

## Commercial Addition or Exterior Renovations Plan Submittal Requirements

### Please submit the following information:

- Two complete sets of plans
- Any requests for VUSBC modifications
- Site Plan
- Provide all information pertaining to special inspections as required by 1704.1
- Asbestos report (if demolishing or altering structures constructed prior to 1985)
- Historical Design and Review Board approval (if required)
- Health Department approval. Food service.
- Backwater Certification Form
- Soils Report

### Plans shall include the following information at a minimum:

- Must be to scale**
- Sealed by all Architect(s) and/or engineer(s) of record
- Site plan **include all exterior equipment locations**
- Building Code Data including:
  - Use group(s), if more than one use mixed or separated
  - Construction type
  - Occupancy load
  - Egress information including travel distances, exit access distances, etc.
  - Sprinkler information
  - Fire alarm information
  - Number of stories
  - Height and area calculations
  - Code edition
  - Fire separation distances
  - Energy conservation code compliance Prescriptive or Performance (Show compliance with mandatory energy code requirements on the plan)
- Provide floor plan layout. Please include uses of all spaces.  
A use must be designated for each space. Empty space (unfinished space) within a structure must be identified as to its intended use group.

### The following are required to be included on your plan if part of your project.

- Window and door locations and schedule
- Building sections for all wall types, floor/ceiling assemblies, stairs, etc
- Wood Construction – show wall bracing locations, attachment and blocking details.
- Submit Site Plan – must show accessibility from public ways to building.
- Details and location of all fire rated partitions or construction
- Insulation requirements, R-values

- Roof plans- covering type, slope and venting
- Details of all penetration of fire rated construction or assemblies
- Structural, mechanical, plumbing, electrical, sprinkler system and fire alarm system
- Roof/ floor Truss layout and detail sheets approved by structural engineer of record.
- Electrical riser diagram including size of all conductors, conduit and equipment
- Mechanical equipment schedule and include equipment specifications.
- VUSBC modification requests must be made in writing and must state the reason for the request and the method being used to meet the spirit and intent of the code.
- Special inspections information per 1704.1

**Plans will be reviewed within 60 days of submittal date.**

**A submittal date will not be assigned until all information requested has been submitted to this office.**

Please call (540) 443-1325 if you have any questions.

10-2019



## TOWN OF BLACKSBURG BUILDING PERMIT APPLICATION

Please read carefully. This application and all accompanying information must be submitted in full before the Building Permit can be reviewed. If you are uncertain of any information required, please contact the Building Safety Division of the Planning and Building Department at (540) 443-1325. **APPLICATION WILL NOT BE ACCEPTED IF IT IS NOT COMPLETE. RELATED DOCUMENTS MUST BE SUPPLIED FOR COMPLETION. ALL WORK SHALL COMPLY WITH THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE.**

**JOB INFORMATION**

**JOB ADDRESS:** \_\_\_\_\_ **LOT:** \_\_\_\_\_ **UNIT:** \_\_\_\_\_ Built Prior to 1985 Yes  No

**PROJECT/BUSINESS NAME:** \_\_\_\_\_

**CONTRACTOR INFO** (person doing work) *If new to Blacksburg, please fill out Contractor Information Form and submit with this application*

**CONTRACTOR:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_ **CITY:** \_\_\_\_\_ **ST:** \_\_\_\_\_ **ZIP:** \_\_\_\_\_

**STATE LICENSE #:** \_\_\_\_\_ **BLACKSBURG LICENSE #:** \_\_\_\_\_

**CONTACT PERSON:** \_\_\_\_\_ **MOBILE:** \_\_\_\_\_

**PHONE:** \_\_\_\_\_ **FAX:** \_\_\_\_\_ **EMAIL:** \_\_\_\_\_

**PROPERTY OWNER INFORMATION**

**NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_ **CITY:** \_\_\_\_\_ **ST:** \_\_\_\_\_ **ZIP:** \_\_\_\_\_

**PHONE (required):** \_\_\_\_\_ **EMAIL:** \_\_\_\_\_

Is the property a rental unit? Yes  No

**TENANT NAME(S):** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_ **CITY:** \_\_\_\_\_ **ST:** \_\_\_\_\_ **ZIP:** \_\_\_\_\_

**PHONE:** \_\_\_\_\_ **EMAIL:** \_\_\_\_\_

**LIEN AGENT:** \_\_\_\_\_ **PHONE:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_ **CITY:** \_\_\_\_\_ **ST:** \_\_\_\_\_ **ZIP:** \_\_\_\_\_

