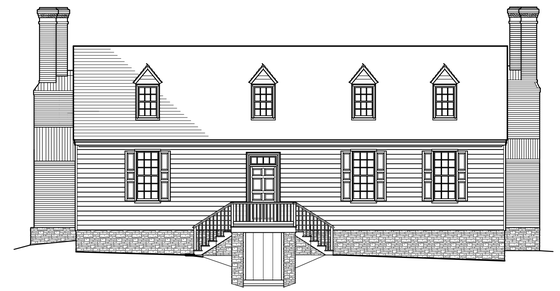
INTERPRETIVE STRUCTURE AT

GEORGE WASHINGTON'S FERRY FARM

268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405



MARCH 18, 2015

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442
A. CURTIS WILSEY: cwilsey@quantumengineers.com

MESICK▪COHEN▪WILSON▪BAKER▪ARCHITECTS
388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397
5525 OLD TOWNE ROAD, SUITE D WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714
JOHN I MESICK: jmesick@mcwb-arch.com

KEAST & HOOD CO.
Structural Engineers
Philadelphia I Washington
202 I 223-1941
1350 Connecticut Ave NW
Suite 412
Washington, DC 20036
www.keasthood.com
MATT DAW: MDaw@keasthood.com

LIST OF DRAWINGS:

T1.1 TITLE SHEET
T1.2 LIFE SAFETY & EGRESS PLANS

SITE

SP1.1 SITE PLAN

PLANS

A1.0 CELLAR & FOUNDATION PLAN
A1.1 FIRST FLOOR PLAN
A1.2 SECOND FLOOR PLAN
A1.3 ROOF PLAN

ELEVATIONS

A2.1 WEST ELEVATION
A2.2 EAST ELEVATION
A2.3 NORTH & SOUTH ELEVATIONS

BUILDING & WALL SECTIONS

A3.1 BUILDING SECTIONS
A3.2 BUILDING SECTIONS
A3.3 BUILDING SECTIONS
A3.4 BUILDING SECTION DETAILS
A3.5 NOT USED
A3.6 ROOF DETAILS

A4.0 NOT USED

FRAMING PLANS & DETAILS

A5.1 FIRST FLOOR FRAMING PLAN
A5.2 SECOND FLOOR FRAMING PLAN
A5.3 ROOF FRAMING PLAN
A5.4 FRAMING SECTIONS
A5.5 FRAMING SECTIONS
A5.6 FRAMING SECTIONS
A5.7 FRAMING SECTIONS

MASONRY

A6.1 NOT USED
A6.2 NOT USED
A6.3 CHIMNEY & FIREPLACE PLANS & SECTIONS
A6.4 CHIMNEY & FIREPLACE PLANS & SECTIONS
A6.5 CHIMNEY & FIREPLACE PLANS & SECTIONS

PORCH & STOOP DETAILS

A7.1 EAST PORCH RAMP PLAN & DETAILS

STAIR DETAILS

A8.1 STAIR

STRUCTURAL DRAWINGS

S0.0 GENERAL NOTES & ABBREVIATIONS
S0.1 SPECIAL INSPECTIONS & SCHEDULES
S1.0 HELICAL PILE & FOUNDATION PLAN
S2.0 SECTION DETAILS

BUILDING SYSTEM DRAWINGS*

PLUMBING & FIRE PROTECTION

FP0.0 FIRE PROTECTION LEGEND, SPECIFICATIONS, & PLANS
FP1.1 FIRE PROTECTION FLOOR PLANS
FP3.1 FIRE PROTECTION SECTIONS & VIEWS

MECHANICAL DRAWINGS

M0.0 MECHANICAL LEGEND, SCHEDULES, & NOTES
M0.2 MECHANICAL SHED PLAN
M1.0 MECHANICAL CELLAR PLAN
M1.1 MECHANICAL FIRST FLOOR PLAN
M1.2 MECHANICAL SECOND FLOOR PLAN
M3.1 MECHANICAL SECTIONS & DETAILS
M4.1 MECHANICAL SCHEMATICS & DETAILS

ELECTRICAL DRAWINGS

E0.0 ELECTRICAL LEGEND, NOTES, & DETAILS
E2.0 ELECTRICAL CRAWL SPACE PLAN
E2.1 ELECTRICAL FIRST FLOOR PLAN
E2.2 ELECTRICAL SECOND FLOOR PLAN
E5.1 ELECTRICAL ONE-LINE DIAGRAM & DETAILS

*THESE DRAWINGS ARE INCLUDED AS PART OF PHASE I (DWELLING) FOR INFORMATIONAL PURPOSES ONLY. THESE DRAWINGS, TOGETHER WITH TECHNICAL SPECIFICATIONS, WILL FORM PART OF PHASE II (MECHANICAL SHED AND BUILDING SYSTEMS). THEY ARE INCLUDED IN THIS DRAWING SET TO INDICATE THE EXTENT AND LOCATIONS OF THE BUILDING SYSTEMS TO BE INSTALLED ULTIMATELY IN THE DWELLING.

DESIGN CRITERIA:

DESIGNED IN COMPLIANCE WITH VIRGINIA UNIFORM STATEWIDE BUILDING CODE, 2009 EDITION

OCCUPANCY GROUP: B (A-3 WITH LESS THAN 50 PEOPLE)

TYPE OF CONSTRUCTION: V (WOOD FRAME)

BUILDING AREAS:
1ST FLOOR: 1683 GSF
2ND FLOOR: 782 GSF
CELLAR: 214 GSF
TOTAL: 2679 GSF (9200 SQ. FT. ALLOWED)

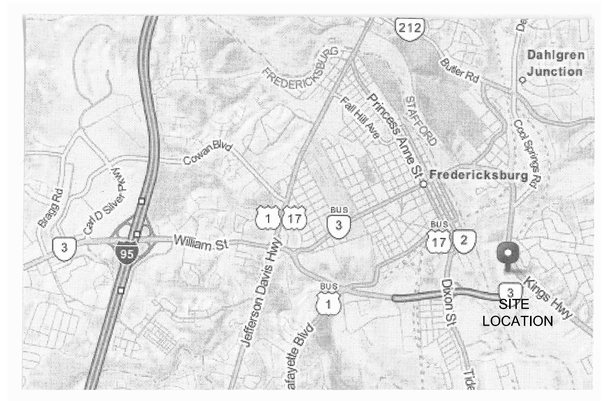
HEIGHT: 1.5 STORIES (2 STORIES ALLOWED)

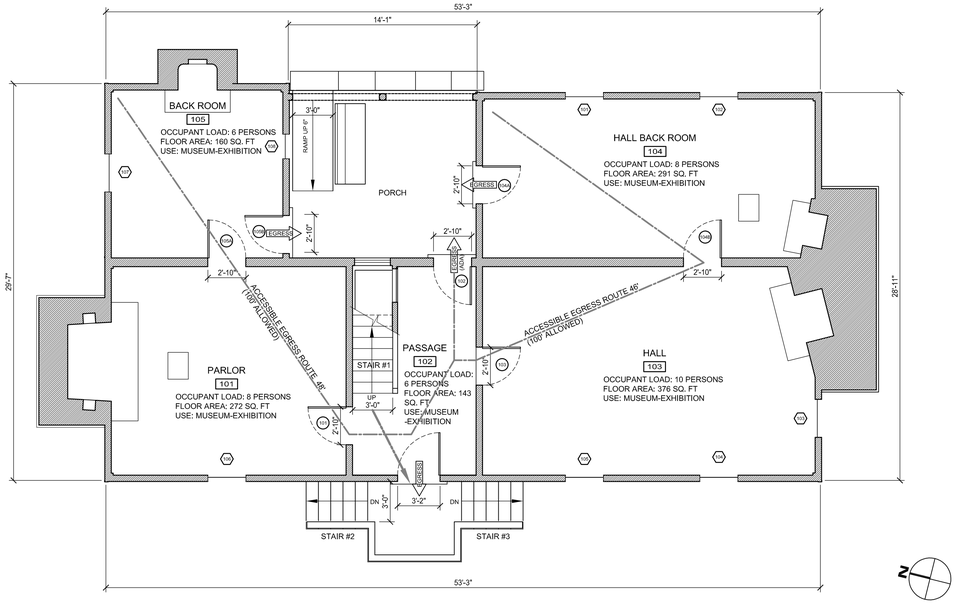
OCCUPANT LOAD:
1ST FLOOR: 38 PEOPLE
2ND FLOOR: 11 PEOPLE (RESTRICTED ACCESS)
CELLAR: 0 PEOPLE (RESTRICTED ACCESS)
TOTAL: 49 PEOPLE (50 PEOPLE ALLOWED)
NOTE: ONLY GUIDED GROUP TOURS WITH MAX. OF 49 PEOPLE IN THE ENTIRE BUILDING WILL BE CONDUCTED

MEANS OF EGRESS: (1 EGRESS DOOR + 1 ADA COMPLIANT REQUIRED)
1ST FLOOR: 3 EGRESS DOORS + 1 ADA COMPLIANT
2ND FLOOR: 36" WIDE STAIR (36" MIN. REQUIRED)
CELLAR: 1 EGRESS DOOR

SEE SHEET S0.0 FOR STRUCTURAL DESIGN CRITERIA

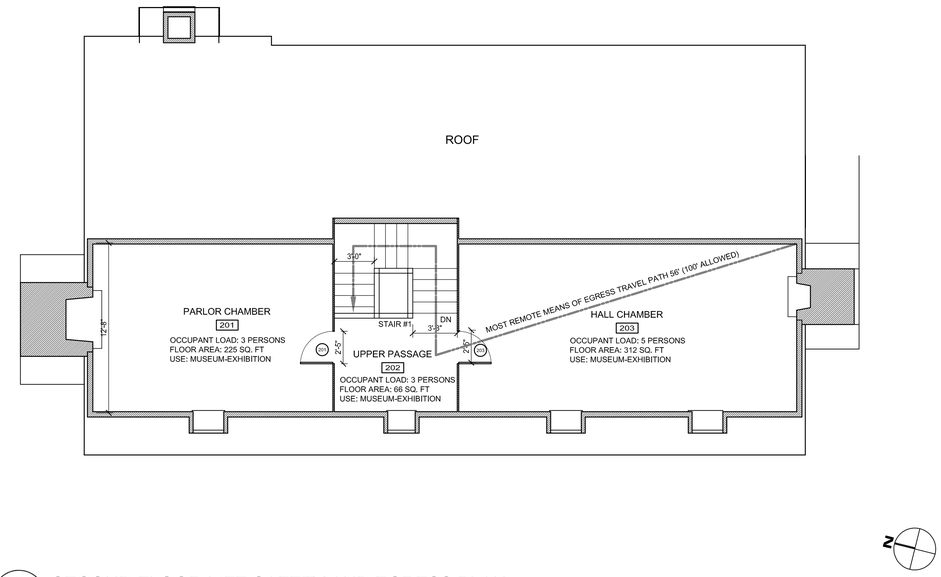
LOCATION MAP:





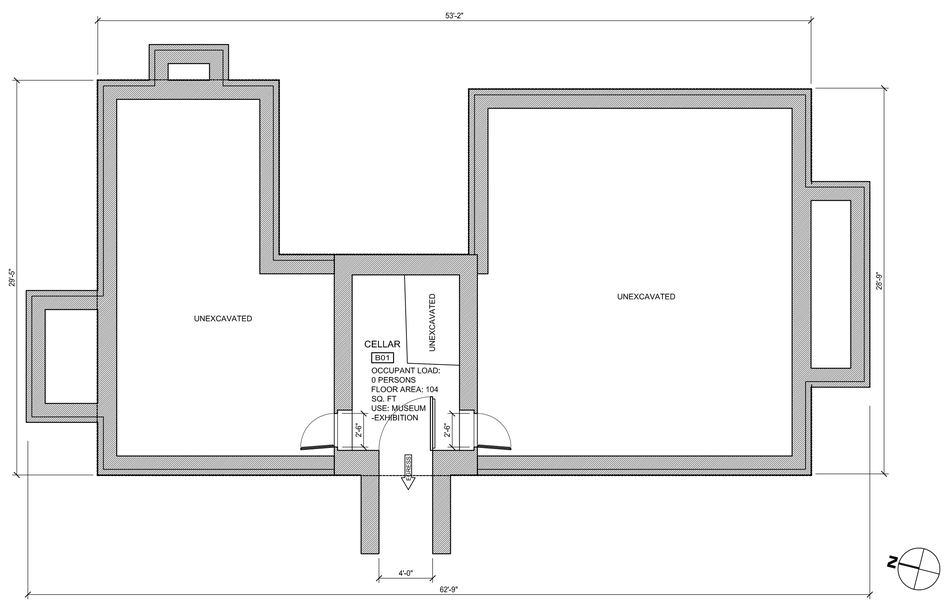
1 T1.2 FIRST FLOOR LIFE SAFETY AND EGRESS PLAN

SCALE: 3/8" = 1'-0"



2 T1.2 SECOND FLOOR LIFE SAFETY AND EGRESS PLAN

SCALE: 3/8" = 1'-0"



3 T1.2 CELLAR FLOOR LIFE SAFETY AND EGRESS PLAN

SCALE: 3/8" = 1'-0"

DESIGN CRITERIA:

- DESIGNED IN COMPLIANCE WITH VIRGINIA UNIFORM STATEWIDE BUILDING CODE, 2009 EDITION
- OCCUPANCY GROUP: B (A-3 WITH LESS THAN 50 PEOPLE)
- TYPE OF CONSTRUCTION: V (WOOD FRAME)
- BUILDING AREAS:
  - 1ST FLOOR: 1683 GSF
  - 2ND FLOOR: 782 GSF
  - CELLAR: 214 GSF
  - TOTAL: 2679 GSF (9200 SQ. FT. ALLOWED)
- HEIGHT: 1.5 STORIES (2 STORIES ALLOWED)
- OCCUPANT LOAD:
  - 1ST FLOOR: 38 PEOPLE
  - 2ND FLOOR: 11 PEOPLE (RESTRICTED ACCESS)
  - CELLAR: 0 PEOPLE (RESTRICTED ACCESS)
  - TOTAL: 49 PEOPLE (50 PEOPLE ALLOWED)

  NOTE: ONLY GUIDED GROUP TOURS WITH A MAXIMUM OF 49 PEOPLE WILL BE CONDUCTED IN THE ENTIRE BUILDING
- MEANS OF EGRESS: 1 EGRESS DOOR + 1 ADA COMPLIANT (REQUIRED)
  - 1ST FLOOR: 3 EGRESS DOORS + 1 ADA COMPLIANT
  - 2ND FLOOR: 36" WIDE STAIR (36" MIN. REQUIRED)
  - CELLAR: 1 EGRESS DOOR

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY, ALBANY, NY 12207
p: (518)433-2094 f: (518)433-9397
5525 OLDE TOWNE RD, SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0719 f: (757)221-0714

LIFE SAFETY & EGRESS PLANS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JSM, AC
DATE	03-18-15
REVISED	-

DRAWING NO.

