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Preface

Virginia Tech University Building Officials Office has formulated a uniform set of procedures based on experience in several Virginia regions, for the manner in which the University shall enforce the Virginia Uniform Statewide Building Code through inspection provisions of the Virginia Uniform Statewide Building Code (VUSBC). These guidelines and procedures shall replace the relevant chapters and forms in the Commonwealth of Virginia’s Construction and Professional Services Manual (CPSM) for projects on VA Tech property in the Commonwealth of Virginia.

The 2012 VUSBC effective July 14, 2014, incorporates and amends the International Code Council, Inc. (ICC) 2012 International Building Code (IBC). The University Building Official Uniform Statewide Building Code Inspection Guidelines and Procedures (herein referred to as Guidelines and Procedures) provides and coordinates the procedures for the inspections that are required by the referenced VUSBC. These procedures and guidelines are intended to be used during the design and permitting process, and on the job site by containing the pertinent information needed for successful implementation of the inspection program.

The Guidelines and Procedures include the following:

- The responsibilities of the University Building Official and staff
- The responsibilities of the Project Manager or permit holder
- The responsibilities of the Special Inspector and related inspectors.
- The responsibilities of the Registered Design Professionals responsible for the design;
- The role of each member of the building construction team to include the Registered Design Professionals, Building Owner (VA TECH), Contractors, the Inspectors, and University Building Official;
- Identification of the required areas of inspections, and;
- Administrative procedures that include important definitions, reporting requirements, and conflict resolution procedures.

The purpose of the Guidelines and Procedures is to increase awareness of the inspection requirements and to have a uniform procedure applicable to all campus projects. Should you have any questions or suggestions for future editions of this document, contact the University Building Official.
1. **Introduction**

The IBC as adopted by reference through the Virginia Uniform Statewide Building Code (VUSBC) intends that the Authority having jurisdiction or Building Official be responsible for the inspection of construction, alteration, additions, and maintenance governed by the code.

The provisions for inspections are intended to provide a degree of scrutiny for aspects of construction that, upon failure, would cause significant risk to life, property or other harm. These aspects of construction include soil suitability, footings, foundations, framing (steel and wood), masonry and concrete construction, finishes, electrical, mechanical and plumbing as detailed in the VUSBC. Additionally, the inspections are intended to provide a degree of scrutiny for aspects of the construction that may if not installed properly, create maintenance and serviceability issues within a building.

This procedure is intended to safeguard the policies and general welfare through:

- Clearly defining the responsibility of all parties involved in the inspection process;
- Applying the inspection provisions of the VUSBC in a consistent manner across the Virginia Tech Community in a manner consistent with other jurisdictions across the Commonwealth.

This set of Guidelines and procedures is specific to new construction, alteration, renovation, and additions. Permits and Inspections required for temporary and amusement structures and the cable pass through permits at the Center for the Arts are not part of this document and are contained in alternate procedural permitting and inspection processes.

2. **Abbreviations and Definitions**

2.1 **Abbreviations**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>ACI</td>
<td>ACI International (American Concrete Institute)</td>
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<td>AISC</td>
<td>American Institute of Steel Construction, Inc.</td>
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<td>AISI</td>
<td>American Iron and Steel Institute</td>
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<td>ASCE</td>
<td>American Society of Civil Engineers</td>
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<td>ASNT</td>
<td>American Society of Non-Destructive Testing</td>
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<td>ASTM</td>
<td>American Society for Testing Materials</td>
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<td>AWS</td>
<td>American Welding Society</td>
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<td>BIA</td>
<td>Brick Industry Association</td>
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<td>CASE</td>
<td>Council of American Structural Engineers</td>
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<td>CM</td>
<td>Construction Manager</td>
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<td>DB</td>
<td>Design Builder</td>
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<tr>
<td>DHCD</td>
<td>Department of Housing and Community Development</td>
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<td>EDI</td>
<td>Exterior Design Institute</td>
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<td>EIFS</td>
<td>Exterior Insulation and Finish Systems</td>
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<td>GC</td>
<td>General Contractor</td>
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<td>IBC</td>
<td>International Building Code</td>
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<td>ICC</td>
<td>International Code Council, Inc.</td>
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<td>NCMA</td>
<td>National Concrete Masonry Association</td>
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<td>NEC</td>
<td>National Electric Code</td>
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<td>NFPA</td>
<td>National Fire Protection Association</td>
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<td>NICET</td>
<td>National Institute for Certification in Engineering Technologies</td>
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<td>MEPR</td>
<td>The Mechanical/Electrical/Plumbing Engineer of Record</td>
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<tr>
<td>OSHA</td>
<td>U.S. Dept. of Labor Occupational Safety and Health Administration</td>
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2.2 Definitions (with abbreviations where appropriate)

Words used in this procedure shall have a meaning as defined in the VUSBC and the IBC. Unless otherwise expressly stated, other words and terms shall have the meaning shown in this procedure. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies.

Agents of Special Inspector (Agents). Qualified individuals or agencies working under the direction of the Special Inspectors who are providing the inspections and tests necessary to complete the special inspection process.