**PERMIT INFORMATION**

NEW  REMODEL  DEMOLITION  ADDITION  DECK  ENERGY  OTHER

**DESCRIPTION OF WORK:** \_\_\_\_\_

**NEW SINGLE FAMILY HOME FOUNDATION:** Slab  Crawlspace  Conditioned Crawlspace  Basement

**VALUE OF CONSTRUCTION** (materials and labor): \$ \_\_\_\_\_ **PROPOSED USE:** \_\_\_\_\_ **CURRENT USE:** \_\_\_\_\_

**RESPONSIBLE/CERTIFIED LAND DISTURBER (SINGLE FAMILY HOME):**

**NAME:** \_\_\_\_\_ **LICENSE:** \_\_\_\_\_ **PHONE:** \_\_\_\_\_

**PROPERTY / ZONING INFORMATION**

SITE ADDRESS: \_\_\_\_\_

ZONING DISTRICT: \_\_\_\_\_ CUP/BZA/HDRB : \_\_\_\_\_ LOT SIZE: \_\_\_\_\_

*OFFICE USE ONLY BELOW IN GRAY*

MINIMUM REQUIRED SETBACKS	PROPOSED SETBACKS	ACTUAL EXISTING SETBACKS
Front	Front	Front
Side	Side	Side
Rear	Rear	Rear
MAXIMUM LOT COVERAGE	PROPOSED LOT COVERAGE	EXISTING LOT COVERAGE
MAXIMUM BUILDING HEIGHT	PROPOSED BUILDING HEIGHT	EXISTING BUILDING HEIGHT

*Please provide proposed setbacks, lot coverage and height for all proposed structures, including but not limited to new construction, decks, additions, accessory structures, etc. Please provide existing setbacks, lot coverage and building height for all existing structures on the parcel.*

**BUILDING INFORMATION**

BUILDING CODE VERSION (YEAR): \_\_\_\_\_  VBC  VRC TYPE OF CONSTRUCTION: \_\_\_\_\_ USE GROUP: \_\_\_\_\_

NUMBER OF BUILDINGS: \_\_\_\_\_ NUMBER OF UNITS: \_\_\_\_\_ **SPRINKLER:** Yes  No  **FIRE ALARM:** Yes  No

**EXISTING NUMBER OF:** STORIES \_\_\_\_\_ ROOMS \_\_\_\_\_ BEDROOMS \_\_\_\_\_ BATHROOMS \_\_\_\_\_

FIREPLACE \_\_\_\_\_ CHIMNEY \_\_\_\_\_

**PROPOSED NUMBER OF:** STORIES \_\_\_\_\_ ROOMS \_\_\_\_\_ BEDROOMS \_\_\_\_\_ BATHROOMS \_\_\_\_\_

FIREPLACE \_\_\_\_\_ CHIMNEY \_\_\_\_\_

**EXISTING SQUARE FOOTAGE:** BASEMENT (finished) \_\_\_\_\_ (unfinished) \_\_\_\_\_ FIRST \_\_\_\_\_ SECOND \_\_\_\_\_

THIRD \_\_\_\_\_ FOURTH \_\_\_\_\_ GARAGE \_\_\_\_\_ DECKS \_\_\_\_\_ PATIO \_\_\_\_\_ ACCESSORY STRUCTURE \_\_\_\_\_

SIDEWALKS \_\_\_\_\_ DRIVEWAY \_\_\_\_\_

**PROPOSED SQUARE FOOTAGE:** BASEMENT (finished) \_\_\_\_\_ (unfinished) \_\_\_\_\_ FIRST \_\_\_\_\_ SECOND \_\_\_\_\_

THIRD \_\_\_\_\_ FOURTH \_\_\_\_\_ GARAGE \_\_\_\_\_ DECKS \_\_\_\_\_ PATIO \_\_\_\_\_ ACCESSORY STRUCTURE \_\_\_\_\_

SIDEWALKS \_\_\_\_\_ DRIVEWAY \_\_\_\_\_

**TOTAL SQUARE FOOTAGE:** \_\_\_\_\_

**WATER & SANITARY SEWER INFORMATION**

TOWN WATER AVAILABLE: Yes  No  (Ask for help for well water)

