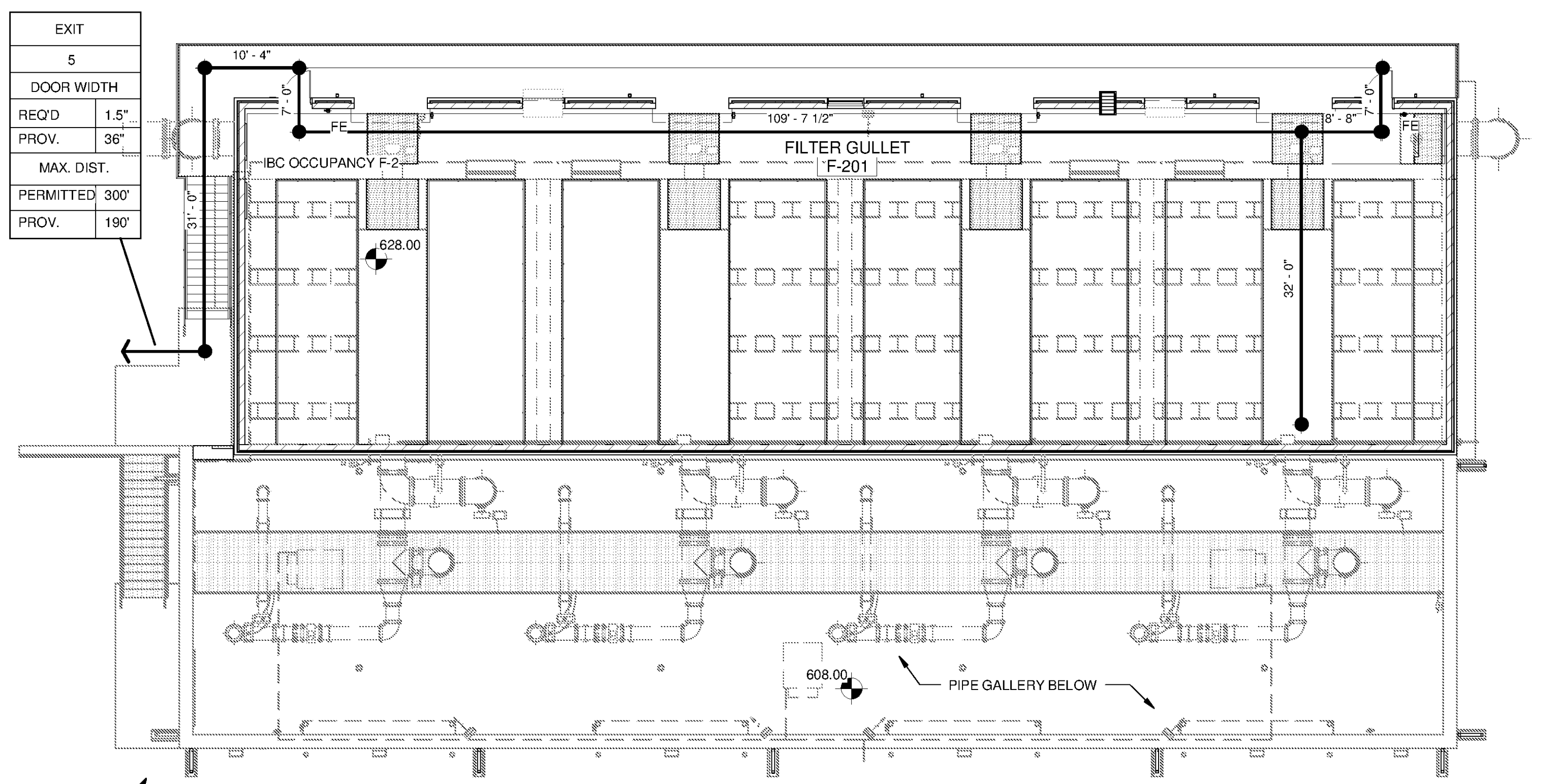


BUILDING CODE ANALYSIS	
GRANULATED ACTIVATED CARBON CONTACTOR BUILDING	
LOCATION:	SOUTHEAST WATER TREATMENT PLANT, GUNTERVILLE DAM, HUNTSVILLE, ALABAMA
OWNER:	HUNTSVILLE UTILITIES
DESCRIPTION OF WORK: CONSTRUCT A TWO STORY GRANULAR ACTIVATED CARBON (GAC) CONTACTOR BUILDING FOR THE SOUTHEAST WTP. THE BUILDING WILL PROVIDE FACILITIES FOR PIPE GALLERY AND FILTER GULLET.	
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. CONCRETE TEE INSULATED ROOF WITH MEMBRANE ROOFING SLOPED TO SCUPPERS OVER FILTER GULLET.	
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: 6,236 SF	
ACTUAL PER FLOOR PROVIDED:	BASEMENT N/A FIRST 4,666 SF (MAINTENANCE ACCESS ONLY) SERVICE PLATFORM 1,570 SF
MAXIMUM ALLOWABLE STORIES (IBC TABLE 503):	3 STORIES PERMITTED
ACTUAL STORIES PROVIDED:	1 STORY 1 SERVICE PLATFORM
MAXIMUM ALLOWABLE HEIGHT (IBC TABLE 503):	55 FEET
ACTUAL HEIGHT PROVIDED:	40 FEET
DESIGN OCCUPANCY (IBC TABLE 1004.1.2): MECHANICAL EQUIPMENT ROOMS	300 GROSS (6,236 / 300 = 21 DESIGN)
ACTUAL NUMBER OF OCCUPANTS	2 PERIODIC SERVICE PERSONNEL FOR ROUTINE INSPECTIONS
EGRESS WIDTH BASE ON OCCUPANCY (IBC 1005.1):	.3" X 21 = 6.3"
ALLOWABLE COMMON PATH OF TRAVEL (IBC 1014.3):	75 FEET
NUMBER OF EXITS (IBC TABLE 1015.1):	2
EXITS PROVIDED:	6
MAXIMUM TRAVEL DISTANCE ALLOWED (IBC TABLE 1016.2):	300 FEET
DISTANCE PROVIDE:	190 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	4
EXIT LIGHTING	YES

