THE CITY OF COLUMBUS ANDREW J. GINTHER, MAYOR DIVISION OF FIRE	Code Compliance Guideline **High Piled Storage Questionnaire**	
	Fire Prevention Bureau 3639 Parsons Ave Columbus, Ohio 43207 (614)645-7641 Ext. 7-5604 www.columbus.gov	Issued: 1/1/2017 Revised: 3/8/2021 ****Permit Required****

I. PURPOSE:

The purpose of the permitting process is to assist the Fire Prevention Bureau in establishing a benchmark of current storage practices within a facility. The established benchmarks will be used as a comparison during future inspections. The current storage practices will be reviewed for compliance with applicable fire codes and standards. If deficiencies are found, a plan of action will be generated to establish a timeframe in which the deficiencies shall be corrected. This timeframe takes into consideration the number of deficiencies, the severity of each deficiency and the anticipated financial burden to correct the deficiencies. The Fire Prevention Bureau will work with facilities to establish a timeframe which is agreeable by all parties affected.

II. OVERVIEW:

This document is designed for use by responsible parties at existing facilities utilizing high piled storage of combustible materials. This document is not designed for facilities that are currently being designed or otherwise in the new construction process. Those facilities under development or construction refer to the Columbus Department of Building and Zoning Services.

Additional Technical Resources: While this packet attempts to provide information to properly fill out the application, additional technical support may be required from a Fire Protection Engineer and/or a Sprinkler Contractor, or other specialists to complete the assessments and application.

III. GUIDELINES:

Steps to Obtain a High Piled Storage Permit:

Follow the steps listed, each step is described in detail throughout this document.

1. Complete and submit CFD Application for Permit.

2. Complete and submit CFD High Piled Combustible Storage Questionnaire for Existing Buildings.

3. Draw and submit floor plan(s) of all storage areas of high piled combustibles throughout the facility. If a facility has existing construction drawings depicting the high pile storage areas, these plans may be submitted instead of drawings on the form provided.

Once all of the required documents have been submitted, the permit application will be processed and the questionnaire and plans will be reviewed. As stated previously, if any deficiencies are noted, the Fire Prevention Bureau will contact the applicant to discuss the deficiencies. A plan of action may be generated depicting a time frame in which severe deficiencies are to be corrected.

1. CFD Application for Permit:

Completely fill out the Application for Permit and check "2502.0431" for High Piled Combustible Storage. Some facilities may require additional permits, as well as High Piled Storage. If other combinations of permits are sought, completely fill out the application as needed. Individual permit fees will be assessed for each permit.

2. CFD High Piled Combustible Storage Questionnaire for Existing Buildings:

2.1. High Piled Combustible Storage Questionnaire - General Storage (Class I-IV Commodities)

Completely and accurately fill out the High Pile Combustible Storage Questionnaire. The questionnaire should be completed and signed by a person qualified to answer these questions correctly. The following is a breakdown of each section of the questionnaire and commentary explaining the information being sought.

Business Name. Please provide the name of the tenant/business which will be occupying the space intended for stocking of high piled combustible materials.

Business Address. The correct and complete street address must be provided to insure the correct information is in our database and on the high piled combustible storage permit. Contact the Franklin County Auditor if assistance is needed.

Business Telephone. Provide at least one daytime phone number for the business that can be used as a contact for any questions or concerns. If possible, include a fax number and a secondary number.

Item 1. **Commodity Classifications.** Identifying commodity classifications is the first step in determining applicable fire code requirements. Fire protection measures such as fire sprinkler designs are also based on commodity classifications. If a commodity is misclassified and fire sprinkler systems are designed for the incorrect classification, a resulting fire may easily overtax the sprinkler system to where the sprinkler system is ineffective. Therefore accurately classifying commodities is imperative. Refer to Commodity Classifications on page 7 to help determine the correct classification. If difficulties are still being experienced, please contact the Fire Prevention Bureau for assistance.

Item 2. **Description of Storage.** Provide an accurate and detailed description of all current storage practices in the facility. If commodity classifications are known, provide descriptions of where and how each classification is being stored. For example, Class I commodities being stored throughout the facility on racks and in piles; Class IV commodities being stored on racks 1-5 to heights of 22ft. and Class III commodities being stored on racks 5-10 to heights of 15ft.

Note: If plastics are being stored, identify this in the description and also complete the Plastics Questionnaire.

Item 3. **Maximum Storage Height.** Provide the maximum height(s), in feet, of the storage within the facility. This measurement is taken from the floor to the **top** of the stored commodity, not to the highest shelf or rack.

Item 4. **Clear Ceiling Height.** This is the measurement, in feet, from the floor of the high piled storage areas to the bottom of the roof deck.

Item 5. **Clear Height.** The measurement, in feet from the floor of the high piled storage areas to the bottom of the structural supports of the roof deck. This may be the bottom of the roof joists, rafters, etc.

Item 6. **Method of Storage.** Indicate all methods in which commodities are currently being stored. Photographs, specification sheets and other information may be submitted to provide a better understanding of how commodities are being stored.

Item 7. **Rack Storage Information.** Provide detailed and accurate information as possible.

Type of Racks. Single row racks are those racks in which commodities may be reached from either side of the rack. No flue space is located in the middle of single row racks. Double row racks allow access from a single side of the individual rack with a flue space in between the racks. See Figure 2. Multiple row racks are similar to double row racks but incorporate more than two racks. Multiple row racks will be more than two pallets deep.

Height of Racks. Indicate if racks are "x" ft high in one area and "y" ft high in other areas or a constant height throughout. This measurement is from the floor level to the highest possible level or shelf the racks are capable of. Rack specification sheets may be submitted as well.