WATER METER SIZE: 5/8"  1"  1.5"  2"  HOW MANY: \_\_\_\_\_

WATER LATERAL: Yes  No  HOW MANY: \_\_\_\_\_

SPRINKLER: Yes  No  SIZE: 2"  4"  6"  PIV: Yes  No  FDC: Yes  No

TOWN SANITARY SEWER AVAILABLE: Yes  No  (Ask for help for septic) NUMBER OF UNITS: \_\_\_\_\_

SANITARY SEWER LATERAL: Yes  No  HOW MANY: \_\_\_\_\_

*Thank you for completing this application. It will be processed as quickly as possible. If it is approved, you will be notified by phone or by email. Applications are processed in order of the date and time that all required plans and/or documents are received. Missing or incorrect information will result in a delay in processing. Requests for inspections will not be scheduled unless the permit number is supplied at the time of the request. Inspections require at least 24-hour advance notice. APPLICATION WILL NOT BE ACCEPTED IF IT IS NOT COMPLETE. RELATED DOCUMENTS MUST BE SUPPLIED FOR COMPLETION. ALL WORK SHALL COMPLY WITH THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE.*

**PRINTED NAME:** \_\_\_\_\_ **PHONE:** \_\_\_\_\_

**APPLICANT SIGNATURE:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

By signing this application I affirm that this application is complete and all required items are included

### CONTRACTOR INFORMATION FORM

Please fill out this information sheet and submit it with your permit application. **This form is only required if you are a new contractor to the Town of Blacksburg or if you need to update your information.**

A Blacksburg business license is required in the Town of Blacksburg if you gross more than \$25,000 annually through work performed in the town. For Blacksburg business license information contact the Finance Department at 540-443-1050.

**BUSINESS NAME:** \_\_\_\_\_

'DOING BUSINESS AS' NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_

**CONTACT PERSON:** \_\_\_\_\_

**CELL:** \_\_\_\_\_ **EMAIL:** \_\_\_\_\_

ALTERNATE CONTACT PERSON: \_\_\_\_\_

CELL: \_\_\_\_\_ EMAIL: \_\_\_\_\_

**STATE LICENSE #:** \_\_\_\_\_

EXPIRATION DATE: \_\_\_\_\_

**CLASS:** A  B  C

## Fire Sprinkler Plan Submittal Requirements

**Please submit the following information:**

- Minimum 3 sets of plans, shop drawings, calculations and submittal data
- Any requests for VUSBC modifications
- A signed copy of completed owner's affidavit – NFPA 13 Section 22.1.4
- Current water flow test results and location
- 2 sets of job specifications

**Plans shall include the following information at a minimum:**

- Must be to scale
- Sealed by an architect or engineer (not required for less than 20 heads)

Include building code data:

- Height and area
- NFPA standard 13 or 13R
- Required or elective

Schematic of underground piping, building entry, size and length of pipe to main and show all valves, meters and backflow device

The submitted plans shall clearly show a floor plan of each story, indicating the location of all walls, partitions, and fire rated assemblies. The intended use of each area, room, or void space shall be indicated on the plans. NFPA 13 Section 22.1.3

The submitted plans shall clearly indicate total area, protected by each system riser on each floor. NFPA 13 Section 22.1.3

Full height cross-section elevation detail(s) indicating construction, and the vertical and horizontal distances of sprinklers relative to the underside of roof or ceiling and structural members to verify if the construction is obstructed or unobstructed. NFPA 13 Section 22.1.3

The submitted plans shall clearly indicate the type and the location of all control valves, drain valves, test connections, hose outlets, and related equipment and piping. NFPA 13 Section 22.1.3

Indicate the location and the type of audible and/or visual alarm devices located inside and outside of the building. NFPA 13 Section 22.1.3 and 2015 Uniform Statewide Building Code Section 903.4.2

Clearly indicate the manufacturer, the temperature rating, the orifice size, the hydraulic K-factor, whether the sprinklers are standard or quick response, and quantity of each type of sprinkler to be installed. NFPA 13 Section 22.1.3

Clearly indicate the location of all special sprinklers, such as extended coverage, sidewall, intermediate or high temperature sprinklers. NFPA 13 Section 22.1.3

Clearly indicate the pipe types and the wall thickness, the type of fittings and joints, and the type and locations of hangers, sleeves, braces, and method to support sprinkler components. NFPA 13 Section 22.1.3

