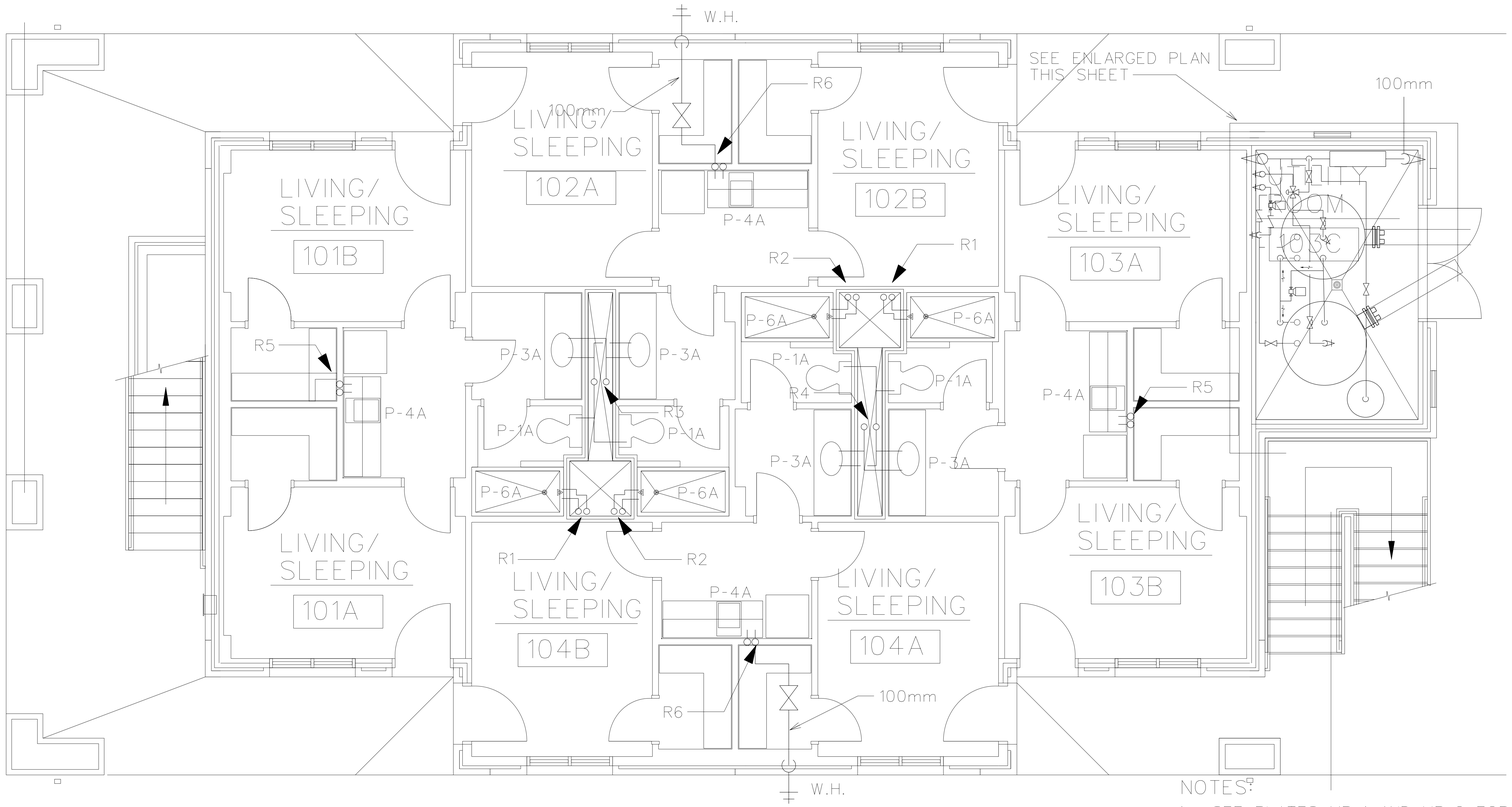
SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
PLUMBING - ENLARGED FL. PLANS - WATER

PLATE REFERENCE NUMBER:
MP-9
SHEET 256

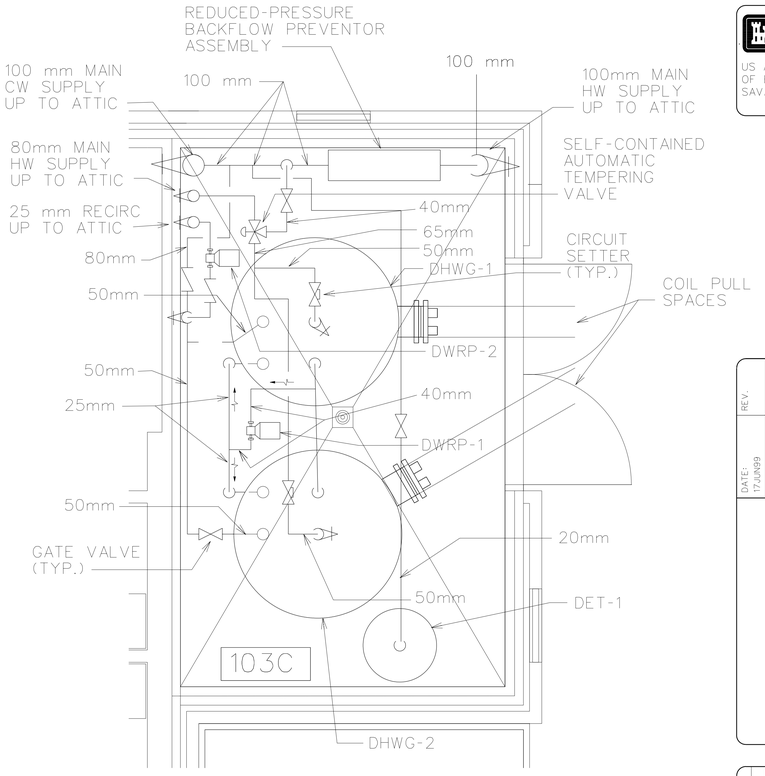
DESIGN FILE: DGN\SPEC$$$$$



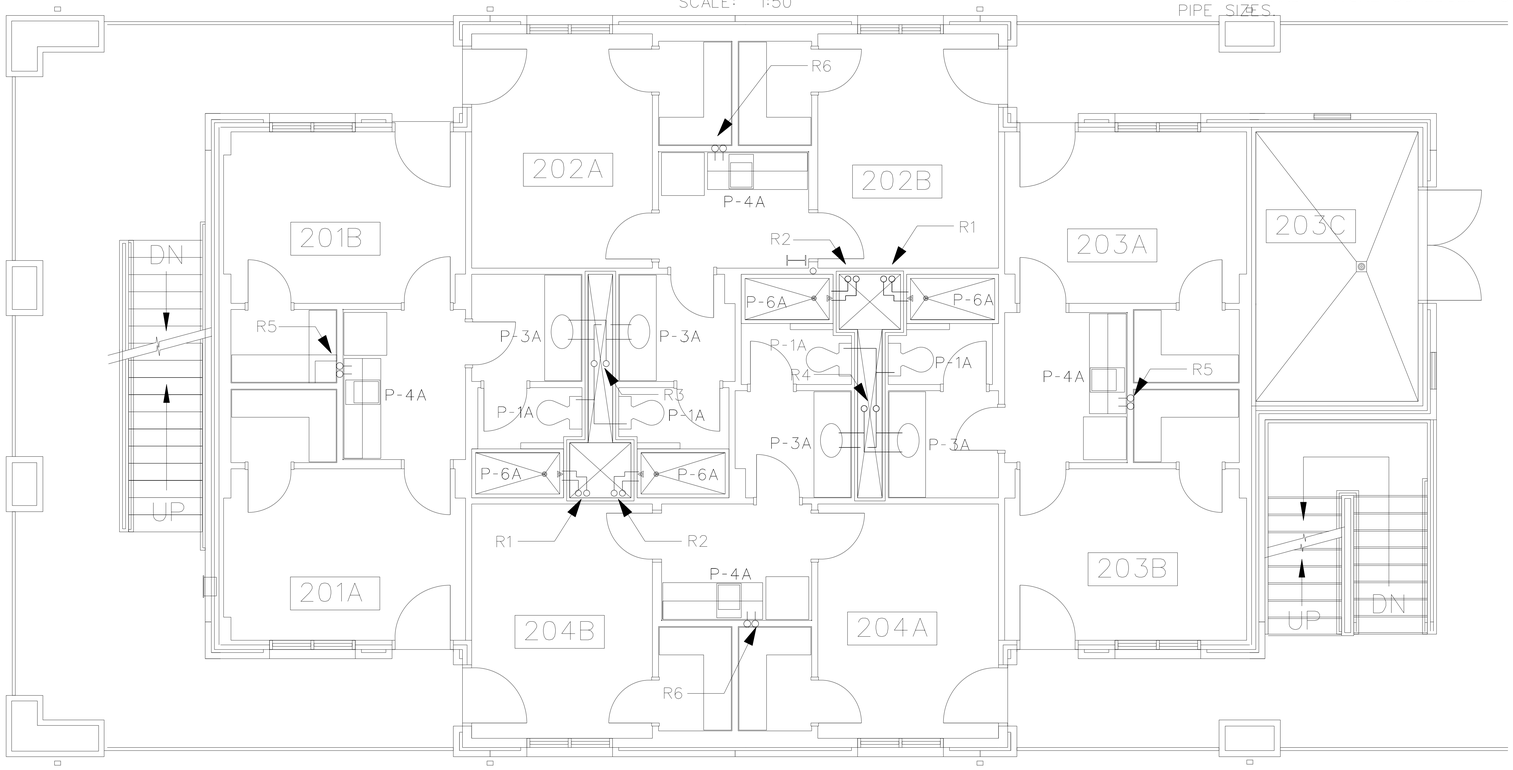
ENLARGED CLUSTER FLOOR PLAN (WATER)
(1ST FLOOR PLAN SHOWN, OTHER 1ST FLOOR CLUSTERS SIMILAR))
SCALE: 1:50

NOTES:

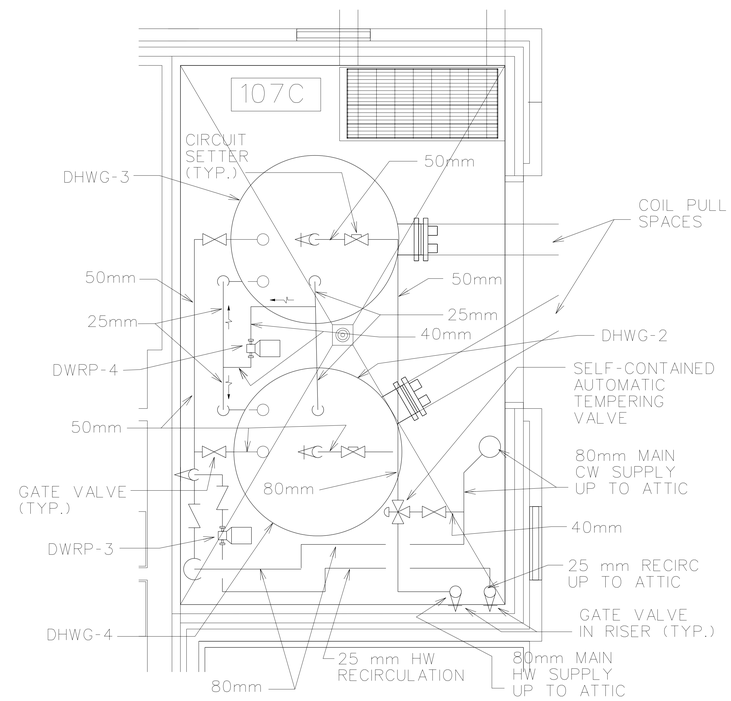
1. SEE PLATES MP-1 AND MP-2 FOR GENERAL NOTES.
2. SEE PLATES M-1 & M-10 FOR RISER DIAGRAMS AND FIXTURE SCHEDULE FOR PIPE SIZES.



ENLARGED MECH RM PLAN
SCALE: 1:25



ENLARGED CLUSTER FLOOR PLAN (WATER)
(2ND FLOOR PLAN SHOWN, OTHER 2ND & 3RD FLOOR CLUSTERS SIMILAR))
SCALE: 1:50



ENLARGED MECH RM PLAN
SCALE: 1:25

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

REV.	DATE: 17JUN99	CATEGORY CODE 721-11-12	SOLICITATION NO: DACA21-99-B-0034	PLOT DATE: $$DATE$$$$
				PLOT SCALE:

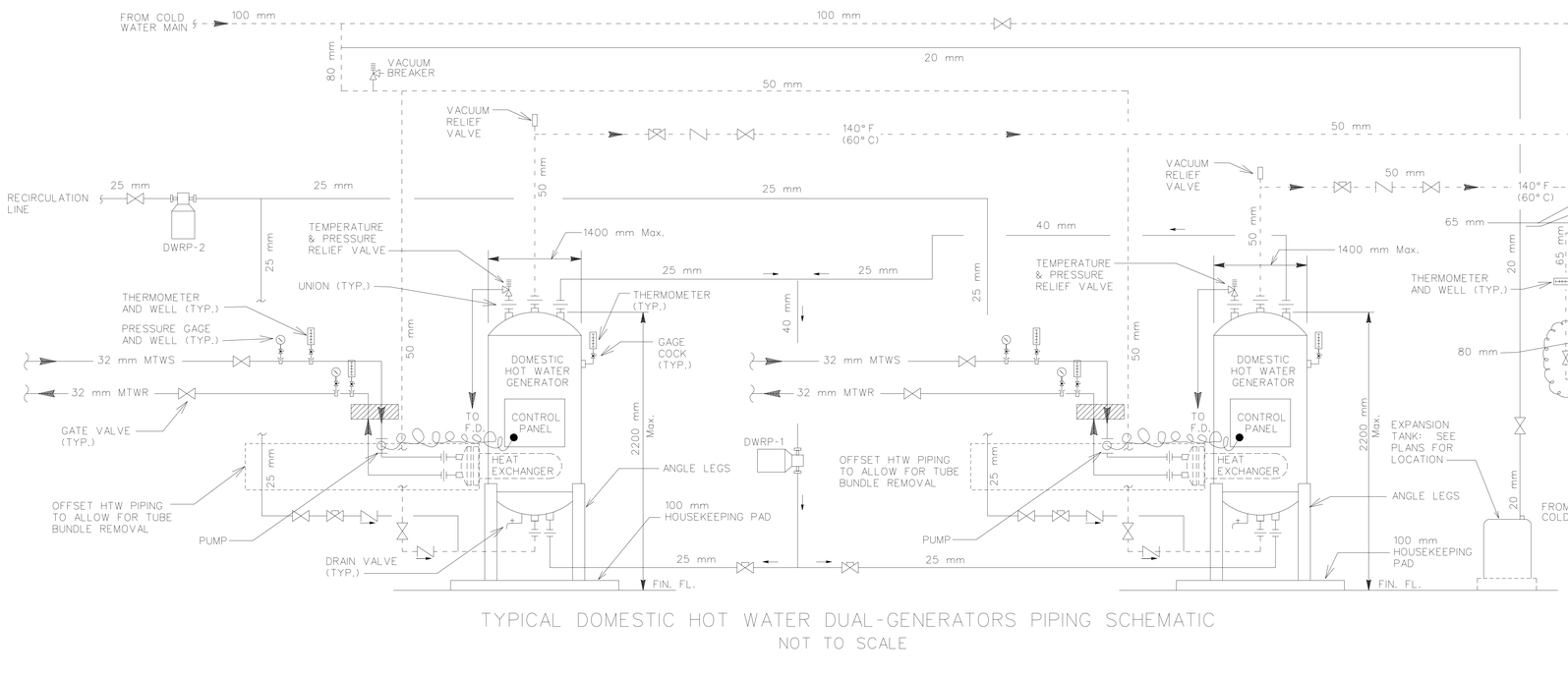
U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

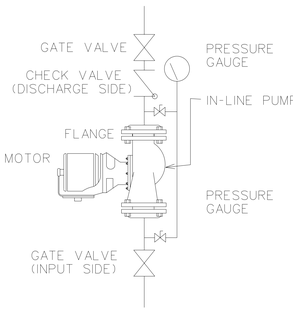
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
PLUMBING - ENLARGED FL. PLANS - WATER