T1.2

FOR BORING LOGS REFER TO TECHNICAL SPECIFICATIONS SECTION 316615 HELICAL PILES

APPROX. LOCATION OF BORING B-5
DRYWELL
DRYWELL
OUTLINE OF PREVIOUS ARCHAEOLOGICAL INVESTIGATION
DRYWELL
APPROX. LOCATION OF BORING B-6
CONSTRUCTION FENCE
BURIED ARCHAEOLOGICAL REMNANTS
EXISTING BUILDING
PROTECTION FENCE
CONSTRUCTION FENCE
CONSTRUCTION FENCE
CONSTRUCTION FENCE
CONSTRUCTION FENCE
CONSTRUCTION YARD (COMPACTED STONE DUST)
CONSTRUCTION FENCE
CONSTRUCTION GATE
EXISTING HOSE BIB TO REMAIN
18' WIDE CONSTRUCTION ACCESS ROAD (COMPACTED STONE DUST)
IN-GROUND HOSE BIB (TYP.)
UTILITY TRENCH
EXISTING ENTRANCE ROAD
FIRE HYDRANT
DWELLING UTILITY TRENCH. REFER TO MEP PLANS
DWELLING WATER SERVICE. BACKFLOW PREVENTER LOCATED INSIDE SHED.
2" WATER METER
484' ± TO DWELLING
TO PROPERTY LINE
PROPOSED ENTRANCE ROAD
PROPERTY LINE (TYP.)
DENSE TREES
DENSE TREES
EXISTING CLASSROOM BUILDING (CONSTRUCTION OFFICE)
EXISTING TOILET BUILDING
321' TO DWELLING
328' TO DWELLING

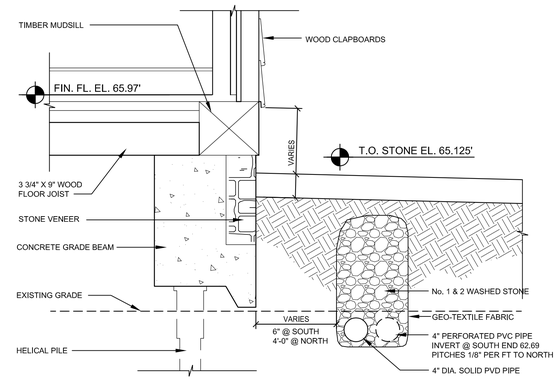
DWELLING
2679 GSF
1.5 Story
FFE=63.00'±

UTILITY SHED
395 GSF
1 Story
FFE=62.50'±

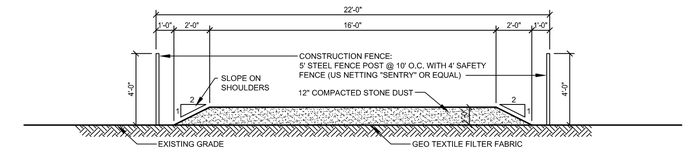
SEE 1/M0.2

2/SP1.1
3/SP1.1
2/E2.0

1/SP1.1 SITE PLAN
SCALE: 1"=20'-0"



2/SP1.1 SECTION THROUGH FOUNDATION DRAIN AT EAST WALL
SCALE: 1"=1'-0"



3/SP1.1 SECTION THROUGH CONSTRUCTION ROAD
SCALE: 1/4"=1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

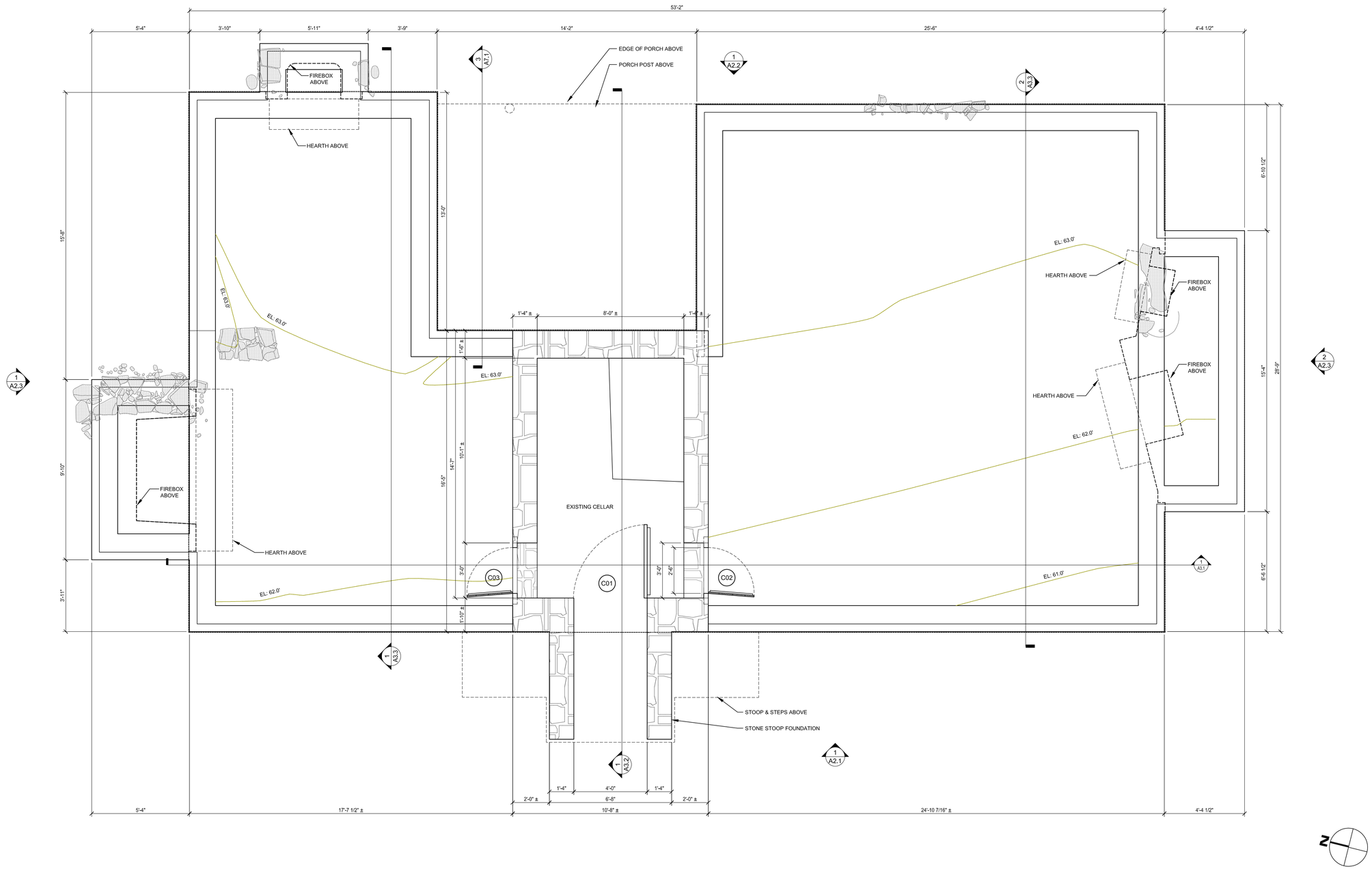
MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY, ALBANY, NY 12207
p: (518)433-2394 f: (518)433-9397
5525 OLDE TOWNE RD, SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0719 f: (757)221-0714

SITE PLAN

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	1" = 20'-0"
COMMISSION NO.	0726
DRAWN BY	AC
DATE	03-18-15
REVISED	-

DRAWING NO.
SP1.1



1 A1.0 CELLAR & FOUNDATION PLAN
SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

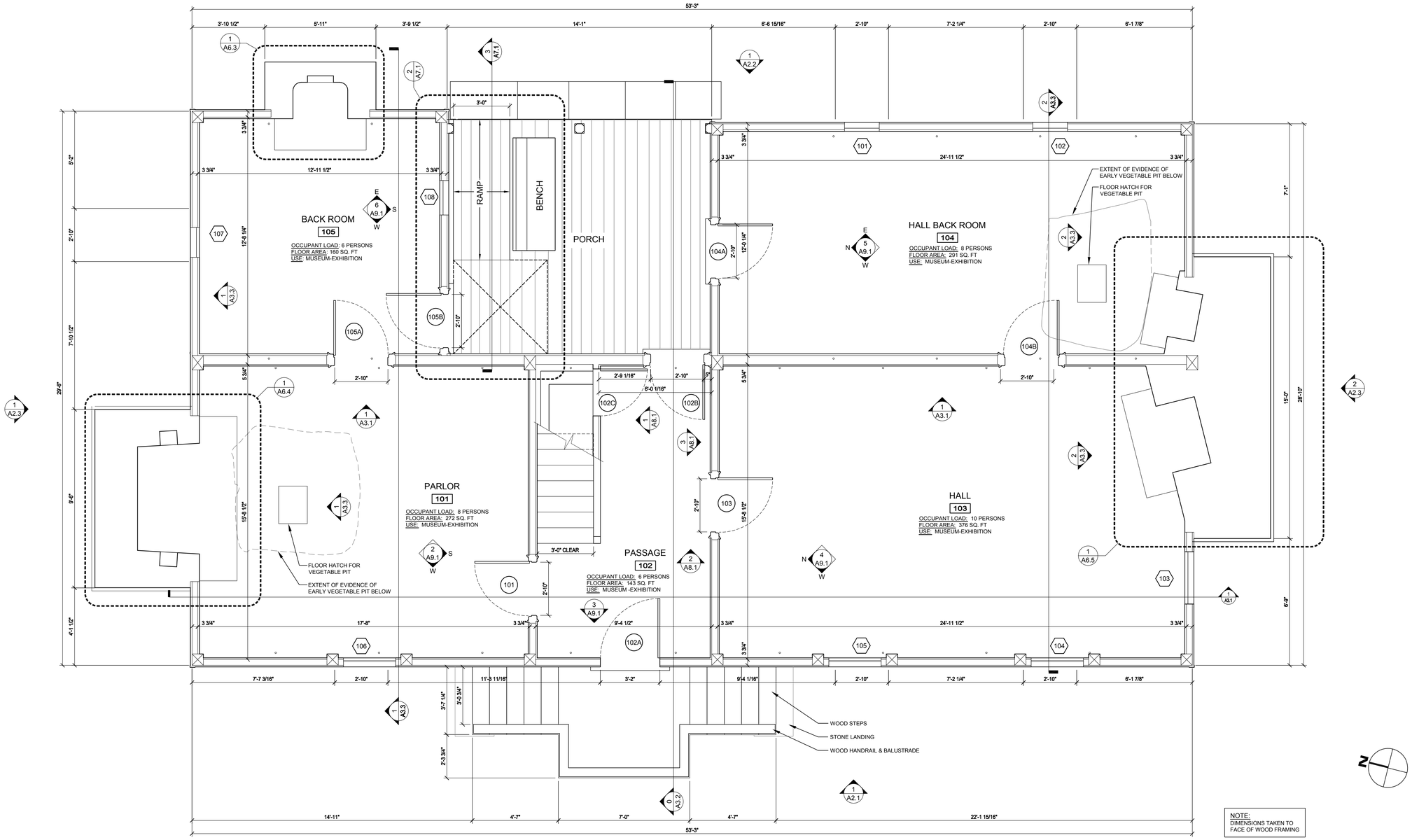
388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397
5525 OLDE TOWNE RD, SUITE D WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

CELLAR & FOUNDATION PLAN

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE
AS NOTED
COMMISSION NO.
0726
DRAWN BY
JGWG JSM
DATE
03-18-15
REVISED
-

