

GOVERNING CODES:

LATEST EDITION AS ADOPTED BY BUILDING AUTHORITY 2018 INTERNATIONAL BUILDING CODE (IBC)
2018 INTERNATIONAL FIRE CODE (IFC) 2018 INTERNATIONAL MECHANICAL CODE (IMC) 2018
INTERNATIONAL PLUMBING CODE (IPC) 2020 NATIONAL ELECTRICAL CODE (NEC)

PROJECT DESCRIPTION:

NEW ALCOHOL PRODUCTION BUILDING WITH ATTACHED RESTROOMS.

BUILDING DESCRIPTION:

NEW ONE-STORY PRE-ENGINEERED METAL BUILDING. STEEL STRUCTURAL FRAME, STEEL PURLINS,
STRUCTURAL INSULATED PANEL (SIP) ROOF WITH ASPHALT SHINGLES, AND EXTERIOR WOOD SIDING
AND METAL WALL PANELS.

CONSTRUCTION TYPE:

TYPE V-B

AUTOMATIC SPRINKLER SYSTEM THROUGHOUT PER SECTION 415.4 FOR GROUP H OCCUPANCIES

OCCUPANCY CLASSIFICATIONS:

H-3 HIGH-HAZARD, FOR STORAGE OF CLASS 1B FLAMMABLE/ COMBUSTIBLE LIQUIDS STORED IN
WOODEN BARRELS/ CASKS WITH TOTAL VOLUME IN EXCESS OF MAXIMUM ALLOWABLE
QUANTITIES PER CONTROL AREA

ALLOWABLE HEIGHT:

1 STORY/ 40' ALLOWABLE

(ACTUAL HEIGHT - 1 STORY/ 34'-4")

ALLOWABLE AREA (506.2.2.1, 508.4.2 FOR H-3 MIXED OCCUPANCY):

CALCULATION FOR H-3 OCCUPANCY FOR A SINGLE OCCUPANCY BUILDING

At = 5,000 SF (AREA PER TABLE 506.2)

F = 278' (BLDG. PERIMETER GREATER THAN 20'-0" SEPARATION)

P = 278' (BLDG. PERIMETER)

W = 30' MIN. SEPARATION ON ALL SIDES

NS = 5,000 SF (AREA PER TABLE 506.2)

FRONTAGE INCREASE CALCULATION:

If = $(278'F / 278'P - 0.25) (30'W / 30) = 0.75$

ALLOWABLE AREA CALCULATION:

= 5,000"At" + (5,000"NS"x 0.75"If")

= 5,000 + 3,750

TOTAL H-3 OCCUPANCY ALLOWABLE AREA = 8,750 SF

(ACTUAL AREA - 4,289 SF)

OCCUPANT LOAD CALCULATION:

H-3 - STORAGE

WAREHOUSE STORAGE & TOILET ROOMS 4,289 SF/ 500 GROSS = 9 OCC.

TOTAL OCCUPANT LOAD = 9 OCC.

EXIT WIDTH REQUIREMENTS:

FIRST FLOOR LEVEL TOTAL REQUIRED EXIT WIDTH

**DOORS - 9 OCC. X 0.2 = 1.8 INCHES OF REQUIRED WIDTH

(ACTUAL WIDTH PROVIDED 66 INCHES - 2@ 33" CLEAR DOOR OPENINGS)

PLUMBING FIXTURE CALCULATIONS:

FIXTURE CALCS BY OCCUPANCY:

STORAGE (H-3) = 9 OCCUPANTS (5 MEN, 5 WOMEN)

MEN = 0.05 WATER CLOSETS, 0.05 LAVATORIES

WOMEN = 0.05 WATER CLOSETS, 0.05 LAVATORIES

TOTAL REQUIRED FIXTURES:

MEN = 1 WATER CLOSETS, 1 LAVATORIES

WOMEN = 1 WATER CLOSETS, 1 LAVATORIES

PROVIDED FIXTURES:

MEN = (1) WATER CLOSETS, (1) URINALS, (1) LAVATORIES

WOMEN = (2) WATER CLOSETS, (1) LAVATORIES

ACCESSIBILITY:

BUILDING ENTRANCES AND RESTROOMS TO COMPLY WITH 2018 IBC CHAPTER 11 & ICC A117.1

FIRE RESISTENCE RATNG OF EXTERIOR WALLS BASED ON FIRE SEPARATION DISTANCE:

TABLE 602

FOR TYPE V-B CONSTRUCTION WITH GROUP H OCCUPANCY WITH A SEPARATION DISTANCE BETWEEN 10 AND 30 FEET A 1 HOUR FIRE RESISTANCE RATING IS REQUIRED. FIRE SEPARATION DISTANCE IS MEASURED TO THE FAR SIDE OF THE EXISTING UTILITY EASEMENT LINE 10' INTO ADJACENT PROPERTY.

TABLE 705.8

FOR A FIRE SEPARATION DISTANCE BETWEEN 15 AND 20 FEET (AS MEASURED FROM FAR SIDE UTILITY EASEMENT) 75% OF WALL AREA IS ALLOWED TO BE PROTECTED OPENINGS.

PER SECTION 705.8.2 EXCEPTION OPENING PROTECTIVES ARE NOT REQUIRED WHEN THE BUILDING IS EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM AND OPENINGS ARE PROTECTED BY A WATER CURTAIN SPRINKLER SYSTEM.