Depth of Racks. This measurement is from the front of the rack or aisle, to the back of the rack either aisle (for single row racks) or flue space (for double and multiple row racks). If different width racks are present, indicate all widths of all racks. For double or multiple row racks, indicate the total widths (depths) of each double or multiple rows.

Width of Racks. This is the side-to-side measurement of the racks. Provide the total width of the racks for each row. The width measurement is measured parallel to the aisles.

Aisle Widths Between Racks. Typically the aisle widths will be either four or eight feet wide. However other aisle widths are definitely possible. Indicate the smallest dimension on the questionnaire but ensure to show all aisle widths on the drawings. See Figure 1.

Longitudinal and Transverse Flue Spaces. - Indicate both of these flue spaces in inches for the current storage practices in the facility. See Figure 2.

Item 8. **Mechanical Smoke Removal Systems.** Mechanical refers that smoke is forcibly removed out of the facility or air is forcibly pushed into the facility to pressurize the facility. These systems may include fans either positioned on the roof or towards the tops of exterior walls. Mechanical smoke removal systems are not smoke vents.

Item 9. **Smoke Vents.** Smoke vents are passive smoke removal systems. Smoke vents are located on the roof. The vents open and the natural buoyancy of the smoke escape the facility via the vents.

Number of Vents. Indicate the total number of vents for each high piled storage area.

Size of Vents. Provide the dimensions for the vents. If more than one type of vent is present in the facility, indicate the dimensions for each type of vent.

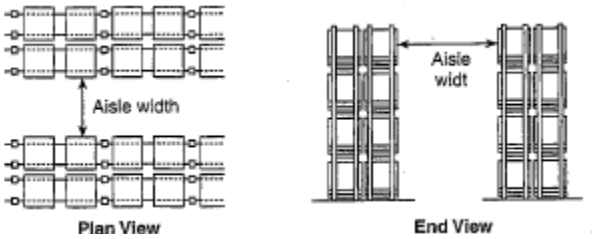


Figure 1 - Illustration of Aisle Width

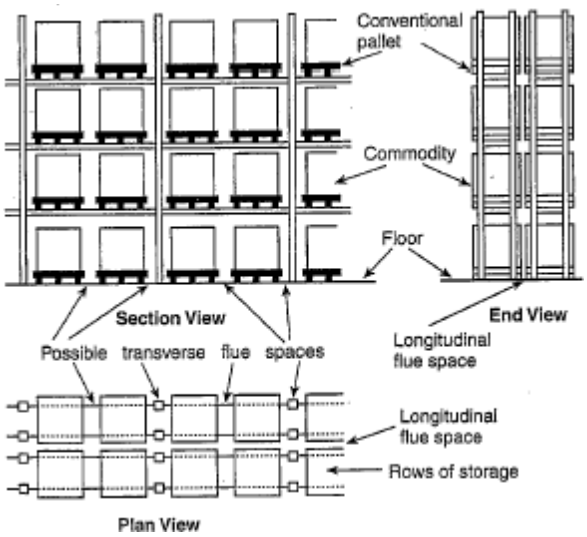


Figure 2 - Typical Double Row Rack with Flues

Item 10. **Draft/Curtain Boards.** Indicate if draft or curtain boards are present in the facility. These are barriers a few feet deep located along the ceiling. They are used to compartmentalize the ceiling space. Typically they are found in unsprinklered buildings but may be found in sprinklered buildings.

Item 11. **Gross Square Footage of Entire Structure.** Provide the gross square footage of the entire facility. This figure includes all portions of the structure, as well as each individual floor, mezzanines, etc.

Item 12. **Square Footage of High Piled Storage Areas Only**. Provide the square footage for all areas used for the high piled storage of combustibles. If more than one area is present and the areas are separated in some fashion (either by distance or barrier) indicate the sizes for each area. If more than one area is present and not separated in some manner, sum all areas into one area. For those areas that are separated, indicate with a number in the check box next to the appropriate size for each area. Otherwise check the appropriate box. The areas used in this measurement are all floor spaces being used by racks and/or piles plus the required aisles for each area. A general rule of thumb for numerous rows of racks or piles is to include all aisles between the racks and piles as well as any applicable required aisles elsewhere throughout the storage.

Item 13. **Fire Sprinklers in High Piled Areas.** Facilities may be sprinklered throughout all areas, over the high piled storage areas only or not at all. Some requirements for high piled combustible storage dictate the presence of fire sprinkler systems.

Item 14. **Existing Sprinkler System Density**. A measurement of the volume of water that is released in a certain amount of time over a specific area. Information may be obtained from a hydraulic analysis.

Item 15. **Sprinkler Density Required**. A measurement of the required volume of water to be released in a certain amount of time over a specific area. Information may be obtained from a hydraulic analysis.

Item 16. **Sprinkler System Compliant**. When sprinklers are present, the sprinkler density must be verified or evaluated to match the storage commodity and arrangement.

Item 17. **Sprinkler System Not Compliant.** If the answer to question 16 is no, there must be an agreed upon action plan of compliance in place

Item 18. **Fire Alarm System.** Indicate whether a fire alarm system is present in the facility or not. A security and/or burglar system that may incorporate a few smoke detectors does not count. The fire alarm system will incorporate, smoke detection, heat detection, manual fire alarm pull stations, horns, strobes, etc.

Item 19. **Piled Storage Information.** Provide as detailed and accurate information as possible. This section only refers to commodities being stored on the floor (with or without the use of pallets) and stacked atop each other. No racks or shelves are used for pile storage.

Cubic Feet Per Pile. Provide the cubic feet for each high piles of combustible storage.

Maximum Pile Dimension. This measurement represents the longest side of a pile.

Maximum Pile Height. As measured from the floor to the top of storage in feet. If multiple piles with different heights are present, provide information for all piles.

