ST. AUGUSTINE-ST. JOHNS COUNTY AIRPORT
South GA Area Development
St. Augustine, Florida

PROPOSED MULTI-PURPOSE BUILDING

BASE BID 'B'

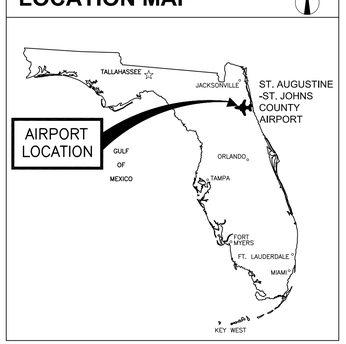
ST. AUGUSTINE • ST. JOHNS COUNTY
AIRPORT AUTHORITY

APRIL 15, 2009

PREPARED BY:

THE LPA GROUP INCORPORATED
Transportation Consultants

LOCATION MAP



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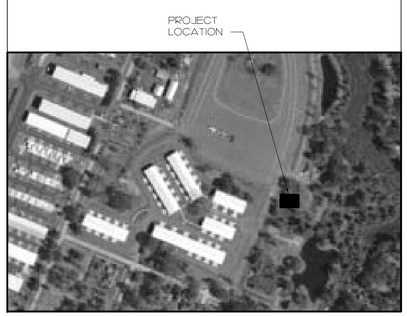
VICINITY MAP



ST. AUGUSTINE • ST. JOHNS COUNTY
AIRPORT AUTHORITY

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RALEIGH, NC•RICHMOND, VA•SARASOTA, FL
TALLAHASSEE, FL•TAMPA ,FL•WEST PALM BEACH, FL

Designer: KPB	Checked by: FRP
Technician: KPB	Project Number: AR553009

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STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
COVER SHEET

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009
Scale:
Drawing Number: G0.0

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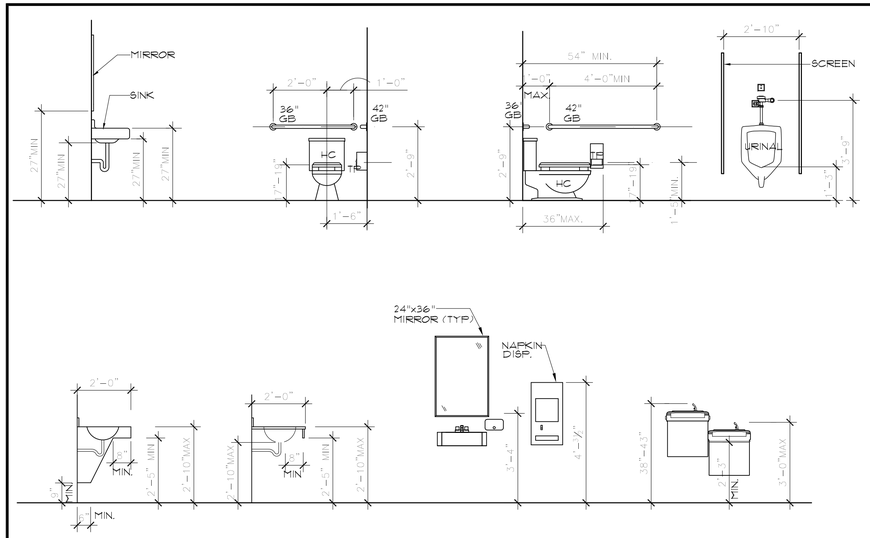
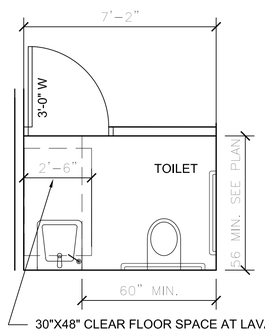
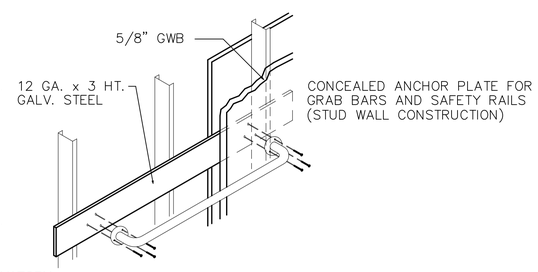


TYPICAL MOUNTING HEIGHTS



TYPICAL HC RESTROOM FLOOR PLAN



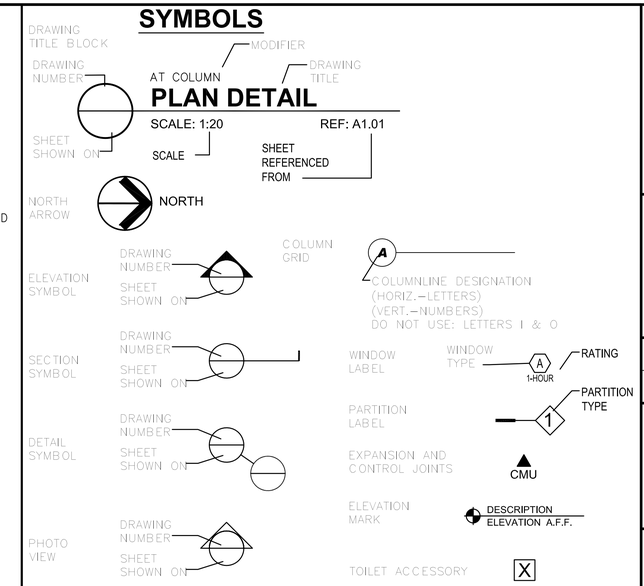
TYPICAL GRAB BAR DETAIL

BACKER ROD & SEALANT, CONT.
BATT INSULATION
BRICK
COMPACTED FILL
CONCRETE
GRAVEL
GYPSUM BOARD
MASONRY
PLASTER
PLYWOOD
RIGID INSULATION
SAND/ GROUT
STEEL/ METAL
WOOD BLOCKING, CONT.
WOOD SHIM
NO WORK IN THIS AREA GRAY HATCH

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
APC	ACOUSTICAL PANEL CEILING
AWC	ACOUSTICAL WALL COVERING
AHU	AIR HANDLING UNIT
ALT	ALTERNATE
AL	ALUMINUM
APPROX	APPROXIMATE
ASPH	ASPHALT
ACP	ASPHALTIC CONCRETE PAVING
AV	AUDIO VISUAL
BL	BASELINE
BR	BRICK
BRP	BRICK PAVERS
BRG	BEARING
BFF	BELOW FINISHED FLOOR
BM	BENCHMARK
BITUM	BITUMINOUS
BOS	BOTTOM OF STEEL
BUR	BUILT-UP ROOFING
CPT/CPTT	CARPET/CARPET TILE
CLG	CEILING
CBB	CEMENTITIOUS BACKER BOARD
CTR	CENTER
CL	CENTERLINE
CT	CERAMIC TILE
CTB	CERAMIC TILE BASE
COL	COLUMN
CONC	CONCRETE
CMU	CONCRETE MASONRY UNIT
CJ	CONSTRUCTION/CONTROL JOINT
DAT	DATUM
DEG	DEGREE
DEMO	DEMOLITION
DIA	DIAMETER
DIM	DIMENSION
DL/DS	DOWNLEADER/DOWNSPOUT
EO	EDGE OF
EXP	EXPOSED
ELEC	ELECTRICAL
EL	ELEVATION
EPT	EPOXY PAINT
EXIST	EXISTING
EJ	EXPANSION JOINT
EIFS	EXTERIOR INSULATION FINISH SYSTEM
EXT	EXTERIOR
FWC	FABRIC WALL COVERING
FO	FACE OF
FIN FLR	FINISH FLOOR
FIN GR	FINISH GRADE
FDC	FIRE DEPARTMENT CONNECTION
FEB	FIRE EXTINGUISHER ON BRACKET
FEC	FIRE EXTINGUISHER IN CABINET
FD	FLOOR DRAIN
FLR	FLOOR
FT	FULLY TEMPERED (GLASS)
GA	GAGE
GALV	GALVANIZED
GL	GLASS
GL BLK	GLASS BLOCK
GFRC	GLASS FIBER REINFORCED CONCRETE
GWT	GLAZED WALL TILE
GYP BD	GYPSUM BOARD
GSB	GYPSUM SHEATHING BOARD
HCP	HANDICAPPED
HDW	HARDWARE
HDWD	HARDWOOD
HAZ	HAZARDOUS
HD JT	HEAD JOINT
HS	HEAT STRENGTHENED (GLASS)
HT	HEAT TREATED (GLASS)
HVAC	HEATING, VENTILATING, AIR CONDITIONING
HM	HOLLOW METAL
HB	HOSE BIBB
INSUL	INSULATION
INT	INTERIOR
INV	INVERT
IRGB	IMPACT RESISTANT GYPSUM BOARD
LAM GL	LAMINATED GLASS
LAV	LAVATORY
LBP	LEAD BASED PAINT
LWC	LIGHTWEIGHT CONCRETE
LTD	LIMITED
LD	LINEAR DIFFUSER
LF	LINEAR FEET
MFR	MANUFACTURER
MATL	MATERIAL
MAX	MAXIMUM
MSL	MEAN SEA LEVEL
MDO	MEDIUM DENSITY OVERLAY
MTL	METAL
MIN	MINIMUM
MISC	MISCELLANEOUS
MM	METAL MESH
MR	MOISTURE RESISTANT
MRGB	MOISTURE RESISTANT GYPSUM BOARD
M.T.	MARBLE THRESHOLD
MTD	MOUNTED
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NRC	NOISE REDUCTION COEFFICIENT
NOM	NOMINAL
NA	NOT APPLICABLE
OC	ON CENTER
OPNG	OPENING
OPR	OPERABLE
OPP	OPPOSITE
OH	OPPOSITE HAND
ORD	OVERFLOW ROOF DRAIN
PCP	PLASTER CEILING, PAINTED
PT	PAINT
PBD	PARTICLEBOARD
PLAS	PLASTER
PLAM	PLASTIC LAMINATE
PLYWD	PLYWOOD
PTD	PRESSURE TREATED
PL	PROPERTY LINE
QA	QUALITY ASSURANCE
QC	QUALITY CONTROL
QT	QUARRY TILE
R	RADIUS
REF	REFERENCE
RCP	REFLECTED CEILING PLAN
REINF	REINFORCED
REBAR	REINFORCING STEEL BARS
REQD	REQUIRED
RB	RESILIENT BASE
RF	RESILIENT FLOORING
REV	REVISION
RD	ROOF DRAIN
RO	ROUGH OPENING
SECT	SECTION
SM	SHEET METAL
SV	SHEET VINYL
SIM	SIMILAR
SGL	SINGLE
SC/SJ	SAW CUT/SAW JOINT
SC	SOLID CORE
STC	SOUND TRANSMISSION CLASS
SPKR	SPEAKER
SF	SQUARE FOOT
SIDA	SECURITY IDENTIFICATION DISPLAY AREA
SST	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STRUCT	STRUCTURAL
SIM	SIMILAR
TEL	TELEPHONE
TEMP	TEMPORARY
TMPD GL	TEMPERED GLASS
TER	TERAZZO
T&G	TONGUE AND GROOVE
TO	TOP OF
TOB/TOS	TOP OF STEEL/TOP OF BEAM
TS	TUBE STEEL
TYP	TYPICAL
UC	UNDERCUT
UNO	UNLESS NOTED OTHERWISE
VR	VAPOR RETARDER
VTR	VENT THROUGH ROOF
VAR	VARIES
VB	VINYL BASE
VIF	VERIFY IN FIELD
VCT	VINYL COMPOSITION TILE
VSP	VINYL SOFFIT PANEL
VWC	VINYL WALL COVERING
WGL	WIRED GLASS
W/	WITH
W/O	WITHOUT
WD	WOOD
WB	WOOD BASE

SYMBOLS



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E-7.1	ELECTRICAL PANEL SCHEDULES

ST. AUGUSTINE • ST. JOHNS COUNTY
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Designer: KPB	Checked by: FRP
Technician:	Project Number: AR553009

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

GENERAL NOTES

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009

Scale: N.T.S.

Drawing Number: GN.0

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LIFE SAFETY CODE:

FLORIDA FIRE PREVENTION CODE 2004 NFPA 101, LIFE SAFTEY CODE, FLORIDA EDITION 2003		
OCCUPANCY CLASSIFICATION (CHAPTER 6)	BUSINESS 'B'/ ASSEMBLY A-3 MULTI-PURPOSE ROOMS ON SECOND FLOOR ONLY	
REQUIRED SEPARATION OF OCCUPANCIES (TABLE 6.1.14.4.1)	-	-
MEANS OF EGRESS (CHAPTER 7)		
OCCUPANT LOAD (TABLE 7.3.1.2)		
1ST FLOOR		-
BUSINESS - 1/100 SF	3,846/ 100 = 39 OCCUPANTS	
2ND FLOOR		
BUSINESS - 1/100 SF	791/ 100 = 8 OCCUPANTS	
ASSEMBLY - 1/15 NET SF	2767/ 15 = 185 OCCUPANTS	
TOTAL OCCUPANT LOAD	232 OCCUPANTS	
	ALLOWABLE/REQ'D.	PROVIDED
REQUIRED MEANS OF EGRESS (CHAPTERS 12-42)	-	-
MINIMUM STAIR WIDTH (TABLE 7.2.2.2.1)	44 IN.	44 IN.
RAMPS (SECTION 7.2.5, TABLE 7.2.5.2 (a))	44 IN.	N/A
MINIMUM WIDTH PER OCCUPANT SERVED (SECTION 7.3.4)		
NUMBER OF MEANS OF EGRESS (SECTION 7.4)	2	-
ARRANGEMENT OF MEANS OF EGRESS (SECTION 7.5) 1. FIGURE A.5.1.3.2 (a THROUGH FIGURE A.7.1.3.2 (e)	-	* SEE PLAN
DEAD END (TABLE A.7.6)	50 FT.	- FT
COMMON PATH (SECTION 1019.3)	100 FT.	95.4 FT.
TRAVEL DISTANCE (TABLE A.7.6)	200 FT.	105.83 FT.
MINIMUM NUMBER OF EXITS (TABLE 1018.1)	2	-

BUILDING DATA:

FLORIDA BUILDING CODE 2007 W/ 2009 AMENDMENTS			
OCCUPANCY CLASSIFICATION (CHAPTER 3)	BUSINESS 'B'/ ASSEMBLY A-3 MULTI-PURPOSE ROOMS ON SECOND FLOOR ONLY		
REQUIRED SEPARATION OF OCCUPANCIES NON-SEPARATED USES PER 302.3.1 BASED ON THE FOLLOWING HEIGHT AND AREA LIMITATIONS FOR EACH OF THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING (MOST STRINGENT USED A-3)	0 HR.	0 HR.	
TYPE OF CONSTRUCTION (CHAPTER 6)	TYPE V - B (SPRINKLERED)		
	OCCUPANCY A-3		BUSINESS
	ALLOWED	PROVIDED	PROVIDED
MAXIMUM HEIGHT IN FEET (TABLE 503, SECTION 504) 20 FEET INCREASE PER SECTION 504.2)	60 FT.	37 FT.	37 FT.
MAX. NO. STORIES 1 STORY INCREASE PER SECTION 504.2)	2	1	2
AREA: MULTISTORY (CHAPTER 5, TABLE 503, SEC. 506, 507.2)	27,000 SF	-	4,583 SF (1ST/2ND FL)
AREA: ONE STORY (200% increase allowed per sec. 506.3)	18,000 SF	2,767 SF	-
FIRE RESISTANCE RATINGS FOR BUILDING ELEMENTS - (TABLE 601)			
	ALLOWED	PROVIDED	
STRUCTURAL FRAME			
INCLUDING COLUMNS, GIRDERS, TRUSSES	0 HR.	0 HR.	
BEARING WALLS			
EXTERIOR	0 HR.	2 HR.	
INTERIOR	0 HR.	0 HR.	
NONBEARING WALLS AND PARTITIONS			
	0 HR.	0 HR.	
FLOOR CONSTRUCTION			
INCLUDING SUPPORTING BEAMS AND JOISTS	0 HR.	0 HR.	
ROOF CONSTRUCTION			
INCLUDING SUPPORTING BEAMS AND JOISTS	0 HR.	0 HR.	
FIRE RESISTANCE RATINGS FOR EXTERIOR WALLS - (TABLE 602)			
FIRE SEPARATION DISTANCE	ALLOWED	PROVIDED	
0 FT TO 5 FT	3 HR.	N/A	
OVER 5 FT TO 10 FT	2 HR.	N/A	
OVER 10 FT TO 20 FT	2 HR.	N/A	
OVER 20 FT TO 30 FT	1 HR.	N/A	
OVER 30 FT	0 HR.	0 HR.	
MEANS OF EGRESS (CHAPTER 10)			
OCCUPANT LOAD (SECTION 1004, TABLE 1004.1.2)			
1ST FLOOR			
BUSINESS - 1/100 SF	3,846/ 100 = 39 OCCUPANTS		
2ND FLOOR			
BUSINESS - 1/100 SF	791/ 100 = 8 OCCUPANTS		
ASSEMBLY - 1/15 SF	2767/ 15 = 185 OCCUPANTS		
TOTAL OCCUPANT LOAD	232 OCCUPANTS		
REQUIRED MEANS OF EGRESS (SECTION 1026-1043)			
EGRESS WIDTH PER OCCUPANT SERVED (TABLE 1005.1)			
STAIRS (TOTAL WIDTH)	0.3 X 193 = 57.9 IN.		
OTHER EGRESS COMPONENTS			
FIRST FLOOR	0.2 X 39 = 7.2 IN.		
SECOND FLOOR	0.2 X 192 = 38.4 IN.		
MINIMUM CLEAR OPENING OF EXIT DOORS (SECTION 1008.1.1)	32 IN.	34 IN.	
MINIMUM STAIR WIDTH (SECTION 1009.1)	44 IN.	44 IN.	
COMMON PATH OF EGRESS (SECTION 1013.3)	100 FT.	95.4 FT.	
EXIT ACCESS TRAVEL DISTANCE (TABLE 1015.1)	200 FT.	105.83 FT.	
DEAD ENDS (SECTION 1016.3)	50 FT.	-	
MINIMUM NUMBER OF EXITS (TABLE 1018.1)	2	-	

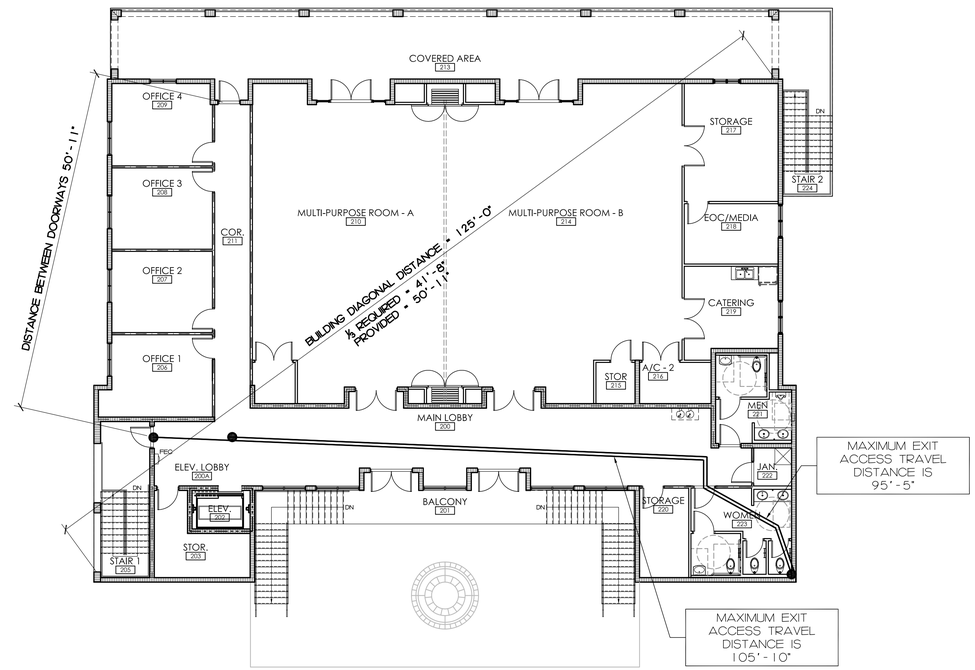
PLUMBING FIXTURE CALCULATIONS:

PER FLORIDA PLUMBING CODE, 2004 EDITION, (TABLE 403.1.)

FLOOR	OCCUPANCY	WATER CLOSETS		LAVATORIES		DRINKING FOUNTAIN		OTHER	
	BUSINESS 1 PER 100	1 PER 25 FOR FIRST 50, AND 1 PER 50 FOR THE REMAINDER EXCEEDING 50		1 PER 40 FOR THE FIRST 50 AND 1 PER 80 FOR THE REMAINDER EXCEEDING 50		1 PER 100		SERVICE SINK (NOT REQ'D.)	
		REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQ.	PRVD.	REQ.	PRVD.
1ST FL.	39	2		2		1		0	
2ND FL.	8								
FLOOR	OCCUPANCY	WATER CLOSETS		LAVATORIES		DRINKING FOUNTAIN		OTHER	
	ASSEMBLY A-3 15 NET	1 PER 125 (MALE) 1 PER 65 (FEMALE)		1 PER 200		1 PER 500		SERVICE SINK 1 REQ'D.	
		REQUIRED	PROVIDED	REQUIRED	PROVIDED	REQ.	PRVD.	REQ.	PRVD.
1ST FL.	-	5		1		1		1	
2ND FL.	185								
SUB-TOTAL (FIXTURES REQUIRED)		7		3		2		1	
TOTAL (FIXTURES PROVIDED)			7		12		4		1

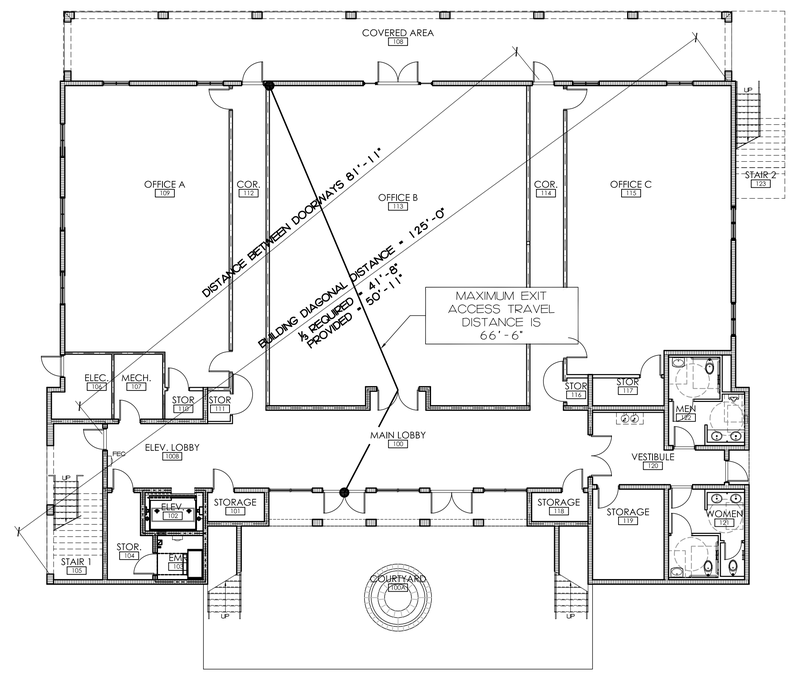
WALL LEGEND

- CMU BLOCK WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- 1 HR. FIRE RATED CMU BLOCK WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- 2 HR. FIRE RATED CMU BLOCK WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- INTERIOR PARTITION WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- 1 HOUR FIRE RATED INTERIOR PARTITION WALL - SEE FLOOR PLAN FOR WALL THICKNESS



SECOND FLOOR PLAN

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



FIRST FLOOR PLAN

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

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

FIRST & SECOND FLOOR LIFE SAFETY & CODE REVIEW PLAN

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009

Scale: AS NOTED

Drawing Number: LS-1

Y:\Clients\St. Augustine\Multi-Use Building\5. DRAWINGS\LS-1 (LIFE SAFETY PLAN) .dwg April 13 2009 - 17:27
Y:\Clients\St. Augustine\Multi-Use Building\5. DRAWINGS\LS-1 (LIFE SAFETY PLAN) .dwg, 4/13/2009 5:27:35 PM, Adobe PDF (temporary) 3344.pc3

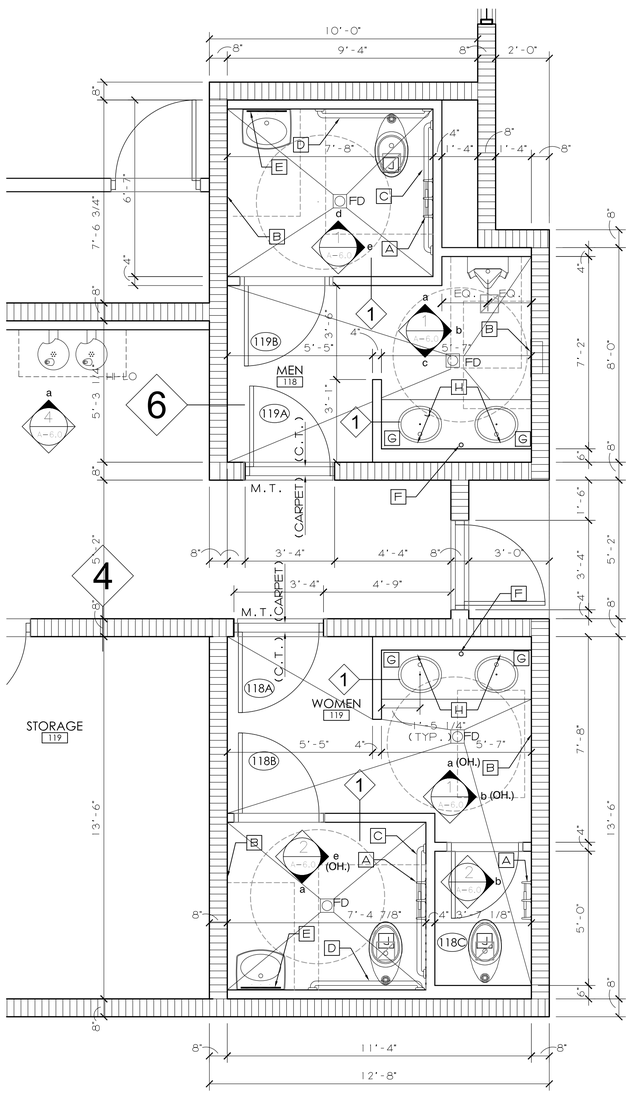
BATHROOM ACCESSORIES

- A — TOILET TISSUE DISPENSER BY OWNER
- B — RECESSED PAPER TOWEL BY OWNER
- C — 48" GRAB BAR - B-5806-42
- D — 36" GRAB BAR - B-5805-36
- E — HC 18" x 30" TILTED MIRROR B-293
- F — SINK MOUNTED SOAP DISPENSER BY OWNER
- G — SINK: OR APPROVED EQUAL COLOR: WHITE
- H — FAUCET: AMERICAN STANDARD 5501.170 OR APPROVED EQUAL
- J — TOILET: OR APPROVED EQUAL COLOR: WHITE FINISH:
- K — JANITOR MOP SINK & FAUCET SEE PLUMBING DRAWINGS

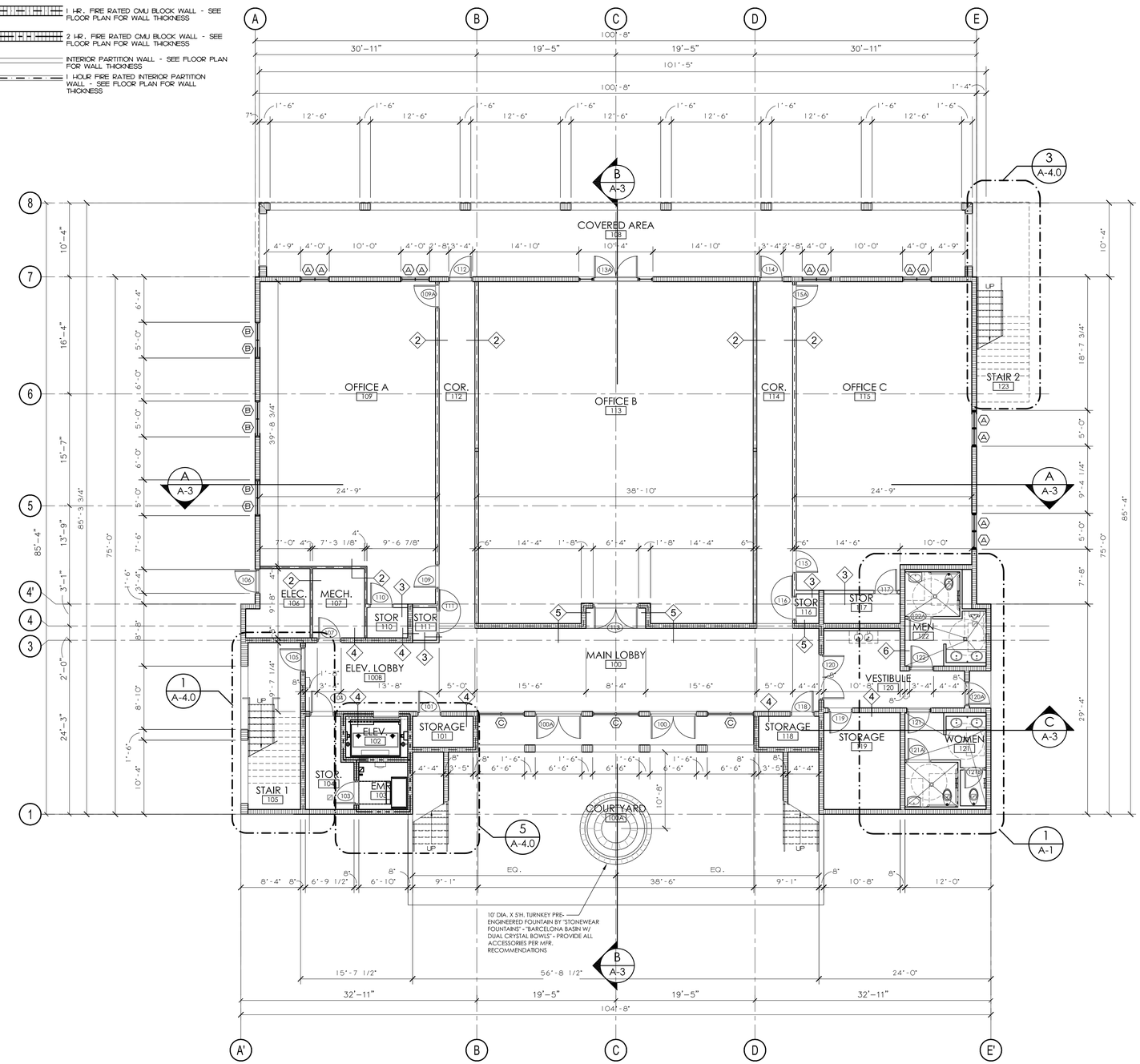
NOTE: ALL BATHROOM ACCESSORIES SHALL BE BOBRICK OR EQUAL. SUBMIT CUT SHEETS TO ARCHITECT FOR APPROVAL.

WALL LEGEND

- CMU BLOCK WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- 1 HR. FIRE RATED CMU BLOCK WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- 2 HR. FIRE RATED CMU BLOCK WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- INTERIOR PARTITION WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- 1 HOUR FIRE RATED INTERIOR PARTITION WALL - SEE FLOOR PLAN FOR WALL THICKNESS



1 / A-1 ENLARGED FLOOR PLAN
SCALE : 3/8" = 1'-0"



FIRST FLOOR PLAN
SCALE : 1/8" = 1'-0"

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RALEIGH, NC•RICHMOND, VA•SARASOTA, FL
TALLAHASSEE, FL•TAMPA ,FL•WEST PALM BEACH, FL

Designer: KPB	Checked by: FRP
Technician: KPB	Project Number: AR553009

THE LPA DESIGN GROUP, INC.
TRANSPORTATION CONSULTANTS
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PHONE 803-254-2211• FAX 803-779-0482
FERNANDO R. PRIETO, A.I.A.
STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

FIRST FLOOR PLAN

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009

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

Drawing Number: A-1

Y:\Clients\St. Augustine\Multi-Use Building\5. DRAWINGS\A-1 THRU A-1_3 (FLOOR PLANS & ROOF PLAN).dwg April 13 2009 - 19:59

BATHROOM ACCESSORIES

- A — TOILET TISSUE DISPENSER BY OWNER
- B — RECESSED PAPER TOWEL BY OWNER
- C — 48" GRAB BAR - B-5806-42
- D — 36" GRAB BAR - B-5805-36
- E — HC 18" x 30" TILTED MIRROR B-293
- F — SINK MOUNTED SOAP DISPENSER BY OWNER
- G — SINK: OR APPROVED EQUAL COLOR: WHITE
- H — FAUCET: AMERICAN STANDARD 5501.170 OR APPROVED EQUAL
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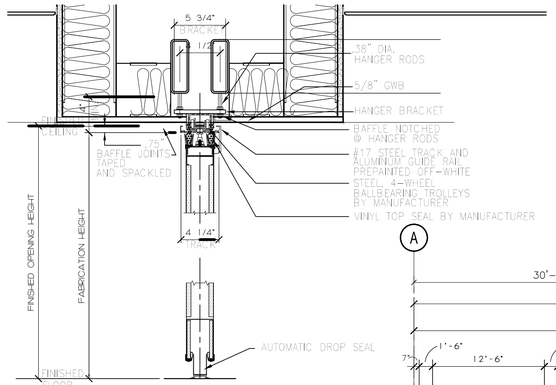
- K — JANITOR MOP SINK & FAUCET SEE PLUMBING DRAWINGS

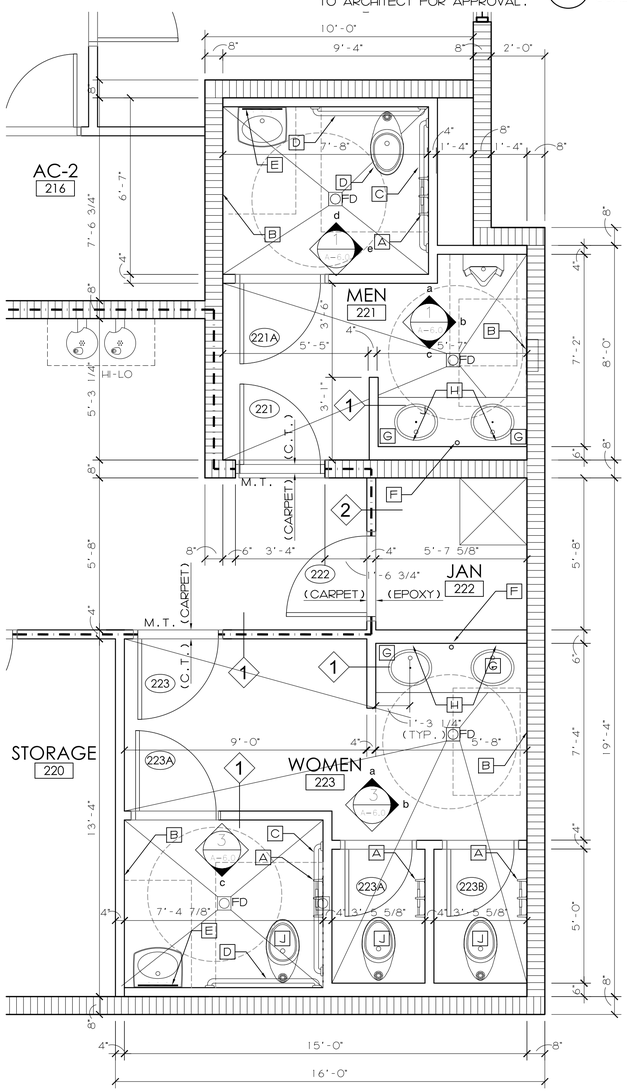
NOTE: ALL BATHROOM ACCESSORIES SHALL BE BOBRICK OR EQUAL. SUBMIT CUT SHEETS TO ARCHITECT FOR APPROVAL.



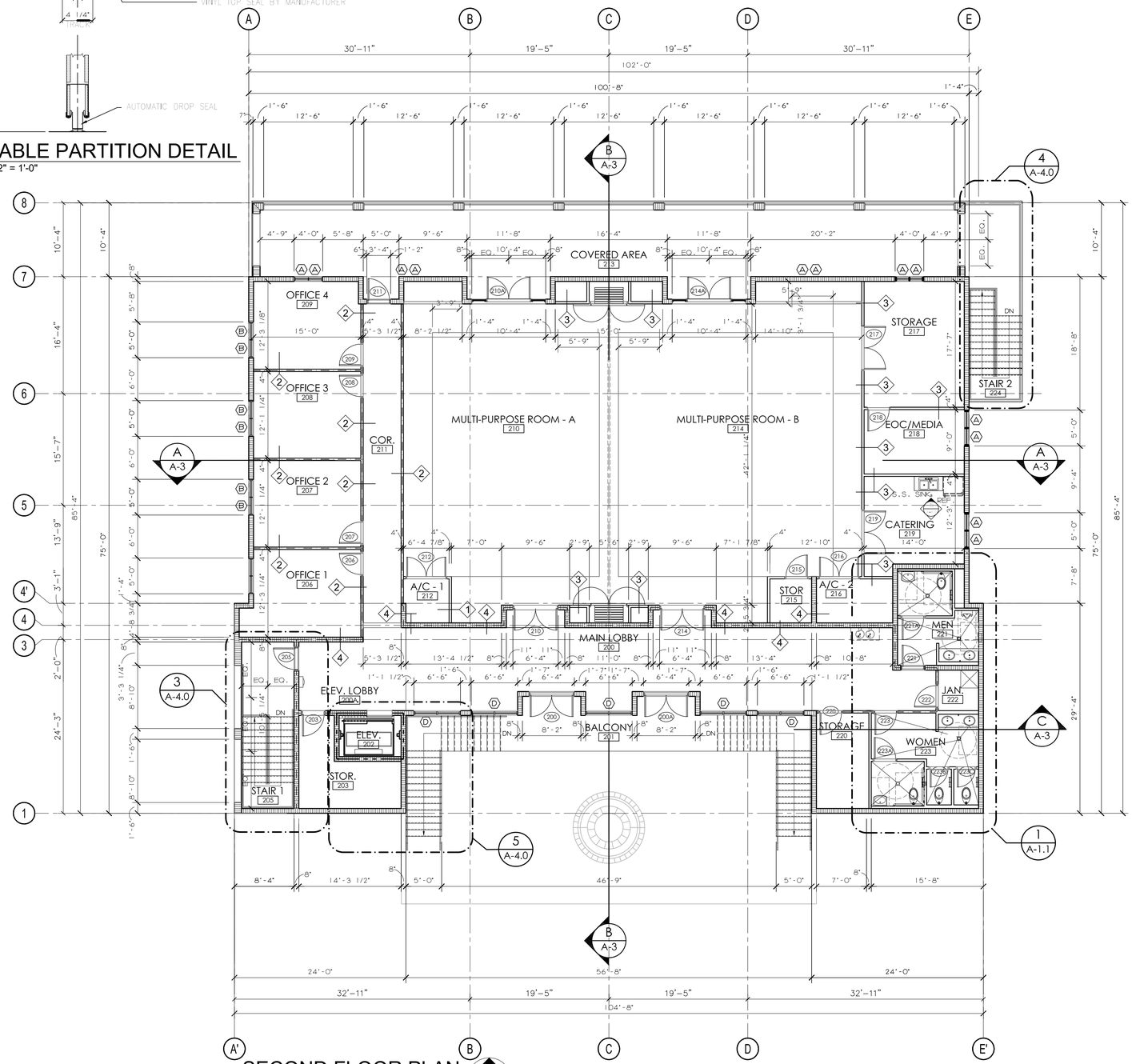
1 A-1.1 **MOVEABLE PARTITION DETAIL**
SCALE : 1 1/2" = 1'-0"

WALL LEGEND

- CMU BLOCK WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- 1 HR. FIRE RATED CMU BLOCK WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- 2 HR. FIRE RATED CMU BLOCK WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- INTERIOR PARTITION WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- 1 HOUR FIRE RATED INTERIOR PARTITION WALL - SEE FLOOR PLAN FOR WALL THICKNESS



1 A-1.1 **ENLARGED FLOOR PLAN**
SCALE : 3/8" = 1'-0"



SECOND FLOOR PLAN
SCALE : 1/8" = 1'-0"

Y:\Clients\St. Augustine\Multi-Use Building\5. DRAWINGS\A-1 THRU A-1_3 (FLOOR PLANS & ROOF PLAN).dwg April 13 2009 - 19:31

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TALLAHASSEE, FL•TAMPA ,FL•WEST PALM BEACH, FL

Designer: KPB	Checked by: FRP
Technician: KPB	Project Number: AR553009

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STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

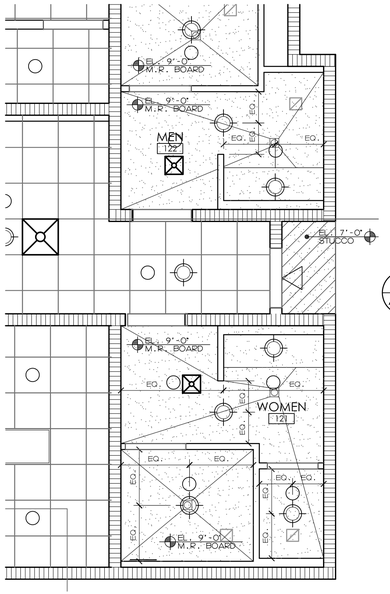
Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
SECOND FLOOR PLAN

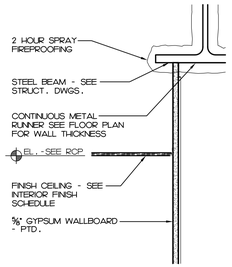
FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

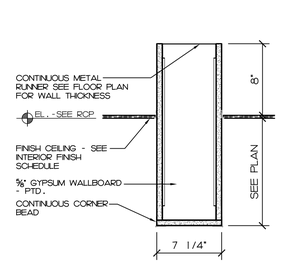
Date: APRIL 15, 2009
Scale: 1/8"=1'-0"
Drawing Number: A-1.1



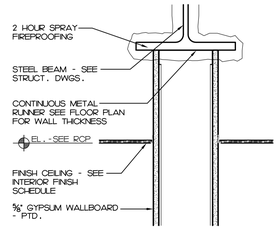
1 A-1.2 ENL. BATHROOM RCP
SCALE : 1/4" = 1'-0"



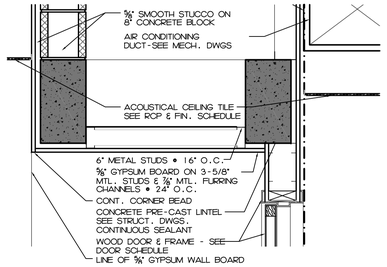
2 A-1.2 CEILING DETAIL
SCALE : 1-1/2" = 1'-0"



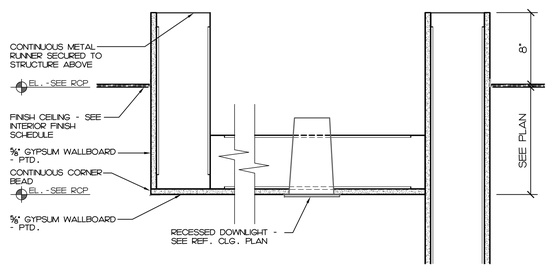
3 A-1.2 CEILING DETAIL
SCALE : 1-1/2" = 1'-0"



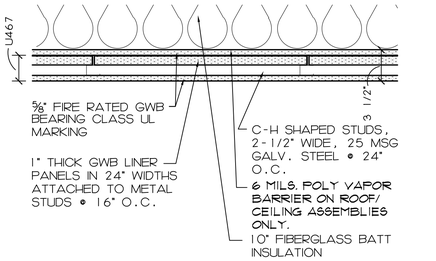
4 A-1.2 CEILING DETAIL
SCALE : 1-1/2" = 1'-0"



5 A-1.2 CEILING DETAIL
SCALE : 1" = 1'-0"



6 A-1.2 CEILING DETAIL
SCALE : 1-1/2" = 1'-0"



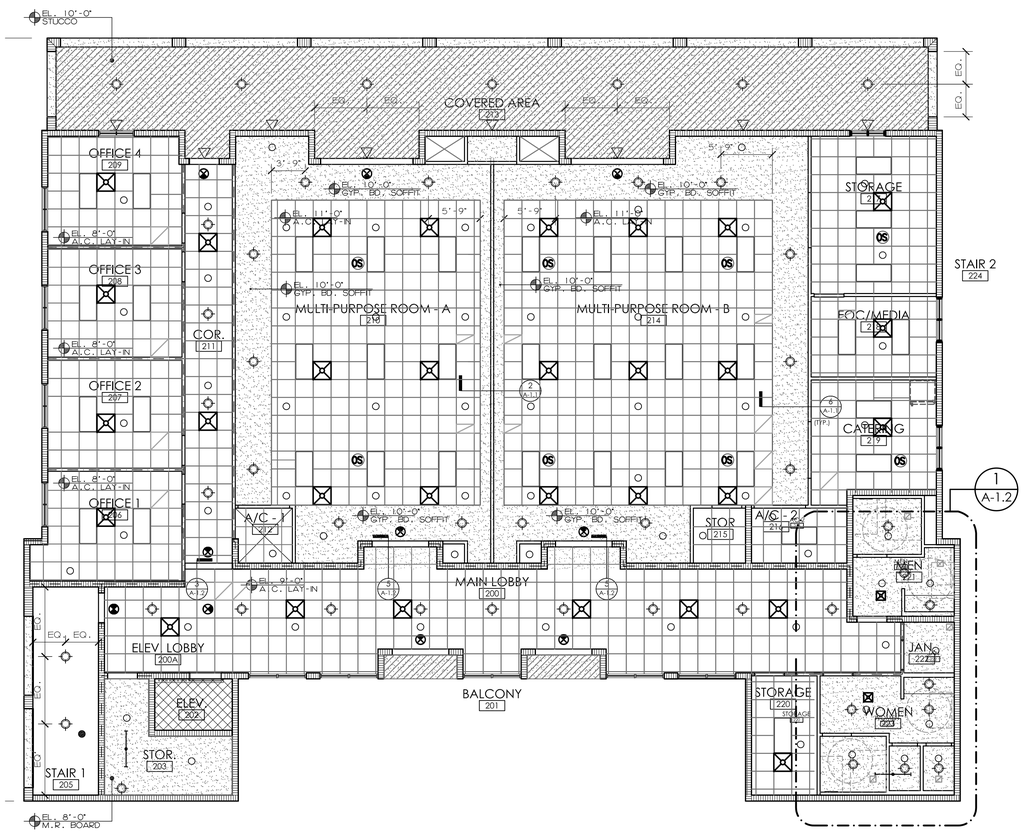
7 A-1.2 2 HR. FIRE RATED CEILING DETAIL
SCALE : 1-1/2" = 1'-0"

GENERAL NOTES

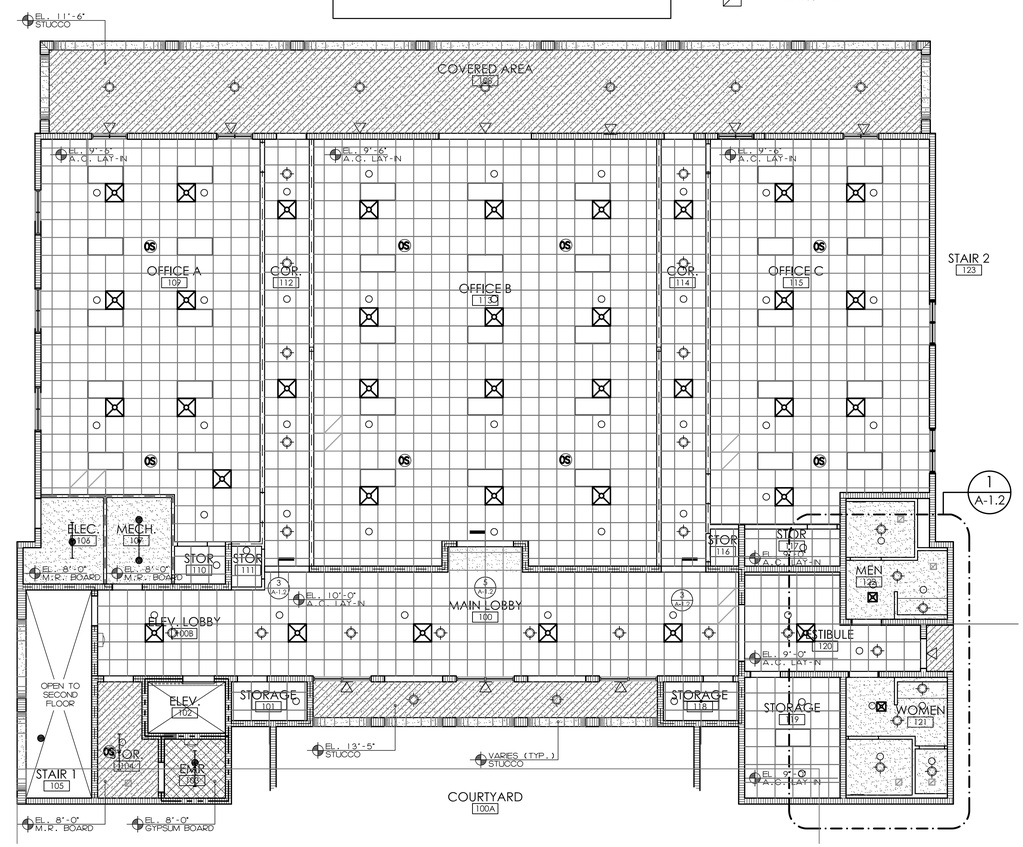
- CEILING GRIDS TO BE CENTERED ON ROOM WITH NO PANELS CUT TO LESS THAN 6" WIDTH.
- LIGHTING, FIRE PROTECTION, SPRINKLERS & REGISTERS TO BE CENTERED WITHIN 2'x2' A.C.T. PANELS.
- CEILING GRILL AND DIFFUSER LOCATIONS TO BE CENTERED WITHIN 2'x2' CEILING TILE
- ALL OPENINGS IN FIRE WALLS AND FIRE SEPARATION WALLS SHALL BE FIRE PROTECTED IN ACCORDANCE W/ THE FL BULDING CODE.
- G.C. TO COORDINATE ALL AUDIO/VISUAL EQUIPMENT, CONNECTIONS AND REQUIREMENTS WITH OWNER APPOINTED A/V SUB-CONTRACTOR.

CEILING LEGEND

- 2'x2' ACOUSTICAL LAY-IN CEILING TILE
- PAINTED GYPSUM WALLBOARD CEILING ON METAL FRAME
- ⅝" STUCCO ON ¾" EXTERIOR GRADE PLYWOOD & GALVANIZED METAL LATH
- 2 HOUR FIRE RATED CEILING ASSEMBLY (UL#U467) SEE DETAIL 7/A-1.2)
- CEILING HEIGHT 9'-0" A.F.F. UNLESS OTHERWISE NOTED
- 2'x4' FLUORESCENT LIGHT FIXTURE
- 2'x2' FLUORESCENT LIGHT FIXTURE
- RECESSED DOWNLIGHT
- WALL MOUNTED LIGHT FIXTURE
- 2'X2' A/C DIFFUSERS - T-BAR LAY-INS
- 2'X2' RETURN AIR GRILLE - T-BAR LAY-INS
- EMERGENCY EXIT LIGHT
- EXPOSED LIGHT FIXTURE
- FULLY RECESSED SPRINKLER HEAD
- UPRIGHT SPINKLER HEAD
- SIDEWALL SPRINKLER HEAD
- EXHAUST FAN



SECOND FLOOR REFLECTED CEILING PLAN
SCALE : 1/8" = 1'-0"



FIRST FLOOR REFLECTED CEILING PLAN
SCALE : 1/8" = 1'-0"

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RALEIGH, NC•RICHMOND, VA•SARASOTA, FL
TALLAHASSEE, FL•TAMPA ,FL•WEST PALM BEACH, FL

Designer:	Checked by:
KPB	FRP
Technician:	Project Number:
KPB	AR553009

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PHONE 803-254-2211• FAX 803-779-0482
FERNANDO R. PRIETO, A.I.A.
STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
FIRST & SECOND FLOOR REFLECTED CEILING PLANS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009
Scale: 1/8"=1'-0"
Drawing Number: A-1.2

Y:\Clients\St. Augustine\Multi-Use Building\5. DRAWINGS\A-1 THRU A-1_3 (FLOOR PLANS & ROOF PLAN) .dwg, 4/13/2009 5:38:01 PM, Adobe PDF (temporary) 5973.pc3
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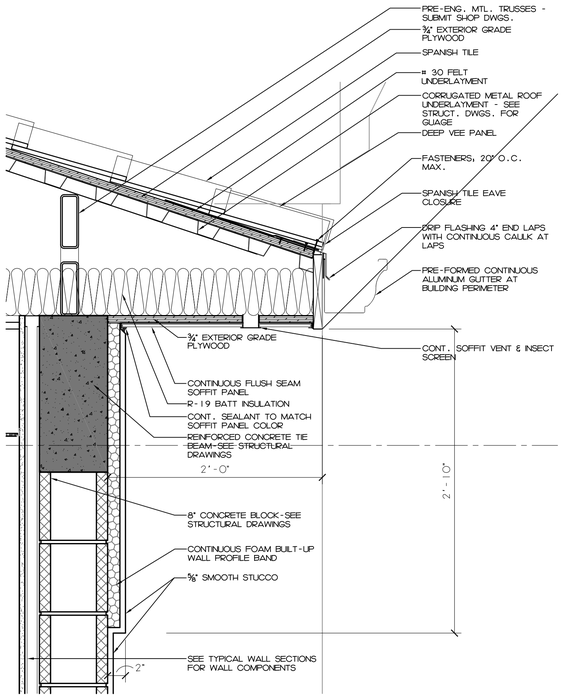
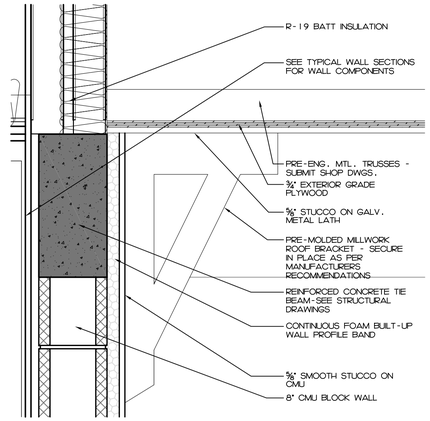
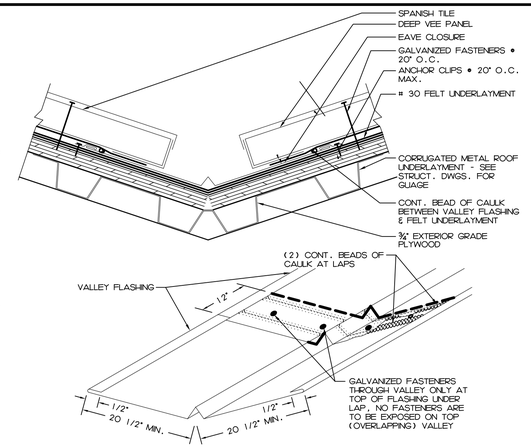


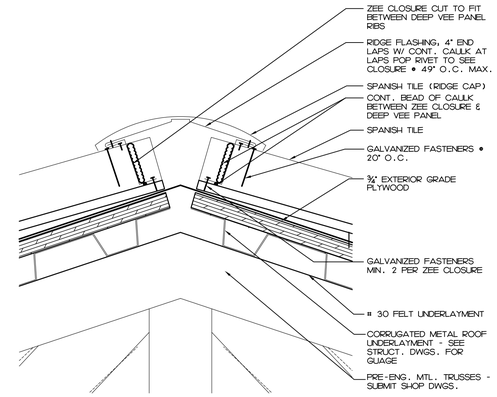
4 A-3.1 ROOF EDGE DETAIL
SCALE : 1 1/2" = 1'-0"



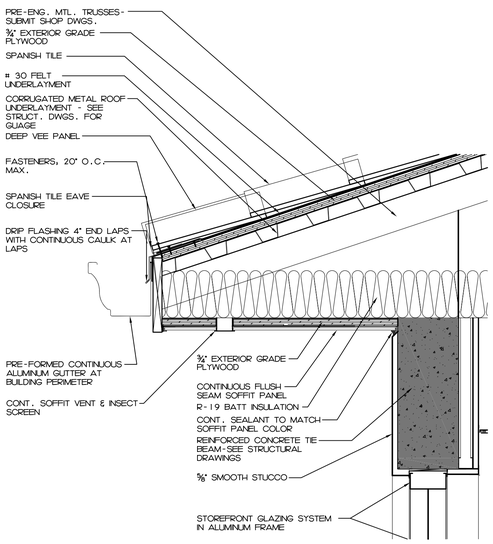
3 A-3.1 SOFFIT DETAIL
SCALE : 3 = 1'-0"



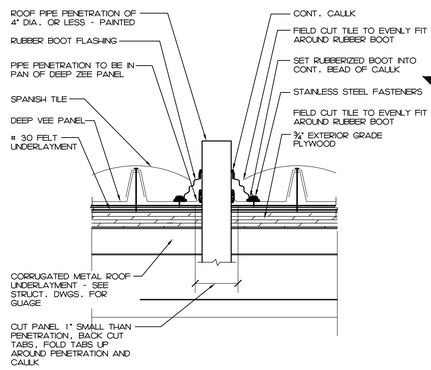
2 A-3.1 VALLEY FLASHING DETAIL
SCALE : 3 = 1'-0"



1 A-3.1 ROOF RIDGE DETAIL
SCALE : 3 = 1'-0"



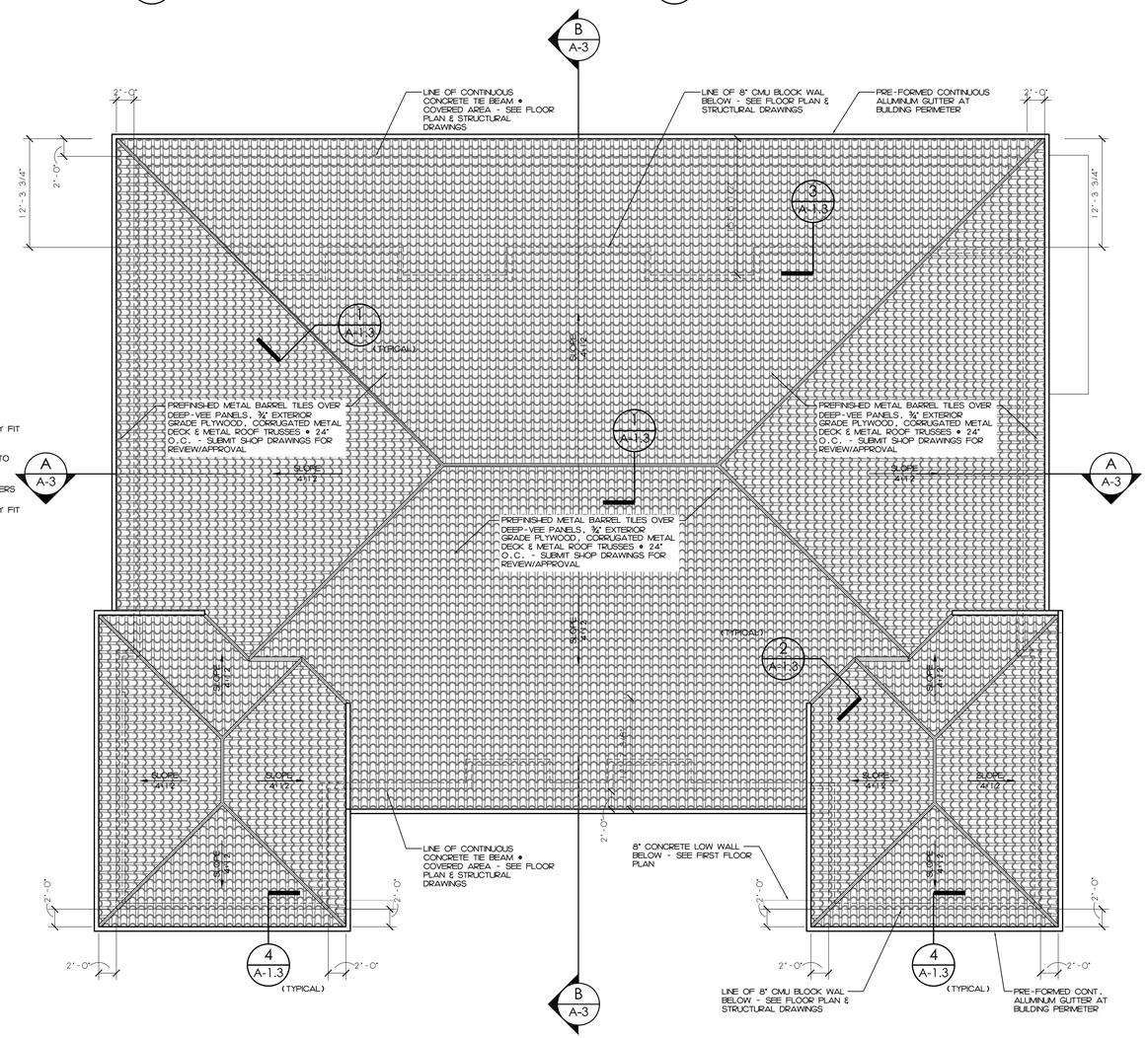
5 A-3.1 ROOF EDGE DETAIL
SCALE : 1 1/2" = 1'-0"



6 A-3.1 PIPE PENETRATION DETAIL
SCALE : 1 1/2" = 1'-0"

GENERAL NOTES

1. CUT HOLE TO ALLOW FOR THERMAL MOVEMENT IF PANELS ARE 30'-0" OR LONGER.
2. IF PIPE IS MADE OF METAL, IT MUST BE PAINTED TO PREVENT RUST RUN-OFF FROM STAINING PANELS.
3. POSITION SQUARE BASED BOOTS IN A DIAMOND ORIENTATION WHERE POSSIBLE TO AID IN DIVERTING WATER.