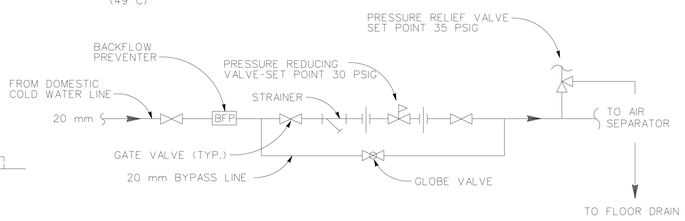
PLATE REFERENCE NUMBER:
MP-9
SHEET 256



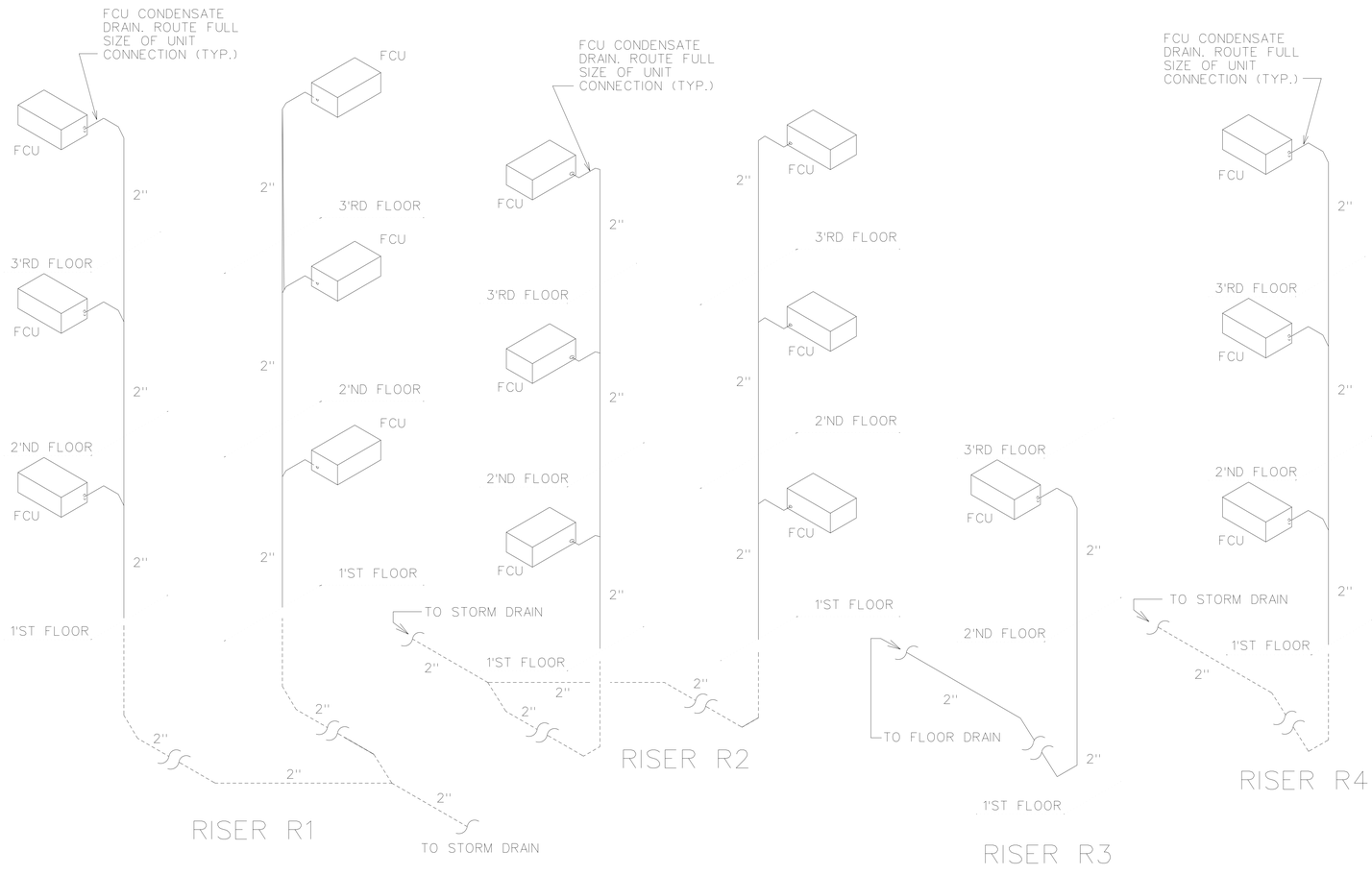
TYPICAL DOMESTIC HOT WATER DUAL-GENERATORS PIPING SCHEMATIC
NOT TO SCALE



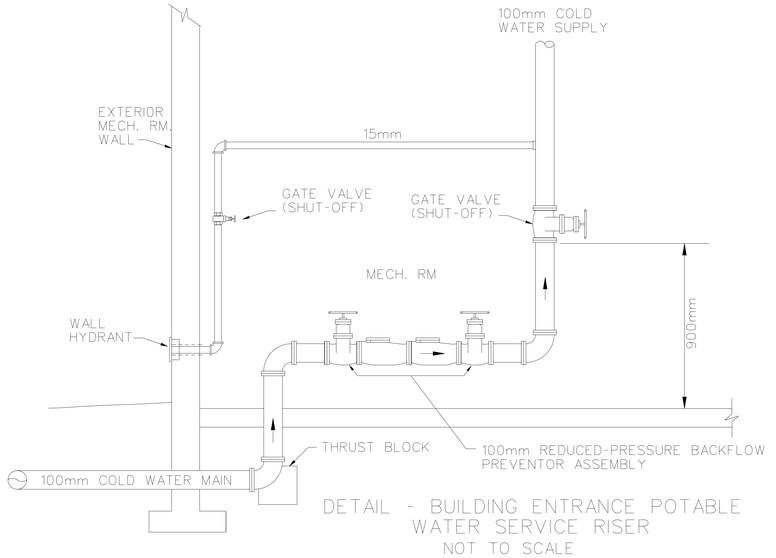
DETAIL - DOMESTIC HOT WATER RECIRCULATION PUMP
NOT TO SCALE



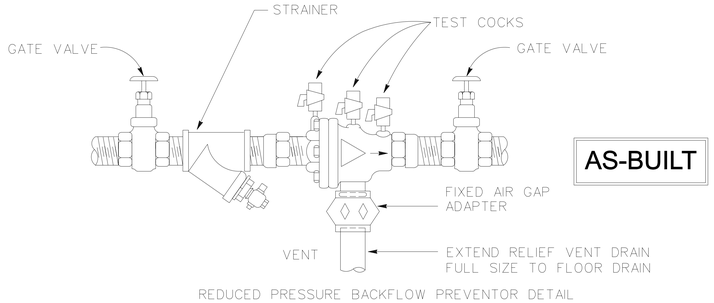
COLD WATER MAKE-UP LINE FOR MECHANICAL EQUIPMENT
NOT TO SCALE



TYPICAL FAN COIL UNIT CONDENSATE DRAIN RISER
NOT TO SCALE



DETAIL - BUILDING ENTRANCE POTABLE WATER SERVICE RISER
NOT TO SCALE



AS-BUILT

REDUCED PRESSURE BACKFLOW PREVENTOR DETAIL
NOT TO SCALE

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	REVISED PER AS-BUILT DRAWING	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
PLUMBING - DHW
SCHEMATIC AND DETAILS

PLATE REFERENCE NUMBER:
MP-11
SHEET 258

DESIGN FILE: DGNSPEC$$$$$

GENERAL NOTES

1. DESIGN LOADS:

ROOF LIVE LOADS:	ROOF	= 1 KN.M^2
FLOOR LIVE LOADS:	SLABS-ON-GRADE	= 7.2 KN.M^2
	STAIRWELLS	= 4.8 KN.M^2
	CORRIDORS	= 4.8 KN.M^2
	CLASSROOMS & STORAGE	= 4.8 KN.M^2
	MECHANICAL, ELECTRICAL, & ATTIC SPACE	= 4.8 KN.M^2
WIND LOADS:	REFERENCE: ASCE 7-95	
	VELOCITY	= 40 M/S
	I	= 1.0
	EXPOSURE	= C
SEISMIC LOADS:	ZONE	= 1
	Z	= 0.075
	C	= 2.75
	I	= 1.00
	R_W	= 8.0

2. WHERE A SECTION OR DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL APPLY TO ALL LIKE AND SIMILAR CONDITIONS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND DETAIL OF SIMPLE (SHEAR ONLY) CONNECTIONS NOT SHOWN ON THE DRAWINGS.
4. NO CORE DRILLING WILL BE PERMITTED IN THE FOUNDATION WALLS OR IN THE ELEVATED SLABS. REFER TO THE MECHANICAL, ELECTRICAL, AND PLUMBING PLATES TO LOCATE PENETRATIONS. THE PENETRATION LOCATIONS MUST BE SHOWN IN THE SHOP DRAWING SUBMITTALS.

CONCRETE NOTES

1. ALL CONCRETE WORK SHALL CONFORM TO ACI 318-89M REVISED 1992, BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
2. CONCRETE STRENGTH = 27.5 MPA AT 28 DAYS FOR CONCRETE MEMBERS INCLUDING FOOTINGS AND TRENCHES.
3. REINFORCING BARS SHALL CONFORM TO ASTM A615M, A184, A184M F_Y = 400 MPA.
4. ALL SPLICES SHALL BE CLASS "B" TENSION LAP SPLICES UNLESS NOTED OTHERWISE.
5. MINIMUM CONCRETE COVER FOR REINFORCING:

   FOOTINGS 80MM
   SLABS 40MM

6. VERTICAL FOUNDATION WALL REINFORCING DOWELS SHALL EXTEND INTO THE FOUNDATION WITH HOOKED BARS OF THE SAME SIZE AND SPACING AS THE VERTICAL REINFORCING.
7. SLABS-ON-GRADE SHALL INCLUDE FIBER MESH REINFORCING AS PRESCRIBED IN THE SPECIFICATIONS TO CONTROL SHRINKAGE.
8. DURING PLACEMENT OF THE CONCRETE SLABS, ALL PRECAUTIONARY STEPS MUST BE TAKEN TO AVOID PLASTIC CRACKS DUE TO WEATHER CHANGES. THE CONTRACTOR SHALL COMPUTE THE PROJECTED RATE OF EVAPORATION IN ACCORDANCE WITH ACI 308-92 AND DCAF BULLETIN 96-08 WITHIN 24 HOURS OF PLACEMENT. IF THE PROJECTED EVAPORATION RATE EXCEEDS THE MAXIMUM ALLOWABLE, THEN THE ERECTION OF SUNSHADES, WINDBREAKERS, AND OTHER SUCH MEASURES AS MAY BE REQUIRED MUST BE TAKEN TO MINIMIZE PLASTIC CRACK FORMATION.
9. THE BAR BENDING SCHEDULE FOR THE FOUNDATION MUST BE SUBMITTED FOR APPROVAL. THE BAR BENDING SCHEDULE SHALL CONFORM TO THE REQUIREMENTS OF ACI 315 AND SPECIFICATION SECTION 3307.

STRUCTURAL STEEL NOTES

1. ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) SPECIFICATIONS FOR DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS, NINTH EDITION, HEREINAFTER REFERRED TO AS AISC-9. THE SIZES OF STRUCTURAL MEMBERS SHALL BE GOVERNED BY ASTM A6M.
2. CONNECTIONS - GENERAL:
   A. ALL CONNECTIONS NOT DETAILED OR OTHERWISE NOTED SHALL BE DESIGNED AS AISC TYPE 2 BOLTED CONNECTIONS DESIGNED FOR THE FULL LOAD CAPACITY OF THE CONNECTING MEMBERS.
   B. THE DESIGN AND DETAILING OF ALL CONNECTIONS SHALL CONFORM TO THE AISC SPECIFICATION CONTAINED IN AISC-9.
3. MATERIAL SPECIFICATION FOR ROLLED SECTIONS, PLATES, AND FLAT BAR STRUCTURAL STEEL SHALL CONFORM TO ASTM A 572A 572M (GRADE 50), UNLESS NOTED OTHERWISE. TUBULAR STEEL SECTIONS SHALL CONFORM TO ASTM A500 (GRADE B).
4. MINIMUM WELD SIZE FOR STRUCTURAL STEEL CONNECTIONS IS 5MM FILLET, UNLESS NOTED OTHERWISE.
5. THIS STRUCTURE IS CONSIDERED A NON-SELF-SUPPORTING BRACED FRAME. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SUPPORTS UNTIL ALL PERMANENT BRACING AND FLOOR SLABS ARE IN PLACE.

FOUNDATION NOTES

1. REFERENCE ELEVATION 100M IS THE ASSUMED FIRST FLOOR FINISHED ELEVATION WITHIN S PLATES. SEE CIVIL PLATES FOR ACTUAL FIRST FLOOR FINISHED ELEVATION.
2. CONSTRUCTION JOINTS IN CONTINUOUS FOOTINGS ARE TO BE FORMED VERTICALLY WITH MINIMUM 550MM LAPS IN CONTINUOUS REINFORCING UNLESS NOTED OTHERWISE.
3. PLACE VAPOR BARRIER AND 100MM CAPILLARY WATER BARRIER UNDER ALL SLABS-ON-GRADE (TYPICAL).
4. CONCRETE FLOOR SLAB-ON-GRADE MAY BE PLACED IN EITHER A CHECKERBOARD PATTERN OR IN LANES. SPACING OF JOINTS SHALL BE AS SHOWN ON THE FOUNDATION PLAN. IN EITHER CASE, PRE-FORMED JOINTS ARE REQUIRED.
5. ALL FLOOR ISOLATION JOINTS SHALL BE NO. 30 FELT.
6. FILL ALL CMU CAVITIES BELOW GRADE WITH GROUT.
7. THE ALLOWABLE SOIL BEARING CAPACITY IS 120 KN.M^2.

LIGHT GAGE TRUSS AND FRAMING NOTES

1. ROOF LAYOUT AND COMPONENTS SHOWN ON THE DRAWINGS ARE FOR GENERAL CONFIGURATION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DIMENSIONS, ELEVATIONS CONNECTION DETAILS, QUANTITIES, ETC. NECESSARY FOR THE COMPLETE DESIGN, FABRICATION, AND ERECTION OF THE METAL ROOF FRAMING SYSTEM. THE CONTRACTOR SHALL COORDINATE THE DESIGN WITH THE ARCHITECTURAL PLANS, ELEVATIONS, AND DETAILS.
2. LIGHT GAGE TRUSS AND FRAMING MEMBERS SHALL BE DESIGNED IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE (AISI) SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS.
3. ALL CALCULATIONS AND DRAWINGS USED IN THIS DESIGN MUST BE SIGNED AND STAMPED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF GEORGIA AND SUBMITTED TO THE GOVERNMENT FOR APPROVAL. IN ADDITION TO THE CALCULATIONS, THIS SUBMITTAL SHALL INCLUDE DETAILS OF CONNECTIONS, ERECTION PLAN, LAYOUT, OUTRIGGERS, HEADERS, BRIDGING, AND BOTH TEMPORARY AND PERMANENT BRACING.
4. THE CONTRACTOR SHALL SUBMIT COMPLETE PRODUCT CATALOGS FROM THE TRUSS MANUFACTURER FOR REVIEW PRIOR TO FABRICATION. THE CATALOGS SHALL INDICATE QUALIFICATIONS, MATERIAL SPECIFICATIONS, DESIGN REFERENCES, ETC.
5. ALL COLD-FORMED STEEL MEMBERS, THEIR COMPONENTS, AND CONNECTION MATERIAL SHALL BE HOT-DIPPED GALVANIZED.
6. ALL TOP CHORD MEMBERS SHALL HAVE A MINIMUM THICKNESS OF 1.5MM.

ABBREVIATIONS

ACI	=	AMERICAN CONCRETE INSTITUTE	NO.	=	NUMBER
AFF	=	ABOVE FINISHED FLOOR	O.C.	=	ON CENTER
AISC	=	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	OPP.	=	OPPOSITE
ASTM	=	AMERICAN SOCIETY FOR TESTING MATERIALS	KG.M^2	=	KILOGRAMS PER SQUARE METER
BRG	=	BEARING	PA	=	PASCAL ? UNIT OF PRESSURE
CMU	=	CONCRETE MASONRY UNIT	KPA	=	KILOPASCAL
CONC.	=	CONCRETE	P.E.J.	=	PREMOLDED EXPANSION JOINT
CONT.	=	CONTINUOUS	REINF.	=	REINFORCED, REINFORCING
C.J.	=	CONSTRUCTION JOINT	SIM.	=	SIMILAR

ABBREVIATIONS CONTINUED

DIA.	=	DIAMETER	SLV	=	SHORT LEG VERTICAL
EL.	=	ELEVATION	T.O.S.	=	TOP OF STEEL
E.W.	=	EACH WAY	TYP.	=	TYPICAL
FIN.	=	FINISHED	U.N.O.	=	UNLESS NOTED OTHERWISE
HORIZ.	=	HORIZONTAL, HORIZONTALLY	VERT.	=	VERTICAL
IN^3	=	INCHES CUBED	W/	=	WITH
IN^4	=	INCHES TO THE FOURTH POWER	X	=	BY
LLV	=	LONG LEG VERTICAL	W.P.	=	WORK POINT
MAX.	=	MAXIMUM	L	=	ANGLE
MIN.	=	MINIMUM			

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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	BY	DATE
	AS-BUILT DRAWING NO REVISION THIS SHEET	KJ	2 JUL 99
1	GENERAL REVISIONS	SRC	FEB2003

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

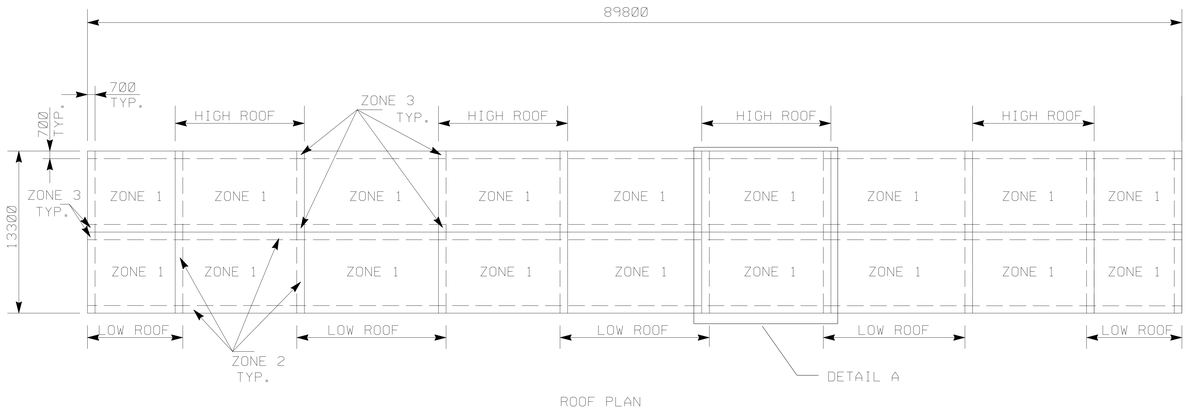
GENERAL NOTES

PLATE REFERENCE NUMBER:
S-1
SHEET 220

AS-BUILT

SAV-22148

DESIGN FILE: D:\NSPEC\$$$$$



ROOF PLAN

WIND PRESSURE DIAGRAM

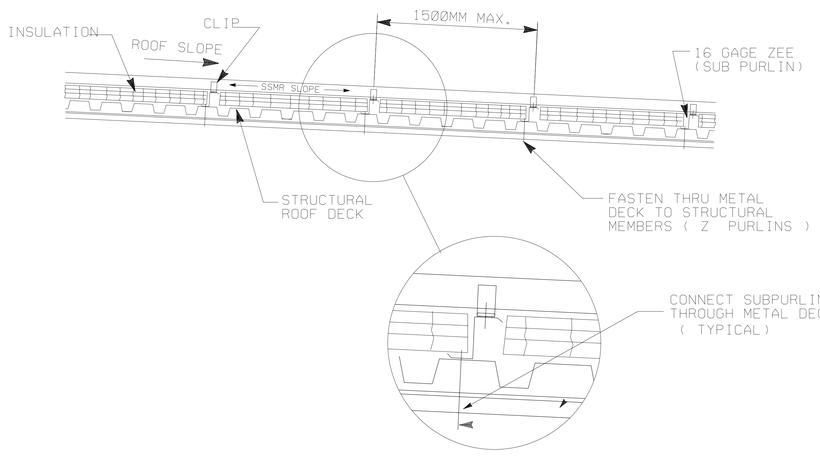
SCALE: NONE

LOAD CRITERIA:

1. ROOF LIVE LOADS = 1.0 KN/M²
2. WIND PRESSURE AT HEIGHT 10000 MM = 1.2 KN/M²
3. WIND LOAD FOR PARTS AND PORTIONS, SEE DIAGRAM ABOVE.
   - A. ROOF ELEMENT 1 SQ M OR LESS,
     - ZONE 1 = -1.436 KN/M² UPLIFT PRESSURE)
     - ZONE 2 = -2.490 KN/M² UPLIFT PRESSURE)
     - ZONE 3 = -3.735 KN/M² UPLIFT PRESSURE)
   - B. ROOF ELEMENT 10 SQ. M OR LESS
     - ZONE 1 = -1.293 KN/M² UPLIFT PRESSURE)
     - ZONE 2 = -1.532 KN/M² UPLIFT PRESSURE)
     - ZONE 3 = -1.532 KN/M² UPLIFT PRESSURE)
   - C. ROOF ELEMENT MORE THAN 10 SQ. M
     - ZONE 3 = -1.0 KN/M²

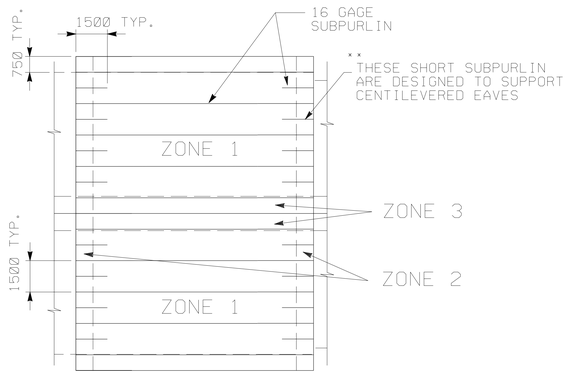
NOTES:

1. STRUCTURAL METAL ROOF DECK IS WELDED TO PURLINS.
2. STRUCTURAL METAL ROOF DECK IS DESIGNED AS A ROOF DIAPHRAM.
3. CONNECT SUBPURLIN TO PURLIN THROUGH METAL DECK.
4. SEE SPECIFICATION 07416 FOR SPECIFIC REQUIREMENTS
5. PROVIDE STANDING SEAM ROOF CLIPS AND SUBPURLINS AT MAX. DISTANCE OF 1500 MM.
6. IN ZONES 2 AND 3, PROVIDE SUBPURLINS AT A DISTANCE NOT TO EXCEED 750 MM O.C. REFER TO DETAIL "A" FOR THE HIGH ROOF AREA.



STANDING SEAM METAL ROOF CONNECTION DETAILS WITH SUBPURLINS

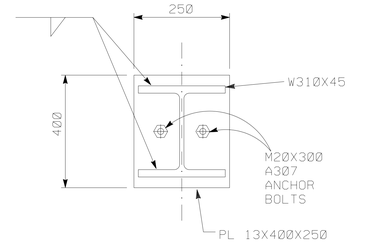
N.T.S.



DETAIL A
SUBPURLINS IN HIGH ROOF AREA

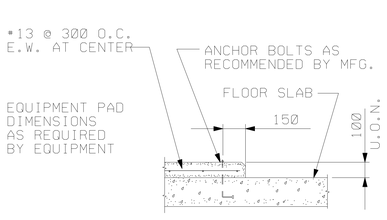
N.T.S.

** PROVIDE ADDITIONAL RAFTER @ 300MM FROM CENTER LINE OF THE COLUMN.



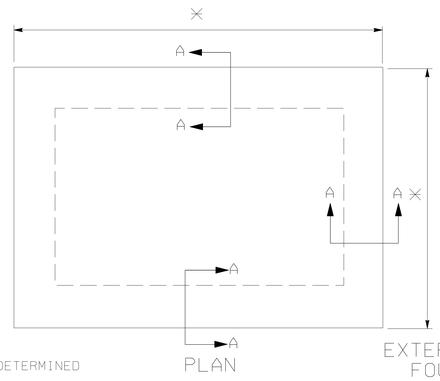
TYPICAL COLUMN BASE PLATE (1 / S2 | S10)

NOT TO SCALE



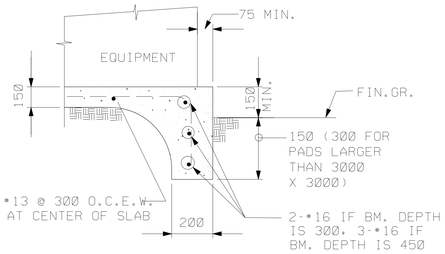
SECTION THRU INTERIOR EQUIPMENT PADS

NOT TO SCALE



PLAN

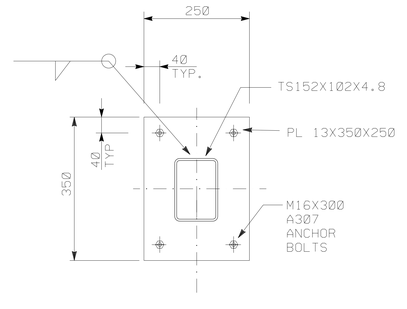
DIMENSION TO BE DETERMINED BY SIZE OF EQUIPMENT



A-A

EXTERIOR EQUIPMENT PAD FOUNDATION DETAILS

NOT TO SCALE



TYPICAL COLUMN BASE PLATE (2 / S2 | S11)

NOT TO SCALE

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

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REV.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

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	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL
GENERAL NOTES AND DETAILS

PLATE REFERENCE NUMBER: S-2

SHEET 221

AS-BUILT

SAV-22148

SB_DGN\BARRACKS96\G1S02GN2.DGN

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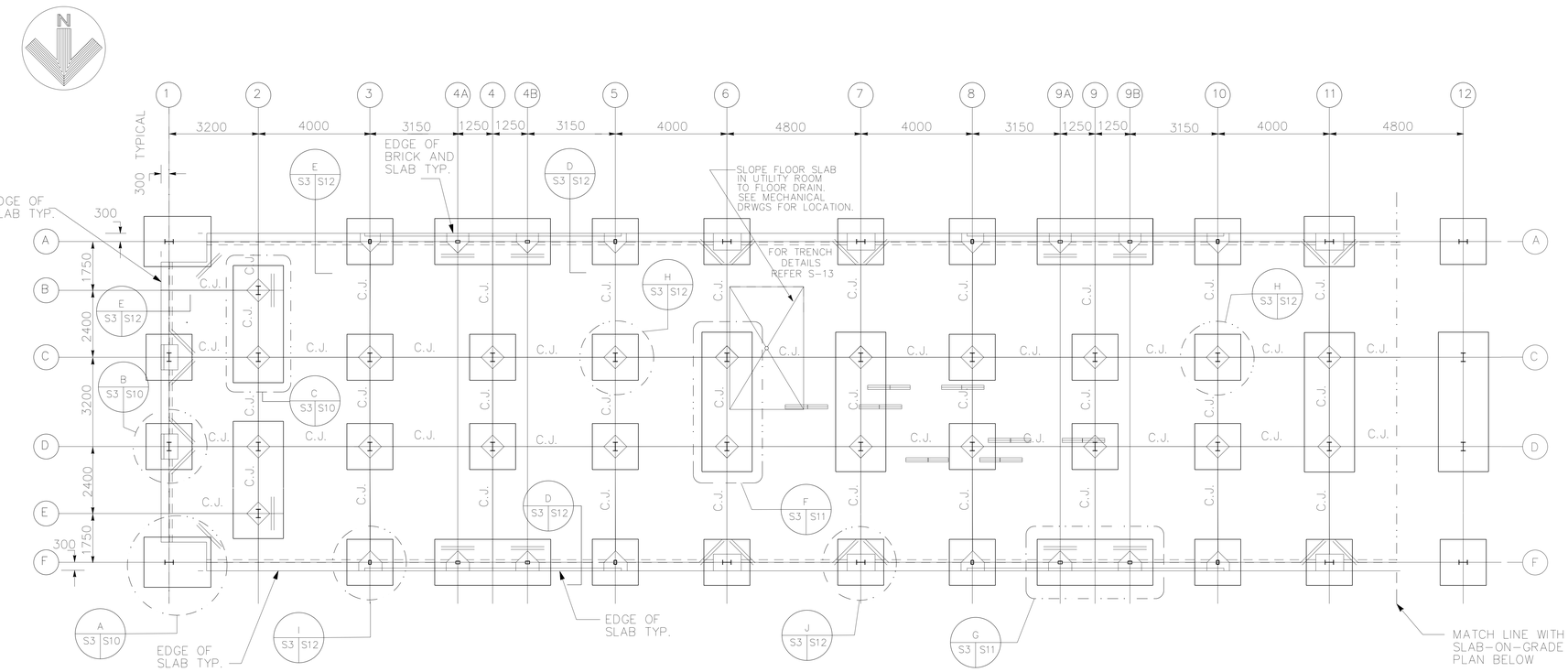
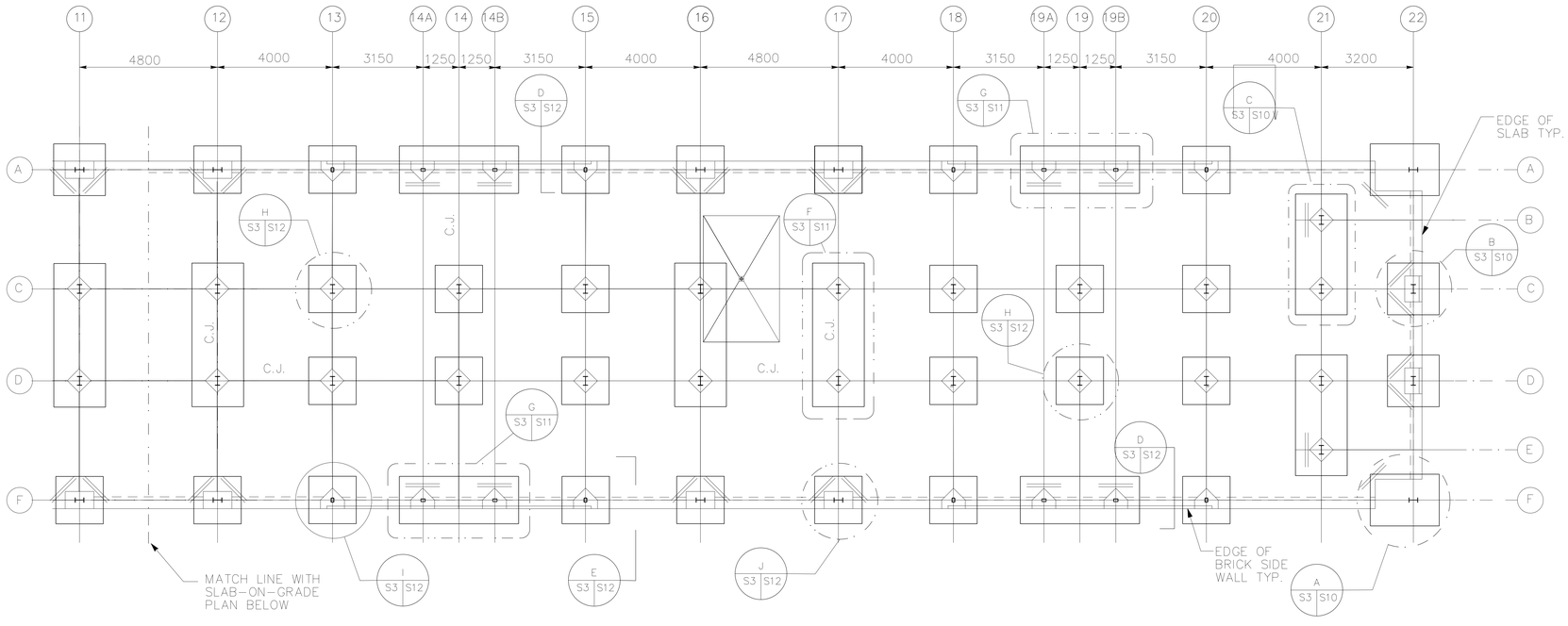


SLAB-ON-GRADE PLAN - LEFT END

SCALE: 1:100

NOTES:

1. FINISH FLOOR ELEVATION IS 100M (ASSUMED). FOR ACTUAL ELEVATION REFER TO CIVIL SITE PLAN.
2. ALL THE SLABS ON GRADE SHALL BE 100mm THICK AND FIBER REINFORCED, U.N.O.



SLAB-ON-GRADE PLAN - RIGHT END

SCALE: 1:100

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

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WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