Aisle Widths Between Piles. Typically the aisle widths will be either four or eight feet wide. However other aisle widths are definitely possible. Indicate the smallest dimension on the questionnaire but ensure to show all aisle widths on the drawings. See Figure 1.

Item 20. **Access Doors Present**. - Those access doors that provide access from the exterior roadways and/or driveways directly into the high piled storage areas may be considered for this item. An exterior door that provides direct access into the high piled storage areas from a sidewalk does not meet this criterion. An access door from a roadway into an office which is adjacent to the high piled storage areas does not meet this criterion either.

Item 21. **Access Doors Keyed for Fire Department Use**. All access doors specifically into the high piled storage areas must have a method for gaining entry from the exterior of the facility.

Names and Titles of Persons Responsible for Information Contained Within Questionnaire. Provide the names of the individuals that filled out these forms, along with all applicable phone/fax numbers to contact them for additional information, or to answer questions that may arise.

2.2. High Piled Combustible Storage Questionnaire - Plastic Storage

Completely and accurately fill out the Plastics Storage Questionnaire. The questionnaire should be completed and signed by a person qualified to answer these questions correctly. The following is a breakdown of each section of the questionnaire and commentary explaining the information being sought.

Business Name. Please provide the name of the tenant/business which will be occupying the space intended for stocking of high piled combustible materials.

Business Address. The correct and complete address must be provided to insure the correct information is in our database and on the high piled combustible storage permit. Contact the Franklin County Auditor if assistance is needed.

Business Telephone. Provide at least one daytime phone number for the business that can be used as a contact for any questions or concerns. If possible, include a fax number and a secondary number.

Item 1. **Plastic Group Type.** Much like the importance of correctly classifying commodities, plastics require correct grouping. If difficulties arise, contact the product manufacturer for the necessary information required to properly group the type of plastic the facility stores. Refer to Classifications of Plastics on page 7 to help determine the correct classification. If difficulties are still being experienced, please contact the Fire Prevention Bureau for assistance.

Item 2. **Plastic characteristics.** Whether the plastics within the facility are Group A, B, or C, the characteristics of the plastics is required to aid in commodity classification.

Expanded, Non-Expanded and Free Flowing. Check all variations that apply and refer to the definitions section within this document for explanations for each variation. Plastics will be one of these variations, possibly all.

Packaging of Plastic. Check all variations present within the facility.

Plastic in Piles. Again, check all variations present within the facility. Refer to the definitions section for assistance. If the plastics are stored on racks, this subsection need not be answered.

Items 3, 4 and 5 are completed for Group A plastics only. This information is not needed for Group B and C plastics. The percentage of plastics is a significant factor. The difference between percentages may be the difference in fire sprinklers within the facility or not. Therefore, an estimated percentage of plastic materials within the facility is required. Please note that this percentage of plastics is based on individual pallet loads or cartons and is a function of the volume or weight of the packaging method for both expanded and non-expanded plastics.

Item 3. **Percent by weight of expanded plastic.** Based on the pallet load or per carton, this is the percentage of weight of expanded plastics as compared to the total weight of the pallet or carton.
OR (either the percent by weight or volume of expanded plastic is needed)
Item 4. **Percent by volume of expanded plastic.** Based on the pallet load or per carton, this is the percentage of volume of expanded plastics as compared to the total volume of the pallet or carton.

For example a pallet load of bicycles, the amount of plastics (pedals, reflector, tires, handle bar grips, etc.) is actually a very limited as compared to the metal (non-combustible) portions of the bicycle. The percentage of plastics in the pallet load of bicycles may be 25% or ¼ of the total weight or volume of the pallet. In another example of storing computers, the percentage of plastics may be as high as 75%, due to computers being mostly plastic with some exceptions. Figure 3203.7.4 below is taken from the 2017 Ohio Fire Code to assist in determining the percentage of Group A plastics being stored. Contact the Fire Prevention Bureau with any questions.
AND (Either Item 3 or 4 plus Item 5 are required.)
Item 5. **Percent by weight of unexpanded plastic.** Based on pallet load or per carton, this is the percentage of weight of unexpanded plastics as compared to the total volume of the pallet or carton.

It is important to note that Items 3, 4 and 5, must all be based on either the pallet load or per carton. This means that one percentage based on the pallet load and another percentage based on the carton is not acceptable. All percentages must have the same common denominator so to speak.

Names and Titles of Persons Responsible for Information Contained Within Questionnaire. Provide the names of the individuals that filled out these forms, along with all applicable phone/fax numbers to contact with them for additional information, or to answer questions that may arise.

IV. Commodity classification:

Class I commodities. Class I commodities are essentially noncombustible products on wooden pallets, in ordinary corrugated cartons with or without single-thickness dividers, or in ordinary paper wrappings with or without pallets. Class I commodities are allowed to contain a limited amount of Group A plastics.

Class II commodities. Class II commodities are Class I products in slatted wooden crates, solid wooden boxes, multiple-thickness paperboard cartons or equivalent combustible packaging material with or without pallets. Class II commodities are allowed to contain a limited amount of Group A plastics.

Class III commodities. Class III commodities are commodities of wood, paper, natural fiber cloth, or Group C plastics or products thereof, with or without pallets. Products are allowed to contain limited amounts of Group A or B plastics, such as metal bicycles with plastic handles, pedals, seats and tires. Group A plastics shall be limited.

Class IV commodities. Class IV commodities are Class I, II or III products containing Group A plastics in ordinary corrugated cartons and Class I, II and III products with Group A plastic packaging, with or without pallets. Group B plastics and free-flowing Group A plastics are also included in this class.

3203.6 High-hazard commodities. High-hazard commodities are high-hazard products presenting special fire hazards beyond those of Class I, II, III or IV. Group A plastics not otherwise classified are included in this class.

Classification of plastics. Plastics shall be designated as Group A, B or C.