Clearly indicate the nominal pipe size and the cutting lengths of pipe, center-to-center dimensions, including riser nipples, drop nipples, and armovers. NFPA 13 Section 22.1.3

Clearly indicate the method of protection for non-metallic piping as required by pipe manufacturer (nail plates and/or thermal insulation). NFPA 13 Section 22.1.3

The submitted plans shall clearly indicate the method of maintaining a minimum temperature of 40° F for sprinkler system piping installed in unconditioned spaces. (Special note: tenting method requires properly secured, minimum R-30 un-faced batt insulation. See NFPA 13R – Annex A – Figures A 5.3.2 (a, b, c, d, and e for proper insulation method) NFPA 13 Section 5-14.3.

Hydraulically designed systems:

1. Required hydraulic data nameplate information. NFPA 13 Section 22.13

a. The minimum rate of water application (density)

b. The location and size of the design area

c. The inside and outside hose stream allowances as actually provided based on the actual hazard being protected in accordance with NFPA 13 Chapters 12-20.

d. The required flow and residual pressure at base of riser

e. The occupancy classification

2. The hydraulic reference points shall be indicated on the plan corresponding with hydraulic calculation sheets. NFPA 13 – Section 22.1.3

3. The protection areas covered per sprinkler head. NFPA 13 - Table 8.6.2.2.1 (a, b, c and d)

4. Provide a copy of Water flow test results, dated within six months of plan submission date. NFPA 13 Section 22.1.3

Graph sheet. A graphic representation of the hydraulic demand shall be plotted on graph paper ( $Q^{1.85}$ ) or computer generated hydraulic program based upon NFPA 13 Section 22.3.

1. Water flow data

2. Total sprinkler system hydraulic demand including hose streams

#### **Tenant Upfit Requirements:**

Where existing systems are to be modified, sufficient details of the existing system shall be shown on the plans to determine the effect of proposed modification on total system. NFPA 13 Section 22.1.3

The submitted plans shall include a shopping center key plan or complete building floor plan indicating the location of the affected tenant space(s).

The submitted plans shall clearly indicate the location and the floor level of the hydraulic remote area and its design criteria.

Work being performed in the hydraulic remote area shall include hydraulic calculation and water flow test results dated within six months of plan submission date.

### **Limited area sprinkler**

The submitted plans shall provide a key plan showing the room or space to be protected. The plans shall indicate the location in the building, room number (s) or floor where the work is to be performed.

Hydraulic calculations shall be provided in accordance with NFPA 13 Sections 22.2, 22.3 and 2015 Uniform Statewide Building Code Section 903.3.5.1.1 Where the sprinkler system is supplied through a domestic water meter, calculations shall be provided.

When a control valve is provided downstream from the domestic water control valve the limited area sprinkler system shall be supervised in accordance with 2015 Uniform Statewide Building Code Section 903.3.5.1.1 - Exception and Section 903.4.

When a control valve is provided downstream from the domestic water control valve the limited area sprinkler system shall be supervised in accordance with 2015 Uniform Statewide Building Code Section 903.3.5.1.1 - Exception and Section 903.4.

### **Storage Occupancy**

#### **Miscellaneous Storage ≤ twelve feet in height**

The submitted plans shall clearly identify and indicate the commodity classification, the maximum storage height, the proposed storage arrangement, the widths and locations of all aisles. NFPA 13 Chapter 13, Figure 13.2.1; Table 13.2.1

The submitted plans shall clearly indicate the roof or ceiling height within the storage area.

#### **Storage Commodities**

The submitted plans shall clearly indicate which of the following sprinkler system design is to be used in accordance with NFPA 13 – Chapters 15, 16, 17, 18, 19, 20, 21, NFPA 30, NFPA 30B, and NFPA 33

1. Control Mode Sprinklers
2. Large Drop and Specific Application Control Mode Sprinklers
3. Suppression Mode Sprinklers (ESFR)

The submitted plans shall clearly indicate the commodity classification, the maximum storage height, the proposed storage arrangement, the widths and locations of all aisles. NFPA 13 Section 22.1.3

The submitted plans shall clearly indicate the minimum and the maximum distance between the sprinkler deflector and the top of the storage.