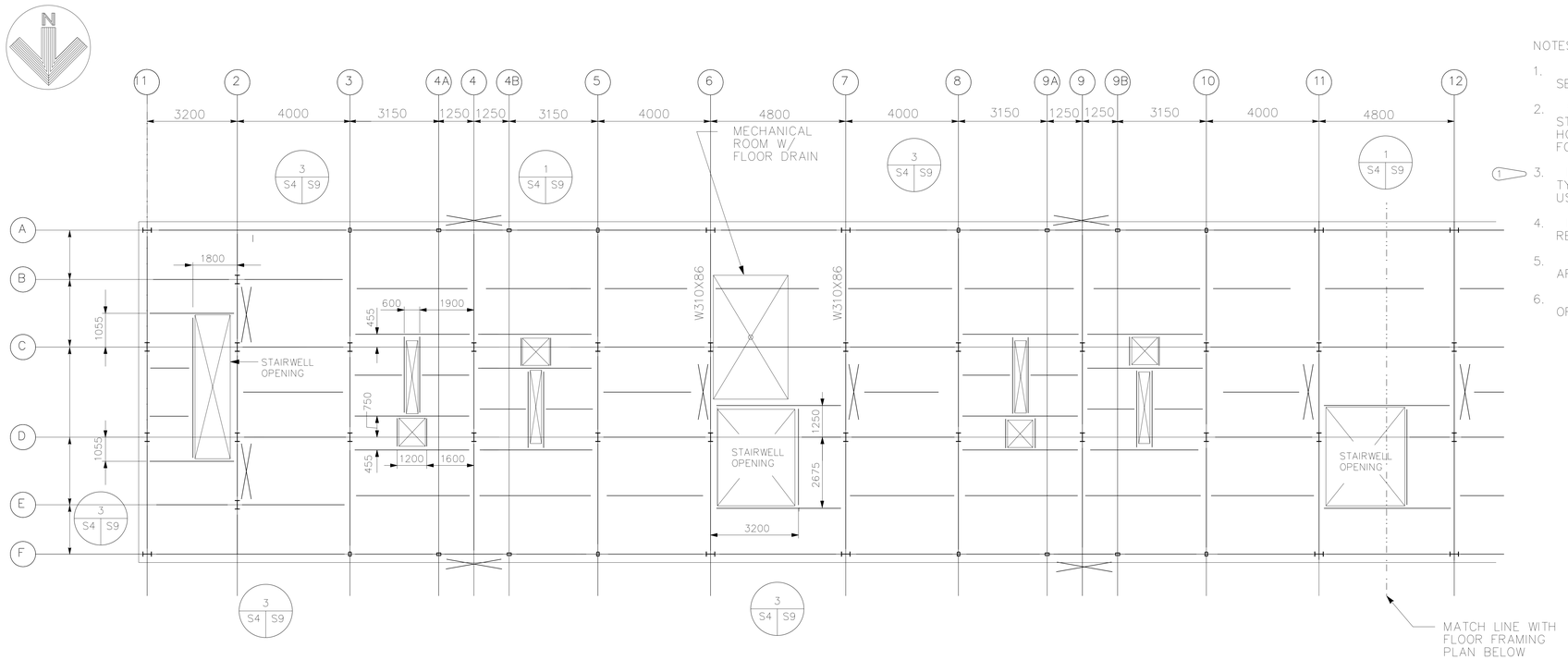
FOUNDATION PLAN

PLATE REFERENCE NUMBER:
S-3
SHEET 222

AS-BUILT

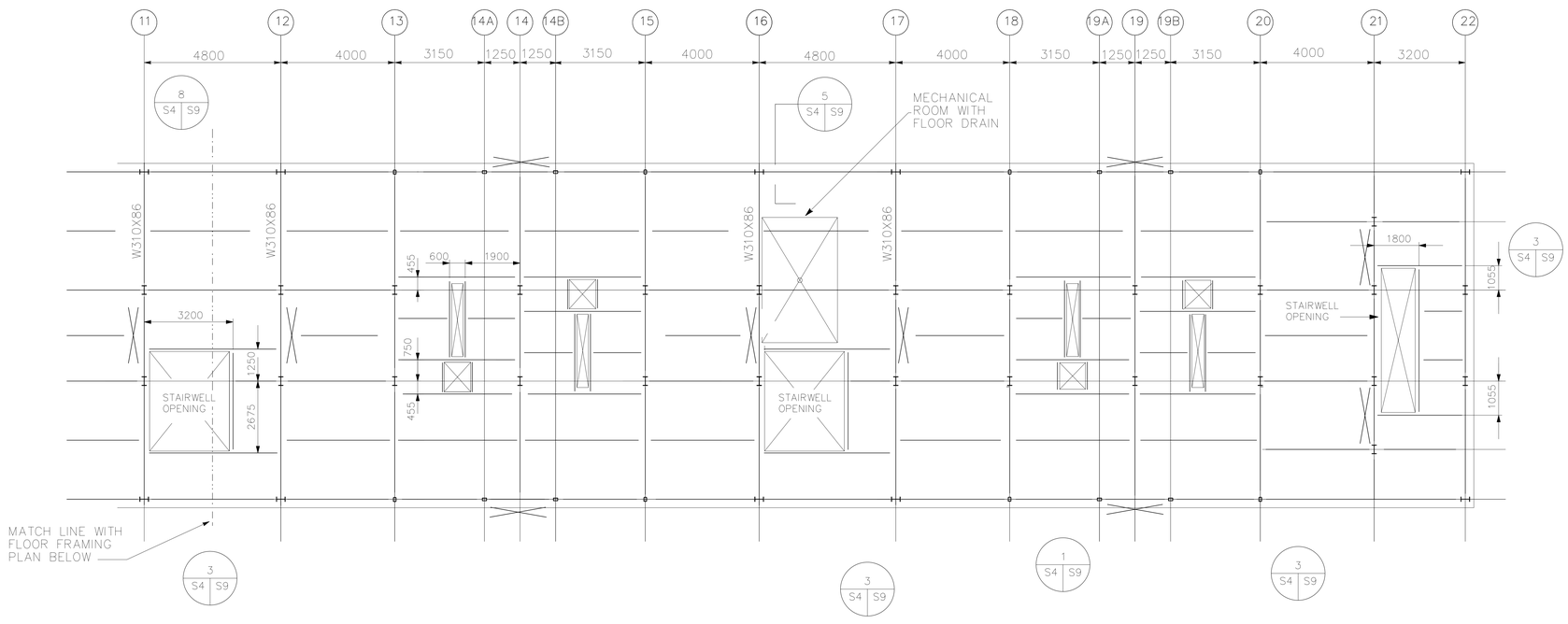
SAV-22148

DESIGN FILE: D:\NSPEC\$$$$$



1 2ND AND 3RD FLOOR FRAMING PLAN – LEFT END

SCALE: 1:100



1 2ND AND 3RD FLOOR FRAMING PLAN – RIGHT END

SCALE: 1:100

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

NOTES:

1. BALCONY SLAB SLOPED 13mm FROM WALL TO SLAB EDGE, TYPICAL. SEE SECTION 2 ON PLATE A-22 AND A-23 FOR DETAIL.
2. STAIR FRAMING IS TO BE DESIGNED AND PROVIDED BY THE FABRICATOR. STAIR FRAMING MAY BE ATTACHED TO THE BUILDING FRAMING SYSTEM. HOWEVER, CONNECTIONS TO THE FRAMING SYSTEM MUST BE SUBMITTED FOR APPROVAL TO THE STRUCTURAL DESIGN ENGINEER.
3. FLOOR SLABS FOR 2ND FLOOR, 3RD FLOOR, AND ATTIC SLABS ARE TYPICAL 100mm CONCRETE SLAB ON 38mm COMPOSITE FLOOR DECK. USE WWF 152x152MW18.7x18.7 IN ALL FLOOR SLABS.
4. FLOOR DRAINS ARE LOCATED IN THE ATTIC AND MECHANICAL ROOMS. REFER TO MECHANCAL PLATES.
5. ALL BEAMS AND COLUMNS ARE W310X45 U.N.O., ALL TUBULAR COLUMNS ARE TS152X102X4.8, ALL BRACING MEMBERS ARE TS152X102X4.8.
6. BEAMS SIZES OF W310X86 ARE PROVIDED TO ACCOMODATE HEAVY LOAD OF DRY CELLS (ELECTRICAL EQUIPMENT) IN THE TWO MECHANICAL ROOMS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

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1	GENERAL REVISIONS	2JUL99	KJ

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

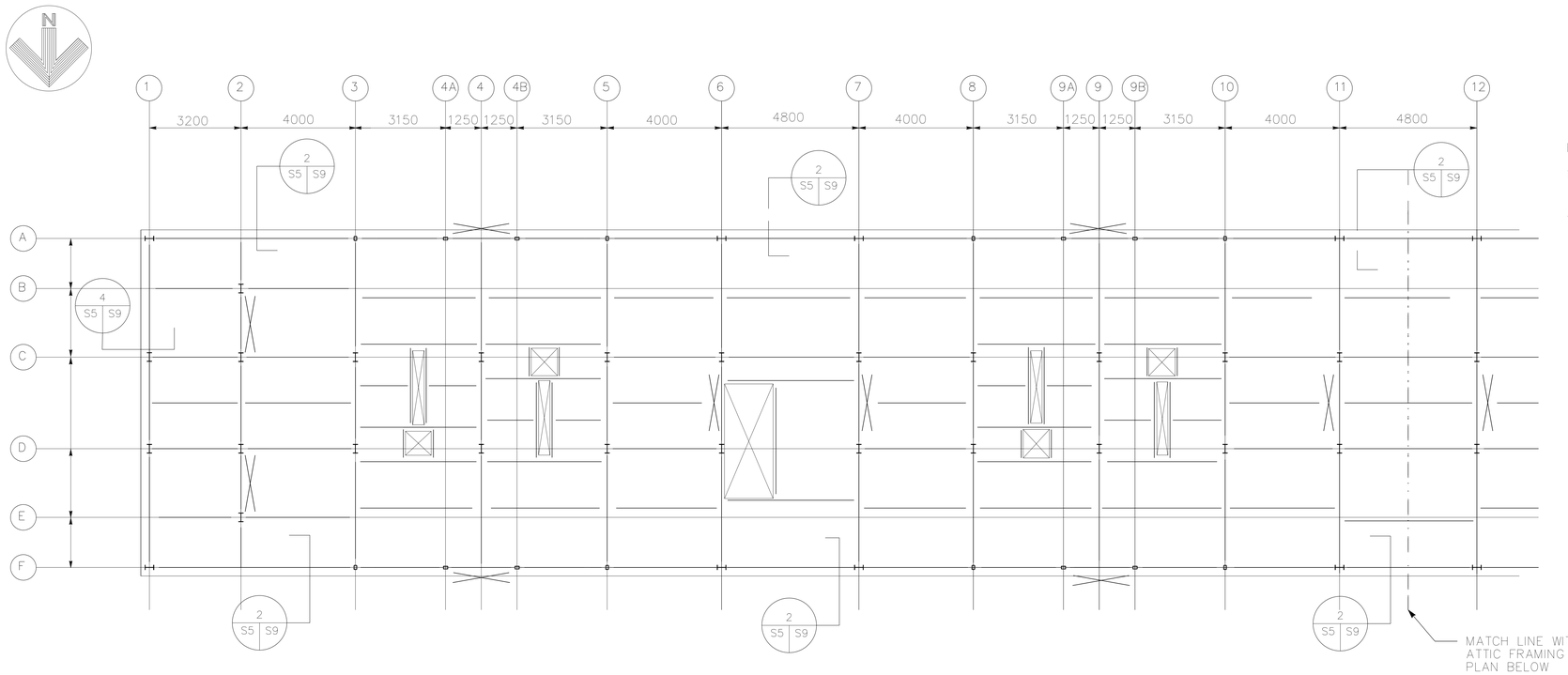
BARRACKS - 96 PERSONNEL
2ND & 3RD FLOOR FRAMING PLAN

PLATE REFERENCE NUMBER:
S-4
SHEET 223

AS-BUILT

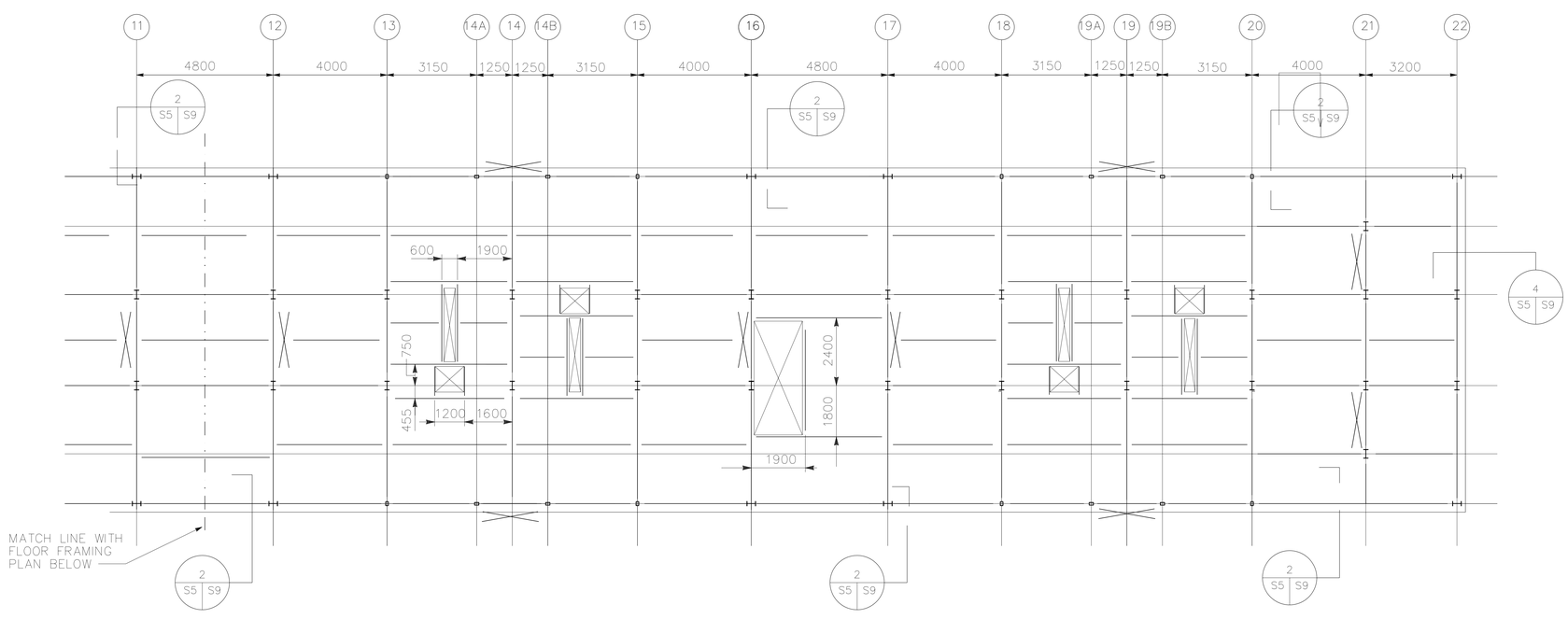
SAV-22148

DESIGN FILE: D:\NSPEC\$$$$$$



1 ATTIC FRAMING PLAN – LEFT END

SCALE: 1:100



1 ATTIC FRAMING PLAN – RIGHT END

SCALE: 1:100

2000 1000 0 2000 4000 6000 8000 10000

GRAPHIC SCALE 1:100

AS-BUILT

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99	REV.
CATEGORY CODE 721-11-12	
SOLICITATION NO: DACA21-99-B-0034	
PLOT DATE: $$DATE$$$$$$	
PLOT SCALE:	

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
1	GENERAL REVISIONS IN ACCORDANC WITH AMM #3	10DEC02	KJ

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS – 96 PERSONNEL

ATTIC FRAMING PLAN

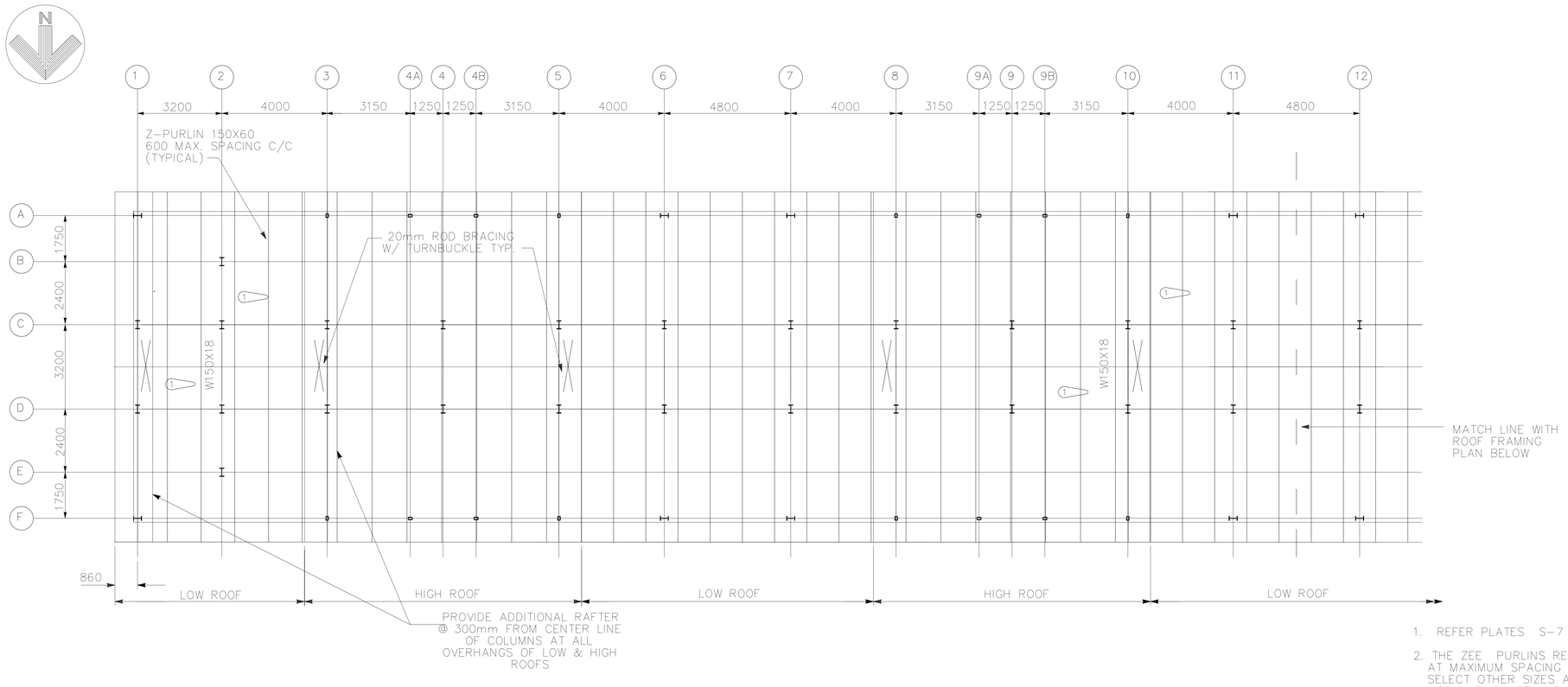
PLATE REFERENCE NUMBER:
S–5

SHEET 224

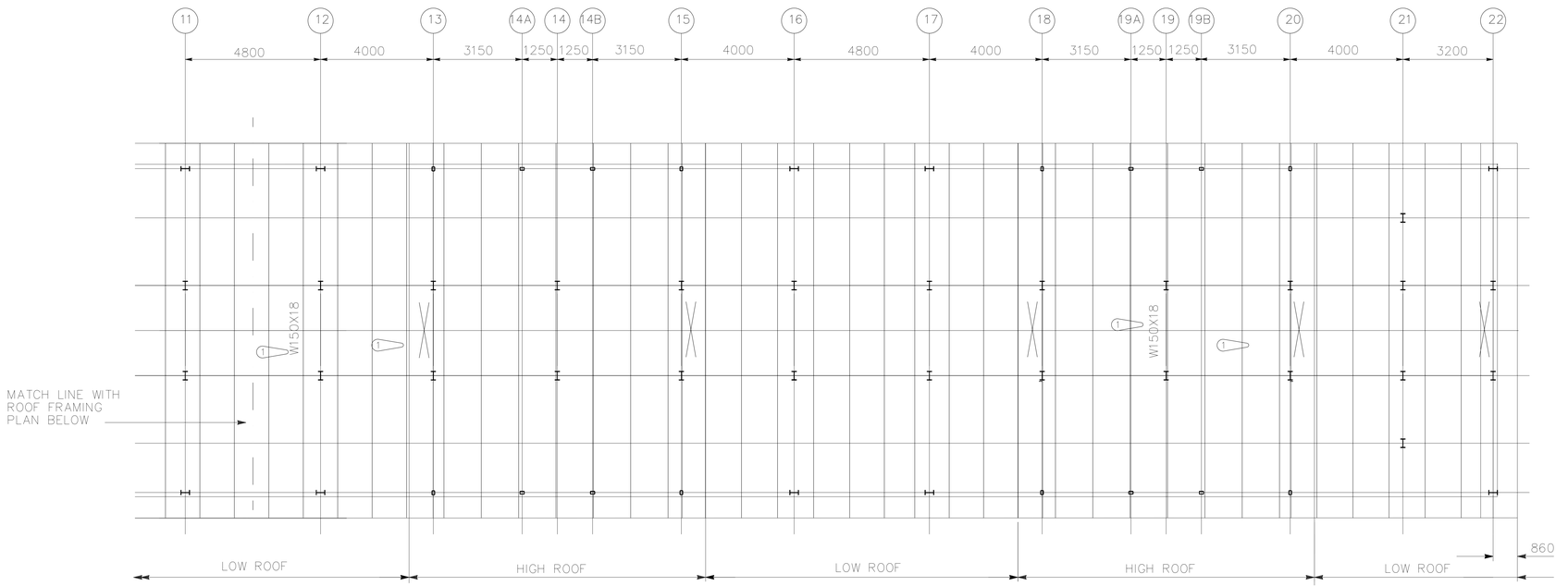
NOTES:

1. ALL BEAMS AND COLUMNS ARE W310X45 U.N.O., ALL TUBULAR COLUMNS ARE TS152X102X4.8, BRACING MEMBERS ARE TS152X102X4.8.
2. ALL THE DIMENSIONS GIVEN FOR THE LOCATION OF THE STEEL BEAMS FROM THE CENTER LINE OF COLUMNS ARE APPROXIMATE AND THEY MUST VERIFIED WITH ARCHITECTURAL DETAILS BEFORE INSTALLATION.