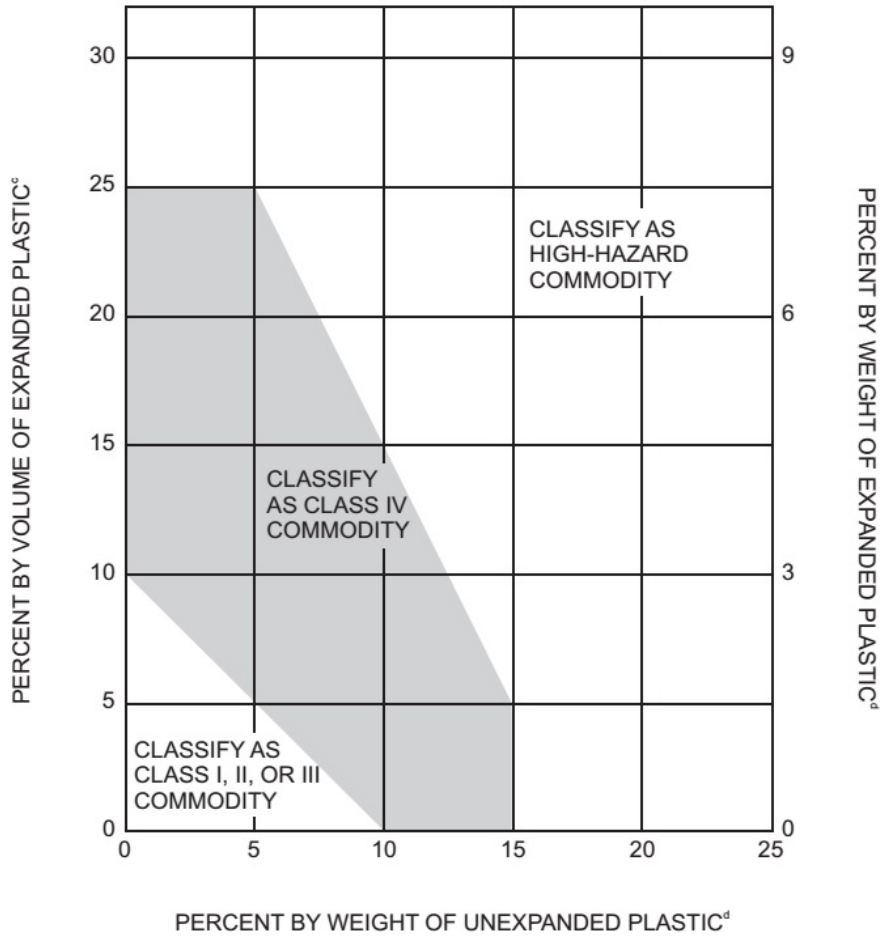
Group A plastics. Group A plastics are plastic materials having a heat of combustion that is much higher than that of ordinary combustibles, and a burning rate higher than that of Group B plastics.

Group B plastics. Group B plastics are plastic materials having a heat of combustion and a burning rate higher than that of ordinary combustibles, but not as high as those of Group A plastics.

Group C plastics. Group C plastics are plastic materials having a heat of combustion and a burning rate similar to those of ordinary combustibles.

Limited quantities of Group A plastics in mixed commodities. Figure 3203.7.4 shall be used to determine the quantity of Group A plastics allowed to be stored in a package or carton or on a pallet without increasing the commodity classification.

Figure 3203.7.4 Mixed commodities[a,b]



a. This figure is intended to determine the commodity classification of a mixed commodity in a package, carton or on a pallet where plastics are involved.

b. The following is an example of how to apply the figure: A package containing a Class III commodity has 12-percent Group A expanded plastic by volume. The weight of the unexpanded Group A plastic is 10 percent. This commodity is classified as a Class IV commodity. If the weight of the unexpanded plastic is increased to 14 percent, the classification changes to a high-hazard commodity.

c. Percent by volume = Volume of plastic in pallet load, divided by the total volume of pallet load, including pallet

d. Percent by weight = Weight of plastic in pallet load, divided by the total weight of pallet load, including pallet.

3. Drawing and Submitting Floor Plans of High Piled Combustible Storage Areas

As stated previously, high piled combustible storage plans are required along with the two other forms in this document. The plans serve as a visual record of the facilities current storage practices and layouts. This document contains a blank sheet which may be used to draw the layout of the storage areas as well as sample drawings showing how some of the information needed is shown on the plans. The following information is required to be shown on the plans where applicable. For typical circumstances, notations on the plans describing the circumstances are fully acceptable. For example, if all of the racks have 3 tiers each, a note on the plans may state such. If there is not enough room on the plans themselves for all notes, attach a separate sheet.

- **All plans must either be drawn to scale or have all applicable dimensions**
- **Plans must be drawn on minimum 11x17 paper unless adequate detail is provided on 8½x11 paper**
- **Straight edges must be used where possible**
- **Use legend as shown on the last three pages for consistency**

☐ Project address shown on plans

N/A ☐ ☐ Maximum pile volume for each storage array

N/A ☐ ☐ Aisle dimensions between each storage array.

N/A ☐ ☐ Usable storage height for each storage area.

N/A ☐ ☐ Location of fire department access doors.

N/A ☐ ☐ Location and classification of commodities.

N/A ☐ ☐ Number of tiers within each rack.

N/A ☐ ☐ Type of fire suppression and fire detection systems.

N/A ☐ ☐ Location of commodities which are banded or encapsulated.

N/A ☐ ☐ Dimension and location of transverse and longitudinal flue spaces.

N/A ☐ ☐ Floor plan of the building showing locations and dimensions of high piled storage areas.

