



**City of Des Moines
Permit and Development Center**

602 Robert D Ray Drive
Des Moines, IA 50309
Phone: 515-283-4200
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This Code Analysis Form must be completed and returned with the Building Permit Application.

Please include the following information on the plan sets when submitting for permit. All the information must be included on the code analysis sheet(s). The code analysis sheets shall include a basic floor plan for each level showing partitions, stairs, doors and door swings, fixtures, corridors, rated walls, shafts, and enclosures.

**** Denotes items required to be represented on the code plan.**

Applicable Codes

Building Code: 2006 IBC
Mechanical Code: 2006 IMC
Plumbing Code: 2006 UPC

Electrical Code: 2005 NEC
Fuel Gas Code: 2006 IFGC
Energy Code: 2006 IECC

Architect Name & IA Registration Number	
Structural Engineer Name & IA Registration Number	
Engineer/Engineers Covering Plumbing, Electrical, & Mechanical Systems Include Names & IA Registration Numbers	

** Is an Automatic Sprinkler System Provided?	YES	NO
If YES, Identify Type: Example: NFPA 13, NFPA 13R, NFPA 13D		
**Identify Type of Construction for Existing Building: Example: II-A, II-B, V-A, V-B		
**Identify Type of Construction for New Building: Example: II-A, II-B, V-A, V-B		
If Mixed Construction Types will be used, Identify Types and Locations:		

List Building Occupancies and Give a Description of Each Use

1.

2.

3.

Height Limitations

Height Limitations for Nonseparated Occupancies Based on Most Restrictive Occupancy.
See Following Table for Separated Occupancies.

	Allowed Height	Proposed Height
Building Height in Feet =		
Building Height in Stories =		
Automatic Sprinkler System Height Increase =		
**Total Building Height, Feet & Stories = Include Calculations		

Area Limitations

Area Limitations for Nonseparated Occupancies Based on Most Restrictive Occupancy.
See Following Table for Separated Occupancies.

**Occupancy Classification	Allowed Area	Proposed Area	
**Building Perimeter =			
**Building Frontage = (Building perimeter that fronts a public way or open space with minimum 20' width.)			
Frontage Area Increase = Include Calculations			
Automatic Sprinkler System Area Increase = Include Calculations			
Total Allowable Floor Area = Include Calculations			
**Number of Floors =			
Total Allowable Building Area = Include Calculations			
**Actual Building Area Per Floor & Total=			
Does the building qualify for unlimited area? If Yes, include open yard widths.		YES	NO
	North	South	East
**Open Yard Widths=			
**Reduced Yard Widths=			
**Fire Rating of Wall=			
**Provide Rated Wall Assembly			

Height & Area Limitations For Separated Occupancies								
Include Occupancy Classifications, Heights, Areas, and Separations.								
Occupancy Classification			Separation Required	Allowed Height	Proposed Height	Allowed Area	Proposed Area	Area Ratio
Area Ratio=	Proposed Area	Allowed Area						
Total Ratios =								

**Incidental Use Areas			
Identify All Incidental Use Areas and Verify Separation and/or Protection			
Incidental Use Areas Identify Room and Use	Area	Separation/Protection	
		Required	Provided

**Accessory Use Areas			
Identify All Accessory Use Areas and Include Area, Occupant Load Factor, & Occupant Load.			
Accessory Use Area Identify Room, Occupancy, & Use	Area	Occupant Load Factor	Occupant Load

**Fire Resistance Rating Requirements Per IBC Table 601	Rating Required	Rating Provided	Assembly #
Structural Frame			
Bearing Walls – Exterior			
Bearing Walls – Interior			
Nonbearing Walls and Partitions – Exterior	See Following Table		
Nonbearing Walls and Partitions – Interior			
Floor Construction			
Roof Construction			

**Fire Resistance Rating Requirements Per IBC Table 602				
Exterior Wall (North, South, East, West)	Fire Separation Distance (Feet)	Rating Required	Rating Provided	Assembly #

Exterior Wall Opening Requirements Per IBC Table 704.8					
Exterior Wall (North, South, East, West)	Fire Separation Distance (Feet)	Area of Wall Openings (% of Wall Area)			
		Allowed		Provided	
		Unprotected	Protected	Unprotected	Protected

****Fire Resistance Rated Assemblies**

Identify rated walls, partitions, and horizontal assemblies. Provide a brief description of why each element is rated, for example: Corridor, Occupancy Separation, Exit Enclosure. Identify the required level of opening protection for each component. Identify the type (Fire, Smoke, Fire/Smoke) and rating of dampers provided in duct systems that penetrate these elements.

