BUILDING CODE ANALYSIS

HIGH SERVICE FINISH PUMP STATION BUILDING

LOCATION: SOUTHEAST WATER TREATMENT PLANT, GUNTERSVILLE DAM, HUNTSVILLE, ALABAMA

OWNER: HUNTSVILLE UTILITIES

DESCRIPTION OF WORK:
CONSTRUCT A ONE STORY FINISH WATER PUMP STATION BUILDING FOR THE SOUTHEAST WTP. THE BUILDING WILL PROVIDE FACILITIES FOR HIGH SERVICE PUMPS AND ELECTRICAL SWITCH GEAR. TYPE IIB NON COMBUSTIBLE CONSTRUCTION CONSISTING OF: REINFORCED CONCRETE MASONRY UNITS, WITH INSULATION AND CLAY MASONRY VENEER WALLS, INSULATED METAL DECK ON COLD FORM METAL TRUSSES WITH STANDING SEAM METAL ROOF.

APPLICABLE BUILDING CODES

- 2012 INTERNATIONAL BUILDING CODE
- 2012 INTERNATIONAL PLUMBING CODE
- 2012 INTERNATIONAL MECHANICAL CODE
- 2012 INTERNATIONAL FIRE CODE
- 2011 NATIONAL ELECTRIC CODE
- ANSI/ASHRAE/IESNA STANDARD 90.1-2007 ENERGY STANDARD FOR BUILDINGS EXCEPT LOW RISE RESIDENTIAL
- 2010 AMERICANS WITH DISABILITY ACT ACCESSIBILITY GUIDELINES

GENERAL INFORMATION

USE AND OCCUPANCY CLASSIFICATION (IBC CHAPTER 3)	USE GROUPS "F-2 FACTORY LOW HAZARD"
CONSTRUCTION TYPE CLASSIFICATION (IBC CHAPTER 5)	TYPE IIB NON- COMBUSTIBLE CONSTRUCTION
MAXIMUM ALLOWABLE AREA (IBC TABLE 503):	23,000 SF
ACTUAL AREA:	5,731 SF
MAXIMUM ALLOWABLE STORIES (IBC TABLE 503):	3 STORIES PERMITTED
ACTUAL STORIES PROVIDED:	1 STORY
MAXIMUM ALLOWABLE HEIGHT (IBC TABLE 503):	55 FEET
ACTUAL HEIGHT PROVIDED:	29 FEET
DESIGN OCCUPANCY (IBC TABLE 1004.1.2): MECHANICAL EQUIPMENT ROOMS	300 GROSS: 5,387 / 300 = 18
ACTUAL NUMBER OF OCCUPANTS	UNOCCUPIED PERIODIC PERSONNEL
EGRESS WIDTH BASE ON OCCUPANCY (IBC 1005.1):	.3" X 18 = 5.4"
ALLOWABLE COMMON PATH OF TRAVEL (IBC 1014.3):	75 FEET
NUMBER OF EXITS (IBC TABLE 1015.1):	2
EXITS PROVIDED:	3
MAXIMUM TRAVEL DISTANCE ALLOWED (IBC TABLE 1016.2):	300 FEET
DISTANCE PROVIDE:	82'-6" FEET

FIRE RESISTANT RATINGS

BUILDING ELEMENT (IBC TABLE 601)	
PRIMARY STRUCTURAL FRAME	0 HR
BEARING WALLS	0 HR
EXTERIOR	0 HR
INTERIOR	0 HR
NONBEARING WALLS AND PARTITIONS	
EXTERIOR (IBC TABLE 602)	0 HR X> 30'
INTERIOR (IBC TABLE 601)	0 HR
FLOOR CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS	0 HR
ROOF CONSTRUCTION AND ASSOCIATED SECONDARY MEMBERS	0 HR
DISTANCE FROM ADJACENT BUILDING OR PROPERTY LINE	

FIRE PROTECTION (IFC)