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

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Designer: KPB	Checked by: FRP
Technician: KPB	Project Number: AR553009

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STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
ROOF PLAN & ROOF DETAILS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009
Scale: 1/8"=1'-0"
Drawing Number: A-1.3

Y:\Clients\St. Augustine\Multi-Use Building\5. DRAWINGS\A-1 THRU A-1_3 (FLOOR PLANS & ROOF PLAN) .dwg, 4/13/2009 6:27:01 PM, Adobe PDF (temporary) 9290.pc3
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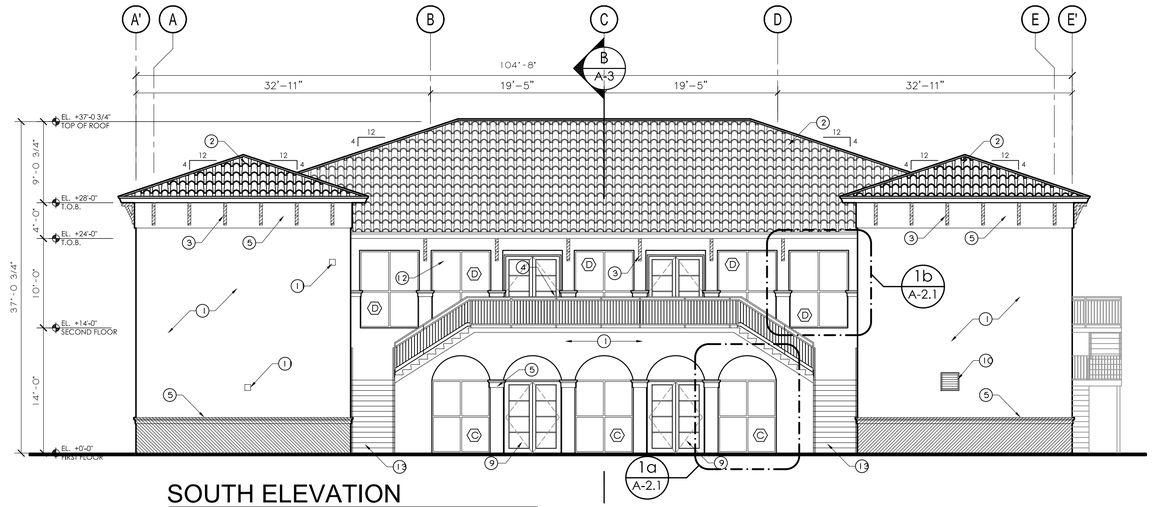
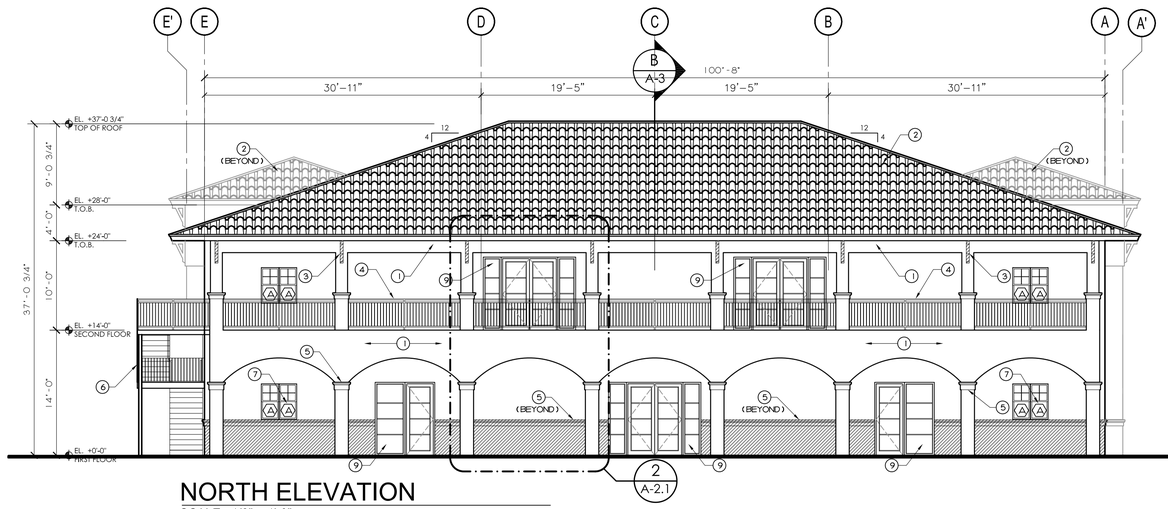


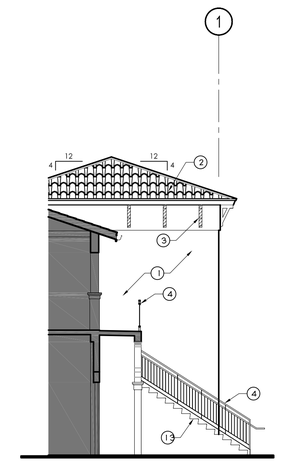
SOUTH ELEVATION

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



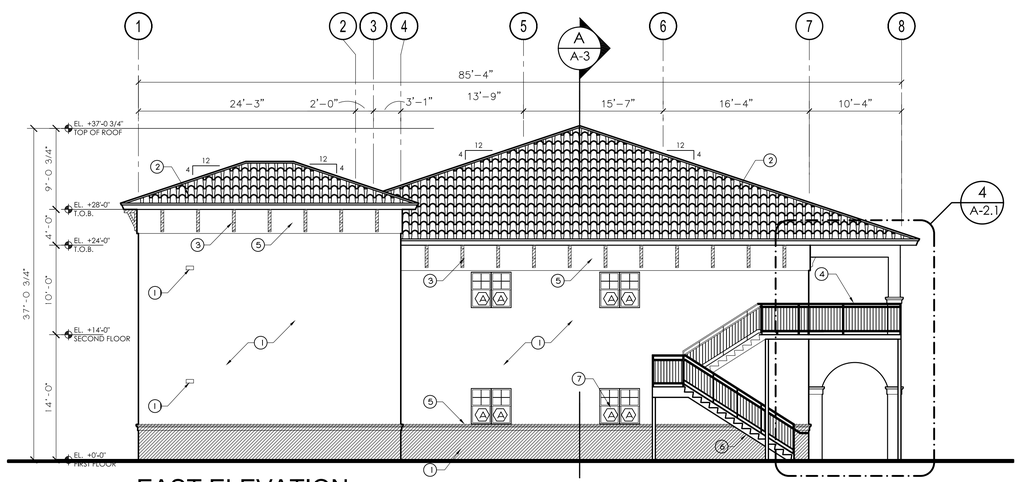
NORTH ELEVATION

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



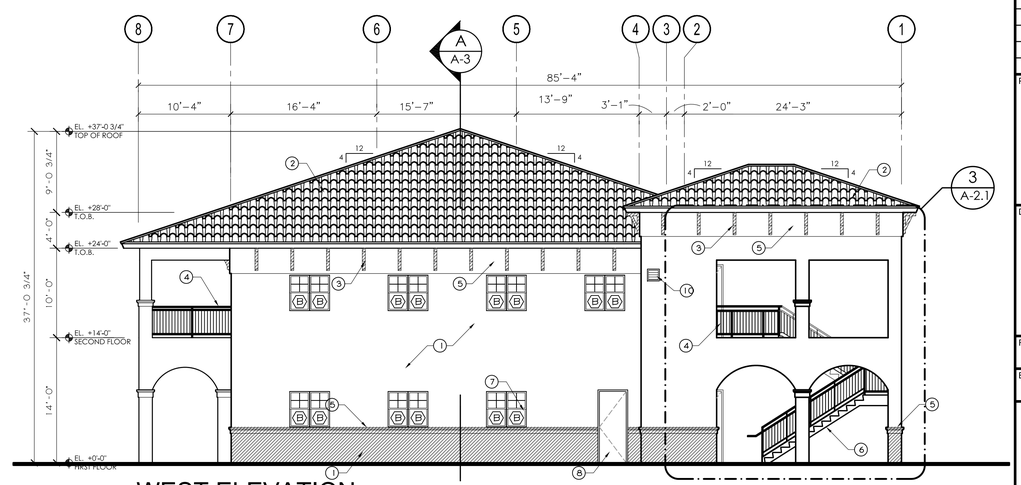
PARTIAL ELEVATION

SCALE : 1/8" = 1'-0" WEST FACING @ COURTYARD



EAST ELEVATION

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



WEST ELEVATION

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

MATERIAL LEGEND

COLOR A

COLOR B

1. SMOOTH SUCCO ON 8" BLOCK
2. METAL ROOF - SPANISH TILE
3. PRE-MOLDED MILLWORK ROOF BRACKET - SECURE IN PLACE AS PER MANUFACTURERS RECOMMENDATIONS
4. ALUMINUM RAILING
5. STUCCO/FOAM BAND
6. PREFABRICATED METAL STAIR W/ POURED CONCRETE PANS W/ NON-SLIP FINISH
7. ALUMINUM WINDOWS W/ IMPACT RESISTANT GLASS
8. HOLLOW METAL DOOR IN HOLLOW METAL FRAME
9. CLEAR ANODIZED STOREFRONT DOORS W/ SIDE-LITE
10. LOUVER - SEE MECH. DWGS. PAINTED TO MATCH WALL COLOR
11. WALL CAP W/ INSECT SCREEN PAINTED TO MATCH WALL COLOR
12. CLEAR ANODIZED STOREFRONT WINDOWS
13. CONCRETE STAIR

ST. AUGUSTINE • ST. JOHNS COUNTY
AIRPORT AUTHORITY

THE LPA GROUP
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RALEIGH, NC•RICHMOND, VA•SARASOTA, FL
TALLAHASSEE, FL•TAMPA ,FL•WEST PALM BEACH, FL

Designer: KPB	Checked by: FRP
Technician: KPB	Project Number: AR553009

THE LPA DESIGN GROUP, INC.
TRANSPORTATION CONSULTANTS
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700 HUGER STREET, COLUMBIA SC 29201
PHONE 803-254-2211• FAX 803-779-0482
FERNANDO R. PRIETO, A.I.A.
STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

EXTERIOR ELEVATIONS

FAA A.I.P. PROJECT NUMBER:

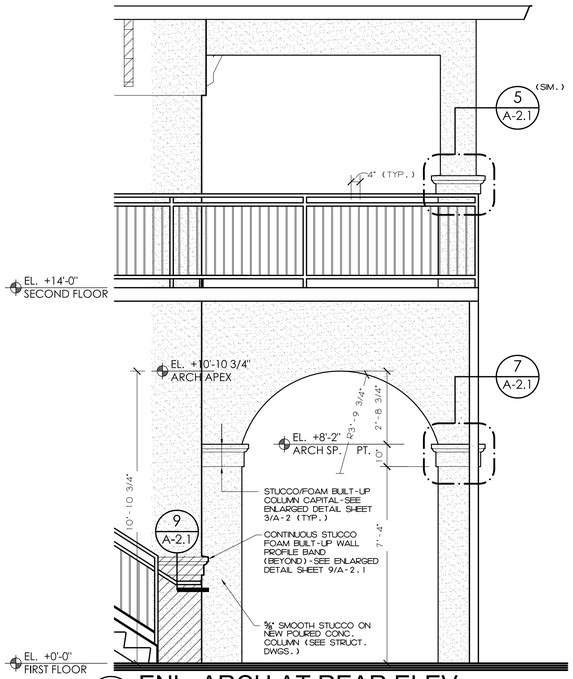
ENGINEER OF RECORD

Date: APRIL 15, 2009

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

Drawing Number: A-2

Y:\Clients\St. Augustine\Multi-Use Building\5. DRAWINGS\A-2 (EXTERIOR ELEVATIONS).dwg April 13 2009 - 19:18



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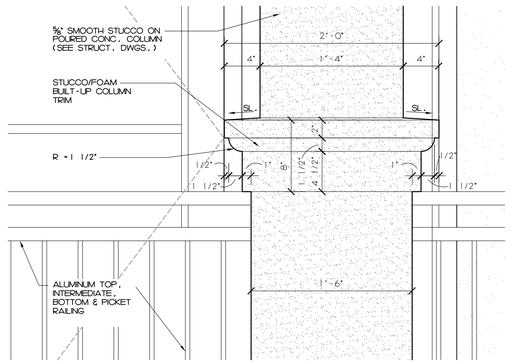

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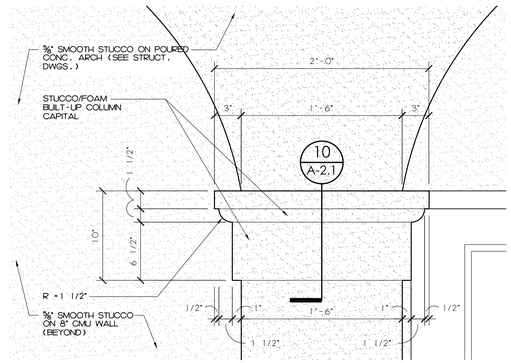

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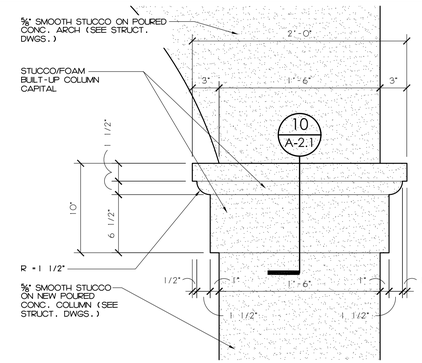

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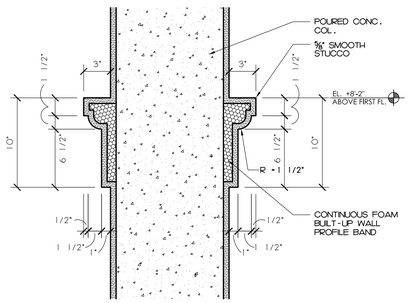

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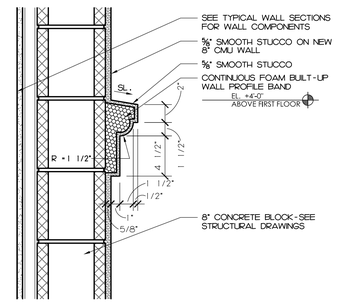

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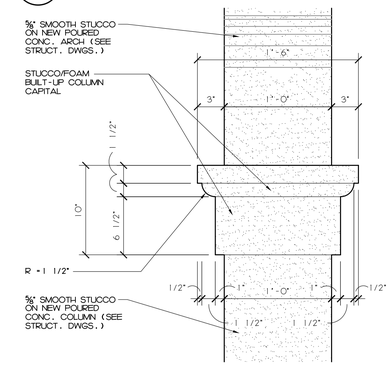

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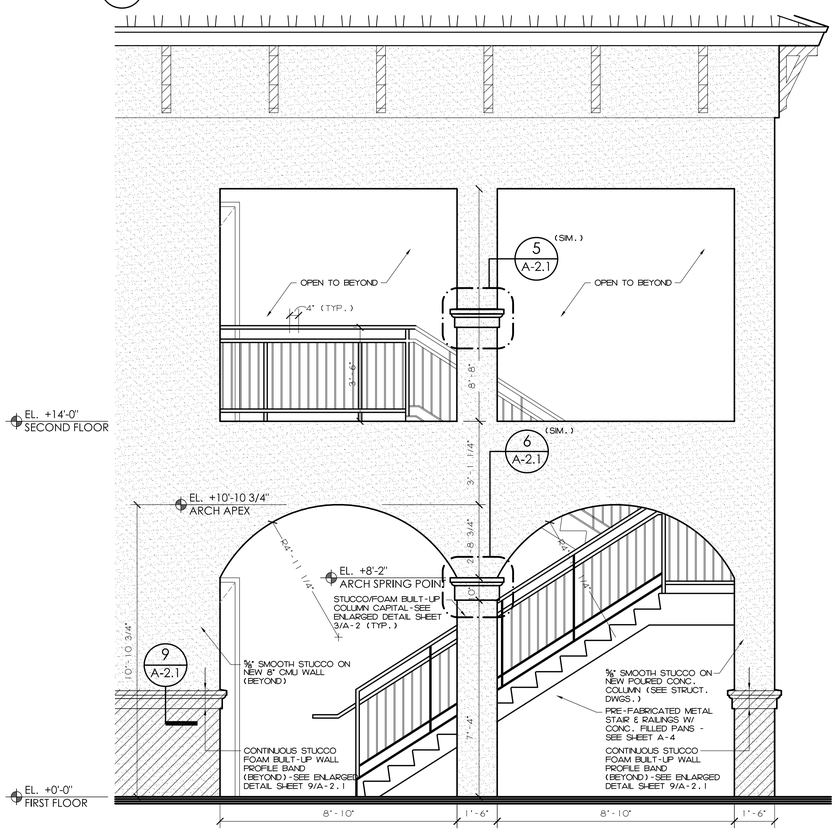
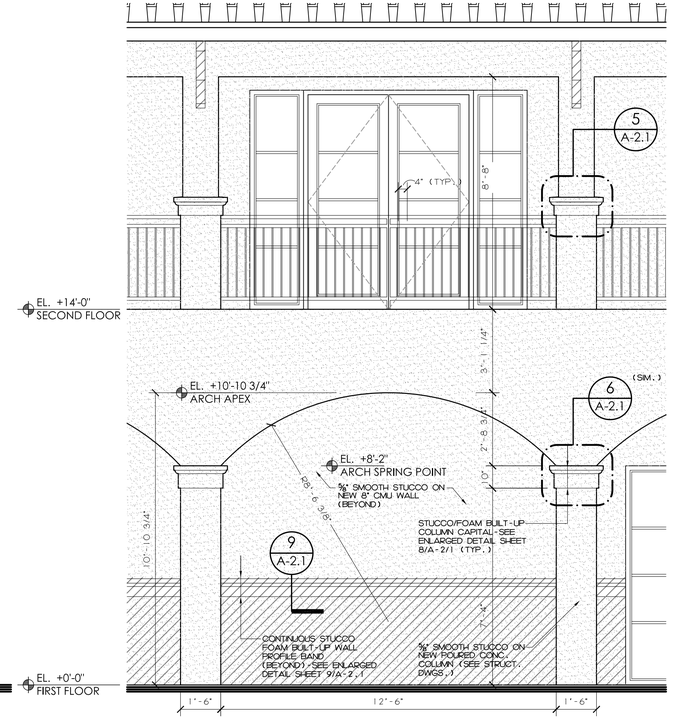
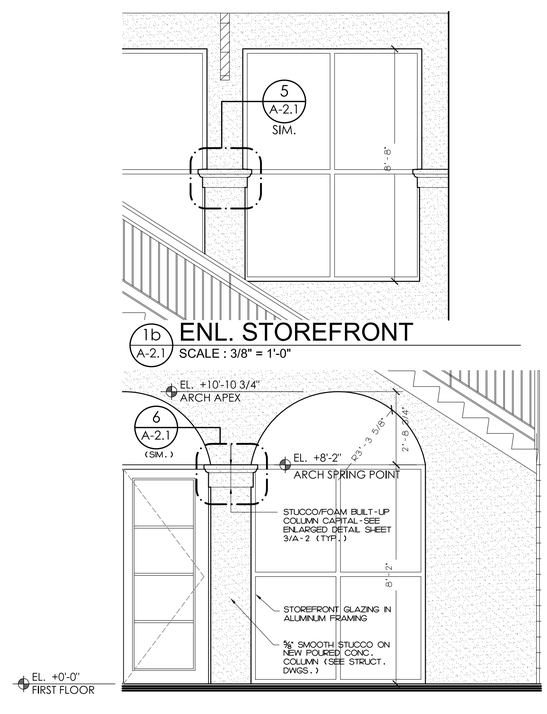


3 A-2.1 ENL. ARCH AT REAR ELEV.
SCALE : 3/8" = 1'-0"



2 A-2.1 ENL. ARCH AT REAR ELEV.
SCALE : 3/8" = 1'-0"



1b A-2.1 ENL. STOREFRONT
SCALE : 3/8" = 1'-0"

1a A-2.1 ENL. ARCH AT FRONT ELEV.
SCALE : 3/8" = 1'-0"

ST. AUGUSTINE • ST. JOHNS COUNTY
AIRPORT AUTHORITY

THE LPA GROUP
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Designer: KPB	Checked by: FRP
Technician: KPB	Project Number: AR553009

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FERNANDO R. PRIETO, A.I.A.
STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

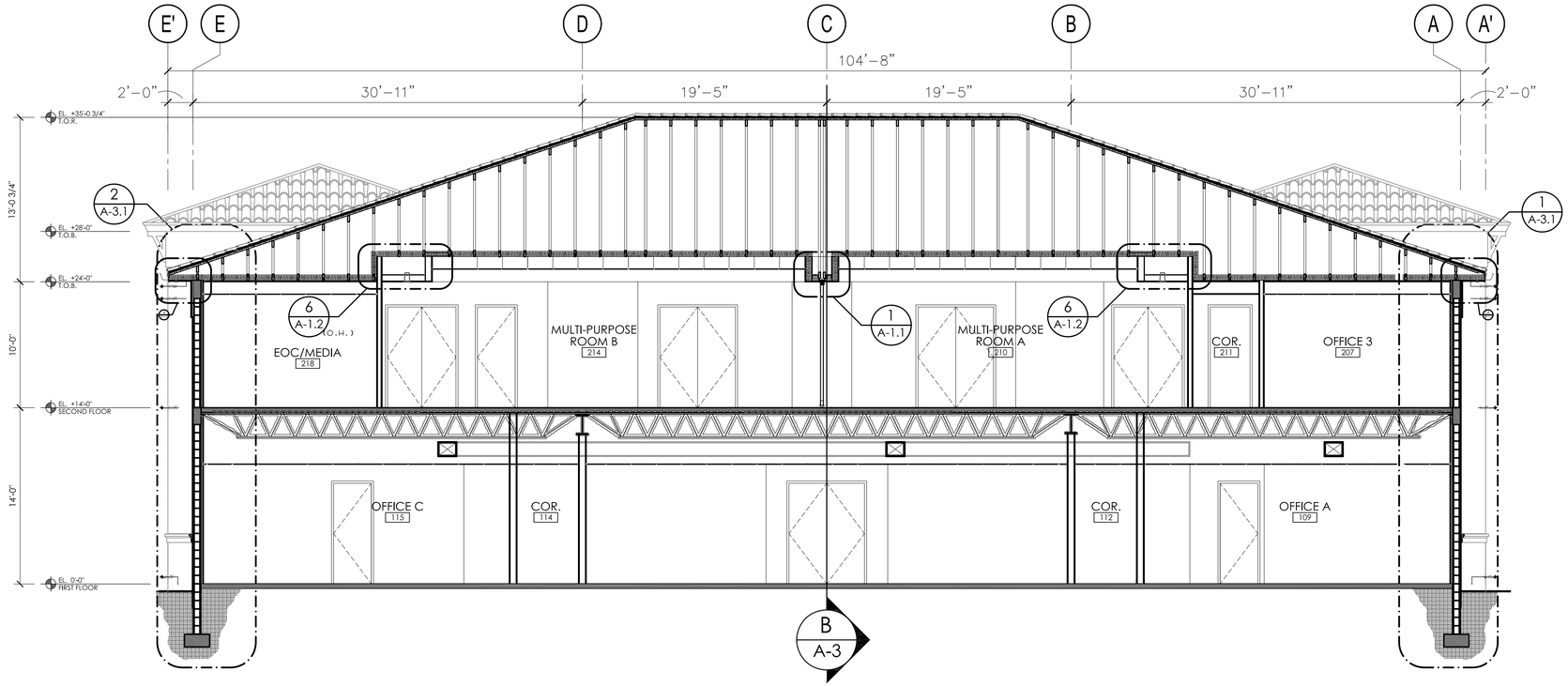
Drawing Name:
EXTERIOR ELEVATIONS DETAILS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009
Scale: 1/8"=1'-0"
Drawing Number: A-2.1

Y:\Clients\St. Augustine\Multi-Use Building\5. DRAWINGS\A-2 (EXTERIOR ELEVATIONS).dwg April 13 2009 - 19:17



A A-3 BUILDING SECTION
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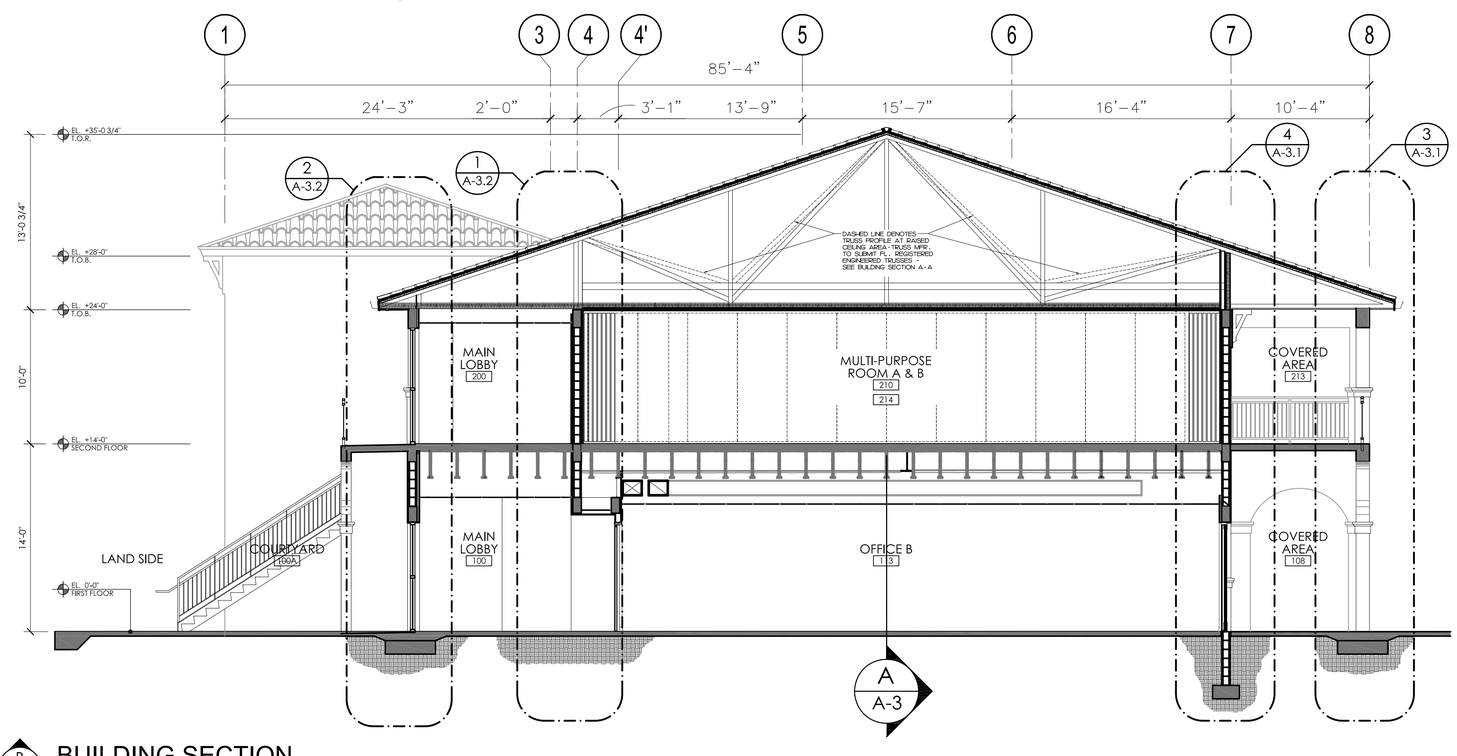

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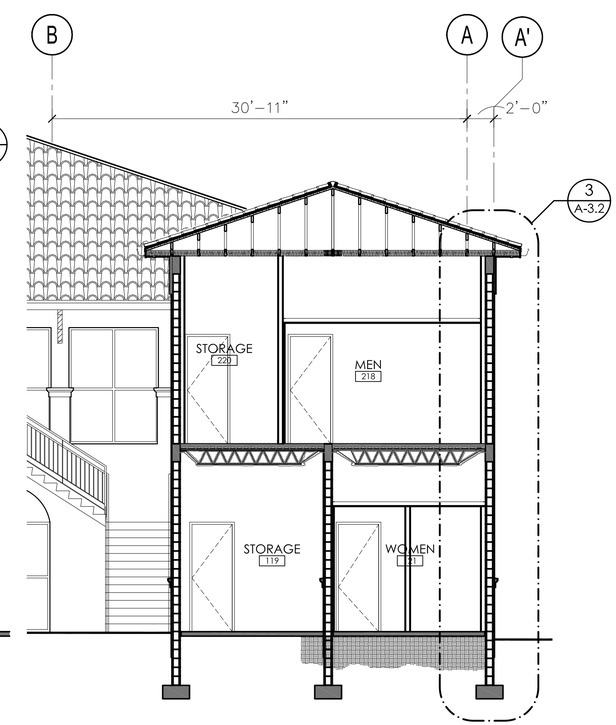

C A-3 BUILDING SECTION
SCALE : 3/16" = 1'-0"

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Designer: KPB	Checked by: FRP
Technician: KPB	Project Number: AR553009

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STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
BUILDING SECTIONS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009
Scale: 3/16"=1'-0"
Drawing Number: A-3

Y:\Clients\St. Augustine\Multi-Use Building\5. DRAWINGS\A-3 (BUILDING SECTIONS & WALL SECTIONS).dwg, 4/13/2009 5:43:29 PM, Adobe PDF (temporary) 8620.pc3
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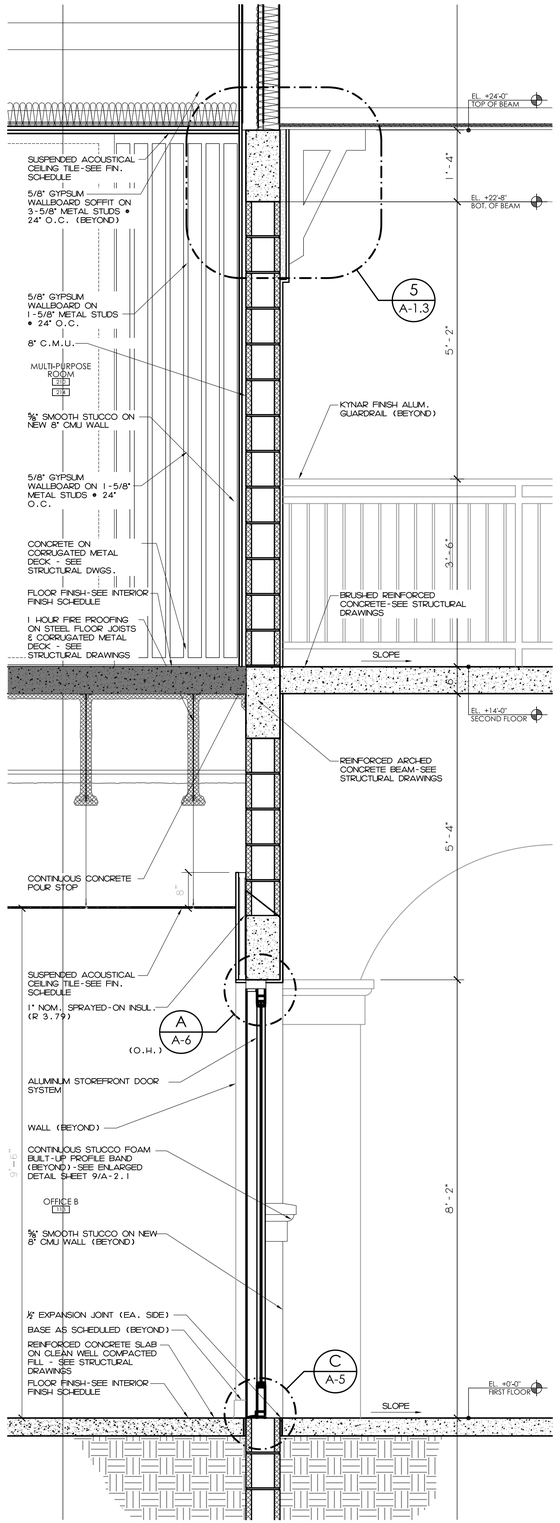

4 A-3.1 WALL SECTION
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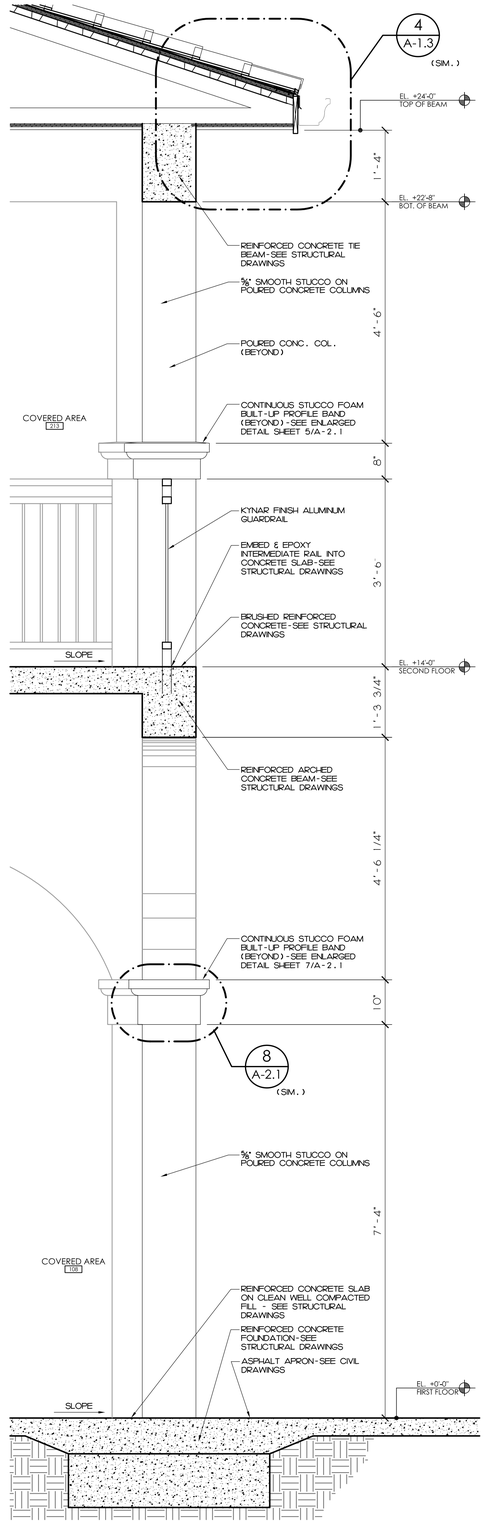

3 A-3.1 WALL SECTION
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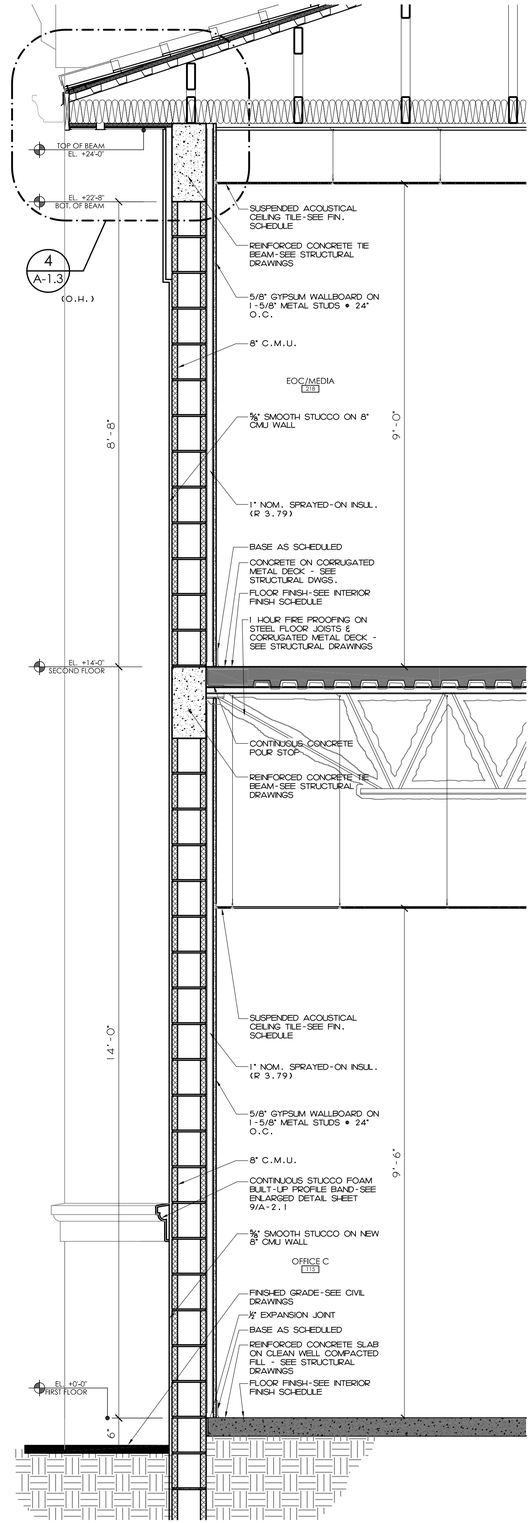

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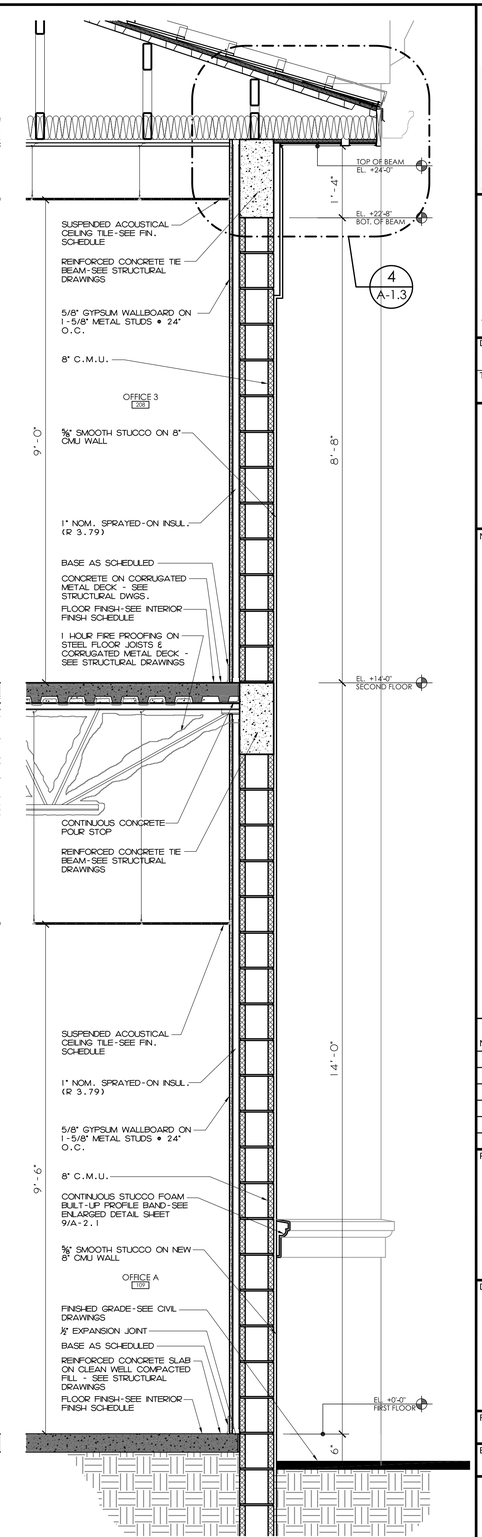

1 A-3.1 WALL SECTION
SCALE : 3/4" = 1'-0"

ST. AUGUSTINE • ST. JOHNS COUNTY
AIRPORT AUTHORITY

THE LPA GROUP
TRANSPORTATION CONSULTANTS
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Designer: KPB	Checked by: FRP
Technician: KPB	Project Number: AR553009

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STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

WALL SECTIONS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009

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

Drawing Number: A-3.1

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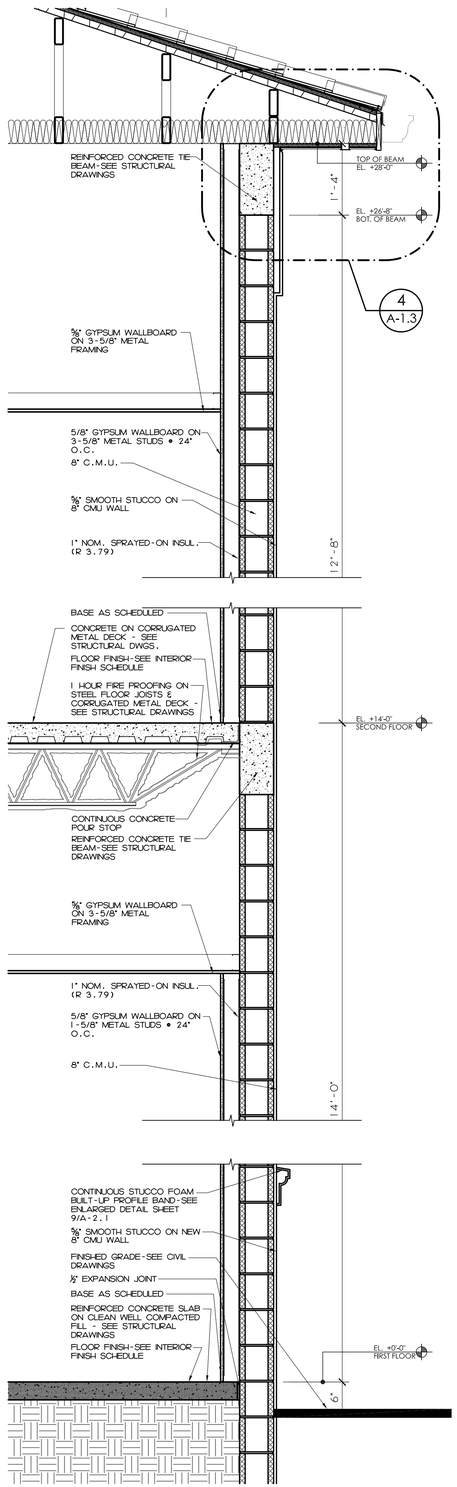

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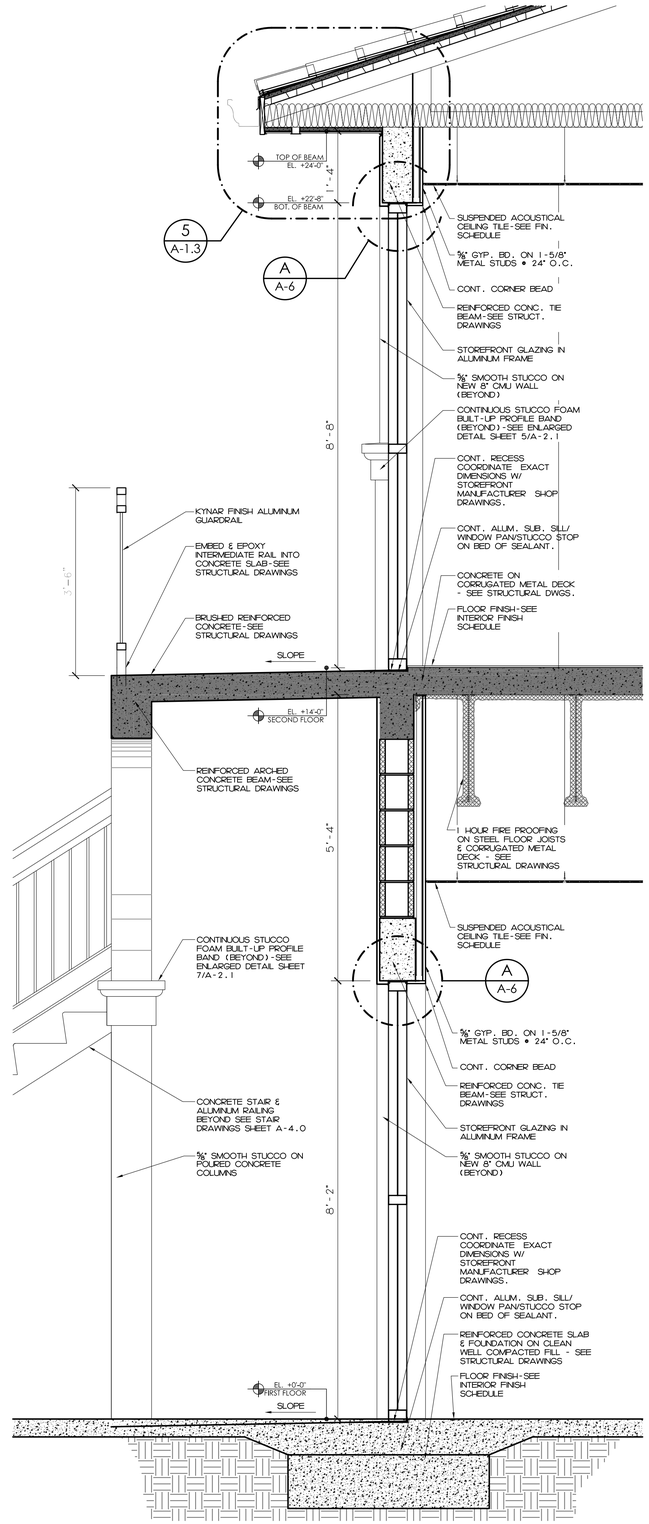

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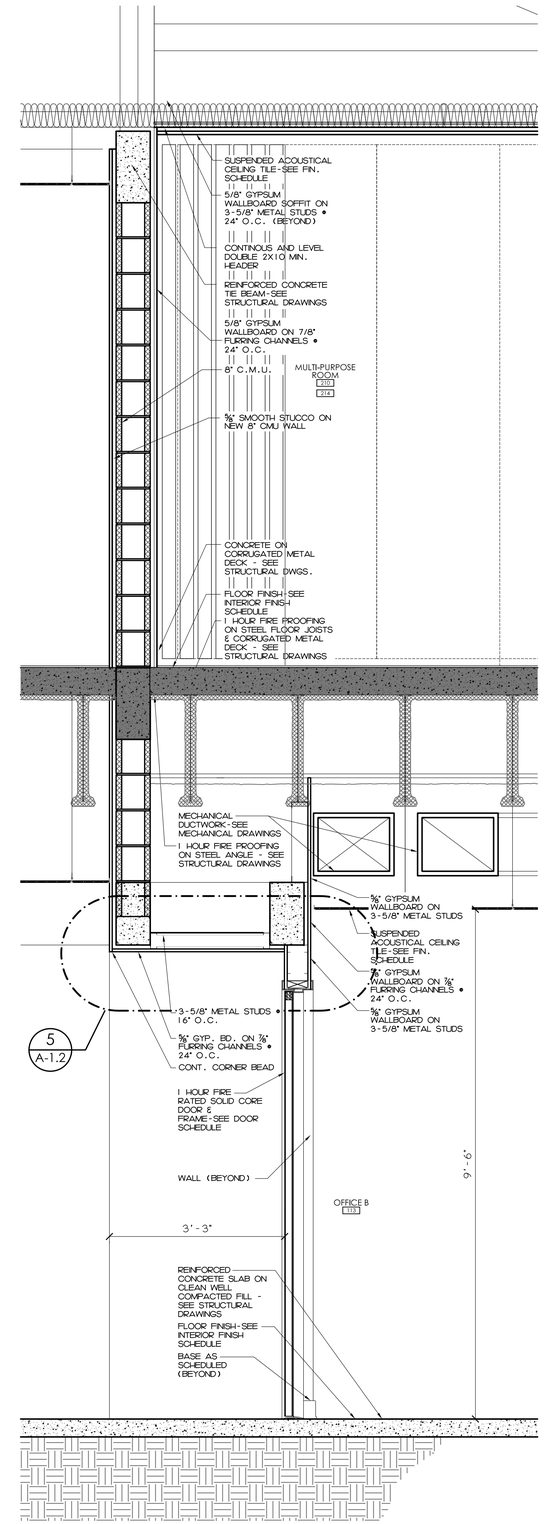

1 A-3.2 WALL SECTION
SCALE : 3/4" = 1'-0"

ST. AUGUSTINE • ST. JOHNS COUNTY
AIRPORT AUTHORITY

THE LPA GROUP
TRANSPORTATION CONSULTANTS
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Designer: KPB	Checked by: FRP
Technician: KPB	Project Number: AR553009

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FERNANDO R. PRIETO, A.I.A.
STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

WALL SECTIONS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009

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

Drawing Number: A-3.2

Y:\Clients\St. Augustine\Multi-Use Building\5. DRAWINGS\A-3 (BUILDING SECTIONS & WALL SECTIONS).dwg April 13 2009 – 17:46
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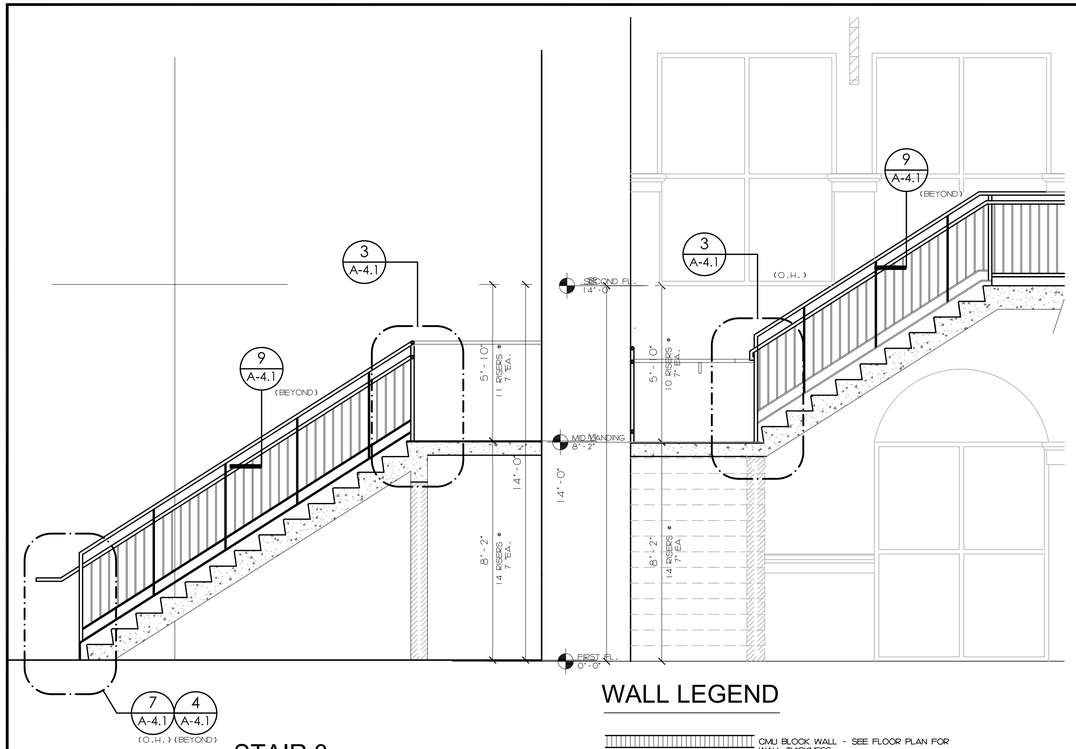
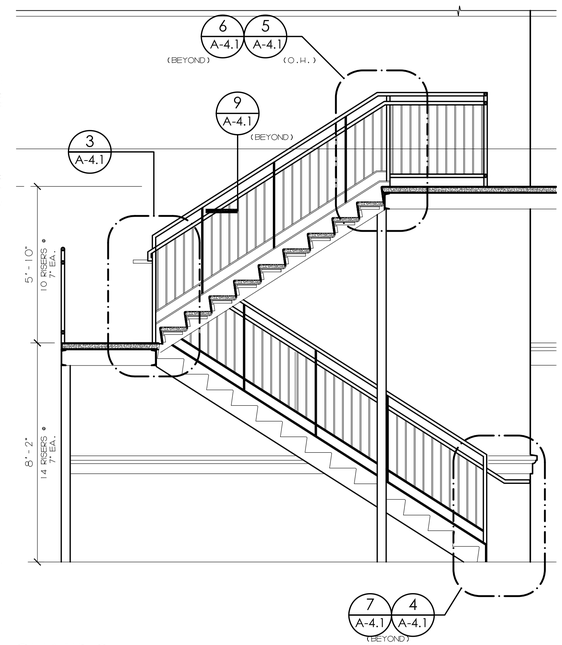
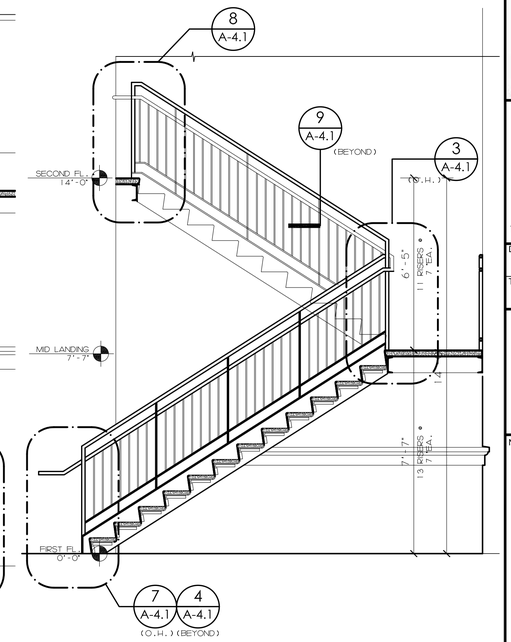


STAIR 3
STAIR SECTION
B A-4.0 SCALE : 3/8" = 1'-0" STAIR 2



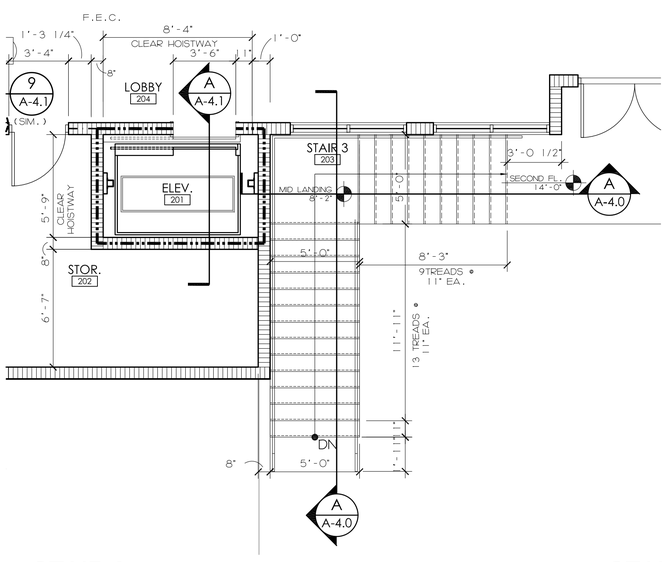
STAIR 2
STAIR SECTION
B A-4.0 SCALE : 3/8" = 1'-0" STAIR 2



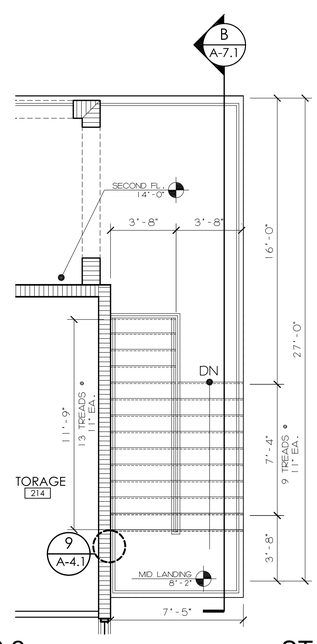
STAIR 1
STAIR SECTION
A A-4.0 SCALE : 3/8" = 1'-0" STAIR 1

WALL LEGEND

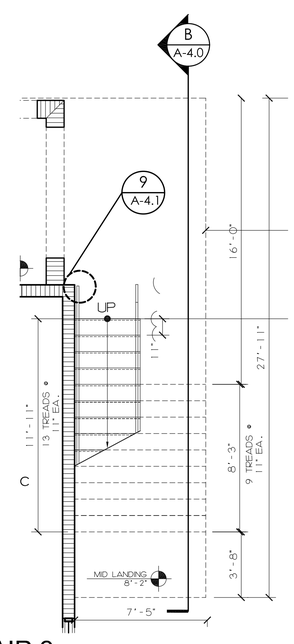
- CMU BLOCK WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- 1 HR. FIRE RATED CMU BLOCK WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- 2 HR. FIRE RATED CMU BLOCK WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- INTERIOR PARTITION WALL - SEE FLOOR PLAN FOR WALL THICKNESS
- 1 HOUR FIRE RATED INTERIOR PARTITION WALL - SEE FLOOR PLAN FOR WALL



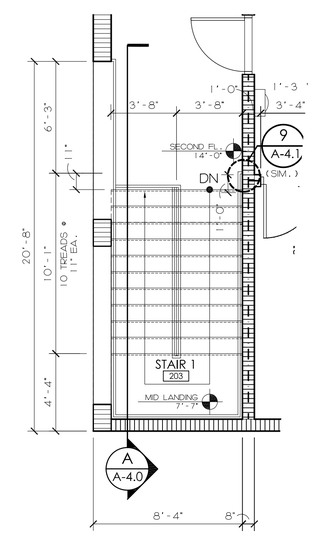
STAIR 3
ENLARGED STAIR PLAN
5 A-4.0 SCALE : 1/4" = 1'-0" SECOND FLOOR PLAN



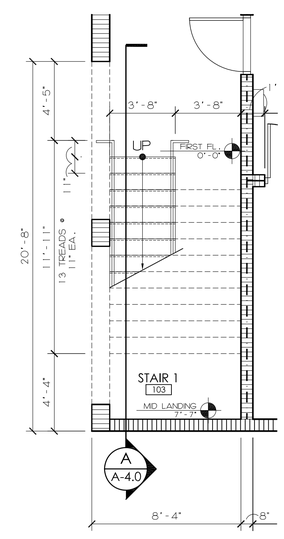
STAIR 2
ENLARGED STAIR PLAN
4 A-4.0 SCALE : 1/4" = 1'-0" SECOND FLOOR PLAN



STAIR 2
ENLARGED STAIR PLAN
3 A-4.0 SCALE : 1/4" = 1'-0" FIRST FLOOR PLAN



STAIR 1
ENLARGED STAIR PLAN
2 A-4.0 SCALE : 1/4" = 1'-0" SECOND FLOOR PLAN



STAIR 1
ENLARGED STAIR PLAN
1 A-4.0 SCALE : 1/4" = 1'-0" FIRST FLOOR PLAN

ST. AUGUSTINE • ST. JOHNS COUNTY
AIRPORT AUTHORITY

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Designer: KPB	Checked by: FRP
Technician: KPB	Project Number: AR553009

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STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
ENLARGED STAIR PLANS & STAIR SECTIONS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009
Scale: AS NOTED
Drawing Number: A- 4.0

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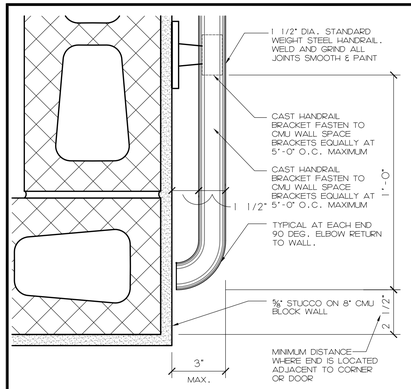
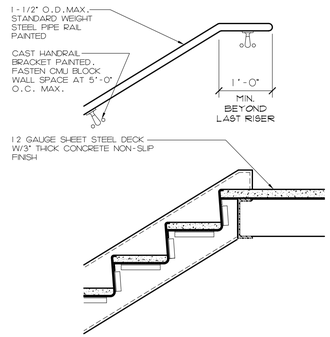
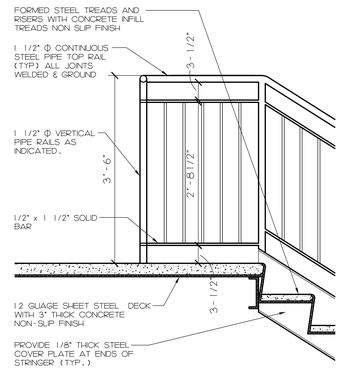


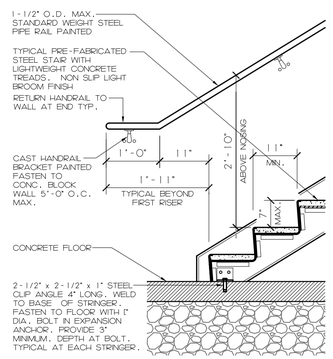
9 A-4.1 HANDRAIL ATTACHMENT
SCALE : 3" = 1'-0"



6 A-4.1 TOP LANDING DETAIL
SCALE : 3/4" = 1'-0"



5 A-4.1 GUARD RAIL DETAIL
SCALE : 3/4" = 1'-0"



4 A-4.1 LANDING DETAIL
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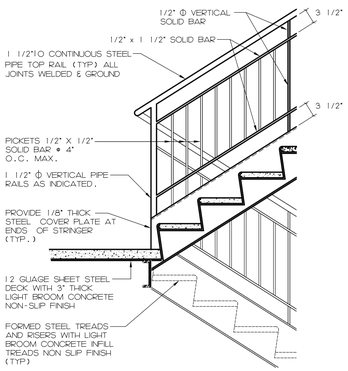

3 A-4.1 FLOOR LANDING DETAIL
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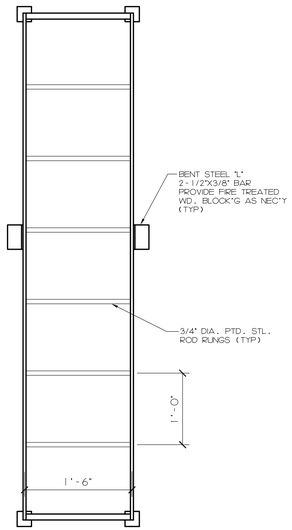
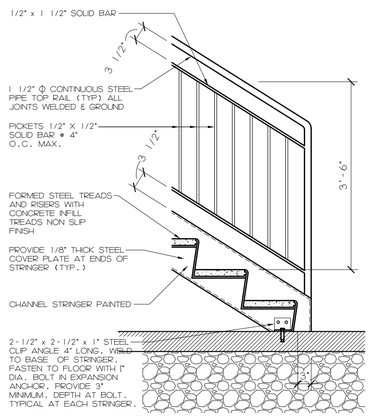
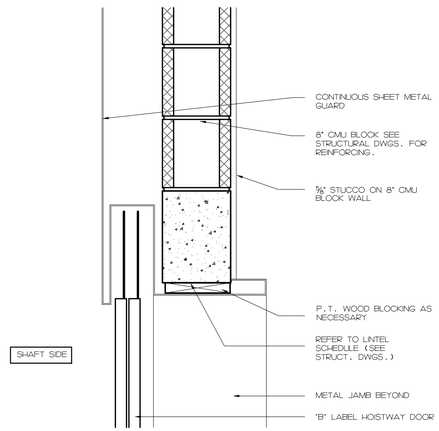


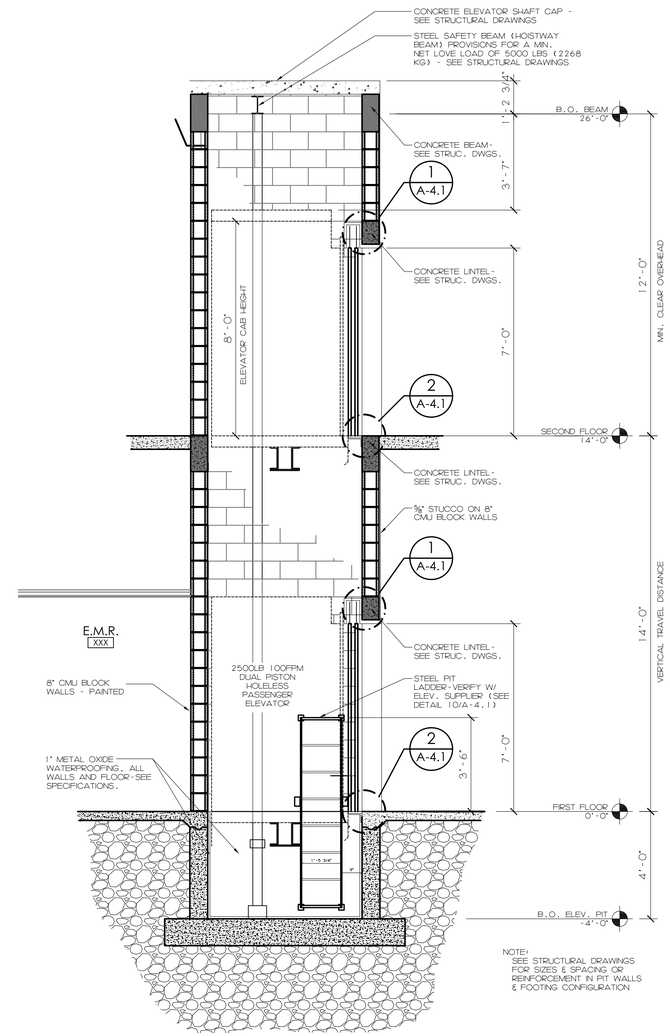
10 A-4.1 ELEVATOR PIT LADDER DETAIL
SCALE : 1" = 1'-0"



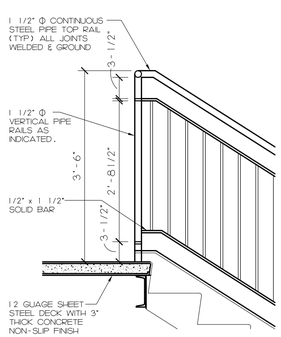
7 A-4.1 RAIL AT BOTTOM LANDING DETAIL
SCALE : 3/4" = 1'-0"



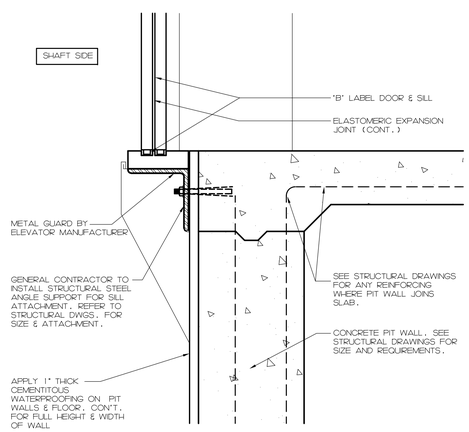
1 A-4.1 TYPICAL ELEVATOR HEAD DETAIL
SCALE : 1-1/2" = 1'-0"
JAMB DETAIL SIMILAR



A A-4.1 ELEVATOR SECTION
SCALE : 3/8" = 1'-0"



8 A-4.1 GUARD RAIL DETAIL
SCALE : 3/4" = 1'-0"



2 A-4.1 TYPICAL ELEVATOR SILL DETAIL
SCALE : 1-1/2" = 1'-0"

ST. AUGUSTINE • ST. JOHNS COUNTY
AIRPORT AUTHORITY

THE LPA GROUP
TRANSPORTATION CONSULTANTS
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RALEIGH, NC•RICHMOND, VA•SARASOTA, FL
TALLAHASSEE, FL•TAMPA ,FL•WEST PALM BEACH, FL

Designer: KPB	Checked by: FRP
Technician: KPB	Project Number: AR553009

THE LPA DESIGN GROUP, INC.
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FERNANDO R. PRIETO, A.I.A.
STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
ELEVATOR SECTION
ELEVATOR & STAIR DETAILS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009
Scale: AS NOTED
Drawing Number: A- 4.1

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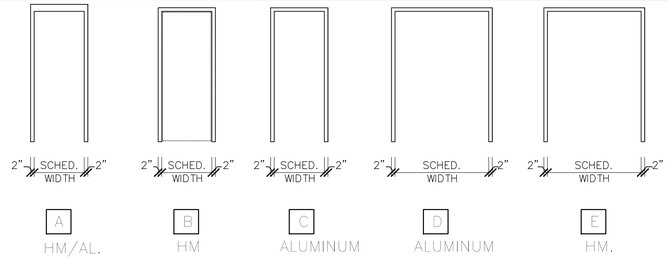
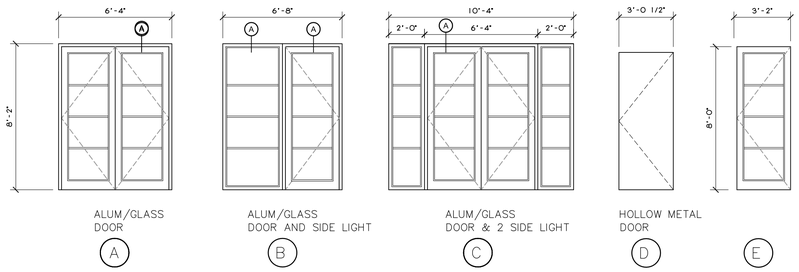


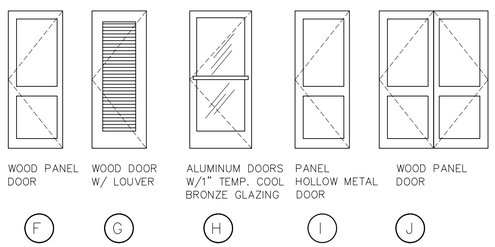
DOOR FRAME

N.T.S.