DESIGN FILE: DONSPEC$$$$$$



ROOF FRAMING PLAN – LEFT END



ROOF FRAMING PLAN – RIGHT END

1. REFER PLATES S-7 & S-8 FOR SECTIONS & STRUCTURAL MEMBER SIZES.
2. THE ZEE PURLINS RECOMMENDED FOR THE ROOF FRAMING ARE 150x60 AT MAXIMUM SPACING OF 600 C/C. THE CONTRACTOR HAS OPTION TO SELECT OTHER SIZES AND MEMBERS ALONG AS THE REQUIRED SECTION MODULUS IS MET AND SPACING DOES NOT EXCEED 600 C/C.
3. HEIGHT OF THE STUD WALL IS BASED ON 150 mm PURLIN. THE CONTRACTOR SHALL RECOMPUTE THE HEIGHT BASED ON THE SELECTED PURLIN SIZE AND THE WORK POINTS.

2000 1000 0 2000 4000 6000 8000 10000
GRAPHIC SCALE 1:100

AS-BUILT

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99	REV.
CATEGORY CODE 721-11-12	
SOLICITATION NO: DACA21-99-B-0034	
PLOT DATE: $$DATE$$$$$$	
PLOT SCALE:	

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
1	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC
	GENERAL REVISIONS OF BEAMS	2JULY99	KJ

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

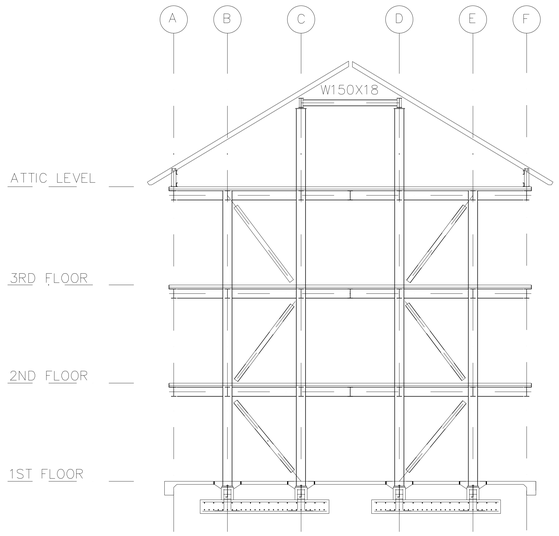
BARRACKS – 96 PERSONNEL

ROOF FRAMING PLAN

PLATE REFERENCE NUMBER:
S-6
SHEET 225

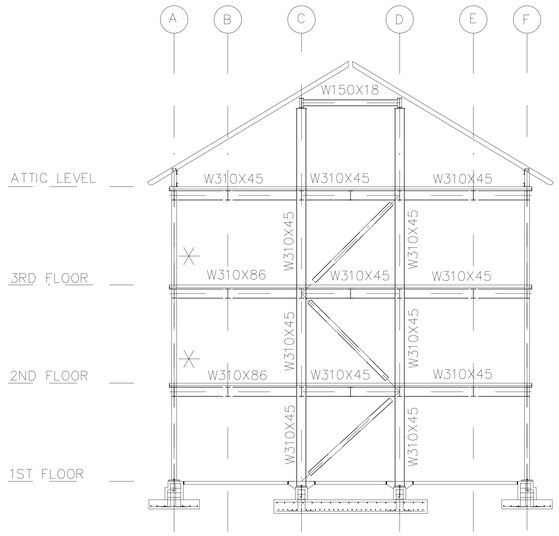
SAV-22148

DESIGN FILE: DONSPEC$$$$$$



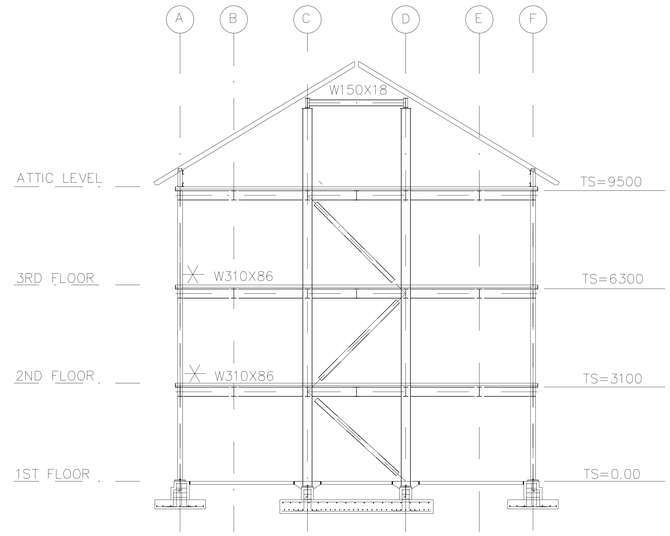
COL. LINE 2 & 21

SCALE: 1:100



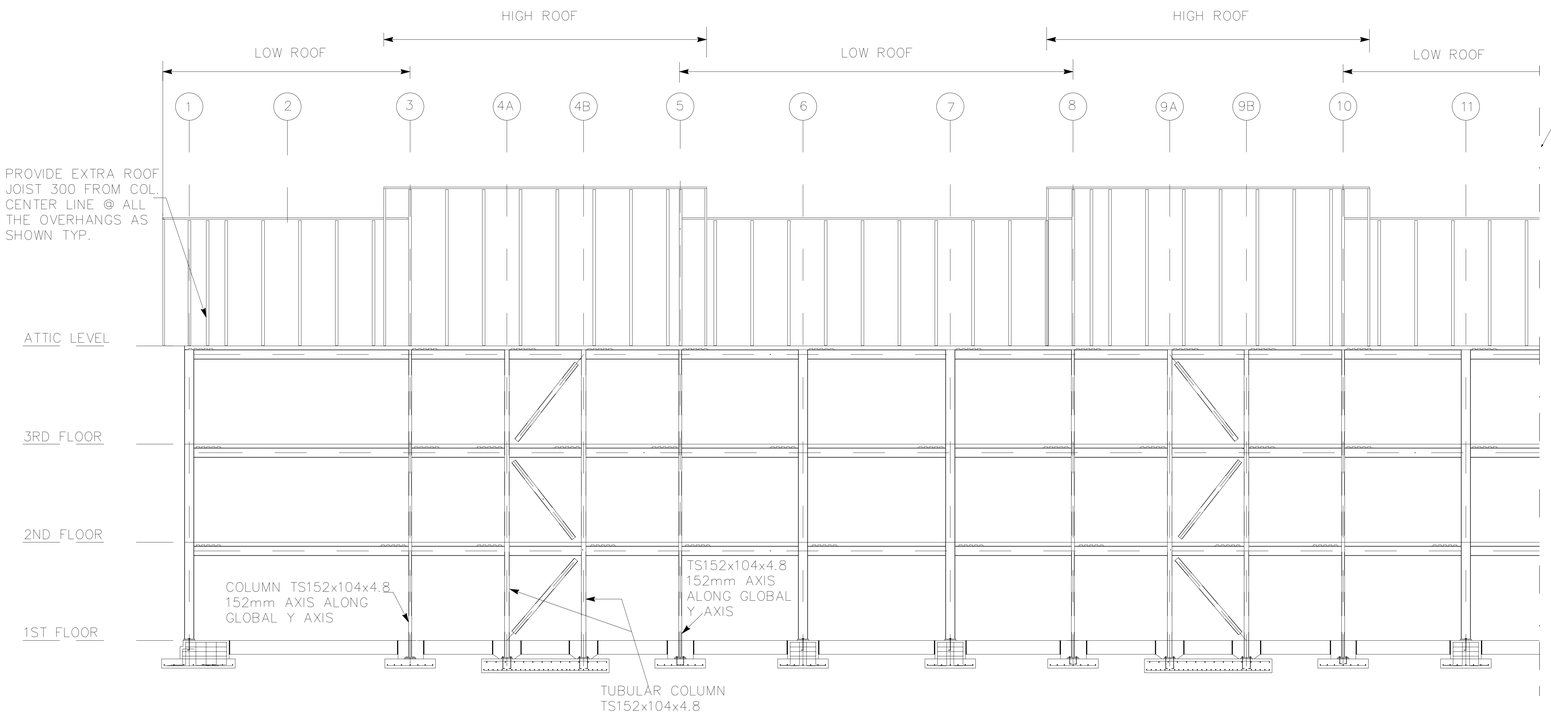
COL. LINE 6, 11, & 16

SCALE: 1:100



COL. LINE 7, 12, & 17

SCALE: 1:100



COL. LINE A & E

SCALE: 1:100

GLOBAL AXIS

NOTE:
1. ALL BEAMS AND COLUMNS ARE W310X45 U.N.O. ALL TUBULAR COLUMNS ARE TS152X102X4.8. BRACING MEMBERS ARE TS152X102X4.8

2. HEAVIER SECTION SPECIAL BEAM REQUIRED DUE DEAD LOAD WEIGHT OF DRY ELECTRICAL CELLS IN THE TWO MECHANICAL ROOMS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT CORPS OF ENGINEERS SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

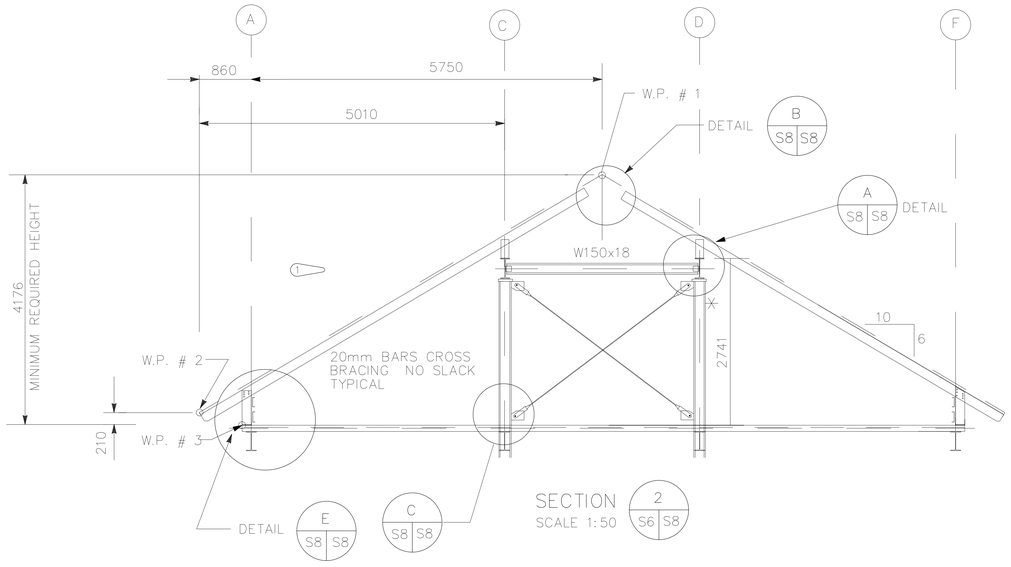
BUILDING SECTIONS

PLATE REFERENCE NUMBER:
S-7
SHEET 226

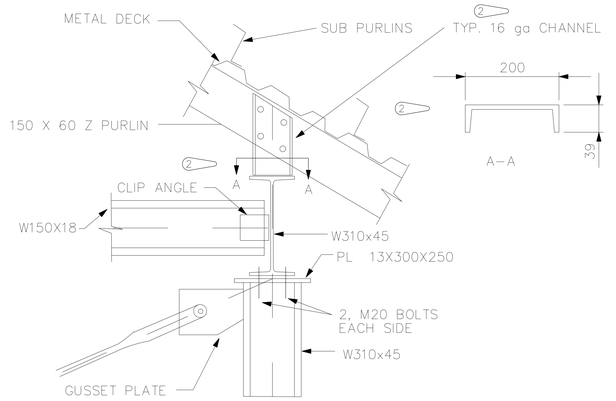
AS-BUILT

H SAV-22148

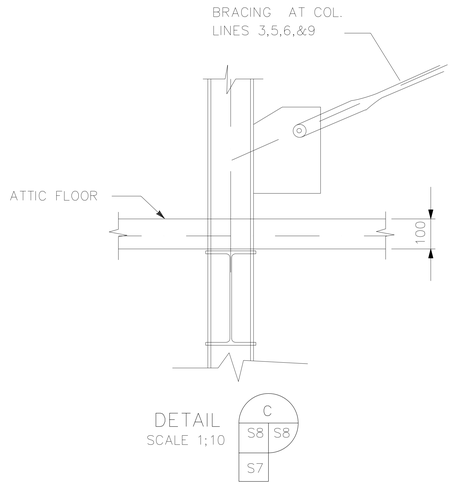
..\SB_DGN\BARRACKS96\G1S07BSC.dgn 07/12/2005 03:36:12 PM



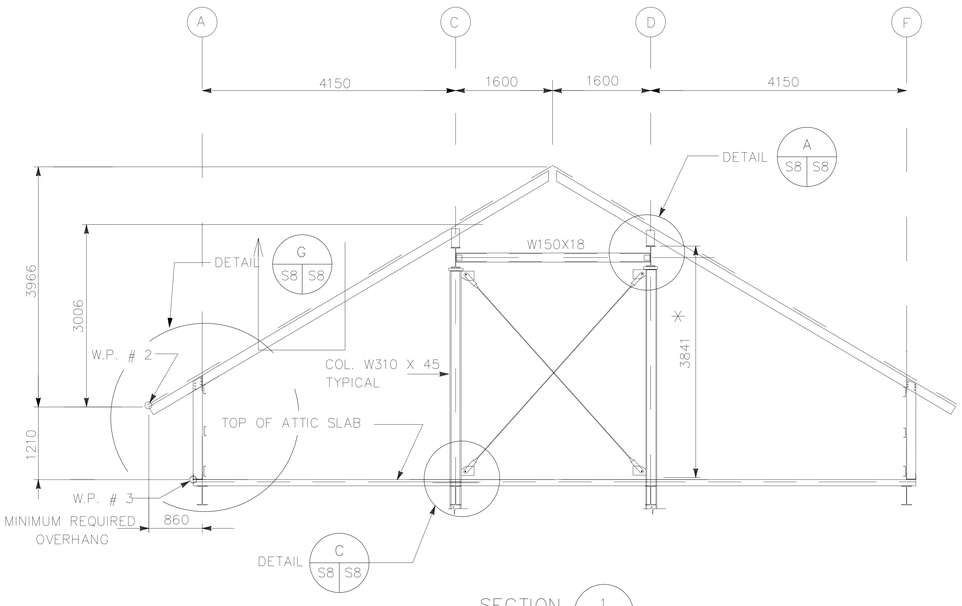
SECTION
SCALE 1:50 2 S6 S8



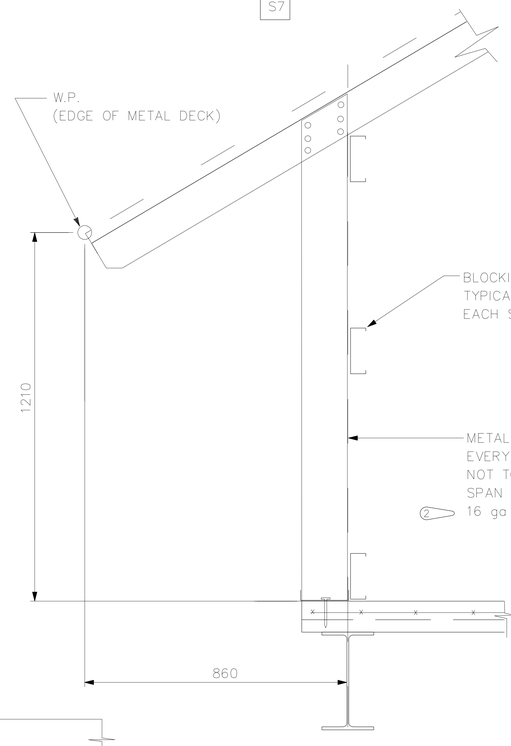
DETAIL
SCALE 1:10 A S8 S8 S7



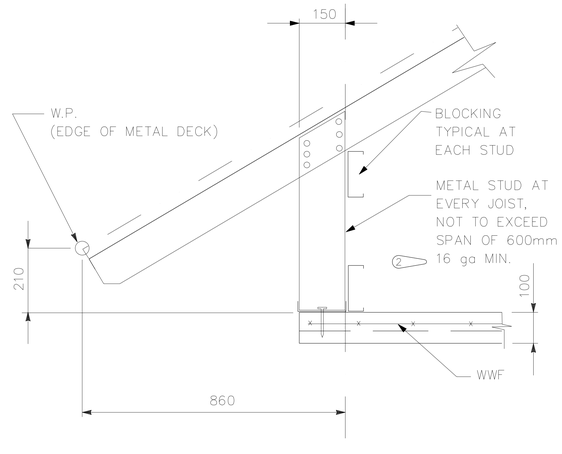
DETAIL
SCALE 1:10 C S8 S8 S7



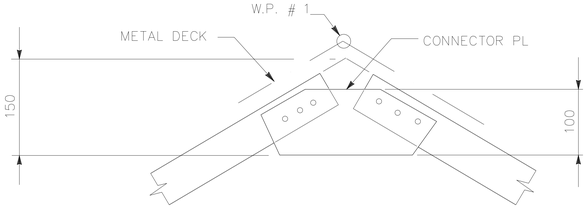
SECTION
SCALE 1:50 1 S6 S8



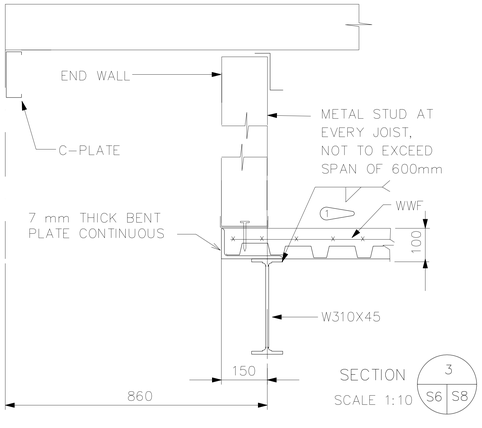
DETAIL
SCALE 1:10 G S8 S8



DETAIL
SCALE 1:10 E S8 S8



DETAIL
SCALE 1:5 B S8 S8



SECTION
SCALE 1:10 3 S6 S8

NOTES:

* 1. FROM THE GIVEN OVERHANG, ROOF HEIGHT AT THE ATTIC FLOOR, THE SLOPE OF THE ROOF AND THE THREE WORK POINTS, THE CONTRACTOR HAS TO COMPUTE THE HEIGHT OF THE STUD WALL, HEIGHT OF THE INTERIOR W150X18 COLUMN AND THE HEIGHT OF THE CLIP ANGLES. ALL THESE ITEMS ARE BASED ON THE SIZE OF THE ROOF PURLIN SELECTED BY THE CONTRACTOR.