Approved. See VCC Chapter 2 as amended

Approved agency. VCC Chapter 2 as amended

Approved documents. Includes building construction documents approved by the jurisdiction including all approved revisions; and also fabrication and erection documents approved by jurisdiction including all approved revisions.

Approved fabricator. See VCC Chapter 2 as amended, 1702.1

Architect of Record (AR). The registered design professional (RDP) retained by the Owner to design or specify architectural construction in accordance with the VUSBC and whose signature and seal appears on the approved architectural construction documents.

Building. See VCC Chapter 2 as amended

Building Official (also referred to as the Authority Having Jurisdiction (AHJ) University Building Official (UBO) at Virginia Tech and Commissioner in some jurisdictions). The local government authority charged with the administration and enforcement of the VUSBC. This shall include any duly authorized technical assistants as specified in the VUSBC.

Certificate of Compliance. See VCC Chapter 2 as amended, 1704.2.5.2

Certificate of Occupancy (CO). This is an authorization for occupancy of a building upon the completion of the work based on the approved construction documents and successful acceptance after all fire code and building code related inspections are satisfied. This recognizes the building is considered in general compliance, although under the building code, there is an addition two year period in which code violations can be identified and required to be resolved.

Construction documents. See VCC Chapter 2 as amended

Contractor. A firm or person licensed in the Commonwealth of Virginia to provide contract to provide construction services. (See Commonwealth of Virginia, Title 54.1)
**Discrepancy.** A deviation from the approved plans and specifications and/or Virginia Uniform Statewide Building Code.

**Fabricated item.** See VCC Chapter 2 as amended

**Fabrication and erection documents (placement drawings).** All of the written, graphic, and pictorial documents prepared or assembled after issuance of a building permit and in addition to the university approved construction documents, describing the design, location, and physical characteristics of the building components or materials necessary for fabrication, assembly, or erection of the elements of the project. (Examples would include, but are not limited to, concrete reinforcing shop drawings, steel fabrication and erection shop drawings, and metal building fabrication and erection shop drawings.)

**Final Report of Special Inspections.** A certification by the SI which shall indicate that all construction elements subject to Special Inspections as identified by the jurisdiction approved Statement and Schedule of Special Inspections (SSI) for all materials or phases of construction have been inspected prior to concealment, and in the SI’s professional opinion and knowledge, the construction project complies with jurisdiction’s approved Construction Documents.

**Geotechnical Engineer of Record (GER).** The Registered Design Professional retained by the Owner to design or specify earthwork and foundation support in accordance with the VUSBC, and whose seal and signature appear on the jurisdiction approved geotechnical report.

**Inspection.** The continuous or periodic observation of work and the performance of tests for certain building or structural components to establish conformance with jurisdiction approved documents as required by the VUSBC and the IBC.

**Independent Inspection.** Inspections done by an approved independent third party, normally and engineering or testing firm, when approved by the Building Official as a substitute for an inspection by the UBO staff. Can be used for inspections outside normal working hours or when required at distant sites from campus. Can only be done for code when prior approval is granted.

**Inspection Certificate.** See VCC Chapter 2, as amended.

**Inspection and testing agency.** An established and recognized agency or agencies, meeting the requirements of ASTM E 329 and accredited, retained by the Owner, independent of the Contractors performing the work subject to special inspections, to perform special inspections and materials testing required by the VUSBC and the IBC. See IBC-1703.1 Approved agency.

**Main Windforce-Resisting System.** An assemblage of structural elements assigned to provide support and stability for the overall structure. The system generally receives wind loading from more than one surface.

**Owner.** See VCC Chapter 2, as amended.

**Pre-engineered structural elements.** Structural elements specified by the SER but which may be designed by a specialty RDP. (Examples are items such as open web steel joists and joist girders; wood trusses; combination wood, metal and plywood joists; pre-cast concrete elements; prefabricated wood or metal buildings; tilt-up concrete panel reinforcement and lifting hardware.)

**Primary Registered Design Professional of Record (PRDP).** The leader of the design team charged with the preparation of construction documents, either an architect or professional engineer. The Primary Registered Design Professional of Record is responsible for determining and interpreting the needs of the client or for coordinating the work of the other members of the design team.
Primary structural system. The combination of elements which serve to laterally brace and support the weight of the building’s structural shell, the applicable live loads based upon use and occupancy, wind, snow, ice, thermal and seismic environmental loads.

Registered Design Professional (RDP). See VCC-Chapter 2 as amended

Registered Design Professional in Responsible Charge. See VCC Chapter 2

Registered Design Professionals Seal. A seal placed on documents prepared by or under the supervision of a registered design professional. The application of a professional seal indicates that the professional has exercised direct control and personal supervision over the work to which it has been affixed. An appropriately licensed certified professional shall apply a seal to all final documents in which they have had direct control and personal supervision thereof.

Risk Category. See VCC Chapter 2, 1604.5

Seismic Design Category. See VCC Chapter 2 as amended.

Seismic Force Resisting System. See VCC Chapter 2 as amended.

Shear Wall. See VCC Chapter 2 as amended.

Structural observation. See VCC-1702.1

Shall. This term indicates mandatory requirements.