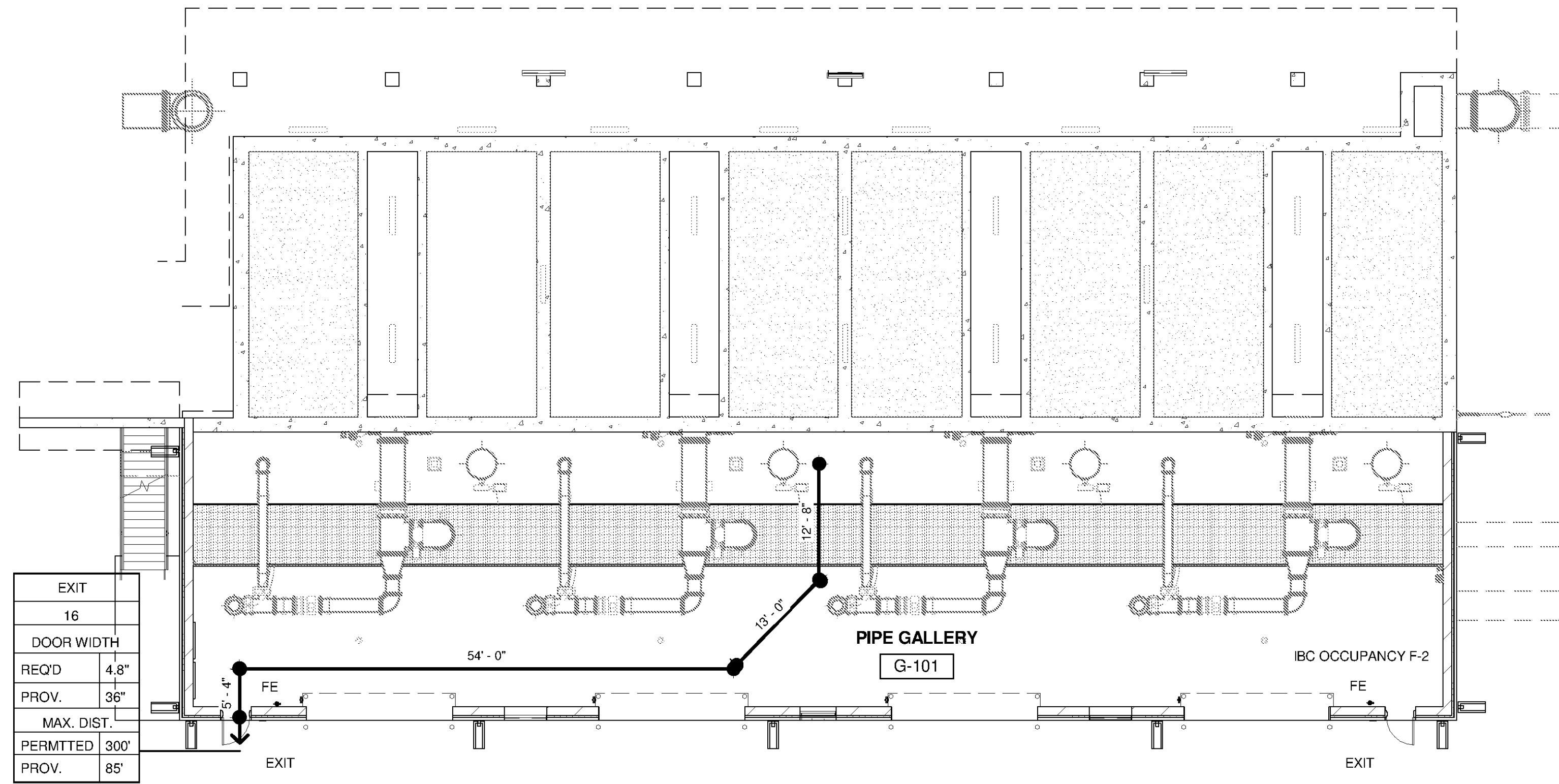
RAINWATER CONDUCTORS AND GUTTER DESIGN CALCULATION	
FILTER GULLET ROOF	
ALABAMA - HUNTSVILLE	
RAINFALL INTENSITY (10 YR) =	7.5 IN / HR
RAINFALL INTENSITY (100 YR) =	10.1 IN/HR
DRAINABLE AREA (10 YR) =	160 SQ FT
DRAINABLE AREA (100 YR) =	120 SQ FT
YEAR SETTING =	10 YR
PLAN AREA =	5,320 SQ FT
GUTTER LENGTH =	4 FT
MAX GUTTER SERVED BY EA DS	1 FT
DESIGN AREA =	5,320 SQ FT
MINIMUM NUMBER OF DS =	10
ACTUAL PROVIDED =	11
MAX ROOF AREA SERVED BY EA DS =	789.16 SQ FT
MIN GUTTER WIDTH =	4"
MIN GUTTER DEPTH =	4"
MIN DS SIZE =	4" DIAMETER
PIPE GALLERY ROOF	
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 =	5,840 SQ FT
GUTTER LENGTH =	218 FT
MAX GUTTER SERVED BY EA DS	40 FT
DESIGN AREA =	5,840 SQ FT
MINIMUM NUMBER OF DS =	6
ACTUAL PROVIDED =	9
MAX ROOF AREA SERVED BY EA DS =	1006.9 SQ FT
MIN GUTTER WIDTH =	5"