EXTERIOR DOOR TYPES

N.T.S.



INTERIOR DOOR TYPES

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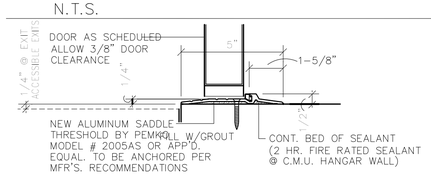
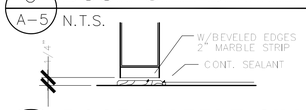


C A-5 **DOOR SILL DETAIL**

N.T.S.



D A-5 **DOOR MARBLE SILL**

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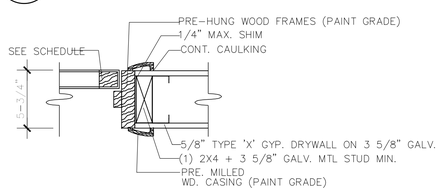

E A-5 **DOOR JAMB/HEAD** (@ INT. DOORS)

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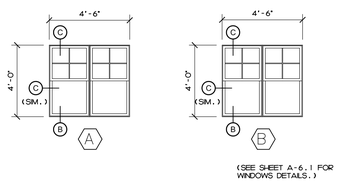
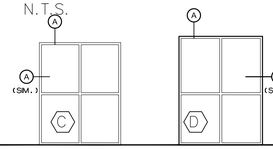


(SEE SHEET A-6.1 FOR WINDOWS DETAILS.)

WINDOW TYPES

N.T.S.



STORE FRONT TYPES

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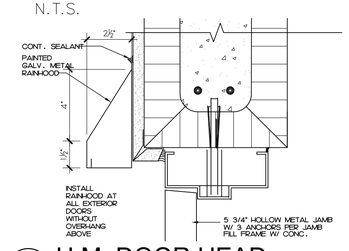
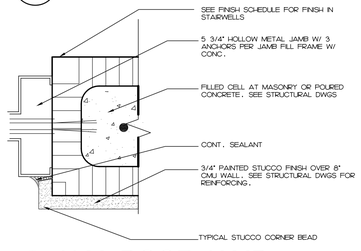


B A-5 **H.M. DOOR HEAD**

SCALE : 1" = 1'-0"



A A-5 **H.M. DOOR JAMB**

SCALE : 1" = 1'-0"

DOOR SCHEDULE

DOOR NUMBER	ROOM NAME	DOOR TYPE		MATERIAL CODE	SIZE: WIDTH	SIZE: HEIGHT	SIZE: THICKNESS	HARDWARE: LOCKSET	PASSAGE LOCK	PANIC DEVICE	DOOR STOP	CLOSER	CYL. DEAD BOLT	CHAIN STOP	PUSH/PULL	ASTRAGAL	SILENCERS	THRESHOLD	WEATHERSTRIP	HINGES/PIVOTS	KICKPLATE	GLAZING	FRAME TYPE	FIRE LABEL	THRESHOLD/ JAMB/HEADER DEATIL	REMARKS
100	MAIN LOBBY	A		AL	6'0"	8'0"	-	●			●	●			●		●	●	●	●		●	D		–	
100A	MAIN LOBBY	A		AL	6'0"	8'0"	-	●			●	●			●		●			●		●	D		–	
101	STORAGE	I		HM	3'0"	8'0"	1-3/4"	●	●		●	●	●				●			●			B		–	
103	EMR	D		HM	3'0"	8'0"	1-3/4"	●	●		●	●	●							●	●		B	2HR.		
104	STORAGE	D		HM	3'0"	8'0"	1-3/4"	●	●		●	●	●							●			B		–	
105	STAIR	D		HM	3'0"	8'0"	1-3/4"	●	●	●	●	●					●			●	●		B	1HR.	–	
106	ELECTRICAL	D		HM	3'0"	8'0"	1-3/4"	●	●		●	●	●					●	●	●	●		B		–	
107	MECHANICAL	D		HM	3'0"	8'0"	1-3/4"	●	●		●		●				●			●			B		–	
109	OFFICE A	D		WD	3'0"	8'0"	-	●			●	●	●				●			●			B	1HR.	–	
109A	OFFICE A	D		WD	3'0"	8'0"	-	●			●	●	●				●			●			B	1HR.	–	
109B	OFFICE A	D		WD	3'0"	8'0"	-	●			●	●	●				●			●			B	1HR.	–	
110	STORAGE	D		HM	3'0"	8'0"	1-3/4"	●	●				●				●			●			B		–	
111	STORAGE	D		HM	3'0"	8'0"	1-3/4"	●	●				●				●			●			B		–	
112	CORRIDOR	E		AL	3'0"	8'0"	-	●			●	●							●	●		●	C		–	
113	OFFICE B	J		WD	6'0"	8'0"	-	●	●		●	●	●		●	●	●			●			E	1HR.	–	
113A	OFFICE B	C		AL	10'0"	8'0"	-	●	●		●	●	●		●		●	●	●	●		●	D		–	
114	CORRIDOR	E		AL	3'0"	8'0"	-	●			●	●					●	●	●	●		●	C			
115	OFFICE C	D		WD	3'0"	8'0"	-	●			●	●	●				●			●			B	1HR.	–	
115A	OFFICE C	D		WD	3'0"	8'0"	-	●			●	●	●				●			●			B	1HR.	–	
116	STORAGE	I		HM	3'0"	8'0"	1-3/4"	●	●		●	●	●				●			●			B	1HR.	–	
117	STORAGE	I		HM	3'0"	8'0"	1-3/4"	●	●		●		●				●			●			B		–	
118	STORAGE	I		HM	3'0"	8'0"	1-3/4"	●	●		●	●	●				●			●			B		–	
119	STORAGE	I		HM	3'0"	8'0"	1-3/4"	●	●		●		●				●			●			B			
120	VESTIBULE	J		WD	6'0"	8'0"	1-3/4"				●	●			●	●		●	●	●	●		B	1HR.		PROVIDE COORDINATOR
120A	VESTIBULE	D		HM	3'0"	8'0"	1-3/4"	●	●		●	●					●	●	●	●	●		B			
121	WOMEN RESTROOM	G		WD	3'0"	8'0"	1-3/8"				●	●			●		●	●		●	●		B			
121A	WOMEN RESTROOM	G		WD	3'0"	8'0"	1-3/8"				●				●					●			B			
121B	WOMEN RESTROOM	G		WD	3'0"	8'0"	1-3/8"				●				●					●			B			
122	MEN RESTROOM	D		HM	3'0"	8'0"	1-3/4"				●	●			●		●	●		●	●		B		–	
122A	MEN RESTROOM	G		WD	3'0"	8'0"	1-3/8"				●				●					●			B			
200	MAIN LOBBY	A		AL	6'0"	8'0"	-	●			●	●			●		●	●	●	●		●	D			
200A	MAIN LOBBY	A		AL	6'0"	8'0"	-	●			●	●			●		●	●	●	●		●	D			
203	STORAGE	D		HM	3'0"	8'0"	1-3/8"	●	●				●				●			●			B			
205	STAIR	D		HM	3'0"	8'0"	1-3/4"	●	●	●	●	●					●			●	●		B	1HR.	–	
206	OFFICE 1	D		WD	3'0"	8'0"	-	●			●	●	●				●			●			B	1HR.		
207	OFFICE 2	D		WD	3'0"	8'0"	-	●			●	●	●				●			●			B	1HR.		
208	OFFICE 3	D		WD	3'0"	8'0"	-	●			●	●	●				●			●			B	1HR.		
209	OFFICE 4	D		WD	3'0"	8'0"	-	●			●	●	●				●			●			B	1HR.		
211	CORRIDOR	H		AL	3'0"	8'0"	-	●	●				●				●			●			C		–	
210	MULTI-PURPOSE ROOM A	J		WD	6'0"	8'0"	-	●	●		●	●	●		●	●	●			●			E	1HR.	–	
210A	MULTI-PURPOSE ROOM B	C		AL	10'0"	8'0"	-	●	●		●	●	●		●			●	●	●		●	D		–	
212C	A/C - 1	G		WD	3'0"	8'0"	1-3/8"	●	●		●	●			●	●			●	●			E			
214	MULTI-PURPOSE ROOM A	J		WD	6'0"	8'0"	-	●	●		●	●	●		●	●	●			●			E	1HR.	–	
214A	MULTI-PURPOSE ROOM A	C		AL	10'0"	8'0"	-	●	●		●	●	●		●		●	●	●	●		●	D		–	
215	STORAGE	F		WD	6'0"	8'0"	1-3/4"	●	●				●				●			●			B			
216	A/C - 2	G		WD	3'0"	8'0"	1-3/8"	●	●		●	●			●	●			●	●			E			
217	STORAGE	F		WD	6'0"	8'0"	1-3/4"	●	●				●				●			●			B			FLUSH BOLT
218	EOC/MEDIA	F		WD	3'0"	8'0"	1-3/8"	●	●				●				●			●			B			
219	CATERING	F		HM	6'0"	8'0"	1-3/8"	●			●	●	●		●		●	●	●	●	●	●	B			FLUSH BOLT
220	STORAGE	F		WD	6'0"	8'0"	1-3/4"	●	●			●	●				●			●			B	1HR.		
221	MEN RESTROOM	D		HM	3'0"	8'0"	1-3/4"				●	●			●		●	●		●	●		B	1HR.	–	MARBLE THRESHOLD
221A	MEN RESTROOM	G		WD	3'0"	8'0"	1-3/8"				●				●					●			B			
222	JANITOR	D		HM	3'0"	8'0"	1-3/4"	●	●			●	●				●			●			B	1HR.	–	
223	WOMEN RESTROOM	G		WD	3'0"	8'0"	1-3/8"					●			●			●	●	●	●		B	1HR.		MARBLE THRESHOLD
223A	WOMEN RESTROOM	D		HM	3'0"	8'0"	1-3/4"				●				●					●			B		–	
223B	WOMEN RESTROOM	G		WD	3'0"	8'0"	1-3/8"				●				●					●			B			
223C	WOMEN RESTROOM	G		WD	3'0"	8'0"	1-3/8"				●				●					●			B			

ST. AUGUSTINE • ST. JOHNS COUNTY
AIRPORT AUTHORITY

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GREENSBORO, NC•GULFPORT, MS•KNOXVILLE, TN
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RALEIGH, NC•RICHMOND, VA•SARASOTA, FL
TALLAHASSEE, FL•TAMPA ,FL•WEST PALM BEACH, FL

Designer: KPB	Checked by: FRP
Technician:	Project Number: AR553009

THE LPA DESIGN GROUP, INC.
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700 HUGER STREET, COLUMBIA SC 29201
PHONE 803-254-2211• FAX 803-779-0482
FERNANDO R. PRIETO, A.I.A.
STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

DOOR SCHEDULE & WINDOW ELEVATIONS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009

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

Drawing Number: A-5

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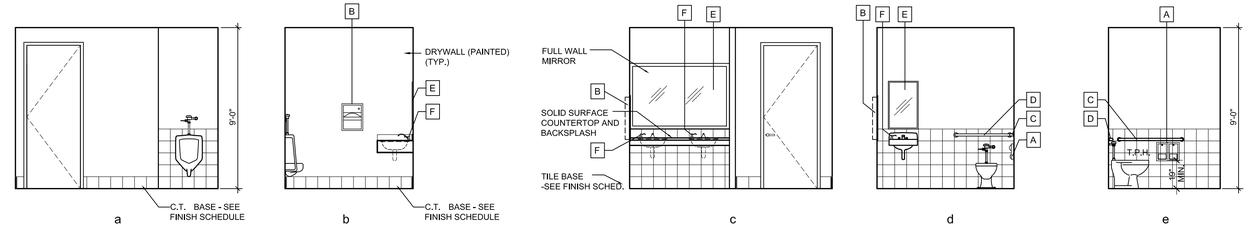

1 A-6.0 MEN RESTROOM

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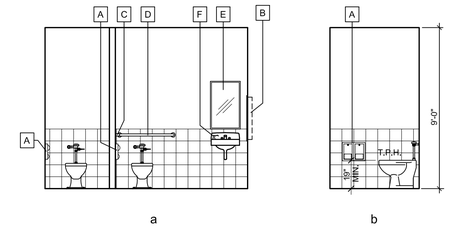
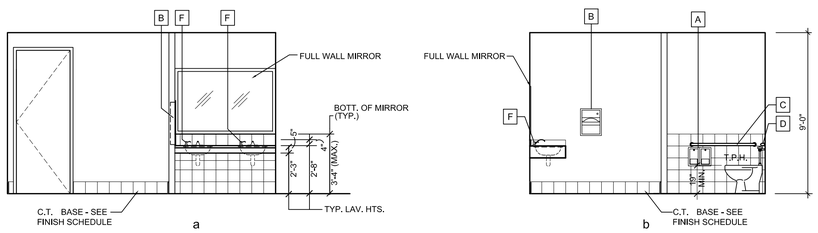


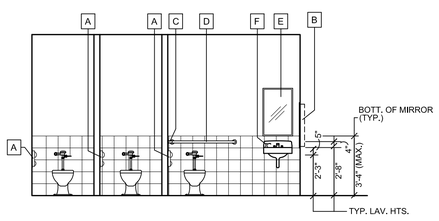
2 A-6.0 WOMEN RESTROOM

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



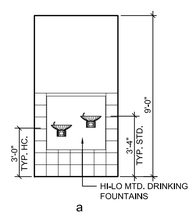
3 A-6.0 WOMEN RESTROOM

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



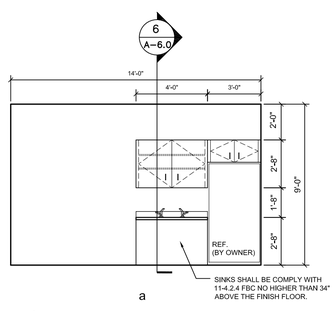
3 A-6.0 WOMEN RESTROOM

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



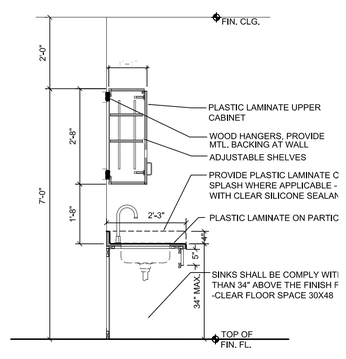
4 A-6.0 DRINKING FOUNTAIN

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



5 A-6.0 CATERING

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



6 A-6.0 SECTION DETAIL

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

FINISH SCHEDULE

NO.	ROOM NAME	BASE MATR'L.	FLOOR FINISH	FLOOR MATR'L.	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING MATR'L.	REMARKS
FIRST FLOOR										
100	MAIN LOBBY	WOOD	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
100A	COURT YARD		CONC.	STAMPED CONC.	STUCCO	STUCCO	–	STUCCO	–	
100B	ELEV. LOBBY	WOOD	CONC.	CARPET	PTD. GYP.	–	PTD. GYP.	PTD. GYP.	A.C.T.	
101	STORAGE	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
102	ELEVATOR	–	CONC.	CARPET	–	–	–	–	–	
103	EMR	NONE	CONC.	CONC.	PTD. CMU	PTD. CMU	PTD. CMU	PTD. CMU	PTD. GYP.	
104	STORAGE	NONE	CONC.	SEALED CONC.	PTD. CMU	PTD. CMU	PTD. CMU	PTD. CMU	PTD. GYP.	
105	STAIR 1	NONE	CONC.	BR. CONC.	STUCCO	STUCCO	STUCCO	STUCCO	–	
106	ELECTRICAL ROOM	NONE	CONC.	SEALED CONC.	PTD. CMU	PTD. CMU	PTD. CMU	PTD. CMU	PTD. GYP.	
107	MECHANICAL ROOM	NONE	CONC.	SEALED CONC.	PTD. CMU	PTD. CMU	PTD. CMU	PTD. CMU	PTD. GYP.	
108	COVERED AREA	NONE	CONC.	BR. CONC.	STUCCO	STUCCO	STUCCO	STUCCO	STUCCO	
109	OFFICE A	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
110	STORAGE	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
111	STORAGE	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
112	CORRIDOR	WOOD	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
113	OFFICE B	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
114	CORRIDOR	WOOD	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
115	OFFICE C	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
116	STORAGE	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
117	STORAGE	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
118	STORAGE	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
119	STORAGE	VINYL COVE	CONC.	VCT	PTD. CMU	PTD. CMU	PTD. CMU	PTD. CMU	A.C.T.	
120	VESTIBULE	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
121	WOMEN RESTROOM	C.T.	CONC.	C.T.	PTD. CMU	PTD. CMU	PTD. CMU	PTD. CMU	PTD. GYP.	
122	MEN RESTROOM	C.T.	CONC.	C.T.	PTD. CMU	PTD. CMU	PTD. CMU	PTD. CMU	PTD. GYP.	
123	STAIR 2	NONE	CONC.	BR. CONC.	STUCCO	–	STUCCO	STUCCO	–	
200	MAIN LOBBY	WOOD	CONC.	STAMPED CONC.	STUCCO	STUCCO	STUCCO	STUCCO	A.C.T.	
200A	ELEV. LOBBY	WOOD	CONC.	CARPET	PTD. GYP.	–	PTD. GYP.	PTD. GYP.	A.C.T.	
201	BALCONY	NONE	CONC.	STAMPED CONC.	STUCCO	STUCCO	–	STUCCO	STUCCO	
202	ELEVATOR	–	CONC.	CARPET	–	–	–	–	–	
203	STORAGE	NONE	CONC.	EPOXY	PTD. CMU	PTD. CMU	PTD. CMU	PTD. CMU	PTD. GYP.	
204	NOT USED	–	–	–	–	–	–	–	–	
205	STAIR 1	–	CONC.	BR. CONC.	STUCCO	STUCCO	STUCCO	STUCCO	–	
206	OFFICE 1	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
207	OFFICE 2	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
208	OFFICE 3	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
209	OFFICE 4	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
210	MULTI-PURPOSE ROOM-A	WOOD	CONC.	CARPET TILES	V.W.C.	V.W.C.	V.W.C.	V.W.C.	NOTE 3	V.W.C.-VINYL WALL COVERING
211	CORRIDOR	WOOD	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
212	A/C – 1	VINYL COVE	CONC.	VCT	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	NONE	
213	COVERED AREA	NONE	CONC.	BR. CONC.	STUCCO	STUCCO	STUCCO	STUCCO	STUCCO	
214	MULTI-PURPOSE ROOM-B	WOOD	CONC.	CARPET TILES	V.W.C.	V.W.C.	V.W.C.	V.W.C.	NOTE 3	V.W.C.-VINYL WALL COVERING
215	STORAGE	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
216	A/C – 2	VINYL COVE	CONC.	VCT	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	NONE	
217	STORAGE	NONE	CONC.	CARPET	PTD. PLY.	PTD. PLY.	PTD. PLY.	PTD. PLY.	A.C.T.	1/2" PAINTED PLYWOOD
218	EOC/MEDIA	VINYL COVE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
219	CATERING	VINYL	CONC.	EPOXY	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
220	STORAGE	NONE	CONC.	CARPET	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	A.C.T.	
221	MEN RESTROOM	C.T.	CONC.	C.T.	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	
222	JANITOR	NONE	CONC.	EPOXY	PTD. CMU	PTD. CMU	PTD. CMU	PTD. CMU	PTD. GYP.	
223	WOMEN RESTROOM	C.T.	CONC.	C.T.	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	PTD. GYP.	
224	STAIR 2	NONE	CONC.	BR. CONC.	STUCCO	STUCCO	STUCCO	STUCCO	–	

FINISH NOTES:

1. REFER TO REFLECTED CEILING PLANS SHEET A-1.2 FOR CEILING HEIGHTS. ALL CEILING HEIGHTS ARE FROM 0'-0" FINISHED FLOOR FOR EACH RESPECTIVE FLOOR.
2. USE CBB OR MR BOARD BEHIND ALL WALL TILE APPLICATIONS
3. ACOUSTICAL CEILING TILE SHALL BE "TEGULAR"

ST. AUGUSTINE • ST. JOHNS COUNTY AIRPORT AUTHORITY

THE LPA GROUP
TRANSPORTATION CONSULTANTS
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Designer: KPB	Checked by: FRP
Technician:	Project Number: AR553009

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FERNANDO R. PRIETO, A.I.A.
STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

INTERIOR ELEVATIONS & FINISH SCHEDULE

FAA A.I.P. PROJECT NUMBER:

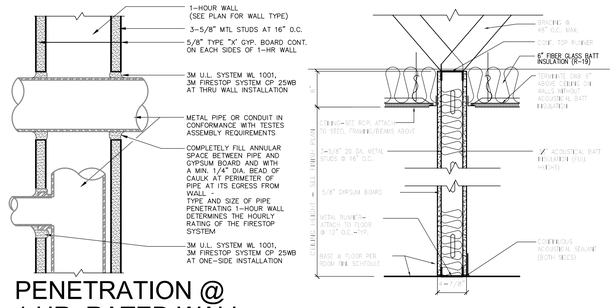
ENGINEER OF RECORD

Date: APRIL 15, 2009

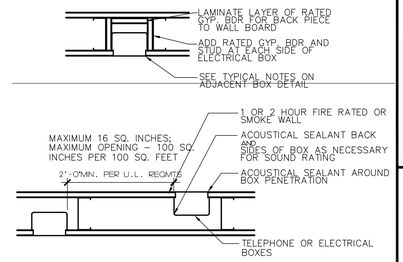
Scale: 1/8"=1'-0"

Drawing Number: A-6.0

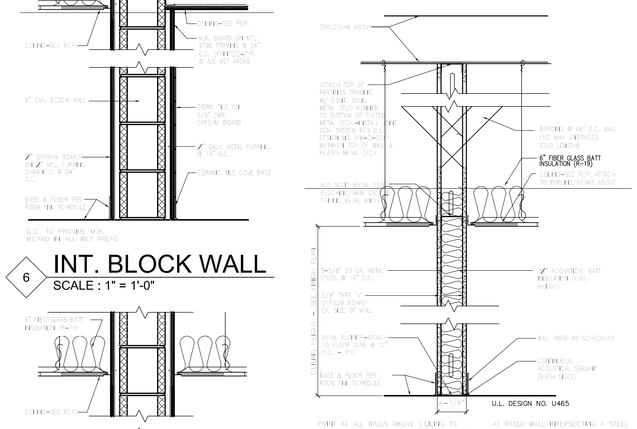
Y:\Clients\St. Augustine\Multi-Use Building\5. DRAWINGS\A-6 INTERIOR ELEVATION FINISH SCHEDULE.dwg April 13 2009 – 20:08



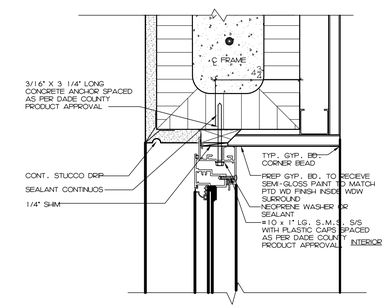
PENETRATION @ 1 HR. RATED WALL
SCALE : 3" = 1'-0"



RATED WALL OPENINGS
SCALE : 1-1/2" = 1'-0"

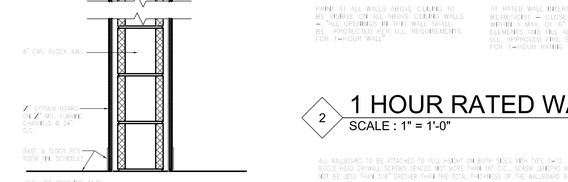


3 TYP. OFFICE PARTITION
SCALE : 1" = 1'-0"

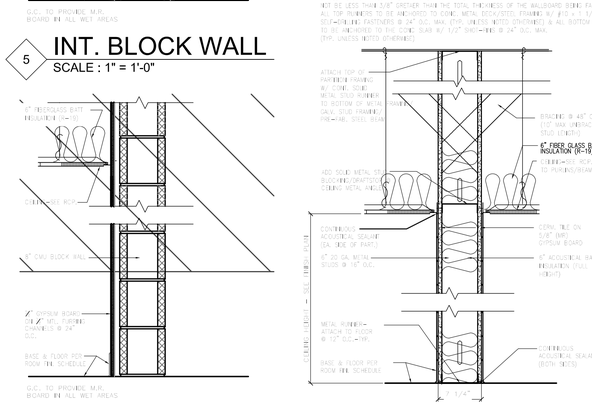


C / A-6 WINDOW HEAD DETAIL
SCALE : 3" = 1'-0" JAMB SIMILAR

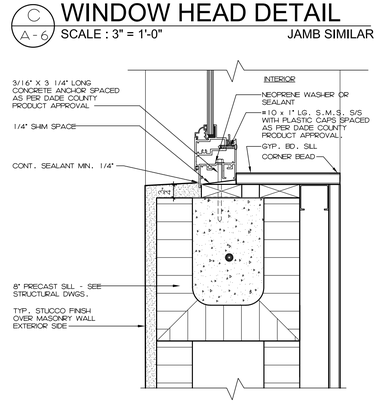
6 INT. BLOCK WALL
SCALE : 1" = 1'-0"



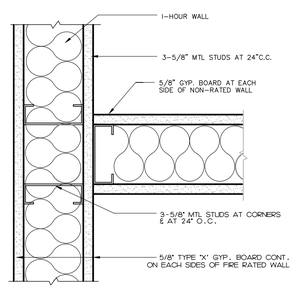
5 INT. BLOCK WALL
SCALE : 1" = 1'-0"



4 INT. BLOCK WALL
SCALE : 1" = 1'-0"

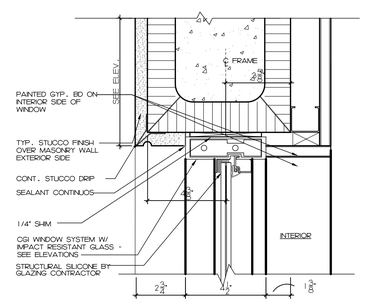


B / A-6 WINDOW SILL DETAIL
SCALE : 3" = 1'-0"



1 HOUR RATED WALL INTERSECTION
SCALE : 3" = 1'-0"

2 1 HOUR RATED WALL
SCALE : 1" = 1'-0"



1 RESTROOM PARTITION
SCALE : 1" = 1'-0"

PARTITION TYPES
SCALE : 1" = 1'-0"

A / A-6 STOREFRONT DOOR HEAD
SCALE : 3" = 1'-0" JAMB SIMILAR

ST. AUGUSTINE • ST. JOHNS COUNTY
AIRPORT AUTHORITY

THE LPA GROUP
TRANSPORTATION CONSULTANTS
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GREENSBORO, NC•GULFPORT, MS•KNOXVILLE, TN
MOBILE, AL•MYRTLE BEACH, SC•ORLANDO, FL
RALEIGH, NC•RICHMOND, VA•SARASOTA, FL
TALLAHASSEE, FL•TAMPA ,FL•WEST PALM BEACH, FL

Designer: KPB	Checked by: FRP
Technician:	Project Number: AR553009

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FERNANDO R. PRIETO, A.I.A.
STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
WALL TYPES & MISC. DETAILS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009
Scale: 1/8"=1'-0"
Drawing Number: A-6.1

Y:\Clients\St. Augustine\Multi-Use Building\5. DRAWINGS\A-6 INTERIOR ELEVATION FINISH SCHEDULE.dwg April 13 2009 – 18:20
Y:\Clients\St. Augustine\Multi-Use Building\5. DRAWINGS\A-6 INTERIOR ELEVATION FINISH SCHEDULE.dwg, 4/13/2009 6:20:07 PM, Adobe PDF (temporary) 1231.pc3

STRUCTURAL NOTES

STRUCTURAL DESIGN CRITERIA

D-1 CODES: FLORIDA BUILDING CODE 2007 W/2009 AMMENDMENTS

D-2 DESIGN LIVE LOADS:
ROOF: 20 PSF.
FLOOR: 100 PSF. (BALCONIES)
100 PSF. (MULTIPURPOSE ROOM)
100 PSF. (OFFICE)
125 PSF. (LIGHT STORAGE)

D-3 GROUND SNOW LOAD: NOT USED

D-4 DESIGN WIND SPEED 130 MPH
IMPORTANCE FACTOR (I)=1.00
EXPOSURE: C
GCpi= +/- 0.18 (ENCLOSED CONDITION)
GCpi= 0.00 (OPEN CONDITION)

D-5 SEISMIC: NOT USED

D-6 ALLOWABLE SOIL BEARING PRESSURE, SEE SF-2 NOTE

D-7 COMPONENTS AND CLADDING WIND PRESSURES, SEE ELSEWHERE IN THIS DRAWING

GENERAL NOTES

G-1 REVIEW ALL PROJECT DOCUMENTS PRIOR TO FABRICATION AND START OF CONSTRUCTION. REPORT ANY DISCREPANCIES TO ARCHITECT OR STRUCTURAL ENGINEER PRIOR TO PROCEEDING WITH WORK.

G-2 THE MASONRY WALLS ARE NOT DESIGNED TO WITHSTAND TEMPORARY CONSTRUCTION LOADS. IT IS THE CONTRACTORS RESPONSIBILITY AT ALL TIMES TO MAINTAIN WALL STABILITY DURING THE CONSTRUCTION PHASE OF THIS PROJECT.

G-3 IT IS THE CONTRACTORS RESPONSIBILITY TO PROTECT EXISTING FACILITIES, STRUCTURES AND UTILITY LINES FROM ALL DAMAGE DURING CONSTRUCTION.

G-4 NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED OR OTHERWISE REDUCED IN SIZE OR STRENGTH WITHOUT PRIOR APPROVAL IN WRITING FROM THE STRUCTURAL ENGINEER.

G-5 COORDINATE STRUCTURAL AND OTHER DRAWINGS THAT ARE PART OF THE CONTRACT DOCUMENTS FOR ANCHORED, EMBEDDED OR SUPPORTED ITEMS WHICH AFFECT THE STRUCTURAL DRAWINGS.

G-6 ALL DETAILS AND SECTIONS ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT EXCEPT WHERE A SEPARATE DETAIL IS SHOWN.

G-7 THE INTENTION OF THE PLANS AND SPECIFICATIONS IS TO PROVIDE ALL NECESSARY DETAILS TO CONSTRUCT A COMPLETE STRUCTURE. GENERAL CONTRACTOR SHALL COORDINATE THE STRUCTURAL DRAWINGS WITH ALL OTHER DISCIPLINES. WHEN SPECIFIC INFORMATION IS MISSING OR IS IN CONFLICT, THE CONTRACTOR SHALL USE A SIMILAR DETAIL AND/OR THE MORE COSTLY ITEM OF CONFLICT. THE CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.

G-8 PHOTOGRAPHIC REPRODUCTIONS OF THE STRUCTURAL DRAWINGS FOR SHOP DRAWINGS SHALL NOT BE PERMITTED.

G-9 REVIEW ALL SHOP DRAWINGS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND FOR COMPLETENESS AND ANSWER ALL CONTRACTOR RELATED QUESTIONS. STAMP AND INITIAL ALL SHEETS PRIOR TO SUBMITTING SHOP DRAWINGS TO ARCHITECT FOR REVIEW. NONCOMPLIANCE WITH THIS REQUIREMENT WILL RESULT IN REJECTION OF SUBMITTAL.

G-10 ALL WORK TO BE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF THE FLORIDA BUILDING CODE AND ALL APPLICABLE LOCAL CODES.

G-11 CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS & DIMENSIONS RELATIVE TO THE SAME. WHERE THERE ARE CONFLICTS BETWEEN ACTUAL FIELD CONDITIONS SHALL BE BROUGHT TO THE ARCHITECT/ENGINEER'S ATTENTION AND THE NECESSARY ADJUSTMENTS MADE PER THEIR COORDINATION.

G-12 IF THERE ARE ANY DISCREPANCIES BETWEEN THE STRUCTURAL DRAWINGS, ARCHITECTURAL DRAWINGS, STRUCTURAL DETAILS, STRUCTURAL NOTES, THE PROJECT SPECIFICATIONS, OR APPLICABLE CODES THE STRICTEST SHALL GOVERN.

G-13 ONLY WRITTEN CHANGES APPROVED BY THE ARCHITECT AND ENGINEER SHALL BE PERMITTED.

SHALLOW FOUNDATIONS

SF-1 SOIL TO BE STRIPPED, COMPACTED AND TESTED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE SOILS ENGINEER AND PROJECT SPECIFICATIONS AS NOTED IN THE SOILS REPORT FOR "LEGACY ENGINEERING INC." PROJECT NUMBER 09-1011.1, DATED FEBRUARY 19, 2009.

SF-2 FOOTING DESIGN BASED ON MAXIMUM ALLOWABLE SOIL BEARING PRESSURE OF 3000 PSF PER SOIL REPORT

SF-3 CENTER ALL FOOTINGS UNDER THEIR RESPECTIVE COLUMNS OR WALLS UNLESS OTHERWISE SHOWN ON PLANS. MAXIMUM MISPLACEMENT OR ECCENTRICITY=2". TOLERANCE FOR MISLOCATION OF COLUMN DOWELS OR ANCHOR BOLTS TO BE PER ACI OR AISC STANDARDS.

SF-4 HORIZONTAL JOINTS IN FOOTINGS WILL NOT BE PERMITTED.

SF-5 WHERE VERTICAL CONSTRUCTION JOINTS OCCUR IN CONTINUOUS FOOTINGS. PROVIDE A MINIMUM CONTINUOUS 2" x 4" KEY WAY ACROSS JOINT FOR EACH 12" OF DEPTH.

SF-6 CONTRACTOR TO NOTIFY ARCHITECT IF SOIL CONDITIONS ARE UNCOVERED THAT PREVENT THE REQUIRED SOIL BEARING PRESSURE FROM BEING OBTAINED.

SF-7 COORDINATE PLUMBING LINES WITH FOOTING LOCATIONS FOR INTERFACE. INDIVIDUAL FOOTINGS SHOULD BE LOWERED WITH THE PRIOR APPROVAL OF THE STRUCTURAL ENGINEER. CONTINUOUS WALL FOOTINGS SHOULD BE STEPPED AS DETAILED ON DRAWINGS.

SF-8 EXCAVATING UNDER OR NEAR IN-PLACE FOOTINGS/FOUNDATIONS WHICH DISTURBS THE COMPACTED SOIL BENEATH THE FOOTINGS/FOUNDATIONS WILL NOT BE PERMITTED.

SF-9 REINFORCING SHALL BE SUPPORTED ON PRECAST CONCRETE PADS, DOWELS FOR COLUMNS AND FILLED CELLS SHALL BE SECURED IN PLACE PRIOR TO POURING CONCRETE. USE TEMPLATES FOR SETTING COLUMN DOWELS AND ANCHOR BOLTS.

SF-10 PREPARATION OF SUBGRADE SHALL BE IN STRICT ACCORDANCE WITH INSTRUCTION OUTLINED IN THE GEOTECHNICAL REPORT CONTRACTOR & SHALL VERIFY, PRIOR TO PLACEMENT OF THE FOUNDATIONS, THAT THE SOIL IS CAPABLE OF SUPPORTING THE SPECIFIED BEARING PRESSURE.

SF-11 THE OWNER SHALL PROVIDE THE CONTRACTOR A COPY OF THE GEOTECHNICAL REPORT FOR THE SITE PRIOR TO CONSTRUCTION, NO CONSTRUCTION MAY BEGIN UNTIL A SOILS REPORT FOR THE SITE IS OBTAINED FROM THE OWNER OR A NEW GEOTECHNICAL REPORT IS PERFORMED FOR THE SITE. A COPY OF THE ORIGINAL GEOTECHNICAL REPORT SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION.

SF-12 STEPS IN WALL FOOTING SHALL NOT EXCEED A SLOPE OF (1) VERTICAL TO (2) HORIZONTAL.

SF-13 CAUTION SHALL BE USED WHEN OPERATING VIBRATORY COMPACTION EQUIPMENT NEAR EXISTING STRUCTURES TO AVOID THE RISK OF DAMAGING THE EXISTING STRUCTURE.

SF-14 ALL BACKFILL COMPACTION WORK ADJACENT TO RETAINING WALLS, FOUNDATION WALLS ETC. SHALL USE LIGHT DUTY HAND OPERATED TAMPERS WITHIN 3'-0" DISTANCE FROM THE WALL.

SF-15 AT EXTERIOR CMU FOUNDATION WALLS, WHEN THE HEIGHT BETWEEN TOP OF SLAB AND FINISH GRADE IS GREATER THAN 3'-0" FOR A LENGTH OF 8'-0" OR MORE, CONTRACTOR SHALL PROVIDE TEMPORARY BRACING OF WALL UNTIL 14 DAYS MINIMUM AFTER SLAB IS INSTALLED.

REINFORCED CONCRETE

RC-1 ALL CONCRETE DESIGN PLACEMENT SHALL BE IN STRICT ACCORDANCE WITH THE ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE," ACI 318 LATEST EDITION.

RC-2 STRUCTURAL CONCRETE SHALL CONFORM TO ACI 301 SPECIFICATIONS. ALL NORMAL WEIGHT CONCRETE TYPE I PORTLAND CEMENT. (ASTM C 150) 3000 psi. TYP COMPRESSIVE STRENGTH AT 28 DAYS (U.O.N.). USE 4000 psi. NORMAL WEIGHT CONCRETE AT COLUMNS AND BEAMS

SLUMP:
FOOTINGS 4" +/- 1"
COLUMNS 4" +/- 1"
SLABS 4" +/- 1"
TIE BMS & TIE COL'S 4" +/- 1"
WATER: POTABLE
CHLORIDE: NONE

RC-3 PROVIDE NORMAL WEIGHT AGGREGATES IN COMPLIANCE WITH THE REQUIREMENTS OF ASTM C33.

RC-4 FLY ASH WHEN USED, SHALL BE LIMITED TO 20% OF THE CEMENTITOUS MATERIAL.

RC-5 ALL PUMPED CONCRETE WITH #57 AGGREGATE IS TO CONTAIN A HIGH RANGE WATER REDUCING AGENT. MINIMUM SIZE OF DISCHARGE TO BE 4" I.D.

RC-6 A 2" I.D. DISCHARGE MAY BE USED WITH #8 AGGREGATE. USE PLASTICIZER ADMIXTURE IF NECESSARY TO INCREASE SLUMPS BEYOND THAT NOTED ABOVE.

RC-7 CHAMFER ALL EDGES OF EXPOSED CONCRETE 3/4" UNLESS NOTED OTHERWISE.

RC-8 ALL REINFORCING STEEL SHALL BE DETAILED, FABRICATED AND INSTALLED IN ACCORDANCE WITH ACI 318-95 AND ACI DETAILING MANUAL, ACI 315 1988 EDITION.

RC-9 REINFORCING STEEL SHALL BE NEW DEFORMED BARS THAT ARE FREE FROM RUST, SCALE AND OIL AND CONFORM TO ASTM A615, GRADE 60, WITH MINIMUM YIELD STRENGTH = 60,000. WHERE WELDING REQUIRED ASTM A706, GRADE 60

RC-10 ALL SLABS ON GRADE SHALL BE REINFORCED WITH WELDED WIRE FABRIC AS SHOWN IN THE DRAWINGS.

RC-11 WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.

RC-12 LAP CONT. BOTTOM STEEL OVER SUPPORT AND CONT. TOP STEEL AT MID SPAN UNLESS OTHERWISE SPECIFIED. MIN. LENGTH OF LAPPED SPLICES SHALL BE AS FOLLOWS UNLESS NOTED. STAGGER SPLICES SO THAT NO TWO ADJACENT BARS ARE SPLICED IN THE SAME LOCATION UNLESS SHOWN OTHERWISE. WELDED WIRE FABRIC SHALL BE LAPPED ONE FULL MESH AT THE SIDES AND ONE FULL MESH PLUS 2" AT THE ENDS. MAKE ALL BARS CONTINUOUS AROUND CORNERS OF PROVIDE CORNER BARS OF EQUAL SIZE AND SPACING.

BAR SIZE:	SPLICE SIZE:
#3	16"
#4	22"
#5	27"
#6	35"

RC-13 TERMINATE ALL DISCONTINUOUS TOP BARS WITH STANDARD 90 DEGREE HOOK (PLACED VERTICALLY) UNLESS NOTED OTHERWISE.

RC-14 PROVIDE THE FOLLOWING CONCRETE COVERAGE'S OVER REINFORING,
B.O. FOOTINGS & UNFORMED EDGES- 3" CLR.
BEAMS &COLUMNS (TIES)- 1 1/2" CLR.
SLABS (TOP & BOT.-STEEL)
INTERIOR- 3/4" CLR.
EXTERIOR- 1 1/2" CLR.
CONC. WALLS- AS NOTED (1 1/2" CLR. MIN.)

RC-15 SHOP DRAWINGS FOR PLACEMENT SHALL BE SUBMITTED FOR REVIEW PRIOR TO REBAR FABRICATION.

RC-16 SLEEVE ALL PENETRATIONS THROUGH BEAMS AND SLABS INDIVIDUALLY CORE DRILLING WILL NOT BE PERMITTED. SUBMIT LOCATION AND SIZE OF SLEEVES THROUGH BEAMS TO ENGINEER FOR REVIEW PRIOR TO CASTING CONCRETE.

RC-17 NO REINFORCING BARS SHALL BE CUT TO ACCOMMODATE THE INSTALLATION OF ANCHORS, EMBEDS OR OTHER ITEMS.

RC-18 USE THE STRUCTURAL DRAWINGS INCLUDING REVISIONS AND ADDENDA IN CONJUNCTION WITH REVIEWED SHOP DRAWINGS FOR PLACEMENT OF REINFORCING.

RC-19 AT CHANGES IN DIRECTION OF CONCRETE WALLS, BEAMS & STRIP FOOTINGS, PROVIDE CORNER BARS OF SAME SIZE AND QUANTITY (U.O.N.) AS HORIZONTAL STEEL. REFER TO TYPICAL DETAIL.

RC-20 ALL EMBEDDED ITEMS SHALL BE SECURELY TIED IN PLACE PRIOR TO CONCRETE PLACEMENT.

RC-21 WEDGE BOLTS SHALL BE ITW RAMSET/REDHEAD BOLTS OR APPROVED EQUIVALENT INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. 3/4" DIAMETER WEDGE BOLTS SHALL BE OF LENGTH REQUIRED TO PROVIDE 3-1/4" MIN. EMBEDMENT, 2.0 KIPS TENSION AND 4.1 KIPS SHEAR WORKING LOADS IN 3000psi CONCRETE (U.O.N.) DO NOT CUT EXISTING REINFORCING TO INSTALL.

RC-22 DOWEL BAR SPLICERS SHALL BE A COMPLETE ASSEMBLY, INCLUDING COUPLER, FROM ATTACHMENT (WHEN REQUIRED) AND THREADED BAR CAPABLE OF DEVELOPING THE BAR BEING SPLICED IN ACCORDANCE WITH ACI 318 SECTION 12.14.3.

RC-23 HEADED STUD ANCHORS SHALL BE ASTM A 108, GRADE S, 1010 THROUGH 1020 AS MANUFACTURED BY NELSON STUD OR APPROVED EQUIVALENT. STUD WELDING SHALL CONFORM TO AWS D1.1 "STRUCTURAL WELDING CODE."

RC-24 ADHESIVE ANCHORS SHALL BE ITW RAMSET/REDHEAD EPCON CERAMIC 6 EPOXY ANCHORING SYSTEM OR APPROVED EQUIVALENT INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. A SCREEN TUBE MUST BE UTILIZED FOR INSTALLATION IN HOLLOW BLOCK AND BRICK MASONRY. DO NOT CUT EXISTING REINFORCING TO INSTALL.

RC-25 PLACE CONCRETE PER ACI 304. USE INTERNAL MECHANICAL VIBRATION FOR ALL CONCRETE. LIMIT MAXIMUM FREE FALL DROP OF CONCRETE TO 6'-0" FOR #57 AGGREGATE AND 8'-0" FOR #8 AGGREGATE. ALL PRECAUTIONS SHOULD BE TAKEN TO AVOID SEGREGATION OF CONCRETE DURING PLACEMENT.

RC-26 PLACEMENT OF CONDUIT AND PIPES IN CONCRETE SHALL CONFORM TO ACI 318, SECTION 6.3.

RC-27 SLABS AND GRADE BEAMS SHALL NOT HAVE JOINTS IN A HORIZONTAL PLANE. ALL REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS.

RC-28 PROVIDE (2) #5 BARS WITH 2'-0" PROJECTION ON ALL SIDES OF ALL OPENINGS OR RE-ENTRANT CORNERS IN CONCRETE

MASONRY

M-1 MASONRY CONSTRUCTION SHALL CONFORM TO ACI "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI/ASCE 530) AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI/ASCE 530.1) EXCEPT AS AMENDED BELOW.

M-2 CONTRACTOR SHALL OBTAIN COPY OF MASONRY CODE AND SPECIFICATIONS FOR REFERENCE AT THE JOBSITE.

M-3 STRUCTURE HAS BEEN DESIGNED AS A BEARING WALL STRUCTURE. ALL MASONRY UNITS SHALL BE LAID PRIOR TO CONCRETE PLACEMENT OF COLUMNS, BEAMS AND SLABS FOR THE SAME STORY.

M-4 USE TYPE "S" MORTAR WITH MINIMUM COMPRESSIVE STRENGTH OF 1800psi. IN ACCORDANCE WITH ASTM C270

M-5 MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE N WITH A MINIMUM COMPRESSIVE STRENGTH OF 1900psi ON NET SECTION TO PROVIDE NET AREA COMPRESSIVE STRENGTH OF MASONRY (F'm) OF 1500psi., LAID IN RUNNING BOND.

M-6 PROVIDE FILLED CELLS AS SHOWN ON PLANS. IN ADDITION, PROVIDE FILLED CELLS W/ (1) #5 VERTICAL ADJACENT TO ALL OPENINGS, AND AT ANCHORAGE OF CONNECTIONS. U.N.O. IN PLANS

M-7 PROVIDE FULL MORTAR BEDDING AROUND ALL FILLED CELLS WITH VERTICAL REINFORCING.

M-8 REINFORCING FOR FILLED CELLS SHALL CONFORM TO ASTM A615, GRADE 60. PROVIDE THE FOLLOWING LAP SPLICES FOR REINFORCING.

BAR SIZE:	SPLICE SIZE:
#4	24"
#5	30"
#6	36"

M-9 ALL FILLED CELLS AND COLUMNS SHALL BE POURED AT LEAST TWO (2) HOURS PRIOR TO POURING BEAMS AND LINTELS.

M-10 REINFORCING WALL WITH LADDER TYPE REINFORCEMENT ("DUR-O-WALL" OR EQUAL) IN BED JOINTS AT 16" O.C. MEASURED VERTICALLY. LAP SPLICE ALL HORIZONTAL WALL REINFORCING 6", PROVIDE PREFABRICATED "TEE" OR CORNER SECTIONS AT ALL INTERSECTING WALLS.

M-11 REFER TO TYPICAL WALL SECTIONS FOR MAXIMUM CONSTRUCTION HEIGHT OF MASONRY WALLS. PROVIDE CLEAN-OUT HOLES AT BASE OF FILLED CELLS WHEN THE CONCRETE POUR EXCEEDS 5 FEET IN HEIGHT.

M-12 CONCRETE FOR FILLED CELLS SHALL BE VIBRATED DURING PLACEMENT USING A "PENCIL" TYPE VIBRATOR.

M-13 THE TYPICAL LINTELS OVER OPENINGS IN THE WALL SHALL HAVE (2) #5 BARS FOR 2 COURSES ABOVE OPENING FILLED SOLID UNLESS NOTED OTHERWISE PROVIDE THE FOLLOWING LINTELS OVER ALL MASONRY WALL OPENINGS.
-PROVIDE MINIMUM END BEARING OF 8". CUT OUT BOTTOM OF LINTEL AT END TO ALLOW CONTINUATION OF FILLED CELL REINFORCING.

M-14 PROVIDE (1) #5 CONTINUOUS HORIZONTAL IN KNOCK-OUT BLOCK BELOW ALL WINDOW SILLS, UNLESS NOTED OTHERWISE.

M-15 PROVIDE VERTICAL REINFORCEMENT IN 3000psi GROUT FILLED CMU CELL FROM FOOTING TO BEAM AT TOP OF WALL AS SHOWN IN PLANS AND:
(2) #5 HORIZONTAL BAR AT 8'-0" O.C.
HORIZONTAL JOINT REINFORCEMENT 16" O.C.

M-16 CMU CELLS INDICATED IN PLAN OR NOTES AS FILLED CELLS SHALL BE GROUTED SOLID WITH 3000 psi CONCRETE GROUT (8" TO 10" SLUMP).

M-17 SUBMIT REBAR PLACING SHOP DRAWINGS FOR REVIEW, ALSO INCLUDE LOCATION OF MASONRY CONTROL JOINTS.

M-18 REINFORCING STEEL SHALL BE NEW DEFORMED BARS THAT ARE FREE FROM RUST, SCALE AND OIL AND CONFORM TO ASTM A615, GRADE 60, WITH MINIMUM YIELD STRENGTH = 60,000. WHERE WELDING REQUIRED ASTM A706, GRADE 60

M-19 A MINIMUM OF (3) FILLED CELLS SHALL BE LOCATED AT CONCENTRATED LOADS ON TYPICAL WALLS.

M-20 PROVIDE (3) FILLED CELLS AT ALL CORNERS AND ENDS OF WALLS.

M-21 LAP ALL BOND BEAMS WHERE STEPPED 4'-0".

M-22 ALL DOWELS FROM THE FOUNDATION SHALL MATCH SIZE & LOCATION OF THE VERTICAL REINFORCING IN MASONRY, UNLESS NOTED DIFFERENTLY. EXTEND DOWEL A MIN. OF 48 BAR DIAMETERS FROM THE FOUNDATION.

M-23 EXPANSION BOLTS SHALL BE "HILTI KWIK BOLT II" OR APPROVED EQUAL. MINIMUM EMBED SHALL BE 5" FOR 3/8" DIA., 3 1/2" FOR 1/2" DIA. AND 2 1/2" FOR 5/8" DIA.

M-24 CHEMICAL ANCHORS SHALL BE "HILTI C-100" OR APPROVED EQUAL. MINIMUM EMBEDMENT SHALL BE 6 3/8" FOR 3/8" DIA., 4 1/2" FOR 1/2" DIA., 3 1/2" FOR 5/8" DIA.

M-25 THREADED ANCHORS SHALL BE ASTM A36 OR A307 QUALITY. ALL CMU CELLS TO RECEIVE ANCHORS SHALL BE GROUTED SOLID. NOTIFY ENGINEER PRIOR TO SUBSTITUTION OF ANY BOLTS INDICATED IN THE DRAWINGS.

STRUCTURAL STEEL

S-1 FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC "MANUAL OF STRUCTURAL CONSTRUCTION" NINTH EDITION AND THE AISC "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," 1989 EDITION.

S-2 STEEL DESIGNATIONS:
WIDE FLANGES.....ASTM A992 Fy=50k.s.i
ALL OTHER HOT-ROLLED
SHAPES AND PLATES.....ASTM A36 Fy=36k.s.i
PIPE COLUMNS.....ASTM A53, GRADE B Fy=35k.s.i
HSS SQUARE/RECTANGULAR.....ASTM A500, GRADE B Fy=46k.s.i

S-3 ALL HIGH-STRENGTH BOLTS SHALL MEET THE REQUIREMENTS OF THE "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS."

S-4 UNLESS NOTED OTHERWISE, ALL BOLTS SHALL BE 3/4" DIAMETER, STRENGTH ASTM A-325 AND SHALL BE BEARING TYPE CONNECTIONS. IF A CERTAIN SITUATION IS NOT DETAILED, USE A SIMILAR DETAIL. CONNECTIONS SHALL GENERALLY FOLLOW THE TYPES SHOWN IN AISC MANUAL OF STEEL CONSTRUCTION.

S-5 ALL BOLTS CAST IN CONCRETE SHALL CONFORM TO ASTM A-36 OR A-307.

S-6 ALL SHOP AND FIELD WELDING SHALL BE DONE BY CURRENTLY CERTIFIED WELDERS IN ACCORDANCE WITH AWS DL1 "STRUCTURAL WELDING CODE," LATEST EDITION.

S-7 ALL WELDS ARE TO CONFORM TO AISC STANDARDS AND LOAD TABLES. USE E70XX ELECTRODES FOR ALL WELDING UNLESS NOTED OTHERWISE GRIND SMOOTH ALL EXPOSED WELDS.

S-8 SUBMIT STRUCTURAL STEEL SHOP DRAWINGS FOR REVIEW PRIOR TO FABRICATION. CLEARLY SHOW ALL PIECE MARKS, CONNECTIONS AND ERECTION DRAWINGS. ANY SPLICES NOT SHOWN ON CONTRACT DRAWINGS ARE TO BE CLEARLY NOTED FOR APPROVAL.

S-9 DO NOT WELD TO EMBEDS UNTIL CONCRETE HAS CURED AT LEAST 72 HOURS. USE APPROPRIATE WELDING PROCESSES TO LIMIT HEAT BUILDUP IN EMBED TO AVOID PLATE EXPANSION AND CRACKING OF CONCRETE.

S-10 WELDED CONNECTIONS SHALL DEVELOP THE FULL SHEAR AND/OR MOMENT CAPACITY OF THE MEMBERS CONNECTED. AS PER AISC.

S-11 ALL BOLTED STEEL CONNECTIONS ARE TO BE STANDARD AISC BOLTED CONNECTIONS AS PER THE AISC MANUAL AND SHALL BE CAPABLE OF SUPPORTING MAXIMUM ALLOWABLE UNIFORM BEAM LOADS, AS DETERMINED FROM THE TABLES OF UNIFORM LOAD CONSTANTS OF THE AISC MANUAL.

STEEL JOISTS

SJ-1 ALL FABRICATION AND ERECTION OF PRE-FABRICATED STEEL JOISTS SHALL BE IN COMPLIANCE WITH THE "RECOMMENDED CODE OF STANDARD PRACTICE FOR STEEL JOISTS AND JOIST GIRDERS" ADOPTED BY THE STEEL JOIST INSTITUTE.

SJ-2 SUBMIT CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.

SJ-3 JOIST MANUFACTURER SHALL SUBMIT A STATEMENT THAT THE JOIST BOTTOM CHORDS ARE ADEQUATELY BRACED DURING UPLIFT CONDITIONS.

SJ-4 THE STEEL JOIST MANUFACTURER SHALL BE RESPONSIBLE FOR ANY ATTACHMENTS, CROSSBRACING, OR BRIDGING REQUIRED THAT ARE NOT SHOWN ON PLANS.

SJ-5 TOP CHORDS OF JOIST GIRDERS SHALL BE DESIGNED FOR JOIST REACTIONS WHICH MAY OCCUR BETWEEN JOIST GIRDER PANEL POINTS. REFERENCE PLANS FOR LOCATIONS.

SJ-6 OPEN WEB STEEL JOISTS SHALL BEAR 2 1/2" MIN. ON STEEL AND 4" MIN. ON MASONRY. 3/16"X2" LONG FILLET WELD AT LH SERIES JOISTS & 1/8"X2" LONG FILLET WELD AT K SERIES JOISTS AT EA. SIDE OF BEARING SEAT AT ALL JOISTS TO STEEL MEMBER CONNECTIONS EXCEPT AT COLUMNS, WHERE BOLTED CONNECTIONS SHALL BE PROVIDED.

METAL DECK

RD-1 ROOF METAL DECK AS SHOWN ON ROOF FRAMING PLAN SHEET S-3.0.

RD-2 METAL DECK SHALL BE CONTINUOUS FOR A MINIMUM OF THREE SPANS.

RD-3 FLOOR METAL DECK AS SHOWN ON FLOOR FRAMING PLAN SHEET S-2.0.

FIELD VERIFY CONDITIONS

FV-1 CONTRACTOR SHALL VERIFY CONDITIONS AND DIMENSIONS RELATIVE TO THE SAME. WHERE THERE ARE CONFLICTS BETWEEN ACTUAL FIELD CONDITIONS AND DATA PRESENTED IN THE DRAWINGS, SUCH CONDITIONS SHALL BE CALLED TO THE ARCHITECT'S ATTENTION AND THE NECESSARY ADJUSTMENTS SHALL BE MADE PER THEIR INSTRUCTIONS.

FV-2 GENERAL CONTRACTOR SHALL REVIEW AND APPROVE SHOP DRAWINGS BEFORE SUBMITTING THEM TO THE ENGINEER, OTHERWISE THEY WILL BE REJECTED.

FV-3 IF THERE ARE ANY DISCREPANCIES THE STRICTER SHALL GOVERN.

SPECIALITY ENGINEERING REQUIREMENTS:

SE-1 STEEL PAN STAIRS SHALL BE DESIGNED BY THE FABRICATORS SPECIALITY ENGINEER AND SHALL INCLUDE STRINGERS, TREADS, HAND RAILING, PLATFORMS (AS REQUIRED), PAN INSERTS, AND MISCELLANEOUS SUPPORTS AND CONNECTIONS. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND MUST BE SIGNED AND SEALED BY A STRUCTURAL ENGINEER IN THE SAME STATE AS THE PROJECT LOCATION. MINIMUM DESIGN LIVE LOAD SHALL BE 100 PSF.

SE-2 HANDRAILS, POSTS, AND SUPPORT CONNECTIONS SHALL BE DESIGNED BY THE FABRICATORS SPECIALITY ENGINEER. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND MUST BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION. DESIGN LOADING(S) SHALL CONFORM TO ALL REQUIREMENTS FO THE BUILDING CODE (SEE GENERAL NOTES FOR APPLICABLE BUILDING CODE).

SE-3 EXTERIOR CURTAIN WALLS SHALL BE DESIGNED BY THE VENDORS SPECIALITY ENGINEER AND SHALL INCLUDE FRAME, GLASS, GLAZING AND CONNECTIONS. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND MUST BE SIGNED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION. DESIGN LOADING(S) SHALL CONFORM TO ALL REQUIREMENTS OF THE BUILDING CODE (SEE GENERAL NOTES FOR APPLICABLE BUILDING CODE). VENDOR SHALL PROVIDE WINDOW WALL REACTIONS TO THE ARCHITECT.

SE-4 AWNINGS SHALL BE DESIGNED BY THE FABRICATORS SPECIALITY ENGINEER AND SHALL INCLUDE FRAME, COVERING, AND CONNECTIONS. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND MUST BE SIGNED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION. DESIGN LOADING(S) SHALL CONFORM TO ALL REQUIREMENTS OF THE BUILDING CODE (SEE GENERAL NOTES FOR APPLICABLE BUILDING CODE).

SE-5 ALL LIGHT GAUGE FRAMING SHALL BE DESIGNED BY A SPECIALITY ENGINEER AND SHALL INCLUDE FRAME, COVERING, AND CONNECTIONS. SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW AND MUST BE SIGNED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE SAME STATE AS THE PROJECT LOCATION.

COLD FORMED STEEL (METAL STUDS)

MS-1 ALL STUDS AND/OR JOISTS AND ACCESSORIES SHALL BE OF THE TYPE, SIZE, GAUGE AND SPACING AS SHOWN ON THE DRAWINGS OR TABLES PER SPECIALTY ENGINEER.

MS-2 ALL STRUCTURAL MEMBERS AND CONNECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH THE AMERICAN IRON AND STEEL INSTITUTE SPECIFICATIONS FOR THE DESIGN OF COLD FORMED STRUCTURAL STEEL MEMBERS, LATEST EDITION.

MS-3 ALL FRAMING MEMBERS SHALL BE FORMED FROM CORROSION RESISTANT STEEL, CORRESPONDING TO THE REQUIREMENTS OF ASTM A-446 WITH A MINIMUM YIELD STRENGTH OF 40 ksi FOR SJ AND CJ STYLE STUDS AND 33 ksi FOR CR RUNNERS. (U.S.G. OR EQUIVALENT).

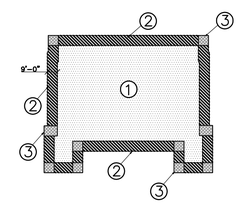
MS-4 FASTENING OF COMPONENTS SHALL BE WITH SELF DRILLING SCREWS OF SUFFICIENT, NUMBER AND SPACING TO DEVELOP THE FULL DESIGN CAPACITY OF THE CONNECTED MEMBERS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. WIRE TYING OF COMPONENTS SHALL NOT BE PERMITTED.

MS-5 PROVIDE HORIZONTAL STRAP BRIDGING 1 5/8"x20 GAUGE AT 48" O.C., SUPPLEMENTED BY SOLID BRIDGING AT 8'-0" O.C. MINIMUM AND AS RECOMMENDED BY THE MANUFACTURER.

MS-6 SUBMIT PRE-ENGINEERED METAL STUD TRUSSES DRAWINGS & CALCULATIONS SIGNED AND SEALED BY AN ENGINEERED REGISTERED IN THE STATE OF FLORIDA.

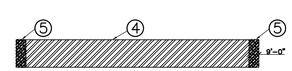
MS-7 PRE-ENGINEERED METAL TRUSSES TOP AND BOTTOM CHORDS SHALL BE 18 GAUGE MIN.

D-7 COMPONENTS AND CLADDING WIND PRESSURES



ROOF PRESSURES — PRESSURES IN PSF.

TRIBUTARY AREA	INTERIOR (1)	PERIMETER (2)	CORNER (3)
A<=20	-38.8	-85.5	-139.3
	+24.5	+24.5	+24.5
20<A<=50	-37.3	-85.5	-126.4
	+22.3	+22.3	+22.3
50<A<=100	-36.3	-85.5	-109.2
	+19.4	+19.4	+19.4
100<A	-35.2	-85.5	-96.2
	+17.3	+17.3	+17.3



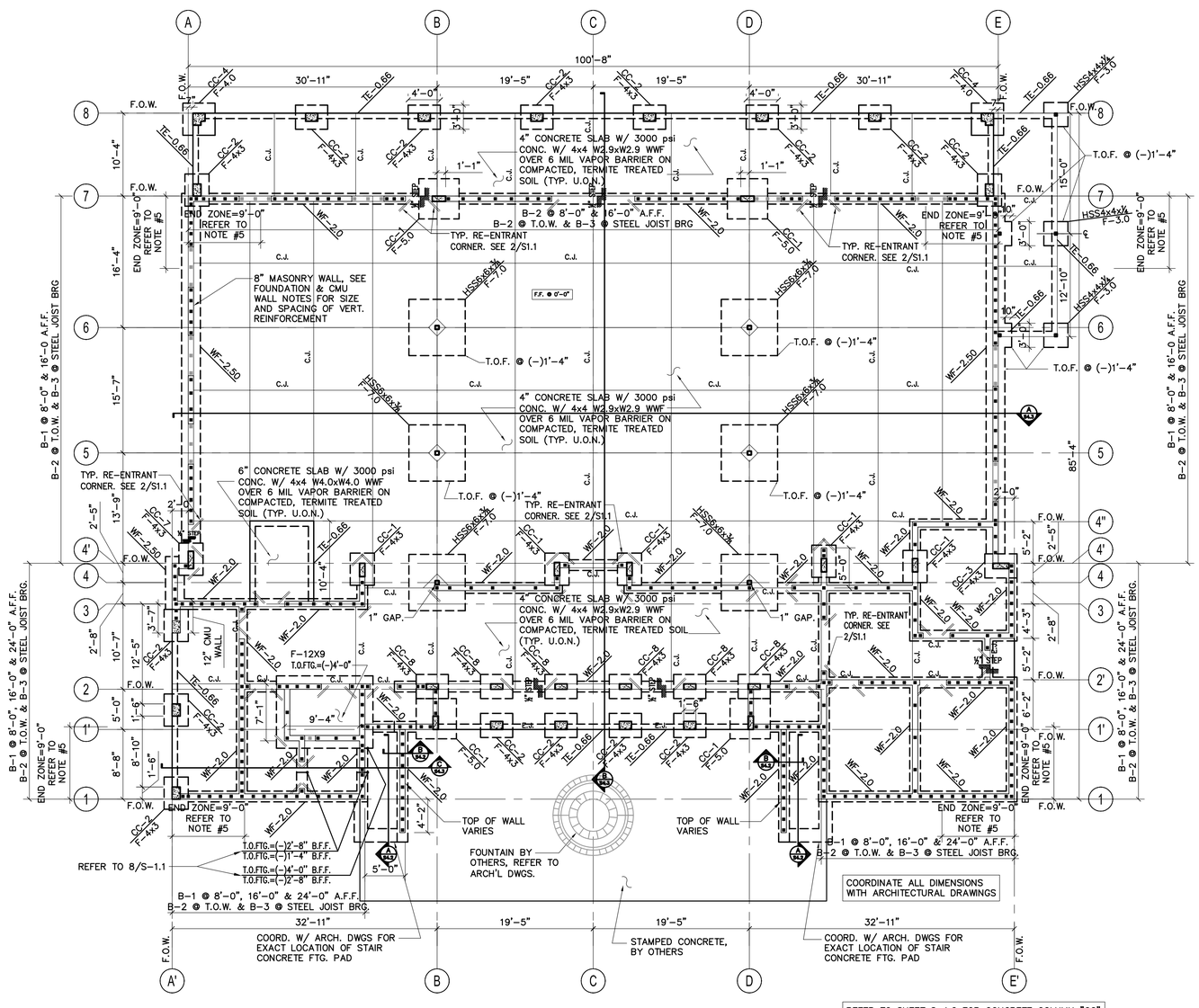
WALL PRESSURES — PRESSURES IN PSF.