Special Inspector (SI). See VCC Chapter 2. The SI is the Registered Design Professional in Responsible Charge who is directly responsible for Special Inspections, materials testing, and related services as described in the approved SSI. The SI shall be retained by the Owner, independent of the Contractors performing the work subject to special inspection. The SI must be approved by the Building Official. The SI shall be listed as Agent 1 on the SSI.

Special Inspection (SI). The process as outlined in VCC Section 1704 for the independent inspection of specific elements in the construction of a structure.

Special Inspection, Continuous. See VCC Chapter 2 the full time observation of work requiring special inspection by an approved special inspector who is present in the area where the work is being performed. (Noted as “c” on the scope or schedule of inspections in the statement of special inspections.)

Special Inspection, Periodic. See VCC Chapter 2 The part-time or intermittent observation of work requiring special inspection by an approved special inspector who is present in the area where the work has been, or is being performed, or at the completion of groups of task involved in completion of the work. One-hundred percent of the work required to be inspected shall be inspected. Under special circumstances, and after a substantiating data is reviewed, the Building Official may decrease the percentage of work that is required to be inspected.

Sprayed fire-resistant materials (SFRM) See VCC Chapter 2-1702.1

Statement of Special Inspections (SSI). The SSI is a statement prepared by an RDP and shall be approved by the appropriate RDP(s) of Record and submitted by the permit applicant. The SSI includes the scope (schedule) of the special inspection services applicable to a construction project, and the RDP’s and inspection and testing agencies that will provide those services. The SSI is required as a condition for permit issuance in accordance with IBC as amended by VUSBC and must be approved by the University Building Official.
**Structural Engineer of Record (SER).** The Registered Design Professional retained by the Owner to design or specify structural documents in accordance with the VUSBC, and whose signature and seal appear on the jurisdiction approved structural construction documents.

**Structure.** See VCC-Chapter 2 as amended.

**Submittal Review Stamp.** A stamp applied to a submittal indicating that the registered design professional has reviewed the submittal, and that the submittal clearly and completely indicates in detail the product(s) that are proposed to be installed. In addition to the product, the RDP and/or UBO, may require the method(s) of installation to be completely and clearly defined. The intent of the shop drawing review process is to ensure that the RDP’s intended results coincide with the contractors proposed products and methods.

**Temporary Certificate of Occupancy (TCO).** This is an authorization for occupancy of a building for a specific time and for a specific set of limitations. While it is issued only where the minimum requirements for fire, fire, and general safety as well as egress are meet for a specific set for situations, it is not indicative of a completed structure.

Third party Inspection. See Independent Inspection

**Virginia Uniform Statewide Building Code (VUSBC).** The adopted statewide building code in Virginia and includes Parts I, II, and III.

**Virginia Construction Code (VCC).** Part I of the VUSBC which adopts and amends the IBC.

### 3. Responsibilities

The **University Building Official** is responsible for permit plan review, the issuance of the building permits, code mandated inspections, and the issuance of the Certificate of Occupancy. Prior to issuing the Building Permit, the University Building Official will review and approve the required Construction Documents. During construction, the University Building Official shall conduct inspections as delineated in the VUSBC for the purpose of the verifying the construction is in general conformance with the approved construction drawings and the VUSBC. The University Building Official has the authority to issue a stop work order if it is found that the work is in non-conformance with the approved construction documents or the VUSBC. The Certificate of Occupancy or final inspection shall be issued only after the University Building Official has conducted and approved the Final Inspections.

The **Project Manager** is the person who has been given the responsibility and authority to manage a project, regardless of the size. Typically they will be University employees from either the Facilities or Housing and Residence Life (Residence and Dining) Departments. The PM normally applies for and holds the permits for a project as well as manages the contracts and contractors.

The **Contractor**, a General Contractor (GC), Design-Builder (DB) or Construction Manager (CM), is responsible for the construction of the project in accordance with the Construction Documents and the VUSBC; this would include the coordination and direction of all subcontractors, fabricators and material suppliers. Herein, the differences in the form of construction management does not impact code compliance and so we refer to the contractor shorthand.

The Contractor is responsible for means and methods of construction as well as for construction site safety. The Contractor is responsible for scheduling inspections and tests. Sufficient notice and lead time must be allowed for the inspection and testing to be performed without impeding the construction operations. The Contractor must cooperate with the inspection and testing agencies. When deficiencies are identified, the Contractor must take corrective actions to comply with the contract documents or remedy the deficiencies as directed by the appropriate Registered Design Professional. The Contractor is responsible for testing services that are required for material submittals and are not part
of the VUSBC Code Enforcement or Special Inspection program, such as aggregate tests, concrete mix designs, testing of controlled fill materials, etc. The Contractor is the primary person or firm responsible for compliance with OSHA and VOSHA standards and regulations. Safe access must be provided to allow inspections and tests to be performed. This may require the Contractor to provide scaffolding, ladders or lifts.

The contractual responsibility of a General Contractor (GC) or Construction Manager (CM) can vary widely therefore it is important to define the GC or CM role and responsibility relative to review and subsequent inspections on a case by case basis. Regardless of the contract form, the Contractor is responsible for completing the construction work in compliance with the Contract Documents and the Building Code. The VUSBC Inspection or any other special inspection or Quality Assurance program does not relieve the Contractor of his or her responsibility to perform Quality Control.