DRAWING NO.
A1.0



REVISED 07-10-15

1 A1.1 FIRST FLOOR PLAN
SCALE: 3/8" = 1'-0"

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

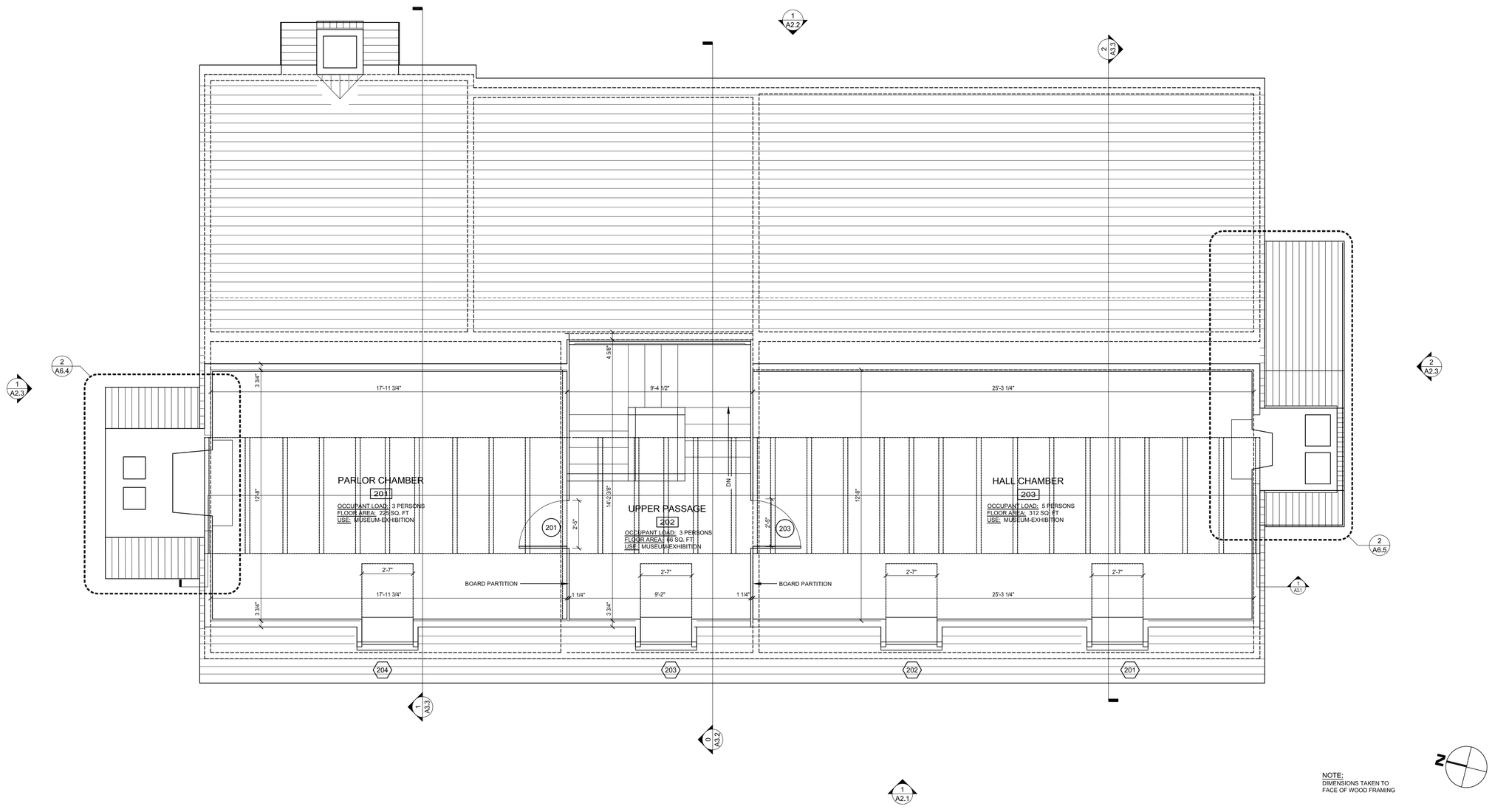
388 BROADWAY, ALBANY, NY 12207
p: (518)433-9394 f: (518)433-9397
5525 OLDE TOWNE RD. SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0715 f: (757)221-0714

FIRST FLOOR PLAN

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	05-05-15
REVISED	

DRAWING NO.
A1.1



NOTE:
DIMENSIONS TAKEN TO FACE OF WOOD FRAMING

1 / A1.2 FIRST FLOOR PLAN
SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

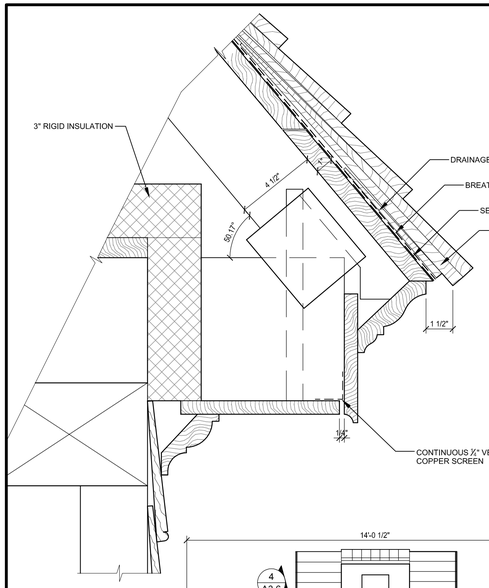
388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397
5525 OLDE TOWNE RD, SUITE D WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

SECOND FLOOR PLANS

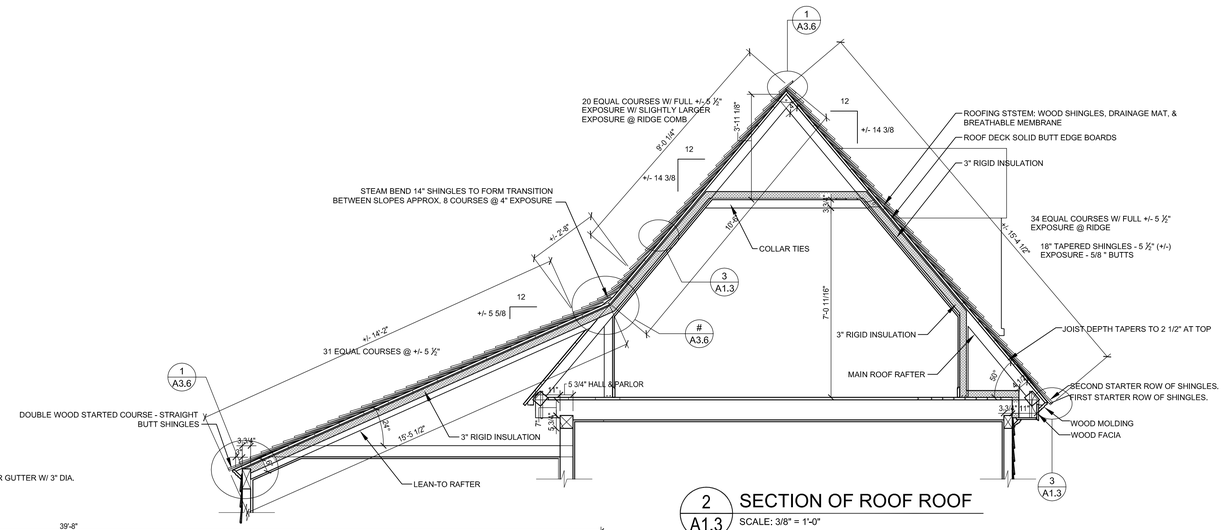
INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

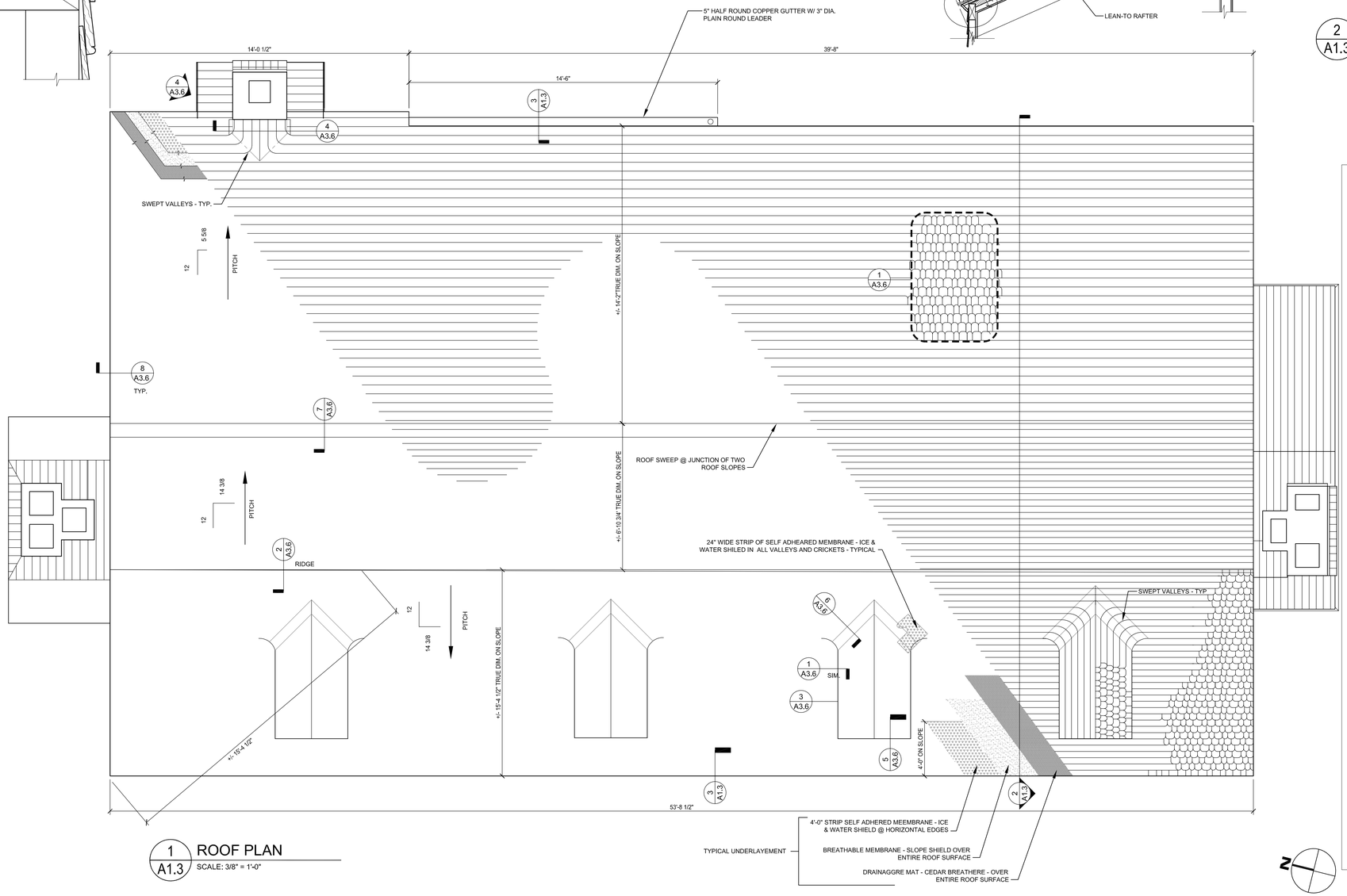
DRAWING NO.
A1.2



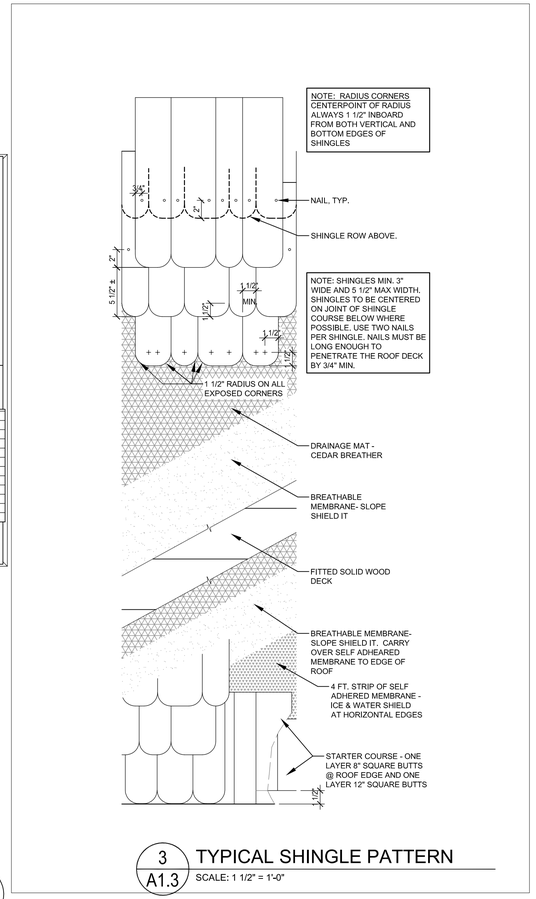
3 A1.3 EDGE DETAIL
SCALE: 3" = 1'-0"



2 A1.3 SECTION OF ROOF ROOF
SCALE: 3/8" = 1'-0"



1 A1.3 ROOF PLAN
SCALE: 3/8" = 1'-0"



3 A1.3 TYPICAL SHINGLE PATTERN
SCALE: 1 1/2" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

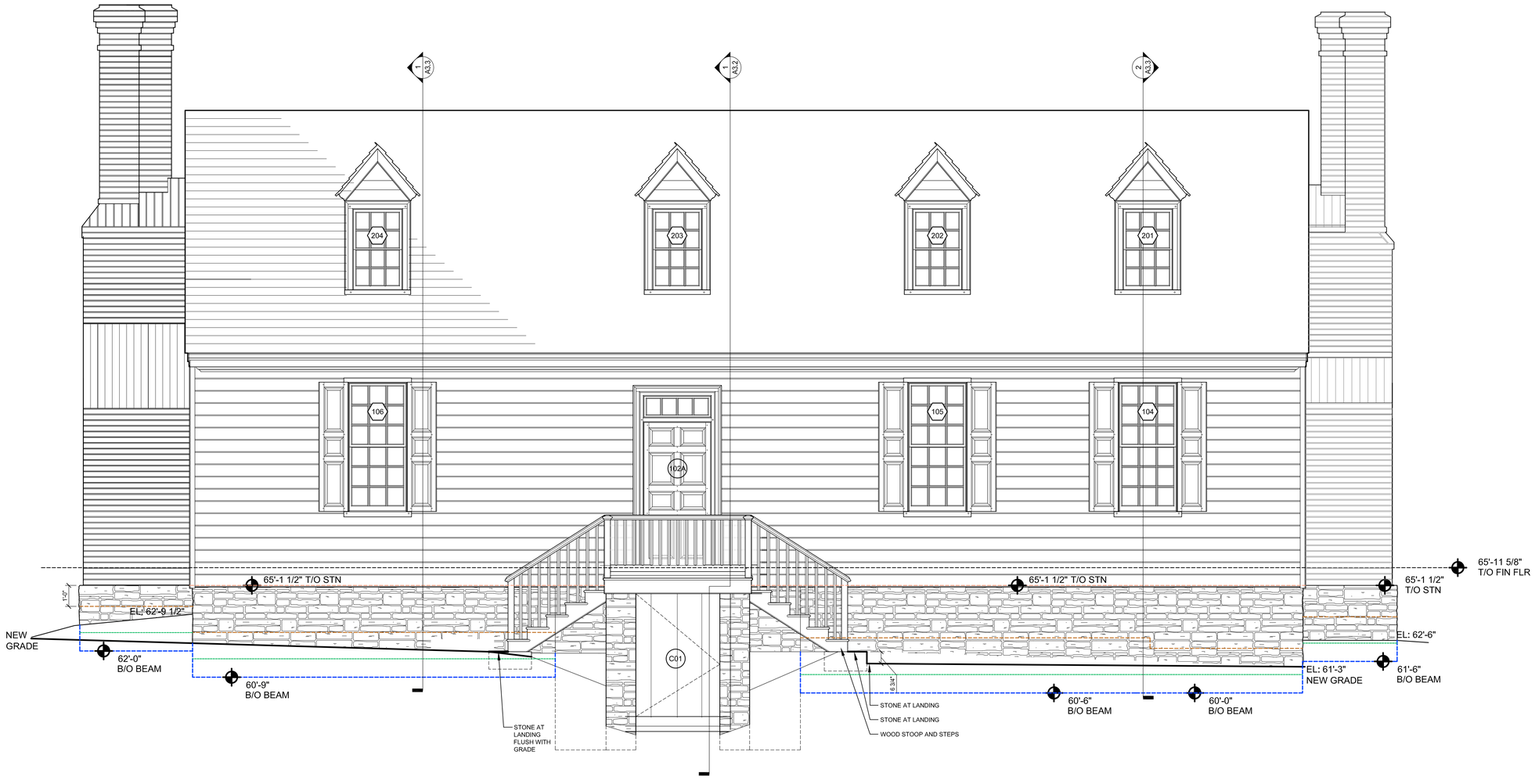
MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY, ALBANY, NY 12207
p: (518)433-2394 f: (518)433-9397
5525 OLDE TOWNE RD, SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0719 f: (757)221-0714