TRIBUTARY AREA	INTERIOR (4)	EXTERIOR (5)
A<=20	-46.0	-56.8
	+42.4	+42.4
20<A<=50	-44.1	-52.9
	+40.5	+40.5
50<A<=100	-41.6	-47.9
	+38.0	+38.0
100<A	-39.7	-44.1
	+36.1	+36.1

SUBMITTALS

SB-1 SUBMIT ALL SHOP DRAWINGS ON ONE REPRODUCIBLE PRINT (SEPIA) AND TWO BLUE PRINTS ONLY. THE REPRODUCIBLE PRINT WILL BE RETURNED. ALL BLUE LINE PRINTS REQUIRED BY THE CONTRACTOR ARE THE RESPONSIBILITY OF THE CONTRACTOR AND SHOULD BE MADE AFTER THE REPRODUCIBLE PRINT IS RETURNED. IF ADDITIONAL BLUE LINES ARE SUBMITTED, THEY WILL BE RETURNED UNMARKED.

SB-2 THE FOLLOWING ITEMS SHALL BE SUBMITTED FOR REVIEW:
- CONCRETE



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

FOUNDATION & CMU WALL NOTES

1.	COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL AND ALL OTHER DISCIPLINE DRAWINGS.
2.	REFERENCED FINISHED FLOOR ELEVATION 0'-0"
3.	TOP OF ALL INTERIOR AND EXTERIOR FOOTINGS SHALL BE 1'-4" BELOW FINISHED FLOOR (TYP. U.O.N. ON PLAN).
4.	1" DEEP SAW CUTS TO BE MADE WITHIN 24 HOURS OF POUR. WWF SHALL BE CONTINUOUS AT ALL CONTROL JOINTS. (TYP. C.J. U.O.N.)
5.	■ DENOTES (1) #6 REBAR VERT. CENTERED IN CMU CELL FILLED W/ 3000psi CONC. CONTINUOUS FROM STD. HOOK IN FTG TO STD HOOK IN BEAM AT T.O. WALL. (TYP. AS SHOWN IN PLAN AND AT 2'-0" O.C. MAX. AND (1) #6 @ 1'-4" O.C. MAX AT EDGES, FOR EDGE ZONE DISTANCE AND LOCATION, REFER TO COMPONENTS & CLADDING WALL SKETCH ZONE 5, ON SHEET S0.0)
6.	BOND BEAM TYPE B-1 @ 6'-0" O.C. MAX. AND T.O.W., AND B-2 AT ROOF ELEVATION. AT ALL CMU WALLS (U.O.N.)

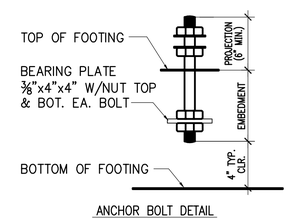
FOUNDATION SCHEDULE

FOUNDATION DESIGN BASED ON 2000 psf ALLOWABLE SOIL BEARING PRESSURE

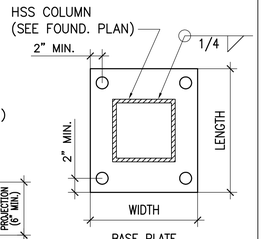
MARK	TYPE	SIZE	DEPTH	REINFORCEMENT
F-12x9	I I	12'-0" X 9'-0"	18"	#5 @ 12" O.C. MAX. E.W. TOP & BTM.
F-4x3	I I	4'-0" X 3'-0"	20"	#5 @ 9" O.C. MAX. E.W. TOP & BTM.
F-14x3	I I	14'-0" X 3'-0"	22"	#5 @ 9" O.C. MAX. E.W. TOP & BTM.
F-14x6	I I	14'-0" X 6'-0"	22"	#5 @ 9" O.C. MAX. E.W. TOP & BTM.
F-3.0	I V	3'-0" SQUARE	16"	(4) #5 E.W. TOP & BTM.
F-4.0	I I	4'-0" SQUARE	20"	(5) #5 E.W. TOP & BTM.
F-5.0	I I	5'-0" SQUARE	20"	(6) #5 E.W. TOP & BTM.
F-7.0	I V	7'-0" SQUARE	24"	(8) #5 E.W. TOP & BTM.
WF-2.0	I	2'-0" WIDE	12"	(3) #5 CONT. BOT. & #5 @ 24" O.C.
WF-2.50	I	2'-6" WIDE	14"	(4) #5 CONT. BOT. & #5 @ 24" O.C.
TE-0.66	I I I	8" WIDE	12"	(2) #5 CONTINUOUS

FOOTING TYPES:
- I = CONTINUOUS
- I I = CMU OR CIP CONC. PILASTER
- I I I = THICKENED EDGE
- I V = STEEL COLUMN PAD

ALL BASE PLATES: (THICKNESSxWIDTHxLENGTH)
3/4"x12"x12" W/ (4)
3/4" DIA. ANCHOR BOLTS



ANCHOR BOLT DETAIL



BASE PLATE

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TALLAHASSEE, FL•TAMPA ,FL•WEST PALM BEACH, FL

Designer: KPB	Checked by: FRP
Technician:	Project Number: AR553009

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EB5026
FRED BOWEN
P.E. # 38153

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

FOUNDATION PLAN

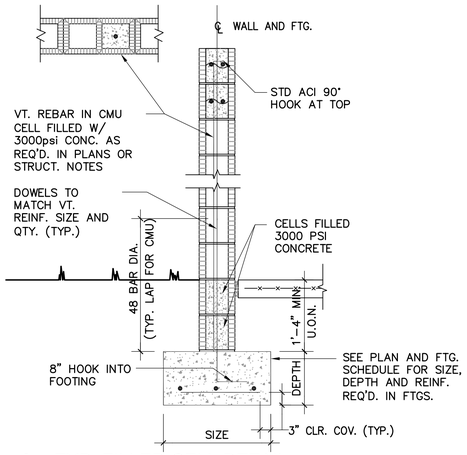
FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

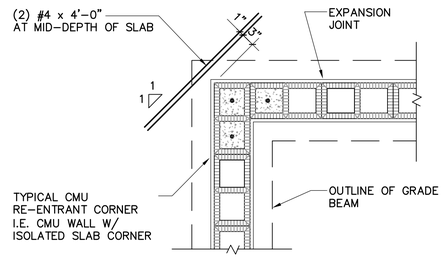
Date: APRIL 15, 2009

Scale: INDICATED

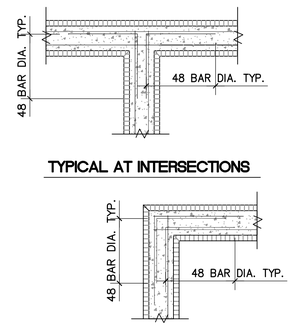
Drawing Number: S-1.0



1 TYP. FILLED CELL DETAIL
3/4"=1'-0"

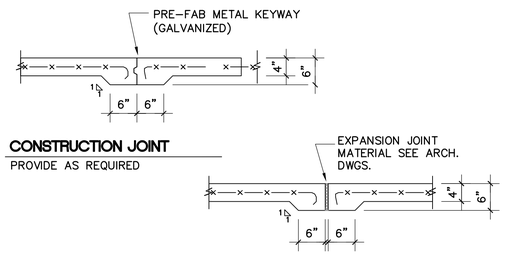


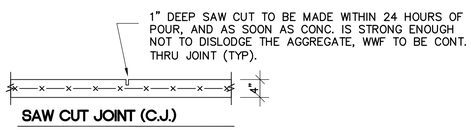
2 TYP. RE-ENTRANT CORNER
3/4"=1'-0"



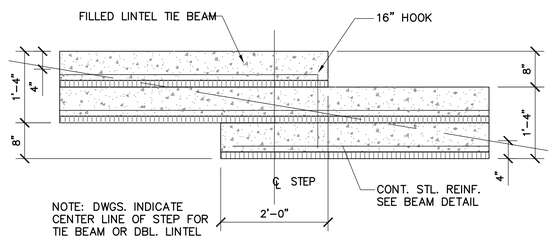
NOTE: FOR BEAM CORNERS AT ENDS OF WALLS (FOR EXAMPLE IN THE VERTICAL PLANE) HOOK BEAM REINF. DOWN INTO CONC. COL. OR FILLED CELLS IN SIMILAR MANNER AS IN HORIZONTAL PLANE

3 TYP. WALL INTERSECTION DETAIL
3/4"=1'-0"



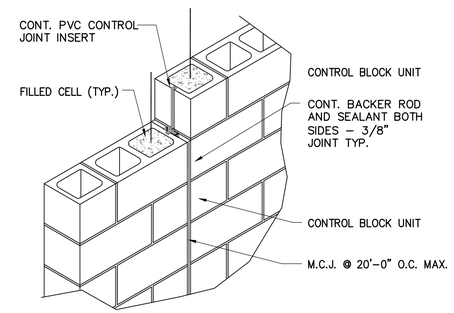


4 TYP. SLAB JOINTS
3/4"=1'-0"



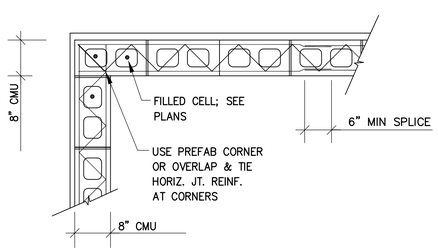
LOCATE STEP AS REQUIRED TO MAINTAIN 4" MINIMUM BETWEEN ROOF LINE AND TOP OR BOTTOM OF BOND BEAM.

5 STEPPED BOND BEAM DETAIL
3/4"=1'-0"

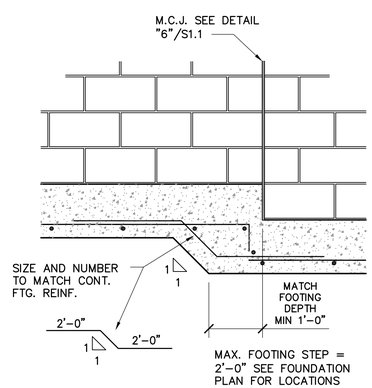


NOTE:
1) "MCJ."=MASONRY CONTROL JOINT
2) PROVIDE A DUMMY JOINT AT TIE BEAMS IN LINE W/ MCJ.

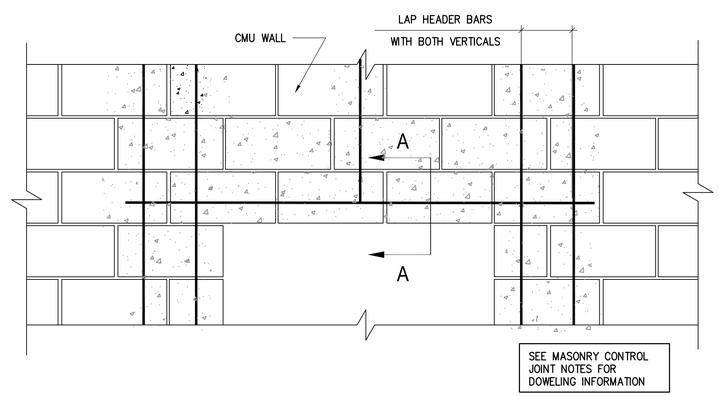
6 M.C.J. DETAIL
3/4"=1'-0"

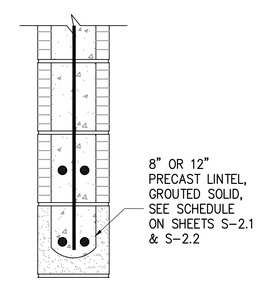


7 TYP. HORIZONTAL REINF. DETAIL
3/4"=1'-0"



8 STEP FOOTING DETAIL
3/4"=1'-0"





SECTION A
(HEAD DETAIL)

9 TYP.MASONRY OPENING DETAILS (U.N.O)
N.T.S

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Designer: KPB	Checked by: FRP
Technician:	Project Number: AR553009

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REVISIONS

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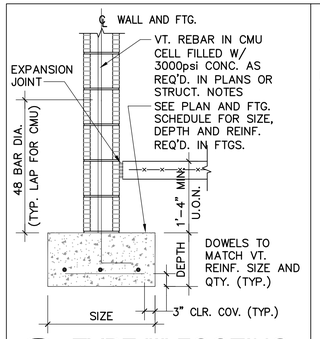
SOUTH GA AREA DEVELOPMENT

Drawing Name:
FOUNDATION DETAILS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009
Scale: INDICATED
Drawing Number: S-1.1



A TYPE "I" FOOTING
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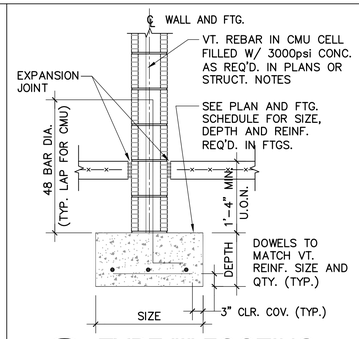

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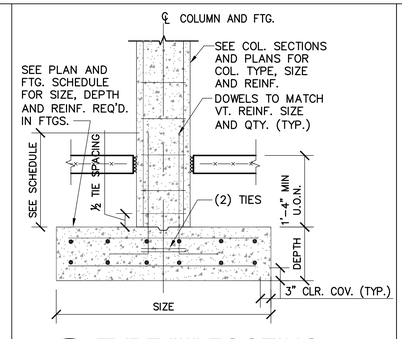

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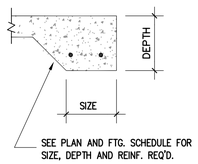

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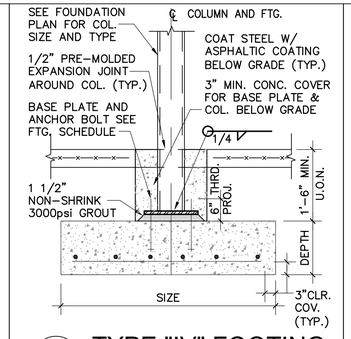

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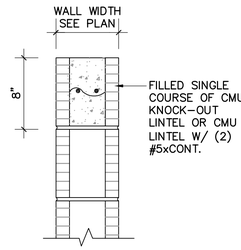

F B-1 SECTION
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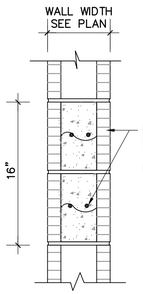

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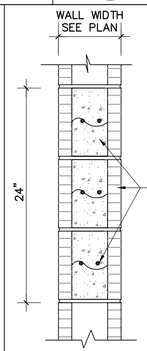

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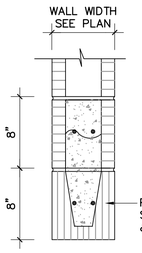

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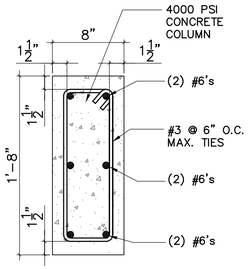

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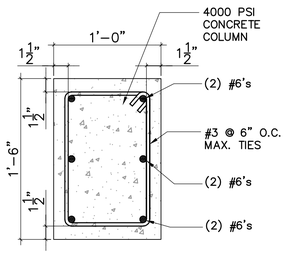

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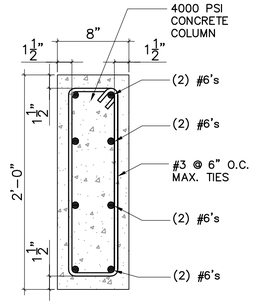

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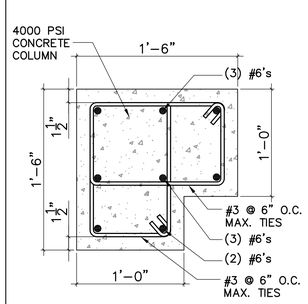

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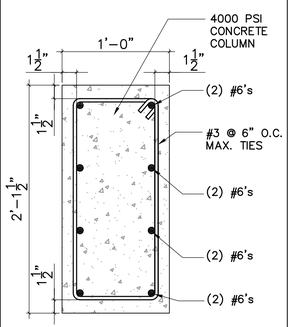

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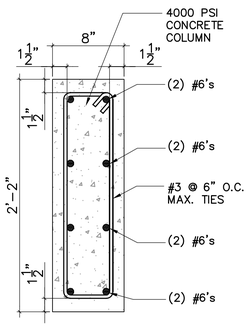

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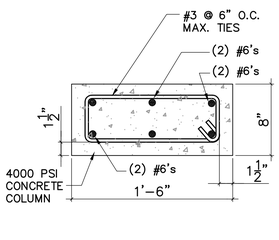

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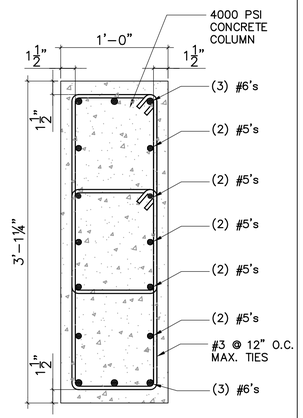

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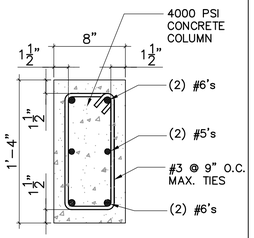

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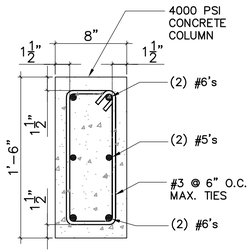

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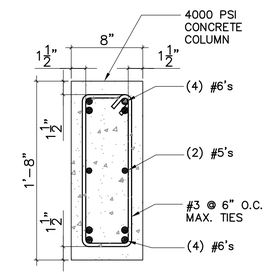

V CB-4 SECTION
N.T.S.

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AIRPORT AUTHORITY

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Designer: KPB	Checked by: FRP
Technician:	Project Number: AR553009

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REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

FOUNDATION DETAILS

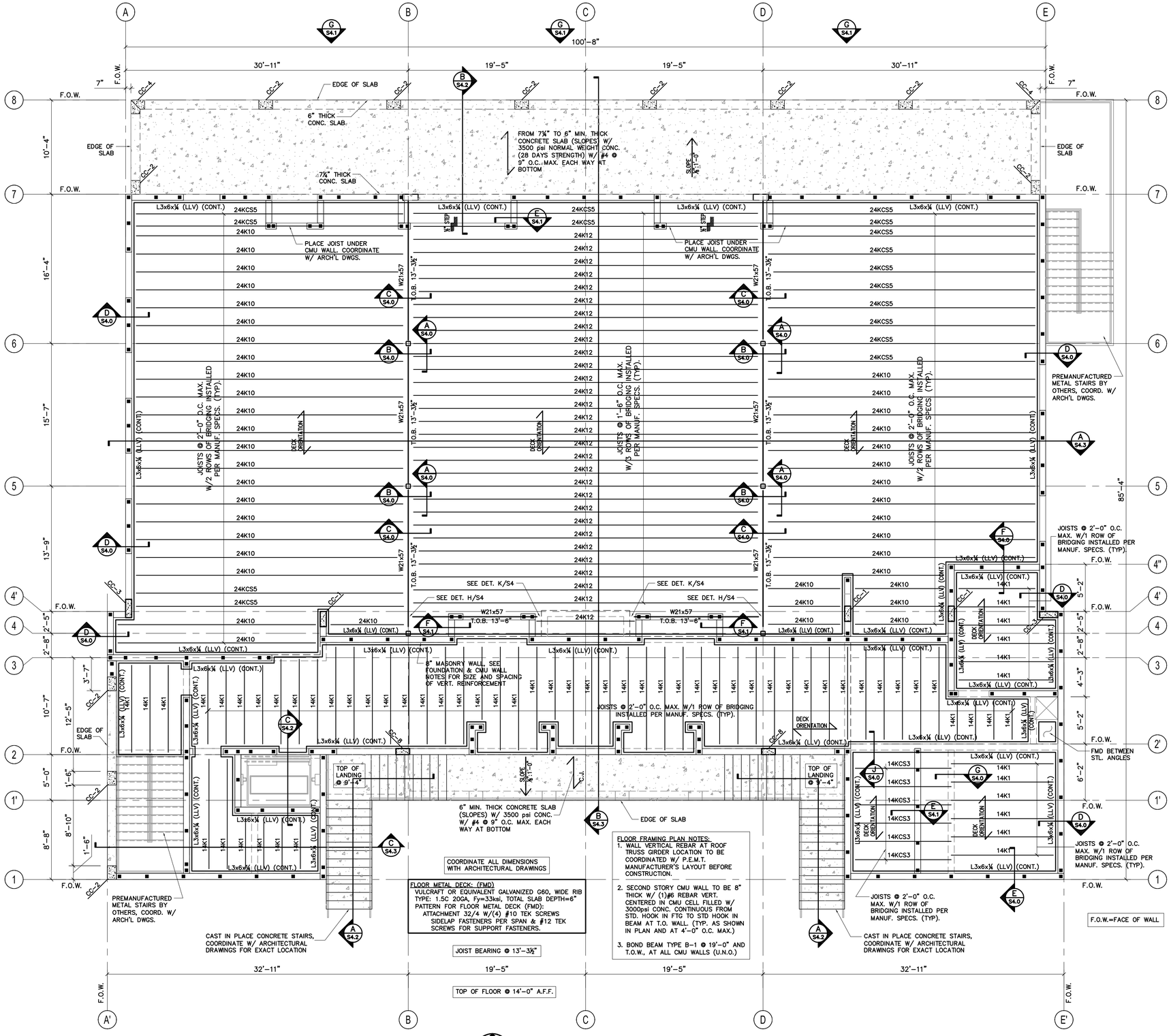
FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009

Scale: INDICATED

Drawing Number: S-1.2



COORDINATE ALL DIMENSIONS WITH ARCHITECTURAL DRAWINGS

FLOOR METAL DECK: (FMD)
VULCRAFT OR EQUIVALENT GALVANIZED G60, WIDE RIB TYPE: 1.5C 20GA, Fy=33ksi, TOTAL SLAB DEPTH=6"
PATTERN FOR FLOOR METAL DECK (FMD):
ATTACHMENT 32/4 W/(4) #10 TEK SCREWS
SIDELAP FASTENERS PER SPAN & #12 TEK SCREWS FOR SUPPORT FASTENERS.

JOIST BEARING @ 13'-3½"

FLOOR FRAMING PLAN NOTES:
1. WALL VERTICAL REBAR AT ROOF TRUSS GIRDER LOCATION TO BE COORDINATED W/ P.E.M.T. MANUFACTURER'S LAYOUT BEFORE CONSTRUCTION.
2. SECOND STORY CMU WALL TO BE 8" THICK W/ (1)#6 REBAR VERT. CENTERED IN CMU CELL FILLED W/ 3000psi CONC. CONTINUOUS FROM STD. HOOK IN FTG TO STD HOOK IN BEAM AT T.O. WALL. (TYP. AS SHOWN IN PLAN AND AT 4'-0" O.C. MAX.)
3. BOND BEAM TYPE B-1 @ 19'-0" AND T.O.W., AT ALL CMU WALLS (U.N.O.)

FLOOR FRAMING PLAN
SCALE: 3/16" = 1'-0"

ST. AUGUSTINE • ST. JOHNS COUNTY
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SOUTH GA AREA DEVELOPMENT

Drawing Name:

FLOOR FRAMING PLAN

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009

Scale: INDICATED

Drawing Number: S-2.0

SAFE LOAD TABLES

FOR GRAVITY, UPLIFT & LATERAL LOADS

8" PRECAST & PRESTRESSED U-LINTELS

CAST-CRETE		GRAVITY							
LENGTH	TYPE	8U8	8F8-08	8F12-08	8F16-08	8F20-08	8F24-08	8F28-08	8F32-08
			8F8-18	8F12-18	8F16-18	8F20-18	8F24-18	8F28-18	8F32-18
2'-10(34") PRECAST	2302		3166	4473	6039	7528	9004	10472	11936
			3166	4473	6039	7528	9004	10472	11936
3'-6"(42") PRECAST	2302		3138	3377	4689	6001	7315	8630	8947
			3166	4473	6039	7528	9004	10472	11936
4'-0"(48") PRECAST	2029		2325	2498	3467	4438	5410	6384	7358
			3846	4473	6039	7528	9004	10472	11936
4'-6"(54") PRECAST	1651		1797	1913	2657	3403	4149	4896	5644
			3170	4027	6039	7528	9004	10472	9668
5'-4"(64") PRECAST	1184		1223	1301	1809	2317	2826	3336	3846
			1665	2889	5057	6096	5400	6424	7450
5'-10(70") PRECAST	972		1000	1059	1474	1888	2304	2721	3137
			1459	2464	4144	5458	4437	5280	6122
6'-6"(78") PRECAST	937		1255	2101	3263	2746	3358	3971	4585
			1255	2101	3396	5260	7134	8995	8890
7'-6"(90") PRECAST	767		1029	1675	2385	1994	2439	2886	3333
			1029	1675	2810	3839	5596	6913	5047
9'-4"(112")PRECAST	573		832	1049	1469	1210	1482	1754	2027
			768	1212	1818	2544	3469	4030	3127
10'-6(126") PRECAST	456		482	802	1135	915	1122	1328	1535
			658	1025	1514	2081	2774	3130	2404
11'-4(136") PRECAST	445		598	935	1365	1854	2355	1793	2075
			598	935	1365	1854	2441	3155	4044
12'-0(144") PRECAST	414		545	864	1254	1689	2074	1570	1818
			555	864	1254	1683	2211	2832	3590
13'-4(160") PRECAST	362		427	726	1028	1331	1635	1224	1418
			485	748	1076	1438	1855	2343	2920
14'-0(168") PRECAST	338		381	648	919	1190	1462	1087	1260
			455	700	1003	1335	1714	2153	2666
14'-8(176")PRESTRESSED	N.R.		NR	NR	NR	NR	NR	NR	NR
			485	765	1270	2045	2610	3185	3765
15'-4(184")PRESTRESSED	N.R.		NR	NR	NR	NR	NR	NR	NR
			420	695	1250	1855	2370	2890	3410
17'-4(208")PRESTRESSED	N.R.		NR	NR	NR	NR	NR	NR	NR
			310	530	950	1400	1800	2200	2600
19'-4(232")PRESTRESSED	N.R.		NR	NR	NR	NR	NR	NR	NR
			240	400	750	1090	1400	1720	2030
21'-4(256")PRESTRESSED	N.R.		NR	NR	NR	NR	NR	NR	NR
			183	330	610	940	1340	1780	2110
22'-0(264")PRESTRESSED	N.R.		NR	NR	NR	NR	NR	NR	NR
			160	300	570	870	1250	1660	1970
24'-0(288")PRESTRESSED	N.R.		NR	NR	NR	NR	NR	NR	NR
			130	240	470	720	1030	1300	1610

8" PRECAST & PRESTRESSED U-LINTELS

CAST-CRETE		UPLIFT								LATERAL	
LENGTH	TYPE	8F8-17	8F12-17	8F16-17	8F20-17	8F24-17	8F28-17	8F32-17		8U8	8F8
		8F8-27	8F12-27	8F16-27	8F20-27	8F24-27	8F28-27	8F32-27			
2'-10(34") PRECAST		2727	3878	4101	5332	6569	7811	9055		2021	2021
		2727	2784	3981	5190	8407	7630	8857			
3'-6"(42") PRECAST		2165	2286	3260	4237	5219	6204	7192		1257	1257
		2165	2215	3165	4125	5091	6061	7038			
4'-0"(48") PRECAST		1878	1989	2832	3680	4532	5387	6245		938	938
		1878	1923	2750	3583	4422	5264	6110			
4'-6"(54") PRECAST		1690	1792	2507	3237	4010	4767	5525		727	727
		1690	1705	2435	3171	3913	4658	5406			
5'-4"(64") PRECAST		1363*	1484	2110	2741	3375	4010	4646		505	505
		1363	1437	2050	2670	3293	3920	4549			
5'-10(70") PRECAST		1272*	1357	1930	2505	3084	3665	4247		418	418
		1272	1315	1875	2441	3010	3583	4157			
6'-6"(78") PRECAST		1141*	1200	1733	2250	2769	3290	3812		707	887
		1141	1182	1684	2192	2703	3216	3732			
7'-6"(90") PRECAST		959*	912	1475	1914	2354	2797	3240		591	657
		990	1029	1466	1907	2351	2797	3245			
9'-4"(112")PRECAST		801*	812	980	1269	1560	1852	2144		454	630
		801	755	1192	1550	1910	2271	2634			
10'-6(126") PRECAST		716*	468	793	1027	1261	1496	1731		396	493
		716	611	1039	1389	1711	2034	2358			
11'-4(136") PRECAST		666*	439	696	899	1104	1309	1515		363	556
		666	535	905	1295	1595	1896	2198			
12'-0(144") PRECAST		607*	400	631	818	1001	1186	1372		340	494
		631	486	818	1209	1514	1799	2086			
13'-4(160") PRECAST		500*	340	532	686	841	997	1153		302	398
		573	409	682	1004	1367	1637	1897			
14'-0(168") PRECAST		459*	318	493	635	778	922	1065		286	360
		548	378	629	922	1254	1567	1816			
14'-8(176")PRESTRESSED		243	295	459	591	724	857	990		N.R.	357
		243	352	582	852	1156	1461	1742			
15'-4(184")PRESTRESSED		228	278	430	553	677	801	925		N.R.	327
		228	339	542	791	1072	1381	1678			
17'-4(208")PRESTRESSED		188	236	361	464	567	670	774		N.R.	255
		188	278	449	649	874	1121	1389			
19'-4(232")PRESTRESSED		165	207	313	401	490	578	667		N.R.	204
		165	239	383	550	736	940	1180			
21'-4(256")PRESTRESSED		145	186	278	356	433	512	590		N.R.	172
		142	212	336	477	635	807	993			
22'-0(264")PRESTRESSED		140	180	268	343	418	493	568		N.R.	161
		137	205	322	457	607	771	947			
24'-0(288")PRESTRESSED		127	165	244	312	380	447	515		N.R.	135
		124	186	290	408	538	680	833			

*REDUCE VALUE BY 25% FOR GRADE 40 FIELD REBAR

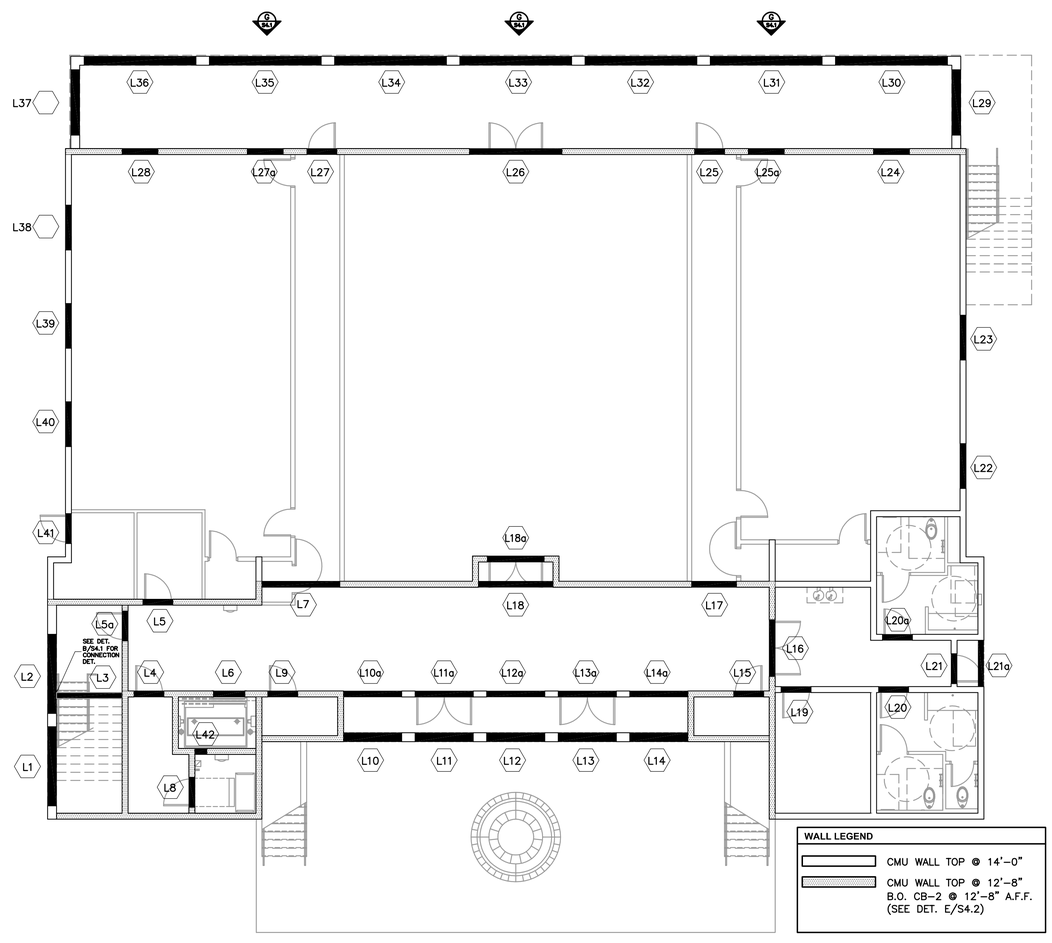
8" PRECAST W/ 2" RECESS DOOR U-LINTELS

CAST-CRETE		GRAVITY							
LENGTH	TYPE	8RU8	8RF8-08	8RF12-08	8RF14-08	8RF16-08	8RF18-08	8RF20-08	8RF30-08
			8RF8-18	8RF12-18	8RF14-18	8RF16-18	8RF18-18	8RF20-18	8RF30-18
4'-4" (52") PRECAST		1489	1591	3053	2982	3954	4929	5904	8880
			1827	3412	4982	6472	7947	9416	10878
4'-6" (54") PRECAST		1357	1449	2782	2714	3600	4487	5375	8264
			1702	3412	4982	6472	7947	9416	10878
5'-8" (68") PRECAST		785	832	1602	1550	2058	2566	3075	3585
			1153	2162	4074	6472	6516	5814	6539
5'-10(70") PRECAST		735	779	1500	1449	1924	2400	2876	3353
			1103	2051	3811	6472	6516	5450	6111
6'-8" (80") PRECAST		822	907	1677	2933	2576	3223	3872	4522
			907	1677	2933	4100	6730	8177	6707
7'-6" (90") PRECAST		665	761	1377	2252	1956	2451	2944	3439
			764	1377	2329	3609	5492	6624	5132
9'-8" (116")PRECAST		371	420	834	1253	1071	1342	1614	1886
			535	928	1497	2179	2818	3595	2875

8" PRECAST W/ 2" RECESS DOOR U-LINTELS

CAST-CRETE		UPLIFT								LATERAL	
LENGTH	TYPE	8RF8-17	8RF12-17	8RF14-17	8RF16-17	8RF18-17	8RF22-17	8RF28-17	8RF30-17	8RU8	8RF8
		8RF8-27	8RF12-27	8RF14-27	8RF16-27	8RF18-27	8RF22-27	8RF28-27	8RF30-27		
4'-4" (52") PRECAST		1244	1573	2413	3260	4112	4967	5825		932	932
		1244	1519	2338	3170	4008	4850	5696			
4'-6" (54") PRECAST		1192	1507	2311	3121	3937	4756	5577		853	853
		1192	1455	2240	3036	3837	4643	5453			
5'-8" (68") PRECAST		924*	1172	1795	2423	3055	3689	4325		501	501
		924	1132	1741	2357	2978	3603	4230			
5'-10(70") PRECAST		896*	1138	1742	2352	2965	3581	4198		469	469
		896	1099	1690	2288	2891	3497	4106			
6'-8" (80") PRECAST		778	882	1513	2042	2573	3107	3642		830	1100
		778	956	1468	1987	2509	3035	3563			
7'-6" (90") PRECAST		685	697	1325	1810	2280	2753	3227		710	941
		685	849	1302	1762	2225	2690	3157			
9'-8" (116")PRECAST		533*	433	806	1123	1413	1704	1995		516	614
		533	527	1009	1389	1728	2088	2450			

*REDUCE VALUE BY 15% FOR GRADE 40 FIELD REBAR



WALL LEGEND

- CMU WALL TOP @ 14'-0"
- CMU WALL TOP @ 12'-8" B.O. CB-2 @ 12'-8" A.F.F. (SEE DET. E/S4.2)

NORTH

2nd FLOOR. LINTEL PLAN

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

LINTEL SCHEDULE

LINTEL NO.	LINTEL LENGHT	LINTEL TYPE	BOTTOM OF BEAM
L 1	8'-10"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 2	8'-10"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 3	7'-4"	8"W.x16"H. C.I.P. CB-2	12'-8"
L 4	4'-6"	8RF22-1B/1T	8'-2"
L 5	4'-6"	8RF22-1B/1T	8'-2"
L 5a	4'-6"	8RF14-1B/1T	8'-2"
L 6	4'-10"	8"W.x18"H. C.I.P. CB-3	7'-2"
L 7	10'-6"	8F24-1B/1T	8'-0"
L 8	4'-6"	8RF14-1B/1T	8'-2"
L 9	4'-6"	8RF22-1B/1T	8'-2"
L 10	6'-6"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 10a	6'-6"	8"W.x16"H. C.I.P. CB-2	8'-2"
L 11	6'-6"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 11a	6'-6"	8"W.x16"H. C.I.P. CB-2	8'-2"
L 12	6'-6"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 12a	6'-6"	8"W.x16"H. C.I.P. CB-2	8'-2"
L 13	6'-6"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 13a	6'-6"	8"W.x16"H. C.I.P. CB-2	8'-2"
L 14	6'-6"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 14a	6'-6"	8"W.x16"H. C.I.P. CB-2	8'-2"
L 15	4'-6"	8RF14-1B/1T	8'-2"
L 16	9'-4"	8RF22-1B/1T	8'-2"
L 17	6'-6"	8F24-1B/1T	8'-0"
L 18	10'-6"	8F24-1B/1T	8'-0"
L 18a	9'-4"	8RF22-1B/1T	8'-2"
L 19	4'-6"	8RF14-1B/1T	8'-2"
L 20	4'-6"	8RF14-1B/1T	8'-2"
L 20a	4'-6"	8RF14-1B/1T	8'-2"
L 21	4'-6"	8RF14-1B/1T	8'-2"
L 21a	6'-6"	8F16-1B/1T	8'-0"
L 22	6'-6"	8F16-1B/1T	8'-0"
L 23	6'-6"	8F16-1B/1T	8'-0"
L 24	5'-4"	8F16-1B/1T	8'-0"
L 25	4'-0"	8"W.x18"H. C.I.P. CB-3	8'-2"
L 25a	5'-4"	8F16-1B/1T	8'-0"
L 26	12'-0"	8RF22-1B/1T	8'-2"
L 27	4'-0"	8"W.x18"H. C.I.P. CB-3	8'-2"
L 27a	5'-4"	8F16-1B/1T	8'-0"
L 28	5'-4"	8F16-1B/1T	8'-0"
L 29	7'-4"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 30	12'-6"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 31	12'-6"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 32	12'-6"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 33	12'-6"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 34	12'-6"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 35	12'-6"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 36	12'-6"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 37	7'-4"	12"W.x37⅞"H. C.I.P. CB-1	10'-10 3/4"
L 38	6'-6"	8F16-1B/1T	8'-0"
L 39	6'-6"	8F16-1B/1T	8'-0"
L 40	6'-6"	8F16-1B/1T	8'-0"
L 41	4'-0"	8"W.x18"H. C.I.P. CB-3	8'-2"
L 42	2'-10"	8F8-1B	COORD. W/MECH'L

REFER TO SHEET S1.2 FOR CAST IN PLACE CONCRETE BEAM SECTIONS & DETAILS

TYPE DESIGNATION

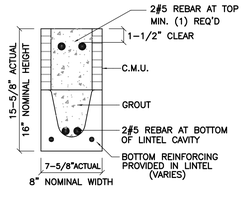
F = FILLED WITH GROUT / U = UNFILLED

QUANTITY OF #5 REBAR AT BOTTOM OF LINTEL CAVITY

8F16-1B/1T

NOMINAL WIDTH
NOMINAL HEIGHT

QUANTITY OF #5 REBAR AT TOP



MATERIALS

1. f'c precast lintels = 3500 psi.
2. f'c prestressed lintels = 6000 psi.
3. f'c grout = 3000 psi w/ maximum 3/8" aggregate.
4. Concrete masonry units (CMU) per ASTM C90 w/ minimum net area compressive strength = 1900 psi.
5. Rebar provided in precast lintel per ASTM A615 GR60. Field rebar per ASTM A615 GR40 or GR60.
6. Prestressing strand per ASTM A416 grade 270 low relaxation.
7. 7/32 wire per ASTM A510.
8. Mortar per ASTM C270 type M or S.

GENERAL NOTES

1. Provide full mortar head and bed joints.
2. Shore filled lintels as required.
3. Installation of lintel must comply with the architectural and/or structural drawings.
4. Lintels are manufactured with 5-1/2" long notches at the ends to accommodate vertical cell reinforcing and grouting.
5. All lintels meet or exceed L/360 vertical deflection, except lintels 17'-4" and longer with a nominal height of 8" meet or exceed L/150.
6. Bottom field added rebar to be located at the bottom of the lintel cavity.
7. 7/32" diameter wire stirrups are welded to the bottom steel for mechanical anchorage.
8. Cast-in-place concrete may be provided in compositte lintel in lieu of concrete masonry units.
9. Safe load ratings based on rational design analysis per ACI 318 and ACI 530

SAFE LOAD TABLE NOTES

1. All values based on minimum 4" bearing. Exception: Safe loads for unfilled lintels must be reduced by 20% if bearing length is less than 6-1/2". Safe loads for all recessed lintels based on 8" nominal bearing.
2. N.R. = Not Rated.
3. Safe loads are total superimposed allowable load on the section specified.
4. Safe loads based on grade 40 or grade 60 field rebar.
5. Additional lateral load capacity can be obtained by the designer by providing addional reinforced masonry above the precast lintel.
6. One #7 rebar may be substituted for two #5 rebars in 8" lintels only.
7. The designer may evaluate concentrated loads from the safe load tables by calculating the maximum resisting moment and shear at d-away from the face of support.
8. For composite lintel heights not shown, use safe load from next lower height.
9. All safe loads in units of pounds per linear foot.

ST. AUGUSTINE • ST. JOHNS COUNTY
AIRPORT AUTHORITY

THE LPA GROUP
TRANSPORTATION CONSULTANTS
ATLANTA, GA•BATON ROUGE, LA•CHARLESTON, SC
CHARLOTTE, NC•CHICAGO, IL•COLUMBIA, SC
GREENSBORO, NC•GULFPORT, MS•KNOXVILLE, TN
MOBILE, AL•MYRTLE BEACH, SC•ORLANDO, FL
RALEIGH, NC•RICHMOND, VA•SARASOTA, FL
TALLAHASSEE, FL•TAMPA ,FL•WEST PALM BEACH, FL

Designer: KPB	Checked by: FRP
Technician:	Project Number: AR553009

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EB5026
FRED BOWEN
P.E. # 38153

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

1ST FLOOR LINTEL PLAN

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

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8" PRECAST & PRESTRESSED U-LINTELS

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2'-10(34") PRECAST	2302	3166	4473	6039	7526	9004	10472	11836	
3'-6"(42") PRECAST	2302	3166	4473	6039	7526	9004	10472	11836	
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7'-6"(90") PRECAST	767	2170	4027	6039	7526	9004	10472	9668	
9'-4"(112")PRECAST	573	1223	1301	1809	2317	2828	3336	3846	
10'-6(126") PRECAST	456	1665	2889	5007	6096	5400	6424	7450	
11'-4(136") PRECAST	445	1000	1059	1474	1889	2304	2721	3137	
12'-0(144") PRECAST	414	1459	2464	4144	5458	4437	5280	6122	
13'-4(160") PRECAST	362	1255	2101	3283	2746	3358	3971	4585	
14'-0(168") PRECAST	338	1255	2101	3386	5260	7134	8995	8890	
14'-8(176")PRESTRESSED	N.R.	1029	1675	2385	1994	2439	2886	3333	
15'-4(184")PRESTRESSED	N.R.	1029	1675	2610	3830	5596	6813	5047	
17'-4(208")PRESTRESSED	N.R.	632	1049	1469	1310	1482	1754	2027	
19'-4(232")PRESTRESSED	N.R.	788	1212	1818	2544	3469	4030	3127	
21'-4(256")PRESTRESSED	N.R.	482	802	1125	915	1122	1328	1535	
22'-0(264")PRESTRESSED	N.R.	658	1003	1514	2081	2774	3130	2404	
24'-0(288")PRESTRESSED	N.R.	598	935	1365	1854	2305	1793	2075	
		598	935	1365	1854	2441	3155	4044	
		545	864	1254	1689	2074	1570	1818	
		555	864	1254	1693	2211	2832	3940	
		427	728	1028	1331	1635	1224	1418	
		485	748	1076	1438	1855	2343	2920	
		381	648	919	1190	1462	1087	1260	
		405	700	1003	1335	1714	2153	2666	
		NR	NR	NR	NR	NR	NR	NR	
		485	765	1370	2045	2810	3185	3765	
		NR	NR	NR	NR	NR	NR	NR	
		420	695	1250	1855	2370	2890	3410	
		NR	NR	NR	NR	NR	NR	NR	
		310	530	950	1400	1800	2200	2600	
		NR	NR	NR	NR	NR	NR	NR	
		240	400	750	1090	1400	1720	2030	
		NR	NR	NR	NR	NR	NR	NR	
		183	330	610	940	1340	1780	2110	
		NR	NR	NR	NR	NR	NR	NR	
		160	300	570	870	1250	1660	1970	
		NR	NR	NR	NR	NR	NR	NR	
		130	240	470	720	1030	1350	1810	

8" PRECAST & PRESTRESSED U-LINTELS

CAST-CRETE		UPLIFT								LATERAL	
LENGTH	TYPE	8F8-17 8F8-21	8F12-17 8F12-21	8F16-17 8F16-21	8F20-17 8F20-21	8F24-17 8F24-21	8F28-17 8F28-21	8F32-17 8F32-21		8U8	8F8
2'-10(34") PRECAST		2727	2878	4101	5332	6569	7811	9055		2021	2021
3'-6"(42") PRECAST		2727	2784	3981	5190	6407	7630	8857			
4'-0"(48") PRECAST		2185	2289	3260	4237	5219	6204	7192		1257	1257
4'-6"(54") PRECAST		2165	2215	3165	4125	5091	6061	7036			
5'-4"(64") PRECAST		1678	1989	2832	3680	4532	5387	6245		938	938
5'-10(70") PRECAST		1680	1762	2507	3257	4010	4767	5525			
6'-6"(78") PRECAST		1680	1705	2435	3171	3913	4658	5406		727	727
7'-6"(90") PRECAST		1363*	1484	2110	2741	3375	4010	4648			
9'-4"(112")PRECAST		1363	1437	2050	2670	3293	3920	4549		505	505
10'-6(126") PRECAST		1272*	1357	1930	2505	3084	3665	4247			
11'-4(136") PRECAST		1272	1315	1875	2441	3010	3583	4157		418	418
12'-0(144") PRECAST		1141*	1200	1733	2250	2769	3290	3812			
13'-4(160") PRECAST		1141	1182	1684	2182	2703	3216	3732		707	887
14'-0(168") PRECAST		959*	912	1475	1914	2354	2797	3240			
14'-8(176")PRESTRESSED		990	1039	1466	1907	2351	2797	3245		591	657
15'-4(184")PRESTRESSED		901*	812	990	1289	1590	1892	2144			
17'-4(208")PRESTRESSED		801	755	1192	1550	1910	2271	2634		454	630
19'-4(232")PRESTRESSED		715*	466	793	1027	1281	1496	1731			
21'-4(256")PRESTRESSED		718	611	1039	1389	1711	2034	2358		396	493
22'-0(264")PRESTRESSED		666*	439	696	899	1104	1309	1515			
24'-0(288")PRESTRESSED		666	535	905	1295	1595	1896	2198		363	556
		607*	400	631	815	1001	1186	1372			
		631	486	818	1209	1514	1799	2086		340	494
		500*	340	532	686	841	997	1153			
		573	409	682	1004	1367	1637	1897		302	398
		458*	316	493	635	778	922	1065			
		548	378	629	922	1254	1587	1814		286	360
		243	295	459	591	724	857	990			
		243	302	582	852	1156	1461	1742		N.R.	357
		228	278	430	553	677	801	925			
		228	339	542	791	1072	1381	1676		N.R.	327
		188	236	361	464	567	670	774			
		188	276	449	649	874	1121	1389		N.R.	255
		165	207	313	401	490	578	667			
		165	239	383	550	736	940	1160		N.R.	204
		145	186	278	356	433	512	590			
		142	212	336	477	635	807	993		N.R.	172
		140	180	268	343	418	493	568			
		137	205	322	457	607	771	947		N.R.	161
		127	165	244	312	380	447	515			
		124	186	290	408	538	680	833		N.R.	135

*REDUCE VALUE BY 25% FOR GRADE 40 FIELD REBAR

8" PRECAST W/ 2" RECESS DOOR U-LINTELS

CAST-CRETE		GRAVITY							
LENGTH	TYPE	8RU6	8RF8-08 8RF8-10	8RF12-08 8RF12-10	8RF14-08 8RF14-10	8RF16-08 8RF16-10	8RF22-08 8RF22-10	8RF28-08 8RF28-10	8RF30-08 8RF30-10
4'-4" (52") PRECAST		1489	1591	3053	2982	3954	4929	5904	6880
4'-6" (54") PRECAST		1357	1827	3412	4982	6472	7947	9416	10878
5'-8" (68") PRECAST		785	1449	2782	2714	3600	4487	5375	6264
5'-10(70") PRECAST		735	1702	3412	4982	6472	7947	9416	10878
6'-8" (80") PRECAST		822	832	1602	1550	2056	2566	3075	3585
7'-6" (90") PRECAST		665	1153	2182	4074	5472	6516	5814	6530
9'-8" (116")PRECAST		371	779	1500	1449	1924	2400	2876	3352
			1103	2051	3811	5472	6516	5450	6411
			907	1677	2933	3576	3223	3872	4522
			907	1677	2933	4100	5730	8177	6707
			761	1377	2252	1958	2451	2944	3439
			764	1377	2329	3609	5492	6924	5132
			450	834	1253	1071	1342	1614	1886
			535	928	1497	2179	2618	3595	2875

8" PRECAST W/ 2" RECESS DOOR U-LINTELS

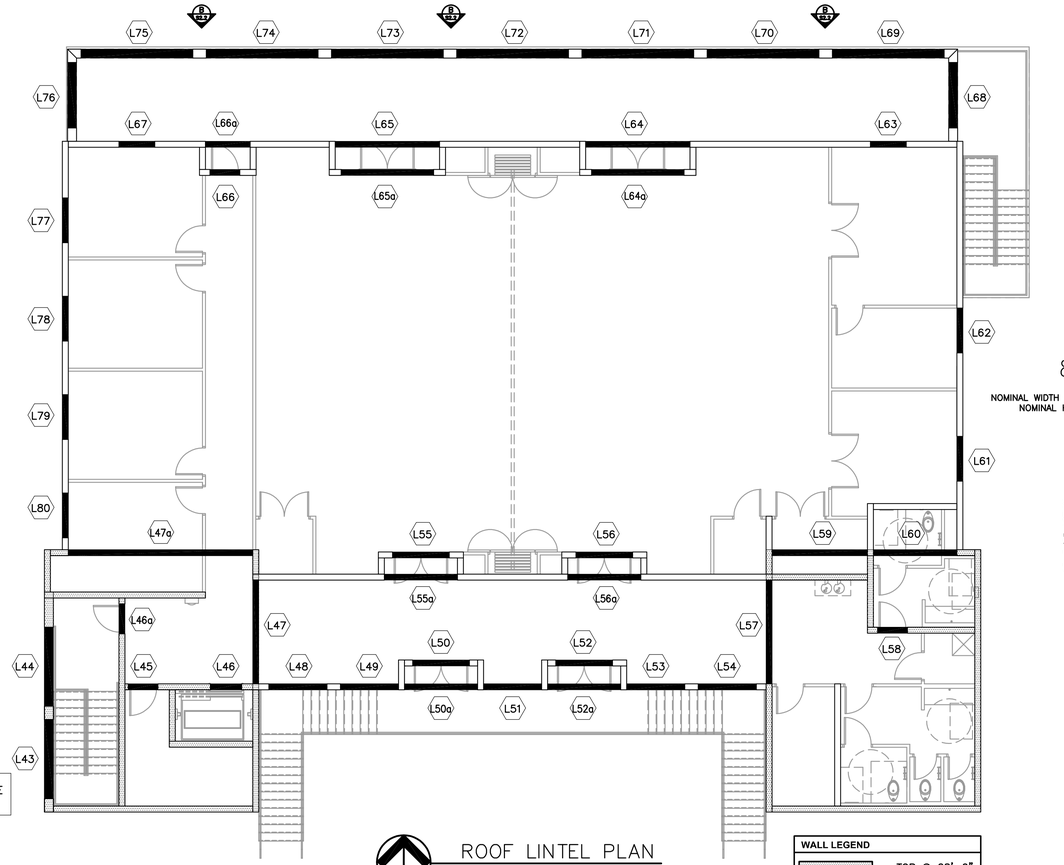
CAST-CRETE		UPLIFT								LATERAL	
LENGTH	TYPE	8RF8-17 8RF8-27	8RF12-17 8RF12-27	8RF14-17 8RF14-27	8RF16-17 8RF16-27	8RF22-17 8RF22-27	8RF28-17 8RF28-27	8RF30-17 8RF30-27		8RU6	8RF8
4'-4" (52") PRECAST		1244	1573	2413	3280	4112	4967	5825		932	932
4'-6" (54") PRECAST		1244	1519	2339	3170	4008	4850	5696			
5'-8" (68") PRECAST		1192	1507	2311	3121	3937	4756	5577		853	853
5'-10(70") PRECAST		1192	1455	2240	3036	3837	4643	5453			
6'-8" (80") PRECAST		924*	1172	1795	2433	3055	3689	4325		501	501
7'-6" (90") PRECAST		924	1132	1741	2357	2978	3603	4230			
9'-8" (116")PRECAST		896*	1136	1742	2352	2965	3581	4198		469	469
		896	1099	1690	2288	2891	3497	4106			
		778	882	1313	2042	2573	3107	3642		830	1100
		778	956	1468	1987	2509	3035	3563			
		688	697	1325	1810	2280	2753	3227		710	941
		688	849	1302	1762	2225	2690	3157			
		533*	433	808	1123	1413	1704	1995		518	614
		533	527	1009	1369	1728	2088	2450			

*REDUCE VALUE BY 15% FOR GRADE 40 FIELD REBAR

LINTEL SCHEDULE

LINTEL NO.	LINTEL LENGHT	LINTEL TYPE	BOTTOM OF BEAM
L 43	10'-6"	12F24-1B/1T	22'-8"
L 44	10'-6"	12F24-1B/1T	22'-8"
L 45	4'-6"	8RF14-1B/1T	22'-2"
L 46	4'-10"	8"W.18"H. CB-3	21'-2"
L 46a	4'-6"	8RF14-1B/1T	22'-2"
L 47	13'-4"	8F24-2B/2T	24'-8"
L 47a	20'-8"	8"W.x20"H. CB-4	24'-8"
L 48	7'-6"	8F16-1B/1T	22'-8"
L 49	7'-6"	8F16-1B/1T	22'-8"
L 50	7'-6"	8RF22-1B/1T	22'-2"
L 50a	8'-10"	8RF22-1B/1T	22'-2"
L 51	7'-6"	8F16-1B/1T	22'-8"
L 52	7'-6"	8RF22-1B/1T	22'-2"
L 52a	8'-10"	8RF22-1B/1T	22'-2"
L 53	7'-6"	8F16-1B/1T	22'-8"
L 54	7'-6"	8F16-1B/1T	22'-8"
L 55	7'-6"	8RF22-1B/1T	22'-2"
L 55a	9'-4"	8RF22-1B/1T	22'-2"
L 56	7'-6"	8RF22-1B/1T	22'-2"
L 56a	9'-4"	8RF22-1B/1T	22'-2"
L 57	13'-4"	8F24-2B/2T	24'-8"
L 58	5'-4"	8RF14-1B/1T	22'-2"
L 59	10'-8"	8"W.x18"H. CB-3	24'-8"
L 60	9'-4"	8"W.x18"H. CB-3	24'-8"
L 61	6'-6"	8F16-1B/1T	21'-0"
L 62	6'-6"	8F16-1B/1T	21'-0"
L 63	5'-4"	8F16-1B/1T	21'-0"
L 64	13'-4"	8RF22-1B/1T	22'-2"
L 64a	11-4"	8RF22-1B/1T	22'-2"
L 65	13'-4"	8RF22-1B/1T	22'-2"
L 65a	11'-4"	8RF22-1B/1T	22'-2"
L 66	4'-6"	8RF14-1B/1T	22'-2"
L 66a	6'-6"	8F16-1B/1T	22'-2"
L 67	5'-4"	8F16-1B/1T	21'-0"
L 68	9'-4"	12F16-1B/1T	22'-8"
L 69	14'-0"	12F16-1B/1T	22'-8"
L 70	14'-0"	12F16-1B/1T	22'-8"
L 71	14'-0"	12F16-1B/1T	22'-8"
L 72	14'-0"	12F16-1B/1T	22'-8"
L 73	14'-0"	12F16-1B/1T	22'-8"
L 74	14'-0"	12F16-1B/1T	22'-8"
L 75	14'-0"	12F16-1B/1T	22'-8"
L 76	9'-4"	12F16-1B/1T	22'-8"
L 77	6'-6"	8F16-1B/1T	21'-0"
L 78	6'-6"	8F16-1B/1T	21'-0"
L 79	6'-6"	8F16-1B/1T	21'-0"
L 80	6'-6"	8F16-1B/1T	21'-0"

REFER TO SHEET S1.2 FOR CAST IN PLACE CONCRETE BEAM SECTIONS & DETAILS



ROOF LINTEL PLAN

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

NORTH

WALL LEGEND

TOP @ 28'-0"

TOP @ 24'-0"

TYPE DESIGNATION

F = FILLED WITH GROUT / U = UNFILLED

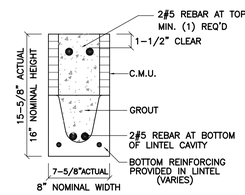
QUANTITY OF #5 REBAR AT BOTTOM OF LINTEL CAVITY

8F16–1B/1T

NOMINAL WIDTH

NOMINAL HEIGHT

QUANTITY OF #5 REBAR AT TOP



SAFE LOAD TABLE NOTES

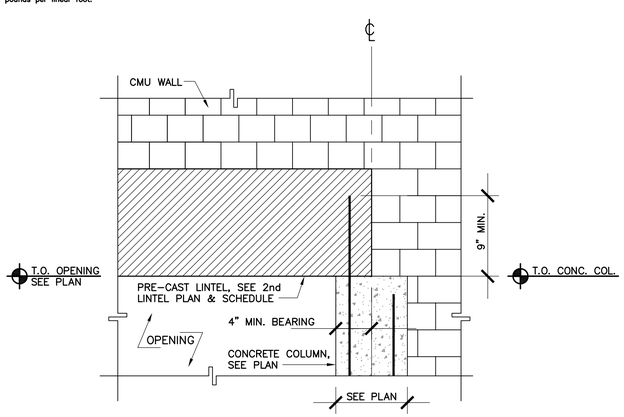
1. All values based on minimum 4" bearing. Exception: Safe loads for unfilled lintels must be reduced by 20% if bearing length is less than 8-1/2". Safe loads for all recessed lintels based on 8" nominal bearing.
2. N.R. = Not Rated.
3. Safe loads are total superimposed allowable load on the section specified.
4. Safe loads based on grade 40 or grade 60 field rebar.
5. Additional lateral load capacity can be obtained by the designer by providing addional reinforced masonry above the precast lintel.
6. One #7 rebar may be substituted for two #5 rebars in 8" lintels only.
7. The designer may evaluate concentrated loads from the safe load tables by calculating the maximum resisting moment and shear at d-away from the face of support.
8. For composite lintel heights not shown, use safe load from next lower height.
9. All safe loads in units of pounds per linear foot.

MATERIALS

1. f'c precast lintels = 3500 psi.
2. f'c prestressed lintels = 6000 psi.
3. f'c grout = 3000 psi w/ maximum 3/8" aggregate.
4. Concrete masonry units (CMU) per ASTM C90 w/ minimum net area compressive strength = 1900 psi.
5. Rebar provided in precast lintel per ASTM A615 GR60. Field rebar per ASTM A615 GR40 or GR60.
6. Prestressing strand per ASTM A416 grade 270 low relaxation.
7. 7/32" wire per ASTM A510.
8. Mortar per ASTM C270 type M or S.