The **Primary Registered Design Professional of Record (PRDP)**, (or A & E) shall be the primary agent responsible for the design and design team. The RDP shall review and act upon conditions noted in plan review comments, inspection reports and providing submittal review and approval, development of or approval of fabrication and erection documents as well as those revisions and change orders affecting work to be inspected or tested. Please note the following sub-classifications of an RDP that may or may not be an active part of any given project depending on the nature of the work:

The **Architect of Record (AR)** is the Registered Design Professional (RDP) in Responsible Charge of the architectural building elements and is often the Prime Design Professional for “typical” building projects.

**Geotechnical Engineer of Record (GER)** is the Registered Design Professional in Responsible Charge of the Geotechnical analysis and design of support systems for the footing and foundation support.

The **Structural Engineer of Record (SER)** is the Registered Design Professional (RDP) in Responsible Charge of the structural system.

The **Mechanical/Electrical/Plumbing/Fire Protection Engineers of Record** are the Registered Design Professionals (RDP) in Responsible Charge of the HVAC systems, electrical systems, plumbing and fire protection systems.

**Plan Reviewers and Permit Technician.**
The University Building Official office staff is comprised of professional and licensed staff who manage the permit application and review process as well as the issue, inspection, and approval of final work in the field for code compliance. All of the University Building Officials office staff are ICC and DHCD Certified to perform plan reviews (and inspections) in their respective areas of expertise as well as being cross certified in additional disciplines for review and inspection.

For small projects that generally have only one or two parts (building and trades), plan reviews will be performed by Reviewers within their disciplines. For larger projects, those involving multiple, a lead reviewer may be assigned to coordinate the review process from submission to issuance. The lead/reviewer inspector will work the other UBO staff as well as other agencies as required to coordinate the various discipline reviews.

The Permit Technician shall be the coordinator for incoming and outgoing permits and permit information. The Tech shall also coordinate the permit management program used to issue the permits and manage related inspection results.

**Code Inspectors**
All projects that have a permit or permits shall have an inspection of some magnitude in accordance with the building code. The members of the University Building Officials office and the Code Review Team are ICC and DHCD Certified to perform plan reviews and inspections in their respective areas of expertise.
For small projects that generally have only one or two parts (building and trades), inspections will be performed by Inspectors within their disciplines. For larger projects, those involving multiple inspections, a lead inspector may be assigned to coordinate the inspection process from initial to final inspection.

The lead inspector will be assigned to a project regardless of the discipline. The lead inspector will work the other UBO inspectors and staff as well as other agencies as required to coordinate the various discipline inspections and maintain the master file of information relating to the project.

**Special Inspections and Inspectors**
In accordance with the VCC, the owner shall contract with a firm or team of firms to provide the Special Inspections in accordance with VCC Chapter 17. These inspections shall be separate from other contract compliance, owner, or contractor inspections. The SI program shall conform to the requirements provided in the *University Building Official Virginia Uniform Statewide Building Code Special inspection Guidelines.*

**Independent or Third Party Inspections and Inspectors**
There may be times or events where the code enforcement staff cannot provide for an inspection when requested by the PM or Contractor. The PM may submit a request and details to utilize a third party, normally an engineer to conduct the inspection in lieu of the code official. Based on the situation, the code official may or may not approve the use of the third party or independent inspector.

**Owner Inspections or Inspections**
In order to administer the contract and construction, the owner (PM) may employ one or more additional inspectors or inspection firms. These firms and inspectors are separate and apart from the code inspectors and shall not have the authority of or the responsibility for code related inspections.

**Key Contacts:**

- **Inspections scheduler:** Heather Snidow  
  Phone: 540-231-5534  Fax 540-231-7239  Email: hsnidow@vt.edu

- **University Building Official**  
  William Hinson  Phone: 540-231-4678  Fax 540-231-7239  Email: hinson@vt.edu

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**4. When Inspections are Required**
The Project Manager or contractor shall provide formal notification to the UBO office of a request for inspection. Typically this should be in writing or by email or fax with a phone call to confirm. If the UBO permit technician has not confirmed the inspection, it has not been scheduled. Requests shall be made with the following information:

- Address or location of Job (floor number, room or suite number, etc)
- Permit number – requests for inspection will not be accepted without the building permit number
- Type Permit
- Separate permits are required for building, mechanical, electrical, gas and plumbing work. No requested inspection is performed unless a valid permit exists for that work. Work performed without a permit, when permit is required, is a violation of the law. If there is a question whether a permit is required or if work is within the scope of any permit issued, call the University Building Official.
- Type of inspection requested (footing, rough in, final, etc.) The request for inspection shall include what systems are to be inspected as well as the intended limits of the requested inspection.
- Name of person making the request
- Contact or callback number of person making the request
- Note the following conditions apply:
Due to the nature of the process, the UBO staff cannot set a specific appointment time. We will provide an approximate time of arrival that is estimated to be plus or minus four hours. In the event the inspection and review load is heavy, some inspections may be delayed and prioritized. A 24 hour notice is the minimum.