The submitted plans shall clearly indicate the rack configuration, the width and height of the racks and the location and size of the rack flue spaces for the following arrangements:

1. Single Row Racks
2. Double Row Racks
3. Multiple Rows Racks
4. Shelf Storage Units, as defined by NFPA 13 Section 3.9.2.6

The submitted plans shall clearly indicate the method of storage to be used:

1. Wood pallets on racks
2. Expanded plastic pallets on racks
3. Solid shelving
4. Open shelving
5. Encapsulated wrapping materials

The submitted plans shall clearly indicate the location of all interior small hose stations or an approved alternative design. NFPA 13 Section 12.8.4

### **Manufacturer's Data Sheet**

All submissions shall include the appropriate Manufacturer's Data Sheets for the following:

Where manufacturer's data sheets cover multiple devices, the submitted data sheet shall indicate those devices used in the system.

Pipe – Indicate if pipe is factory or field anti-microbial coated, if applicable

Fittings (Threaded, Grooved, Welded)

Valves (O.S. & Y., Butterfly, PIVs)

Hangers/Rod/Fasteners/Clamps

Alarm Check Valve/Retard Chamber/Water Motor Alarm

Swing Check Valves

Fire Department Connections

Sprinkler Heads/Spray Nozzles

Inspectors Test Connections/Drain Assemblies

Riser Manifolds

Backflow Prevention Devices/RPZ's/Detector Check Valves – Including friction loss tables

(Please note: a separate backflow permit must be obtained prior to installation of the device. Failure to obtain permit prior to installation could result in wrong device being installed and will require replacement).

Pressure Regulating Valves – Indicating the factory pressure setting

Dry Pipe Valves/Accelerators/Exhausters/Actuation Devices and System/Trim

Deluge Valves/P-Reaction Valves/Actuation Devices and Systems/Trim

Valve Supervisory Switches

Waterflow Vane Switches

Pressure Switches

Fire Pumps/Accessories

Fire Pump Drivers/Accessories

Fire Pump Controllers

Jockey Pumps

- Jockey Pump Controllers
- Relief Valves
- Fire Hose Valves
- Special System Components (Foam, Antifreeze, Water Mist, Etc.)
- Other \_\_\_\_\_
- Other \_\_\_\_\_

Where multiple contractors are involved in the system design and installation, the plan approval requires the concurrent submittal and review of the fire suppression and detection systems.

### Special Notes

- The submitted plans shall clearly indicate the location of the device to be used for flow tests at system demand, downstream of all backflow prevention valves. NFPA 13 Section 8.17.4.6.1
- All sprinkler systems are required to be monitored off-site to an approved supervising station, with the exception of NFPA 13D – One and Two-Family Dwellings and Manufactured Housing and Limited Area Sprinkler Systems as permitted by the 2015 Uniform Statewide Building Code. 2015 Uniform Statewide Building Code Section 901.6.1 Exceptions 1 and 2
- All piping between the sprinkler system and a pressure actuated water flow alarm initiating device or High/Low Air Pressure Switch supervisory device shall be galvanized, nonferrous metal, or other approved corrosion resistant material. NFPA-72 (2014 Edition) Section A5.11.1
- The submitted plans shall clearly indicate the make, type, model, and size of all dry pipe valves, pre-action valves, or deluge valves. NFPA 13 Section 22.1.3
- The submitted plans shall clearly indicate the water capacity, in gallons, of each dry pipe and pre-action system. NFPA 13 Section 22.1.3
- The submitted plans shall clearly indicate the air pressure settings for dry pipe valves and the supervisory air functions at normal and abnormal conditions.
- Antifreeze systems shall be prepared with minimum freezing point of -26° F, and a recommended maximum 40-gallon capacity. NFPA 13 Section 7.6
- In addition to standard hydraulic calculations, antifreeze systems with a solution capacity greater than 40 gallons shall also be calculated using the Darcy-Weisbach formula. A copy of the annotated Moody diagram shall be included. NFPA 13 Section 22.4.2.1.3
- An approved reduced pressure principle backflow prevention device, RPZ-listed assembly, including approved indicating control valves shall be provided at the point of connection of the wet pipe sprinkler system supplying the anti-freeze sprinkler system.
- An approved, listed reduced pressure backflow prevention device is required on all antifreeze systems. NFPA 13 Section 7.6.3.2; Figure 7.6.3.2
- An approved, listed expansion chamber shall be provided on all antifreeze systems. NFPA 13 Section 7.6.3.3
- All fire pump and booster fire pump installations shall comply with NFPA 20.