GENERAL NOTES

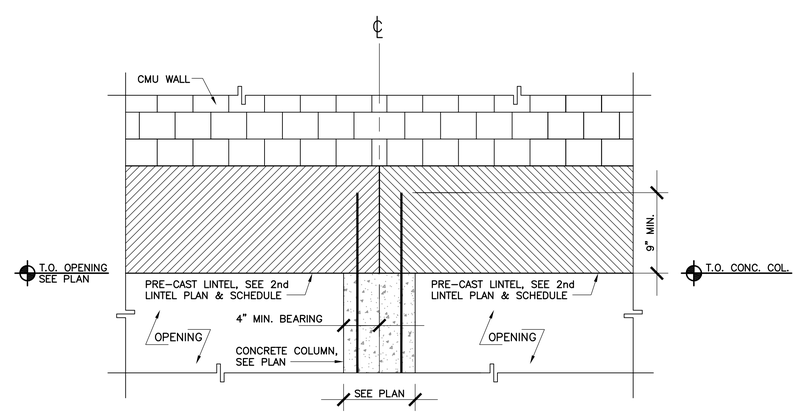
1. Provide full mortar head and bed joints.
2. Shore filled lintels as required.
3. Installation of lintel must comply with the architectural and/or structural drawings.
4. Lintels are manufactured with 5-1/2" long notches at the ends to accommodate vertical cell reinforcing and grouting.
5. All lintels meet or exceed L/360 vertical deflection, except lintels 17'-4" and longer with a nominal height of 8" meet or exceed L/180.
6. Bottom field added rebar to be located at the bottom of the lintel cavity.
7. 7/32" diameter wire stirrups are welded to the bottom steel for mechanical anchorage.
8. Cast-in-place concrete may be provided in composite lintel in lieu of concrete masonry units.
9. Safe load ratings based on rational design analysis per ACI 318 and ACI 530



A
S2.2

PRE-CAST LINTEL TO CONC. COLUMN CONNECTION DETAIL

N.T.S



B
S2.2

PRE-CAST LINTEL TO CONC. COLUMN CONNECTION DETAIL

N.T.S

ST. AUGUSTINE • ST. JOHNS COUNTY AIRPORT AUTHORITY

THE LPA GROUP TRANSPORTATION CONSULTANTS

ATLANTA, GA•BATON ROUGE, LA•CHARLESTON, SC CHARLOTTE, NC•CHICAGO, IL•COLUMBIA, SC GREENSBORO, NC•GULFPORT, MS•KNOXVILLE, TN MOBILE, AL•MYRTLE BEACH, SC•ORLANDO, FL RALEIGH, NC•RICHMOND, VA•SARASOTA, FL TALLAHASSEE, FL•TAMPA ,FL•WEST PALM BEACH, FL

Designer: KPB	Checked by: FRP
Technician:	Project Number: AR553009

THE LPA DESIGN GROUP, INC.
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STATE OF FLORIDA #AR-8840

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1528 VASSAR STREET
ORLANDO, FL 32804
EB5026
FRED BOWEN
P.E. # 38153

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

2ND FLOOR LINTEL PLAN

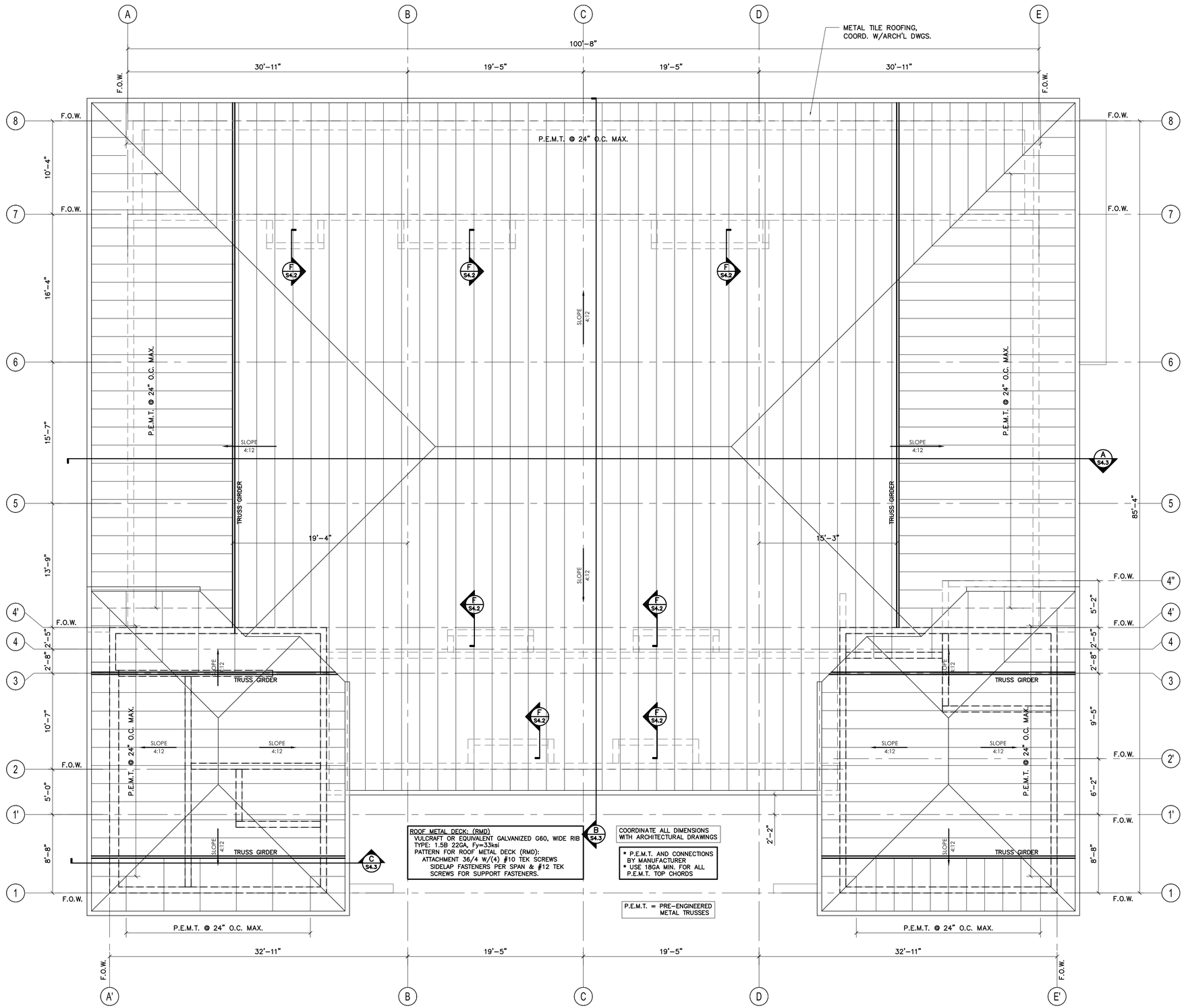
FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009

Scale: INDICATED

Drawing Number: S-2.2



ROOF FRAMING PLAN

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

ST. AUGUSTINE • ST. JOHNS COUNTY
AIRPORT AUTHORITY

THE LPA GROUP
TRANSPORTATION CONSULTANTS
ATLANTA, GA•BATON ROUGE, LA•CHARLESTON, SC
CHARLOTTE, NC•CHICAGO, IL•COLUMBIA, SC
GREENSBORO, NC•GULFPORT, MS•KNOXVILLE, TN
MOBILE, AL•MYRTLE BEACH, SC•ORLANDO, FL
RALEIGH, NC•RICHMOND, VA•SARASOTA, FL
TALLAHASSEE, FL•TAMPA ,FL•WEST PALM BEACH, FL

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Technician:	Project Number: AR553009

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REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

ROOF FRAMING PLAN

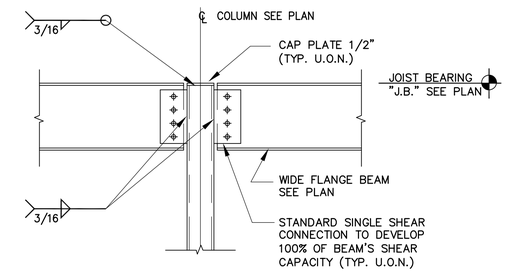
FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009

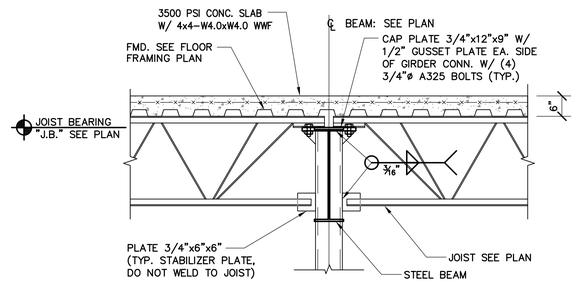
Scale: INDICATED

Drawing Number: S-3.0



A / S4.0 TYPICAL BEARING CONNECTION

N.T.S



B / S4.0 TYP. JOIST TO STL. COL. SECTION

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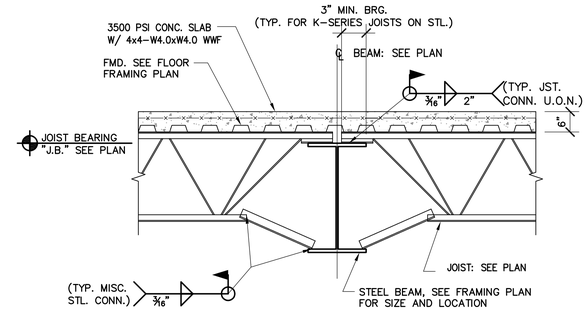

C / S4.0 STL JOIST TO STL BM

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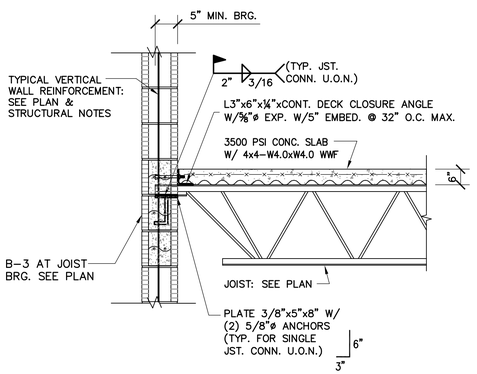
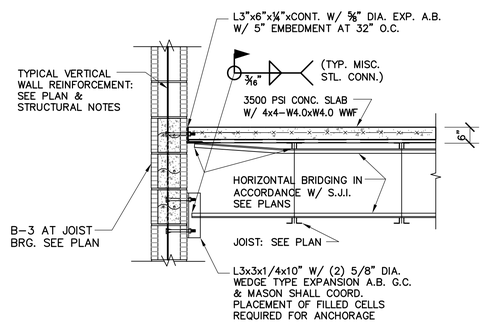


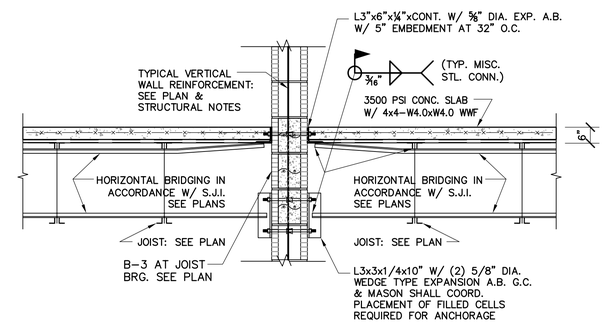
D / S4.0 STEEL JOIST TO CMU WALL

N.T.S



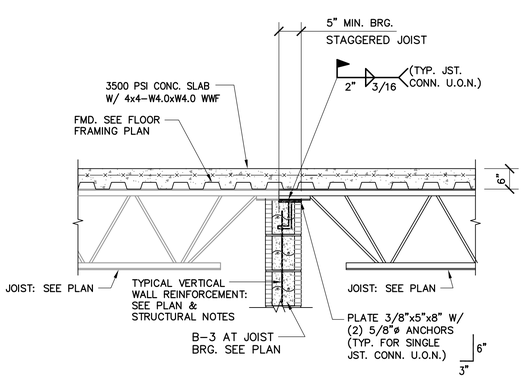
E / S4.0 BRIDGING ANCHORAGE AT SIDEWALL

N.T.S



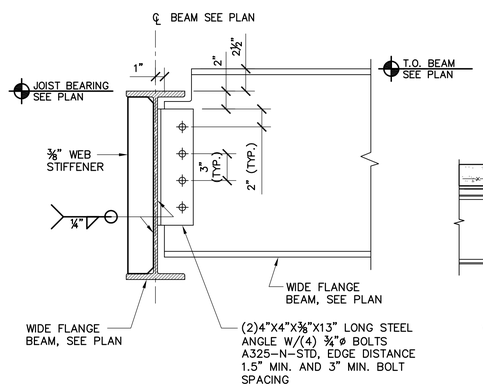
F / S4.0 BRIDGING ANCHORAGE AT INT. WALL

N.T.S



G / S4.0 STEEL JOIST TO CMU WALL

N.T.S



H / S4.0 TYP. BEAM TO BEAM CONN.

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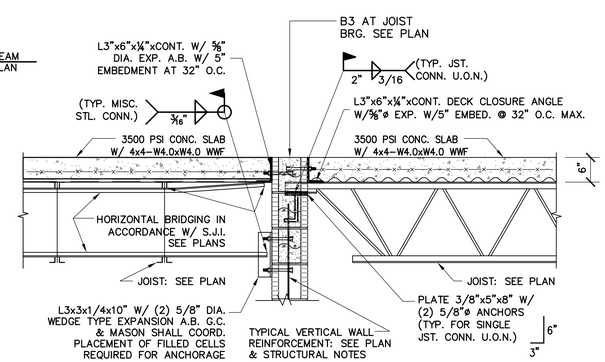

J / S4.0 STEEL JOIST TO CMU WALL

N.T.S

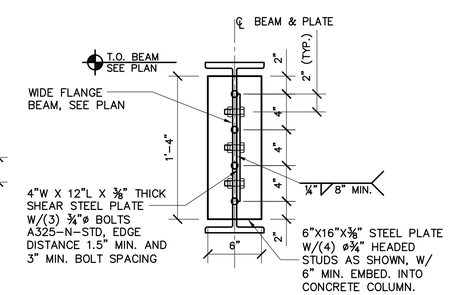

PLATE TYPE "I"

K / S4.0 STEEL PLATE FOR STL. BEAM / CONC. COL. CONN.

N.T.S

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Designer: KPB	Checked by: FRP
Technician:	Project Number: AR553009

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REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

FRAMING DETAILS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009

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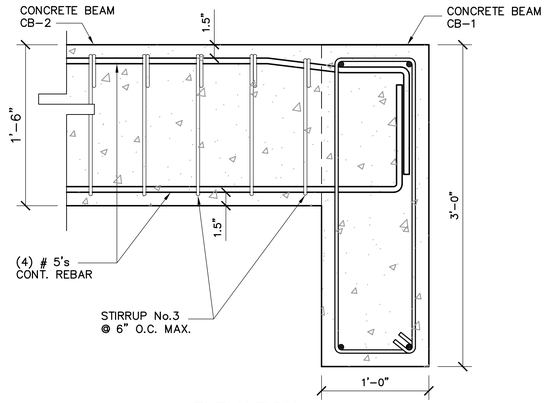
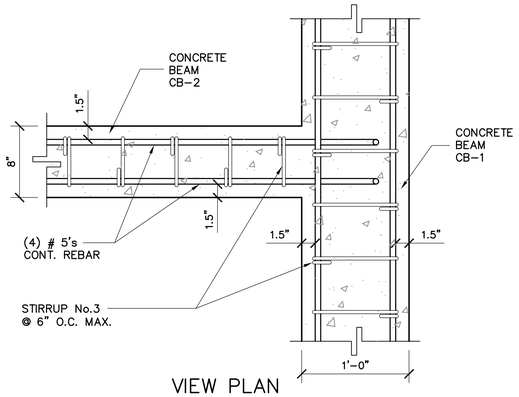


ELEVATION



VIEW PLAN

A S4.1 CONCRETE BEAM TO CONC. BEAM CONNECTION DETAIL

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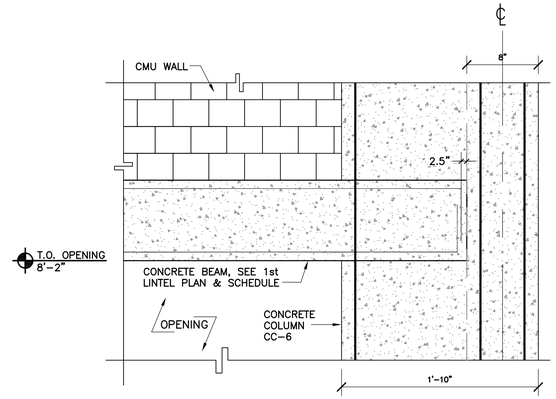

B S4.1 CONC. BEAM TO CONC. COL CONNECTION DETAIL

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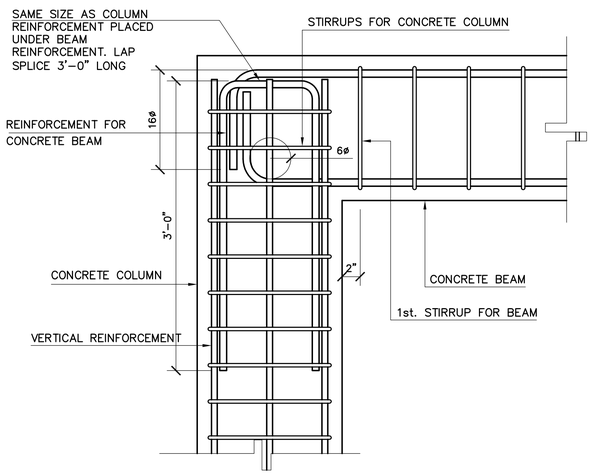

C S4.1 CONC. BEAM TO CONC. COLUMN, DETAIL, CASE 1

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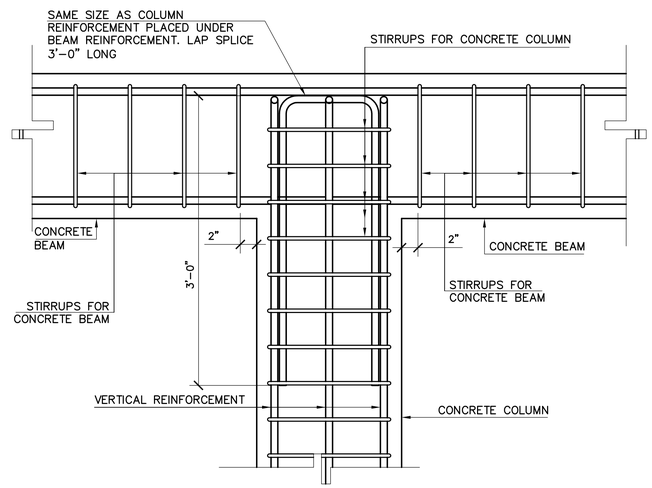

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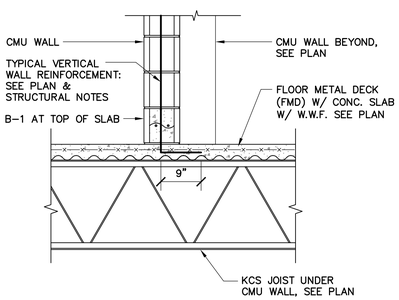

E S4.1 CMU WALL OVER CONC. SLAB AND JOIST, DETAIL

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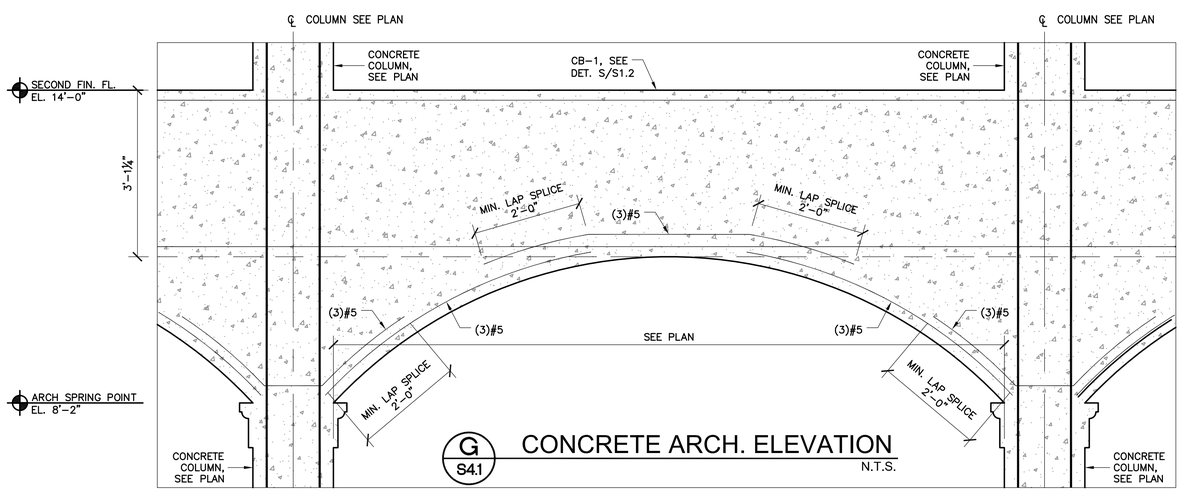

G S4.1 CONCRETE ARCH. ELEVATION

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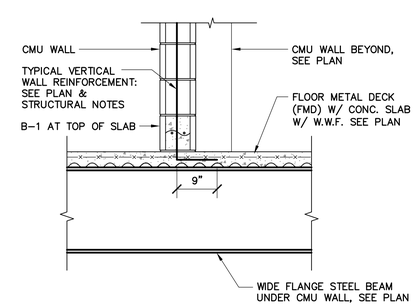

F S4.1 CMU WALL OVER CONC. SLAB AND STL BEAM, DETAIL

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SOUTH GA AREA DEVELOPMENT

Drawing Name:

FRAMING DETAILS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009

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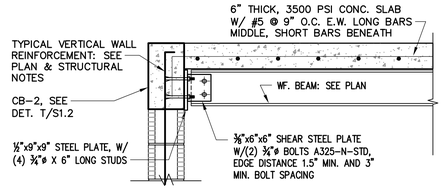
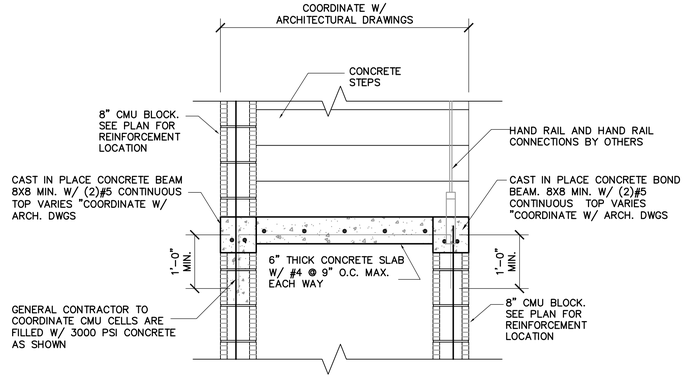
Drawing Number: S-4.1



D S4.2 STL. BEAM TO CMU WALL

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



B S4.2 CONCRETE STAIRS SECTION

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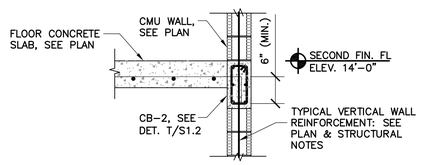
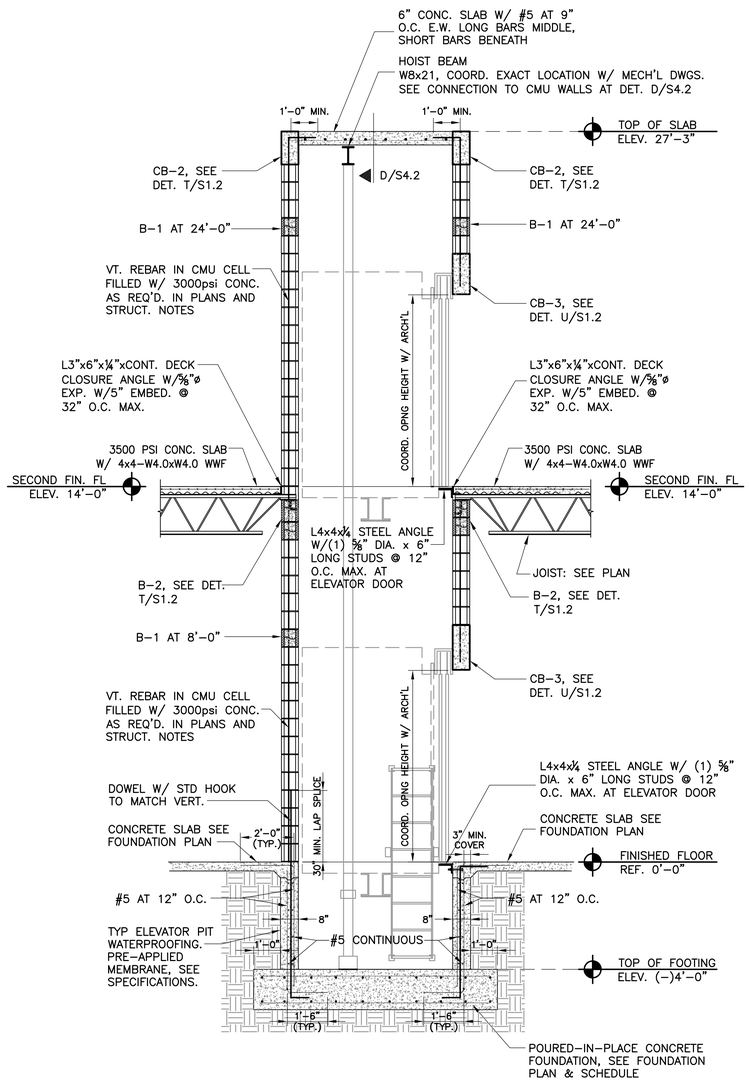


E S4.2 CONCRETE SLAB TO CB-2 DET.

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



C S4.2 ELEVATOR SECTION

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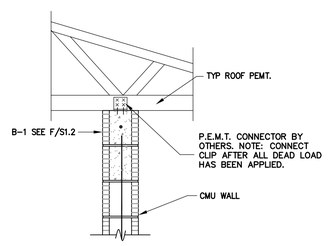
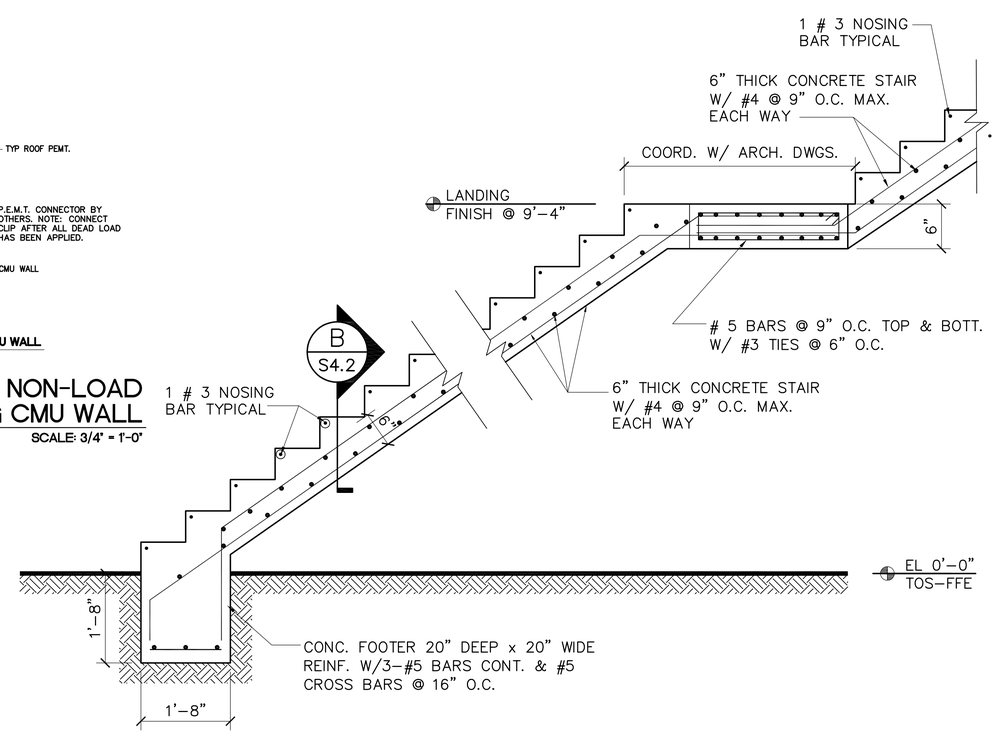


NON-LOAD BEARING CMU WALL

F S4.2 BRACING AT NON-LOAD BEARING CMU WALL

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



A S4.2 CONCRETE STAIRS SECTION

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

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Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

STRUCTURAL SECTIONS

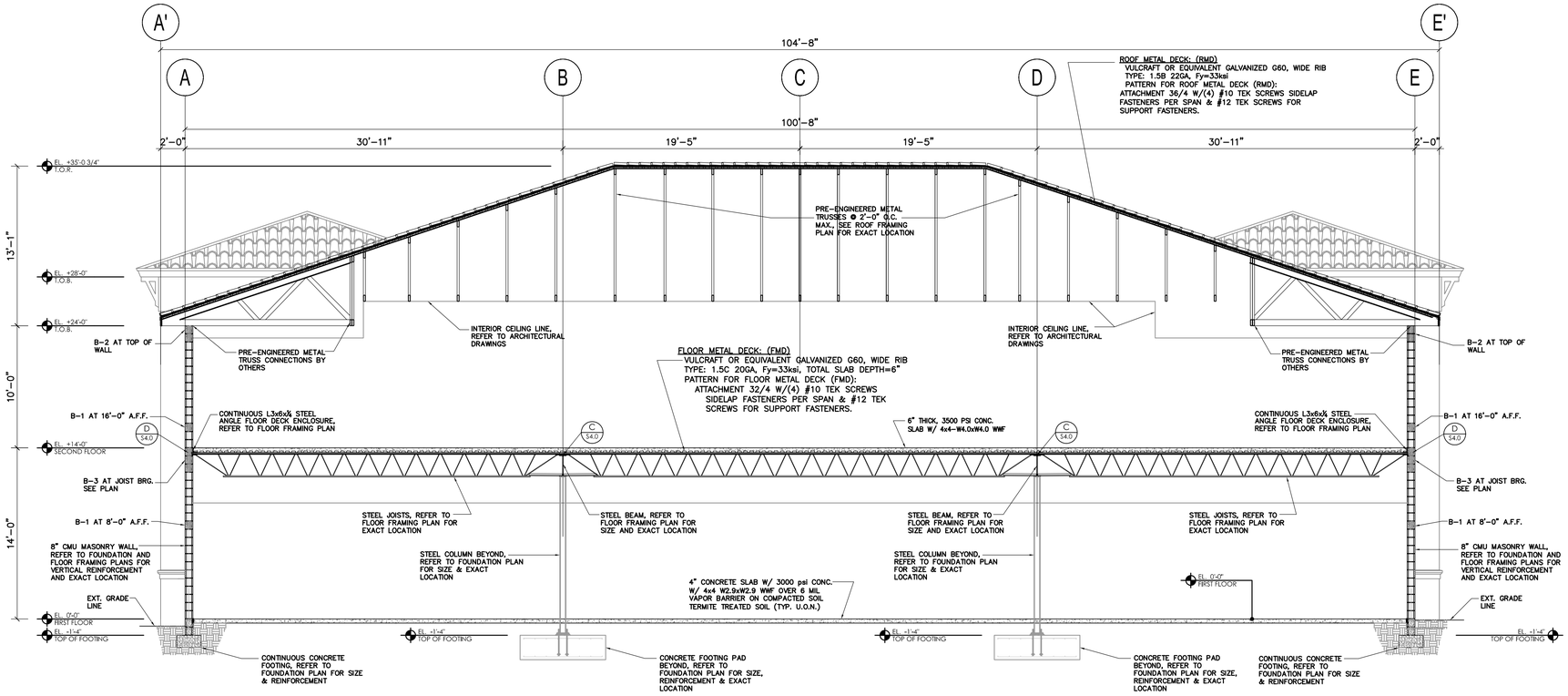
FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

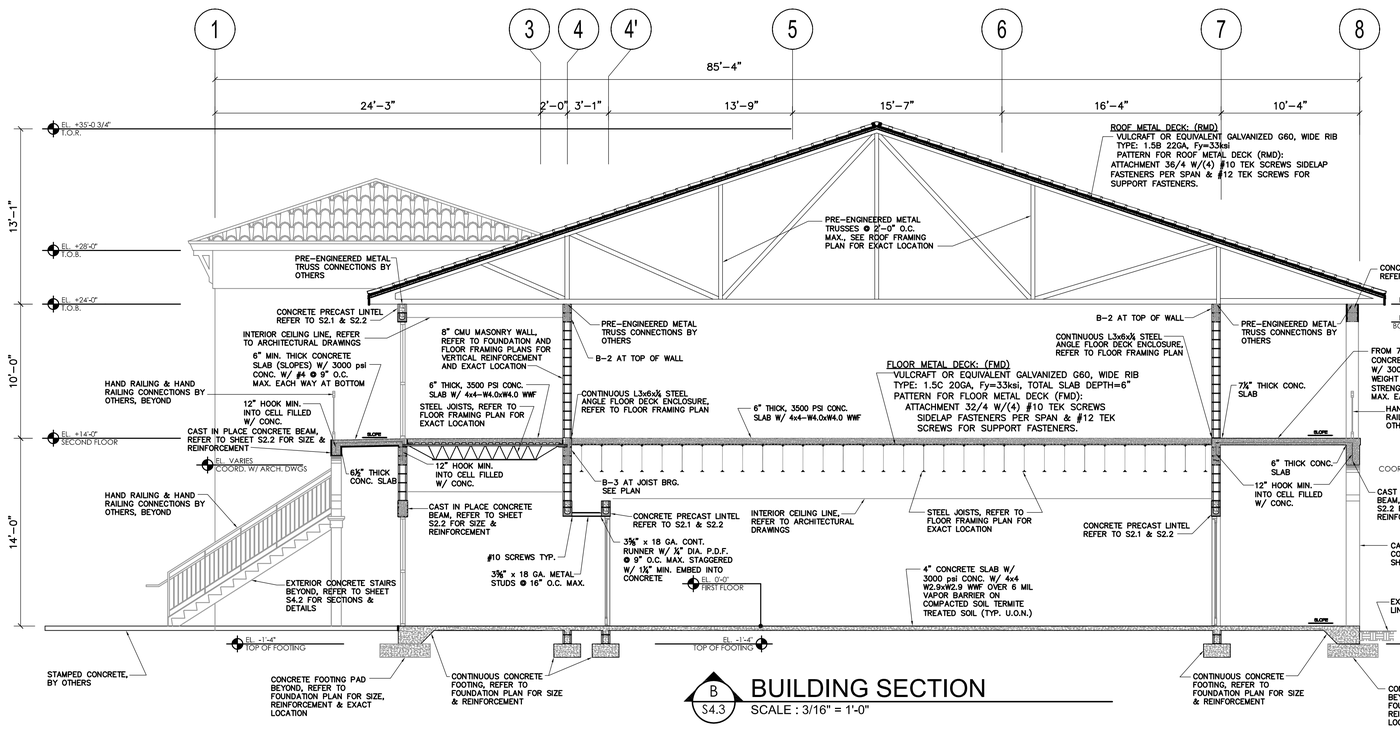
Date: APRIL 15, 2009

Scale: INDICATED

Drawing Number: S-4.2



A S4.3 BUILDING SECTION
SCALE : 3/16" = 1'-0"



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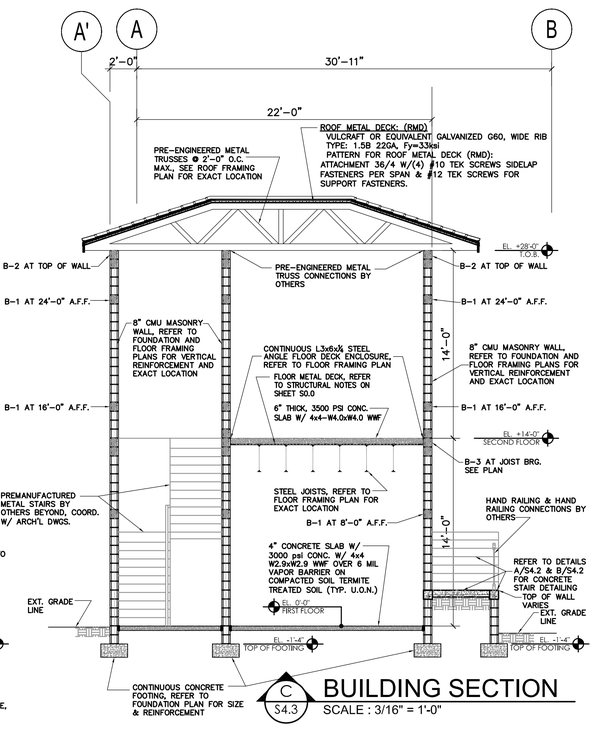

C S4.3 BUILDING SECTION
SCALE : 3/16" = 1'-0"

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ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

STRUCTURAL BUILDING SECTIONS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009

Scale: INDICATED

Drawing Number: S-4.3

HVAC SYMBOL LEGEND

24x12	DUCT–FIRST DIM. IS WIDTH DUCT–SECOND IS HEIGHT		POINT OF CONNECTION NEW TO EXIST. WORK
	DUCT ELBOW DOWN		THERMOMETER
	DUCT ELBOW UP		PRESSURE GAUGE
R	DUCT RISE		UNION OR FLANGE
D	DUCT DOWN		BALL OR BUTTERFLY VALVE
SA	DUCT UNDER POSITIVE PRESSURE		CHECK VALVE
RA EA OA	DUCT UNDER NEGATIVE PRESSURE		MODULATING CONTROL VALVE
	ELBOW W/TURNING VANES		TWO POSITION CONTROL VALVE
	TAKE–OFF W/EXTRACTOR		PLUG VALVE W/ MEMORY
	DUCT UP TO UNIT ABOVE		FLEXIBLE PIPE
	FLEX. DUCT CONNECTOR		STEAM TRAP
	FLEX. DUCT/FLEX. CONN.		STRAINER
	SUPPLY AIR TERMINAL ARROW INDICATES THROW		MANUAL AIR VENT
	RETURN OR EXHAUST AIR		AUTOMATIC AIR VENT
	LINEAR DIFFUSERS		3/4" HOSE END DRAIN PIPE
	SIDE MOUNTED EHD		PRESSURE REDUCING VALVE
	BOTTOM MOUNTED EHD	HS	HYDRAULIC SUPPLY LINE
F	FIRE DAMPER	HR	HYDRAULIC RETURN LINE
S	SMOKE DAMPER	MPR	MEDIUM PRESS. COND. RETURN
S/F	SMOKE AND FIRE DAMPER	MPS	MEDIUM PRESSURE STEAM
VD	VOLUME DAMPER	CWS	CONDENSER WATER SUPPLY
MD	MOTORIZED DAMPER	CWR	CONDENSER WATER RETURN
RVD	REMOTE VOLUME DAMPER	CHWS	CHILLED WATER SUPPLY
BDD	BACKDRAFT DAMPER	CHWR	CHILLED WATER RETURN
S	SMOKE DETECTOR (DUCT MOUNTED)	D	CONDENSATE DRAIN
AD	CEILING ACCESS DOOR		PIPE DOWN ELBOW
AD	DUCT ACCESS DOOR		PIPE UP ELBOW
H	HUMIDITY SENSOR		PIPE ELBOW
S	ROOM SENSOR		PIPE DOWN TEE
T	THERMOSTAT		PIPE UP TEE
STC	SELF CONTAINED THERMOSTAT	Ø	ROUND

DESIGN CONDITION SCHEDULE

	SUMMER	WINTER
OUTDOOR	94 °F db/78 °F wb	35 °F db
INDOOR	75 °F db/60%RH MAX	70 °F db

HVAC ABBREVIATIONS

AC	AIR CONDITIONING	HVAC	HEATING, VENTILATING & AIR CONDITIONING
AFF	ABOVE FINISHED FLOOR	H2O	WATER
AHU	AIR HANDLING UNIT	INIT	INITIAL
BDD	BACKDRAFT DAMPER	KSU	KITCHEN AIR SUPPLY UNIT
BHP	BRAKE HORSEPOWER	LAT	LVG. AIR TEMPERATURE
BMS	BUILDING MANAGEMENT SYSTEM	LD	LINEAR DIFFUSER
BTU	BRITISH THERMAL UNIT	LR	LINEAR RETURN
CC	COOLING COIL	LVG	LEAVING
CD	CEILING DIFFUSER	LWT	LVG. WATER TEMPERATURE
CF	CHEMICAL FEEDER	MAU	MAKE UP AIR UNIT (KITCHEN HOOD)
CFM	CUBIC FEET PER MINUTE	MBH	MEGA BTU PER HOUR
CLG	CEILING	NC	NOISE CRITERIA
CYC	CYCLES	NIC	NOT IN CONTRACT
COND	CONDENSATE	NTS	NOT TO SCALE
CU	CONDENSING UNIT	OA	OUTSIDE AIR
DB	DRY BULB	OPER	OPERATING
DIM	DIMENSION	OV	OUTLET VELOCITY
F	FILTER	PCF	PUMP, CHEMICAL FEED
°F	DEGREES FARENHEIT	PCH	PUMP, CHILLED WATER
DWG	DRAWING	PD	PRESSURE DROP
EA	EXHAUST AIR	PH	PHASE
EAT	ENT. AIR TEMPERATURE	RA	RETURN AIR
EF	EXHAUST FAN	RF	RETURN FAN
EG	EXHAUST AIR GRILLE	RG	RETURN AIR GRILLE
EHC	ELECTRIC HEATING COIL	ROT	ROTATION
EHD	ELECTRIC HEATER, DUCT	RPM	REVOLUTION PER MINUTE
EHU	ELECTRIC UNIT HEATER	RTU	ROOF TOP UNIT
EHW	ELECTRIC HEATER, WALL	RVD	REMOTE VOLUME DAMPER
ENT	ENTERING	SA	SUPPLY AIR
ER	EXHAUST AIR REGISTER	SENS	SENSIBLE
EWT	ENT. WATER TEMPERATURE	SD	SPLITTER DAMPER
FCU	FAN COIL UNIT	SF	SUPPLY FAN
EF	EXHAUST FAN	SP	STATIC PRESSURE
EFG	EXHAUST FAN, GREASE	SR	SUPPLY AIR REGISTER
FF	FLY FAN	TG	TRANSFER AIR GRILLE
FPI	FINS PER INCH	TEMP	TEMPERATURE
FPM	FEET PER MINUTE	UD	UNDERCUT DOOR
FR	FAN, RETURN	VG	VENT, GRAVITY
GPM	GALLONS PER MINUTE	VD	VOLUME DAMPER
HD	HUB DRAIN	W	WATTS
HOA	HAND/OFF/AUTOMATIC	WB	WET BULB
HP	HORSEPOWER	W/	WITH

HVAC GENERAL NOTES

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2007 FLORIDA BUILDING CODE, THE 2007 FLORIDA MECHANICAL CODE, THE 2007 FLORIDA ENERGY EFFICIENCY CODE AND THE CITY OF ST. AUGUSTINE BUILDING DEPARTMENT REQUIREMENTS AND ALL OTHER APPLICABLE CODES AND STANDARDS.
2. PRIOR TO FABRICATION, VERIFY AND COORDINATE ALL DIMENSIONS IN FIELD. CONTRACTOR SHALL SUBMIT 1/4" SCALE COORDINATED DRAWINGS OF ALL DUCTWORK, PIPING, EQUIPMENT, STRUCTURAL SYSTEM AND LIGHT FIXTURES. NO DUCTWORK, PIPING OR EQUIPMENT SHALL BE INSTALLED OR FABRICATED UNTIL THE DRAWINGS ARE SUBMITTED AND APPROVED BY THE ENGINEER.
3. PRIOR TO ORDERING HVAC EQUIPMENT CONTRACTOR SHALL PREPARE AND SUBMIT A 1/4" SCALE COORDINATED SHOP DRAWING OF EACH MECHANICAL ROOM. THESE DRAWINGS SHALL INCLUDE THE DIMENSIONS AND REQUIRED CLEARANCES OF THE ACTUAL EQUIPMENT PROPOSED FOR THE PROJECT. THESE DRAWINGS SHALL ALSO INCLUDE ALL DUCTWORK, EQUIPMENT, HEATERS, DISCONNECTS, PIPING, AND THEIR REQUIRED ACCESS CLEARANCES. FAILURE TO SUBMIT THESE DRAWINGS RELIEVES THE ENGINEER OF ALL RESPONSIBILITY FOR THE MECHANICAL ROOM LAYOUT.
4. REFER TO ARCHITECTURAL DRAWINGS FOR CLEARANCES WITHIN THE CEILING SPACE AND MECHANICAL ROOMS, LOCATIONS AND SIZES OF BEAMS AND CEILING AND SOFFIT HEIGHTS.
5. DUCTWORK AND EQUIPMENT LOCATIONS AND CLEARANCES SHALL BE COORDINATED WITH GENERAL, PLUMBING AND ELECTRICAL CONTRACTORS. REFER TO ARCHITECTURAL PLANS FOR BUILDING SECTIONS AND DETAILS.
6. CONNECTION TO ALL EQUIPMENT SHALL BE VERIFIED WITH MANUFACTURERS CERTIFIED DRAWINGS. TRANSITIONS TO ALL EQUIPMENT SHALL BE VERIFIED AND PROVIDED FOR ALL EQUIPMENT FURNISHED.
7. COORDINATE DIFFUSER, REGISTER AND GRILLE LOCATION WITH LIGHTING, SPRINKLER AND ARCHITECTURAL CEILING PLANS. ALSO COORDINATE THE TYPE OF DIFFUSER FRAME WITH THE CEILING TYPE.
8. ALL HVAC SYSTEMS SHALL BE BALANCED FOR AIR QUANTITIES SHOWN AGAINST THE ACTUAL INSTALLED STATIC PRESSURE OF THE SYSTEM. CONTRACTOR SHALL PROVIDE POSITIVE MEANS FOR BALANCING EACH INDIVIDUAL AIR OUTLET AND INLET.
9. ALL EQUIPMENT SHALL BE PROPERLY SUPPORTED AND ISOLATED TO PREVENT NOISE AND VIBRATION TRANSMISSION. ALL AIR HANDLING EQUIPMENT SHALL BE SUPPORTED OR SUSPENDED WITH SPRING VIBRATION ISOLATORS PADS. ALL CONNECTIONS BETWEEN AIR HANDLING EQUIPMENT AND DUCTWORK SHALL BE CANVAS FLEXIBLE CONNECTORS.
10. EVERY APPLIANCE AND ALL MECHANICAL EQUIPMENT SHALL BE LOCATED WITH RESPECT TO BUILDING CONSTRUCTION AND OTHER EQUIPMENT SO AS TO PERMIT ACCESS TO THE MECHANICAL EQUIPMENT IN CONFORMITY WITH ANY CLEARANCE WHICH MAY BE RECOMMENDED BY THE MANUFACTURER OF THE EQUIPMENT. SUFFICIENT CLEARANCE SHALL BE MAINTAINED FOR CLEANING COILS, MOTORS, BURNERS, AS WELL AS CHANGING FILTERS. ALL EQUIPMENT SHALL BE LOCATED WITHIN THE MECHANICAL ROOM AND CEILING SPACES WITH ADEQUATE CLEARANCES FOR REPAIR AND MAINTENANCE. ALL PIPING AND DUCTWORK SHALL BE INSTALLED TO PROVIDE ADEQUATE CLEARANCE FOR ACCESS TO ALL EQUIPMENT. INSTALLATION OF ALL MECHANICAL EQUIPMENT SHALL COMPLY WITH THE MANUFACTURERS SPECIFICATION AND CLEARANCE REQUIREMENT.
11. ALL DUCT DIMENSIONS SHOWN ARE CLEAR INSIDE DIMENSIONS.
12. THE INSIDE OF ALL DUCTS VISIBLE THRU THE FACE OF DIFFUSERS, REGISTERS, AND GRILLES SHALL BE PAINTED FLAT BLACK WITH NON TOXIC PAINT.
13. ALL SUPPLY AIR, RETURN AIR, OUTSIDE AIR AND EXHAUST AIR DUCTWORK SHALL BE GALVANIZED STEEL SHEETS. FABRICATION AND INSTALLATION SHALL BE IN ACCORDANCE WITH LATEST EDITION OF SMACNA DUCT CONSTRUCTION STANDARDS FOR A 2 INCH PRESSURE CLASSIFICATION.
14. FLEXIBLE DUCTWORK SHALL BE INSULATED VINYL TYPE (R–6) WITH WIRE SPIRAL SUPPORT. FLEXIBLE DUCTWORK SHALL BE RUN IN MAXIMUM LENGTHS OF 14'–0". FLEXIBLE DUCTWORK SHALL BE PROPERLY SUPPORTED WITH GALVANIZED STEEL STRAPS 2" WIDE AND SHALL BE RUN AS STRAIGHT AS POSSIBLE WITH NO KINKS OR BENDS TO RESTRICT AIRFLOW.
15. ALL DUCTWORK, EXCEPT EXHAUST SYSTEM, SHALL BE EXTERNALLY INSULATED WITH 2.2" THICK (R–6) FIBERGLASS BLANKET INSULATION WITH FOIL JACKETING UNLESS OTHERWISE NOTED. INSULATION R VALUE IS WITH 25% COMPRESSION IN ACCORDANCE WITH FBCM 604.7 IDENTIFICATION.
16. ALL DUCT JOINTS SHALL BE SEALED WITH APPROVED MASTIC.
17. ALL FIBROUS GLASS INSULATION JOINTS, SEAMS AND CONNECTIONS SHALL BE CONSTRUCTED WITH PRESSURE SENSITIVE TAPE, FAB, STAINLESS STEEL STAPLES AND THEN SEALED WITH MASTIC. HEAT AND PRESSURE SENSITIVE TAPE ARE NOT ACCEPTABLE AS A FINAL CLOSURE.
18. PROVIDE HANGER STRAPS FOR ALL DUCTS MADE OF 2" WIDE, 22 GAGE GALVANIZED STEEL–SPACED ACCORDING TO SMACNA STANDARDS AND ALL OTHER APPLICABLE GOVERNING CODES AND STANDARDS.
19. ALL DUCT BRANCH TAKE OFFS FROM MAIN DUCT FOR INDIVIDUAL AIR OUTLETS, INLETS AND BOXES SHALL HAVE BALANCING DAMPERS.
20. ALL DUCTWORK STORED ON SITE OR ALREADY INSTALLED SHALL HAVE ALL OPEN ENDS SEALED WITH VISQUINE TO PREVENT DUST AND DEBRIS FROM ACCUMULATING INSIDE OF THE DUCTWORK. INTERIORS OF ALL DUCTWORK SHALL BE THOROUGHLY CLEANED PRIOR TO INSTALLATION.
21. ALL DAMPERS AND EXTRACTORS SHALL HAVE LOCKING QUADRANTS AND SHALL BE ACCESSIBLE.
22. PROVIDE REMOTE VOLUME DAMPER (RVD) OPERATORS IN ALL NON–ACCESSIBLE CEILINGS. EQUAL TO YOUNG REGULATOR COMPANY MODEL 270–896C BOWDEN CABLE CONTROL UNIT OR METROPOLITAN AIR OR UNITED INTERTECH BATTERY OPERATED REMOTE DAMPER. CONTROL FOR EACH REMOTE VOLUME DAMPER SHALL BE LOCATED WITHIN THE DIFFUSER OR REGISTER BEING SERVED.
23. BEVELED TAKE OFFS AND DAMPERS SHALL BE INSTALLED IN ALL BRANCH DUCTWORK LEADING FROM MAIN TRUNK LINES.
24. ALL SPLITTER DAMPERS SHALL BE BALANCED AND SET PRIOR TO THE INSTALLATION OF THE CEILING.
25. PROVIDE ADJUSTABLE PULLEYS WITH CONSTANT VOLUME AIR HANDLING UNITS AND BELT DRIVE FANS.
26. EXHAUST FAN OUTLETS SHALL BE INSTALLED A MINIMUM OF 10'–0" FROM FRESH AIR INTAKES OF MECHANICAL EQUIPMENT AS WELL AS ALL OPERABLE WINDOWS AND DOORS.
27. ALL FANS AND AIR HANDLING UNITS SHALL BE PROPERLY SUPPORTED AND ISOLATED TO PREVENT NOISE AND VIBRATION TRANSMISSION. ALL AIR HANDLING EQUIPMENT SHALL BE SUPPORTED OR SUSPENDED WITH SPRING ISOLATORS. ALL CONNECTIONS BETWEEN FANS OR AIR HANDLING UNITS AND DUCTWORK SHALL BE CANVAS FLEXIBLE CONNECTORS.
28. ALL EQUIPMENT LOCATED WITHIN THE CEILING SPACES SHALL HAVE ADEQUATE CLEARANCES FOR REPAIR AND MAINTENANCE. ALL PIPING AND DUCTWORK SHALL BE INSTALLED TO PROVIDE ADEQUATE CLEARANCE FOR ACCESS TO ALL EQUIPMENT.
29. SET ALL CONDENSING UNITS ON 1" THICK NEOPRENE CORK VIBRATION ISOLATION PADS.
30. REFER TO MECHANICAL AND ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL FIRE AND SMOKE RATED PARTITIONS. ALL PENETRATIONS THROUGH FIRE RATED/SMOKE RATED PARTITIONS OR FLOORS AND CEILINGS SHALL HAVE FIRE/SMOKE DAMPERS. ALL FIRE WALL PENETRATIONS SHALL HAVE FIRE DAMPERS. PROVIDE ACCESS DOORS IN WALL OR HARD CEILING FOR THESE DAMPERS.
31. PROVIDE ACCESS DOORS (24"x24") FOR ALL FIRE DAMPERS IN NON–ACCESSIBLE CEILINGS.
32. PROVIDE ACCESS PANELS IN DRYWALL CEILINGS AS REQUIRED FOR ACCESS TO MECHANICAL EQUIPMENT. COORDINATE WITH GENERAL CONTRACTOR TO PROVIDE WORK PLATFORMS AS REQUIRED FOR ALL EQUIPMENT LOCATED WITHIN THE CEILING SPACE.
33. FURNISH AND INSTALL INSULATED PVC CONDENSATE DRAINS WITH TRAPS FOR ALL COOLING COILS.
34. ALL PIPING SHALL BE FULLY SUPPORTED THE ENTIRE LENGTH AND ANCHORED TO PREVENT SWAY AND VIBRATION.
35. DIVISION 16 CONTRACTOR SHALL SUPPLY AND WIRE ALL SMOKE DETECTORS IN THE SUPPLY AIR DUCTWORK OF ALL AIR HANDLING UNITS 2000 CFM AND ABOVE TO SHUT DOWN THE FANS IN THE EVENT OF A FIRE. DUCT SMOKE DETECTOR SHALL BE OF PHOTOELECTRIC TYPE AND LOW VOLTAGE. DIVISION 15 CONTRACTOR SHALL INSTALL ALL SMOKE DETECTORS.
36. ALL WALL SENSORS, VARIABLE SPEED CONTROL SWITCHES, ON–OFF SWITCHES AND MOTOR STARTERS SHALL BE INDIVIDUALLY LABELED. LABELS SHALL INDICATED THE UNIT CONTROLLED, TYPE OF CONTROL AND AREA SERVED. THE LABELS SHALL BE PLASTIC LAMINATE, PERMANENT TYPE, WHITE WITH BLACK LETTERING, AND SHALL BE MOUNTED INSIDE OF THE COVER PLATE, OF THE CONTROL DEVICE.
37. COORDINATE ALL CONTROL DEVICES WITH ELECTRICAL CONTRACTOR.
38. ALL CONTROL WIRING, CONDUIT AND HARDWARE TO COMPLETE THE HVAC CONTROL SYSTEM SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 15 – MECHANICAL.
39. ALL CONTROL WIRING AND INTERLOCK WIRING LOCATED IN MECHANICAL ROOMS AND IN NON ACCESIBLE CEILINGS SHALL BE IN CONDUIT.
40. AIR FILTERS SHALL BE 2" PLEATED 30% EFFICIENT (MIN.) OR EQUAL IN AIR HANDLING EQUIPMENT. FILTERS SHALL BE INSTALLED PRIOR TO UNIT START UP, REPLACED A MINIMUM OF ONCE PER MONTH DURING THE CONSTRUCTION PERIOD, REPLACED PRIOR TO TEST AND BALANCE, AND REPLACED MONTHLY UNTIL FINAL COMPLETION.
41. ALL EXHAUST FANS SHALL BE PROVIDED WITH BACK DRAFT DAMPERS.
42. ALL REFRIGERANT LINES EXPOSED TO THE EXTERIOR SHALL BE INSULATED WITH 1" CLOSED CELL FOAM INSULATION (ARMAFLEX) AND WRAPPED WITH ALUMINUM JACKETING.
43. ALL REFRIGERANT LINES FOR SPLIT SYSTEM DX UNITS SHALL HAVE FILTER DRYERS AND SIGHT GLASSES. ALL PIPING BELOW SLAB SHALL BE WITHOUT JOINTS AND RUN IN A PIPING CHASE OR CONDUIT OF SUFFICIENT SIZE TO ALLOW REPLACEMENT OF THE PIPING IN THE FUTURE. EACH END OF THE CHASE SHALL BE SEALED AIR TIGHT AND WATERTIGHT.
44. ALL REFRIGERANT PIPING IN CONCEALED CHASES FOR SPLIT DX UNITS SHALL BE SOFT DRAWN TYPE K COPPER. SERVICE FITTINGS FOR REFRIGERANT LINES SHALL BE LOCATED IN A MANNER TO BE INACCESSIBLE TO THE PUBLIC. INSULATE ALL REFRIGERANT LINES WITH 1" ARMAFLEX INSULATION AND WRAP WITH ALUMINUM JACKETING.
45. OUTSIDE AIR INTAKE LOUVERS SHALL HAVE 1/2" x 1/2" MINIMUM MESH SCREEN, AND SHALL BE LOCATED AS HIGH ABOVE FINISH GRADE AS POSSIBLE.
46. THE CONTRACTOR SHALL HIRE AN INDEPENDANT TEST AND BALANCE FIRM TO TEST AND BALANCE ALL AIR CONDITIONING SYSTEMS–SEE SPECIFICATIONS.
47. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR COORDINATING THEIR WORK WITH THE TEST AND BALANCE FIRM. PRIOR TO TEST AND BALANCE, THE CONTRACTOR SHALL START–UP, PRE–BALANCE THE SYSTEM, AND REPLACE ALL AIR FILTERS FOR EVERY AHU BEING TESTED. ALL DISCREPANCIES, DRIVE CHANGES, ETC. REPORTED BY ENGINEER OR THE TEST AND BALANCE FIRM SHALL BE CORRECTED BY THE CONTRACTOR WITHIN FIVE CALENDAR DAYS AT NO ADDITIONAL COST.
48. OPERATION AND MAINTENANCE MANUALS SHALL INCLUDE AS A SEPARATE SUBMITTAL ITEM, PREVENTATIVE MAINTENANCE REQUIREMENTS ALONG WITH TIME SCHEDULE(S) FOR EACH ITEM. THE SEQUENCE OF OPERATION SHALL ALSO INCLUDE A DEFINITIVE SEQUENCE OF OPERATION OF THE MECHANICAL SYSTEM AND COMPONENTS AS THEY FUNCTION INTEGRALLY AND INDEPENDENTLY WITH THE SYSTEM.

SEQUENCE OF OPERATION

1. EACH SPLIT SYSTEM AIR CONDITIONING SYSTEM SHALL BE CONTROLLED BY IT'S OWN PROGRAMMABLE THERMOSTAT LOCATED WITHIN THE SPACE THAT IT IS SERVING. THE SYSTEM SHALL CYCLE ON TO MAINTAIN SET POINT TEMPERATURE WITHIN THE SPACE.
2. EXHAUST FANS EF–1.1 AND EF–2.1 SHALL RUN CONTINUOUSLY 24 HOURS A DAY – 7 DAYS A WEEK.
3. EXHAUST FANS EF–1.2 AND EF–2.2 SHALL BE CONTROLLED BY A TIME CLOCK LOCATED IN THE JANITORS CLOSET 120 AND SHALL RUN DURING BUILDING OCCUPIED HOURS.

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Designer: KBS	Checked by: ABR
Technician: MB	Project Number: AR553009

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
HVAC GENERAL NOTES

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009
Scale: N.T.S.
Drawing Number: M-1.0

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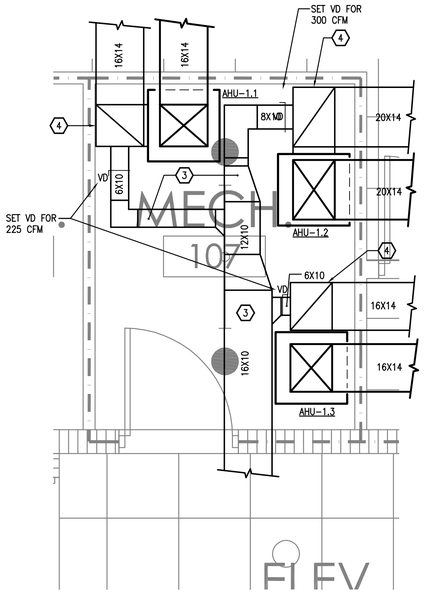
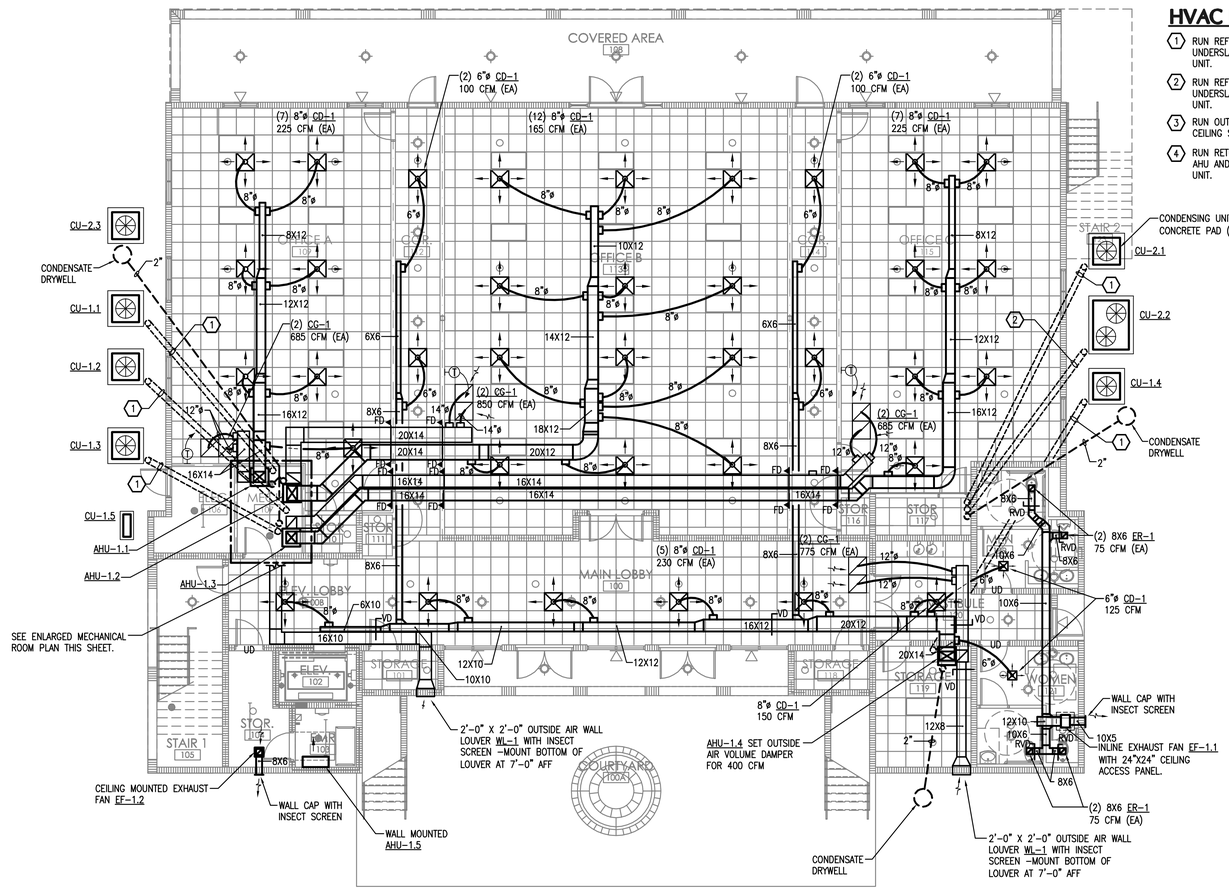


ENLARGED MECH. ROOM 105

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



HVAC KEY NOTES

1. RUN REFRIGERANT LINES IN 4" PVC CONDUIT UNDERSLAB TO PAD MOUNTED CONDENSING UNIT.
2. RUN REFRIGERANT LINES IN 6" PVC CONDUIT UNDERSLAB TO PAD MOUNTED CONDENSING UNIT.
3. RUN OUTSIDE AIR DUCTWORK TIGHT TO CEILING STRUCTURE.
4. RUN RETURN AIR DUCT DOWN ALONG SIDE AHU AND CONNECT INTO PLENUM BENEATH UNIT.