N/A ☐ ☐ Location of valves controlling the water supply of ceiling and in-rack sprinklers. (if applicable)

N/A ☐ ☐ Type location and specifications of smoke removal (vents) and curtain board systems (if applicable)

N/A ☐ ☐ Clearance between top of storage and the sprinkler deflector for each storage arrangement. (if applicable)

☐ Additional information regarding required design features, commodities, storage arrangement and fire protection features within the high piled storage area.

For any questions, comments or concerns regarding the drawings, please contact the Fire Prevention Bureau.

V. DEFINITIONS:

BIN BOX A five-sided container with an open side facing an aisle. Bin boxes are self-supporting or are supported by a structure designed so that little or no horizontal or vertical space exists around the boxes. (IFC)

CARTONED A method of storage consisting of corrugated cardboard or paperboard containers fully enclosing the commodity. (NFPA 13)

ENCAPSULATED A method of packaging consisting of a plastic sheet completely enclosing the sides and top of a pallet load containing a combustible commodity, a combustible package, a group of combustible commodities, or combustible packages. Totally noncombustible commodities on wood pallets enclosed only by a plastic sheet as described are not covered under this definition. *Banding* (i.e. stretch-wrapping around the sides only of a pallet load) is not considered to be encapsulated. Where there are holes or voids in the plastic or waterproof cover on the top of the carton that exceed more than half of the area of the cover, the term encapsulated does not apply. The term encapsulated does not apply to plastic-enclosed products or packages inside a large, non-plastic, enclosed container. (NFPA 13)

HIGH PILED COMBUSTIBLE STORAGE Storage of combustible materials in closely packed piles or combustible materials on pallets, in racks, or on shelves where the top of storage is greater than 12 feet in height. When required by the fire code official, high-piled combustible storage also includes certain high-hazard commodities, such as rubber tires, Group A plastics, flammable liquids, idle pallets, rail-road ties, and similar commodities, where the top of storage is greater than 6 feet in height. (IFC)

HIGH PILE STORAGE AREA An area within a building which is designated, intended, proposed or actually used for high pile combustible storage. This definition is intended to include the actual floor space of racks or piles and associated aisles when required. (IFC)

PILE, STABLE Those arrays where collapse, spillage of contents, or leaning of stacks across flue spaces is not likely to occur soon after initial fire development. (NFPA 13)

PILE, UNSTABLE Those arrays where collapse, spillage of contents, or leaving of stacks across flue spaces occurs soon after initial fire development. (NFPA 13)

PLASTICS, FREE-FLOWING Those plastics that, in their original state of flakes, powder, pellets, or random- packed small plastic objects (ex: razor blade dispensers), will fall out of their containers during a fire, fill the flue spaces, and create a smothering effect on a fire. (NFPA 13)

PLASTICS, EXPANDED (FOAMED OR CELLULAR) Those plastics, the density of which is reduced by the presence of numerous small cavities (cells), interconnecting or not, dispersed throughout their mass. Examples include Styrofoam, peanuts and cups. (IFC, NFPA 13)

PLASTICS, NON EXPANDED Those plastics with high densities, solid, or not otherwise categorized as expanded, such as polyethylene film, polystyrene toys, polyester and polystyrene plastic tote bins, polyethylene 55-gallon drums or smaller containers, etc.

RACK Any combination of vertical, horizontal, and diagonal members which supports stored materials. Some rack structures use solid shelving. Rack can be fixed, portable, or moveable. Loading can be either manual, using lift trucks, stacker cranes or hand placement, or automatic, using machine controlled storage and retrieval systems. (NFPA 13)

RACK, SINGLE ROW Racks with no longitudinal flue space, and having a width up to 6 feet with aisles at least 3½ feet from other storage. (NFPA 13)

RACK, DOUBLE ROW Two single row racks placed back to back, creating a flue space, having a combined width up to 12 feet with aisles at least 3½ feet on each side. (NFPA 13)

RACKS, MULTIPLE-ROW Racks greater than 12 feet wide or single- or double-row racks separated by aisles less than 3½ feet wide having an overall width greater than 12 feet. (NFPA 13)

SOLID SHELVING Fixed-in-place solid, slatted, or other types of shelves located within the racks and which obstructs sprinkler discharge down into the racks. The area of a solid shelf is defined by perimeter aisle or flue space on all four sides. Solid shelves having an area equal or less than 20ft2 shall be defined as open racks. Shelved of wire mesh, slates or other materials more than 50 percent open and where the flue spaces are maintained shall be defined as open racks. (IFC, NFPA 13)

STORAGE, BIN BOX Storage in five-sided wood, metal or cardboard boxes with open face on the aisles. Boxes are self-supporting or supported by a structure so designed that little or no horizontal or vertical space exists around boxes. (NFPA 13)

STORAGE, RACK Storage in racks that use combinations of vertical, horizontal and diagonal members, with or without solid shelves, to support stored material. Racks may be fixed in place or portable. Loading may be done either manually by using lift trucks, stacker cranes, or hand placement, or automatically by using machine- controlled storage and retrieval systems. (FM 8-9)

STORAGE, SHELF Storage on a structure where shelves are less than 30 inches deep with the distance between shelves usually 2 feet apart and not exceeding 3 feet vertically and separated by approximately 30 inches. (IFC, NFPA 13)

STORAGE, SOLID PILE This is on-floor storage, without pallets or other material handling devices. Unit loads are placed on top of each other, leaving no horizontal spaces between unit loads. (FM 8-9)

ATTACHMENTS

A. High Piled Combustible Storage Questionnaire (Class I-IV Commodities)

B. High Pile Combustible Storage Questionnaire (Plastic Commodities)

C. Example Drawing of High Piled Combustible Storage Area (Floor Plan)

D. Example Drawing of High Piled Combustible Storage Area (Ceiling Plan)

E. Blank Sheet for High Piled Combustible Storage Drawings

HIGH-PILED COMBUSTIBLE STORAGE QUESTIONNAIRE FOR EXISTING TENANTS IN EXISTING BUILDINGS ONLY

Business Name: _____ Date _____

Business Address: _____

Business Telephone: (_____) _____ Business Fax (_____) _____

1. Commodity classifications: (check all that apply) ☐ I ☐ II ☐ III ☐ IV ☐ High Hazard

(If **plastics** are being stored, please fill out the plastics portion of this questionnaire)

