A/E Contract for Pool Projects

- Funding is provided by phase
  - Detailed Planning
  - Construction
- Negotiate for all Preliminary A/E services
- Standard contract language

_The A/E is authorized to complete the A/E services through the Preliminary Design Phase. The A/E shall not proceed beyond this Preliminary Design, and the Owner shall have no responsibility to pay for services beyond the Preliminary Design Phase, unless the Owner states to the A/E, in writing, that “The A/E is hereby authorized to proceed beyond the Preliminary Design Phase.”_

- Memorandum of Understanding
  - Schematic Phase Target
  - After SC and PD revise the MOU based on the Design-to-Budget
2012 VCC Sec 403.5.4 requires a smoke proof enclosure in exit stairways serving floors 75’ above fire department access.

**Design**

- Maintain positive pressure between 0.10 and 0.35 inches of water column
  - Measured with all door closed and latched
- Independent system with standby power to operate within 60 seconds of power disruption
- Doors must latch and operate in accordance with opening force requirements in VCC 1008.1.3 and ADA-ASAD 404.2.8 both when running and under normal conditions.
Stair Pressurization

- **Construction**
  - Required smoke detectors for activation shall be located outside each door to the stairway and shall be connected to the emergency power system

- **Acceptance**
  - Separate inspection
    - After commissioning agency and A/E have reviewed and approved the system
  - System shall comply with VCC section 909.20 – Smokeproof Enclosures
  - Inspections include BCOM, SFMO, A/E, Fire Alarm Contractor, Electrical Contractor and Mechanical Contractor
Virginia Rehabilitation Code

- 2005: Introduced to ensure new construction complied with current code and existing building conditions were maintained
- 2012: VRC became mandatory (supplanted VCC)
  - Except in R-5
- Compliance Options (VRC Chapter 3)
  - 301.1.1 – Prescriptive Compliance Method
  - 301.1.2 – Work Area Compliance Method
  - 301.1.3 – Performance Compliance Method
- Cover/Title Sheet of Drawings shall identify the applicable code and compliance method
VCC Sec 1301.1.1 requires buildings to be designed in accordance with Virginia Energy Conservation Code

New Building Compliance Paths:
- Comply with ANSI/ASHRAE/IESNA 90.1-2010
- Prescriptive path defined by VECC sections C402-C405
  - Add: Enhanced HVAC/Reduced Lighting/Onsite Renewable Energy
- Performance path defined by VECC section C407 and mandatory compliance with C402.4, C403.2, C404 and C405.2 - C405.7

Existing Buildings Compliance Paths:
- Prescriptive path defined by VECC sections C402-C405
  - Additional efficiency package not required
- Comply with ASHRAE 90.1
Backup Power - Emergency & Standby Electrical Loads

- Requirements based on Group and/or building features (see VUSBC Ch. 27)
- NEC Article 700 Emergency Systems
  - Provisions for systems that are legally required and classed as emergency
    - Egress Illumination
    - Exit Signs
    - Fire Alarms
Backup Power - Emergency & Standby Electrical Loads

- NEC Article 701 Legally Required Standby Systems
  - Heating and refrigeration, communication, ventilation and smoke removal, sewage disposal, lighting and some industrial processes

- NEC Article 702 Optional Standby Systems
  - Not necessary for Life Safety but may be important to support the program

- NEC Article 708 Critical Operations Power Systems (COPS)
  - Serve vital infrastructure facilities

- Not all NEC designated emergency and standby loads can be combined in a single system
Inspection Responsibilities

- **SFMO Responsibilities**
  - Life and fire safety aspects
    - Fire-Resistance Rated Construction
    - Fire Protection Systems
    - Means of Egress
    - Fire Department Access
    - Safeguards during Construction

- **Memorandum of Agreement**
  - Allows SFMO to order changes to the work placed to comply with approved construction documents
  - Does not grant authority to order changes to approved documents
  - Does not grant authority to provide field interpretations of the VCC
Agency Project Inspector Responsibilities

- Inspect installation and workmanship of all construction placed for compliance with BCOM Approved Building Permit Documents and Shop Drawings.

Agency Inspectors:

- Do not have authority to interpret, change or deviate from the BCOM Approved Documents.
- Are responsible for coordinating with SFMO to schedule inspection of the Work.
- Do not have the authority to review or accept the construction placed for code compliance thus permitting the fire rated construction to be completed or closed in.*

*Only BCOM or SFMO have the authority to authorize this.
Successful Inspections

- Require a Pre-Installation Conference
  - Fire Resistance Rated Construction
  - Expansion Control Joints
  - Through Penetration Fire Stop Assemblies
  - Fire Protection Systems and Access Controls/Security Locking Systems

- Notebook of Approved Documents
  - Listed Design Assemblies
  - Engineering Judgements
  - Gypsum Manufacturer’s Installation Manual
Successful Inspections

- Fire Protection Systems are to be validated based on BCOM Approved Fire Protection Shop Drawings
- Request Preliminary Field Inspections prior to wall close-in and ceiling close-in inspections
- SFMO validates the construction of Fire Rated Assemblies
- Address prior to BCOM Inspection
  - Incomplete construction and construction debris
  - Unapproved changes during construction
Successful Inspections

- Address prior to BCOM Inspection
  - Incomplete construction and construction debris
  - Unapproved changes during construction
  - Roofing deficiencies
  - Mechanical systems
  - Incorrect plumbing fixtures or indirect waste disposal
  - Handicapped accessibility
  - Exit signs and exit discharge
  - Improperly locked exit doors
  - Incomplete closeout documents
Successful Inspections

- **Substantial Completion**
  - Date project is sufficiently complete and may be utilized as intended
- **Beneficial Occupancy**
  - After Substantial Completion but prior to Final Completion
  - Owner may occupy and utilize space for its intended use
Successful Inspections

- Beneficial Occupancy Inspection
  - Means of Egress Circulation
  - Toilet Rooms and other service spaces
  - Functional rooms/spaces that house main & secondary building functions
  - Installation & operation of HVAC and plumbing systems
  - Installation of electrical equipment
  - Fire alarm appliance placement
  - Building construction (fire barriers, fire walls, penetrations, etc)
  - Egress Lighting

End