There is a minimum 8 business hour notice for all inspections. However it is possible that inspections may be scheduled for and inspected within 2 business days following the request. Inspections will be scheduled as far in advance as the contractor desires.

Failure to be ready is cause to reject and reschedule.

If an email has been sent and confirmation of the inspection has not been returned by the end of the day do not assume the message has been received.

Inspection requests shall be honored as schedules permit. Flexibility is required on the part of both the inspector and requestor.

In no situation shall work shall be concealed without written confirmation from the University Building Official’s office inspector that inspections are complete and all code related deficiencies have been resolved.

Sub-contractors will need to schedule all inspections through the PM, CM or GC and not schedule their own inspections.

Project Managers and Special Inspectors are expected to have verified the equipment to be inspected prior to the UBO arriving.

**INSPECTION PROCESS:**
The UBO office shall perform requested code required inspections. The Permit Tech will schedule the inspection to the UBO staff as required and available. The Permit Tech or the Inspector who provides the inspection shall:

- Review inspection request form for completeness and accuracy
- Review the status of past inspections
- Review the project status
- Review the approved drawings
- Provide the Inspection and discuss the inspection with the PM or PC on site if possible. The goal being to make as many corrections as possible if timely and not leave deficiencies for follow up inspections.
  - Failure to have the buildings and trade permits posted is cause to reject and terminate the inspection.
  - Failure to have the UBO approved drawings on site for reference during inspection is cause to reject and terminate the inspection.
  - Any issue that cannot be resolved in a timely manner is subject to being rejected and will be noted and must be re-inspected when corrected.
- Annotate comments on the inspection request form
- Provide the completed inspection form to:
  - Following the inspection, the inspector shall provide results to the PM or his/her designee
  - UBO Permit Technician

The Building Inspector’s hours are from 8:00 am to 5:00 pm. Inspections must be requested not later than 4:00 pm to be placed on the inspector’s schedule for the next available inspection opportunity. Any request received after 4:00 pm will be placed on the schedule for the following working day(s). If work is not complete and open for inspection, it may be subject to disapproval and require re-inspection.

Examples:
- Inspections requested@ 3:30 pm; Tuesday 12/13/2011 will be placed on the inspection schedule for Wednesday 12/14/2011.
- Inspections requested @ 4:15 pm; Tuesday 12/13/2011 will be placed on the inspections schedule for Thursday 12/15/2011
- Be sure to account for Holidays when inspectors may not be available.
The inspectors may contact the project manager and/or Contractor concerning inspections after having an opportunity to review the assignment schedule. Please note the inspector is not able to schedule a specific time for an inspection.

The person requesting an inspection must leave a call back number. Inspectors are not allowed to inspect a job without a responsible party (usually the permit holder) present with them during the inspection.

When requesting a concrete or masonry grout inspection forms must be in place with ALL reinforcement, covered or integrated electrical, plumbing, mechanical and structural equipment installed and fastened in place a minimum of two (2) hours prior to the scheduled pour. If ordered please provide the exact time of the proposed pour, note that a failed inspection will normally delay or cancel the pour.

It is the permit holder’s responsibility to furnish a ladder if one is needed for a requested inspection.

Special weather conditions may affect the inspector’s ability to perform inspections. Should you have a question concerning inspections for a particular day, please contact the Inspections Scheduler at 540-231-5534. If inspections are cancelled for any particular day, the inspector will contact you if you have provided a call back number when the inspection was requested.

An existing building typically only requires a final to close the permit. However, alterations to existing buildings, new buildings, additions to existing buildings, buildings and spaces which have undergone a change of use and shell spaces which have never been occupied will require a certificate of occupancy from the building official before the space is occupied. Request for final inspection shall be scheduled a minimum of 5 days in advance. It is the responsibility of the PM or designee to coordinate the inspection with the building official and deputy state fire marshal, etc.

In addition to these required inspections, the VUSBC states that structures may be inspected at any time during construction. Occasionally, inspectors will visit jobs unannounced and when not requested.

The University Building Official will consider on a case by case basis the use of Independent Inspectors, third party inspectors, photo verification and video inspection. In no case is the UBO bound to accept any inspection without prior approval, review of the firms or individuals, and evaluation of the situation. If the use of alternative inspection processes is denied, a UBO staff inspection shall be provided at the earliest available date and time.

A project or permit will not be considered complete until a Certificate of Occupancy (CO), an Authorization to Reoccupy, or a Final Inspection is successfully completed.

**APPEAL PROCESS:**
Appeals of inspection results by reviewers and inspectors as well as department directives may be made to the University Building Official.
- Be specific as to the issue being appealed
- Provide supporting documentation as may be applicable, such as code or UL references, etc.

Further appeal of UBO code interpretations can be appealed by the permit applicant to the Department of Housing and Community Development Building Code Technical Review Board.