2. THE CONNECTIONS BETWEEN THE COLUMNS & BEAMS, BETWEEN CLIP ANGLES & BEAMS AND BETWEEN CLIP ANGLES & COLUMNS ARE SIZED FOR FULL STRENGTH OF THE SMALLEST MEMBER. ALL THE CONNECTIONS ARE SIMPLE CONNECTIONS U.N.O.

1000 500 0 1000 2000 3000 4000 5000
GRAPHIC SCALE 1:50

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

AS-BUILT

US ARMY CORPS OF ENGINEERS
SAVANNAH DISTRICT

REV.	DATE: 17JUN99	CATEGORY CODE 721-11-12	SOLICITATION NO: DACA21-99-B-0034	PLOT DATE: $$DATE$$$$$
				PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
2	REVISED DETAIL A, E AND G IN ACC. WITH AMM #3	9JULY99	KJ
1	GENERAL REVISIONS IN ACC. WITH AMM #3	2JULY99	KJ

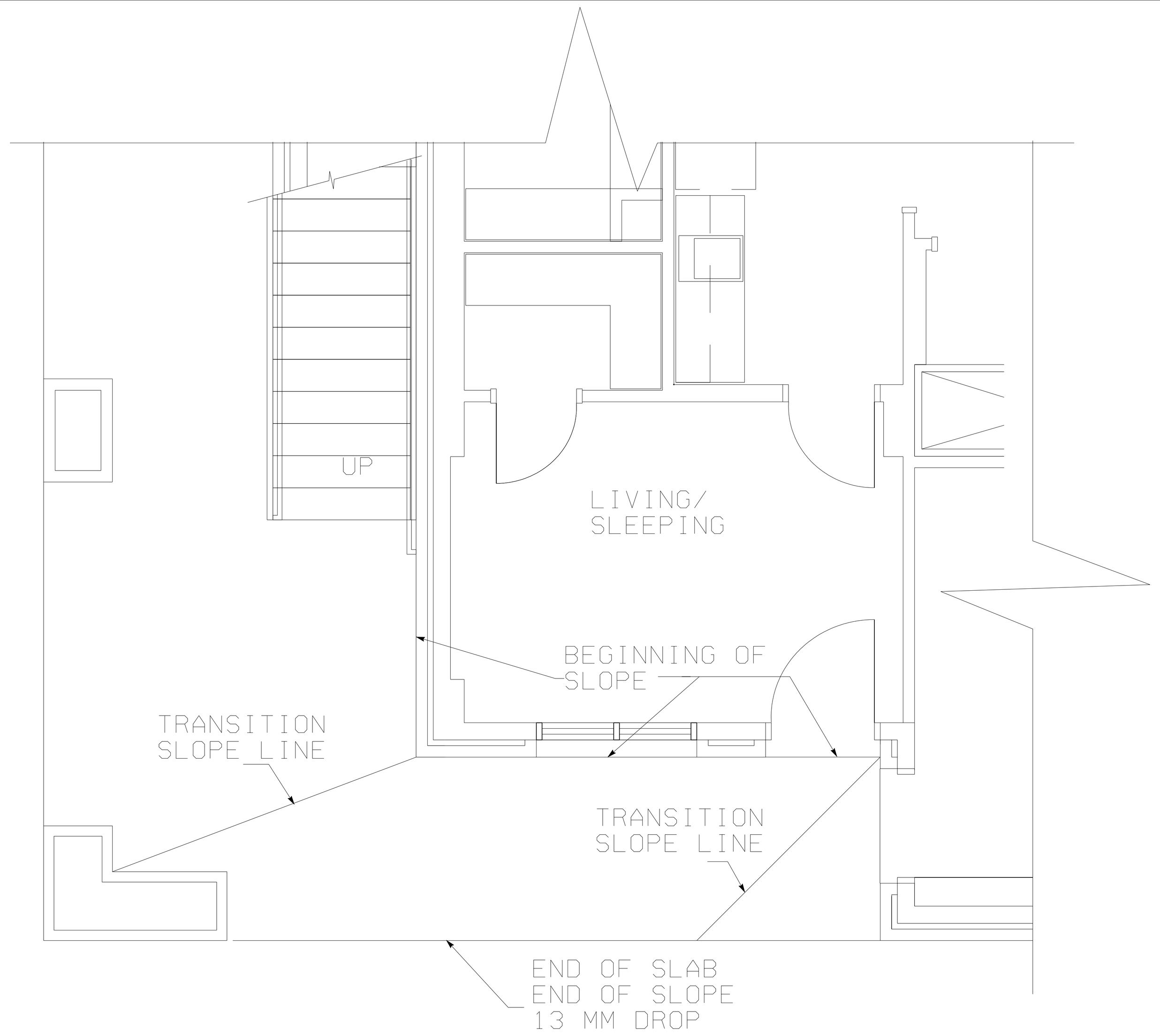
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS – 96 PERSONNEL

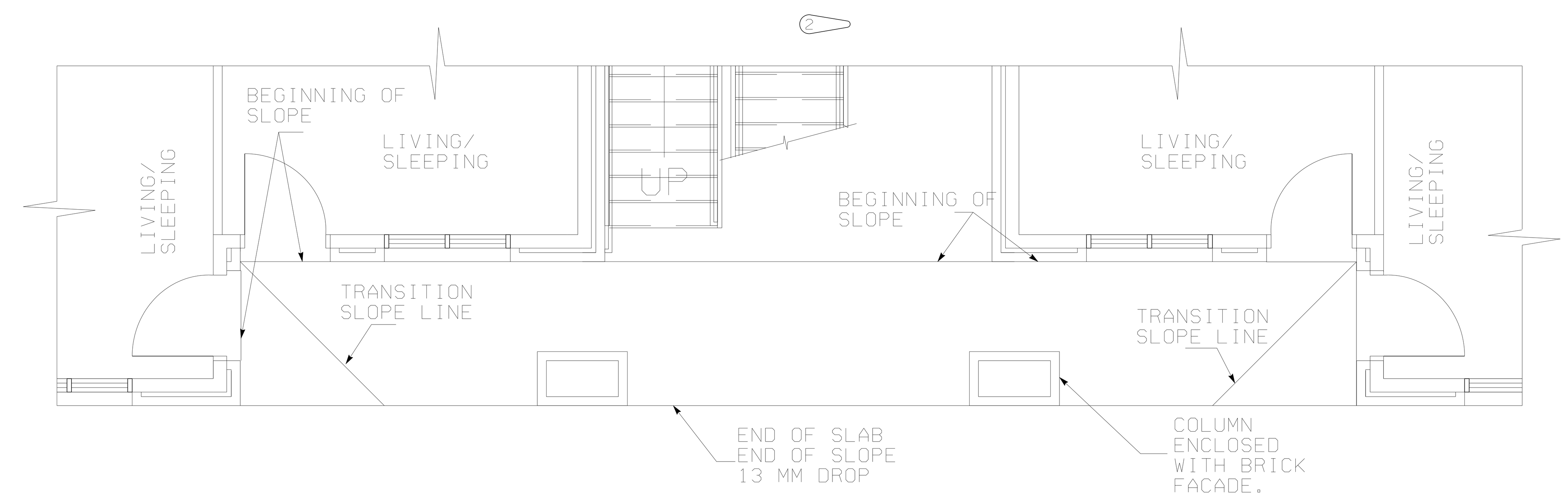
FRAMING DETAILS

PLATE REFERENCE NUMBER:
S–8
SHEET 227

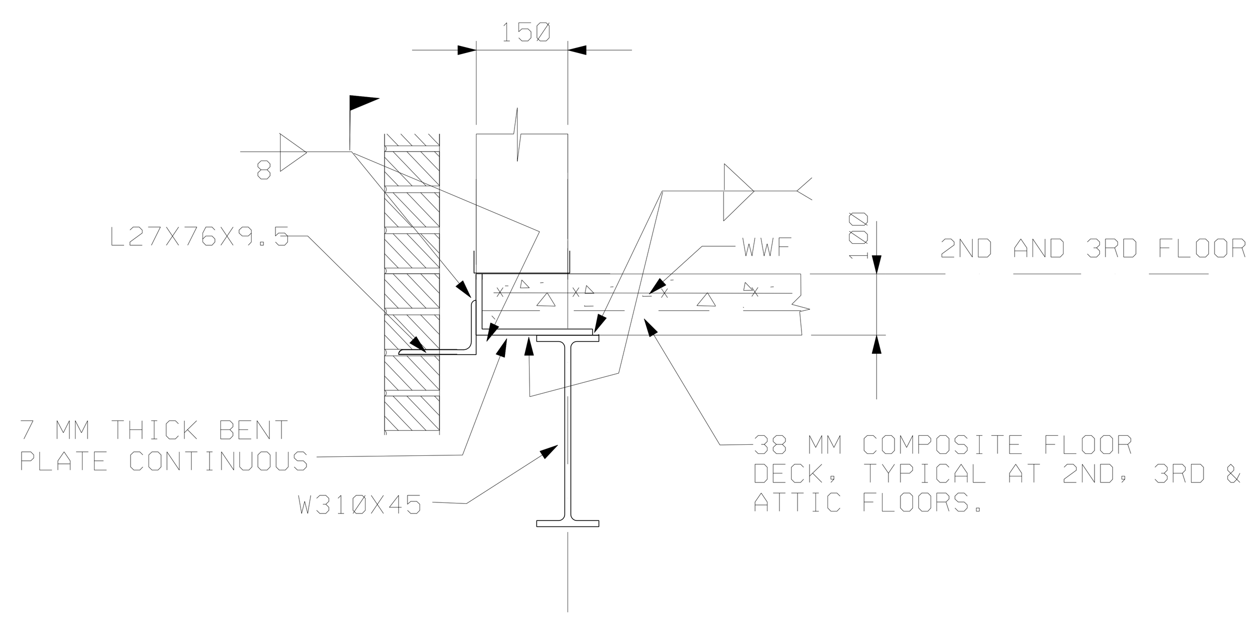
DESIGN FILE: D:\NSPEC\$\$\$



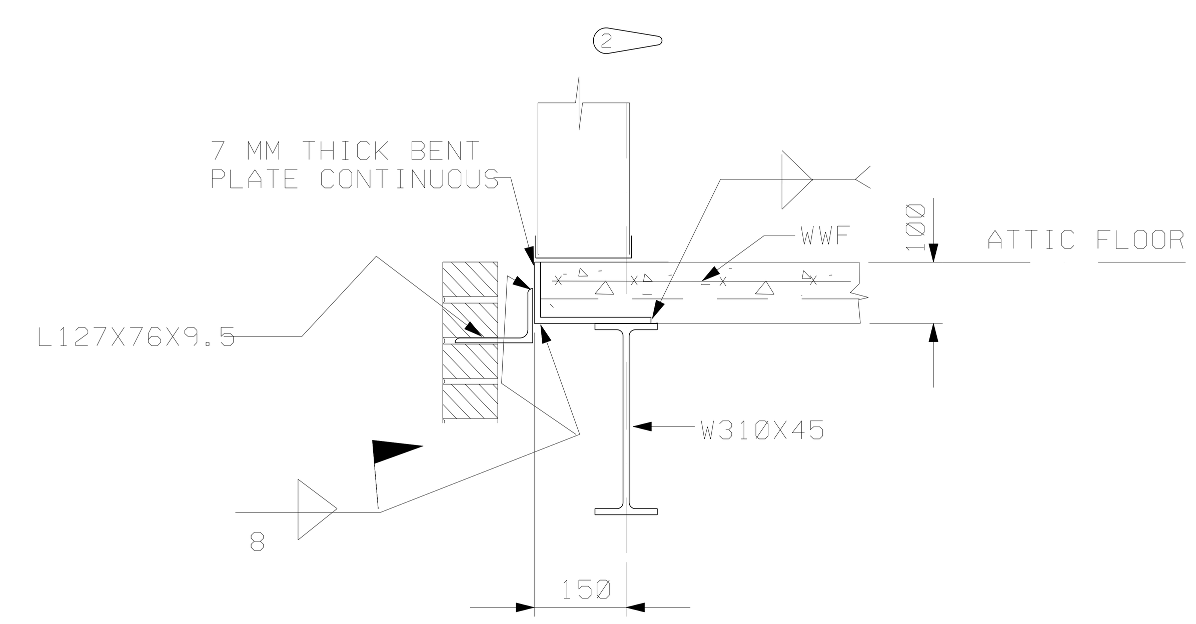
(1) TYPICAL SLOPING DETAILS OF SLAB
BALCONY/ CORRIDOR AREA AT ENDS OF BUILDING



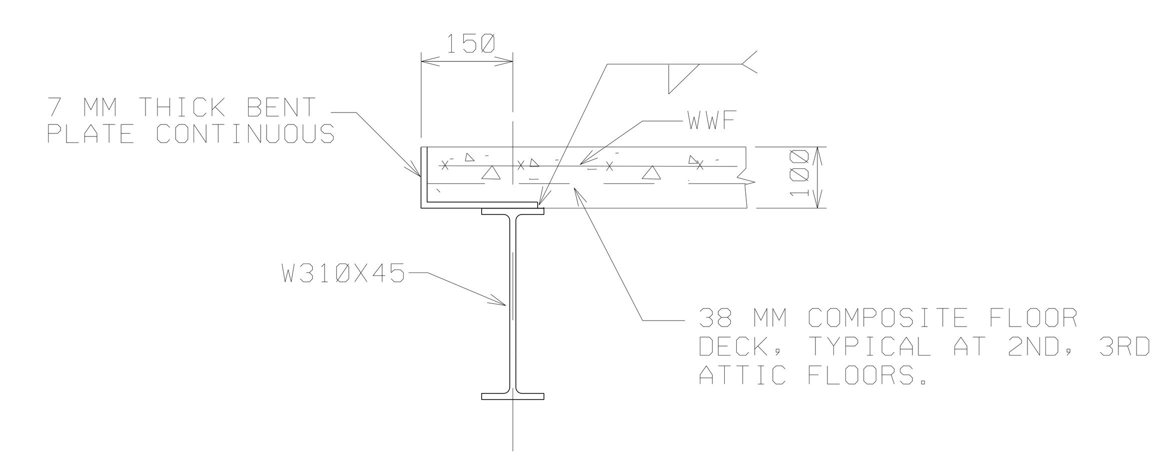
(1) TYPICAL SLOPING DETAILS OF SLAB
BALCONY/ CORRIDOR AREA AT MIDDLE OF BUILDING