ROOF PLAN

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM RNP
DATE	03-18-15
REVISED	-

DRAWING NO.
A1.3



1 A2.1 WEST ELEVATION
SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

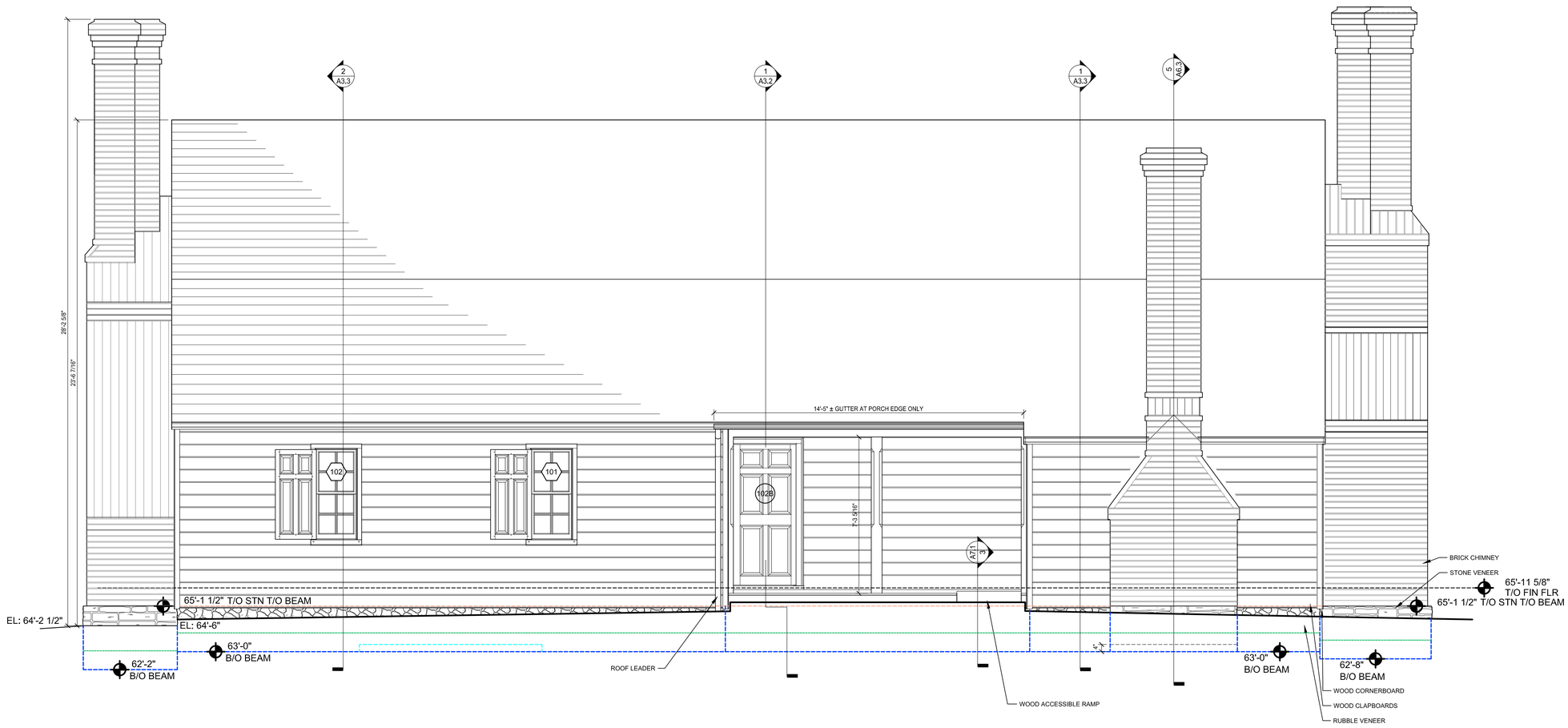
388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397
5525 OLDE TOWNE RD, SUITE D WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

WEST ELEVATION

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

DRAWING NO.
A2.1



1 / A2.2 EAST ELEVATION

SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

388 BROADWAY, ALBANY, NY 12207
p: (518)433-0394 f: (518)433-9397

5525 OLDE TOWNE RD. SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0710 f: (757)221-0714

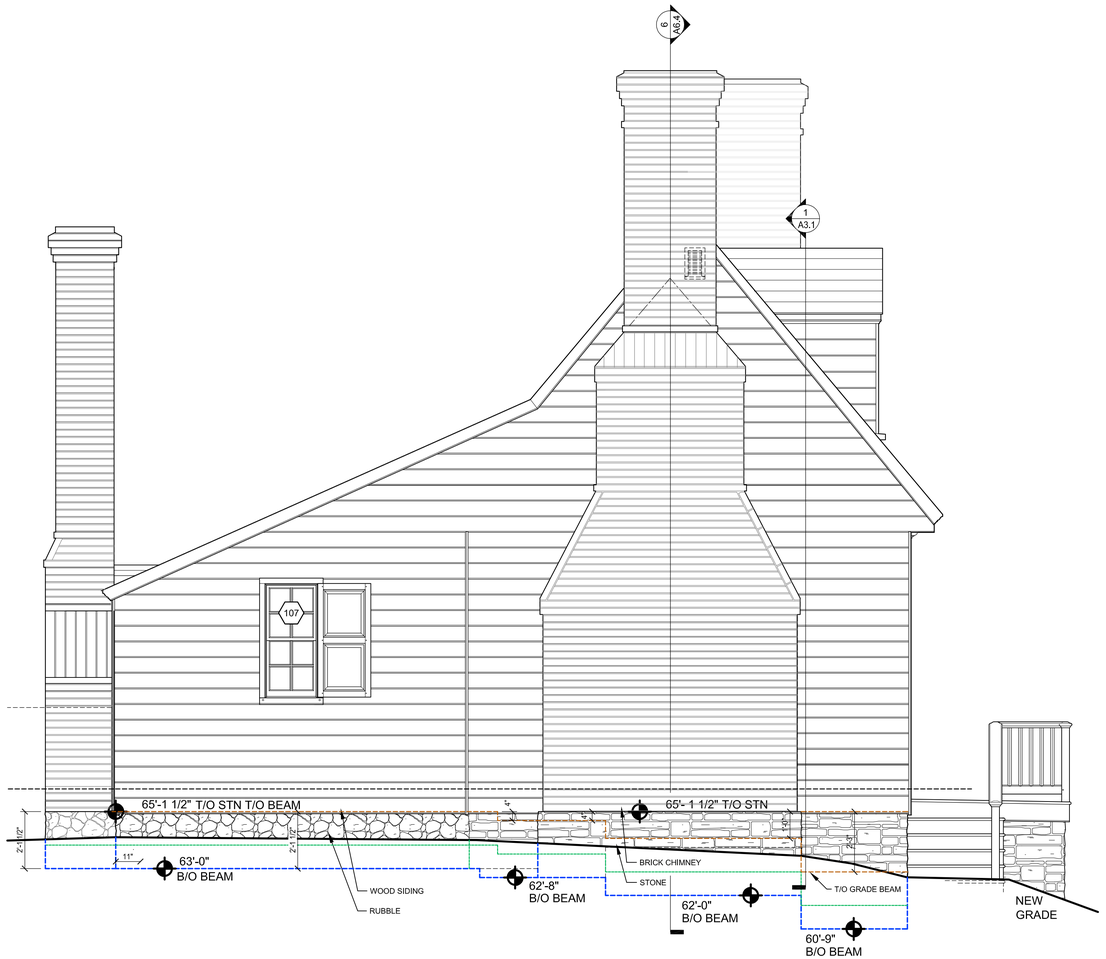
EAST ELEVATION

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

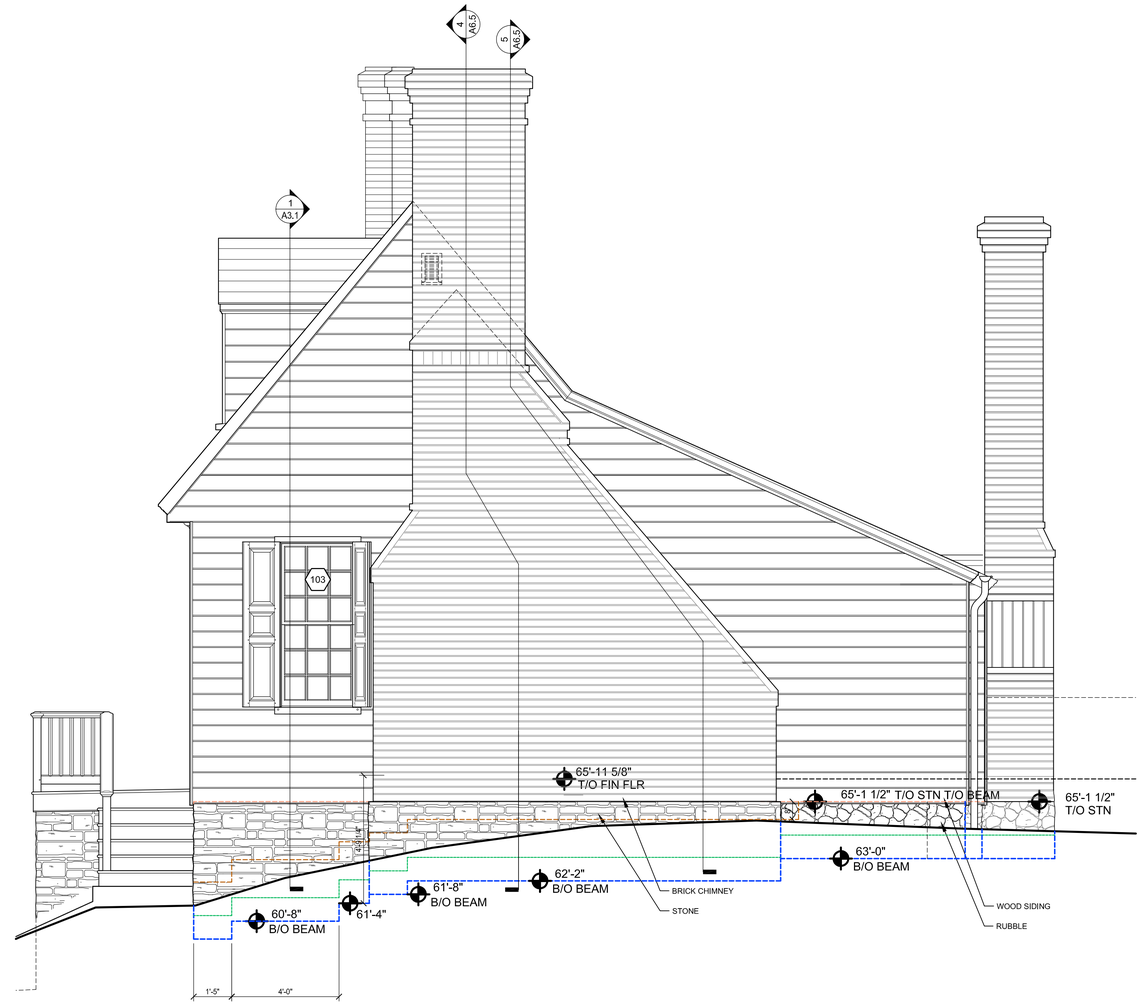
DRAWING NO.