2. Description of storage: _____

_____

_____

_____

(if more space is needed please attach additional pages)

3. Maximum storage height _____ Ft
4. Clear ceiling height - Floor to bottom of roof deck: _____ Ft
5. Clear height - Floor to bottom of structural roof supports: _____ Ft
6. Method of storage: (check all that apply)

☐ Encapsulated in plastic ☐ Non encapsulated ☐ Bin box
☐ On wooden pallets ☐ On plastic pallets ☐ Solid pile
☐ On racks **with** solid shelves ☐ On racks **without** solid shelves
☐ Other (describe) _____

7. Rack Storage Information (Fill out following only if utilizing rack storage, check all that apply) ☐ N/A

Type of racks: ☐ Single rows ☐ Double rows ☐ Multiple rows

Height of racks: _____ Ft Depth of racks: _____ Ft Width of racks: _____ Ft

Minimum aisle width between racks: _____ Inches

Longitudinal flue space: _____ Inches

Transverse flue space: _____ Inches

8. Is a mechanical smoke removal system present? ☐ Yes ☐ No
9. Are smoke vents present? ☐ Yes ☐ No

If yes, What is the total number present? _____

What are the dimensions for the vents? _____ L x _____ W = ____ Total Square Ft.

10. Are draft/curtain boards present? ☐ Yes ☐ No
11. Gross square footage of <u>entire structure</u> : _____ Square Ft

12. Size of designated storage areas: (Actual floor space of all racks/piles plus required aisles)

☐ Storage Area 1_____sq. ft ☐ Storage Area 4_____sq. ft
☐ Storage Area 2_____sq. ft ☐ Storage Area 5_____sq. ft (list additional storage
☐ Storage Area 3_____sq. ft ☐ Storage Area 6_____sq. ft areas on separate sheet)

13. Are the high-piled storage areas protected with fire sprinklers? ☐ Yes ☐ No

14. Existing sprinkler system density _____ gpm/square foot over the remote _____ square feet.

15. Sprinkler density required for the worst case demand in the facility or tenant space _____ gpm/square foot over the remote _____ square feet.

16. Is the sprinkler system compliant for the storage? ☐ Yes ☐ No

17. If the answer to 16 is No, provide an action plan for improvements to the system.

18. Does the facility have a fire alarm system? (burglar or security systems don't count) ☐ Yes ☐ No

19. Pile Storage Information (does not apply to rack storage) ☐ N/A

Cubic feet per pile _____Cubic ft
Maximum pile dimension (any direction) _____Ft
Maximum height of pile(s) Minimum _____Ft
aisle width between piles: _____Inches

20. Are access doors provided every 100 lineal feet of all high piled storage area exterior walls which face roadways/driveways?

☐Yes ☐No

21. If so, are these access doors keyed for fire department use during emergencies?

☐ Yes ☐ No

22. Is the high-pile storage area open to the public?

☐ Yes ☐ No

23. Is storage height limitation signage installed?

☐ Yes ☐ No

Names and titles of persons responsible for information contained within this questionnaire: (please print)

_____ _____
(NAME) (TITLE)
Office: (_____) _____ Cell: (_____) _____ Fax (_____) _____

_____ _____
(NAME) (TITLE)
Office: (_____) _____ Cell: (_____) _____ Fax (_____) _____

_____ _____
(NAME) (TITLE)
Office: (_____) _____ Cell: (_____) _____ Fax (_____) _____

PLASTICS QUESTIONNAIRE FOR ANY/ALL BUILDINGS, EXISTING/NEW TENANTS OR USES

(Page 1 of 1)

Business Name: _____ Date: _____

Business Address: _____

Business Telephone: (_____) _____

1. Plastic group type: ☐A ☐B ☐C ☐Unknown

2. Plastic characteristics - (check all that apply)
   a. Is the plastic: ☐Expanded ☐Non expanded ☐Free flowing
   b. How is the plastic packaged? ☐Exposed ☐Cartoned
   c. How is the plastic piled? ☐Stable piles ☐Unstable piles

(Complete Items 3, 4, and 5 for Group A plastics only)

3. Percent by weight of expanded plastic: _____% (either per pallet or per carton)

OR

4. Percent by volume of expanded plastic: _____% (either per pallet or per carton)

AND

5. Percent by weight of unexpanded plastic: _____% (either per pallet or per carton)

(all percentages above must be based either on the pallet load or carton)

Names and titles of persons responsible for information contained within this questionnaire: (please print)