SPRINKLERS	NO
FIRE EXTINGUISHERS	3
EXIT LIGHTING	YES

RAINWATER CONDUCTORS AND GUTTER DESIGN CALCULATION

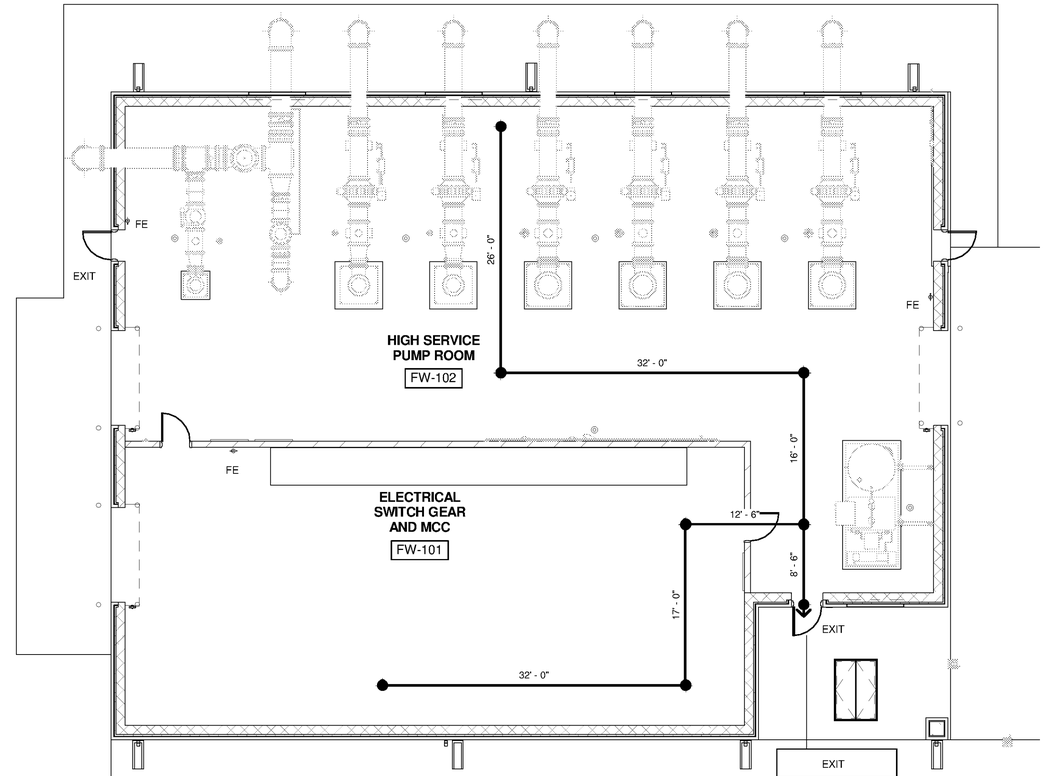
ALABAMA - HUNTSVILLE

RAINFALL INTENSITY (10 YR) =	7.5 IN / HR
RAINFALL INTENSITY (100 YR) =	10.1 IN/HR
DRAINABLE AREA (10 YR) =	160 SQ FT
DRAINABLE AREA (100 YR) =	120 SQ FT
YEAR SETTING =	10 YR
PLAN AREA =	6,497 SQ FT
GUTTER LENGTH =	180 FT
MAX GUTTER SERVED BY EA DS	40 FT
DESIGN AREA =	6,822 SQ FT
MINIMUM NUMBER OF DS =	5
ACTUAL PROVIDED =	6
MAX ROOF AREA SERVED BY EA DS =	1,516 SQ FT
MIN GUTTER WIDTH =	6"
MIN GUTTER DEPTH =	6"
MIN DS SIZE =	3" X 4"

NOTES:
1. EGRESS REQUIREMENTS SHALL NOT BE LESS THAN REQUIRED BY 2012 IBC CHAPTER 10 AND ELSEWHERE AS REQUIRED BY APPLICABLE CODE, INCLUDING 2010 ACCESSIBILITY STANDARDS. IN THE EVENT OF DISCREPANCIES BETWEEN CODES, COMPLY WITH THE MORE RESTRICTIVE REQUIREMENT IN ALL CASES.

2. MEANS OF EGRESS DOORS SHALL MEET THE REQUIREMENTS OF 2012 IBC SECTION 1008. DOORS PROVIDED FOR EGRESS PURPOSES IN NUMBERS GREATER THAN REQUIRED BY CODE SHALL MEET THE REQUIREMENTS OF THESE SECTIONS.

3. PROJECTIONS INTO THE REQUIRED EGRESS CLEAR OPENING WIDTH, INCLUDING HANDRAILS, SHALL COMPLY WITH IBC SECTION 1008.1.1.1 NOT TO EXCEED 4" BETWEEN 27" AND 80" ABOVE THE FLOOR OR GROUND.



EXIT	
18	
DOOR WIDTH	
REQ'D	5.4"
PROV.	36"
MAX. DIST.	
PERMITTED	300'
PROV.	82'-6"

LIFE SAFETY FLOOR PLAN

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

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

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BID SET

STATE OF ALABAMA
J. QUINTIN BIAGI JR
ARCHITECT
6512
REGISTERED ARCHITECT
10/24/14

MARK	DATE	DESCRIPTION	BY

HUNTSVILLE UTILITIES
SOUTHEAST WATER TREATMENT PLANT

FINISHED WATER PUMP STATION LIFE SAFETY & BUILDING CODE ANALYSIS

Project No.:	200-1170-10003
Designed By:	Q.BIAGI
Drawn By:	Q.BIAGI
Checked By:	D.GALANTE

A-4101

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Bar Measures 1 inch

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