**REQUIRED MINIMUM INSPECTIONS:**
The following are the inspections required by the Virginia Construction Code and referenced International Codes and associated references. The building or trade permit which has been issued gives authority for work to commence based on the UBO approved design documents. The stamped, approved plans, returned with this permit, shall be retained at the job site and be available for inspectors on request. It shall be the applicant’s responsibility to perform all work in accordance with the Virginia Uniform Statewide Building Code, and within the scope of what was authorized by the
plans submitted and approved. Changes to these plans must be approved by this office. Please post your permit placard in a prominent location, preferably visible from the street or sidewalk that provides common access to the work site.

Inspections at various stages of work are required by this office, under provisions of the Virginia Uniform Statewide Building Code. The required inspections for buildings are listed below.

**BUILDING INSPECTIONS REQUIRED:**

A. **Footing Inspection** – To be made after basement or footing trenches are excavated and forms, where applicable, are erected. All reinforcement steel, when necessary, must be in place and anchored. This inspection must be made prior to pouring concrete. If slab on grade (monolithic pour) construction this inspection includes the foundation inspection. The inspector will also check for the required erosion control measures as shown on the approved site plan. If these items (e.g., silt fence, construction entrance, etc.) are not properly installed this inspection may be disapproved.

   a. Footings, foundations and water and sewer line inspections will be given a priority when requested to assist you in pours and covering open excavations. Same day inspections will be considered on an emergency basis only. For a same day inspections request to be covered, you must FIRST request the inspection through one of the methods described above. Be sure to indicate on your request that this is an emergency situation and you need an inspection as soon as possible. Same day inspections cannot be guaranteed and will only be performed if inspectors are available.

B. **FOUNDATION**

   a. **Masonry Foundation Wall Inspection:** The foundation block must be completed to the level of the finish grade, and be continuous over any steps or grade changes. Piers must be complete to the level of finish grade and any brick or other veneer must also be in place. All bonding or other lateral support of intersection walls must be complete and visible. All form boards or step boards must be removed and the foundation trench ready for backfilling. The top of the footings must be clean and clearly visible. Inspectors will not wait more than several minutes until the footing is made visible if they arrive and find it has been covered.

   b. **Floor Joists Inspection:** To be made after load-bearing walls to the first floor sill height have been erected, beams and floor-joists have been installed, and grading within the perimeter walls has been completed. Sub-flooring shall not be installed before this inspection has been approved. In basements, the first floor system (box) shall have all approved (on plans) supports (posts, columns, posts) for beams and girders in place and secured.

   c. **Damp-Proofing Inspection:** Basements must be inspected for water-proofing method, drains, gravel, and filter cloth before being backfilled.

   d. **Concrete slab and under floor inspection** to be made after any required reinforcement, building service equipment, piping (including sprinkler main), conduits and other ancillary equipment items are in place.

   e. **Lowest floor elevation inspection** when the building is located in a flood hazard area. The elevation certification required in IBC Section 1612.5 shall be submitted to the building official.

C. **FIREPLACE INSPECTION** – Where there is to be a fireplace(s) installed in a building, this inspection must take place while combustible clearances can be inspected. This must be before the interior is insulated and sheet rocked, but may be after the fireplace is finished. This includes all types of fireplaces; masonry, prefab, and vent-less. NOTE: A separate mechanical permit is required for gas fireplace appliances.
D. FRAMING INSPECTION – To be made after the roof, all framing fire-stopping, blocking and bracing is in place, and the Sub-flooring has been installed. Do not install insulation before the framing inspection is approved. The building should be “weathered in” including windows, doors, and roof shingles for this inspection. The inspector will also check the condition of the required erosion control measures. If these items are not in good condition, this inspection may be disapproved.

Structures with fire walls, fire barriers, fire rated assemblies will have additional inspections as required by the inspector as construction progresses. Issues to be addressed include but not limited to:

- Frame inspection to take place after the roof deck or sheathing, all framing, fire blocking and bracing are in place and plumbing, mechanical, and electrical systems are in place and have been approved. Partial framing inspections are acceptable in large projects.
- Lathe and gypsum board inspection for fire resistive assemblies or shear assembly are to take place after lathing and gypsum board, interior and exterior are in place, but before plastering is applied or gypsum board joints and fasteners are taped and finished.
- Fire resistant penetrations. Protection of joints and penetrations in fire resistance rated assemblies shall not be concealed from view until inspected and approved.
- Energy Efficiency inspection.
- Above ceiling framing and rough in
- Other inspections including stucco, roofing, back veneer, masonry, etc.

Contact the University Building Official for details specific to the project.

NOTE: It will be necessary to request or schedule the trade rough-ins. All of the trade rough-ins may be conducted on the day the general contractor requests the framing inspection.

E. INSULATION INSPECTION – To be made when all required insulation has been installed. In the event that the contractor intends to use blown insulation in the ceilings, that portion of this inspection may be delayed until and during the final inspection.

Exception: Insulation between slabs and exterior walls will be inspected during the foundation inspection.

F. FINAL INSPECTION – To be made after the building has been completed and ready for occupancy. This inspection will not be made until all required electrical, plumbing, and mechanical final inspections and fire system inspections have been made and the work approved. A Final or Certificate of Use or Occupancy is issued only after completion of this inspection. The structure may not be used or occupied in whole or part until issuance of a Certificate of Occupancy. The disturbed area must be stabilized or the required erosion control measures must be in good condition.