A2.2



1 A2.3 NORTH ELEVATION

SCALE: 3/8" = 1'-0"



2 A3.3 SOUTH ELEVATION

SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

388 BROADWAY, ALBANY, NY 12207
p: (518)432-9394 f: (518)433-9397

5525 OLDE TOWNE RD. SUITE D WILLIAMSBURG, VA 23188
p: (757)221-0710 f: (757)221-0714

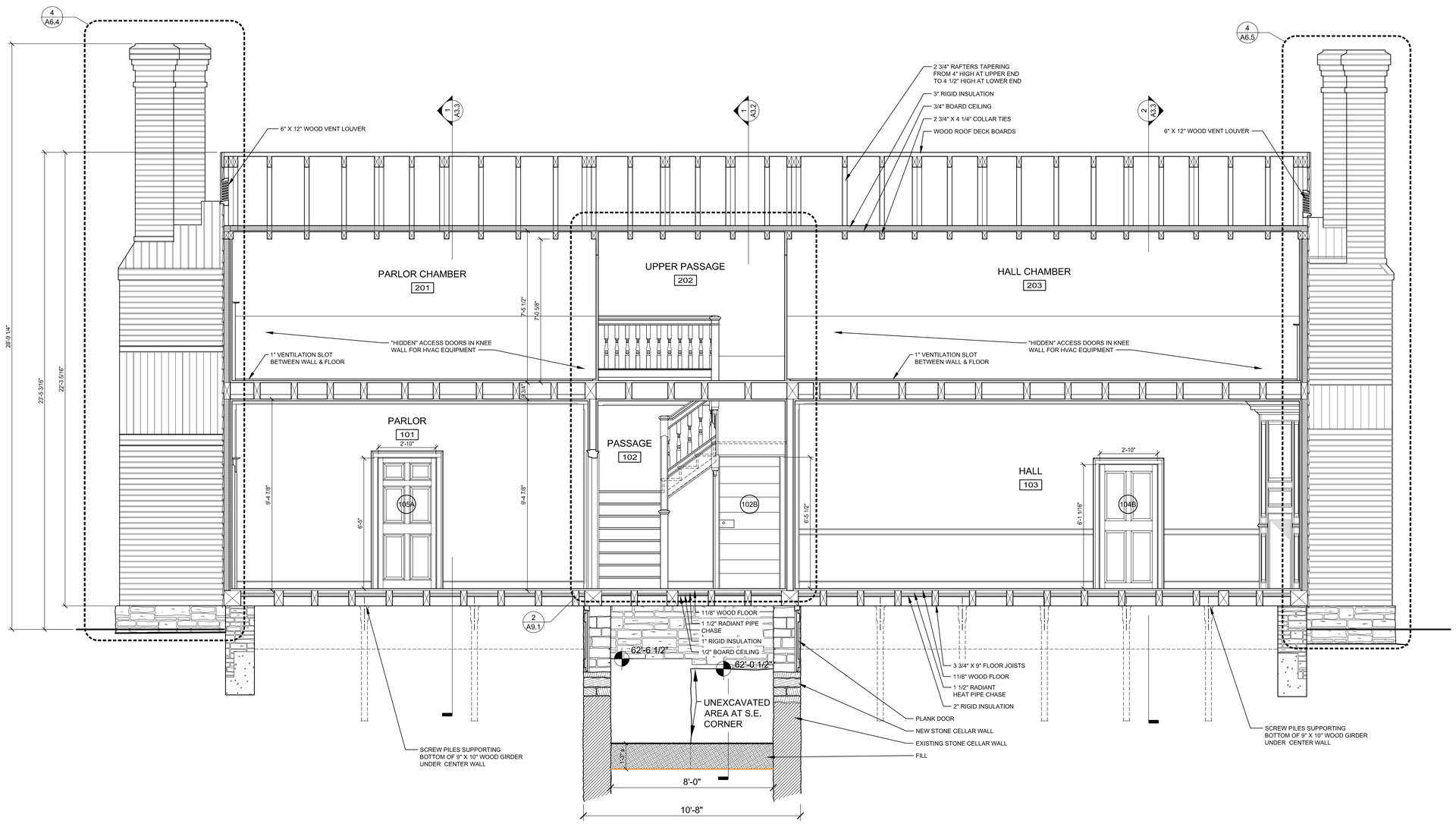
NORTH & SOUTH ELEVATIONS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

DRAWING NO.

A2.3



1 A3.1 BUILDING SECTION - LOOKING EAST

SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

388 BROADWAY, ALBANY, NY 12207
p: (518)433-0394 f: (518)433-9397

5525 OLDE TOWNE RD. SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0710 f: (757)221-0714

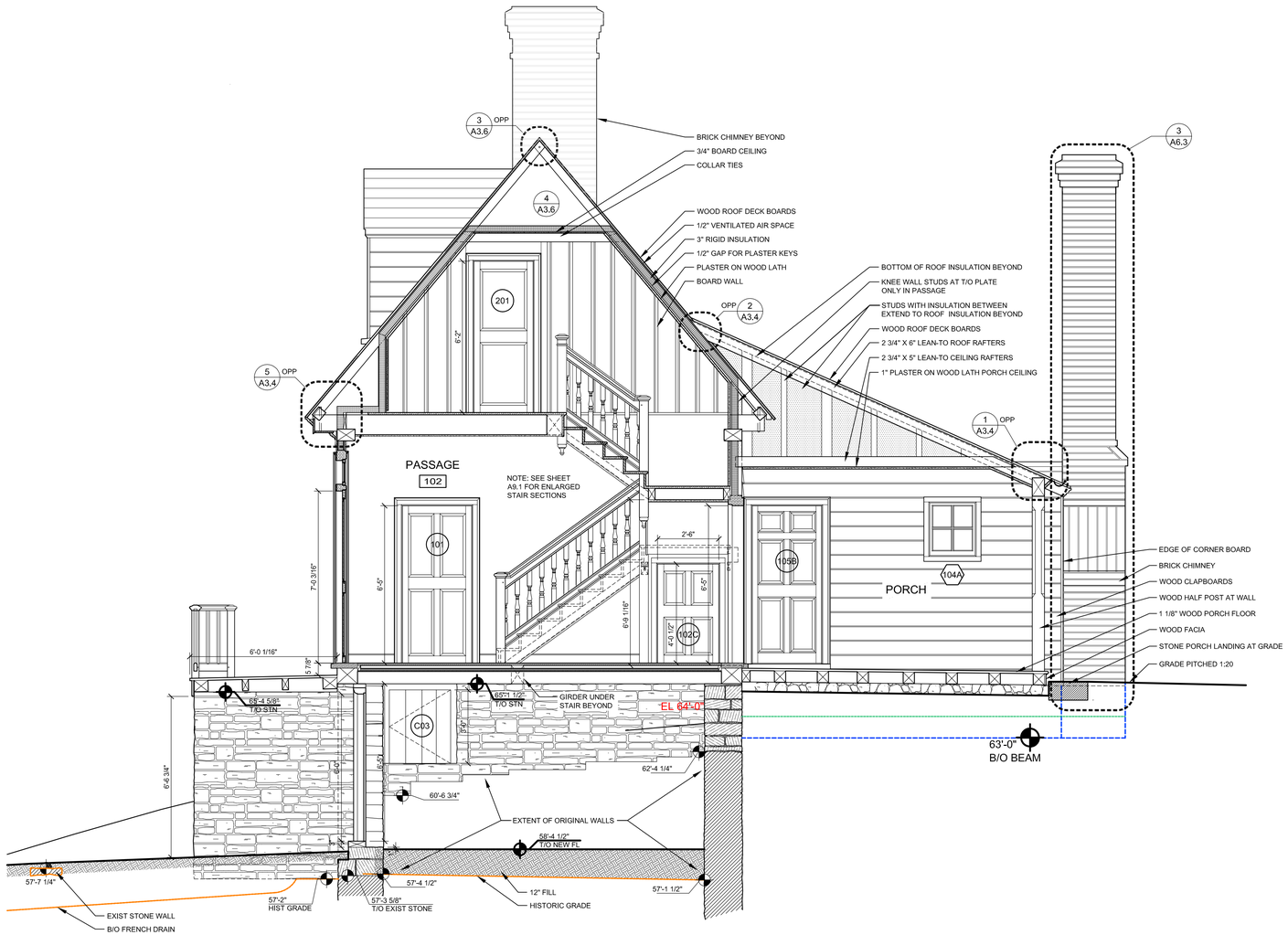
BUILDING SECTIONS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

DRAWING NO.

A3.1



1 A3.2 BUILDING SECTION - LOOKING NORTH

SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

388 BROADWAY, ALBANY, NY 12207
p: (518)432-9394 f: (518)433-9397

5525 OLDE TOWNE RD, SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0710 f: (757)221-0714

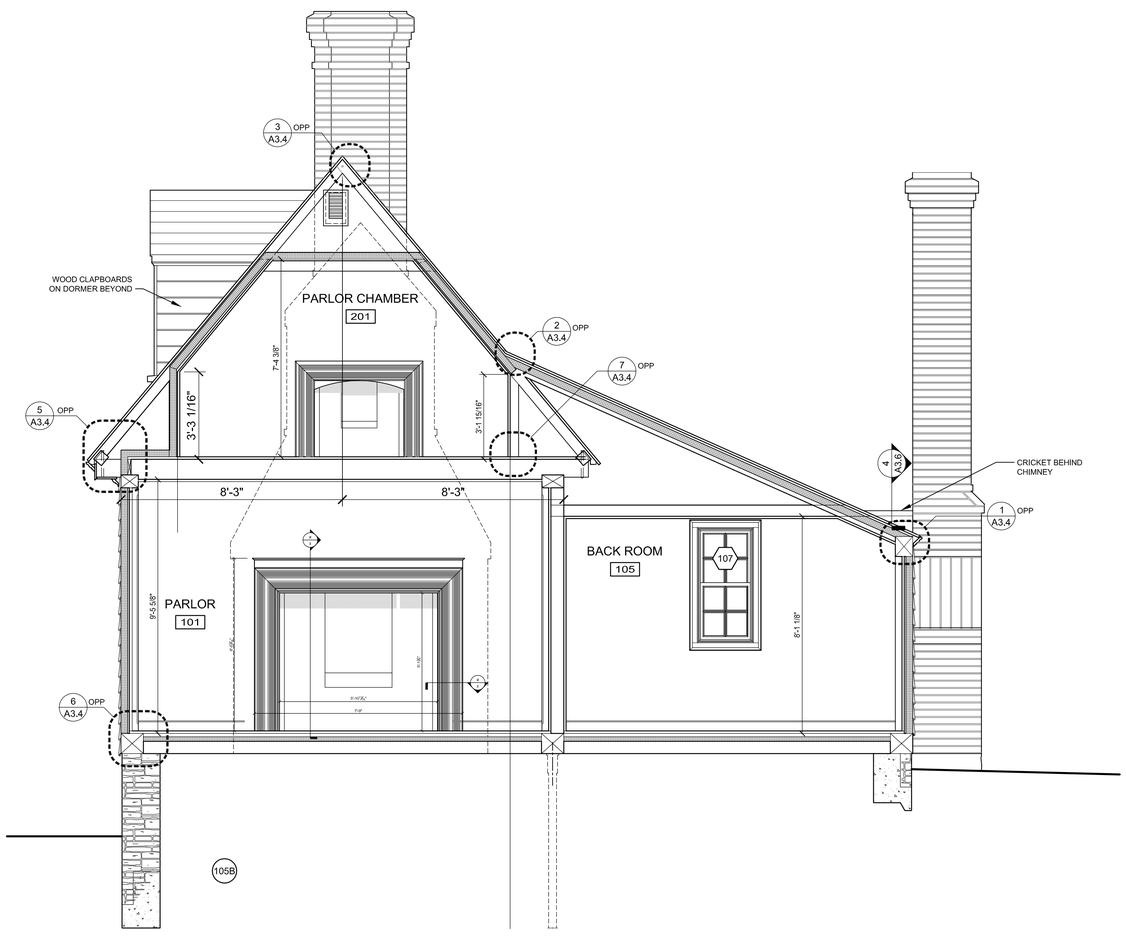
BUILDING SECTION

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	6726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

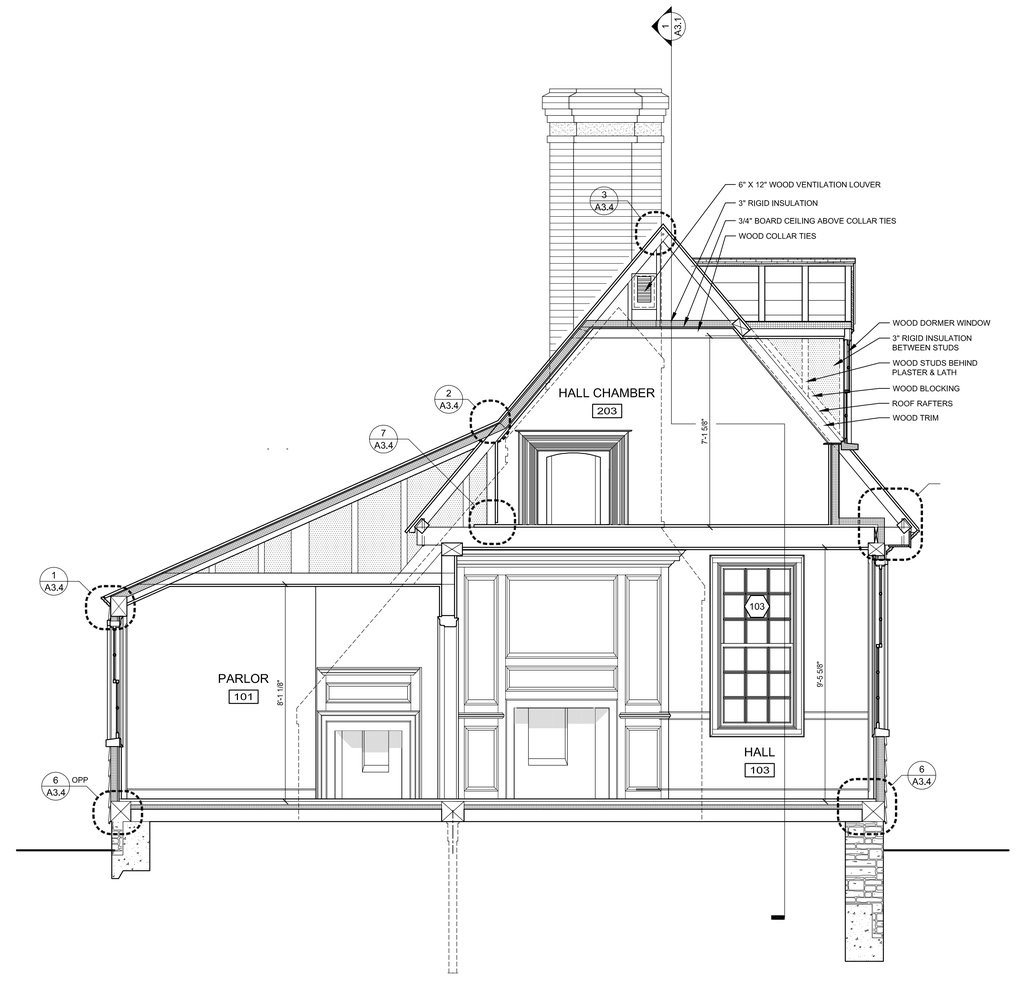
DRAWING NO.