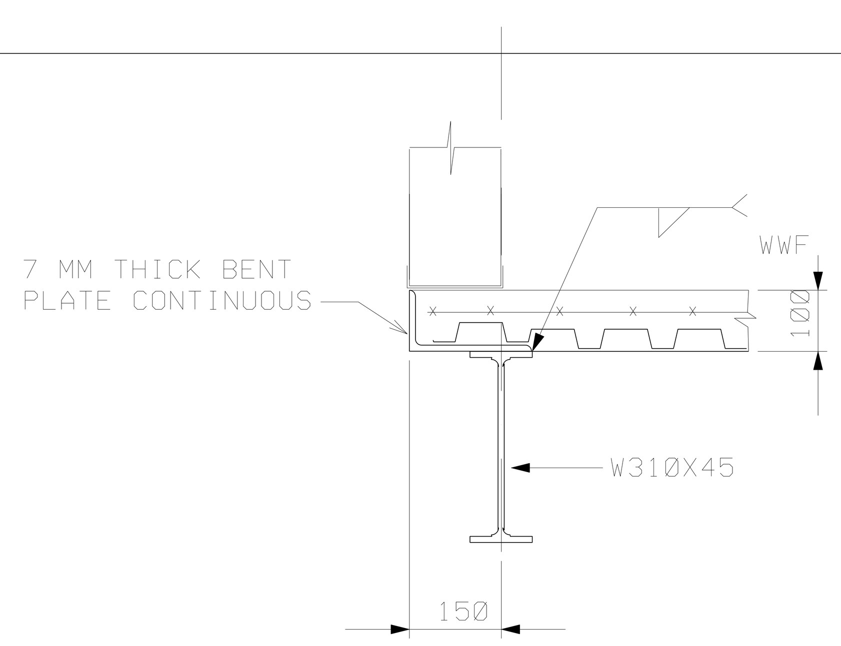
SECTION 1 (S4 S9 S5)
SCALE 1:10



SECTION 2 (S5 S9)
SCALE 1:10



SECTION 3 (S4 S9 S5)
SCALE 1:10

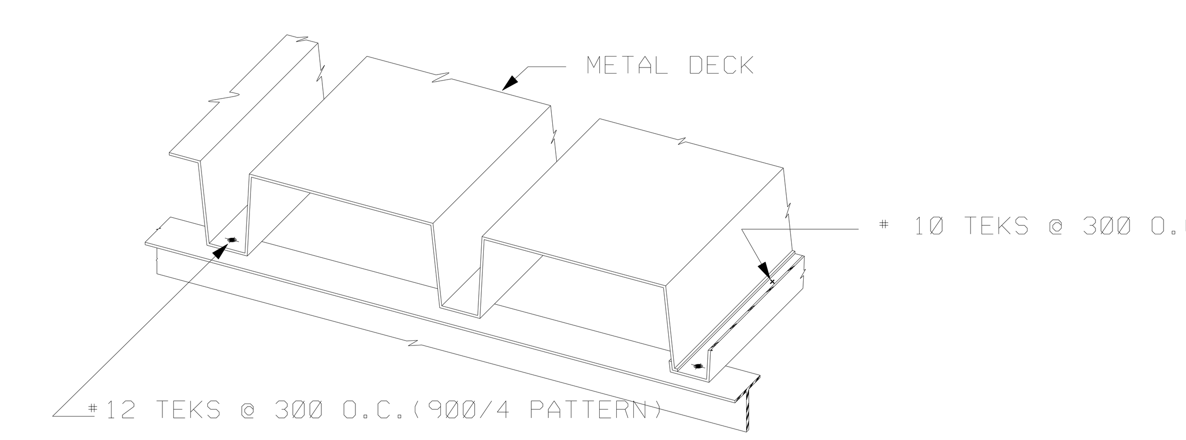


SECTION 4 (S5 S9)
SCALE 1:10

MINIMUM PROPERTIES OF METAL DECK

(FOR LOCATION SEE PLANS)

METAL DECK	38 (ROOF DECK) - TYPE B	38 (COMPOSITE FLOOR DECK)
THICKNESS (MM)	0.75	0.75
MOMENT OF INERTIA OF STEEL SECTION (MM^4/MM)	228.0	203.4
SECTION MODULUS OF STEEL SECTION POSITIVE BENDING(MM^3/MM)	10.0	9.7
SECTION MODULUS OF STEEL SECTION NEGATIVE BENDING(MM^3/MM)	10.4	10.2
MIN. YIELD STRENGTH - FY (MPA)	230	230



END, INTERIOR AND SEAM WELDING DETAILS FOR METAL DECK
NOT TO SCALE

AS-BUILT

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
REV.
CATEGORY CODE 721-11-12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
2	REVISED SECTION 2 AND TYP. SLOPING DETAIL	9JULY99	KJ
1	GENERAL REVISIONS IN ACCORDANCE WITH AMM #3	2JULY99	KJ

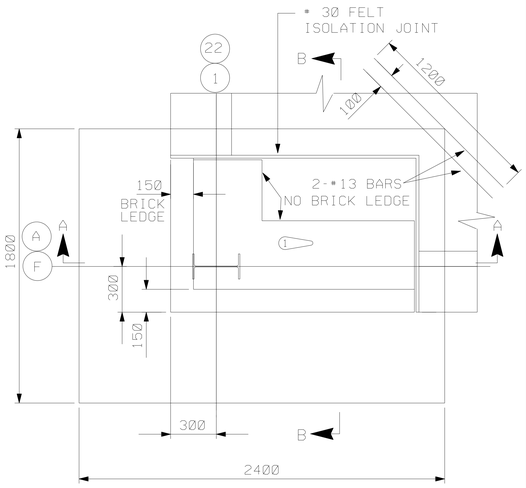
WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA
BARRACKS - 96 PERSONNEL
FRAMING SECTIONS

PLATE
REFERENCE
NUMBER:
S-9
SHEET 228
SAV-22148

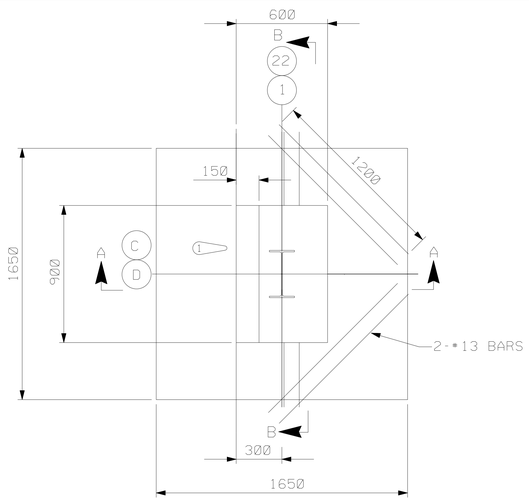
DESIGN FILE:DGNSPEC$$

BARRACKS96\G1S09SFC.DGN

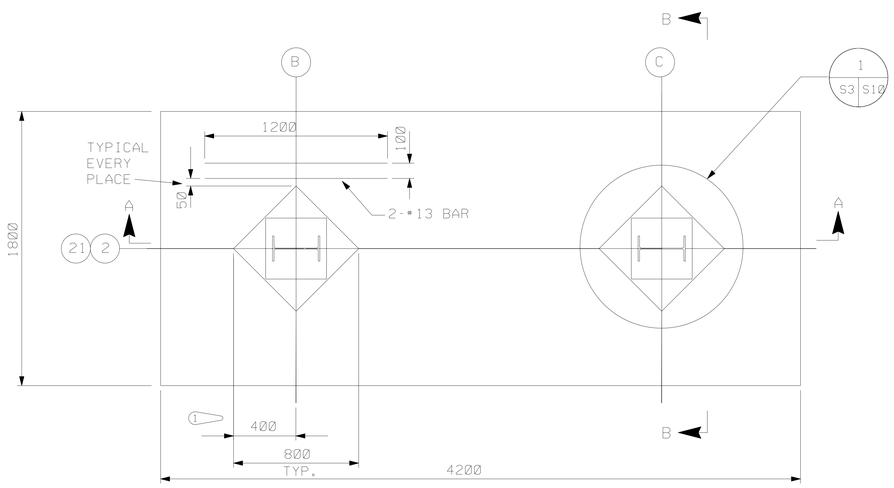
...\SB_DGN\BARRACKS96\G1S09SFC.dgn 07/12/2005 03:48:45 PM



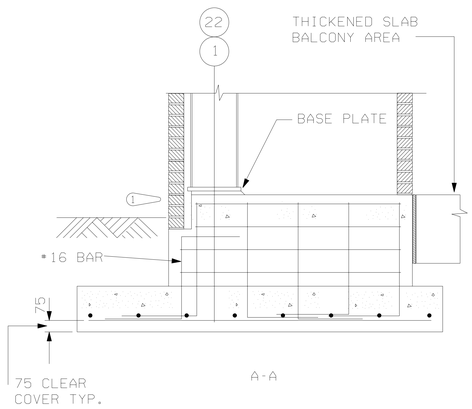
PLAN



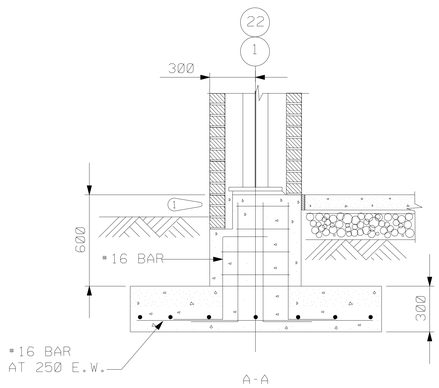
PLAN



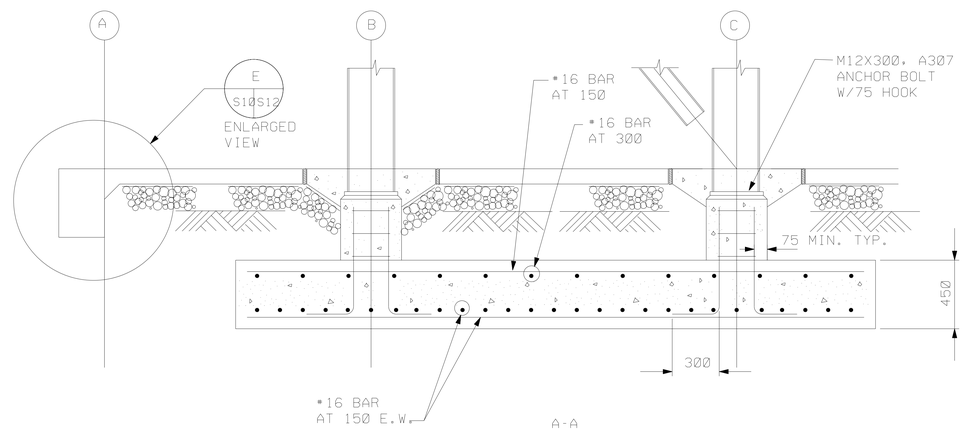
PLAN



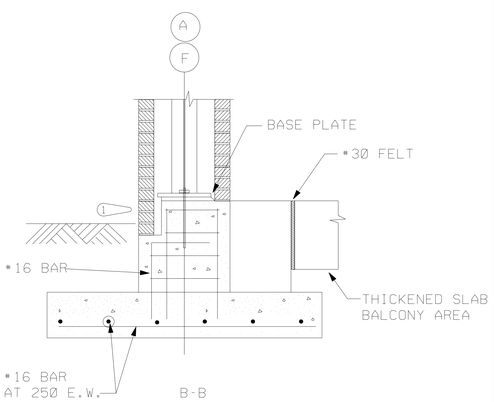
A-A



A-A

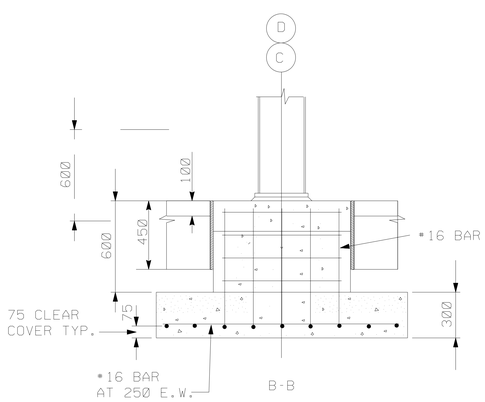


A-A



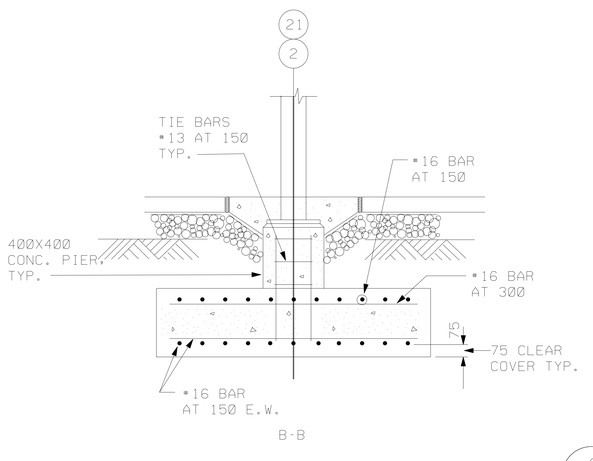
B-B

DETAIL A
S3 S10
AT COLUMN "F"
SCALE: 1:20



B-B

DETAIL B
S3 S10
AT COLUMN "D"
SCALE: 1:20



B-B

DETAIL C
S3 S10
SCALE: 1:20
AT COLUMN 2 AND 16

400 200 0 400 800 1200 1600 2000
GRAPHIC SCALE 1:20

200 100 0 2000 400 600 800 1000
GRAPHIC SCALE 1:10

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

AS-BUILT

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
REV.
CATEGORY CODE
721:11:12
SOLICITATION NO:
DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
1	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC
	GENERAL REVISIONS	2JUL99	KJ

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA
BARRACKS - 96 PERSONNEL

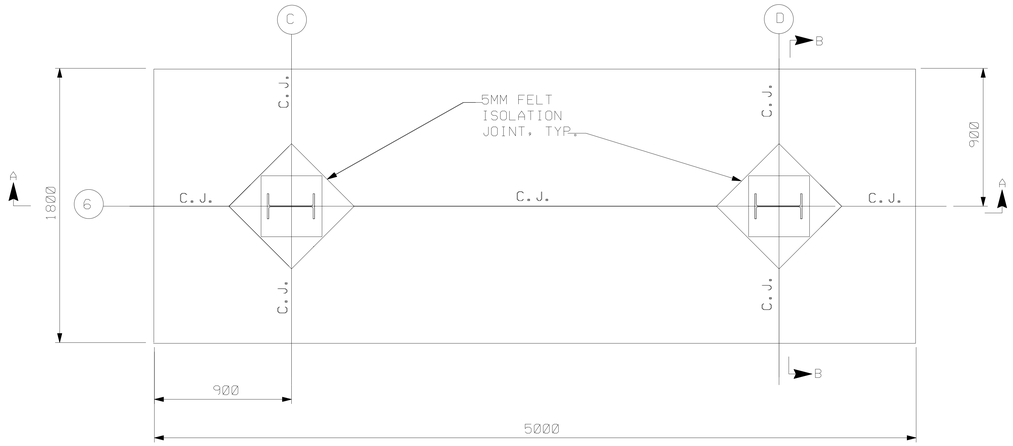
FOUNDATION DETAILS NO.

PLATE
REFERENCE
NUMBER:
S-10

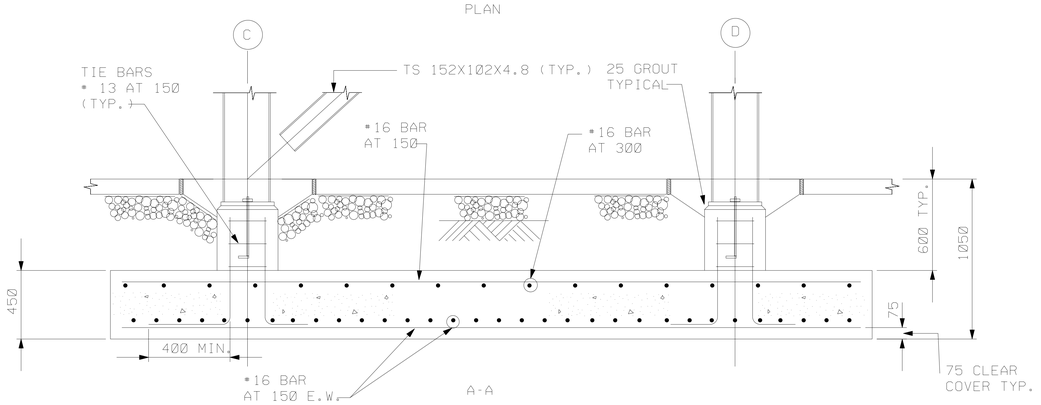
SHEET 229

HSAV-22148

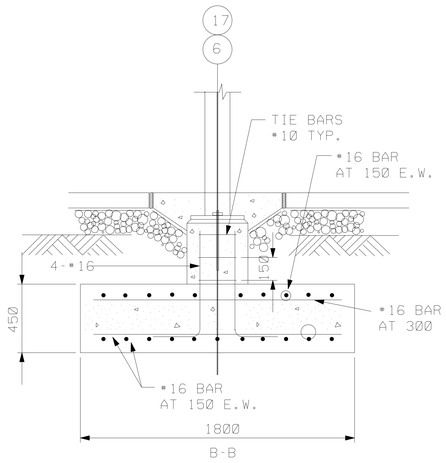
DESIGN FILE=DONSPEC$$$$$



PLAN



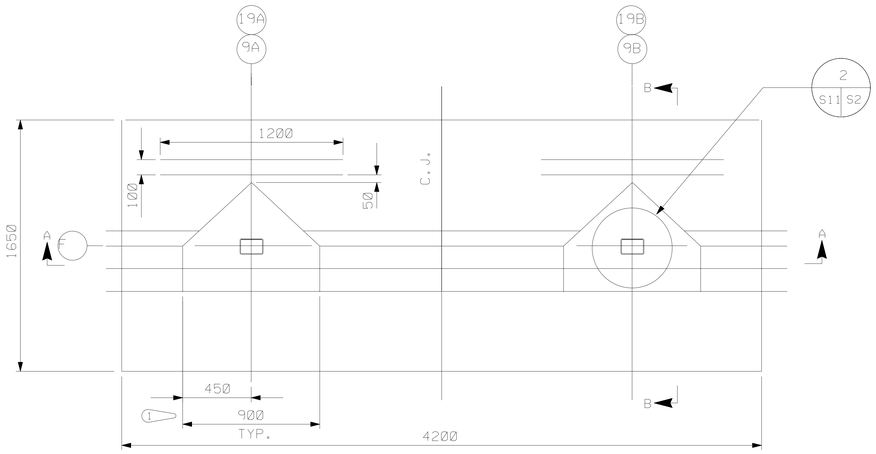
A-A



B-B

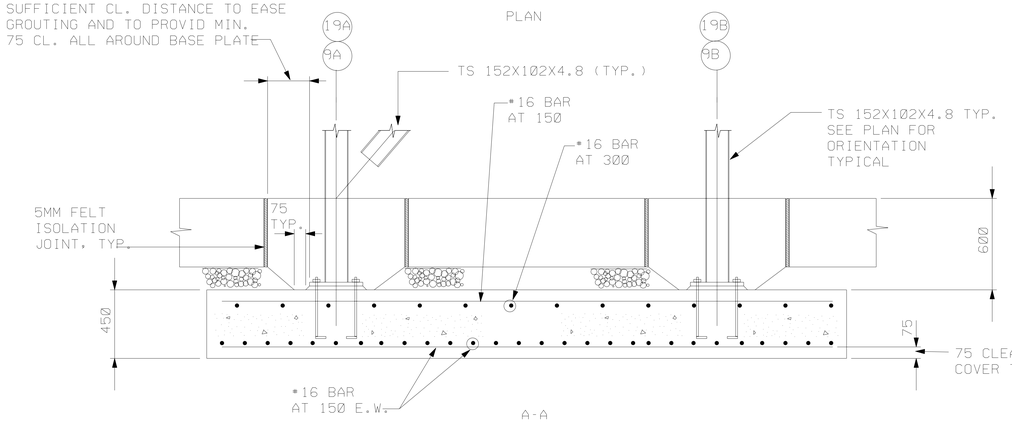
DETAIL F (S3 | S11)