_____ _____
(NAME) (TITLE)

Office: (_____)_____ Cell: (_____)_____ Fax (_____)_____

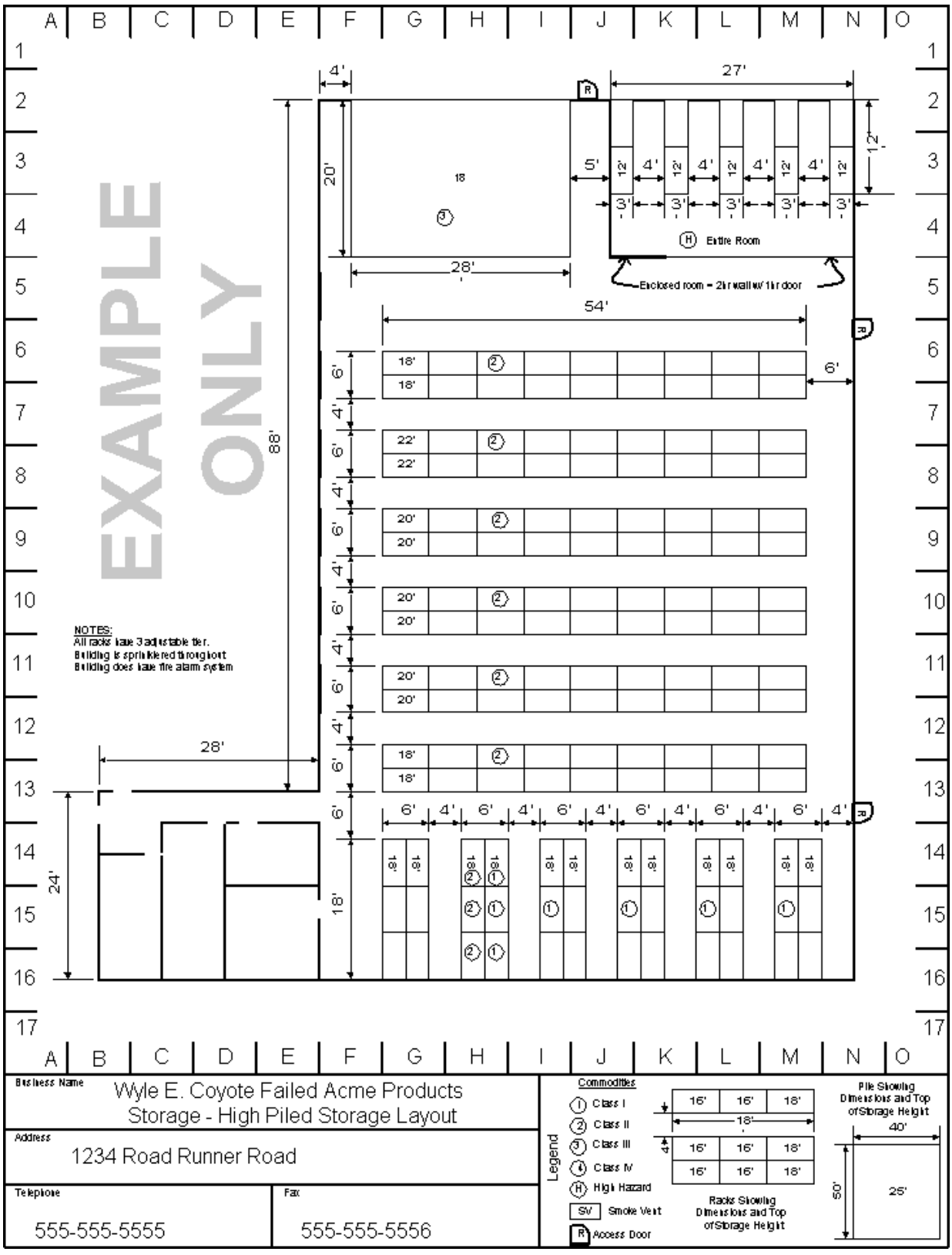
_____ _____
(NAME) (TITLE)

Office: (_____)_____ Cell: (_____)_____ Fax (_____)_____

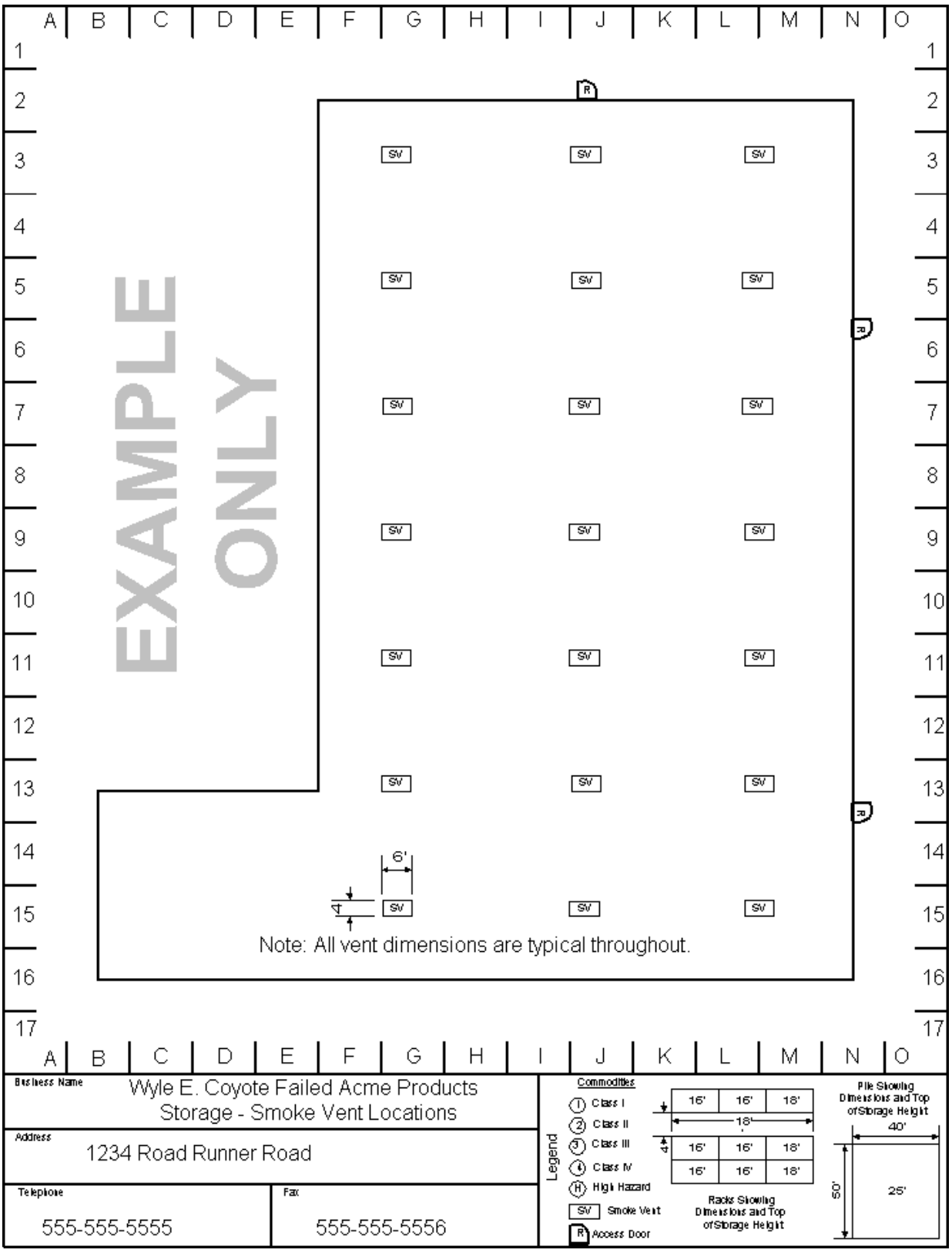
_____ _____
(NAME) (TITLE)