A3.2



1 A3.3 BUILDING SECTION - LOOKING NORTH

SCALE: 3/8" = 1'-0"



2 A3.3 BUILDING SECTION - LOOKING SOUTH

SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

388 BROADWAY, ALBANY, NY 12207
p: (518)432-9394 f: (518)433-9397

5525 OLDE TOWNE RD. SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0710 f: (757)221-0714

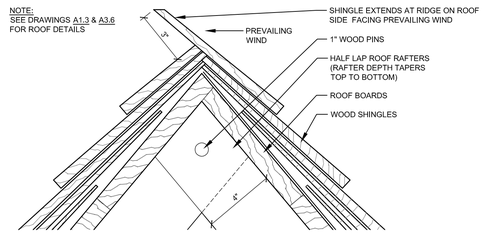
BUILDING SECTIONS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

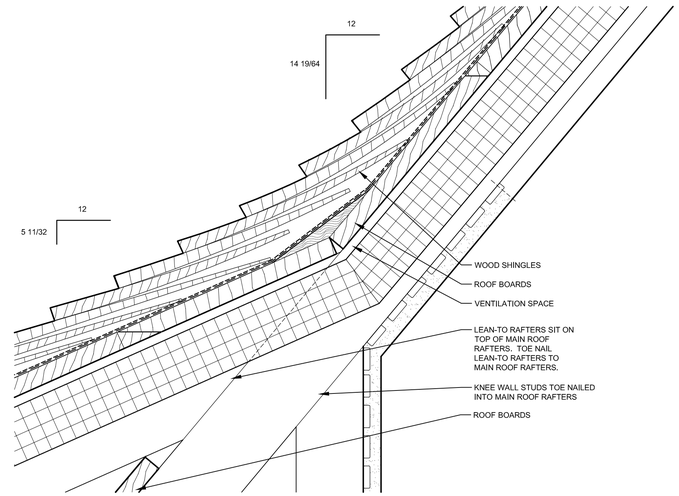
DRAWING NO.

A3.3



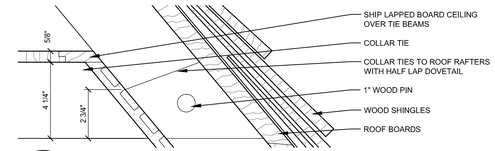
3 / A3.4 FRAMING DETAIL AT RAFTER TIES & SECOND FLOOR CEILING

SCALE: 3" = 1'-0"



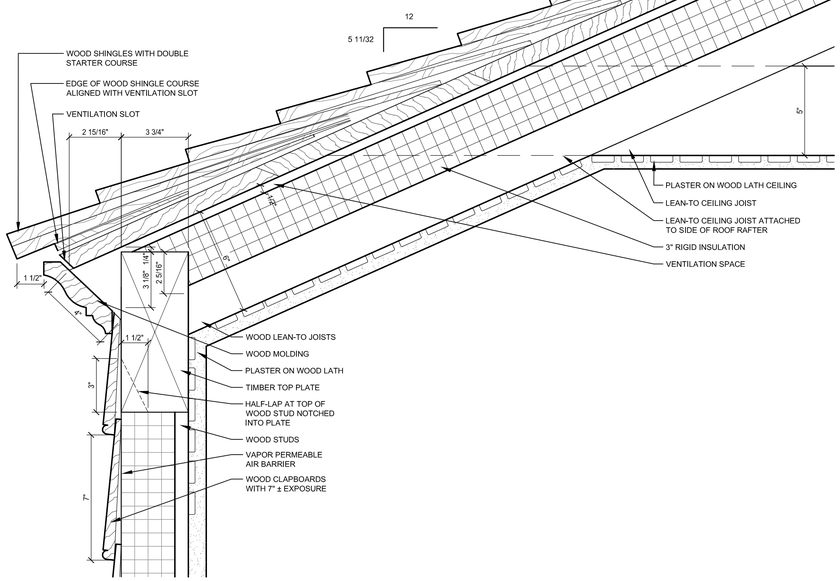
2 / A3.4 SECTION DETAIL AT LEAN-TO, MAIN ROOF, AND EAST KNEE WALL

SCALE: 3" = 1'-0"



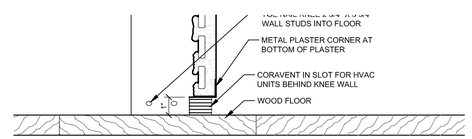
4 / A3.4 FRAMING DETAIL AT RAFTER TIES & SECOND FLOOR CEILING

SCALE: 3" = 1'-0"



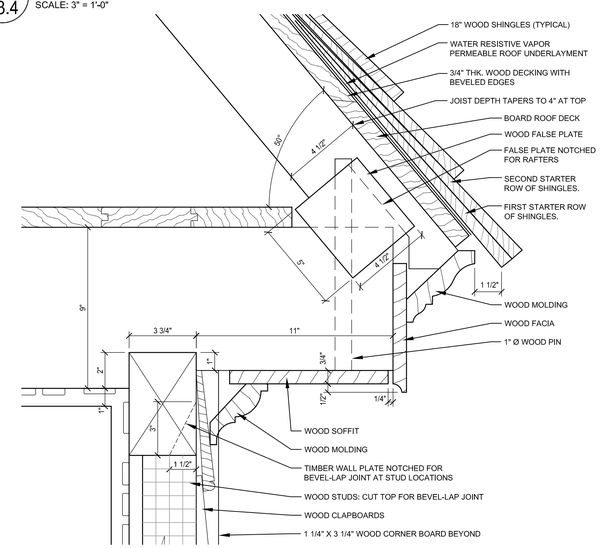
1 / A3.4 FRAMING DETAIL AT LEAN-TO EAVE

SCALE: 3" = 1'-0"



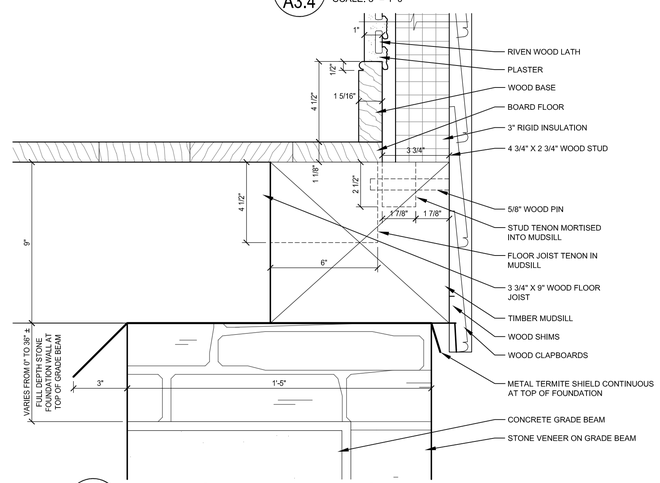
7 / A3.4 SECTION DETAIL AT B/O EAST KNEE WALL

SCALE: 3" = 1'-0"



5 / A3.4 FRAMING DETAIL AT ENCLOSED EAVES

SCALE: 3" = 1'-0"



6 / A3.4 FRAMING DETAIL AT MUD SILL

SCALE: 3" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

388 BROADWAY, ALBANY, NY 12207
p: (518)433-2094 f: (518)433-3097
5525 OLDE TOWNE RD. SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0719 f: (757)221-0714

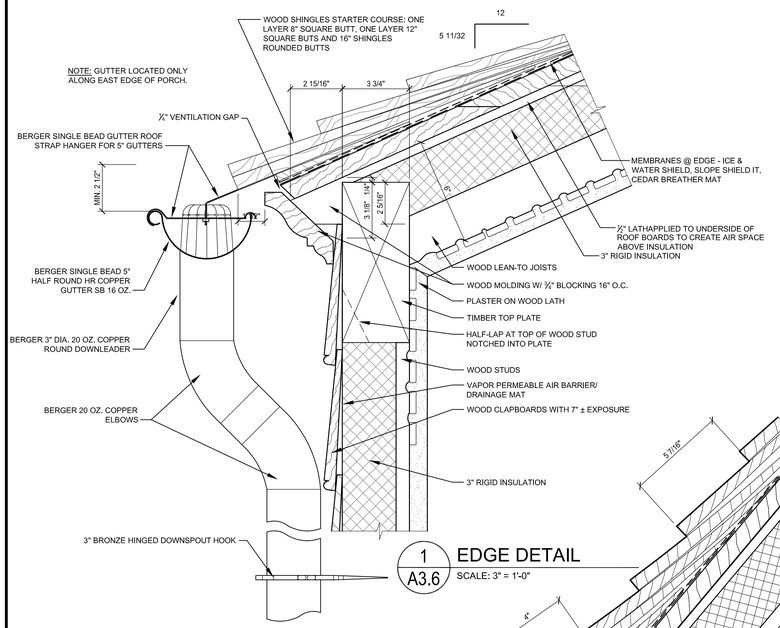
BUILDING SECTION DETAILS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

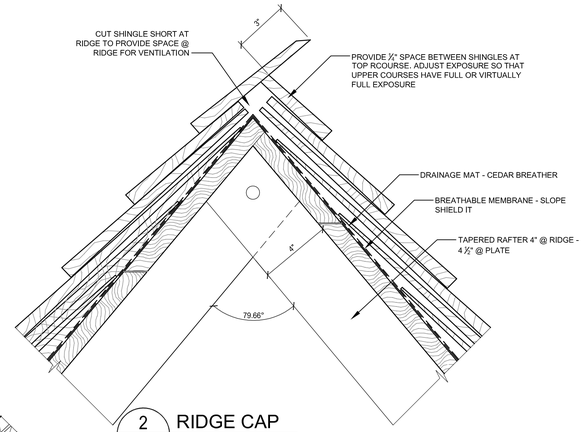
SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

DRAWING NO.

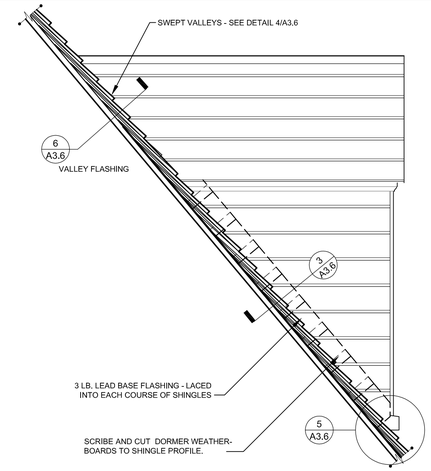
A3.4



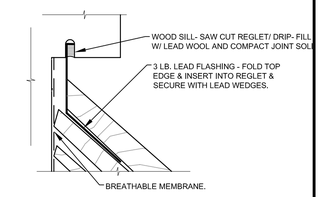
1 / A3.6 EDGE DETAIL
SCALE: 3" = 1'-0"



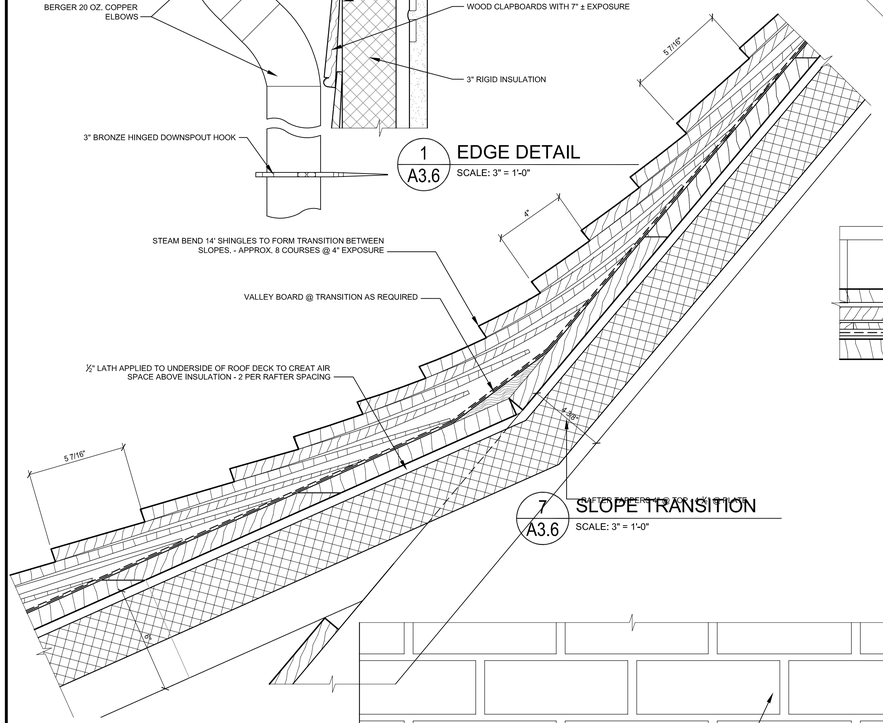
2 / A3.6 RIDGE CAP
SCALE: 3" = 1'-0"



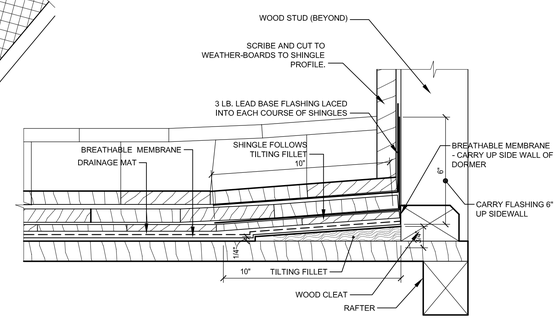
SIDE ELEVATION OF DORMER
SCALE: 3/4" = 1'-0"



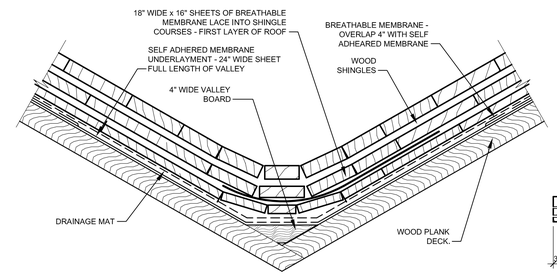
5 / A3.6 DORMER SILL
SCALE: 6" = 1'-0"