MIN GUTTER DEPTH =	5"
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.



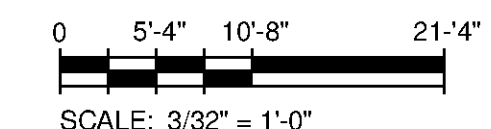
LIFE SAFETY - BASIN PLAN - ELEV. 628

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



LIFE SAFETY - GALLERY PLAN - ELEV. 608

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



10/1/2014 4:18:19 PM C:\Users\brent.fox\Documents\WTFP-11740-S-GACBAC_brent.fox.rvt

Copyright Tetra Tech

Project No.: 200-11740-10003

Designed By: Q.BIAGI

Drawn By: Q.BIAGI

Checked By: D.GALANTE

HUNTSVILLE UTILITIES

SOUTHEAST WATER TREATMENT PLANT

GAC/BAC FILTRATION

BUILDING LIFE SAFETY & BUILDING CODE ANALYSIS

BY

DATE

MARK

DESCRIPTION

10/21/14

6512

ALABAMA

STATE OF ALABAMA

www.tetra-tech.com

101 QUALITY CIRCLE, SUITE 140
HUNTSVILLE, ALABAMA 35896
PHONE: (256) 424-4077 FAX: (256) 424-4087

TETRA TECH

BID SET

A-3101

Bar Measures 1 Inch