# REGIONAL FIREARMS TRAINING CENTER

2300 Milton Road, Charlottesville, VA 22902

## PROJECT INFORMATION

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<th>APPLICABLE CODES AND STANDARDS</th>
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<td>2012 VIRGINIA CONSTRUCTION CODE (VCC), PART II OF THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE.</td>
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<td>2010 ADA STANDARDS FOR ACCESSIBLE DESIGN.</td>
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<td>OCCUPANCY CLASSIFICATION AND OCCUPANT LOADS AND COMPUTED IN ACCORDANCE WITH REQUIREMENTS OF THE 2012 VCC.</td>
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<td>OCCUPANCY CLASSIFICATION: MIXED USE, SEPARATED, B &amp; A-3.</td>
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<td>OCCUPANT LOADS:</td>
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<td>FIRING RANGE (1 PER LANE + 3 INSTRUCTORS PER RANGE): 38</td>
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<td>MECHANICAL/ELECTRICAL (300 SF/OCCUPANT): 16</td>
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<td>CLASSROOM (15 SF/OCCUPANT): 52</td>
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<td>STORAGE (300 SF/OCCUPANT): 6</td>
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<td>REMAINDER OF BUILDING (100 SF/OCCUPANT): 17</td>
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<td>TYPE OF CONSTRUCTION: IIB NONCOMBUSTIBLE UNPROTECTED.</td>
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<td>STRUCTURAL FRAME: PRECAST CONCRETE WALL PANELS, PRECAST CONCRETE DOUBLE-TEE ROOF.</td>
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<td>EXTERIOR WALLS: PRECAST CONCRETE PANELS.</td>
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<td>FIRE PROTECTION SYSTEMS: LIMITED MANUAL FIRE ALARM SYSTEM IN AREAS OUTSIDE OF FIRING RANGES.</td>
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## LOCATION MAP

![Location Map](image1)

## VICINITY MAP

![Vicinity Map](image2)

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6/25/2014 9:04:17 AM
**CONCRETE WALL THROUGH-PENETRATION**

**System No.:** 5364-A

**August 31, 2005**

**Rating:** 90 Hr

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1. **Joint System**

   - A. All concrete joints are made with 1-1/2 in. (38 mm) deep, 1-1/4 in. (32 mm) wide, standard joint material. Joint material can be a 1-1/4 in. (32 mm) wide, standard joint material.
   - B. Concrete wall may also be constructed of any UL Classified L Rating At 400°F — Less Than 1 CFM/Lin Ft
   - C. Concrete wall may also be constructed of any UL Classified L Rating At Ambient — Less Than 1 CFM/Lin Ft

2. **System No. WW-D-0032**

   - **Nominal Joint Width** - 1 in.

3. **HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC**

   - **flush with both surfaces of wall for 1 hr and 2 hr fire-rated walls, respectively.**

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**CONCRETE WALL JOINT**

**System No.:** 5364-A

**June 30, 2005**

**Rating:** 90 Hr

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1. **Joint System**

   - A. Wall framing may consist of either wood studs or steel channel studs. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) on center.
   - B. Nom 8 in. (203 mm) diam (or smaller) cast or ductile iron pipe.
   - C. Nom 4 in. (203 mm) diam (or smaller) steel electrical metallic tubing (EMT) or 6 in. diam steel conduit.
   - D. Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.

2. **Steel Pipe**

   - Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or nom 6 in. (152 mm) diam (or smaller) steel conduit.

3. **Copper Tubing**

   - Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.

4. **Copper Tubing**

   - Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.

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**CONCRETE WALL THROUGH-PENETRATION**

**System No.:** 5364-A

**August 31, 2005**

**Rating:** 90 Hr

---

1. **Joint System**

   - A. All concrete walls are made with 1-1/2 in. (38 mm) deep, 1-1/4 in. (32 mm) wide, standard joint material. Joint material can be a 1-1/4 in. (32 mm) wide, standard joint material.
   - B. Concrete wall may also be constructed of any UL Classified L Rating At 400°F — Less Than 1 CFM/Lin Ft
   - C. Concrete wall may also be constructed of any UL Classified L Rating At Ambient — Less Than 1 CFM/Lin Ft

2. **System No. W-J-1028**

   - **Nominal Joint Width** - 1 in.

3. **HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC**

   - **flush with both surfaces of wall for 1 hr and 2 hr fire-rated walls, respectively.**

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**REVISIONS**

**DRAWN:**

**DATE:**

**CN NO:**

**SCHEMATIC DESIGN SUBMITTAL**

_REGIONAL FIREARMS TRAINING CENTER_

2300 Milton Road, Chantilly, VA 20152

**FIRE RATED ASSEMBLIES**

**GI004**
DELEGATED DESIGN NOTES

C. DESIGN LOAD CRITERIA:

1. COORDINATE WITH THE CONTRACT DOCUMENTS FOR PROFESSIONAL LICENSURE AND SEALING.
2. DELEGATED ENGINEERED SYSTEMS AND COMPONENTS SHALL SATISFY ASCE 7-05 LOAD COMBINATIONS.
3. CIRCUMSTANCE.

SOLE RESPONSIBILITY OF THE CONTRACTOR.