AT COLUMN "C" AND "D"
SCALE: 1:20

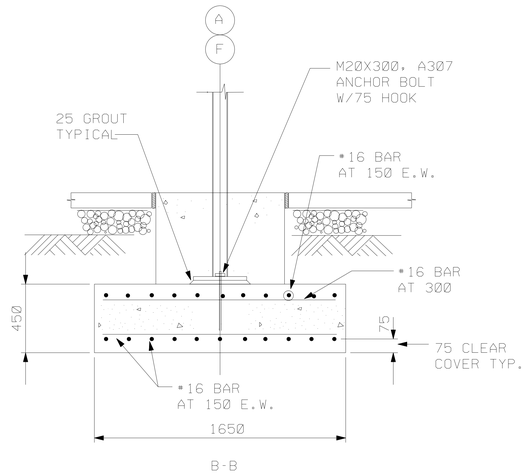


SUFFICIENT CL. DISTANCE TO EASE GROUTING AND TO PROVID MIN. 75 CL. ALL AROUND BASE PLATE

PLAN



A-A



B-B

DETAIL G (S3 | S11)

AT COLUMN "4A AND 4B"
SCALE: 1:20

AS-BUILT

400 200 0 400 800 1200 1600 2000

GRAPHIC SCALE 1:20

200 100 0 2000 400 600 800 1000

GRAPHIC SCALE 1:10

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS
OF ENGINEERS
SAVANNAH DISTRICT

DATE: 17JUN99
CATEGORY CODE 721:11:12
SOLICITATION NO: DACA21-99-B-0034
PLOT DATE: $$DATE$$$$$
PLOT SCALE:
REV.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	ZONE F-5	GENERAL REVISIONS	AS-BUILT DRAWING NO REVISION THIS SHEET
			2JULY99 KJ	FEB2003 SRC
			DATE	BY

SHEET 2

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

FOUNDATION DETAILS NO. 2

PLATE REFERENCE NUMBER:
S-11

SHEET 230

SAV-22148

SB_DGN\BARRACKS96\G1S11FDT.DGN

...\SB_DGN\BARRACKS96\G1S11FDT.dgn 07/13/2005 10:16:41 AM

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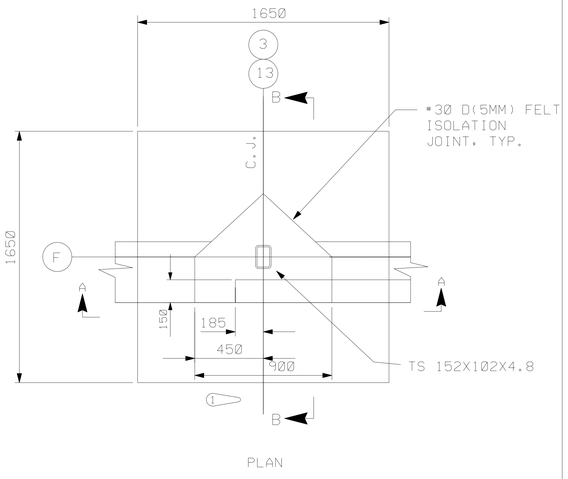
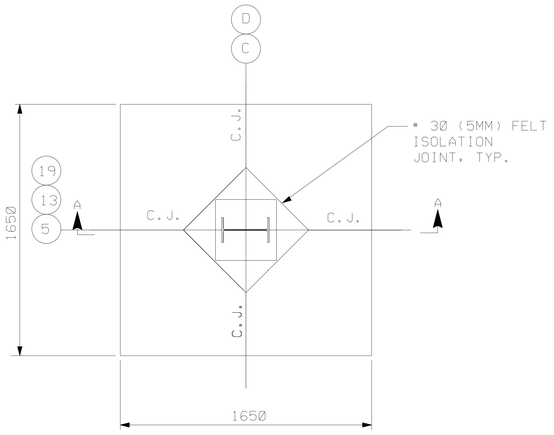


PLAN



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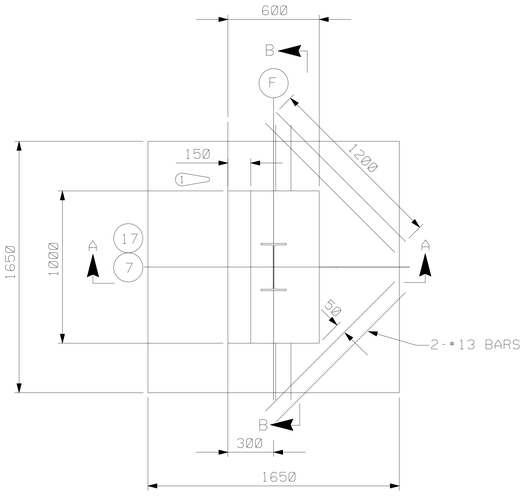

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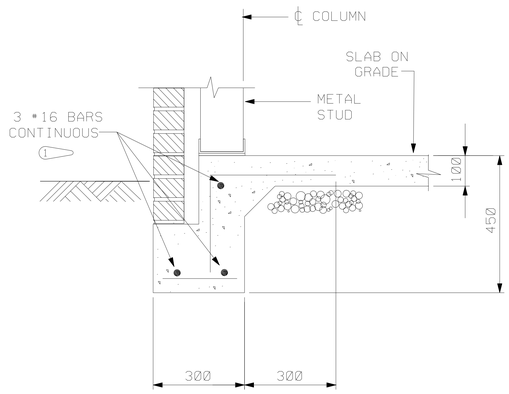
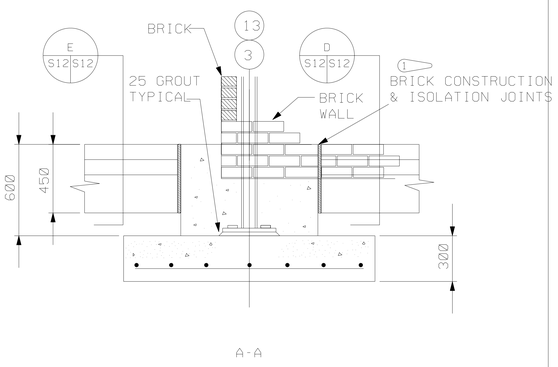
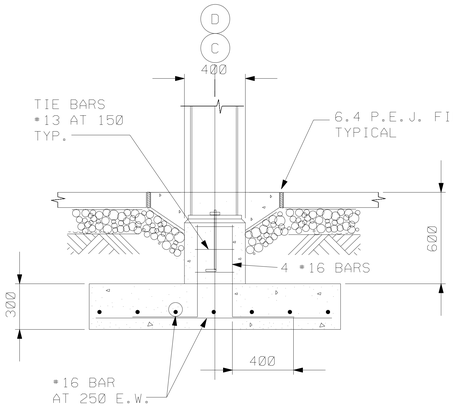


SECTION
SCALE: 1:10

THICKENED SLA
AT SIDE WALL



A-A



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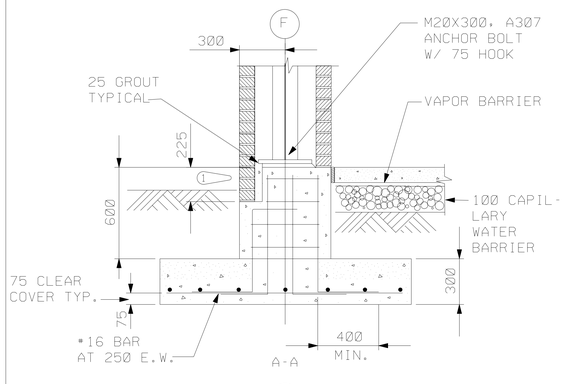

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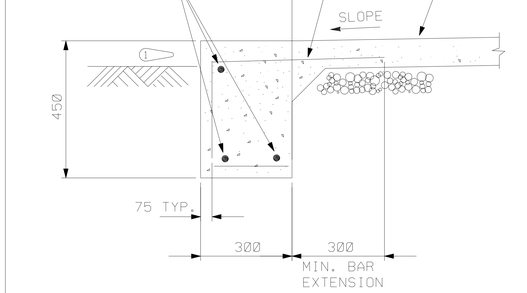
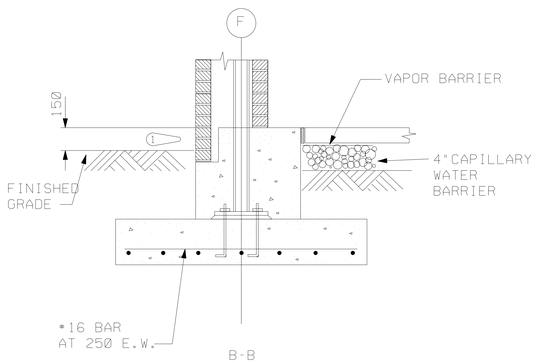
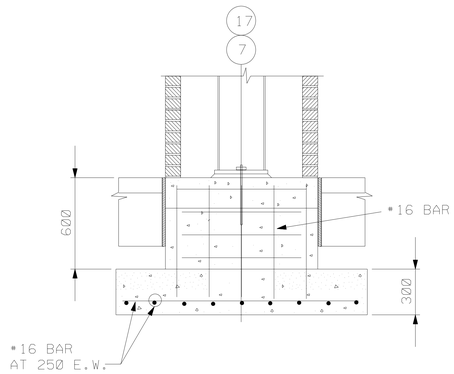


SECTION
SCALE: 1:10

THICKENED SLAB
BALCONY AREA
AT SIDE AND END WALL



B-B



B-B

DETAIL H
SCALE: 1:20
AT COLUMN "C"

DETAIL I
SCALE: 1:20
AT COLUMN "C"

DETAIL J
SCALE: 1:20
AT COLUMN "F"

AS-BUILT

400 200 0 400 800 1200 1600 2000
GRAPHIC SCALE 1:20

200 100 0 2000 400 600 800 1000
GRAPHIC SCALE 1:10

NOTE: ALL LINEAR DIMENSIONS ARE INDICATED IN MILLIMETERS.

US ARMY CORPS OF ENGINEERS SAVANNAH DISTRICT

DATE: 17JUN99
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

SYMBOL	DESCRIPTION	DATE	BY
1	AS-BUILT DRAWING NO REVISION THIS SHEET	FEB2003	SRC
	GENERAL REVISIONS	2JULY99	KJ

WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

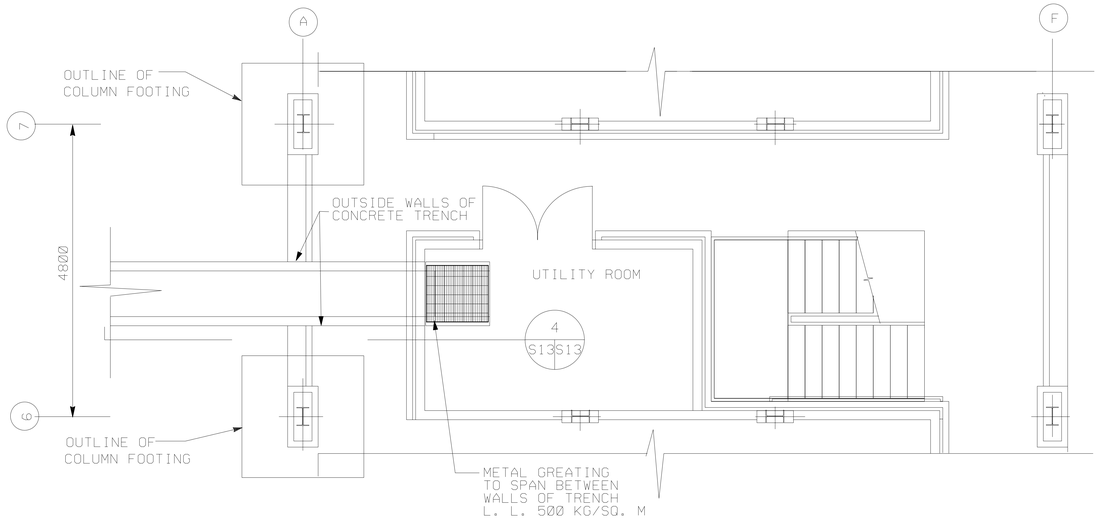
BARRACKS - 96 PERSONNEL

FOUNDATION DETAILS NO. 3

PLATE REFERENCE NUMBER:
S-12
SHEET 231

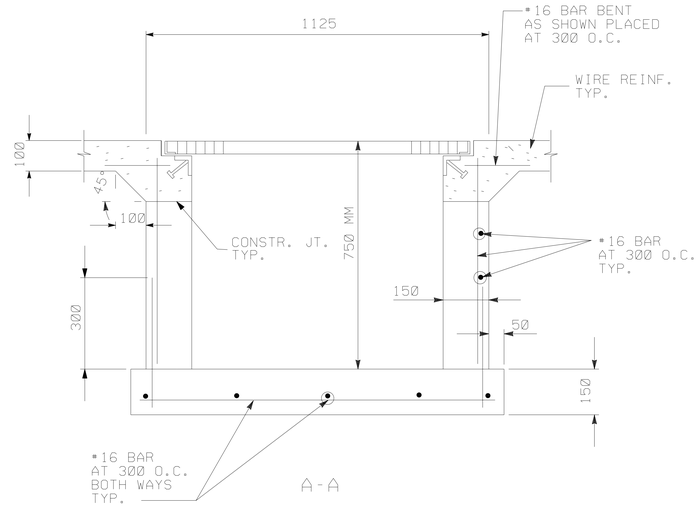
SAV-22148

DESIGN FILE=DONSPEC$$$$$

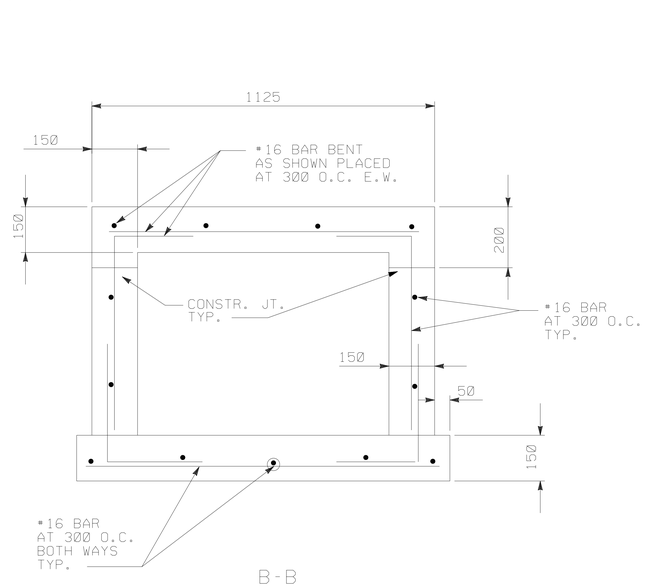


FLOOR PLAN
ACCESS TRENCHES LAYOUT FOR
BARRACKS #1 #2 #3 & #4

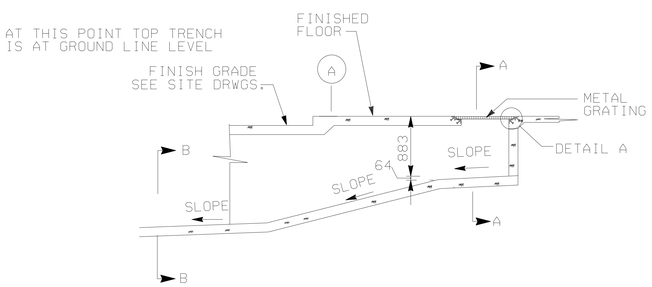
SCALE = 1:50



A-A

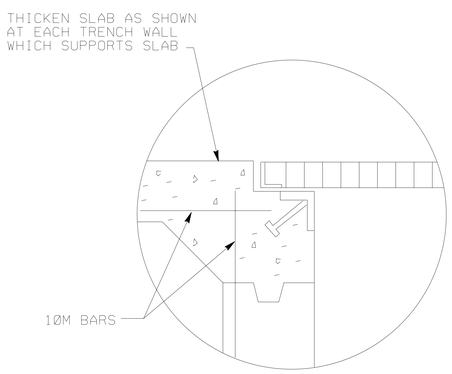


B-B



SECTION 4 / S13S16

SCALE: 1:50



DETAIL A

GENERAL NOTES

1. ACCESS TRENCHES FOR ALL BARRACKS BUILDINGS ARE SIMILAR EXCEPT THAT TOP OF FINISH GRADE OUTSIDE OF EACH BUILDING CHANGES. THIS CHANGES THE DEGREE OF SLOPE OF EACH TRENCH BETWEEN FINISH FLOOR AND FINISH GRADE. CONTRACTOR IS TO DETERMINE DEGREE OF SLOPE FOR EACH TRENCH BASED ON SITE CONDITIONS.

US ARMY CORPS
OF ENGINEERS
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U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
SAVANNAH, GEORGIA

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WHOLE BARRACKS COMPLEX RENEWAL
FORT BENNING, GEORGIA

BARRACKS - 96 PERSONNEL

ACCESS TRENCH LAYOUT

AS-BUILT

PLATE REFERENCE NUMBER:
S-13

SHEET 232

SAV-22148

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