N

1ST FLOOR PLAN - HVAC

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

AIR BALANCE SCHEDULE - 1ST FLOOR

UNIT	SUPPLY AIR	RETURN AIR	OUTSIDE AIR	EXHAUST AIR	NET EFFECT
AHU-1.1	1600	1375	225	- -	+225
AHU-1.2	1950	1650	300	- -	+300
AHU-1.3	1600	1375	225	- -	+225
AHU-1.4	1950	1550	400	- -	+400
EF-1.1	- -	- -	- -	75	-400
EF-1.2	- -	- -	- -	300	-300
TOTAL	7100	5950	1150	-375	+775

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Designer: KBS	Checked by: FRP
Technician: MB	Project Number: AR553009

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

1ST FLOOR PLAN HVAC

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009

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

Drawing Number: M-1.1

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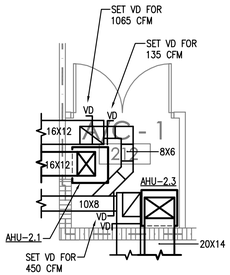
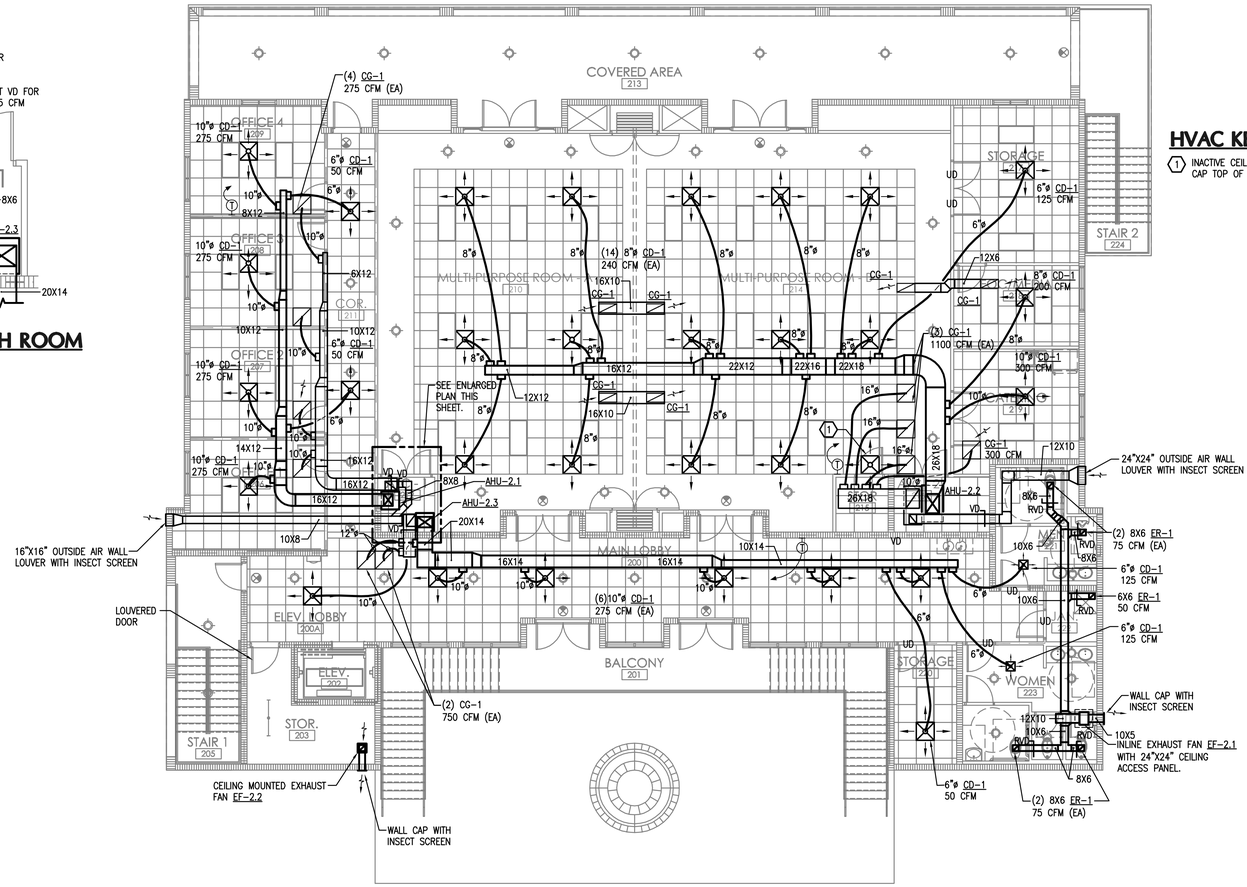


ENLARGED MECH ROOM

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



HVAC KEY NOTES

1. INACTIVE CEILING DIFFUSER CD-1 – CAP TOP OF DIFFUSER.

2ND FLOOR PLAN - HVAC

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

AIR BALANCE SCHEDULE - 2ND FLOOR

UNIT	SUPPLY AIR	RETURN AIR	OUTSIDE AIR	EXHAUST AIR	NET EFFECT
AHU-2.1	1200	1065	135	– –	+135
AHU-2.2	4000	3300	700	– –	+700
AHU-2.3	1950	1500	450	– –	+450
EF-2.1	– –	– –	– –	350	–350
EF-2.2	– –	– –	– –	75	–75
TOTAL	7150	5865	1285	425	+860

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Designer:	Checked by:
KBS	KBS
Technician: MB	Project Number: AR553009

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

2ND FLOOR PLAN HVAC

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009

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

Drawing Number: M-1.2

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AIR HANDLING UNIT SCHEDULE

UNIT NUMBER	LOCATION	AREA SERVED	FAN DATA: OUTSIDE AIR	CFM MAX. MIN.	TOTAL STATIC IN. W.G.	MIN. EXT. STATIC IN. W.G.	MAX OUTLET VEL. F.P.M.	RPM	BHP	HP	DX COOLING COIL DATA: ENT. AIR °F DB	ENT. AIR °F WB	LVG. AIR °F DB	LVG. AIR °F WB	CAPAC. MBH SENS.	MAX MBH TOT.	F.P.I.	FACE AREA	NO. ROWS	STATIC IN W.G.	ELECTRIC HEATING COIL: ENT. AIR °F	LVG. AIR °F	KW.	VOLTS	PHASE	CYCLES	MCA	FUSE	CONTROLS	FILTER DATA: TYPE	CLEAN P.D. IN W.C.	SIZE	EFFICIENCY EER	MANUFACTURER/MODEL	WEIGHT (lbs)
AHU-1.1	MECH RM 105	1ST FLOOR OFFICE A	225	1600	- -	.50"	1500	- -	- -	1/2	- -	- -	- -	- -	36.0	48.0	14.5	5.93	3	- -	70	93	15	208	3	60	47.7	50	PROGRAMMABLE WITH 7 DAY TIME CLOCK	2"	.10"	21.5"X20"	15.0	CARRIER FV4BNF005	172
AHU-1.2	MECH RM 105	1ST FLOOR OFFICE B	300	1950	- -	.50"	1500	- -	- -	3/4	- -	- -	- -	- -	44.2	59.0	14.5	7.42	3	- -	70	90	15	208	3	60	47.7	50	PROGRAMMABLE WITH 7 DAY TIME CLOCK	2"	.10"	21.5"X23.25"	14.5	CARRIER FV4BNF005	172
AHU-1.3	MECH RM 105	1ST FLOOR OFFICE C	225	1600	- -	.60"	1500	- -	- -	1/2	- -	- -	- -	- -	36.0	48.0	14.5	5.93	3	- -	70	93	15	208	3	60	47.7	50	PROGRAMMABLE WITH 7 DAY TIME CLOCK	2"	.10"	21.5"X20"	15.0	CARRIER FV4BNF005	172
AHU-1.4	STORAGE 120	1ST FLOOR LOBBY	400	1950	- -	.50"	1500	- -	- -	3/4	- -	- -	- -	- -	44.2	59.0	14.5	7.42	3	- -	70	90	15	208	3	60	47.7	50	PROGRAMMABLE WITH 7 DAY TIME CLOCK	2"	.10"	21.5"X23.25"	14.5	CARRIER FV4BNF005	172
AHU-1.5	SEE BELOW																																			
AHU-2.1	MECH RM 205	2ND FLOOR OFFICES 1-4	135	1200	- -	.50"	1500	- -	- -	1/2	- -	- -	- -	- -	26.6	35.4	14.5	25.93	3	- -	70	90	9	208	3	60	32.0	35	PROGRAMMABLE WITH 7 DAY TIME CLOCK	2"	.10"	21.5"X20"	15.0	CARRIER FV4BNF005	172
AHU-2.2	MECH RM 205	2ND FLOOR MULTIFUNCTION	700	4000	- -	.80"	1500	- -	- -	2.4	- -	- -	- -	- -	90.7	118.0	17.0	10.01	3	- -	70	92	25	208	3	60	78.9	80	PROGRAMMABLE WITH 7 DAY TIME CLOCK	2"	.10"	(4) 16"X24"	9.6	CARRIER 40RM012	600
AHU-2.3	MECH. ROOM 210A	2ND FLOOR LOBBY	450	1950	- -	.50"	1500	- -	- -	3/4	- -	- -	- -	- -	44.2	59.0	14.5	7.42	3	- -	70	90	15	208	3	60	47.7	50	PROGRAMMABLE WITH 7 DAY TIME CLOCK	2"	.10"	21.5"X23.25"	14.5	CARRIER FV4BNF005	172

1. FURNISH ALL AIR HANDLING UNITS WITH SINGLE POINT ELECTRICAL CONNECTION.
2. ALL SYSTEMS SHALL UTILIZE R410A REFRIGERANT.
3. AHU-2.2 SHALL HAVE A DUAL CIRCUIT COIL.

CONDENSING UNIT SCHEDULE

UNIT NUMBER	CAPACITY BTU/HR AT ARI CONDITION	EER	ELECTRICAL: COMPRESSOR LRA	COMPRESSOR RLA	FAN FLA	MCA	FUSE	VOLTS	PHASE	CYCLE	MANUFACTURER/MODEL
CU-1.1	48,000	15.0	117	21.8	1.2	28.4	40	208	1	60	CARRIER 24ACA4-48
CU-1.2	59,000	14.50	134	26.4	1.2	34.2	50	208	1	60	CARRIER 24ACA4-60
CU-1.3	48,000	15.0	117	21.8	1.2	28.4	40	208	1	60	CARRIER 24ACA4-48
CU-1.4	59,000	14.50	134	26.4	1.2	34.2	50	208	1	60	CARRIER 24ACA4-60
CU-1.5	SEE BELOW										
CU-2.1	35,400	15.0	79	16.7	1.2	22	35	208	1	60	CARRIER 24ACA4-36
CU-2.2	118,000	9.6	(2) 125	(2) 16	(2)1.5	39.0	50	208	3	60	CARRIER 38ARD-012
CU-2.3	59,000	14.50	134	26.4	1.2	34.2	50	208	1	60	CARRIER 24ACA4-60

1. ALL CONDENSING UNITS SHALL UTILIZE R410A REFRIGERANT.
2. CU-2.2 SHALL HAVE DUAL COMPRESSORS.

AHU-1.5 / CU-1.5 — MINISPLIT AIR CONDITIONER : WALL MOUNTED CARTRIDGE TYPE INDOOR UNIT, 13.0 SEER, 240 CFM, NO HEAT, INTEGRAL THERMOSTAT, AIR COOLED PAD MOUNTED OUTDOOR UNIT. MITSUBISHI MODEL MS09TW INDOOR UNIT, 115V, 1 PHASE, 60 CYCLE, .5 MCA, .37 FAN FLA, 15.0 AMP FUSE. MITSUBISHI MODEL MV09TW OUTDOOR UNIT, 115V, 1 PHASE 60 CYCLE, 15.0 AMP FUSE, 11.0 MCA, FAN .6 FLA, COMPRESSOR 7.8 RLA, 41.0 LRA.

FAN SCHEDULE

UNIT NUMBER	PERFORMANCE DATA: CFM	SP	OV (FFM)	RPM	SONES	BHP	CONSTRUCTION DATA: FAN TYPE	CLASS	ROT	DISCH	MOTOR DATA: HP	WATTS	START TYPE	ELECTRICAL: VOLTS	PHASE	CYCLES	MANUFACTURER/MODEL
EF-1.1	300	.375"	- -	1600	4.3	- -	INLINE CENTRIFUGAL	- -	- -	- -	- -	350	- -	115	1	60	LOREN COOK GN-640
EF-1.2	75	.25"	- -	1200	1.5	- -	CEILING MOUNTED CENTRIFUGAL	- -	- -	- -	- -	65	- -	115	1	60	LOREN COOK GC-240
EF-2.1	350	.375"	- -	1600	4.3	- -	INLINE CENTRIFUGAL	- -	- -	- -	- -	350	- -	115	1	60	LOREN COOK GN-640
EF-2.2	75	.25"	- -	1200	1.5		CEILING MOUNTED CENTRIFUGAL	- -	- -	- -	- -	65		115	1	60	LOREN COOK GC-240

FURNISH EXHAUST FAN EF-1.1 AND EF-2.1 WITH WALL CAP WITH INSECT SCREEN, BACK DRAFT DAMPER AND VARIABLE SPEED CONTROLLER.

DIFFUSER SCHEDULE

UNIT NUMBER	SERVICE	MOUNT	NECK SIZE	C.F.M. RANGE	N.C. MAX	MAX. P.D. IN. W.G.	PATTERN	DAMPER	FINISH	SURFACE PANEL	CONSTRUCTION	MANUFACTURER/MODEL	NOTES
CD-1	LAY-IN	CLG	SEE DWG	SEE DWG	21	0.063	4-WAY	NO	WHITE	24x24	ALUMINUM	TITUS TMS-AA/PRICE A5CDA	1
CD-2	SURFACE	CLG	SEE DWG	SEE DWG	21	0.065	4-WAY	NO	WHITE	12x12	ALUMINUM	TITUS TMS-AA/PRICE A5CDA	1, 2, 3

1. ALL GRILLES, REGISTERS AND DIFFUSERS SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50 IN COMPLIANCE WITH SECTIONS 603.15 AND 603.15.1 OF THE FLORIDA BUILDING CODE.
2. PROVIDE T-BAR PLASTER FRAME FOR ALL DIFFUSERS LOCATED IN HARD CEILING APPLICATION.
3. PROVIDE FACTORY INSTALLED R-6 INSULATION ON BACK OF DIFFUSER.

AIR GRILLE SCHEDULE

UNIT NUMBER	SERVICE	MOUNT	C.F.M. RANGE	SIZE L"xH"	N.C.	FRAME	MAX. P.D. IN. W.G.	DAMPER	BLADE SPACING 0 DEG. FIXED DEFLECTION	CONSTRUCTION	FINISH	MANUFACTURER/MODEL	NOTES
ER-1	EXHAUST	CLG	0-100	6x6	20	SURFACE	0.016	NO	1/2"	ALUMINUM	WHITE	TITUS 50F	1, 2
CG-1	EXH/RET	CLG	0-1100	24x24	20	SEE DRAWING	0.016	NO	PERF	ALUMINUM	WHITE	TITUS PAR	1, 2

PAINT FLAT BLACK INSIDE OF DUCTS BEHIND GRILLES.
PROVIDE DUCT COLLAR WITH ALL GRILLES.

1. ALL GRILLES, REGISTERS AND DIFFUSERS SHALL HAVE A MAXIMUM FLAME SPREAD RATING OF 25 AND A MAXIMUM SMOKE DEVELOPED RATING OF 50 IN COMPLIANCE WITH SECTIONS 603.15 AND 603.15.1 OF THE FLORIDA BUILDING CODE.
2. PROVIDE T-BAR PLASTER FRAME FOR ALL DIFFUSERS LOCATED IN HARD CEILING APPLICATION.
3. PROVIDE FACTORY INSTALLED R-6 INSULATION ON BACK OF DIFFUSER.

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AIRPORT AUTHORITY

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RALEIGH, NC•RICHMOND, VA •SARASOTA, FL
TALLAHASSEE, FL •TAMPA ,FL •WEST PALM BEACH, FL

Designer: KBS
Checked by: RBS
Technician: MB
Project Number: AR553009

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STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
HVAC SCHEDULES

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009
Scale: N.T.S.
Drawing Number: M-4.1

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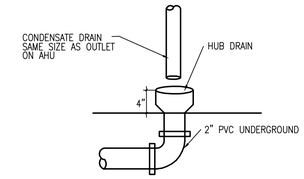

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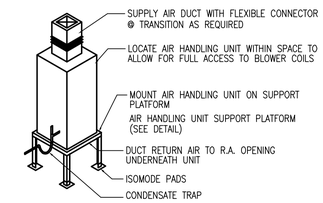

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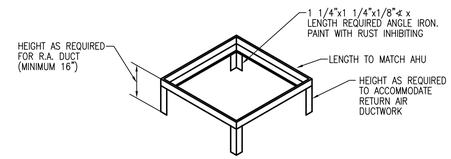

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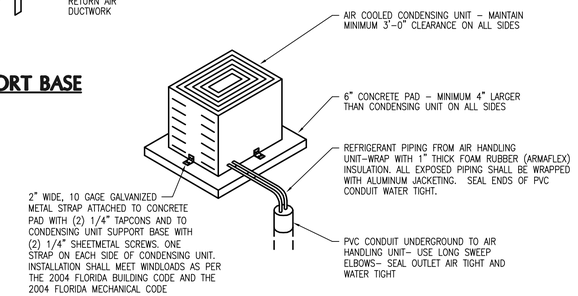

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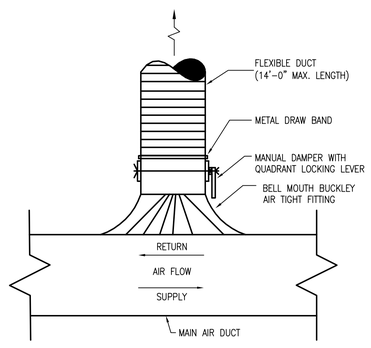

TYPICAL FLEXIBLE DUCT CONNECTION DETAIL - SUPPLY & RETURN
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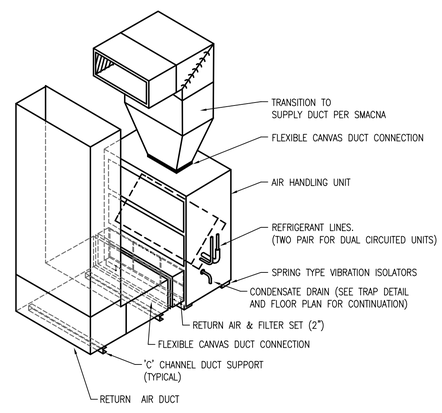

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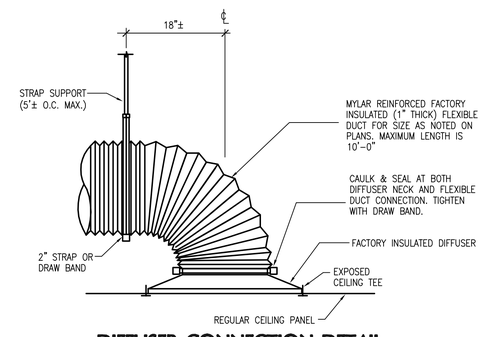

DIFFUSER CONNECTION DETAIL
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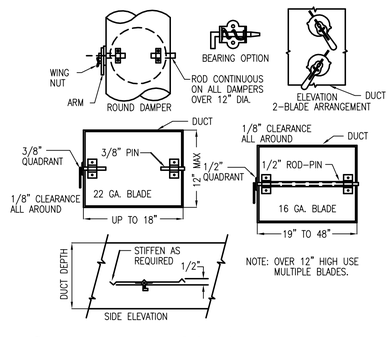

VOLUME DAMPERS-SINGLE BLADE TYPE
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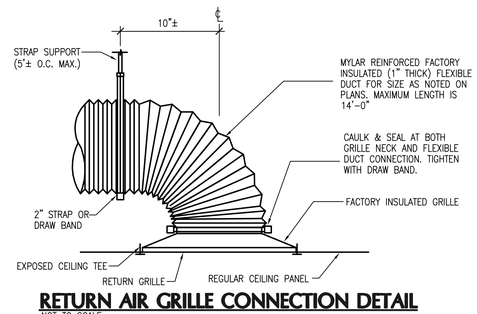

RETURN AIR GRILLE CONNECTION DETAIL
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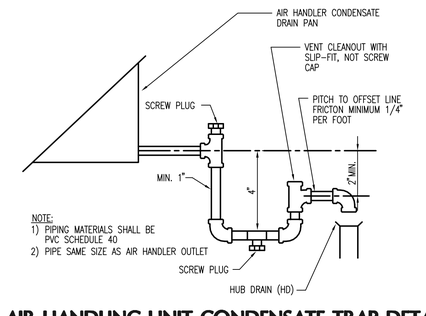

AIR HANDLING UNIT CONDENSATE TRAP DETAIL
NOT TO SCALE

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SOUTH GA AREA DEVELOPMENT

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HVAC DETAILS

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ENGINEER OF RECORD

Gus Bobes Jr. P.E.
#39410

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PLUMBING SYMBOL LEGEND

	SANITARY WASTE LINE– BELOW FLOOR		PIPE ELBOW UP	L	COUNTER TOP LAVATORY
	SANITARY WASTE LINE– ABOVE FLOOR		PIPE ELBOW DOWN		BALL VALVE
	SANITARY VENT LINE	WCO	WALL CLEANOUT		BALL/BUTTERFLY VALVE
	DOMESTIC COLD WATER	FCO	FLOOR CLEANOUT		CHECK VALVE
	DOM. HOT WATER 140° F	GCO	GROUND CLEANOUT		INLINE PUMP
	DOMESTIC HOT WATER RECIRCULATED	VTR	VENT THRU ROOF		UNION
T	TEMPERED WATER 110° F	RL	ROOF LEADER		TEMP. & PRESSURE RELIEF VALVE
F	FILTERED WATER	RD	ROOF DRAIN		COCK
S	SOFT WATER	FD	FLOOR DRAIN		GAS COCK
SD	STORM DRAIN – BELOW FLOOR	HD	HUB DRAIN		WATER ARRESTOR
SD	STORM DRAIN – ABOVE FLOOR		POINT OF CONNECTION NEW TO EXISTING		BALANCING VALVE
GR	GREASE WASTE LINE– BELOW FLOOR	HB	HOSE BIBB	1	DRAWING HEX NOTE
COND	CONDENSATE DRAIN	WC	WATER CLOSET	1	REVISION DELTA AND NUMBER
G	GAS LINE	U	URINAL		
A	AIR LINE	L	WALL MOUNTED LAVATORY		

PLUMBING ABBREVIATIONS

AAV	AIR ADMITTANCE VALVE	ESE	EMERGENCY SHOWER/ EYEWASH	RWL	RAIN WATER LEADER
AD	AREA DRAIN	EWH	ELECTRIC WATER HEATER	SAN	SANITARY
ADR	AIR DRIER (COMPRESSED AIR)	EWC	ELECTRIC WATER COOLER	S	SINK
AF	AIR FILTER (COMPRESSED AIR)	FD	FLOOR DRAIN	SR	SANITARY RISER DIAGRAM
AFF	ABOVE FINISHED FLOOR	FL	FLOOR	SD	STORM DRAIN
AR	AIR RISER DIAGRAM	FS	FLOOR SINK	SE	SEWAGE EJECTOR
BF	BARRIER FREE	GPH	GALLON PER HOUR	SH	SHOWER
BTU	BRITISH THERMAL UNIT	GR	GAS RISER DIAGRAM	SS	SERVICE SINK
B/S	BELOW SLAB	HB	HOSE BIBB	ST	STORM
CA	COMPRESSOR (COMPRESSED AIR)	HD	HUB DRAIN	TEMP	TEMPERATURE
CLG	CEILING	HW	HOT WATER	TW	TEMPERED WATER
CHDW	CHILLER, DRINKING WATER	IM	ICE MAKER	TMW	TEMPERING/MIXING VALVE
CS	COUNTER SINK	KS	KITCHEN SINK	UR	URINAL
CW	COLD WATER	KW	KILOWATT	UG	UNDERGROUND
°F	DEGREES FARENHEIT	LAV, L	LAVATORY	VTR	VENT THRU ROOF
C.O.	CLEAN OUT	MBH	MEGA BTU PER HOUR	WC	WATER CLOSET
DISP	DISPOSER	MS	MOP SINK	W/	WITH
DN	DOWN	NIC	NOT IN CONTRACT	WH	WATER HEATER
DF	DRINKING FOUNTAIN	OD	OVER FLOW DRAIN	WF	WATER FILTER
ΔT	TEMP. DIFFERENCE IN °F	PC	PUMP, CIRCULATING (DOMESTIC HOT WATER)	WR	WATER RISER DIAGRAM
DWG	DRAWING	PD	PLANTER DRAIN	WS	WATER SOFTENER
EDF	ELECTRIC DRINKING FOUNTAIN	PS	PUMP, SUMP		
EFF	EFFICIENCY	PW	POWER WASH		

PLUMBING FIXTURE SCHEDULE

WC–1 WATER CLOSET: FLOOR MOUNTED, FLUSH VALVE, SIPHON JET, ELONGATED, WATER SAVER 1.6 GPF, WHITE VITREOUS CHINA, WHITE OPEN FRONT SEAT. AMERICAN STANDARD "MADERA" 2234.015. WHITE OPEN FRONT SEAT, CHURCH #9500C, ZURN Z–6000XL–WS1 FLUSH VALVE.

WC–2 HANDICAP WATER CLOSET: FLOOR MOUNTED, FLUSH VALVE, SIPHON JET, ELONGATED, WATER SAVER 1.6 GPF, WHITE VITREOUS CHINA, WHITE OPEN FRONT SEAT. AMERICAN STANDARD "MADERA" 3043.102, ZURN Z–6000XL–WS1 FLUSH VALVE, CHURCH #9500C SEAT. ADA APPROVED FOR HANDICAP ACCESSIBILITY. MOUNT AT ADA APPROVED HANDICAP ACCESSIBLE HEIGHT.

UR–1 HANDICAP URINAL: WALL HUNG, TOP SPUD WATER CONSERVING 1.0 GPF,FLUSH VALVE, WASHOUT, WHITE VITREOUS CHINA, FLOOR MOUNTED CARRIER. AMERICAN STANDARD "WASHBROOK" 6501.010. ZURN Z–6003XL–WS1 EXPOSED FLUSH VALVE, ZURN ZR–1222 CARRIER. MOUNT AT ADA APPROVED HANDICAP ACCESSIBLE HEIGHT.

L–1 LAVATORY: 20" X 17" OVAL, COUNTER MOUNTED, SELF RIMMING, WHITE VITREOUS CHINA, SINGLE LEVER CENTERSET FAUCET WITH FLAT GRID STRAINER, BRASS P–TRAP, SUPPLIES WITH STOP. AMERICAN STANDARD "AQUALYN" 0476–028 WITH SPEAKMAN S–3561 OR T&S B2711 FAUCET.

L–2 HANDICAP LAVATORY: 20" X 18" WALL HUNG, WHITE VITREOUS CHINA, FLOOR MOUNTED CARRIER, SINGLE LEVER CENTERSET FAUCET WITH FLAT GRID STRAINER, BRASS P–TRAP, SUPPLIES WITH STOP. INSULATE HOT WATER AND WASTE PIPING BELOW LAVATORY. AMERICAN STANDARD "LUCERNE" 0355.012, S–3561 OR T&S B2711 FAUCET.

CS–1 COUNTER SINK: 33" X 22" DOUBLE BOWL, 18 GAUGE TYPE 304 STAINLESS STEEL, COUNTER MOUNTED, SELF RIMMING, DUAL HANDLE FAUCET WITH SWING SPOUT AND SPRAY, CRUMB CUP STRAINER, SUPPLIES WITH STOP, BRASS P–TRAP. ELKAY "LUSTERTONE" LR–3322, LK–4160 OR T&S B2731 FAUCET, LK–35 STRAINER, T & S BRASS B–1305 SUPPLIES, KOHLER K–9000 P–TRAP,

EWC–1 ELECTRIC WATER COOLER: WALL HUNG, TWIN OVAL RECEPTORS, HI–LOW, RECESSED COOLER, STAINLESS STEEL, HANDICAP ACCESSIBLE, 180 DEGREE WATER, FRONT PUSH BARS, SUPPLY WITH STOP, BRASS P–TRAP, 8.0 GPH OF 50 DEGREE WATER, 1/5 HP, 3.5 FLA, 115 VOLT, 1 PHASE, 60 CYCLE. HALSEY TAYLOR OVL–II–SER–Q, ELKAY ERPBM28RAC OR OASIS M8CR.

FD–1 FLOOR DRAIN: 6" STRAINER DIAMETER, CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP, ADJUSTABLE TYPE B NICKEL BRONZE STRAINER, TRAP PRIMER CONNECTION, ZURN Z– 415–P OR WATTS FD–100P–A5–7.

AD–1 AREA DRAIN: 9" DIAMETER STRAINER, CAST IRON BODY WITH BOTTOM OUTLET, SEEPAGE PAN AND COMBINATION MEMBRANE FLASHING CLAMP AND FRAME FOR MEDIUM DUTY CAST IRON SLOTTED GRATE. RATED FOR CARS AND SUVS. ZURN Z–550.

MS–1 MOP SINK: 24" X 24" X 10" MOLDED STONE, FLOOR MOUNTED, WITH WALL MOUNTED FAUCET WITH 3/4" HOSE THREAD SPOUT, INTEGRAL STOPS, WALL BRACKET, FAUCET WITH PAIL HOOK AND VACUUM BREAKER, HOSE AND HOSE BRACKET, MOP HANGER, STAINLESS STEEL FLAT GRID STRAINER, WALL GUARD AND EDGE GUARD. FIAT MSB–2424, 830–AA SERVICE, T&S B665–BSTR, T&S B653 OR T&S B654 FAUCET, 832–AA HOSE AND BRACKET, 889–CC MOP HANGER, 1453–BB STRAINER, MSG 2424 WALL GUARD, E–88–AA EDGE GUARD.

HB–1 HOSE BIBB: RECESSED, WALL MOUNTED IN BRASS BOX WITH LOCKING COVER, BRASS, CHROME PLATED, VACUUM BREAKER, 3/4" HOSE THREAD SPOUT, REMOVABLE KEY. ZURN Z–1335 OR WATTS HY330.

BP–1 BACKFLOW PREVENTER: REDUCED PRESSURE, BRONZE BODY, THREADED INLET AND OUTLET. SIZE AS PER SUPPLY LINE. WILKINS 975XLMS OR WATTS 919QT.

S–1 STRAINER: BRONZE BODY, Y–TYPE DOMESTICALLY MANUFACTURED, 125 PSI RATED, 100 MESH STAINLESS STEEL SCREEN. SIZE TO MATCH WATER LINE IT IS SERVING. WILKINS YB–100 OR WATTS 777S.

TMV–1 TEMPERING/MIXING VALVE: HIGH–LOW VALVE WITH MINIMUM FLOW OF 1.0 GPM, MAXIMUM FLOW OF 22 GPM, ADJUSTABLE HIGH TEMPERATURE LIMIT STOP, INLET CHECK STOP, OUTLET BALL VALVE, LOCKING TEMPERATURE REGULATOR, WALL MOUNTED ADJACENT TO WATER HEATER. ¾" INLETS, 1" OUTLET. LEONARD MODEL TM–420 OR BRADLEY S59–3045–T.

WATER ARRESTOR EQUAL TO ZURN SHOCKTROL MODEL Z–1700 OR WATTS SC (COPPER WATER HAMMER ARRESTOR), 65 PSI MAX. RATING MAX. PIPING LENGTH COVERED BY ONE ARRESTOR SHALL BE 20 LINEAR FT.

TYPE "A" = 11 FU MAX, TYPE "B" = 30 FU MAX,
TYPE "C" = 60 FU MAX.

ALL WATER ARRESTERS SHALL BE TYPE "A" UNLESS OTHERWISE SHOWN.

WCO	WALL CLEANOUTS:	EQUAL TO:
	FINISHED AREAS	ZURN, ZS–1469–VP–7"
	UNFINISHED AREAS	ZURN, ZAB–1469–VP–7"
FCO	FLOOR CLEANOUTS:	EQUAL TO:
	FINISHED AREAS	ZURN, ZN–24000–2, ZN–1400 OR WATTS CO–200P–R
	CARPETED AREAS	ZURN, ZN–14000–14, ZN–1400 OR WATTS CO–200P–RC
	UNFINISHED AREAS	ZURN, ZN–1420–27, Z–1400 OR WATTS CO–200P–RX–4
	HEAVY DUTY HIGH TRAFFIC AREAS	ZURN, Z–1400–DC

HRU–1 HEAT RECOVERY UNIT: SELF CONTAINED, AIR TO WATER HEAT EXCHANGER WALL MOUNTED, CIRCULATION PUMP, 120 V, 1 PH, 60 CYCLE, AQUEFIER MODEL RGK–HP–PC–M.

PLUMBING FIXTURE CONNECTION SCHEDULE

SYMBOL	DESCRIPTION	CW	HW	WASTE	VENT	REMARKS
WC–1	WATER CLOSET	1"	– –	3"	2"	– – –
WC–2	WATER CLOSET	1"	– –	3"	2"	HANDICAP
UR–1	URINAL	3/4"	– –	2"	1 1/2"	HANDICAP
L–1	LAVATORY	1/2"	1/2"	1 1/2"	1 1/4"	COUNTER
L–2	LAVATORY	1/2"	1/2"	1 1/2"	1 1/4"	HANDICAP
EWC–1	ELECTRIC WATER COOLER	1/2"	– –	1 1/4"	1 1/4"	HANDICAP
CS–1	COUNTER SINK	1/2"	1/2"	1 1/2"	1 1/4"	– – –
MS–1	MOP SINK	1/2"	1/2"	3"	1 1/2"	– – –
HB–1	HOSE BIBB	3/4"	– –	– –	– –	RECESSED
HB–2	HOSE BIBB	3/4"	– –	– –	– –	– – –

ELECTRIC WATER HEATER SCHEDULE

UNIT NUMBER	KW	STORAGE (GAL)	DIAMETER	HEIGHT	WATER CONN.	POWER REQUIRED			MANUFACTURER/MODEL
						VOLTS	PHASE	CYCLES	
EWH–1	9.0(2@4.5 KW)	80	24"	59"	3/4"	208	3	60	LOCHINVAR LTK082KK

FURNISH EACH TANK TYPE WATER HEATER WITH THE FOLLOWING:
1. 6 YEAR WARRANTY.
2. WATER HEATER SUPPORT STAND.
3. R–16 INSULATION (NON CFC FOAM).
4. BRASS DRAIN VALVE
5. GLASS LINED STEEL TANK.
6. ADJUSTABLE THERM–STAT CONTROL
7. DUAL NON–SIMULTANEOUS UPPER & LOWER ELEMENTS.

PLUMBING GENERAL NOTES

1. ALL WORK SHALL CONFORM WITH THE 2007 FLORIDA PLUMBING CODE, THE 2007 FLORIDA BUILDING CODE, THE 2007 FLORIDA ACCESSIBILTY CODE, THE CITY OF ST. AUGUSTINE BUILDING DEPARTMENT, AND ALL OTHER APPLICABLE CODES AND STANDARDS.
2. ALL HANDICAP FIXTURES SHALL BE MOUNTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA) AND THE 2004 FLORIDA BUILDING CODE CHAPTER 11 – FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION.
3. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY EXACT LOCATIONS OF UTILITIES IN FIELD.
4. PRIOR TO START OF CONSTRUCTION, CONTRACTOR SHALL VERIFY ALL EXISTING BUILDING CONDITIONS.
5. COORDINATE WORK WITH ALL OTHER TRADES TO AVOID INTERFERENCES.
6. INSTALL ALL WATER, WASTE AND VENT PIPING IN ACCORDANCE WITH ALL APPLICABLE CODES.
7. SOIL, WASTE AND VENT PIPING SHALL BE SCHEDULE 40 PVC IN ACCORDANCE WITH ASTM D 2665. PVC PIPE FITTINGS SHALL BE IN ACCORDANCE WITH ASTM D 3311. JOINTS SHALL BE SOLVENT CEMENTED IN ACCORDANCE WITH ASTM D 2855 USING SOLVENT CEMENT IN COMPLIANCE WITH ASTM D 2564.

7A. SOIL, WASTE AND VENT PIPING SHALL BE CAST IRON "NO HUB" IN ACCORDANCE WITH ASTM A 888 AND CISPI 301. JOINTS SHALL COMPLY WITH CISPI 310 OR ASTM C 1277 USING ELASTOMERIC SEALING SLEEVES IN ACCORDANCE WITH ASTM C 564. VENT PIPING MAY BE TYPE L COPPER TUBING IN ACCORDANCE WITH ASTM B 88 AND FITTINGS IN ACCORDANCE WITH ASTM B 16.22. JOINTS SHALL BE SOLDER IN ACCORDANCE WITH ASTM B 828 USING SOLDER IN COMPLIANCE WITH ASTM B32.

8. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL PLUMBING FIXTURES.
9. ALL PIPING SHALL BE CONCEALED WITHIN THE CEILING SPACE, WALLS AND CHASES AS SHOWN ON PLANS.
10. ALL EXPOSED PIPING AT PLUMBING FIXTURES SHALL BE CHROME PLATED BRASS WITH ESCUTCHEON PLATES AT THE WALL, FLOOR OR CEILING PENETRATIONS.
11. ALL ABOVE SLAB COLD WATER, HOT WATER AND TEMPERED WATER PIPING SHALL BE SCHEDULE 40 CPVC IN ACCORDANCE WITH ASTM F 441.. PIPE FITTINGS SHALL BE IN ACCORDANCE WITH ASTM F 483. JOINTS SHALL BE SOLVENT CEMENTED IN ACCORDANCE WITH ASTM D 2846 USING SOLVENT CEMENT IN COMPLIANCE WITH ASTM F 493.
12. ALL BELOW SLAB COLD WATER, HOT WATER AND TEMPERED WATER PIPING SHALL BE TYPE "K" COPPER.
13. ALL COPPER WATER LINE PENETRATIONS THROUGH WALLS SHALL BE SLEEVED.
14. INSULATE ALL HOT WATER, TEMPERED WATER AND HOT WATER RECIRCULATION PIPING WITH 3/4" FOAM RUBBER INSULATION (ARMA FLEX).
15. INSULATE ALL EXPOSED PIPES AND SURFACES UNDER ACCESSIBLE LAVATORIES PER ADA 4.19.4 AND ANSI–A117.1. PROVIDE ONE PIECE PROTECTOR WITH FULL ROTATION OPTION CONSISTING OF INTERNAL GROOVE LOCKING RING FOR NON SEPARATION AND EXTERNAL LOCKING RING WITH STAINLESS STEEL SECURITY SCREW TO INSURE EXTRA LONG TERM TAMPER RESISTANCE ANTIMICROBIAL U.V. INHIBITED UNIVERSAL FIT, 3–M DUAL LOCK (TM) FASTENERS SECURED WITH SELF LOCKING APPROVED NYLON STRAPS. FURNISH ONE PIECE VALVE/ANGLE STEP PROTECTOR. ONE PIECE OFFSET PROTECTOR AND ONE PIECE P–TRAP PROTECTOR. PRO–XTREME BY PLUMBEREX.
16. ALL PIPING SHALL BE FIRMLY ANCHORED AND SUPPORTED TO PREVENT SWAY AND VIBRATION THE ENTIRE LENGTH.
17. CONTRACTOR SHALL FURNISH AND INSTALL WATER SHOCK ARRESTERS EQUAL TO ZURN SHOKTROL AS SHOWN ON PLANS AND AS PER MANUFACTURER'S RECOMMENDATIONS. AIR CHAMBERS SHALL NOT BE SUBSTITUTED FOR FACTORY FABRICATED WATER SHOCK ARRESTORS.
18. ALL FLOOR DRAINS SHALL HAVE TRAP PRIMER. TRAP PRIMER SHALL BE OF THE WATER SAVER TYPE EQUAL TO ZURN Z 1021 MOUNTED TO THE 1 1/4" SINK OUTLET AND CONNECTED VIA FLEXIBLE COPPER TO THE TRAP PRIMER CONNECTION AT THE FLOOR DRAIN.
19. FURNISH SUPPLIES WITH STOP VALVES FOR ALL PLUMBING FIXTURES.
20. ALL SHUT–OFF VALVES SHALL BE BALL VALVES.
21. ALL WATER PIPING SHALL BE SLOPED TO DRAIN.
22. ALL SOIL, WASTE, AND VENT PIPING SHALL BE SLOPED 1/4" PER FOOT (2%) FOR PIPES 2 1/2" AND SMALLER AND 1/8" PER FOOT (1%) FOR PIPES 3" AND LARGER.
23. PROVIDE DIELECTRIC UNIONS AT ALL CONNECTIONS OF DISSIMILAR METALS.
24. SEAL ALL PENETRATIONS OF FIRE RATED PARTITIONS WITH FIRE RATED STOPPING MATERIAL.
25. FURNISH AND INSTALL A TIME CLOCK FOR THE WATER HEATER.
26. FURNISH AND INSTALL A TIME CLOCK FOR THE HOT WATER RECIRCULATION PUMP.
27. SET WATER HEATER THERMOSTAT TO PREVENT PROMOTION OF LEGIONELLA. FURNISH TEMPERING MIXING VALVE TO PROVIDE 110°F WATER AT THE PLUMBING FIXTURES.
28. FURNISH EXPANSION TANK WITH EVERY STORAGE TYPE WATER HEATER. CONTRACTOR SHALL CHARGE EACH EXPANSION TANK TO EQUAL THE STREET WATER PRESSURE.
29. THIS CONTRACTOR SHALL INSTALL AND WIRE ALL ELECTRIC FLUSH VALVES AND LAVATORY FAUCETS FROM TRANSFORMER LOCATED ABOVE THE CEILING. ALL WIRING SHALL BE CONCEALED ABOVE THE CEILING AND INSIDE THE WALLS. USE #14 WIRE AND METALLIC CHROME FLEXIBLE CONDUIT WHERE EXPOSED.
30. FURNISH ALL HOSE BIBBS WITH VACUUM BREAKER, AND WATER SHOCK ARRESTOR AND SHUT OFF VALVE IN CEILING SPACE.
31. PIPE ALL P&T VALVES FROM WATER HEATERS TO OUTSIDE OF BUILDING USING FULL SIZE COPPER PIPING.
32. PROVIDE 12"x12" ACCESS DOORS ON ALL NON–ACCESSIBLE CEILINGS AND WALLS FOR ALL VALVES
33. PROVIDE CLEANOUTS EVERY 100 FT., AT CHANGES OF DIRECTION, AT BASE OF DOWNSPOUTS AND AT BASE OF SOIL AND WASTE STACKS. IN ADDITION TO CLEANOUTS INDICATED ON PLANS, CLEANOUTS SHALL BE LOCATED IN ACCORDANCE WITH THE REQUIREMENTS OR ALL APPLICABLE CODES AND JURISDICTIONS.
34. DRAIN WASTE AND VENT PIPING LOCATED WITHIN FIRE RATED WALL ASSEMBLIES SHALL BE SERVICE WEIGHT CAST IRON WITH NO–HUB OR BELL AND SPIGOT FITTINGS.
35. NO PLUMBING PIPING SHALL BE RUN THROUGH OR INTO ELECTRICAL ROOMS.
36. ALL FAUCET BODIES SHALL BE ONE PIECE BRASS CONSTRUCTION.

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Designer:	Checked by:
KBS	KBS
Technician: MB	Project Number: AR553009

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
PLUMBING GENERAL NOTES

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009
Scale: N.T.S.
Drawing Number: P-1.0

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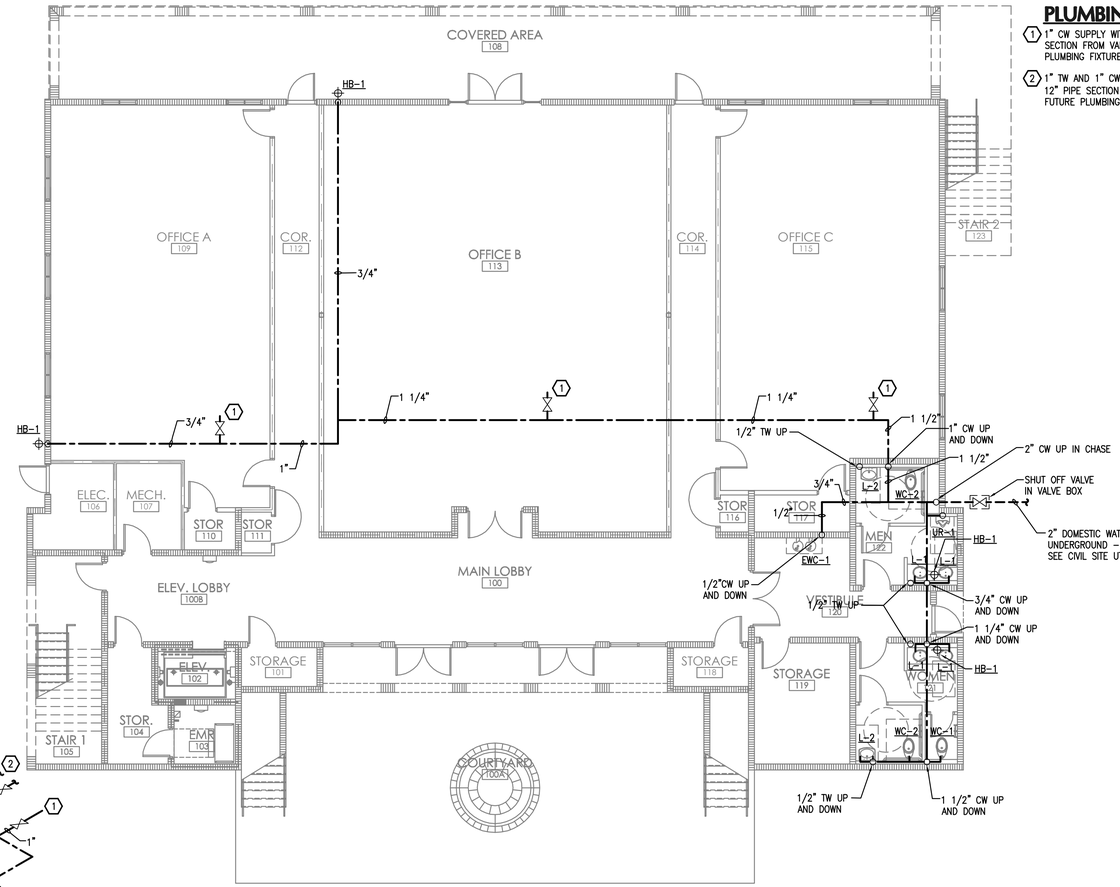
PLUMBING KEY NOTES

1. 1" CW SUPPLY WITH SHUT OFF VALVE AND 12" PIPE SECTION FROM VALVE INTO SPACE – FOR FUTURE PLUMBING FIXTURES IN OFFICE SPACE.
2. 1" TW AND 1" CW SUPPLY WITH SHUT OFF VALVE AND 12" PIPE SECTION FROM VALVE INTO THE SPACE – FOR FUTURE PLUMBING FIXTURES IN CATERING.



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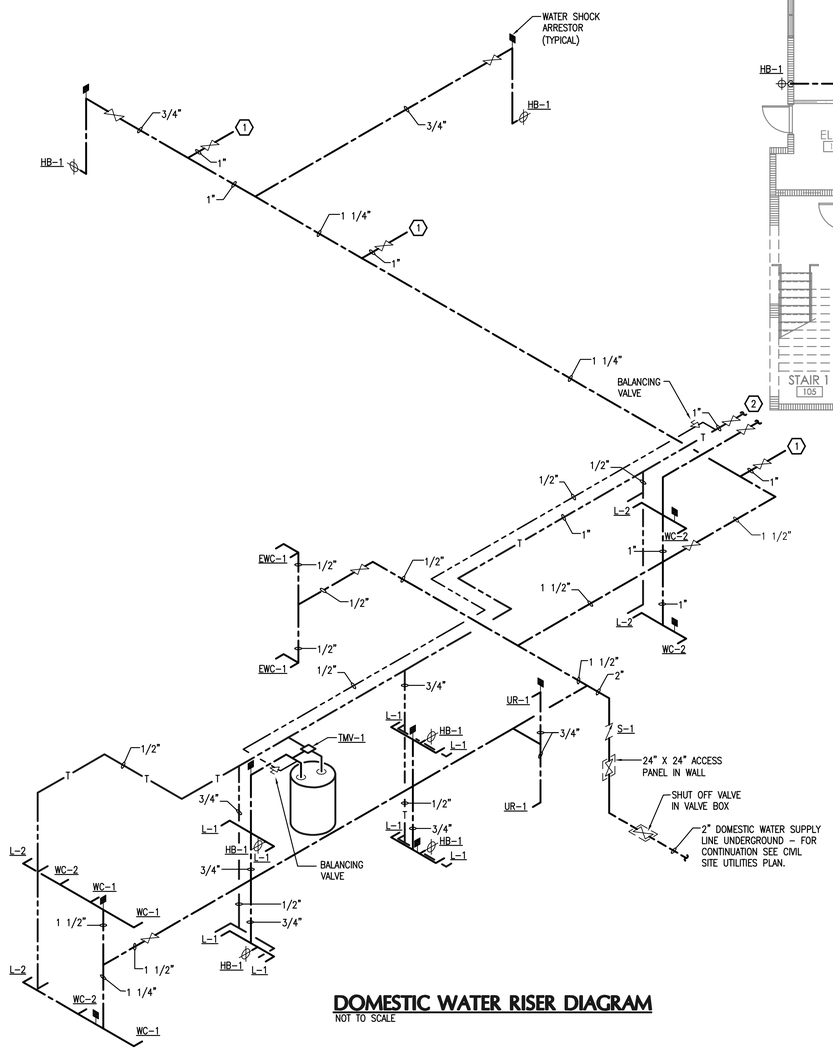
1ST FLOOR PLAN - PLUMBING - DOMESTIC WATER

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



DOMESTIC WATER RISER DIAGRAM

NOT TO SCALE

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Designer: KBS	Checked by: KBS
Technician: MB	Project Number: AR553009

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
1ST FLOOR PLAN
PLUMBING
DOMESTIC WATER

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009
Scale: 1/8"=1'-0"
Drawing Number: P-1.1

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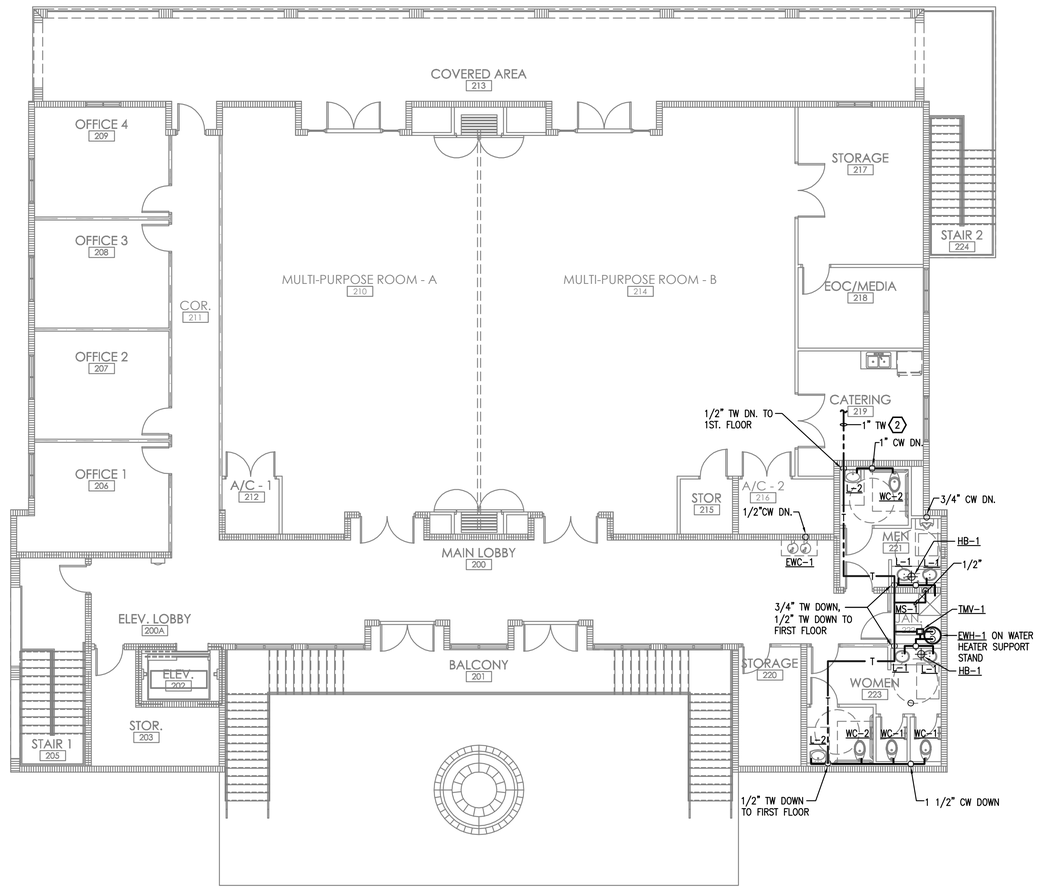
PLUMBING KEY NOTES

1. 1 1/4" CW & HW SUPPLY WITH SHUT OFF VALVE AND 12" PIPE SECTION FROM VALVE INTO SPACE –FOR FUTURE PLUMBING FIXTURES IN OFFICE.
2. 1" TW AND 1" CW SUPPLY WITH SHUT OFF VALVE AND 12" PIPE SECTION FROM VALVE INTO THE SPACE – FOR FUTURE PLUMBING FIXTURES IN CATERING.



N

2ND FLOOR PLAN - PLUMBING - DOMESTIC WATER

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

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Designer:	Checked by:
KBS	KBS
Technician:	Project Number:
MB	AR553009

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

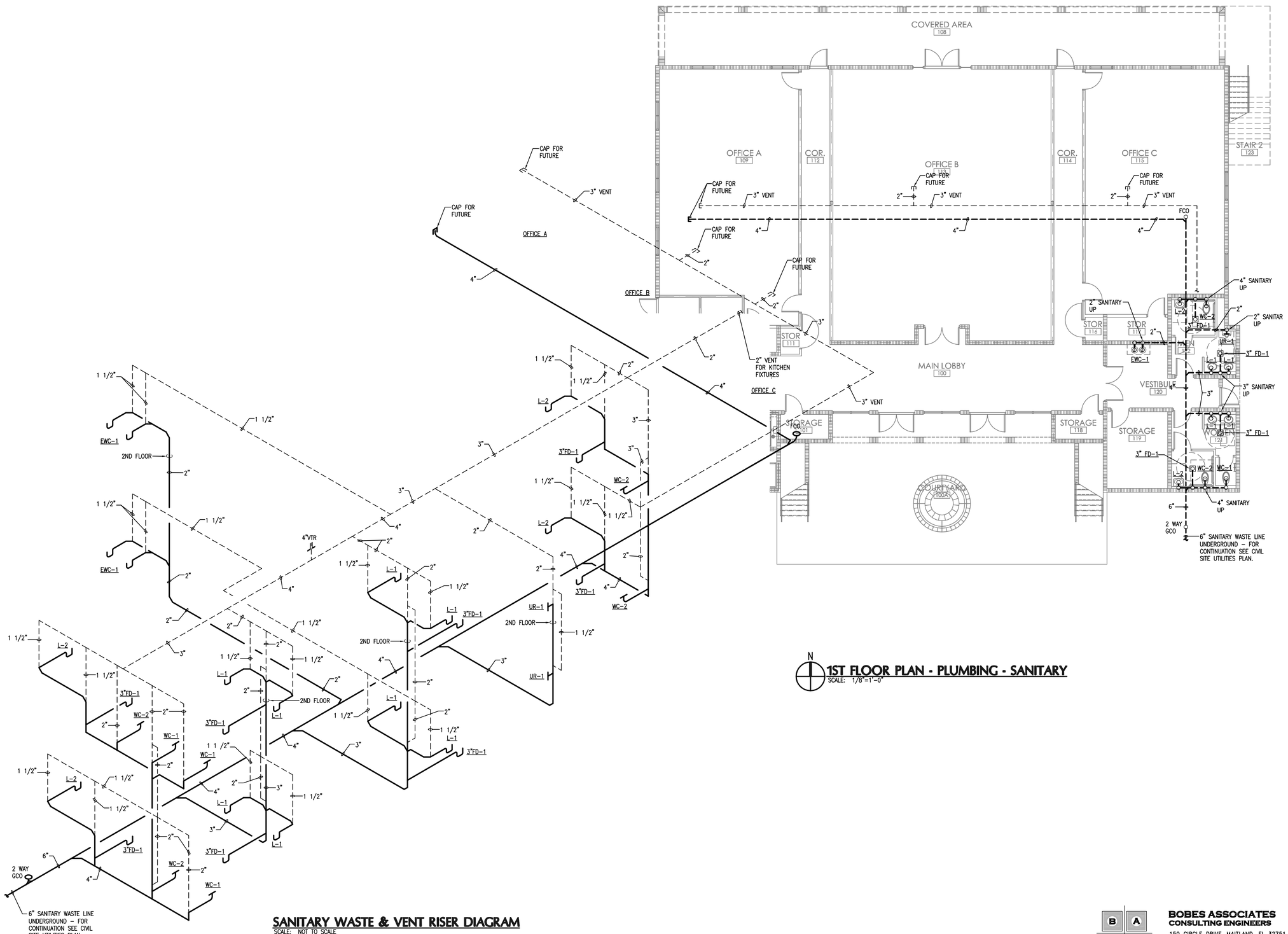
Drawing Name:
2ND FLOOR PLAN
PLUMBING
DOMESTIC WATER

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E.
#39410

Date: APRIL 15, 2009
Scale: 1/8"=1'-0"
Drawing Number: P-1.2



1ST FLOOR PLAN - PLUMBING - SANITARY

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

SANITARY WASTE & VENT RISER DIAGRAM

SCALE: NOT TO SCALE

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Designer:	Checked by:
KBS	KBS
Technician:	Project Number:
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Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

1ST FLOOR PLAN
PLUMBING
SANITARY

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E.
#39410

Date: APRIL 15, 2009

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

Drawing Number: P-2.1

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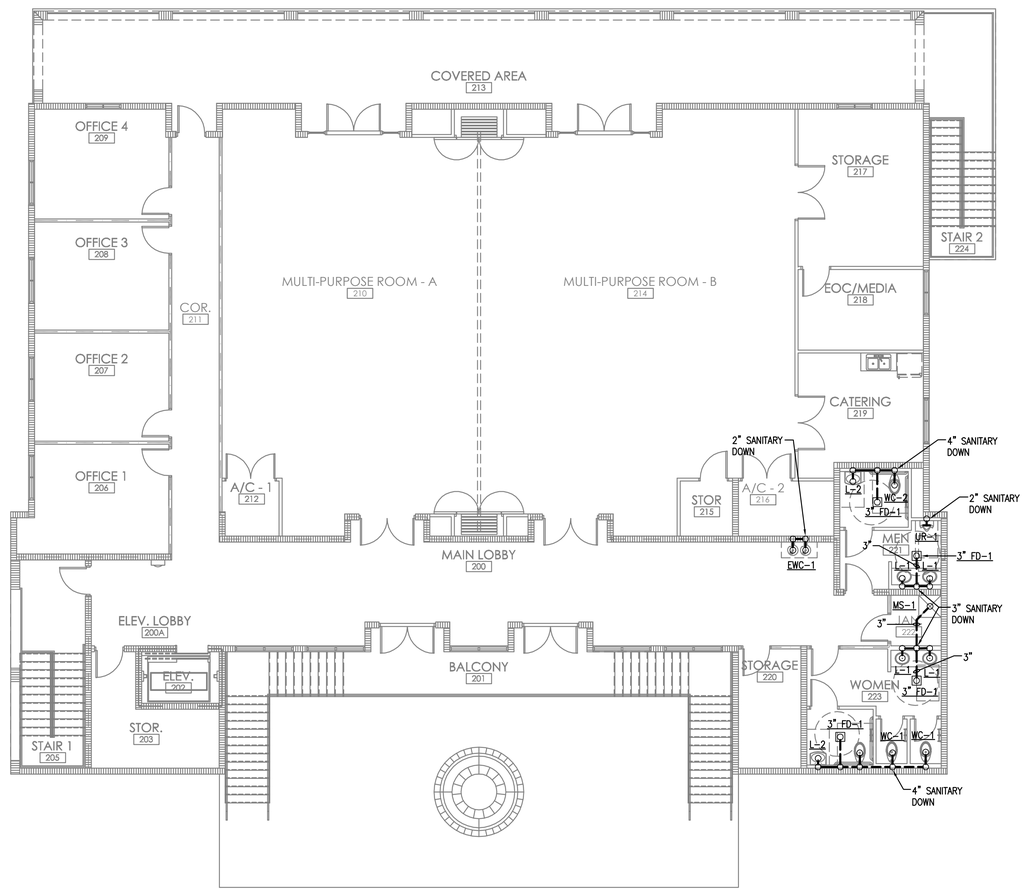

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2ND FLOOR PLAN - PLUMBING - SANITARY

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

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
2ND FLOOR PLAN
PLUMBING
SANITARY

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009
Scale: 1/8"=1'-0"
Drawing Number: P-2.2

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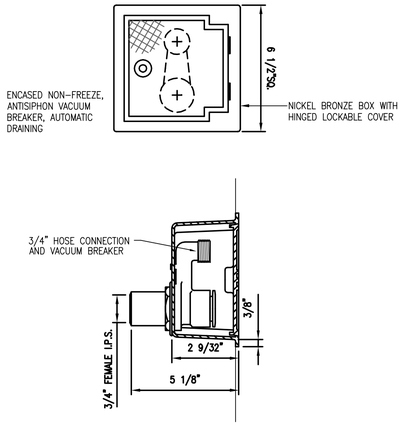
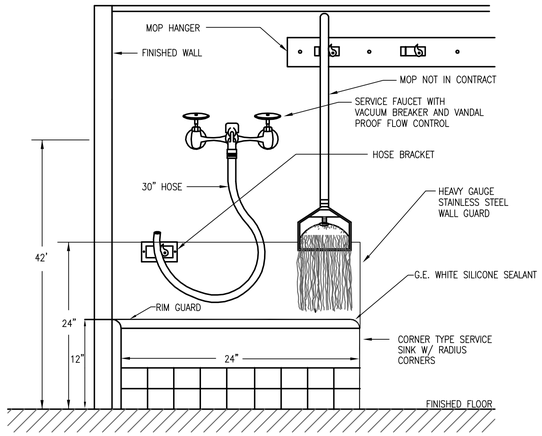


RECESSED HOSE BIBB DETAIL
NOT TO SCALE



MOP SINK DETAIL
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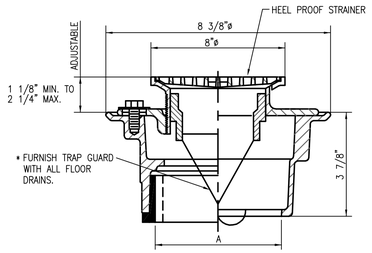

FLOOR DRAIN DETAIL
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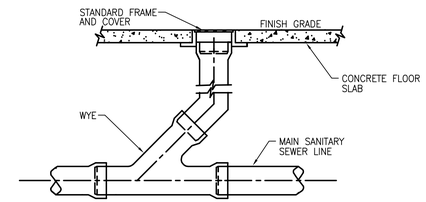

GRADE CLEANOUT DETAIL
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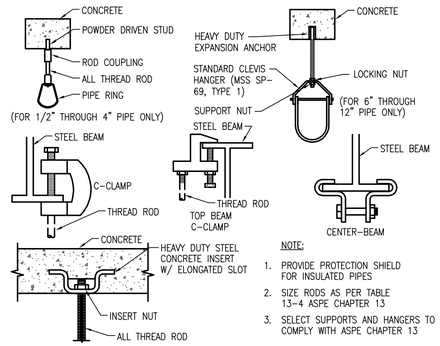
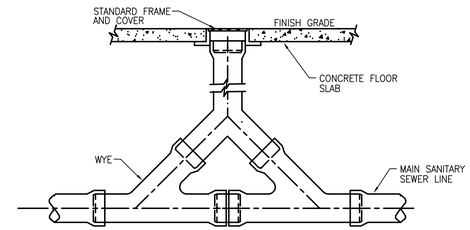


NOTE:
1. PROVIDE PROTECTION SHIELD FOR INSULATED PIPES
2. SIZE RODS AS PER TABLE 13-4 ASPE CHAPTER 13
3. SELECT SUPPORTS AND HANGERS TO COMPLY WITH ASPE CHAPTER 13

PIPE HANGERS AND SUPPORTS DETAIL
NOT TO SCALE



TWO WAY GRADE CLEANOUT DETAIL
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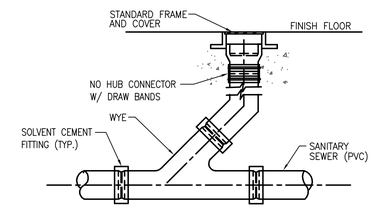

FLOOR CLEANOUT DETAIL
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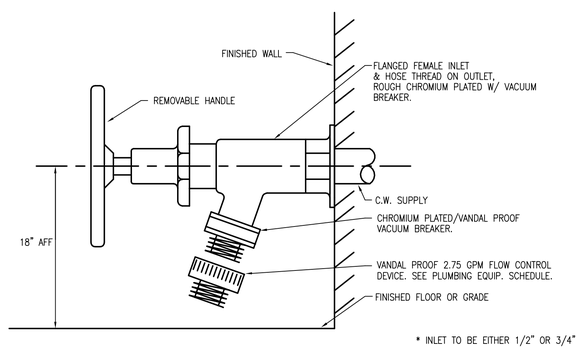
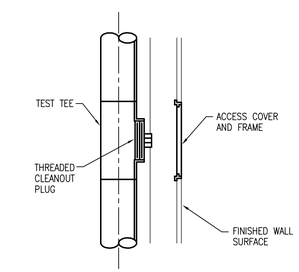


* INLET TO BE EITHER 1/2" OR 3/4"

HOSE BIBB DETAIL
NOT TO SCALE

HORIZONTAL SUPPORT SPACING 'L' (FT.), SCHEDULE 40 PVC

TEMP. °F	NOMINAL PIPE SIZE												
	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	6"	8"	10"	12"
80	4 1/2	4 1/2	5	5 1/2	5 1/2	5 1/2	6	7	7	8	9	10	11



WALL CLEANOUT DETAIL
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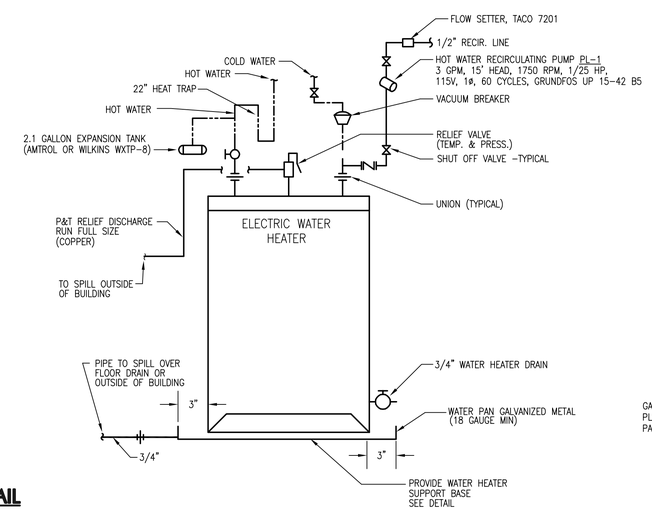
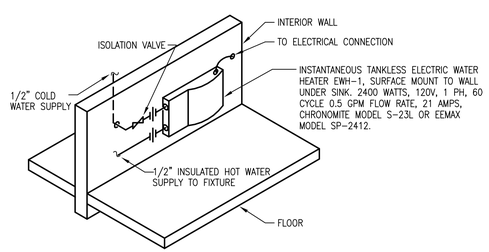


ELECTRIC WATER HEATER DETAIL
NOT TO SCALE



WALL MOUNTED INSTANTANEOUS ELECTRIC WATER HEATER DETAIL
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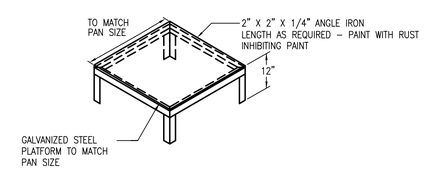

WATER HEATER SUPPORT BASE DETAIL
NOT TO SCALE

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Designer: KBS	Checked by: RRP
Technician: MB	Project Number: AR553009

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
PLUMBING DETAILS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009
Scale: N.T.S.
Drawing Number: P-5.1

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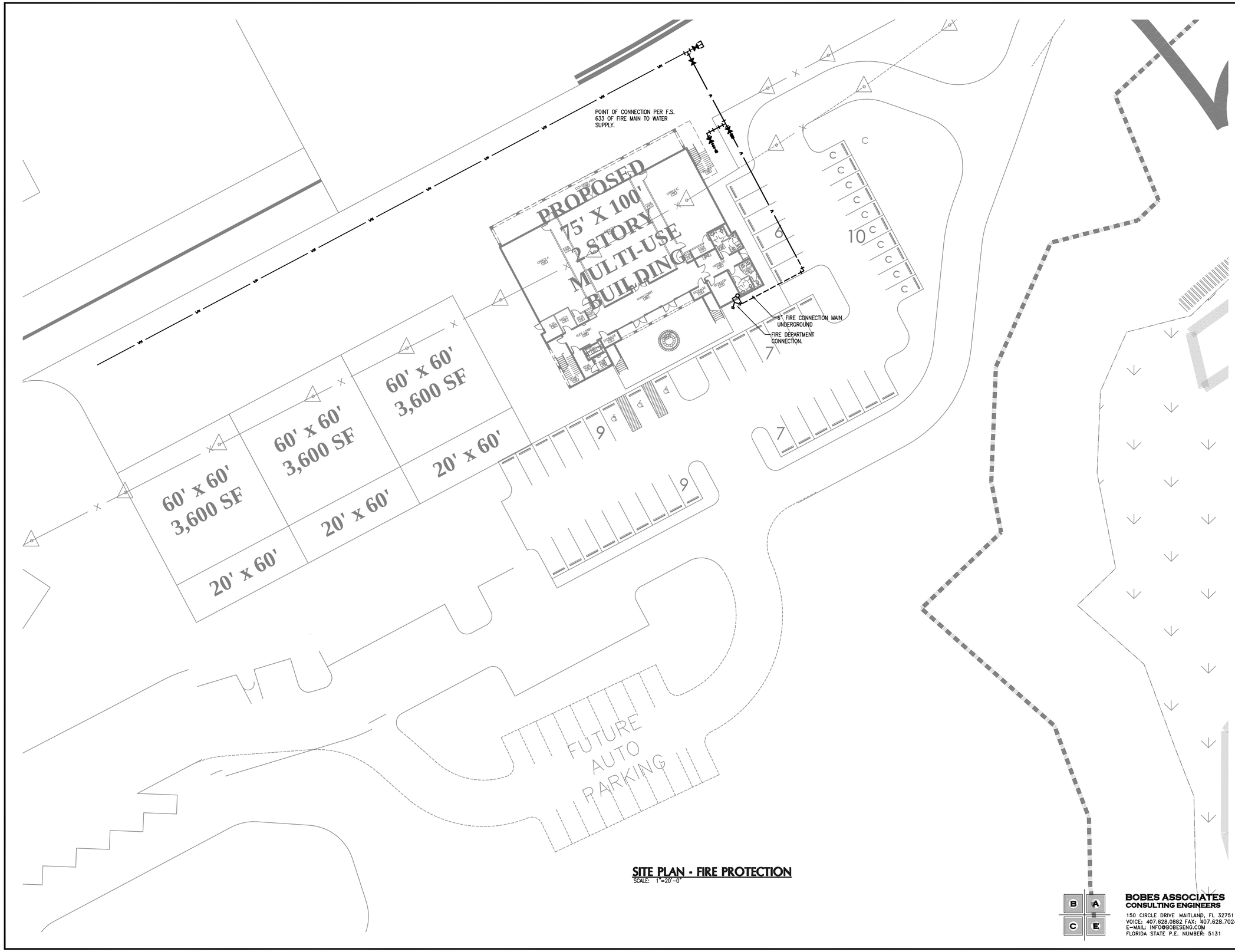

SITE PLAN - FIRE PROTECTION

SCALE: 1"=20'-0"

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Designer:	Checked by:
KBS	KBS
Technician:	Project Number:
MB	AR553009

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
FIRE PROTECTION SITE PLAN

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E.
#39410

Date: APRIL 15, 2009
Scale: 1"=20'-0"
Drawing Number: FPS-1.1

PART 1 – GENERAL

A. THIS FIRE SPRINKLER SYSTEM SHALL BE CLASSIFIED AS A WET PIPE SYSTEM WITHOUT HOSE. INSTALL AUTOMATIC FIRE PROTECTION SYSTEM IN ACCORDANCE WITH THE FOLLOWING DOCUMENTS:
1. FLORIDA BUILDING CODE 2007
2. NFPA–13, 2002
3. FLORIDA ADMINISTRATIVE CODE 69A–3
4. FLORIDA ADMINISTRATIVE CODE 69A–48
5. FLORIDA ADMINISTRATIVE LAW 61C–15 RULES AN REGULATIONS REGARDING PREPARATION OF FIRE PROTECTION AND LIFE SAFETY DESIGNS
6. CITY OF ST. AUGUSTINE BUILDING DEPARTMENT REQUIREMENTS

B. UL COMPLIANCE: PROVIDE FIRE PROTECTION PRODUCTS IN ACCORDANCE WITH UL STANDARDS; PROVIDE UL LABEL ON EACH PRODUCT/COMPONENT. ALL COMPONENTS SHALL BE UL LISTED.