A. USE STRUCTURAL DRAWINGS IN CONJUNCTION WITH ALL OTHER DRAWINGS. COORDINATE THE WORK OF DISCIPLINES INCLUDING, BUT NOT LIMITED TO, CIVIL, MECHANICAL, PLUMBING, AND ELECTRICAL.

B. PROVIDE ALL FOUNDATIONS IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.

C. FOUNDATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT PREPARED BY ECS MID-ATLANTIC, LLC DATED JUNE 6, 2014.

D. ADDITIONAL GROUNDS FOR THE USE OF COLD-FORMED STEEL FRAMING AND CONNECTIONS.

- SHEET LAPS SHALL BE TIED AND LAPPED ONE FULL MESH SPACING PLUS 2".
- CONCRETE DENSITY SHALL BE NORMAL WEIGHT UNLESS SPECIFICALLY OTHERWISE NOTED.
- CONCRETE INSTITUTE "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" (ACI 318-08) AND THE DESIGN NOTES SHOWN HEREIN.

E. FOUNDATION NOTES

- FOOTINGS SHALL BE LOWERED AS REQUIRED TO PASS UNDER UTILITY LINES. STEP CONTINUOUS FOOTINGS AS NEEDED.
- FOUNDATION CONCRETE TO BE PLACED IN LAYERS NOT EXCEEDING 12" THICK.
- FOOTINGS REQUIRE MICKSON 200-10000 OR SAGINAW 200-10000 6" WALL FOOTINGS TO PASS UNDER TRENCHES AND FOOTINGS REQUIRE MICKSON 400-10000 OR SAGINAW 400-10000 8" WALL FOOTINGS TO PASS UNDER TRENCHES.
- FOUNDATION CONCRETE TO BE PLACED IN LAYERS NOT EXCEEDING 12" THICK.

F. FOUNDATION BEARING PRESSURES

- FOUNDATIONS Capacable OF SUPPORTING A NET ALLOWABLE DESIGN BEARING PRESSURE OF 3000 PSF.
- FOUNDATION BEARING PRESSURES SHOWN HEREIN.

G. FOUNDATION NOTES

- FOUNDATION BEARING PRESSURES SHOWN HEREIN.

H. FOOTINGS REQUIRE MICKSON 200-10000 OR SAGINAW 200-10000 6" WALL FOOTINGS TO PASS UNDER TRENCHES AND FOOTINGS REQUIRE MICKSON 400-10000 OR SAGINAW 400-10000 8" WALL FOOTINGS TO PASS UNDER TRENCHES.
SEE PLAN
SANDWICH PANEL, PRECAST CONCRETE
SEALANT AT 1" JOINT
BACKER ROD AND CONTINUOUS
2/3 = 1'-0"

SECTION
3/4" = 1'-0"

SF101
2
4
5
6
1/8" = 1'-0"

10" PRECAST CONCRETE SANDWICH PANEL
8" SOLID PRECAST CONCRETE PANEL
TOP OF WALL PANEL = [+X'-X"], UNLESS OTHERWISE NOTED.
HIGH
LOW
NEEDED TO ACCOMMODATE ATYPICAL WIDTHS.
OTHERWISE NOTE. PRECAST MANUFACTURER TO ADJUST LAYOUT AS CONCRETE DOUBLE-TEES WITH 4" CONCRETE TOPPING, EXCEPT WHERE ROOF STRUCTURE IS 24" DEEP BY 12'-0" WIDE PRECAST, PRESTRESSED DOUBLE-TEES.

TOP OF CONCRETE SHOWN ON PLAN IS AT END OF PRECAST CONCRETE NOTED. TOP OF PRECAST CONCRETE SANDWICH PANEL = [+X'-X"], UNLESS OTHERWISE NOTED.

REVISIONS
REVIEW:
DRAWN:
DESIGN:
DATE:
CN NO:

ROOF FRAMING PLAN

PLAN NOTES
1. ALWAYS PROVIDE DRUM PUMPED FIREPROOF POURED FLOOR SLAB AT LOCATION OF TOP OF WALL PANELS.
2. TOP OF CONCRETE SANDWICH PANELS.
3. TOP OF WOOD PANELS, 12'-0" (TYP)
4. ROOF STRUCTURE SLAB DECK BY SPECIFIED PRECAST. PRECAST PANEL SHEAR WALLS COHENCRETE OR SIMILAR PANELS SHAPE AND SIZE AS SHEET 3-1204 AS REQUIRED TO PROVIDE LATERAL RESTRAINT.
5. IF ANY MODIFICATIONS TO THE STRUCTURE ARE REQUIRED, WEIGHT GIVEN BY MORE THAN 5%, INFORM ENGINEER SO AS TO DETERMINE WEIGHTS SHOWN ARE BASED ON GENERIC MODELS. NO WEIGHT IS PROVIDED FOR ROOF PENETRATIONS WITH ARCHITECTURAL AND MECHANICAL DRAWINGS.

KEY NOTES
1. AT PRECAST CONCRETE SANDWICH PANEL:
2. TOP OF PRECAST CONCRETE PANEL:
3. TOP OF WOOD PANEL:
4. AT PRECAST CONCRETE SANDWICH PANEL TOP:
5. AT PRECAST CONCRETE SANDWICH PANEL:

GRAPHIC SCALE(S)
1" = 1'-0"