### Hydraulic Calculation Forms

**If using non-computer generated hydraulic calculations:**

- Hydraulic calculations shall be prepared on form sheets that include a summary sheet, detailed worksheets and a graph sheet. NFPA 13 - Figures A22.3.2 (a), A22.3.3 and A22.3.4
- The calculation summary sheet shall indicate the hazard classification for the system design. When multiple designs are required to protect various hazards with a common system area, separate calculations shall be provided for each hazard area. NFPA 13 Section 22.3
- The required calculation summary sheet shall include:
  1. The design density and the total design area, such as a 0.1 GPM per square foot over the hydraulically most demanding 1500 square feet. NFPA 13 Section 22.3
  2. The maximum area of coverage per sprinkler. NFPA 13 Section 22.3
  3. The total system demand at the base of the riser. Water for inside and outside hose streams shall be represented as it is actually provided. NFPA 13 Section 22.3
- Graph sheet. A graphic representation of the hydraulic demand shall be plotted on graph paper (Qn1.85) or computer generated hydraulic program based upon:
  1. Water flow data
  2. The total sprinkler system hydraulic demand including the in-rack demand and the inside and outside hose streams requirements. NFPA 13 Section 22.3.4
- The hydraulic calculations provided shall include the domestic water demand if sprinkler system is supplied through a common domestic meter. NFPA 13 Section 22.3 and the 2015 Uniform Statewide Building Code Section 903.3.5.1.

**If using computer generated hydraulic reports:**

- The hydraulic calculations shall be prepared on form sheets that include a summary sheet, a graph sheet, a water supply analysis, a node analysis and detailed worksheets. NFPA 13 Sections 22.3.5.2, 22.3.5.3, 22.3.5.4, 22.3.5.5 and 22.3.5.6
- The data developed from computer generated hydraulic calculations shall be presented in the order shown in NFPA 13 - Figures 22.3.5.1 (a, b, c, and d).

Please call (540) 443-1325 if you have any questions.

## **Required Commercial Inspections**

1. All excavations for footings, foundation walls, pier footings, walls and slabs shall be inspected prior to placing concrete. If steel reinforcement is required, it must be in place at the time of inspection. **Wet setting of steel is prohibited.**
2. All exterior and interior underground work must be inspected prior to backfilling. All trades must have materials installed on firm bedding with conduit, duct or piping set. If excavated material is not suitable as fill material as defined by the code then clean fill must be on site at time of inspection. All plumbing, fire protection, duct or gas line is required to be tested and witnessed by the Town of Blacksburg.
3. All framing, mechanical, plumbing and electrical are required to be inspected prior to the installation of insulating material or other wall covering. All sprinkler, plumbing and gas piping materials must be tested before or during combination inspection.
4. Building air barrier and window flashing.
5. Fire resistant construction assemblies and penetrations.
6. Duct sealing prior to duct insulation being installed.
7. All insulation must be inspected prior to concealment.
8. Electrical service inspection is mandatory for service to be energized. All service entrance conductors must be terminated. GEC must be complete. Structure must be weather tight. A 120v 20 amp GFCI receptacle must be installed.
9. Final inspection.

Each trade is required to complete any specialty inspection prior to concealment inspection. A few examples include: Grease duct tightness testing, hydrostatic testing of sprinkler system including dry system 24 hr. leak testing, and Type 1 hood testing.

### **Simplified Inspection schedule for a small commercial building:**

1. Footings
2. Foundation walls
3. Interior and exterior underground work. All trades.
4. Combination wall Rough in.
5. Building wrap and window flashing.
6. Insulation.
7. Duct seal.
8. Above ceiling combination rough in.
9. Final.

The above schedule will not apply to all projects because of the numerous types of methods and materials used in commercial construction. Please contact our office prior to starting your projects to coordinate inspections. Your project may also require special inspections as required by code.

1/2019

## Fire Sprinkler Systems Required Inspections

These items must be completed prior to request for each inspection.