C. FM COMPLIANCE: PROVIDE FIRE PROTECTION PRODUCTS AND INSTALLATION IN FULL COMPLIANCE WITH FACTORY MUTUAL (FM) LOSS PREVENTION DATA SHEET DESIGN STANDARDS. ALL COMPONENTS SHALL BE FM APPROVED.

D. SCREW THREAD CONNECTIONS: COMPLY WITH LOCAL FIRE DEPARTMENT/MARSHAL REGULATIONS FOR SIZES, THREADING AND ARRANGEMENT OF CONNECTIONS FOR FIRE DEPARTMENT EQUIPMENT TO FIRE PROTECTION SYSTEM.

E. SUBMITTALS: SUBMIT MANUFACTURER'S TECHNICAL PRODUCT DATA AND INSTALLATION INSTRUCTIONS FOR FIRE PROTECTION MATERIALS AND PRODUCTS.
1. REVIEW OF SHOP DRAWINGS BY ENGINEER OF RECORD DOES NOT RELIEVE THE FIRE SPRINKLER CONTRACTOR FROM MEETING ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS, INCLUDING CAPACITIES, EFFICIENCIES, SPACE REQUIREMENTS, ETC.
2. DRAWING: ENGINEER OF RECORD SHALL PREPARE ENGINEERING DRAWING CONFORMING TO THE FORM AND FORMAT REQUIREMENTS OF FLORIDA STATUTORY AND ADMINISTRATIVE LAW RELATING TO LIFE SAFETY AND PROPERTY CONSERVATION SYSTEM DRAWINGS. FIRE SPRINKLER CONTRACTORSHALL PREPARE WORKING DRAWINGS OF THE FIRE PROTECTION SYSTEM, WHICH DRAWINGS SHALL CONTAIN ALL ELEMENTS OF A WORKING DRWAING SET AS DISCLOSED IN NFPA 13. AFTER DELIVERY OF THE COMPLETED WORKING DRAWING SET TO ENGINEER OF RECORD FOR REVIEW. THE FIRE SPRINKLER CONTRACTOR SHALL SUBMIT FOUR APPROVED COPIES OF THE DRAWING SET WITH HYDRAULICS AND SYSTEM/ COMPONENT SPECIFICATIONS TO THE AUTHORITY HAVING JURISDICTION TOWARD OBTAINING A CONSTRUCTION PERMIT. WORKING DRAWINGS SHALL BR PREPARED OVER THE ENGINEERING DRAWINGS BACKGROUND. ALL WORKING DRAWINGS SHALL BE PREPARED IN AUTOCAD 2000 FOR ULTIMATE DELIVERY TO THE OWNER.
3. THE FIRE SPRINKLER CONTRACTOR SHALL SUBMIT FOUR COPIES OF SYSTEM SPECIFICATIONS AND COMPONENT SPECIFICATIONS WITH THE HYDRAULIC AND DRAWING SET TO THE AHJ.
4. DESIGN CALCULATIONS: ENGINEER OF RECORD SHALL PREPARE HYDRAULIC CALCULATIONS FOR THE FIRE PROTECTION SYSTEMS. THE FIRE SPRINKLER CONTRACTOR SHALL VERIFY THE CALCULATIONS BASED ON THE WORKING DRAWINGS. ANY QUESTION ARISING FROM THIS VERIFICATION REQUIRES THE FIRE SPRINKLER CONTRACTOR TO CONTACT ENGINEER OF RECORD FOR CLARIFICATION OR ADJUSTMENT. THE FIRE SPRINKLER CONTRACTOR SHALL SUBMIT FOUR COPIES OF THE RESULTING HYDRAULIC CALCULATIONS TO THE AHJ REVIEW, BEFORE PROCEEDING WITH CONSTRUCTION. ANY CALCULATIONS PERFORMED BY EITHER ENGINEER OF RECORD OR THE FIRE SPRINKLER CONTRACTOR SHALL BE SUBMITTED TO THE AHJ FOR REVIEW.

F. CERTIFICATE OF INSTALLATION: THE FIRE SPRINKLER CONTRACTOR SHALL SUBMIT A CERTIFICATE TO THE OWNER UPON COMPLETION OF FIRE PROTECTION PIPING WORK WHICH INDICATES THAT WORK HAS BEEN TESTED IN ACCORDANCE WITH NFPA 13 AND ALSO THAT SYSTEM IS OPERATIONAL COMPLETE AND HAS NO DEFECTS. THIS CERTIFICATION SHOULD INDICATE THAT THE AHJ HAS WITNESSED AND APPROVED TESTS.

G. MAINTENANCE DATA: SUBMIT MAINTAINANCE DATA AND FINAL PARTS LISTS FOR FIRE PROTECTION MATERIALS AND PRODUCTS. INCLUDE THIS DATA, PRODUCT DATA, SHOP DRAWINGS, APPROVAL DRAWINGS, APPROVAL CALCULATIONS, CERTIFICATE OF INSTALLATION, AND RECORD DRAWINGS IN MAINTENANCE MANUAL.

INSTALLATION OF BURIED PIPE, PRIVATE FIRE UNDERGROUND & INSIDE FIRE CONTROL LATERALS
1.0 DEPTH OF COVER
1–1.1 THE DEPTH OF COVER OVER WATER PIPES SHALL BE DETERMINED BY THE MAXIMUM DEPTH OF FROST PENETRATION IN THE LOCALITY WHERE THE PIPE IS LAID. THE TOP OF THE PIPE SHALL BE BURIED NOT LESS THAN 1 FT. BELOW THE FROST LINE FOR THE LOCALITY. IN THOSE LOCATIONS WHERE FROST IS NOT A FACTOR, THE DEPTH OF COVER SHALL BE NOT LESS THAN 2 1/2 FT. TO PREVENT MECHANICAL DAMAGE. PIPE UNDER DRIVEWAYS SHALL BE BURIED A MINIMUM OF 3 FT.
1–1.2 DEPTH OF COVERING SHALL BE MEASURED FROM TOP OF PIPE TO FINISHED GRADE, AND DUE CONSIDERATION SHALL ALWAYS BE GIVEN TO FUTURE OR FINAL NATURE OF SOIL.
1–1.3 THE UNDERGROUND FIRE MAIN SHALL BE INSTALLED BY A CLASS I, II OR V CONTRACTOR AND A FIRE PERMIT SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF WORK.

1–2 PROTECTION AGAINST FREEZING.
1–2.1 WHERE IT IS IMPRACTICABLE TO BURY PIPE. IT SHALL BE PERMITTED TO BE LAID ABOVE GROUND. PROVIDED THE PIPE IS PROTECTED AGAINST FREEZING AND MECHANICAL DAMAGE TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION. 1–2.2 PIPES SHALL NOT BE PLACED NEAR EMBANKMENT WALLS WITHOUT SPECIAL ATTENTION BEING GIVEN TO PROTECTION AGAINST FROST.

1–3 PROTECTION AGAINST DAMAGE.
1–3.1 PIPE SHALL NOT BE RUN UNDER BUILDINGS.
EXCEPTION: WHEN ABSOLUTELY NECESSARY TO RUN PIPE UNDER BUILDINGS, SPECIAL PRECAUTIONS SHALL BE TAKEN WHICH INCLUDE ARCHING THE FOUNDATION WALLS OVER THE PIPE, RUNNING PIPE IN COVERED TRENCHES, AND PROVIDING VALVES TO ISOLATE SECTIONS OF PIPE UNDER BUILDINGS.
1–3.2 WHERE A RISER IS CLOSE TO BUILDING FOUNDATIONS, UNDERGROUND FITTINGS OF PROPER DESIGN AND TYPE SHALL BE USED TO AVOID PIPE JOINTS BEING LOCATED IN OR UNDER THE FOUNDATIONS.
1–3.3 MAINS RUNNING UNDER ROADS CARRYING HEAVY TRUCKING, UNDER LARGE PILES OF HEAVY COMMODITIES, OR IN AREAS SUBJECTING THE MAIN TO HEAVY SHOCK AND VIBRATIONS SHALL BE SUBJECTED TO AN EVALUATION OF THE SPECIFIC LOADING CONDITIONS AND SUITABLY PROTECTED, IF NECESSARY.
1–3.4 WHEN IT IS NECESSARY TO JOIN METAL PIPE WITH PIPE OF DISSIMILAR METAL, THE JOINT SHALL BE INSULATED, BY AN APPROVED METHOD, AGAINST THE PASSAGE OF AN ELECTRIC CURRENT.
1–3.5 IN NO CASE SHALL THE PIPE BE USED FOR GROUNDING OF ELECTRICAL SERVICES.

1–4 CARE IN LYING.
1–4.1 PIPES, VALVES, HYDRANTS, AND FITTINGS SHALL BE INSPECTED FOR DAMACE WHEN RECEIVED AND SHALL BE INSPECTED PRIOR TO INSTALLATION. BOLTED JOINTS SHALL BE CHECKED FOR PROPER TORQUING OF BOLTS. PIPES, VALVES, HYDRANTS AND FITTINGS SHALL BE CLEAN INSIDE. WHEN WORK IS STOPPED, OPEN ENDS SHALL BE PLUGGED TO PREVENT STONES AND FOREIGN MATERIALS FROM ENTERING.
1–4.2 ALL PIPE, FITTINGS, VALVES, AND HYDRANTS SHALL BE CAREFULLY LOWERED INTO THE TRENCH WITH SUITABLE EQUIPMENT. THEY SHALL BE CAREFULLY EXAMINED FOR CRACKS OR OTHER DEFECTS WHILE SUSPENDED ABOVE THE TRENCH IMMEDIATELY BEFORE INSTALLATION. PLAIN ENDS SHALL BE INSPECTED WITH SPECIAL ATTENTION, AS THESE ENDS ARE THE MOST SUSCEPTIBLE TO DAMAGE. UNDER NO CIRCUMSTANCES SHALL WATER MAIN MATERIALS BE DROPPED OR DUMPED. PIPE SHALL NOT BE ROLLED OR SKIDDED AGAINST OTHER PIPE MATERIALS.
1–4.3 PIPES SHALL BEAR THROUGHOUT THEIR FULL LENGTH AND SHALL NOT BE SUPPORTED BY THE BELL ENDS ONLY OR BY BLOCKS.
EXCEPTION: IF GROUND IS SOFT, OR OF A QUICKSAND NATURE, SPECIAL PROVISIONS SHALL BE MADE FOR SUPPORTING PIPE. FOR ORDINARY CONDITIONS OF SOFT GROUND, LONGITUDINAL WOODEN STRINGERS WITH CROSS TIES WILL GIVE GOOD RESULTS.

1–5 PIPE JOINT ASSEMBLY.
1–5.1 JOINTS SHALL BE ASSEMBLED BY PERSONS FAMILIAR WITH THE PARTICULAR MATERIALS BEING USED AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS.
1–5.2 ALL BOLTED JOINT ACCESSORIES SHALL BE CLEANED AND THOROUGHLY COATED WITH ASPHALT OR OTHER CORROSION–RETARDING MATERIAL AFTER INSTALLATION.

1–6 RESTRAINING FIRE MAINS.
1–6.1 ALL TEES, PLUGS, CAPS, BENDS, AND HYDRANT BRANCHES SHALL BE RESTRAINED AGAINST MOVEMENT.
1–6.2 THRUST BLOCKS ARE SATISFACTORY WHERE SOIL IS SUITABLE. THE THRUST BLOCKS SHALL BE OF A CONCRETE MIX NOT LEANER THAN ONE PART CEMENT, TWO AND ONE–HALF PARTS SAND, AND FIVE PARTS STONE. THRUST BLOCKS SHALL BE PLACED BETWEEN UNDISTURBED EARTH AND THE FITTING TO BE RESTRAINED, AND SHALL BE OF SUCH BEARING AS TO ENSURE ADEQUATE RESISTANCE TO THE THRUST TO BE ENCOUNTERED. IN GENERAL, THRUST BLOCKS SHALL BE SO PLACED THAT THE JOINTS WILL BE ACCESSIBLE FOR INSPECTION AND REPAIR.
1–6.2.2 PIPE CLAMPS AND TIE–RODS, THRUST BLOCKS, LOCKED MECHANICAL OR PUSH–ON JOINTS, MECHANICAL JOINTS UTILIZING SET SCREW RETAINER GLANDS, OR OTHER APPROVED METHODS OR DEVICES SHALL BE USED. THE TYPE OF PIPE. SOIL CONDITIONS, AND AVAILABLE SPACE DETERMINE THE METHOD.

1–7 TESTING AND QUALITY
1–7.1 PRESSURE TESTING OF PRIVATE FP UNDERGROUND SHALL BE PERFORMED PER NFPA 24 AT 200 PSI, OR 50 PSI OVER OPERATING PRESSURES ABOVE 150 PSI.
1–7.2 MANUFACTURING QUALITY
1–7.2.1 ALL PIPE AND FITTINGS MUST BE DOMESTICALLY MANUFACTURED.
1–7.2.1 PIPE, FITTINGS AND INSTALLATION MUST MEET FOLLOWING AWWA C110, C111, C150, C206, C208, C600, C900 AND ANSI B16.1. REFER TO PRIVATE FIRE PROTECTION UNDERGROUND REQUIREMENTS NFPA 24, 1142.

PART 2 – PRODUCTS

A. PIPING MATERIALS AND PRODUCTS: PROVIDE PIPING MATERIALS AND FACTORY FABRICATED PIPING PRODUCTS OF SIZES, TYPES, PRESSURE RATINGS, TEMPERATURE RATINGS, AND CAPACITIES INDICATED. WHERE NOT SPECIFICALLY INDICATED, PROVIDE PROPER SELECTION AS DETERMINED BY INSTALLER TO COMPLY WITH INSTALLLATION APPLICATION. PROVIDE SIZES AND TYPES OF MATCHING PIPING AND EQUIPMENT CONNECTIONS: PROVIDE FITTINGS OF MATERIALS WHICH MATCH PIPE MATERIALS OR PRODUCTS ARE INDICATED, SELECTION IS INSTALLER'S OPTION.

B. IDENTIFICATION: PROVIDE IDENTIFICATION IN ACCORDANCE WITH THE FOLLOWING LISTING:
1. FIRE PROTECTION PIPING.
A. PLASTIC PIPE MARKERS.
B. PAINTED ON PIPE ARROWS, DURABLE WHITE PAINT SUITABLE FOR OUTDOOR USE ON METAL PIPING.
2. FIRE PROTECTION VALVES: METAL VALVE TAGS..
3. INSTALL FIRE PROTECTION SIGNS ON PIPING IN ACCORDANCE WITH NFPA 13 REQUIREMENTS.
4. ARROWS SHALL BE PAINTED ON ALL MAINS AND RISERS INDICATING DIRECTION OF WATER TRAVEL.

C. PIPES AND PIPE FITTINGS: ALL PIPE NOT INSIDE BUILDINGS SHALL BE GALVANIZED, INSIDE & OUT. PROVIDE PIPES, AND PIPE FITTINGS IN ACCORDANCE WITH THE FOLLOWING LISTING:
1. STEEL FIRE PROTECTION PIPE: SCHEDULE 40 FOR PIPING WITH DIAMETER LESS THAN OR EQUAL TO 2 INCH.
2. STEEL FIRE PROTECTION PIPE: SCHEDULE 10 FOR 2–1/2 INCH AND LARGER PIPING IS ACCEPTABLE.
3. COPPER TUBE: TYPE L WHEN USED, SHALL BE HARD DRAWN TEMPER: WROUGHT COPPER FITTINGS: SOLDER JOINTS.
4. ALL GASKETS USED IN PIPE FITTINGS SHALL BE SUITABLE FOR 175 PSI SYSTEMS. THE GASKETS SHALL BE SUITABLE FOR USE IN APPLICATIONS AND EXPOSED TO WEATHER.
5. ALL PIPING USED IN THESE SYSTEMS SHALL BE IN STRICT CONFORMANCE WITH THE REQUIREMENTS OF NFPA 13 AND FM DATA SHEETS/APPROVAL GUIDE.
6. ALL NEW UNDERGROUND FIRE PROTECTION SUPPLY PIPING SHALL BE C900–PVC CLASS 200, DR14 OR CEMENT LINED DUCTILE IRON. ALL NEW UNDERGROUND PIPING LOCATED DOWNSTREAM OF THE RELOCATED FDC (FIRE DEPARTMENT CONNECITON SIAMESE) SHALL BE EITHER CEMENT LINED DUCTILE IRON, OR C900–PVC CLASS 200, DR14. ALL NEW UNDERGROUND PIPING LOCATED WITHIN 5'–0" OF THE BUILDING SHALL BE CEMENT LINED DUCTILE IRON.

D. COMPLY WITH REQUIREMENTS OF NFPA 13 FOR INSTALLATION OF FIRE PROTECTION PIPING MATERIALS. INSTALL PIPING PRODUCTS WHERE INDICATED, IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, AND IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES TO ENSURE THAT PIPING SYSTEMS COMPLY WITH THE REQUIREMENTS AND SERVE IT'S INTENDED PURPOSED.

E. PIPING SHALL BE SUSPENDED USING SUITABLE CLEVIS OR TRAPEZE HANGING DEVICES. ALL APPLIANCES INCLUDING RODS SHALL BE UL/FM & GALVANIZED.

F. INSTALL DRAIN PIPING AT LOW POINTS OF PIPING SYSTEMS.

G. INSTALL VALVES AS REQUIRED FOR DRAINING PURPOSES.

H. INSTALL FIRE DEPARTMENT CONNECTION CHECK VALVES IN PIPING WHERE FIRE DEPARTMENT CONNECTIONS ARE INDICATED. ALL FIRE DEPARTMENT CONNECTIONS SHALL BE AS SHOWN ON THE ACCOMPANYING DRAWINGS.

I. MOUNT SUPERVISORY SWITCHES ON EACH VALVE AS SHOWN IN DETAILS AND PLAN VIEWS.

J. COORDINATE WITH FIRE ALARM INSTALLER REGARDING ATTACHMENT OF FIRE SPRINKLER CONTRACTOR PROVIDED SWITCHES TO NFPA 72 SYSTEM.

K. PIPING SPECIALTIES: PROVIDE PIPING SPECIALTIES IN ACCORDANCE WITH THE FOLLOWING LISTING:
1. PIPE SLEEVES
2. SLEEVE SEALS
3. HANGER CONCRETE INSERTS

L. SUPPORTS AND ANCHORS: PROVIDE SUPPORTS AND ANCHORS IN ACCORDANCE WITH THE FOLLOWING LISTING:
1. ADJUSTABLE GALVANIZED STEEL CLEVIS HANGERS, ADJUSTABLE STEEL BAND HANGERS, OR ADJUSTABLE BAND HANGERS, FOR HORIZONTAL PIPING HANGERS AND SUPPORTS.
2. TWO BOLT RISER CLAMPS FOR VERTICAL PIPING SUPPORTS, PAINTED OR GALVANIZED.
3. STEEL TURNBUCKLES AMD MALLEABLE IRON SOCKETS FOR HANGER ROD ATTACHMENTS.
4. CONCRETE INSERTS, TOP BEAM C–CLAMPS, SIDE BEAM OR CHANNEL CLAMPS OR CENTER BEAM CLAMPS FOR BUILDING ATTACHMENT.
5. USE GRINNELL MODEL 281. OR EQUIVALENT, CONCRETE INSERT FOR ALL SERVICE TO SUSPENDED MAINS.

M. VALVES: PROVIDE VALVES IN ACCORDANCE WITH THE FOLLOWING LISTING:
1. SECTIONAL VALVES: GATE VALVES OR BUTTERFLY VALVES: UL, FM.
2. CHECK VALVES: SWING CHECK VALVES: UL, FM.

N. FIRE DEPARTMENT CONNECTION VALVES: INSTALL CHECK VALVES WHERE INDICATED ON FDC. CONNECT THE FDC INTO THE SYSTEM WHERE SHOWN ON THE DRAWING.

O. VALVES MANUFACTURERS: VIKING, CENTRAL, RELIABLE, GRINNELL, CROKER–STANDARD.

P. METERS AND GAUGES: PROVIDE METERS AND GAUGES IN ACCORANCE WITH THE FOLLOWING ITEMIZED LIST:
1. PRESSURE GAUGES: 0–250 PSI RANGE.

PART 3 – EXECUCTION

A. FLUSHING: FLUSH FEED MAINS, LEAD–IN CONNECTIONS AND CONTROL PORTIONS AT PROPER VELOCITY. AFTER PIPING INSTALLATION HAS BEEN COMPLETED AND BEFORE PIPING IS PLACED IN SERVICE, FLUSH ENTIRE SYSTEM TO REMOVE FOREIGN SUBSTANCES UNDER PRESSURE AS SPECIFIED IN NFPA 13. CONTINUE FLUSHING UNTIL WATER IS CLEAR, AND CHECK TO ENSURE THAT DEBRIS WILL NOT CLOG HOSE VALVES.

B. HYDROSTATIC TESTING: AFTER FLUSHING SYSTEM, TEST HYDROSTATICALLY, FOR PERIOD OF 2 HOURS, AT NOT LESS THAN 200 PSI OR AT 50 PSI IN EXCESS OF MAXIMUM STATIC PRESSURE WHEN MAXIMUM STATIC PRESSURE IS IN EXESS OF 150 PSI. CHECK SYSTEM FOR LEAKAGE OF JOINTS.

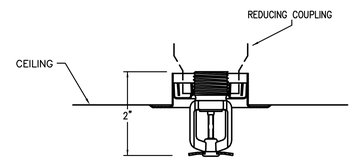
C. REPAIR OR REPLACE PIPING SYSTEM AS REQUIRED TO ELIMINATE LEAKAGE IN ACCORDANCE WITH NFPA STANDARDS. IF LEAKAGE, RETEST TO DEMONSTRATE COMPLIANCE.

D. WHERE SERVICE MAINS PROCEED THROUGH WALL ASSEMBLIES, RETURN WALL ASSEMBLIES TO ORIGINAL RATING AFTER FAB.

E. WHERE SERVICE MAINS PENETRATE SLABS, SEAL PENETRATION TO PREVENT WATER INTRUSION.

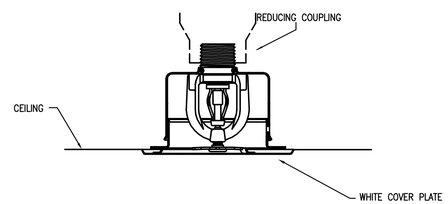
(NOTE : USE IN SPACES WITHOUT CEILING, U.N.O.)
(INTERMEDIATE TEMPERATURE CLASSIFICATION, U.N.O.)

UPRIGHT SPRINKLER - TYPE "A" HEAD
NOT TO SCALE



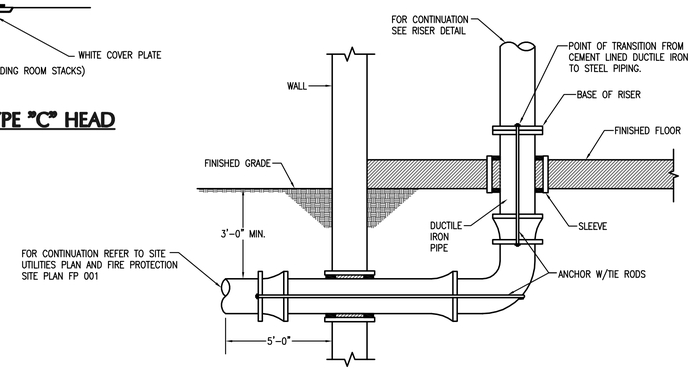
(NOTES: USE IN ALL AREAS WITH CEILINGS, U.N.O.)

RECESSED PENDENT - TYPE "B" HEAD QUICK RESPONSE IN LIGHT HAZARD AREAS)
NOT TO SCALE

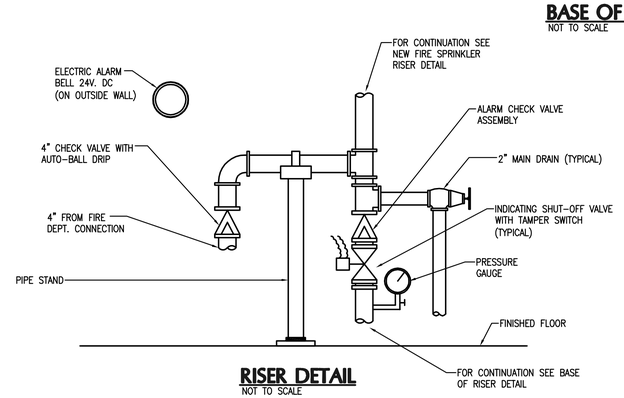


(NOTE : USE IN MAIN LOBBY, CORRIDORS AND READING ROOM STACKS)

CONCEALED PENDENT- TYPE "C" HEAD (QUICK RESPONSE)
NOT TO SCALE



BASE OF RISER DETAIL
NOT TO SCALE



RISER DETAIL
NOT TO SCALE

FIRE PROTECTION LEGEND

———	FIRE SPRINKLER MAIN
———	FIRE SPRINKLER BRANCH LINE
— —F— —	NEW UNDERGROUND FIRE SPRINKLER SUPPLY MAIN
—D—	TEST AND DRAIN PIPING
TYPE "B" OR "C" ●	RECESSED CHROME PENDENT CEILING HEAD ON ARM–OVER ORDINARY TEMPERATURE CLASSIFICATION
TYPE "A" ○	BRASS UPRIGHT HEAD (INTERMEDIATE TEMP. CLASSIFICATION)
— D —	TEST AND DRAIN PIPING
—⊃	PIPING DROP OR RISE
F.C. —⊐	FLUSHING CONNECTION
4" 20 / 12–0 19	HYDRAULIC CALCULATION NODE TAG
U.N.O.	UNLESS NOTED OTHERWISE
NF	NO FLOW REQUIRED IN CALCULATION FOR THIS HEAD
⋈	HORIZONTAL SIDEWALL HEAD, EXTENDED COVERAGE

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TALLAHASSEE, FL •TAMPA ,FL •WEST PALM BEACH, FL

Designer: KBS	Checked by: KBS
Technician: MB	Project Number: AR553009

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
FIRE PROTECTION GENERAL NOTES

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009
Scale: 1/8"=1'-0"
Drawing Number: FP-1.O

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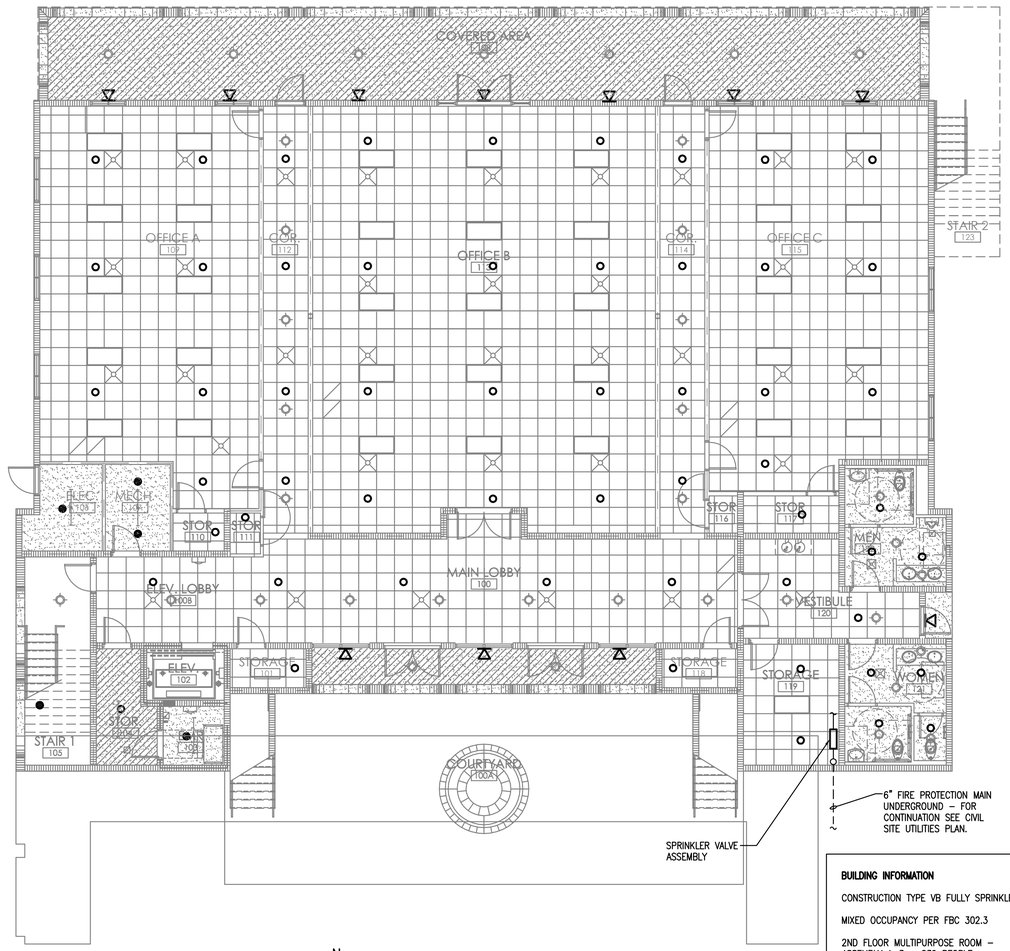
FIRE PROTECTION SYMBOL LEGEND

- FULLY RECESSED CEILING MOUNTED SPRINKLER HEAD WITH WHITE COVERPLATE. CENTER ON 2'x2' CEILING TILE IF APPLICABLE.
- UPRIGHT SPRINKLER HEAD IN ROOM WITH NO CEILING. LOCATE HEAD AS NECESSARY TO PROVIDE PROPER COVERAGE.
- SIDEWALL SPRINKLER HEAD.



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1ST FLOOR PLAN - FIRE PROTECTION

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

BUILDING INFORMATION

CONSTRUCTION TYPE VB FULLY SPRINKLERED

MIXED OCCUPANCY PER FBC 302.3

2ND FLOOR MULTIPURPOSE ROOM – ASSEMBLY A-3 – 239 PEOPLE.

REMAINDER OF BUILDING SHALL BE BUSINESS OCCUPANCY – 55 PEOPLE.

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Designer: KBS	Checked by: KBS
Technician: MB	Project Number: AR553009

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

1ST FLOOR PLAN
FIRE PROTECTION

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Date: APRIL 15, 2009

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

Drawing Number: FP-1.1

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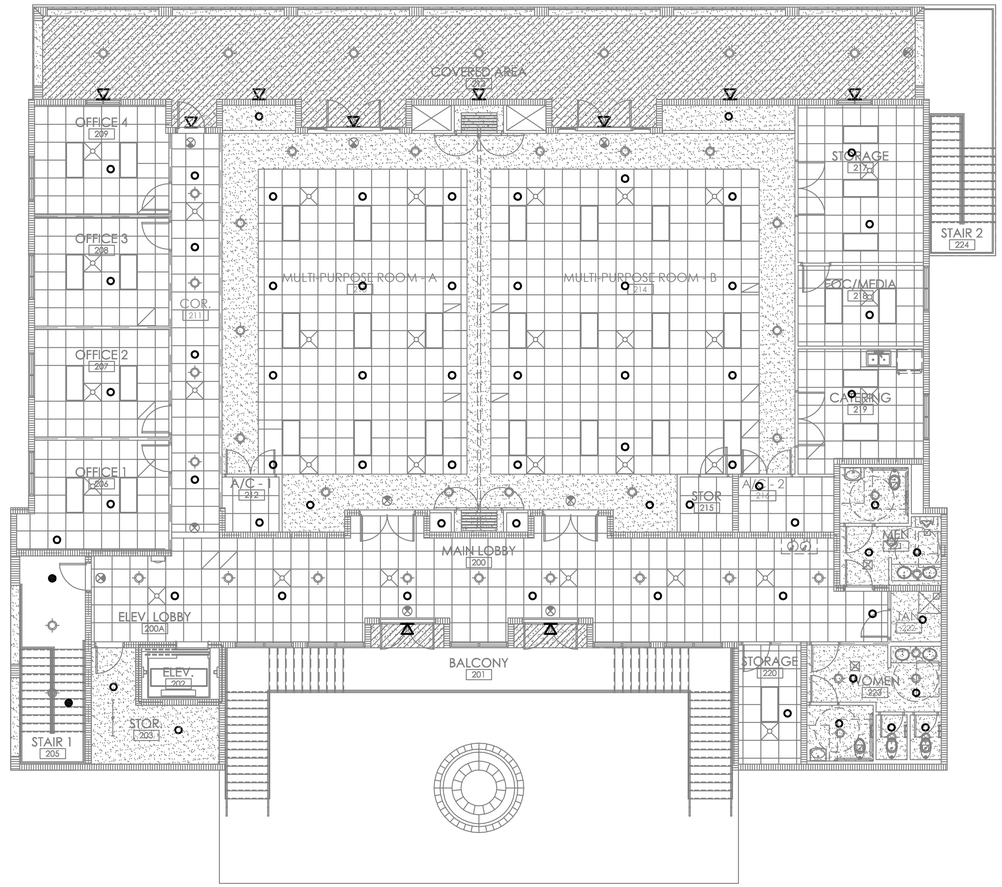
FIRE PROTECTION SYMBOL LEGEND

- FULLY RECESSED CEILING MOUNTED SPRINKLER HEAD WITH WHITE COVERPLATE. CENTER ON 2'x2' CEILING TILE IF APPLICABLE.
- UPRIGHT SPRINKLER HEAD IN ROOM WITH NO CEILING. LOCATE HEAD AS NECESSARY TO PROVIDE PROPER COVERAGE.
- SIDEWALL SPRINKLER HEAD.



N

2ND FLOOR PLAN - FIRE PROTECTION

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

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Designer: KBS	Checked by: KBS
Technician: MB	Project Number: AR553009

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

2ND FLOOR PLAN
FIRE PROTECTION

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E.
#39410

Date: APRIL 15, 2009

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

Drawing Number: FP-1.2

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GENERAL NOTES (APPLIES TO ALL DRAWINGS)

1. WIRING SHOWN ON PLANS IS SCHEMATIC AND INTENDED TO SHOW REQUIRED SWITCHING AND CIRCUITING. JUNCTION BOXES AND FLEXIBLE FIXTURE CONNECTIONS ARE NOT INDICATED. PROVIDE PROPER NUMBER OF WIRES IN EACH CONDUIT AS REQUIRED BY INDICATED CIRCUITRY AND SWITCHING.
2. FOR EXACT LOCATION OF LIGHTING FIXTURES, REFER TO ARCHITECTURAL REFLECTED CEILING PLANS. COORDINATE WORK WITH CEILING CONTRACTOR PROVIDE PROPER FIXTURE FRAMES, FOR TYPE OF CEILING INDICATED.
3. COORDINATE WITH OTHER DIVISIONS FOR EXACT LOCATION OF ALL MOTOR AND OTHER EQUIPMENT TO BE INSTALLED AND/OR WIRED UNDER THIS DIVISION BUT FURNISHED UNDER ANOTHER DIVISION OF THE SPECIFICATIONS.
4. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA), AND NATIONAL ELECTRICAL CODE (NEC) 2005 EDITION STATE REGULATIONS FOR EDUCATIONAL FACILITIES.
5. COORDINATE ALL WORK DONE UNDER THIS DIVISION WITH WORK TO BE PERFORMED UNDER OTHER DIVISIONS.
6. ALL TRENCHING SHALL BE HAND-DUG.
7. ALL BRANCH CIRCUITS FOR 120 VOLT, 20 AMP CIRCUITS EXCEEDING EIGHTY FEET IN LENGTH SHALL BE #10 AWG ENTIRE CIRCUIT MINIMUM.
8. VISIT AND CAREFULLY EXAMINE THOSE PORTIONS OF THE BUILDING AND SITE AFFECTED BY THIS WORK BEFORE SUBMITTING PROPOSALS, SO AS TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT EXECUTION OF THE WORK. SUBMISSION OF A PROPOSAL WILL BE CONSTRUED AS EVIDENCE THAT SUCH EXAMINATION HAS BEEN MADE AND LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIALS REQUIRED BECAUSE OF DIFFICULTIES ENCOUNTERED WILL NOT BE RECOGNIZED.
9. UTILITIES AND SERVICES INDICATED ARE TAKEN FROM VARIOUS OLD SURVEYS AND FIELD INVESTIGATIONS. IT IS TO BE UNDERSTOOD THAT UNFORESEEN CONDITIONS PROBABLY EXIST AND NEW WORK MAY NOT BE FIELD LOCATED EXACTLY AS SHOWN ON THE DRAWINGS. COOPERATION WITH OTHER TRADES IN ROUTING AND/OR BURIAL DEPTHS, AS DETERMINED DURING CONSTRUCTION AND AS DIRECTED BY THE ARCHITECT/ENGINEER, MAY BE NECESSARY AND IT IS INTENDED THAT SUCH DEVIATION SHALL BE CONSIDERED AS PART OF THIS CONTRACT. IT IS ALSO UNDERSTOOD THAT THE PLANS ARE NOT COMPLETELY TO SCALE. THIS CONTRACTOR IS TO FIELD VERIFY DIMENSIONS OF ALL SITE UTILITIES, ETC., PRIOR TO BID, AND INCLUDE ANY DEVIATIONS IN THE CONTRACT.
10. COMPLY WITH ALL DEP, EPA, NATIONAL, STATE AND LOCAL RULES AND REGULATIONS APPLICABLE TO THE TRANSPORT, DISPOSAL AND/OR RECYCLING OF ALL WASTE MATERIALS GENERATED BY THIS PROJECT, INCLUDING FLORIDA STATUTE(S) REGARDING LAMPS AND BALLASTS. PROVIDE WRITTEN VERIFICATION OF PROPER DISPOSAL OF WASTE MATERIALS TO OWNER PRIOR TO SUBSTANTIAL COMPLETION. REFER TO SECTION 02 84 16 FOR DISPOSAL OF FLUORESCENT LAMPS.
11. REMOVE ALL EXISTING LIGHTING FIXTURES LOCATED IN AREAS OF RENOVATION UNLESS OTHERWISE NOTED. REMOVE ALL EXISTING LIGHTING BRANCH CIRCUIT CONDUITS AND WIRING ASSOCIATED WITH FIXTURES BEING REMOVED, BACK TO SOURCE (UNLESS OTHERWISE NOTED). REFER TO RENOVATION PLANS FOR NEW LIGHTING REQUIREMENTS. DISPOSE OF FLUORESCENT LAMPS AS PER ALL APPLICABLE EPA AND OTHER REQUIREMENTS.
12. AT HIS DISCRETION, CONTRACTOR MAY REUSE EXISTING CONDUIT, FITTINGS, AND BOXES WHICH ARE FREE FROM DEBRIS AND CORROSION, AND ARE CONSIDERED IN "LIKE-NEW" CONDITION. WHERE EXISTING CONDUIT ROUTING DOES NOT ACCOMODATE INSTALLATION OF NEW WORK, NEW CONDUIT SHALL BE INSTALLED. EXISTING CONDUCTORS/WIRING SHALL NOT BE REUSED.
13. REMOVE EXISTING LIGHT SWITCHES, SWITCH PLATES, AND WIRING BETWEEN EXISTING FIXTURES AND SWITCHES BEING REMOVED UNLESS OTHERWISE NOTED. REFER TO RENOVATION PLANS FOR REUSE OF EXISTING SWITCH OUTLET BOX AND CONDUIT.
14. REMOVE ALL EXISTING ELECTRICAL ASSOCIATED WITH EXISTING HVAC EQUIPMENT BEING DEMOLISHED INCLUDING, BUT NOT LIMITED TO: ELECTRICAL CONNECTIONS TO EQUIPMENT, DISCONNECT SWITCHES, CONDUIT, WIRING, PULL BOXES, AND PANELBOARDS. COORDINATE WITH OTHER DIVISIONS PRIOR TO SUBMITTING PROPOSAL AND PRIOR TO COMMENCEMENT OF WORK.
15. ALL EQUIPMENT AND MATERIALS INCLUDING, BUT NOT LIMITED TO: PANELBOARDS, LIGHTING FIXTURES, LIGHT SWITCHES, PULL BOXES, AND DISCONNECT SWITCHES BEING REMOVED AND NOT REINSTALLED SHALL BE IDENTIFIED BY ORANGE COUNTY PUBLIC SCHOOLS FOR DELIVERY TO THEIR FACILITY. SPECIAL CARE SHALL BE EXERCISED WHEN REMOVING EQUIPMENT TO MINIMIZE DAMAGE TO MATERIALS DESIGNATED BY ORANGE CO. SCHOOL FOR REUSE.
16. ALL EXISTING ELECTRICAL NOT BEING DEMOLISHED (I.E. RECEPTACLES, LIGHTS, INTERCOM, TV, TELEPHONE, DATA, ETC.), AND ELECTRICAL OUTSIDE THE AREA OF RENOVATION SHALL REMAIN. PROVIDE ALL ELECTRICAL REQUIRED TO MAINTAIN CONTINUITY TO ALL CIRCUITS AND FEEDERS THAT REMAIN INCLUDING REROUTING OF EXISTING CONDUIT AND WIRE TO ACCOMODATE INSTALLATION OF NEW WORK WHERE REQUIRED. REFER TO RENOVATION PLANS AND PANEL SCHEDULES FOR ADDITIONAL REQUIREMENTS.
17. REMOVE ALL EXISTING CEILING MOUNTED SPEAKERS AND BACK BOXES LOCATED IN CEILINGS BEING DEMOLISHED.
18. ALL EXISTING FEEDERS AND BRANCH CIRCUITS NOT BEING DEMOLISHED SHALL BE TRACED-OUT IN PANELBOARDS THAT ARE TO BE RE-WORKED. PROVIDE NEW TYPED PANEL DIRECTORIES FOR ALL PANELBOARDS THAT ARE RE-WORKED DUE TO RENOVATION.
19. PROVIDE NEW TYPED PANEL DIRECTORIES FOR ALL PANELBOARDS AFFECTED BY RENOVATION. TRACE-OUT ALL BRANCH CIRCUITS AS REQUIRED.
20. PROVIDE NEW TYPED PANEL DIRECTORIES FOR ALL NEW PANELBOARDS. ALL TYPED PANELBOARD DIRECTORIES SHALL INCLUDE THE TYPED ROOM NUMBERS AS WELL AS CIRCUIT DESCRIPTION AS REQUIRED BY OCPS.
21. ALL NEW INTERIOR CONDUITS SHALL BE INSTALLED CONCEALED ABOVE CEILINGS AND IN WALLS WHERE PRACTICAL. IF CONDUITS CANNOT BE INSTALLED IN WALLS PROVIDE SURFACE METAL RACEWAY WIREMOLD 500 OR 700 AS REQUIRED. NEW CONDUITS INSTALLED IN MECHANICAL ROOMS AND ELECTRICAL ROOMS MAY BE SURFACE MOUNTED.
22. COORDINATE THE REQUIRED SIZE OF ALL CIRCUIT BREAKERS FEEDING EQUIPMENT, (I.E. MOTORS, HVAC, KITCHEN EQUIPMENT, SPECIAL PURPOSE OUTLETS, ELEVATORS, OWNER FURNISHED EQUIPMENT, ETC.) WITH APPROVED EQUIPMENT SHOP DRAWINGS AND OWNER REPRESENTATIVES PRIOR TO ORDERING PANELBOARDS. BREAKERS SHALL BE SIZED PER THE NEC, THE EQUIPMENT NAME PLATE AND MANUFACTURER'S RECOMMENDATIONS.
23. THE POWER COMPANY SHALL BE CONTACTED WITHIN 10 DAYS OF THE AWARD OF THE CONTRACT BY THE CONTRACTOR TO VERIFY THE ACTUAL AVAILABLE SHORT CIRCUIT FAULT CURRENT (SCC) AT THE TRANSFORMER SECONDARY BUSHINGS. THE CONTRACTOR SHALL PROVIDE ELECTRICAL DISTRIBUTION AND UTILIZATION EQUIPMENT AND PANELBOARDS WHICH HAVE AIC/WITHSTAND RATINGS GREATER THAN THE AVAILABLE SSC.
24. ALL EXISTING ELECTRICAL (I.E CONDUIT/LINE) INSIDE THE RENOVATION AREA THAT IS TO REMAIN SHALL BE REWORKED/REROUTED AS REQUIRED TO ACCOMODATE INSTALLATION OF NEW WORK (I.E LIGHTING FIXTURES, HVAC DUCTWORK) AT NO ADDITIONAL COST TO OWNER/ENGINEER.
25. NO SPLICING OF CONDUCTORS ALLOWED IN UNDERGROUND OR IN-GRADE PULLBOXES UNLESS APPROVED BY ENGINEER.
26. WHERE DRAWINGS INDICATE THE INSTALLATION OF A NEW CIRCUIT BREAKER IN EXISTING PANEL, THE AIC RATING OF THE NEW CIRCUIT BREAKER SHALL MATCH THE EXISTING.
27. ALL OPENINGS IN WALLS AND FLOORS SHALL BE SEALED WATERTIGHT. SEAL SHALL BE FLUSH WITH FINISH SURFACE AND PAINTED TO MATCH SURROUNDING FINISH, COORDINATE EXACT REQUIREMENTS WITH ARCHITECT.
28. REMOVE ALL EXISTING WALL MOUNTED EQUIPMENT AND DEVICES WHICH INTERFERE WITH INSTALLATION OF NEW CEILINGS. PROVIDE ALL THAT IS REQUIRED TO REINSTALL EXISTING EQUIPMENT AND DEVICES ON WALLS BELOW NEW CEILING HEIGHT. WHERE PROTRUDING SHARP CORNERS OR OTHER POTENTIAL HAZARDS ARE MOUNTED BELOW 6'-8"AFF, MARK AND PAD IN ACCORDANCE WITH ACCEPTED SAFETY STANDARDS. COORDINATE EXACT REQUIREMENTS WITH ARCHITECT PRIOR TO COMMENCEMENT OF WORK.
29. WHERE CONDUIT PENETRATES A FIRE RATED WALL, FLOOR, ETC., FIRESTOPPING SHALL BE PROVIDED AS PER APPICABLE CODES AND STANDARDS.
30. SUBMIT WRITTEN VERICATION THAT ALL EXISTING SYSTEMS NOT BEING DEMOLISHED (I.E. INTERCOM, TV, DATA, TELEPHONE, FIRE ALARM, ETC.) AND SYSTEMS OUTSIDE THE AREA OF RENOVATION ARE IN PROPER WORKING ORDER PRIOR TO COMMENCEMENT OF WORK. COMMENCEMENT OF WORK BY CONTRACTOR SHALL CONSTITUTE AN ACCEPTANCE OF RESPONSIBILITY BY CONTRACTOR FOR MAINTAINING COMPLETE AND OPERATIONAL SYSTEMS DURING AND UPON COMPLETION OF CONSTRUCTION. LATER CLAIMS FOR LABOR, EQUIPMENT OR MATERIAL WILL NOT BE RECOGNIZED.
31. UNLESS OTHERWISE SHOWN ON RENOVATION POWER PLANS, PROVIDE A 1P/20A DEDICATED CIRCUIT AT NEAREST AVAILABLE ELECTRICAL PANEL IN FOR HVAC CONTROL POWER, WHEREVER REQUIRED. REFER TO HVAC DRAWINGS FOR LOCATIONS.
32. FLOOR BOXES SHALL BE CARLON E976RFB/E976AK2 SERIES, WITH ADDITIONAL COMPARTMENTS FOR SYSTEMS DEVICES WHERE SHOWN ON THE SYSTEMS DRAWINGS, WITH ALL ACCESSORIES AND HARDWARE NEEDED FOR A COMPLETE AND OPERABLE INSTALLATION.
33. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL ELECTRIC HAND DRYERS AND RECEPTACLES MOUNTED AT LAVATORIES PRIOR TO ROUGH-IN.
34. NO RECEPTACLE SHALL BE INSTALLED DIRECTLY "BACK-TO-BACK".
35. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ADDITIONAL WIRING AND CONDUIT FOR EXHAUST FAN TIME-DELAY RELAYS AND OTHER DEVICES THAT REQUIRE 120VAC CONTROL POWER.

MOUNTING HEIGHTS

HEIGHT OF WALL OUTLETS TO BOTTOM ABOVE FINISHED FLOORS IS TO BE AS FOLLOWS, UNLESS SPECIFICALLY NOTED OTHERWISE, OR UNLESS OTHERWISE REQUIRED BY APPLICABLE CODES INCLUDING ADA. VERIFY WITH THE ARCHITECTURAL PLANS AND SHOP DRAWINGS FOR INSTALLING.

1) SWITCHES 4'-0" AFF TO TOP
2) RECEPTACLES 1'-4" AFF TO TOP
3) LIGHTING PANELS 6'-6" AFF TO CENTERLINE OF HIGHEST BREAKER/FUSE
4) PHONE OUTLETS 1'-4" AFF TO BOTTOM
5) INTERCOM CALL BUTTON 4'-0" AFF TO TOP
6) FIRE ALARM PULL STATIONS 4'-0" AFF TO TOP
7) FIRE ALARM STROBE LIGHTS 80" AFF TO BOTTOM

BOTTOMS OF OUTLETS ABOVE COUNTER TOPS OR BASE CABINETS ARE TO BE A MINIMUM 2" ABOVE COUNTER TOP OR BACKSPLASH, WHICHEVER IS HIGHEST. OUTLETS MAY BE RAISED SO THAT BOTTOM RESTS ON TOP OF CONCRETE BLOCK COURSE, BUT ALL OUTLETS ABOVE COUNTERS IN THE SAME AREA ARE TO BE AT THE SAME HEIGHT. IT IS THE RESPONSIBILITY OF THIS DIVISION TO SECURE CABINET DRAWINGS AND COORDINATE OUTLET LOCATIONS IN RELATION TO ALL CABINETS AS SHOWN ON THE ARCHITECTURAL PLANS, PRIOR TO ROUGH-IN, REGARDLESS OF HEIGHT SHOWN ON THE DRAWINGS.

HEIGHT OF WALL-MOUNTED FIXTURES IS TO BE AS SHOWN ON THE DRAWINGS OR AS REQUIRED BY ARCHITECTURAL PLANS AND CONDITIONS. FIXTURE OUTLET BOXES ARE TO BE EQUIPPED WITH FIXTURE STUDS WHEN SUPPORTING FIXTURES.

ABBREVIATIONS

AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
AHU	AIR HANDLING UNIT
BAS	BUILDING AUTOMATION SYSTEM
CKT	CIRCUIT
CU	CONDENSING UNIT
EC	EMPTY CONDUIT
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EMS	ENERGY MANAGEMENT SYSTEM
ERU	ENERGY RECOVERY UNIT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EXP	EXPLOSION PROOF
FF	FINISH FLOOR
G	GROUND FAULT INTERRUPTER
GND	GROUND
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUG ONLY
NL	NIGHT SECURITY LIGHTING
NTS	NOT TO SCALE
TYP	TYPICAL
WP	WEATHERPROOF

ELECTRICAL SYMBOL LIST

- A/b — RECESSED 2'x 4' FLUORESCENT FIXTURE. UPPER CASE LETTER INDICATES FIXTURE TYPE; SUBSCRIPT LETTER INDICATES SWITCH CONTROL.
- RECESSED 1' X 4' FLUORESCENT FIXTURE
- SURFACE OR PENDANT MOUNTED FLUORESCENT FIXTURE
- SURFACE OR PENDANT MOUNTED FLUORESCENT STRIP
- B/a — RECESSED INCANDESCENT, FLUORESCENT OR HID DOWNLIGHT. UPPER CASE LETTER INDICATED FIXTURE TYPE: SUBSCRIPT LETTER INDICATES SWITCH CONTROL.
- WALL MOUNTED BATTERY POWERED EMERGENCY LIGHT
- WALL MOUNTED INCANDESCENT, COMPACT FLUORESCENT OR HID FIXTURE.
- CEILING MOUNTED EXIT LIGHT, ARROW INDICATES DIRECTION OF CHEVRONS ON FIXTURE; SHADING INDICATES FACE OF FIXTURE
- WALL OR END MOUNTED EXIT LIGHT, ARROW INDICATES DIRECTION OF CHEVRONS ON FIXTURE; SHADING INDICATES FACE OF FIXTURE
- PC — PHOTOCELL
- LC — LIGHTING CONTACTOR
- $3a — SINGLE POLE SWITCH MOUNTED 48" AFF TOP OF BOX, CAPITAL LETTER OR NUMBER INDICATES SWITCH TYPE (3=THREE-WAY, 4=FOUR-WAY, P=PILOT LIGHT, K=KEY OPERATED); SUBSCRIPT LETTER INDICATES FIXTURE OR LAMP CONTROL
- 3a — WALL DIMMER MOUNTED 48" AFF TOP OF BOX, CAPITAL LETTER OR NUMBER INDICATES SWITCH TYPE (3=THREE-WAY); SUBSCRIPT LETTER INDICATES FIXTURE OR LAMP CONTROL
- $M — HORSEPOWER RATED MANUAL MOTOR SWITCH WITHOUT OVERLOAD PROTECTION 20 AMP, 1 POLE RATED: 1HP AT 120V; 2HP AT 240V
- 20A, 2 POLE, 3 WIRE, 125V GROUNDED DUPLEX RECEPTACLE MOUNTED AT 16" AFF TO BOTTOM OF BOX UNLESS OTHERWISE NOTED.
- 20A, 2 POLE, 3 WIRE, 125V GROUNDED DUPLEX RECEPTACLE MOUNTED ABOVE COUNTERTOP UNLESS OTHERWISE NOTED
- WPG — 20A, 2 POLE, 3 WIRE, 125V GFI GROUNDED DUPLEX RECEPTACLE WITH LOCKING METALLIC WEATHERPROOF IN-USE COVER. 24" AFF TO BOTTOM OF BOX.
- (2) 20A, 2 POLE, 3 WIRE 125V GROUND DUPLEX RECEPTACLE IN 2-GANG BOX MOUNTECD 16" AFF TO BOTTOM OF BOX UNLESS OTHERWISE NOTED.
- FLUSH FLOOR OUTLET BOX WITH (2) 20A, 2 POLE, 3 WIRE, 125V GROUNDED DUPLEX RECEPTACLES.
- SPECIAL RECEPTACLE, TYPE AS INDICATED ON DRAWINGS, 16" AFF TO BOTTOM OF BOX UNLESS OTHERWISE NOTED.
- POWER POLE, AS NOTED
- CONDUIT CONCEALED BELOW GRADE OR IN SLAB
- CONDUIT TURNING UP
- CONDUIT TURNING DOWN
- CONDUIT CAPPED OFF
- J — JUNCTION BOX
- C — CONNECTION TO EQUIPMENT
- ST — SHUNT-TRIP PUSHBUTTON STATION IN WEATHERPROOF ENCLOSURE
- SAFETY DISCONNECT SWITCH, AS NOTED
- VARIABLE FREQUENCY DRIVE / DISCONNECT SWITCH
- MOTOR
- PANELBOARD - 120/208V, 3PH, 4W
- TC — TIME CLOCK
- GROUND OR GROUND ROD AS NOTED
- COMBINTATION VOICE/DATA OUTLET
- W 54" — WALL TELEPHONE OUTLET
- TELEPHONE TERMINAL BOARD
- F — FIRE ALARM MANUAL PULL STATION
- F — FIRE ALARM A/V SIGNALING DEVICE
- FIRE ALARM VISUAL-ONLY SIGNALING DEVICE
- R — FIRE ALARM AHU SHUT-DOWN RELAY
- "FACP" — FIRE ALARM CONTROL PANEL (EXISTING)
- S — FIRE ALARM DUCT SMOKE DETECTOR
- FS — FIRE ALARM CONNECTION TO FIRE SPRINKLER FLOW SWITCH
- TS — FIRE ALARM CONNECTION TO FIRE SPRINKLER TAMPER SWITCH
- H — HEAT DETECTOR

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER/CATALOG NUMBER	VOLTS	INPUT WATTS	LAMPS QTY	LAMPS WATTS	LAMPS TYPE
A	2'X4' FLUORESCENT GRID-TYPE LAY-IN TROFFER	LITHONIA	120	64	2	32	FO32T8 835K
	WITH ACRYLIC PRISMATIC LENS	2GT8-232-A12-120-1/2 GEB					
B	2'X4' FLUORESCENT GRID-TYPE LAY-IN TROFFER	LITHONIA	120	128	4	32	FO32T8 835K
	WITH ACRYLIC PRISMATIC LENS	2GT8-432-A12-120-1/4-GEB					
C	2'X4' FLUORESCENT GRID-TYPE LAY-IN TROFFER	LITHONIA	120	96	3	32	FO32T8 835K
	WITH 18-CELL PARABOLIC LOUVER	2PM3N-G-332-18-120-1/3-GEB					
D	2'X4' FLUORESCENT GRID-TYPE LAY-IN TROFFER	LITHONIA	120	96	3	32	FO32T8 835K
	WITH 18-CELL PARABOLIC LOUVER, WIRED FOR	2PM3N-G-332-18-120-2/3-GEB					
	SEPERATE SWITCHING OF INNER AND OUTER LAMPS						
E	COMPACT FLUORESCENT ENCLOSED WALL BRACKET,	CANLET	120	33	1	26	PL
	ELEVATOR SHAFT	68-02-FWF-21-OG-39-120V					
F	4' FLUORESCENT STRIP	LITHONIA	120	64	2	32	FO32T8 835K
		C-232-120-1/2-GEB					
G	8" COMPACT FLUORESCENT OPEN RECESSED	LITHONIA	120	72	1	57	57W TRT PL
	ROUND WITH SPECULAR SILVER REFLECTOR	AF-157TRT-8AR-120					
H	8" COMPACT FLUORESCENT ENCLOSED RECESSED	LITHONIA	120	72	1	57	57W TRT PL
	ROUND WITH FRESNEL LENS, DAMP LOCATION	AF-157TRT-8AR-CCL					
J	COMPACT FLUORESCENT WALL BRACKET, OVER	SELECTED BY OWNER	120	105	2	42	42W PL
	LAVATORY						
K	COMPACT FLUORESCENT PENDANT, DAMP LOCATION	SELECTED BY OWNER	120	105	2	42	42W PL
X1	SINGLE-FACE EXIT SIGN WITH INTEGRAL BATTERY,	LITHONIA	120	.57	–	–	RED LED
	CHARGER, TEST SWITCH AND INDICATOR LAMP	LQMSW1R120ELN					
X2	DOUBLE-FACE EXIT SIGN WITH INTEGRAL BATTERY,	LITHONIA	120	.57	–	–	RED LED
	CHARGER, TEST SWITCH AND INDICATOR LAMP	LQMSW2R120ELN					
X3	TWO-HEAD SELF-CONTAINED EMERGENCY LIGHTING	LITHONIA	120	1.2	2	5.4	KRYPTON
	UNIT WITH INTEGRAL BATTERY, CHARGER, TEST	ELM					
	SWITCH AND INDICATOR LAMP						
X4	TWO-HEAD SELF-CONTAINED EMERGENCY LIGHTING	LITHONIA	120	1.2	2	5.4	KRYPTON
	UNIT WITH INTEGRAL BATTERY, CHARGER, TEST	TBD					
	SWITCH AND INDICATOR LAMP, WET LOCATION						
X5	COMPACT FLUORESCENT WALL-MOUNT WITH	LITHONIA	120	1.2	2	5.4	KRYPTON
	INTEGRAL BATTERY, CHARGER, TEST SWITCH AND	TBD					
	INDICATOR LAMP, WET LOCATION						

NOTES:
1. FOR ALL FIXTURES, SUBSTITUTES OF EQUAL OR BETTER QUALITY BY DAY-BRITE AND COOPER ARE ACCEPTABLE FOR BIDDING, SUBJECT TO REVIEW AND APPROVAL BY ARCHITECT AND ENGINEER.