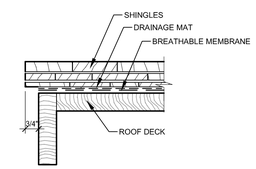
7 / A3.6 SLOPE TRANSITION
SCALE: 3" = 1'-0"



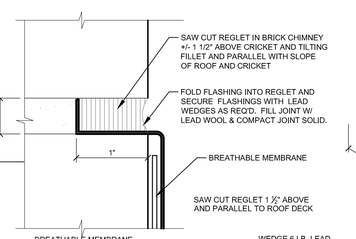
3 / A3.6 DORMER SIDEWALL
SCALE: 3" = 1'-0"



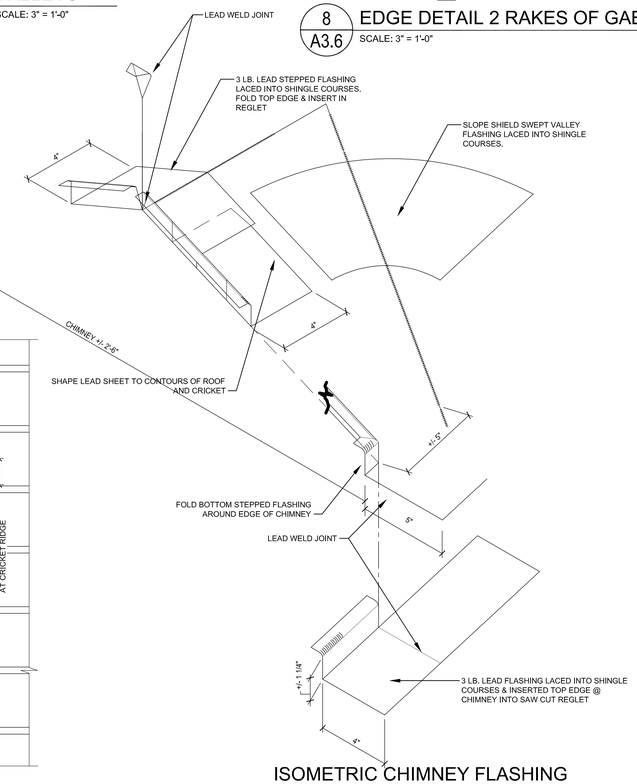
6 / A3.6 VALLEYS
SCALE: 3" = 1'-0"



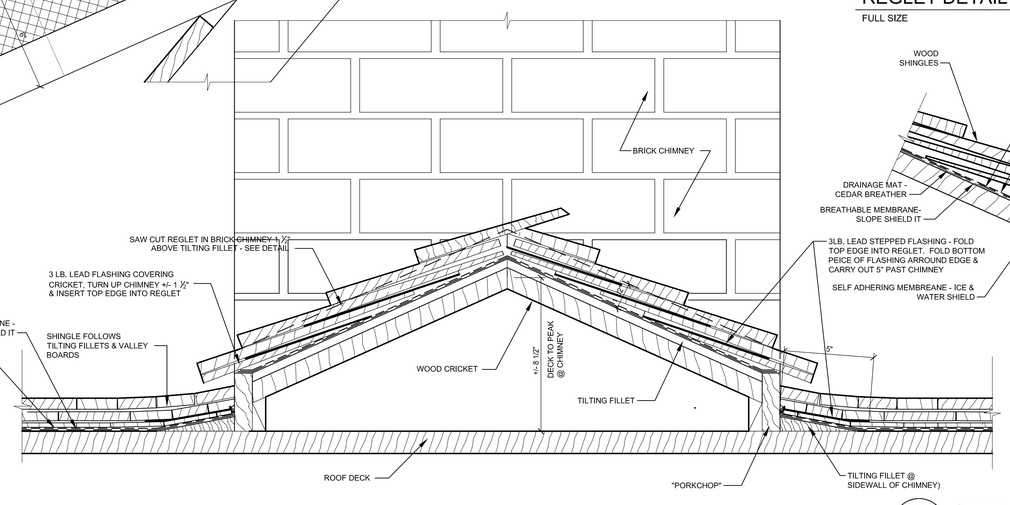
8 / A3.6 EDGE DETAIL 2 RAKES OF GABLE
SCALE: 3" = 1'-0"

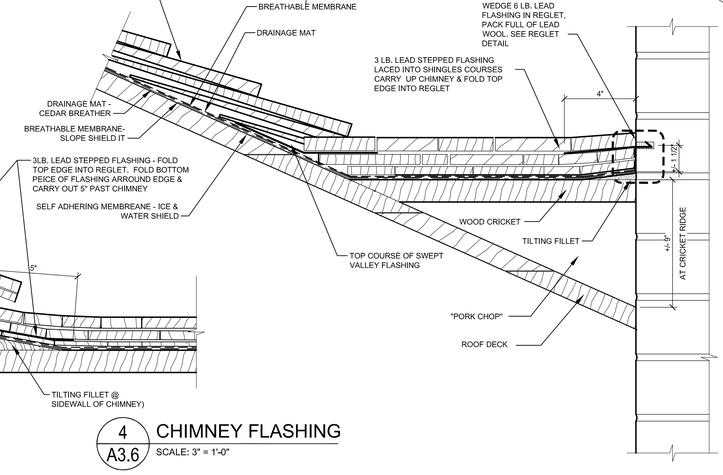


REGLET DETAIL
FULL SIZE



ISOMETRIC CHIMNEY FLASHING
N.T.S. - SCHEMATIC





4 / A3.6 CHIMNEY FLASHING
SCALE: 3" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

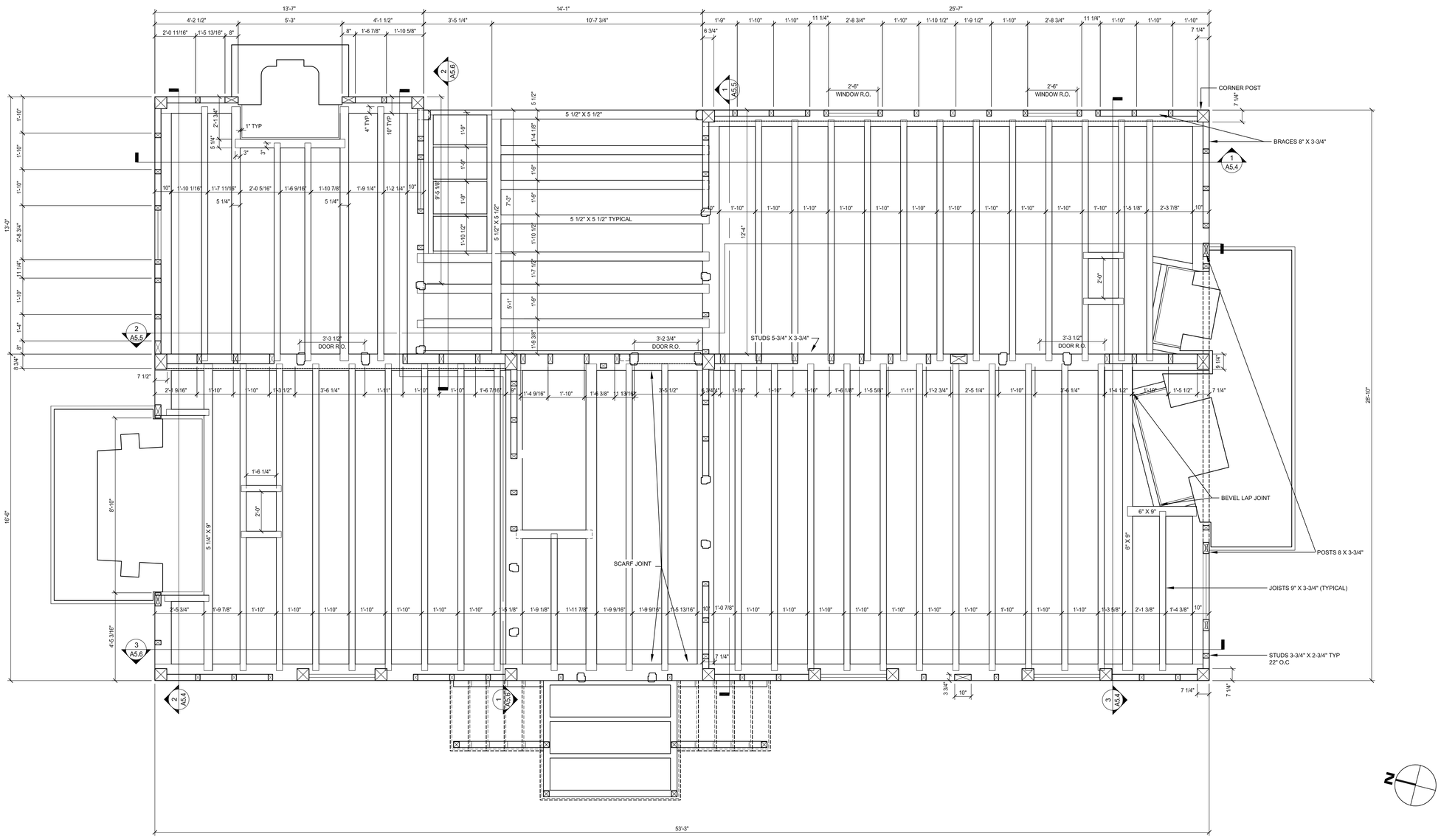
MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY, ALBANY, NY 12207
p: (518)432-9394 f: (518)433-9397
5525 OLDE TOWNE RD. SUITE D WILLIAMSBURG, VA 23188
p: (757)221-0719 f: (757)221-0714

ROOF DETAILS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	RAP
DATE	03-18-15
REVISED	-

DRAWING NO.
A3.6



1 A5.1 FIRST FLOOR FRAMING PLAN
SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

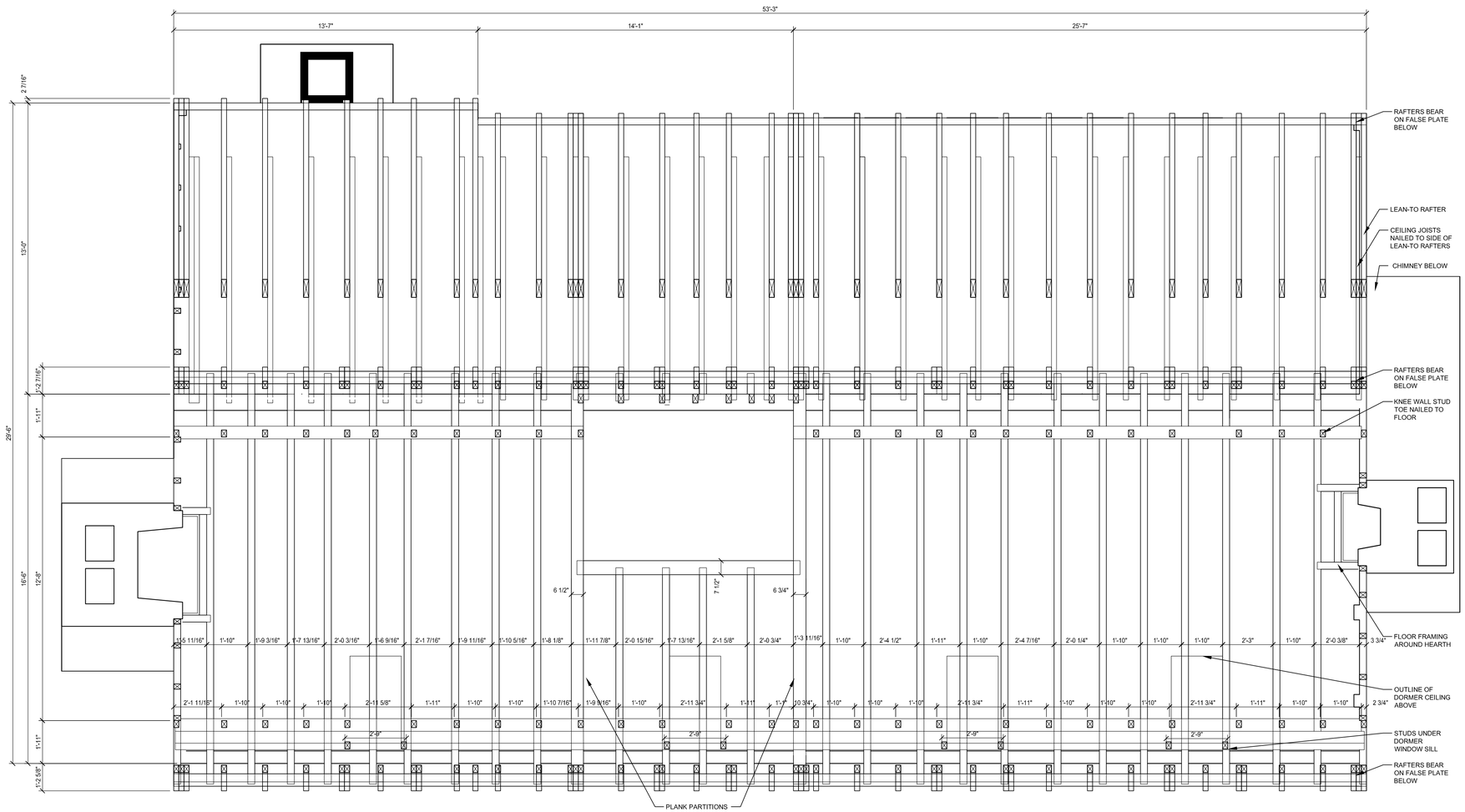
388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397
5525 OLDE TOWNE RD, SUITE D WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

FIRST FLOOR FRAMING PLAN

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM & MR
DATE	03-18-15
REVISED	-