### Underground Piping-

- Minimum cover is 36"
- Thrust block forms in place (if required)
- All piping complete
- Pipe bedded on compacted earth
- Clean backfill on site

### Underground Hydrostatic Test-

- Hydro test – 200 PSI – 2-hour test
- Ambient temperature must be greater than 40 degrees Fahrenheit or system will fail inspection.
- Test gauge shall be rated at 400 psi maximum and **listed for use with sprinkler systems**

### Underground Flush Test-

(At completion of test – submit completed Contractors material and test certificate)

- Have piping ready to safely discharge without causing nuisance for adjoining properties and road ways.
- Minimum outlet size is 4" pipe or wye/Siamese with two 2 ½ inch hoses
- Must discharge through burlap sack(s) and must be free of debris to pass inspection

Note: if interior piping system is tied into underground piping prior to AHJ approved flush test all mains and drops will have to be flowed or **all interior piping replaced**

### Interior Piping – Wet/Dry System-

(At completion of test – submit completed Contractors material and test certificate)

- Have all piping and hangers completed.
- Have 200 PSI or 50 PSI above working pressure whichever is greater on piping system
- Test gauge shall be rated at 400 psi maximum and listed for use with sprinkler systems
- Ambient temperature must be greater than 40 degrees Fahrenheit or system will fail inspection

### Interior Piping – Dry System (24-hour Test)

- Have 40 PSI or greater on dry system.
- Schedule follow up inspection for 24 hours later.
- If air test is passed, 60-second flow test will be performed at this time.
- Perform 30-minute air build up test.

**Final – Wet System-**

- System is ready to go into operation.
- Sprinkler room is labeled 4" high lettering.
- Fire department connection labeled.
- Fire alarm panel is operational. (Will be tested and must pass final inspection)
- Spare heads and tools are in place.
- Have responsible party on site to perform main drain test, inspectors test and flow tests.
- Calculations plate installed.

Please call (540) 443-1325 if you have any questions

## **Type 1 Fire Suppression Hood Systems Information**

First time installers frequently make extremely expensive and time consuming installation errors due to the specialized knowledge required to design and install a code compliant type 1 hood system. **The building official strongly recommends that restaurant owners hire licensed fire suppression and mechanical contractors to install this type of hood system.**

### **Minimum required inspections:**

Inspection of hood and duct systems

1. Minimum of a 100 watt incandescent light passed through the duct. The contractor must supply light test rigging, ladders, access and personnel to perform test. The test must be successfully completed with no visible light through any welds on the duct prior to wrapping and/or concealment of duct work.
2. All materials, supports, clearances, cleanout locations and fall of duct work prior to concealment.
3. Duct wrap installation prior to concealment
4. Hood location, mounting hardware and surrounding wall construction

Final inspection:

1. Approval of balancing report by building official
2. Verify interlock of exhaust, makeup air fans and energy source for all protected equipment. When suppression system is activated all energy sources to protected equipment and make up air fan must automatically shut-off.
3. Dump test
4. Type of heads, location and position of suppression heads. Contractor must have documentation on site at time of inspection
5. Clearance to combustibles of cooking equipment, hood, and duct.
6. Check pull station location(s) and operation
7. Location and type of approved fire extinguisher
8. Check fusible link(s) type, location and operation
9. Exhaust and makeup air fan inlet and outlet location clearance from intakes, property lines and building openings, etc.
10. Check interlock with F/A panel if F/A system is present

Because of the uniqueness of each installation the building official reserves the right to request additional field inspections were field conditions warrant them.

Please call (540) 443-1325 if you have any questions.

Updated 10-2019 (ARS)

## **Town of Blacksburg Re-Inspection Fee Policy**

Effective March 1, 2012 the following re-inspection fees will apply to **all** construction projects within the Town of Blacksburg, Virginia.

### **A \$50.00 re-inspection fee will be charged for the following violations.**

- Approved plans are not on site.
- Truss drawings not on site.
- Soils reports, engineered documents and/or repairs not on site.
- Failure to post issued building permits.
- Failure to post address.
- Failure to cancel an inspection when not ready.
- Failure to correct all noted violations.
- Second and subsequent failures for the same violation.
- Not ready for inspection when inspector arrives on site.
- Failure to supply required equipment to perform the inspection (ladders, hoses etc).
- Additional re-inspection fees as determined by the Building Official.

### **TIPS to AVOID Re-INSPECTION FEES:**

This office will make every attempt to work with you to avoid re-inspection fees. If you have questions prior to scheduling your inspection or if you have scheduled an inspection and will not be ready - please call to cancel the inspection to avoid unnecessary fees. Once the inspector has arrived on site and the determination has been made that you are not ready a re-inspection fee will be charged.

Make sure your construction site has all approved plans, engineered documents and details, soils reports, truss drawings and other pertinent information on site to assist in the inspection. Make sure you provide on site any necessary equipment needed to perform your inspection.