****Fire Walls**

Rating	Assembly	Opening Protection	Dampers (Type & Rating)	Reason for Rating

****Fire Barriers**

Rating	Assembly	Opening Protection	Dampers (Type & Rating)	Reason for Rating

****Shaft Enclosures**

Rating	Assembly	Opening Protection	Dampers (Type & Rating)	Reason for Rating

****Fire Partitions**

Rating	Assembly	Opening Protection	Dampers (Type & Rating)	Reason for Rating

****Smoke Partitions**

Rating	Assembly	Opening Protection	Dampers (Type & Rating)	Reason for Rating

****Smoke Barriers**

Rating	Assembly	Opening Protection	Dampers (Type & Rating)	Reason for Rating

****Horizontal Assemblies**

Rating	Assembly	Opening Protection	Dampers (Type & Rating)	Reason for Rating

**Fire Areas for Nonsprinkled Buildings			
(Identify Occupancies and Sizes of all Fire Areas in Buildings Without an NFPA 13 Sprinkler System)			
Fire Area Occupancy Identify all Occupancies Contained in each Fire Area	Area	Occupant Load	Separated By: If the building contains multiple Fire Areas, identify the means of separation. Example: The A-2 fire area is separated from the M by a 2 hour fire barrier.

**Fire Protection and Fire Department Requirements			
Are Fire Extinguishers Provided? **Fire Extinguisher Locations Must be Identified on Code Plan**	YES		NO
Identify Hazard Class Per NFPA 10:	Low	Ordinary (Moderate)	Extra (High)
Identify Maximum Floor Area Per Extinguisher: (Square Feet)			
Identify Maximum Travel Distance to Extinguishers: (Feet)			
Is a Manual Fire Alarm System Provided? **Identify Pull Locations on Code Plan**	YES		NO
Is an Automatic Fire Alarm System Provided?	YES		NO
Alarm System is Required to be Reviewed by the Des Moines Fire Department			
Will an Approved Lock Box be Provided? **Identify Location on Code Plan**	YES		NO
Identify Location of Fire Department Connection: **Include location on Code Plan**			

**Occupant Load and Exiting							
Identify Occupant Loads for All Spaces on all Floors and Include Totals							
Room	Occupancy	Area	Occupant Load Factor	Occupant Load	# Exits Required	# Exits Provided	Is Panic Hardware Required?
Total Occupant Load=							

**Areas with a Single Exit		
Identify Maximum Common Path of Travel in Areas with 1 Exit.		
Space or Area	Common Path of Travel	
	Allowed	Provided
Maximum Travel Distance = (Enter Distance in Feet from Most Remote Point of Building to the nearest Exit)		

Multiple Exits					
Identify Minimum Separation Distance Between Exits in Areas Required to Have More than 1 Exit					
Space or Area	Diagonal Dimension	Occ. Load	# Exits Provided	Required Distance Between Exits	Actual Distance Between Exits

Number of Exits and Exit Width from Each Level	Number of Exits		Exit Width			
			Stairs Enter Width Factor Example: 0.3"		Other Egress Components Enter Width Factor Example: 0.15"	
			Required	Provided	Required	Provided
Basement						
First Floor						
Mezzanine						
Second Floor						
Third Floor						
Other Floors						
Are Areas of Refuge Required?	YES		NO			

Plumbing Fixture Count		
Provide Calculation Per Occupancy Using 2006 UPC Tables 4-1 and Occupant Load Factor Table A		
<u>Example:</u>		
'A' occupancy restaurant of 6,000 sf / 30 sf per occupant = 200 / 2 = 100 occupants each sex.		
Using Table 4-1:		
100 occupants = 2 water closets, 1 urinal, and 1 lavatory required for males.		
3 water closets and 1 lavatory required for females.		
Occupant Load Calculation=		
Fixture	# Required	# Provided
Men's Water Closets		
Men's Urinals		
Women's Water Closets		
Lavatories in Each Restroom		
Showers		
Drinking Fountains		
If a single unisex restroom is to be used, provide a code based justification using the 2006 UPC.		