G. INDEPENDENT or THIRD PARTY INSPECTION – For situations where work will be done after business hours or on weekends and the UBO is closed, an independent or third party code inspection may be authorized. These are approved on a case by case basis and subject to prior discussion and review. Typically additional information on the inspector or inspectors will be required as well as a clear understanding of the scope and limits of the inspection and reporting. Refer to the VT Building Code Independent Inspection Procedures for additional details.

H. SPECIAL INSPECTION – refer to Special Inspection procedures for details.

PLUMBING INSPECTIONS REQUIRED

A. WATER AND SEWER – To be made after all water and sewer lines are installed from the water and sewer mains (or wells and septic tanks) to the structure. Trench must be open and all lines accessible to the inspector.
B. ROUGH-IN INSPECTION. Under-slab inspection to be made prior to pouring concrete (under-slab). Rough-in inspection after all interior piping (water and sewer) has been installed and tested, and prior to concealment.

C. FINAL INSPECTION – To be made after all plumbing work has been done and all appliances involving water and/or sewer connections have been installed.

ELECTRICAL INSPECTIONS REQUIRED

A. ROUGH-IN INSPECTION – Under-slab inspection required prior to pouring concrete. Rough-in inspection to be made after all interior wiring and electrical equipment has been installed, but prior to covering or concealment and prior to installation of any insulation. When possible, the following requirements must be in place at this for the rough-in electrical inspection:
   a. The grounds and neutrals in the electrical panel must be terminated.
   b. The meter base must be mounted.
   c. The service cable must be terminated.
   d. The panel cover shall be installed with two screws only, and the screws shall be only finger tight.
   e. For residential:
      i. One 20-Amp breaker shall be installed in the panel for the washer outlet ONLY.
      ii. A GFI receptacle must be installed in the washer outlet.

If all of the above-listed items are not completed at the time of the electrical rough-in inspection, the rough-in may be approved but the meter will not be released until the electrical trim-out has been completed and inspected.

B. FINAL INSPECTION – To be made after electrical work is complete and power is turned on. JUST BECAUSE POWER IS ON, IT DOES NOT MEAN YOU CAN OCCUPY OR USE THE STRUCTURE. YOU MUST HAVE THE BUILDING C.O. FIRST!

MECHANICAL INSPECTIONS REQUIRED:

A. ROUGH-IN INSPECTION – Under-slab inspection to be made prior to pouring concrete. Rough-in inspection to be made after the installation of all equipment, duct work, gas lines, fuel storage tanks, etc., and prior to covering or concealment.

B. GAS LINES – Rough-in inspection required after installation of all lines and after pressure test is complete (but before concealment of any lines or fittings). Final inspection required after hookup of all gas appliances. Gas service will not be released to the utility company for connection until these inspections are approved. If service is interrupted, new pressure tests and inspections may be required prior to release to the utility company.

C. FINAL INSPECTION – To be made after all heating, ventilating, and air conditioning installations have been completed and tested.

EVERY PERMIT MUST HAVE AT LEAST ONE INSPECTION!

Outstanding Issues, failed inspections, RFI’s, or Deviations may prevent or delay subsequent inspections.
A permit will expire if the work authorized by the permit is not started within six months (180 days) after it is issued and a permit will also expire if there is no activity recorded by the University Building Officials office in any six month period. No work should be done under an expired permit and inspections cannot be scheduled or performed for an expired permit. If your permit has expired, you must submit a written request for an extension to the Building Inspections Division. It is your responsibility to prove to the University Building Official that the work has not been suspended or abandoned.

5. Pre-construction Meeting and Post Construction Closeout

5.1 Pre-construction Meeting
When required by the University Building Official, pre-construction meetings are to be conducted by the Project Manager at the start of the project unless work is of a minor nature and waived by the University Building Official. The meeting is to be attended by the following individuals:

- Building Official (or designee)
- Contractor
- Subcontractor’s representatives for each trade of work
- Special Inspector (if part of project)

The following individuals are to be notified of the pre-construction meeting and are encouraged to attend whenever possible:

- Owner
- RDP(s) of Record for each scope of work specified

The meeting should provide a forum to review and explain the following:

- Work to be reviewed as specified in the VUSBC inspection.
- Discussion of the inspections and testing to be performed.
- Timely notification required by the Contractor to the UBO of when the work is ready for inspections during the course of the work.
- Procedures to document, correct, re-inspect, and complete items found to be non compliant or deficient.
- Identification of the RDP designated to resolve field deviations and non-compliant items if different from the RDPs responsible for preparing the construction documents.
- Contact information of individuals involved with the project.
- Proper submission and distribution of reports and supplemental information.
- Discussion of coordination of all work to be performed in accordance with the Contract Documents and that no changes shall be permitted unless authorized and approved in writing by the RDP of Record for the work in question.

5.2 Post Construction Closeout
At the conclusion of the final Inspection for a new construction, the PM shall be responsible to submit the required closing documents found in the CPSM as modified for the UBO office. These can also be found at the UBO Website.

At that time the PM may request a CO in order to occupy the building. We expect the PM to ask for the CO when the work is complete and simply utilize a TCO as an accelerator to get occupants in the building before the work is in fact complete.
The UBO staff shall review the file, contact other related state agencies, such as the SFMO, for clearance documents if they have not been provided.