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
ELECTRICAL GENERAL NOTES AND SYMBOLS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009
Scale: N.T.S.
Drawing Number: E-1.0

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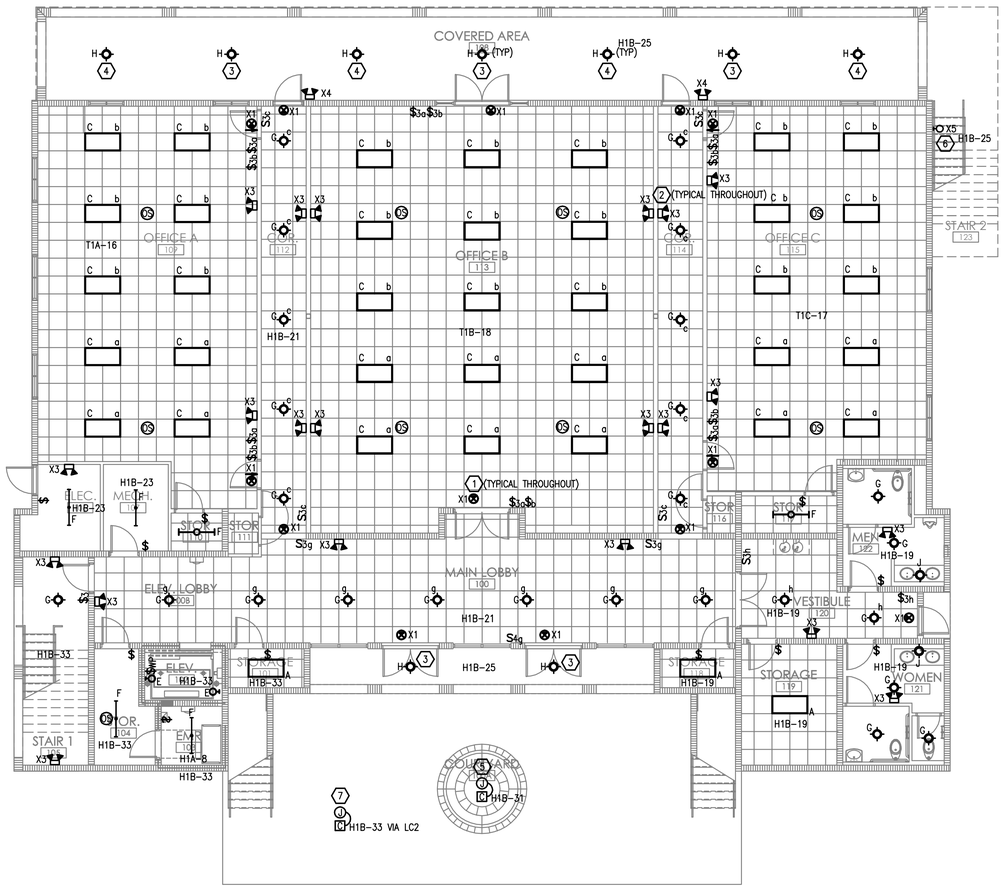

KEY NOTES

1. CONNECT EXIT SIGN FIXTURE TO UNSWITCHED LEG OF LIGHTING CIRCUIT FROM AREA IN WHICH IT SERVES TO BOTH CHARGE AND ILLUMINATE CONTINUOUSLY, REGARDLESS OF SWITCH POSITIONS. PROVIDE ADDITIONAL UNSWITCHED CONDUCTORS WHEREVER NECESSARY.
2. CONNECT EMERGENCY LIGHTING UNIT TO UNSWITCHED LEG OF LIGHTING CIRCUIT FROM AREA IN WHICH IT SERVES TO CHARGE CONTINUOUSLY, BUT ILLUMINATE ONLY UPON LOSS OF NORMAL POWER, ALL REGARDLESS OF SWITCH POSITIONS. PROVIDE ADDITIONAL UNSWITCHED CONDUCTORS WHEREVER NECESSARY.
3. CONNECT EXTERIOR LIGHTING FIXTURE VIA LIGHTING CONTACTOR "LC1" FOR AUTOMATIC PHOTOCELL-ON/ PHOTOCELL-OFF DUSK-TO-DAWN CONTROL OF LIGHTING.
4. CIRCUIT EXTERIOR LIGHTING FIXTURE VIA LIGHTING CONTACTOR "LC2" FOR AUTOMATIC TIME CLOCK-ON/TIME CLOCK-OFF CONTROL OF LIGHTING.
5. CONNECT FOUNTAIN LIGHTING FIXTURES, RUN CIRCUIT VIA LIGHTING CONTACTOR "LC2" FOR AUTOMATIC TIME CLOCK-ON/TIME CLOCK-OFF OPERATION.
6. CONNECT EMERGENCY EXTERIOR LIGHTING FIXTURES TO CHARGE CONTINUOUSLY REGARDLESS OF PHOTOCELL STATE, ILLUMINATE WHEN TURNED ON BY PHOTOCELL UPON NORMAL POWER, AND ILLUMINATE REGARDLESS OF PHOTOCELL STATE UPON LOSS OF NORMAL POWER. PROVIDE ADDITIONAL UNSWITCHED CONDUCTORS WHEREVER NECESSARY.
7. CONNECT ILLUMINATED SIGN, VERIFY EXACT LOCATION, 2#8,#10G,1"C, AS PER NEC 600.5.

N

1ST FLOOR PLAN - LIGHTING

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

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

1ST FLOOR PLAN LIGHTING

FAA A.I.P. PROJECT NUMBER:

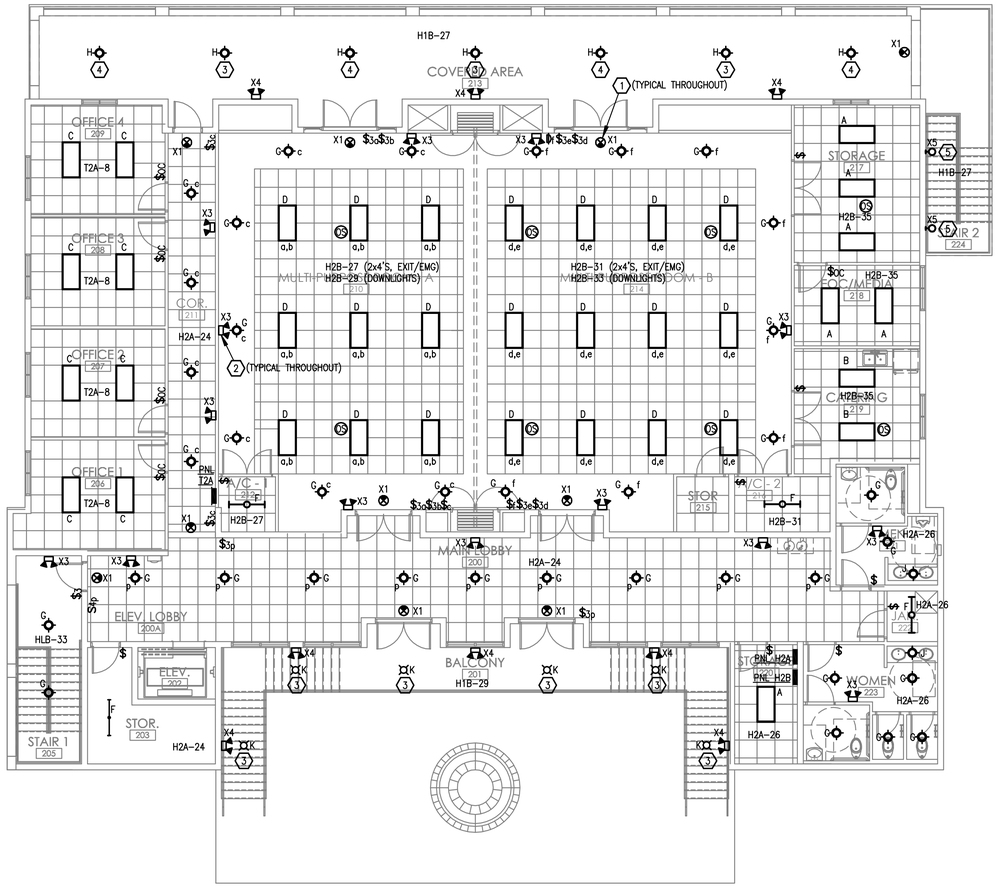
ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009

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

Drawing Number: E-1.1



2ND FLOOR PLAN - LIGHTING

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

KEY NOTES

1. CONNECT EXIT SIGN FIXTURE TO UNSWITCHED LEG OF LIGHTING CIRCUIT FROM AREA IN WHICH IT SERVES TO BOTH CHARGE AND ILLUMINATE CONTINUOUSLY, REGARDLESS OF SWITCH POSITIONS. PROVIDE ADDITIONAL UNSWITCHED CONDUCTORS WHEREVER NECESSARY.
2. CONNECT EMERGENCY LIGHTING UNIT TO UNSWITCHED LEG OF LIGHTING CIRCUIT FROM AREA IN WHICH IT SERVES TO CHARGE CONTINUOUSLY, BUT ILLUMINATE ONLY UPON LOSS OF NORMAL POWER, ALL REGARDLESS OF SWITCH POSITIONS. PROVIDE ADDITIONAL UNSWITCHED CONDUCTORS WHEREVER NECESSARY.
3. CONNECT EXTERIOR LIGHTING FIXTURE VIA LIGHTING CONTACTOR "LC1" FOR AUTOMATIC PHOTOCELL-ON/ PHOTOCELL-OFF DUSK-TO-DAWN CONTROL OF LIGHTING.
4. CONNECT EXTERIOR LIGHTING FIXTURE VIA LIGHTING CONTACTOR "LC2" FOR AUTOMATIC PHOTOCELL-ON/TIME CLOCK-OFF CONTROL OF LIGHTING.
5. CONNECT EMERGENCY EXTERIOR LIGHTING FIXTURE TO CHARGE CONTINUOUSLY REGARDLESS OF PHOTOCELL STATE, ILLUMINATE WHEN TURNED ON BY PHOTOCELL UPON NORMAL POWER, AND ILLUMINATE REGARDLESS OF PHOTOCELL STATE UPON LOSS OF NORMAL POWER. PROVIDE ADDITIONAL UNSWITCHED CONDUCTORS WHEREVER NECESSARY.

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Designer: KGB	Checked by: EGP
Technician: TT	Project Number: AR553009

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Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

2ND FLOOR PLAN LIGHTING

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009

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

Drawing Number: E-1.2

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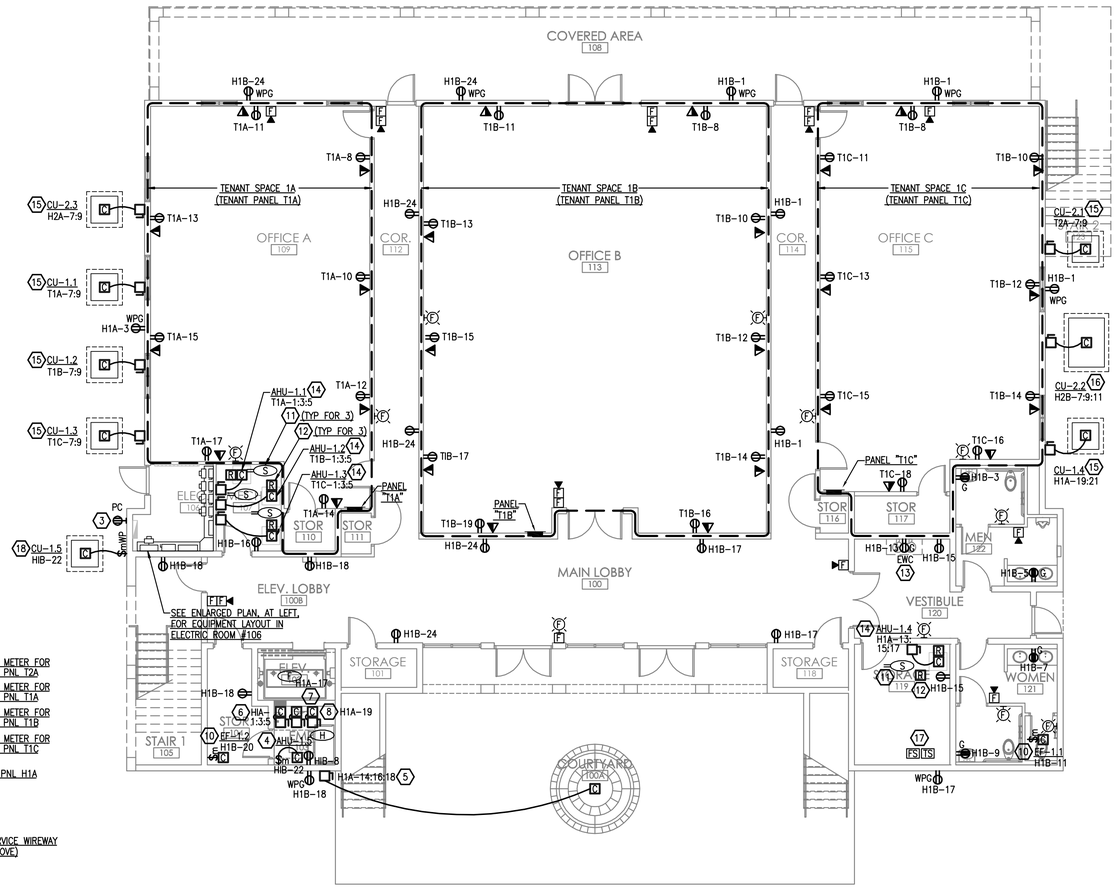

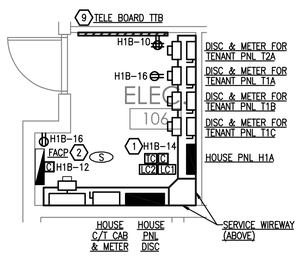

N

ENLARGED PLAN - ELECTRIC ROOM #106

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

N

1ST FLOOR PLAN - POWER

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

KEY NOTES

1. MAKE 120VAC OPERATING POWER CONNECTION TO EXTERIOR LIGHTING TIME CLOCK AND LIGHTING CONTACTORS.
2. MAKE 120VAC OPERATING POWER CONNECTION TO FIRE ALARM CONTROL PANEL AND POWER SUPPLIES, IDENTIFY AS PER NFPA 72 1-5.2.5.2.
3. EXTERIOR LIGHTING PHOTOCELL, MOUNT AT 10'-0"AFF.
4. 1P/20A 120V MANUAL MOTOR STARTING TOGGLE SWITCH (WITHOUT OVERLOADS), CONNECT MINI-SPLIT SYSTEM AIR HANDLING UNIT, 120V, 2#12,#12G,3/4"C.
5. 3P/30A 208V NF 3R DISCONNECT SWITCH, CONNECT FOUNTAIN PUMP, 208V, 3PH, 3#10,#10G,3/4"C.
6. 3P/200A 208V FUSIBLE, LOCKABLE DISCONNECT SWITCH WITH (3) FUSES OF THE SIZE AND TYPE RECOMMENDED BY THE ELEVATOR MANUFACTURER. CONNECT ELEVATOR, 208V, 3ø, 3#1,#6G,1-1/2"C.
7. 1P/30A 120V FUSIBLE, LOCKABLE DISCONNECT SWITCH WITH (1) FUSE OF THE SIZE AND TYPE RECOMMENDED BY THE ELEVATOR MANUFACTURER. CONNECT ELEVATOR CONTROLS, 120V, 2#12,#12G,3/4"C.
8. 1P/30A 120V FUSIBLE, LOCKABLE DISCONNECT SWITCH WITH (1) FUSE OF THE SIZE AND TYPE RECOMMENDED BY THE ELEVATOR MANUFACTURER. CONNECT ELEVATOR FAN AND LIGHTS, 120V, 2#12,#12G,3/4"C.
9. TELEPHONE TERMINAL BOARD, SEE VOICE/DATA RACEWAY SYSTEM RISER DIAGRAM, SHEET E-3.1.
10. 1P/20A 120V MANUAL MOTOR STARTING TOGGLE SWITCH (WITHOUT OVERLOADS), CONNECT EXHAUST FAN, 120V.
11. DUCT SMOKE DETECTOR, FURNISHED BY FIRE ALARM CONTRACTOR, INSTALLED IN DUCTWORK BY HVAC CONTRACTOR, CONNECTED TO FIRE ALARM SYSTEM BY FIRE ALARM CONTRACTOR.
12. AIR HANDLING UNIT SHUT-DOWN RELAY, CONNECT TO SHUT DOWN AIR HANDLING UNIT UPON DETECTION OF SMOKE BY DUCT SMOKE DETECTOR.
13. COORDINATE EXACT LOCATION OF RECEPTACLE SO THAT POWER CORD IS FULLY CONCEALED.
14. 3P/60A 208V NF DISCONNECT SWITCH. CONNECT AIR HANDLING UNIT, 3#6,#10G,1"C.
15. 2P/60A 208V NF DISCONNECT SWITCH. CONNECT CONDENSING UNIT, 2#8,#10G,3/4"C.
16. 3P/60A 208V NF 3R DISCONNECT SWITCH. CONNECT CONDENSING UNIT, 3#8,#10G,3/4"C.
17. MAKE FIRE ALARM CONNECTIONS TO FIRE SPRINKLER FLOW AND TAMPER SWITCHES.
18. 1P/20A 120V MANUAL MOTOR STARTING TOGGLE SWITCH (WITHOUT OVERLOADS), CONNECT MINI-SPLIT SYSTEM CONDENSING UNIT, 120V, 2#12,#12G,3/4"C. PROVIDE WEATHERPROOF HINGED, GASKETED COVER PLATE.

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Designer: KQB	Checked by: FRP
Technician: TT	Project Number: AR553009

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Notes:

REVISIONS

No.	Description	Date	By

Project Name:

PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

1ST FLOOR PLAN POWER

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009

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

Drawing Number: E-2.1

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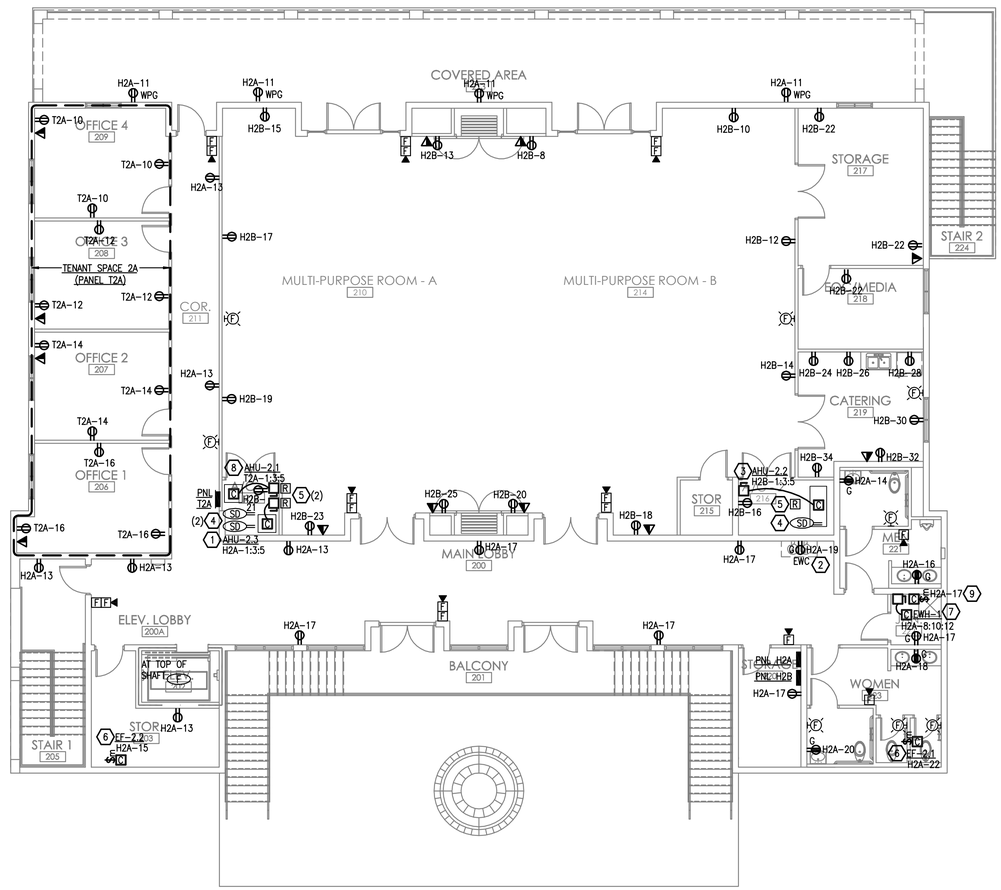

KEY NOTES

1. 3P/60A 208V NF DISCONNECT SWITCH. CONNECT AIR HANDLING UNIT, 208V, 3ø, 3#6, #10G, 1"C.
2. COORDINATE EXACT LOCATION OF RECEPTACLE SO THAT POWER CORD IS FULLY CONCEALED.
3. 3P/100A 208V NF DISCONNECT SWITCH. CONNECT AIR HANDLING UNIT, 208V, 3ø, 3#3, #8G, 1-1/4"C.
4. DUCT SMOKE DETECTOR, FURNISHED BY FIRE ALARM CONTRACTOR, INSTALLED IN DUCTWORK BY HVAC CONTRACTOR, CONNECTED TO FIRE ALARM SYSTEM BY FIRE ALARM CONTRACTOR.
5. AIR HANDLING UNIT SHUT-DOWN RELAY, CONNECT TO SHUT DOWN AIR HANDLING UNIT UPON DETECTION OF SMOKE BY DUCT SMOKE DETECTOR.
6. 1P/20A 120V MANUAL MOTOR STARTING TOGGLE SWITCH (WITHOUT OVERLOADS), CONNECT EXHAUST FAN, 120V, 2#12,#12G,3/4"C.
7. 3P/60A 208V NF DISCONNECT SWITCH, CONNECT ELECTRIC WATER HEATER, 208V, 3ø, 3#8, #10G,3/4"C.
8. 3P/60A 208V NF DISCONNECT SWITCH. CONNECT AIR HANDLING UNIT, 208V 3ø, 3#8,#10G,3/4"C.
9. 1P/20A 120V MANUAL MOTOR STARTING TOGGLE SWITCH (WITHOUT OVERLOADS), CONNECT HOT WATER RECIRCULATING PUMP, 120V, 2#12,#12G,3/4"C.

N

2ND FLOOR PLAN - POWER

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

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PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
2ND FLOOR PLAN POWER

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009

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

Drawing Number: E-2.2

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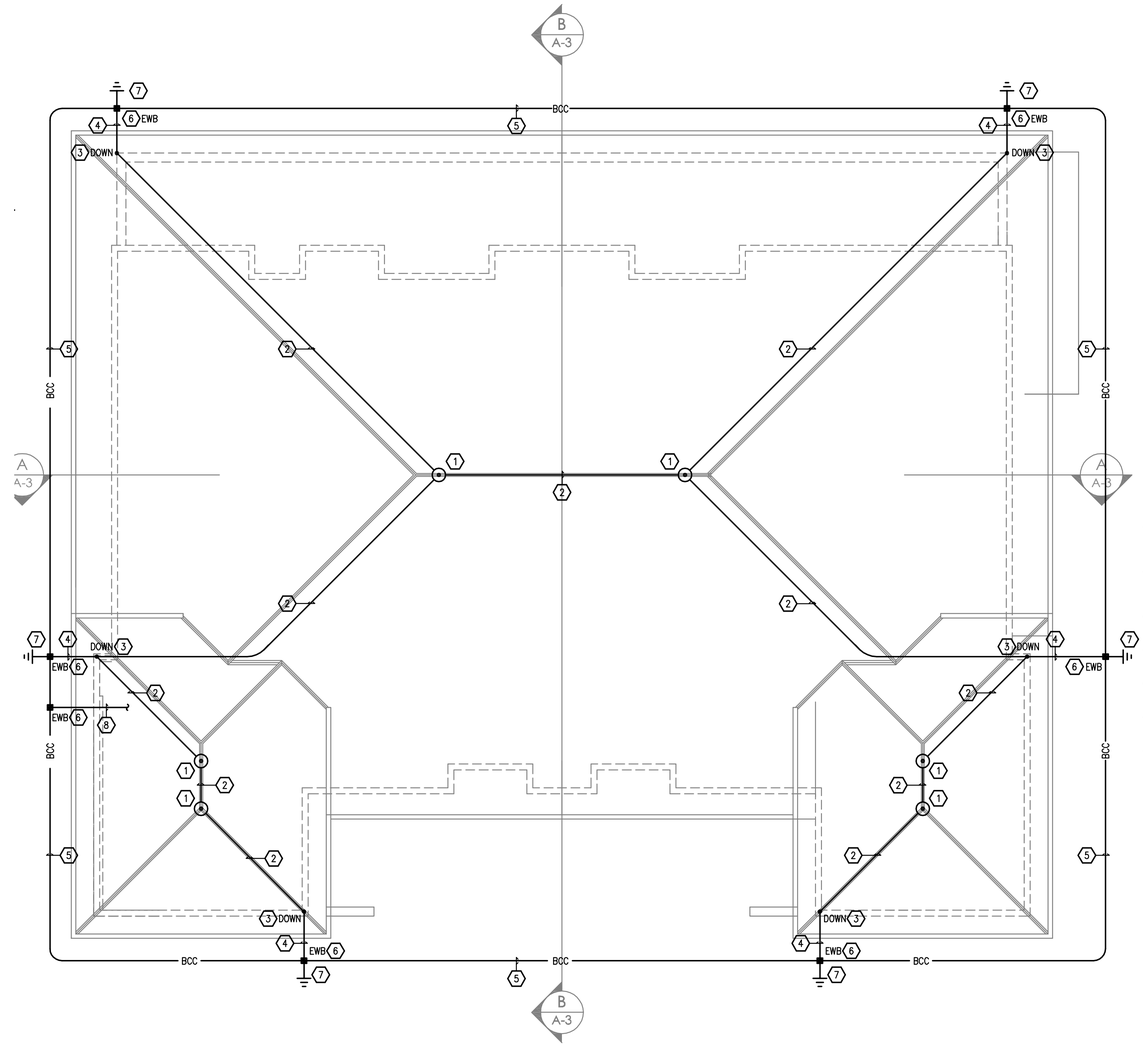

KEY NOTES

1. LIGHTNING PROTECTION AIR TERMINAL WITH BASE AND FACTORY-FABRICATED THROUGH-ROOF ASSEMBLY WITH FULLY CONCEALED DOWN CONDUCTORS AS NEEDED.
2. LIGHTNING PROTECTION ROOFTOP MAIN CONDUCTOR, FULLY CONCEALED BELOW ROOFTOP.
3. DOWN CONDUCTOR RUN FULLY-CONCEALED WITHIN STRUCTURE DOWN TO BURIED COUNTERPOISE CONDUCTOR.
4. EXIT BUILDING WITH DOWN CONDUCTOR BELOW GRADE AND INTERCEPT BURIED COUNTERPOISE CONDUCTOR.
5. LIGHTNING PROTECTION BURIED COUNTERPOISE CONDUCTOR.
6. LIGHTNING PROTECTION EXOTHERMIC WELDED BOND, BELOW GRADE.
7. 3/4" X 20' COPPER-CLAD DRIVEN GROUND ROD, MINIMUM 12" BELOW GRADE TO TOP.
8. #3/0 BARE COPPER GROUND TO ELECTRICAL BUILDING SERVICE GROUND.

LIGHTNING PROTECTION SYMBOL LEGEND

- AIR TERMINAL WITH BASE AND THROUGH-ROOF ASSEMBLY
- ROOFTOP MAIN CONDUCTOR, CONCEALED BELOW ROOFTOP.
- THREE-WAY BOLTED SPLICE.
- BONDING CONNECTION, AS NOTED.
- DOWN — DOWN CONDUCTOR, AS NOTED.
- BCC — BURIED COUNTERPOISE CONDUCTOR.
- EWB — EXOTHERMIC WELDED BOND, BELOW GRADE.
- DRIVEN GROUND ROD WITH TEST WELL.

N

ROOF PLAN - LIGHTNING PROTECTION

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

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Designer: KQB	Checked by: FRP
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PROPOSED MULTI-PURPOSE BUILDING

ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

ROOF PLAN LIGHTNING PROTECTION

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009

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

Drawing Number: E-2.3

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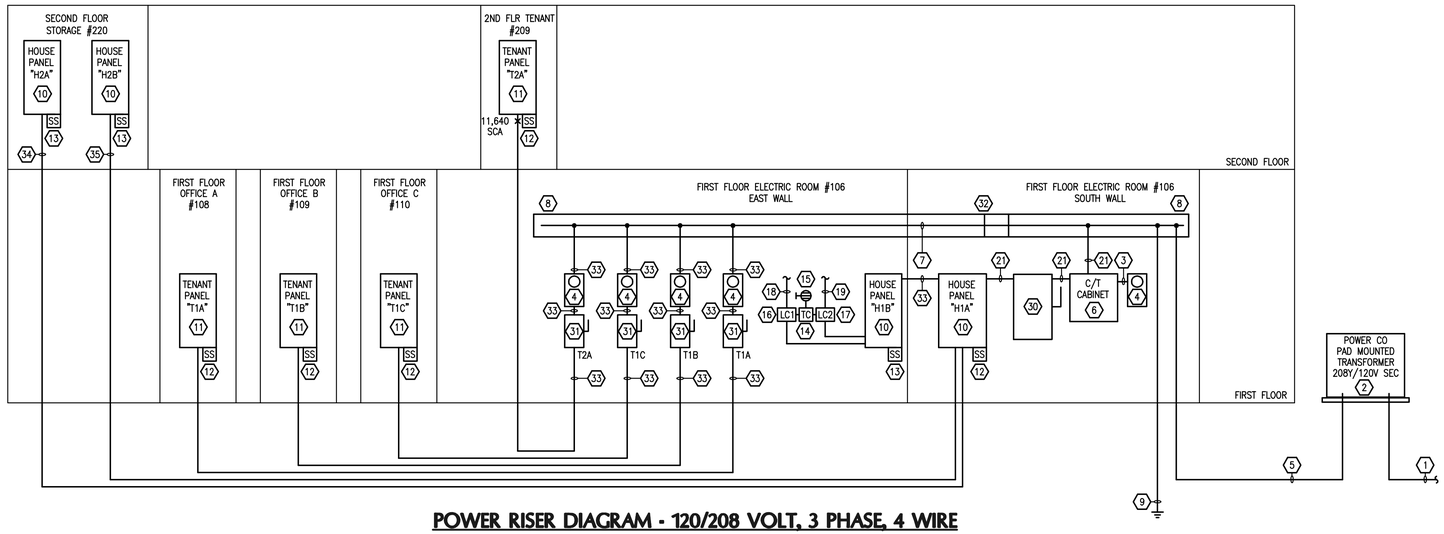
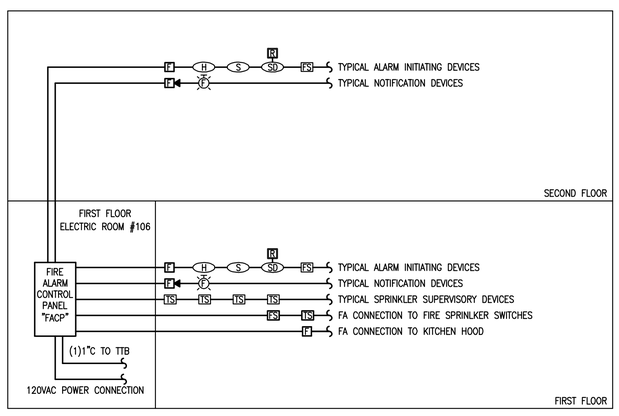


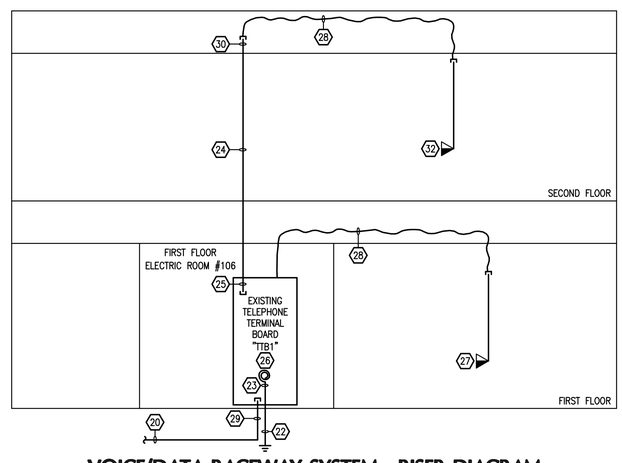
POWER RISER DIAGRAM - 120/208 VOLT, 3 PHASE, 4 WIRE

NO SCALE



FIRE ALARM SYSTEM - RISER DIAGRAM

NO SCALE



VOICE/DATA RACEWAY SYSTEM - RISER DIAGRAM

NO SCALE

KEY NOTES

1. UNDERGROUND ELECTRIC PRIMARY CONDUIT FURNISHED AND INSTALLED BY BY ELECTRICAL CONTRACTOR; PRIMARY CABLE FURNISHED, INSTALLED AND CONNECTED BY POWER COMPANY.
2. PAD MOUNTED TRANSFORMER, FURNISHED, INSTALLED AND CONNECTED BY POWER COMPANY.
3. (1)1"C BY ELECTRICAL CONTRACTOR. METERING CONDUCTORS AND METERING CONNECTIONS BY POWER COMPANY.
4. METER AS PER POWER COMPANY REQUIREMENTS.
5. (3) PARALLEL RUNS, EACH WITH 4-300 KCMIL, 3"C.
6. C/T CABINET, AS PER POWER COMPANY REQUIREMENTS.
7. WIREWAY SERVICE CONDUCTORS, (3) PARALLEL RUNS, EACH WITH 4-300KCMIL, #2/0G.
8. NEMA 1 SCREW COVER WIREWAY (OPENS TO FRONT), 12" X 12" X LENGTH OF WALLS.
9. BUILDING SERVICE GROUND, #2/0 BARE COPPER GROUND TO 3/4" X 30' COPPER-CLAD DRIVEN GROUND ROD, TO REBAR IN CONCRETE FOOTING, TO BUILDING STEEL AND TO METALLIC COLD WATER PIPE.
10. HOUSE PANELBOARD, SEE PANEL SCHEDULE, SHEET E-7.1.
11. TENANT PANELBOARD, SEE PANEL SCHEDULE, SHEET E-7.1.
12. SERVICE ENTRANCE SURGE PROTECTIVE DEVICE, LEA #PV200, 208Y/120V,3PH,4W, 4#10,#10G,3/4"C.
13. BRANCH PANEL SURGE PROTECTIVE DEVICE, LEA #SP100, 208Y/120V,3PH,4W, 4#10,#10G,3/4"C.
14. LIGHTING CONTROL TIME CLOCK, TORK #DGLC
15. LIGHTING CONTROL PHOTOCELL, TORK #2101.
16. LIGHTING CONTROL CONTACTOR "LC1", 12-POLE EOMH, SQUARE D #LXG1200-V02-R6, WITH COIL CLEARING CONTACTS FOR TWO-WIRE CONTROL, 120VAC COIL VOLTAGE AND NEMA 1 ENCLOSURE, FOR AUTOMATIC CONTROL OF PHOTOCELL-ON/PHOTOCELL-OFF DUSK-TO-DAWN EXTERIOR LIGHTING.
17. LIGHTING CONTROL CONTACTOR "LC2", 12-POLE EOMH, SQUARE D #LXG1200-V02-R6, WITH COIL CLEARING CONTACTS FOR TWO-WIRE CONTROL, 120VAC CONTROL VOLTAGE AND NEMA 1 ENCLOSURE, FOR AUTOMATIC CONTROL OF PHOTOCELL-ON/TIME CLOCK-OFF EXTERIOR LIGHTING.
18. ROUTE PHOTOCELL-ON/PHOTOCELL-OFF DUSK-TO-DAWN EXTERIOR LIGHTING CIRCUITS VIA THIS CONTACTOR.
19. ROUTE TIME CLOCK-ON, TIME CLOCK-OFF EXTERIOR LIGHTING CIRCUITS VIA THIS CONTACTOR.
20. STUB-OUT AND CAP AT PROPERTY LINE AS DIRECTED BY TELEPHONE UTILITY.
21. (2)PARALLEL RUNS, EACH WITH 4-350KCM,#2/0G,3"C.
22. #6 BARE COPPER GROUND TO BUILDING SERVICE GROUND.
23. 6' COIL OF #6 BARE COPPER CONDUCTOR, FOR CONNECTION BY OWNER TO VOICE/DATA EQUIPMENT.
24. (3)2"C VOICE/DATA CONDUITS WITH PULL STRINGS. CABLE AND CONNECTIONS BY OWNER.
25. STUB-OUT CONDUITS 6" BELOW TOP OF BOARD, PROVIDE NYLON BUSHINGS.
26. TELEPHONE TERMINAL BOARD, 8'W X 8'H X 3/4" EXTERIOR GRADE PLYWOOD. PAINT WITH TWO COATS OF FIRE-RETARDANT GREY PAINT.
27. TYPICAL VOICE/DATA OUTLET, 4-11/16" SQUARE BOX WITH SINGLE-GANG DEVICE RING, (1)1"C STUB-UP INTO CEILING SPACE AND PULL STRING AND WITH NYLON BUSHING ON STUB-OUT END.
28. VOICE/DATA CABLING, FURNISHED, INSTALLED AND CONNECTED BY OWNER.
29. STUB-OUT CONDUITS 6" ABOVE BOTTOM OF BOARD, PROVIDE NYLON BUSHINGS.
30. 3P/600A 208V NEMA 1 FUSIBLE, LOCKABLE, SERVICE-ENTRANCE RATED DISCONNECT SWITCH WITH (3) 600A CURRENT-LIMITING FUSES, LABEL TO READ "HOUSE PANELS DISCONNECT SWITCH"
31. 3P/100A 208V NEMA 1 FUSIBLE, LOCKABLE, SERVICE-ENTRANCE RATED DISCONNECT SWITCH WITH (3) 100A CURRENT LIMITING FUSES, LABEL TO READ "TENANT DISCONNECT SWITCH" AND ADD SPECIFIC TENANT ADDRESS AND NAME.
32. PROVIDE FACTORY-FABRICATED 90-DEGREE ELBOW.
33. 4#3,#8G,1-1/4"C.
34. 4#1/0,#6G,2"C.
35. 4#3/0,#6G,2"C.

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ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:

ELECTRICAL RISER DIAGRAMS

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009

Scale: N.T.S.

Drawing Number: E-3.1

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PANEL DESIGNATION: HOUSE PANEL "H1A" | PANELBOARD RATING: 600A | VOLTAGE: 120/208V,3ϕ,4W | AIC RATING: 42KAIC
PANEL FED FROM: SERVICE WIREWAY | MAINS: 600A MAIN LUGS ONLY | MANUFACTURER: SQUARE D | MOUNTING: SURFACE
LOCATION: 1ST FLOOR ELECTRIC ROOM #106 | STYLE: "I-LINE" | NEMA TYPE: 1

LOAD DESCRIPTION	WATTS PER PHASE PH A	PH B	PH C	BKR	POLE	CKT	CKT	POLE	BKR	WATTS PER PHASE PH A	PH B	PH C	LOAD DESCRIPTION
ELEVATOR	9750			125	3	1	2	3	100	8334			HOUSE PANEL H1B
------		9750		–	–	3	4	–	–		8334		------
------			9750	–	–	5	6	–	–			8334	------
HOUSE PANEL H2A	12472			150	3	7	8	3	200	16855			HOUSE PANEL H2B
------		12472		–	–	9	10	–	–		16855		------
------			12472	–	–	11	12	–	–			16855	------
AIR HANDLING UNIT AHU-1.4	5376			60	3	13	14	3	30	2004			FOUNTAIN PUMP
------		5376		–	–	15	16	–	–		2004		------
------			5376	–	–	17	18	–	–			2004	------
CONDENSING UNIT CU-1.4	2871			50	2	19	20	3	30	0			SURGE PROTECTIVE DEVICE
------		2871		–	–	21	22	–	–		0		------
SPARE			0	–	1	23	24	–	–			0	------
SPACE	0			–	1	25	26	1	–	0			SPACE
SPACE		0		–	1	27	28	1	–		0		SPACE
SPACE			0	–	1	29	30	1	–			0	SPACE
SPACE	0			–	1	31	32	1	–	0			SPACE
SPACE		0		–	1	33	34	1	–		0		SPACE
SPACE			0	–	1	35	36	1	–			0	SPACE
SPACE	0			–	1	37	38	1	–	0			SPACE
SPACE		0		–	1	39	40	1	–		0		SPACE
SPACE			0	–	1	41	42	1	–			0	SPACE
PANELBOARD SUB-TOTALS	27598	27598	27598							27193	27193	27193	PANELBOARD SUB-TOTALS

LOAD CALCULATIONS:	CONNECTED LOAD (WATTS)	DEMAND FACTOR	ESTIMATED DEMAND LOAD (WATTS)	NOTES:
LIGHTING	15366	1.25	19208	
RECEPTACLES (FIRST 10 KW)	10000	1.00	10000	
RECEPTACLES (REMAINDER)	36590	0.50	18295	
HVAC (WORST CASE)	63452	1.00	63452	
WATER HEATING	9000	1.00	9000	
MISCELLANEOUS (FOUNTAIN)	6012	1.00	6012	
MISCELLANEOUS (ELEVATOR)	29250	1.00	29250	
PANELBOARD TOTALS:	169670W (472A)		155217W (431A)	

PANEL DESIGNATION: HOUSE PANEL "H2B" | PANELBOARD RATING: 225A | VOLTAGE: 120/208V,3ϕ,4W | AIC RATING: 10KAIC
PANEL FED FROM: HOUSE PANEL "H1A" | MAINS: 225A MAIN LUGS ONLY | MANUFACTURER: SQUARE D | MOUNTING: SURFACE
LOCATION: 2ND FLOOR STORAGE #220 | STYLE: "NQOD" | NEMA TYPE: 1

LOAD DESCRIPTION	WATTS PER PHASE PH A	PH B	PH C	BKR	POLE	CKT	CKT	POLE	BKR	WATTS PER PHASE PH A	PH B	PH C	LOAD DESCRIPTION
AIR HANDLING UNIT AHU-2.2	9432			100	3	1	2	3	30	0			SURGE PROTECTIVE DEVICE
------		9432		–	–	3	4	–	–		0		------
------			9432	–	–	5	6	–	–			0	------
CONDENSING UNIT CU-2.2	4200			50	3	7	8	1	20	1080			RECEPTACLES
------		4200		–	–	9	10	1	20		1080		RECEPTACLES
------			4200	–	–	11	12	1	20			1080	RECEPTACLES
RECEPTACLES	1080			20	1	13	14	1	20	1080			RECEPTACLES
RECEPTACLES		1080		20	1	15	16	1	20		1080		RECEPTACLES
RECEPTACLES			1080	20	1	17	18	1	20			1080	RECEPTACLES
RECEPTACLES	1080			20	1	19	20	1	20	1080			RECEPTACLES
RECEPTACLES		1080		20	1	21	22	1	20		1080		RECEPTACLES
RECEPTACLES			1080	20	1	23	24	1	20			1200	CATERING RECEPTACLES
RECEPTACLES	1080			20	1	25	26	1	20	1200			CATERING RECEPTACLES
LIGHTING		978		20	1	27	28	1	20		1200		CATERING RECEPTACLES
LIGHTING			735	20	1	29	30	1	20			1200	CATERING RECEPTACLES
LIGHTING	1316			20	1	31	32	1	20	1200			CATERING RECEPTACLES
LIGHTING		850		20	1	33	34	1	20		1200		CATERING RECEPTACLES
LIGHTING			576	20	1	35	36	1	20			0	SPARE
SPARE	0			20	1	37	38	1	20	0			SPARE
SPARE		0		20	1	39	40	1	20		0		SPARE
SPARE			0	20	1	41	42	1	20			0	SPARE
PANELBOARD SUB-TOTALS	18188	17620	17103							5640	5640	4560	PANELBOARD SUB-TOTALS

LOAD CALCULATIONS:	CONNECTED LOAD (WATTS)	DEMAND FACTOR	ESTIMATED DEMAND LOAD (WATTS)	NOTES:
LIGHTING	4455	1.25	5569	
RECEPTACLES (FIRST 10 KW)	10000	1.00	10000	
RECEPTACLES (REMAINDER)	13400	0.50	6700	
HVAC (WORST CASE)	28296	1.00	28296	
WATER HEATING	0	1.00	0	
MISCELLANEOUS	0	1.00	0	
MISCELLANEOUS	0	1.00	0	
PANELBOARD TOTALS:	56151W (156A)		50565W (141A)	

PANEL DESIGNATION: TENANT PANEL T1C | PANELBOARD RATING: 100A | VOLTAGE: 120/208V,3ϕ,4W | AIC RATING: 10KAIC
PANEL FED FROM: SERVICE WIREWAY | MAINS: 100A MAIN LUGS ONLY | MANUFACTURER: SQUARE D | MOUNTING: SURFACE
LOCATION: 2ND FLR OFFICE C #110 | STYLE: "NQOD" | NEMA TYPE: 1

LOAD DESCRIPTION	WATTS PER PHASE PH A	PH B	PH C	BKR	POLE	CKT	CKT	POLE	BKR	WATTS PER PHASE PH A	PH B	PH C	LOAD DESCRIPTION
AIR HANDLING UNIT AHU-1.3	5268			60	3	1	2	3	30	0			SURGE PROTECTIVE DEVICE
------		5268		–	–	3	4	–	–		0		------
------			5268	–	–	5	6	–	–			0	------
CONDENSING UNIT CU-1.3	2392			40	3	7	8	1	20	1080			RECEPTACLES
------		2392		–	–	9	10	1	20		1080		RECEPTACLES
RECEPTACLES			1080	20	1	11	12	1	20			1080	RECEPTACLES
RECEPTACLES	1080			20	1	13	14	1	20	1080			RECEPTACLES
RECEPTACLES		1080		20	1	15	16	1	20		1080		RECEPTACLES
LIGHTING			980	20	1	17	18	1	20			1080	RECEPTACLES
SPARE	0			20	1	19	20	1	20	0			SPARE
SPARE		0		20	1	21	22	1	20		0		SPARE
SPARE			0	20	1	23	24	1	20			0	SPARE
SPACE	0			–	1	25	26	1	–	0			SPACE
SPACE		0		–	1	27	28	1	–		0		SPACE
SPACE			0	–	1	29	30	1	–			0	SPACE
SPACE	0			–	1	31	32	1	–	0			SPACE
SPACE		0		–	1	33	34	1	–		0		SPACE
SPACE			0	–	1	35	36	1	–			0	SPACE
SPACE	0			–	1	37	38	1	–	0			SPACE
SPACE		0		–	1	39	40	1	–		0		SPACE
SPACE			0	–	1	41	42	1	–			0	SPACE
PANELBOARD SUB-TOTALS	6348	6348	7328							2160	2160	2160	PANELBOARD SUB-TOTALS

LOAD CALCULATIONS:	CONNECTED LOAD (WATTS)	DEMAND FACTOR	ESTIMATED DEMAND LOAD (WATTS)	NOTES:
LIGHTING	980	1.25	1225	
RECEPTACLES (FIRST 10 KW)	9720	1.00	9720	
RECEPTACLES (REMAINDER)	0	0.50	0	
HVAC (WORST CASE)	15804	1.00	15804	
WATER HEATING	0	1.00	0	
MISCELLANEOUS	0	1.00	0	
MISCELLANEOUS	0	1.00	0	
PANELBOARD TOTALS:	26504W (74A)		26749W (75A)	

PANEL DESIGNATION: HOUSE PANEL "H1B" | PANELBOARD RATING: 100A | VOLTAGE: 120/208V,3ϕ,4W | AIC RATING: 22KAIC
PANEL FED FROM: HOUSE PANEL "H1A" | MAINS: 100A MAIN LUGS ONLY | MANUFACTURER: SQUARE D | MOUNTING: SURFACE
LOCATION: 1ST FLOOR ELECTRIC ROOM #106 | STYLE: "NQOD" | NEMA TYPE: 1

LOAD DESCRIPTION	WATTS PER PHASE PH A	PH B	PH C	BKR	POLE	CKT	CKT	POLE	BKR	WATTS PER PHASE PH A	PH B	PH C	LOAD DESCRIPTION
RECEPTACLES	1080			20	1	1	2	3	30	0			SURGE PROTECTIVE DEVICE
RECEPTACLES		1080		20	1	3	4	–	–		0		------
RECEPTACLES			1080	20	1	5	6	–	–			0	------
RECEPTACLES	1080			20	1	7	8	1	20	1080			ELEV SHAFT/EQUIP RM LT/RECS
RECEPTACLES		1080		20	1	9	10	1	20		1000		TELEPHONE BOARD RECEPTACLES
EXHAUST FAN EF-1.1			350	20	1	11	12	1	20			1000	FIRE ALARM CONTROL PNL FACP
ELECTRIC WATER COOLER	750			20	1	13	14	1	20	250			TIME CLOCK/CONTACTOR POWER
RECEPTACLES		1080		20	1	15	16	1	20		1080		RECEPTACLES
RECEPTACLES			1080	20	1	17	18	1	20			1080	RECEPTACLES
INTERIOR LIGHTING	1133			20	1	19	20	1	20	350			EXHAUST FAN EF-1.2
INTERIOR LIGHTING		1350		20	1	21	22	1	20		1500		MINI-SPLIT AHU-1.5/CU-1.5
INTERIOR LIGHTING			731	20	1	23	24	1	20			1080	RECEPTACLES
EXTERIOR LIGHTING	1070			20	1	25	26	1	20	0			SPARE
EXTERIOR LIGHTING		975		20	1	27	28	1	20		0		SPARE
EXTERIOR LIGHTING			630	20	1	29	30	1	20			0	SPARE
EXTERIOR FOUNTAIN LIGHTING	1200			20	1	31	32	1	–	0			SPACE
EXTERIOR SIGN LIGHTING		1200		20	1	33	34	1	–		0		SPACE
SPARE			0	20	1	35	36	1	–			0	SPACE
SPACE	0			–	1	37	38	1	–	0			SPACE
SPACE		0		–	1	39	40	1	–		0		SPACE
SPACE			0	–	1	41	42	1	–			0	SPACE
PANELBOARD SUB-TOTALS	6313	6765	3871							1680	3580	3160	PANELBOARD SUB-TOTALS

LOAD CALCULATIONS:	CONNECTED LOAD (WATTS)	DEMAND FACTOR	ESTIMATED DEMAND LOAD (WATTS)	NOTES:
LIGHTING	8289	1.25	10362	
RECEPTACLES (FIRST 10 KW)	10000	1.00	10000	
RECEPTACLES (REMAINDER)	4880	0.50	2440	
HVAC (WORST CASE)	2200	1.00	2200	
WATER HEATING	0	1.00	0	
MISCELLANEOUS	0	1.00	0	
MISCELLANEOUS	0	1.00	0	
PANELBOARD TOTALS:	25369W (71A)		25002W (70A)	

PANEL DESIGNATION: TENANT PANEL T1A | PANELBOARD RATING: 100A | VOLTAGE: 120/208V,3ϕ,4W | AIC RATING: 22KAIC
PANEL FED FROM: SERVICE WIREWAY | MAINS: 100A MAIN LUGS ONLY | MANUFACTURER: SQUARE D | MOUNTING: SURFACE
LOCATION: OFFICE A #108 | STYLE: "NQOD" | NEMA TYPE: 1

LOAD DESCRIPTION	WATTS PER PHASE PH A	PH B	PH C	BKR	POLE	CKT	CKT	POLE	BKR	WATTS PER PHASE PH A	PH B	PH C	LOAD DESCRIPTION
AHU-1.1	5268			60	3	1	2	3	30	0			SURGE PROTECTIVE DEVICE
------		5268		–	–	3	4	–	–		0		------
------			5268	–	–	5	6	–	–			0	------
CU-1.1	2392			40	2	7	8	1	20	1080			RECEPTACLES
------		2392		–	–	9	10	1	20		1080		RECEPTACLES
RECEPTACLES			1080	20	1	11	12	1	20			1080	RECEPTACLES
RECEPTACLES	1080			20	1	13	14	1	20	1080			RECEPTACLES
RECEPTACLES		1080		20	1	15	16	1	20		980		LIGHTING
RECEPTACLES			1080	20	1	17	18	1	20			0	SPARE
SPARE	0			20	1	19	20	1	20	0			SPARE
SPARE		0		20	1	21	22	1	20		0		SPARE
SPARE			0	20	1	23	24	1	20			0	SPARE
SPACE	0			–	1	25	26	1	–	0			SPACE
SPACE		0		–	1	27	28	1	–		0		SPACE
SPACE			0	–	1	29	30	1	–			0	SPACE
SPACE	0			–	1	31	32	1	–	0			SPACE
SPACE		0		–	1	33	34	1	–		0		SPACE
SPACE			0	–	1	35	36	1	–			0	SPACE
SPACE	0			–	1	37	38	1	–	0			SPACE
SPACE		0		–	1	39	40	1	–		0		SPACE
SPACE			0	–	1	41	42	1	–			0	SPACE
PANELBOARD SUB-TOTALS	8740	8740	7428							2160	2060	1080	PANELBOARD SUB-TOTALS

LOAD CALCULATIONS:	CONNECTED LOAD (WATTS)	DEMAND FACTOR	ESTIMATED DEMAND LOAD (WATTS)	NOTES:
LIGHTING	980	1.25	1225	
RECEPTACLES (FIRST 10 KW)	8640	1.00	8640	
RECEPTACLES (REMAINDER)	0	0.50	0	
HVAC (WORST CASE)	15804	1.00	15804	
WATER HEATING	0	1.00	0	
MISCELLANEOUS	0	1.00	0	
MISCELLANEOUS	0	1.00	0	
PANELBOARD TOTALS:	25424W (71A)		25669W (72A)	

PANEL DESIGNATION: TENANT PANEL T2A | PANELBOARD RATING: 100A | VOLTAGE: 120/208V,3ϕ,4W | AIC RATING: 22KAIC
PANEL FED FROM: SERVICE WIREWAY | MAINS: 100A MAIN LUGS ONLY | MANUFACTURER: SQUARE D | MOUNTING: SURFACE
LOCATION: 2ND FLOOR CORR #209 | STYLE: "NQOD" | NEMA TYPE: 1

LOAD DESCRIPTION	WATTS PER PHASE PH A	PH B	PH C	BKR	POLE	CKT	CKT	POLE	BKR	WATTS PER PHASE PH A	PH B	PH C	LOAD DESCRIPTION
AIR HANDLING UNIT AHU-2.1	3264			40	3	1	2	3	30	0			SURGE PROTECTIVE DEVICE
------		3264		–	–	3	4	–	–		0		------
------			3264	–	–	5	6	–	–			0	------
CONDENSING UNIT CU-2.1	1862			35	3	7	8	1	20	768			LIGHTING
------		1862		–	–	9	10	1	20		1080		RECEPTACLES
SPARE			0	20	1	11	12	1	20			1080	RECEPTACLES
SPARE	0			20	1	13	14	1	20	1080			RECEPTACLES
SPARE		0		20	1	15	16	1	20		1080		RECEPTACLES
SPARE			0	20	1	17	18	1	20			0	SPARE
SPACE	0			–	1	19	20	1	–	0			SPACE
SPACE		0		–	1	21	22	1	–		0		SPACE
SPACE			0	–	1	23	24	1	–			0	SPACE
SPACE	0			–	1	25	26	1	–	0			SPACE
SPACE		0		–	1	27	28	1	–		0		SPACE
SPACE			0	–	1	29	30	1	–			0	SPACE
SPACE	0			–	1	31	32	1	–	0			SPACE
SPACE		0		–	1	33	34	1	–		0		SPACE
SPACE			0	–	1	35	36	1	–			0	SPACE
SPACE	0			–	1	37	38	1	–	0			SPACE
SPACE		0		–	1	39	40	1	–		0		SPACE
SPACE			0	–	1	41	42	1	–			0	SPACE
PANELBOARD SUB-TOTALS	3264	3264	3264							1848	2160	1080	PANELBOARD SUB-TOTALS

LOAD CALCULATIONS:	CONNECTED LOAD (WATTS)	DEMAND FACTOR	ESTIMATED DEMAND LOAD (WATTS)	NOTES:
LIGHTING	768	1.25	960	
RECEPTACLES (FIRST 10 KW)	4320	1.00	4320	
RECEPTACLES (REMAINDER)	0	0.50	0	
HVAC (WORST CASE)	9792	1.00	9792	
WATER HEATING	0	1.00	0	
MISCELLANEOUS	0	1.00	0	
MISCELLANEOUS	0	1.00	0	
PANELBOARD TOTALS:	14880W (42A)		15072W (42A)	

PANEL DESIGNATION: HOUSE PANEL "H2A" | PANELBOARD RATING: 225A | VOLTAGE: 120/208V,3ϕ,4W | AIC RATING: 10KAIC
PANEL FED FROM: HOUSE PANEL "H1A" | MAINS: 225A MAIN LUGS ONLY | MANUFACTURER: SQUARE D | MOUNTING: SURFACE
LOCATION: 2ND FLOOR STORAGE #220 | STYLE: "NQOD" | NEMA TYPE: 1

LOAD DESCRIPTION	WATTS PER PHASE PH A	PH B	PH C	BKR	POLE	CKT	CKT	POLE	BKR	WATTS PER PHASE PH A	PH B	PH C	LOAD DESCRIPTION
AIR HANDLING UNIT AHU-2.3	5376			60	3	1	2	3	30	0			SURGE PROTECTIVE DEVICE
------		5376		–	–	3	4	–	–		0		------
------			5376	–	–	5	6	–	–			0	------
CONDENSING UNIT CU-2.3	2871			50	2	7	8	3	35	3000			ELECTRIC WATER HEATER EWH-1
------		2871		–	–	9	10	–	–		3000		------
RECEPTACLES			1080	20	1	11	12	–	–			3000	------
RECEPTACLES	1080			20	1	13	14	1	20	1080			RECEPTACLES
EXHAUST FAN EF-2.2		350		20	1	15	16	1	20		1080		RECEPTACLES
RECEPTACLES			1080	20	1	17	18	1	20			1080	RECEPTACLES
ELECTRIC WATER COOLER	750			20	1	19	20	1	20	1080			RECEPTACLES
SPARE		0		20	1	21	22	1	20		350		EXHAUST FAN EF-2.1
SPARE			0	20	1	23	24	1	20			1529	LIGHTING
SPARE	0			20	1	25	26	1	20	1093			LIGHTING
SPARE		0		20	1	27	28	1	20		0		SPARE
SPARE			0	20	1	29	30	1	20			0	SPARE
SPACE	0			–	1	31	32	1	–	0			SPACE
SPACE		0		–	1	33	34	1	–		0		SPACE
SPACE			0	–	1	35	36	1	–			0	SPACE
SPACE	0			–	1	37	38	1	–	0			SPACE
SPACE		0		–	1	39	40	1	–		0		SPACE
SPACE			0	–	1	41	42	1	–			0	SPACE
PANELBOARD SUB-TOTALS	7206	5726	7536							6253	4430	5609	PANELBOARD SUB-TOTALS

LOAD CALCULATIONS:	CONNECTED LOAD (WATTS)	DEMAND FACTOR	ESTIMATED DEMAND LOAD (WATTS)	NOTES:
LIGHTING	2622	1.25	3278	
RECEPTACLES (FIRST 10 KW)	8310	1.00	8310	
RECEPTACLES (REMAINDER)	0	0.50	0	
HVAC (WORST CASE)	16828	1.00	16828	
WATER HEATING	9000	1.00	9000	
MISCELLANEOUS	0	1.00	0	
MISCELLANEOUS	0	1.00	0	
PANELBOARD TOTALS:	36760W (103A)		37416W (104A)	

PANEL DESIGNATION: TENANT PANEL T1B | PANELBOARD RATING: 100A | VOLTAGE: 120/208V,3ϕ,4W | AIC RATING: 10KAIC
PANEL FED FROM: SERVICE WIREWAY | MAINS: 100A MAIN LUGS ONLY | MANUFACTURER: SQUARE D | MOUNTING: SURFACE
LOCATION: 1ST FLR OFFICE B #109 | STYLE: "NQOD" | NEMA TYPE: 1

LOAD DESCRIPTION	WATTS PER PHASE PH A	PH B	PH C	BKR	POLE	CKT	CKT	POLE	BKR	WATTS PER PHASE PH A	PH B	PH C	LOAD DESCRIPTION
AIR HANDLING UNIT AHU-1.2	5376			60	3	1	2	3	30	0			SURGE PROTECTIVE DEVICE
------		5376		–	–	3	4	–	–		0		------
------			5376	–	–	5	6	–	–			0	------
CONDENSING UNIT CU-1.2	2871			50	2	7	8	1	20	1080			RECEPTACLES
------		2871		–	–	9	10	1	20		1080		RECEPTACLES
RECEPTACLES			1080	20	1	11	12	1	20			1080	RECEPTACLES
RECEPTACLES	1080			20	1	13	14	1	20	1080			RECEPTACLES
RECEPTACLES		1080		20	1	15	16	1	20		1080		RECEPTACLES
RECEPTACLES			1080	20	1	17	18	1	20			1500	LIGHTING
RECEPTACLES	1080			20	1	19	20	1	20	0			SPARE
SPARE		0		20	1	21	22	1	20		0		SPARE
SPARE			0	20	1	23	24	1	20			0	SPARE
SPACE	0			–	1	25	26	1	–	0			SPACE
SPACE		0		–	1	27	28	1	–		0		SPACE
SPACE			0	–	1	29	30	1	–			0	SPACE
SPACE	0			–	1	31	32	1	–	0			SPACE
SPACE		0		–	1	33	34	1	–		0		SPACE
SPACE			0	–	1	35	36	1	–			0	SPACE
SPACE	0			–	1	37	38	1	–	0			SPACE
SPACE		0		–	1	39	40	1	–		0		SPACE
SPACE			0	–	1	41	42	1	–			0	SPACE
PANELBOARD SUB-TOTALS	7536	6456	7536							2160	2160	2580	PANELBOARD SUB-TOTALS

LOAD CALCULATIONS:	CONNECTED LOAD (WATTS)	DEMAND FACTOR	ESTIMATED DEMAND LOAD (WATTS)	NOTES:
LIGHTING	1500	1.25	1875	
RECEPTACLES (FIRST 10 KW)	10000	1.00	10000	
RECEPTACLES (REMAINDER)	800	0.50	400	
HVAC (WORST CASE)	16128	1.00	16128	
WATER HEATING	0	1.00	0	
MISCELLANEOUS	0	1.00	0	
MISCELLANEOUS	0	1.00	0	
PANELBOARD TOTALS:	28428W (79A)		28403W (79A)	

SERVICE CALCULATION

LOAD CALCULATIONS:	CONNECTED LOAD (WATTS)	DEMAND FACTOR	ESTIMATED DEMAND LOAD (WATTS)
LIGHTING	19594	1.25	24493
RECEPTACLES (FIRST 10 KW)	10000	1.00	10000
RECEPTACLES (REMAINDER)	70070	0.50	35035
HVAC (WORST CASE)	120980	1.00	120980
WATER HEATING	9000	1.00	9000
MISCELLANEOUS	6012	1.00	6012
MISCELLANEOUS	29250	1.00	29250
SERVICE TOTAL:	264906W (736A)		234770W (652A)

652A ESTIMATED DEMAND X 1.25 = 815A MINIMUM SERVICE CONDUCTOR SIZE
USE (3) PARALLEL RUNS, EACH WITH 4#300 KCMIL, 3"C (3 X 285A = 855A SERVICE CONDUCTOR AMPACITY)

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ST. AUGUSTINE • ST. JOHNS COUNTY
AIRPORT AUTHORITY

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Designer: KQB | Checked by: FRP
Technician: TT | Project Number: AR553009

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STATE OF FLORIDA #AR-8840

Notes:

REVISIONS

No.	Description	Date	By

Project Name:
PROPOSED MULTI-PURPOSE BUILDING
ST. AUGUSTINE ST. JOHNS COUNTY AIRPORT
SOUTH GA AREA DEVELOPMENT

Drawing Name:
ELECTRICAL PANEL SCHEDULES

FAA A.I.P. PROJECT NUMBER:

ENGINEER OF RECORD

Gus Bobes Jr. P.E. #39410

Date: APRIL 15, 2009
Scale: N.T.S.
Drawing Number: E-7.1

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