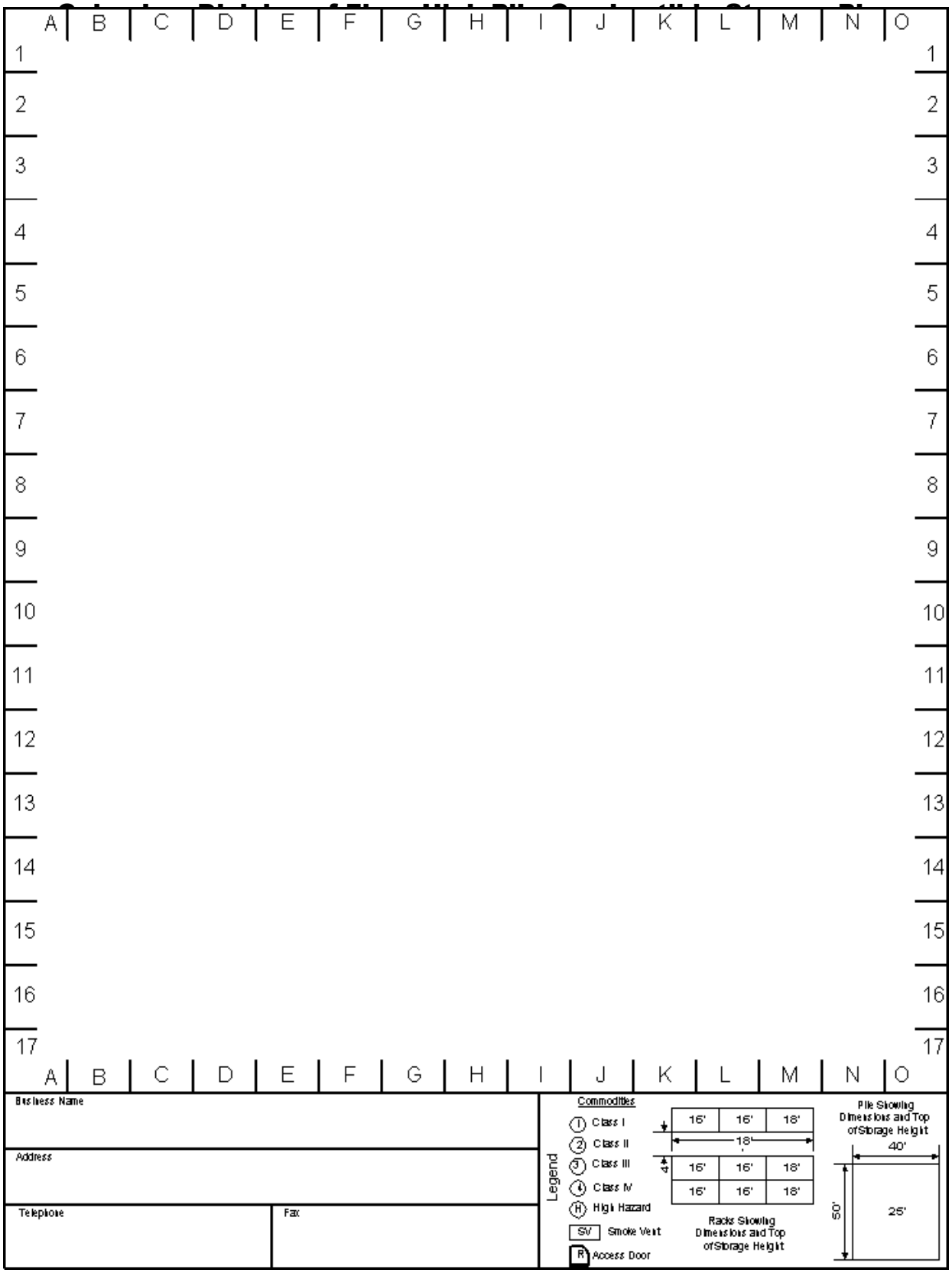
Office: (_____)_____ Cell: (_____)_____ Fax (_____)_____

Columbus Division of Fire - High Pile Combustible Storage Plan



Columbus Division of Fire - High Pile Combustible Storage Plan




A B C D E F G H I J K L M N O
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17
Business Name
Address
Telephone
Fax
Legend
Commodities
1 Class I
2 Class II
3 Class III
4 Class IV
H High Hazard
SV Smoke Vent
R Access Door
16' 16' 18'
18'
4'
16' 16' 18'
16' 16' 18'
Racks Showing Dimensions and Top of Storage Height
Pile Showing Dimensions and Top of Storage Height
40'
50'
25'