If the paperwork is complete and the building complete, the UBO shall issue the CO.

In the case of work on an existing building, the final inspection shall stand in the place of a new CO. Depending on the project, the building official may opt to issue a revised CO for the building.

6. Referenced Documents

7. Revisions to this document
Revisions will be made from time to time based on changes in the Virginia Construction Code or problems identified in the field.
University Building Officials Office Inspection Guide

It is the Project Manager’s responsibility to ensure all inspections are conducted and approved in accordance with approved plans. Typical inspections are listed below but may not be all inclusive. Refer to VUSBC Section 113.

Building Inspections Required
Footing
Foundation
Masonry Foundation Wall Inspection
Floor Joist Inspection
Damp-Proofing Inspection
Fireplace Inspection
Framing Inspection
Structure, Anchorage
Shear Walls
Cavity Wall Components (Ties, Waterproof, etc.)
Poured Wall (Reinforcement, Thickness, Anchors, etc.)
Core Drills Prior to Fill
Fire Rated Assemblies and Penetrations
Insulation Inspection
Above Ceiling Inspection

Mechanical Inspections Required
Rough In Inspection
Trade Final

Plumbing (Water and Sewer) Inspections Required
Water and Sewer Trenches and Support
Rough in Inspection
Trade Final

Fire Suppression and/or Fire Alarm System Inspections Required
Water Piping Trenches and Support
Rough in Inspection
Alarm Test
Pressure Test
Witness the System Flush
Witness Alarm Testing
Witness Fire Damper Operations
Trade Final

Electrical Inspections Required
Rough In Inspection
Trade Final

Fuel Gas Inspections Required
Trenches and Support
Gas Lines
Pressure Testing
Trade Final

Misc. Inspections Required
Sidewalks, Patio, etc. Reinforcement prior to placement of concrete
Utility Piping (Water, Steam, Sewer)
Health Department Inspection
State Fire Marshall Inspection
Special Inspections
Third Party if specified by UBO
 Permit Final
### University Building Official – VUSBC Inspection Report

The Building Permit holder, Project Managers, coordinators, contractors and A/E’s and all staff responsible for work governed by the VUSBC are fully responsible for complying with all laws, the VUSBC, regulations, VA Tech Standards, policies and contract documents.

<table>
<thead>
<tr>
<th>Project Manager or Applicant:</th>
<th>Day/Date:</th>
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<tbody>
<tr>
<td>Permit Number:</td>
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<tr>
<td>Project Title:</td>
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<td>Contractor:</td>
<td>Weather/Temp:</td>
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<tbody>
<tr>
<td>Above Ceiling (check below)</td>
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<td>Rough-in (check below)</td>
<td>Trade Final</td>
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<td>Re-inspection</td>
<td>Project Final</td>
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**Work Description:**

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<thead>
<tr>
<th>Use Group:</th>
<th>Type of Construction:</th>
<th>Area of Construction (Sq Ft):</th>
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<tbody>
<tr>
<td>Fire Suppression Type:</td>
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<td>Fire Alarm:</td>
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<table>
<thead>
<tr>
<th>Soils</th>
<th>Roof Trusses, Wood or Steel (circle)</th>
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<tbody>
<tr>
<td>Footing</td>
<td>Roof finish (EPDM, Shingle, etc)</td>
</tr>
<tr>
<td>Foundation Piles, Piers, or columns</td>
<td>Spray on fireproofing</td>
</tr>
<tr>
<td>Foundation Wall (masonry)</td>
<td>Veneer Installation (brick, stone, etc)</td>
</tr>
<tr>
<td>Concrete Reinforcement Steel and/or Forms</td>
<td>FIFS</td>
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<tr>
<td>Concrete Slab incl. turndown</td>
<td>Mechanical</td>
</tr>
<tr>
<td>Framing, Wood or Light Gage Metal (circle)</td>
<td>Electrical</td>
</tr>
<tr>
<td>Fire Rated walls, penetrations, membranes</td>
<td>Plumbing</td>
</tr>
<tr>
<td>Structural steel</td>
<td>Utility (Re)connect (Elect, Gas, Trailer, temp.)</td>
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<tr>
<td>Wind/Seismic System</td>
<td>Fire Suppression</td>
</tr>
<tr>
<td>Insulation</td>
<td>Fire Alarm</td>
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<tr>
<td>Joists or floor trusses (circle)</td>
<td>Elevator or Hoist</td>
</tr>
<tr>
<td>Metal Deck, elevated slabs</td>
<td>Other:</td>
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**Summary of Services/Inspection:**

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**Attach additional sheets as required.**

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<th>Inspector:</th>
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<tbody>
<tr>
<td>Passed</td>
<td>Rejected, need to re-inspect</td>
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<tr>
<td>Other:</td>
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**Note:** FAX copy of Utility (Re) Connect Inspect to VTES (Elect) or ATMOS (Gas)
Top copy – Final, VA Tech UBO Office, Bottom copy – PM or leave in field or as directed by VT Project Manager (v. 01/03/12)