DRAWING NO.
A5.1



1 A5.2 SECOND FLOOR FRAMING PLAN

SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397

5525 OLDE TOWNE RD, SUITE D WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

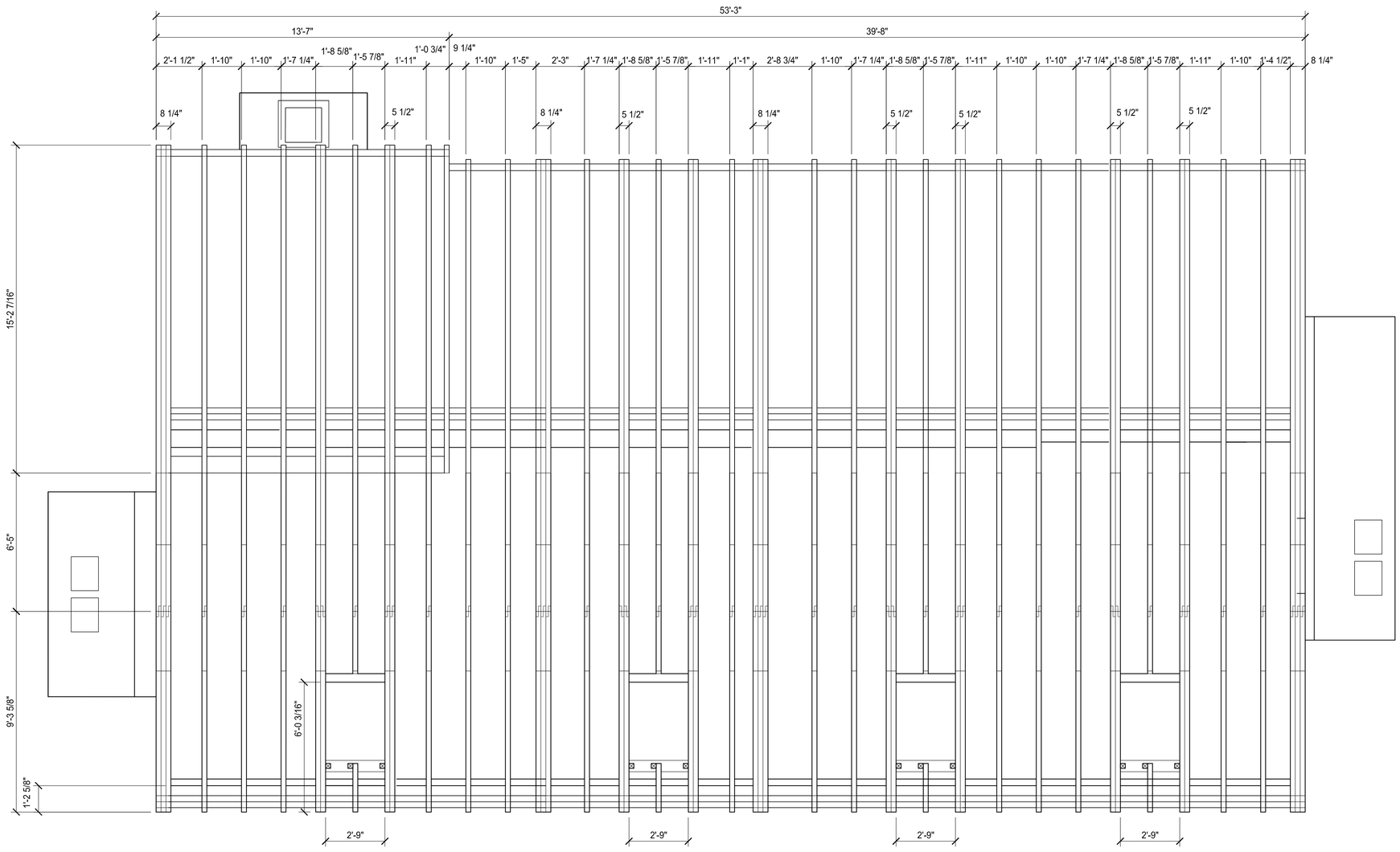
SECOND FLOOR FRAMING PLAN

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

DRAWING NO.

A5.2



1 A5.3 ROOF FRAMING PLAN

SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

388 BROADWAY, ALBANY, NY 12207
p: (518)433-2394 f: (518)433-3397

5525 OLDE TOWNE RD. SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0710 f: (757)221-0714

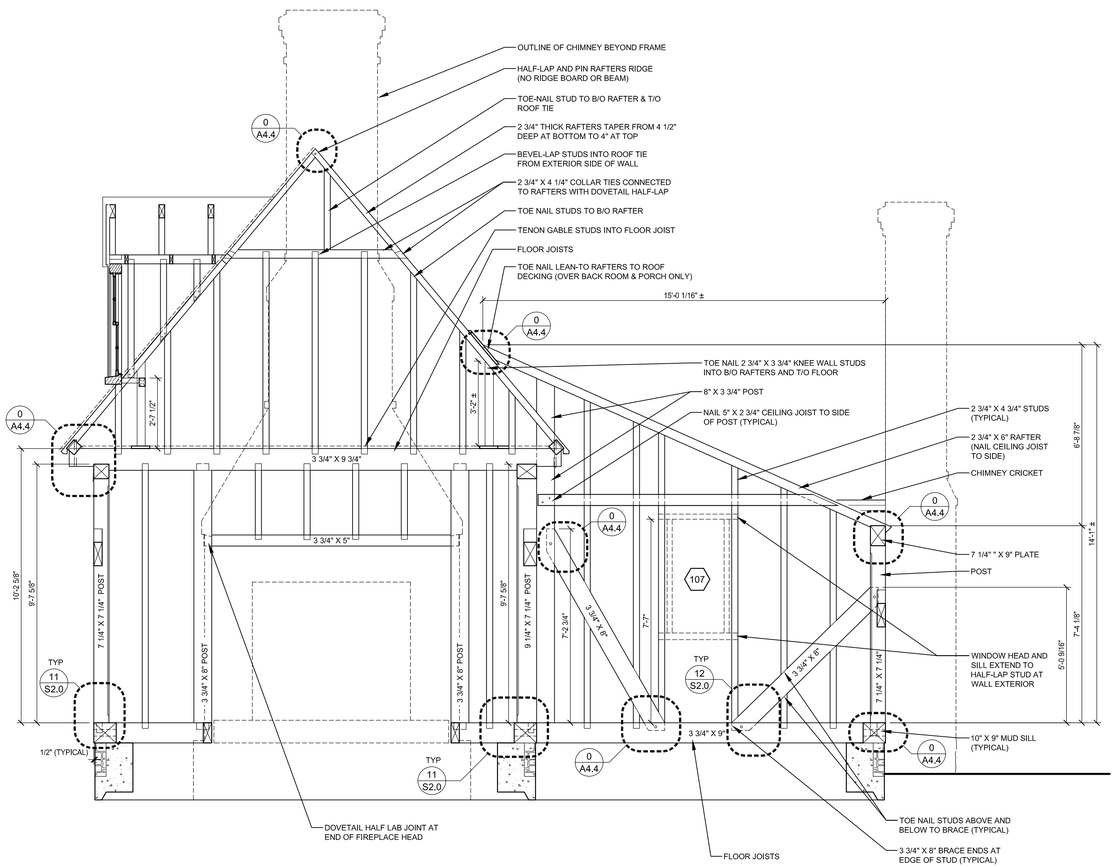
ROOF FRAMING PLAN

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

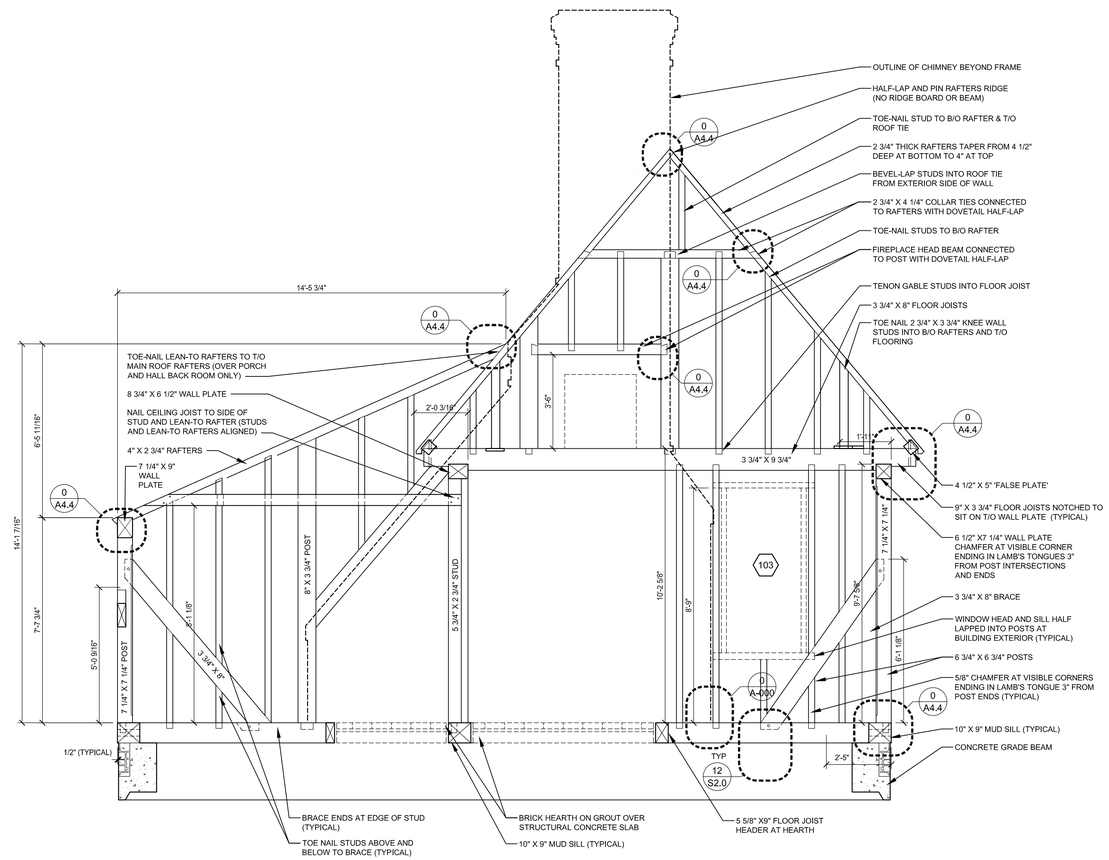
DRAWING NO.

A5.3



2 A5.4 FRAMING SECTION - PARLOR & PARLOR BACK ROOM LOOKING NORTH

SCALE: 3/8" = 1'-0"



3 A5.4 FRAMING SECTION - HALL & HALL BACK ROOM LOOKING SOUTH

SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

388 BROADWAY, ALBANY, NY 12207
p: (518)433-2034 f: (518)433-3037

5525 OLDE TOWNE RD, SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0710 f: (757)221-0714

FRAMING SECTION

INTERPRETIVE STRUCTURE AT GEORGE WASHINGTON'S FERRY FARM

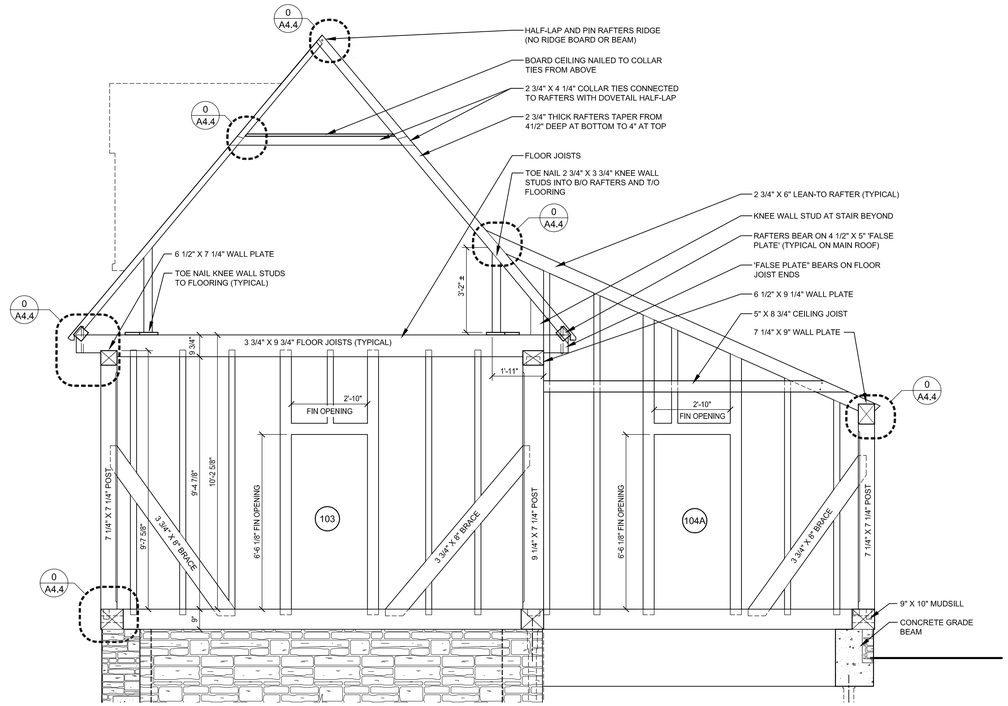
GEORGE WASHINGTON FOUNDATION

268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

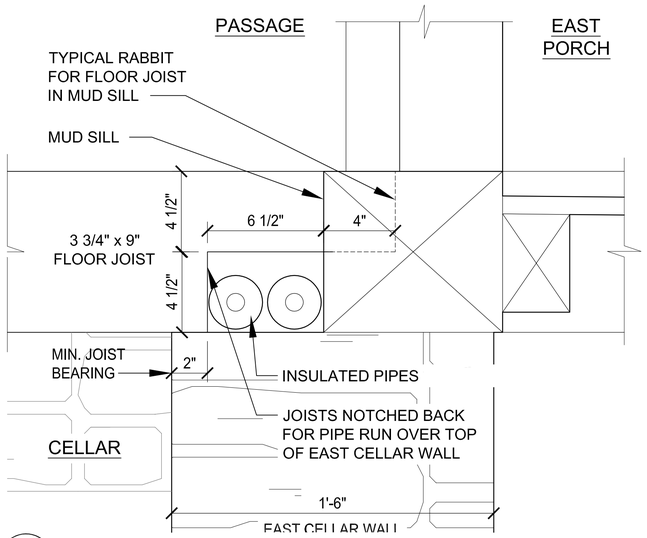
DRAWING NO.

A5.4



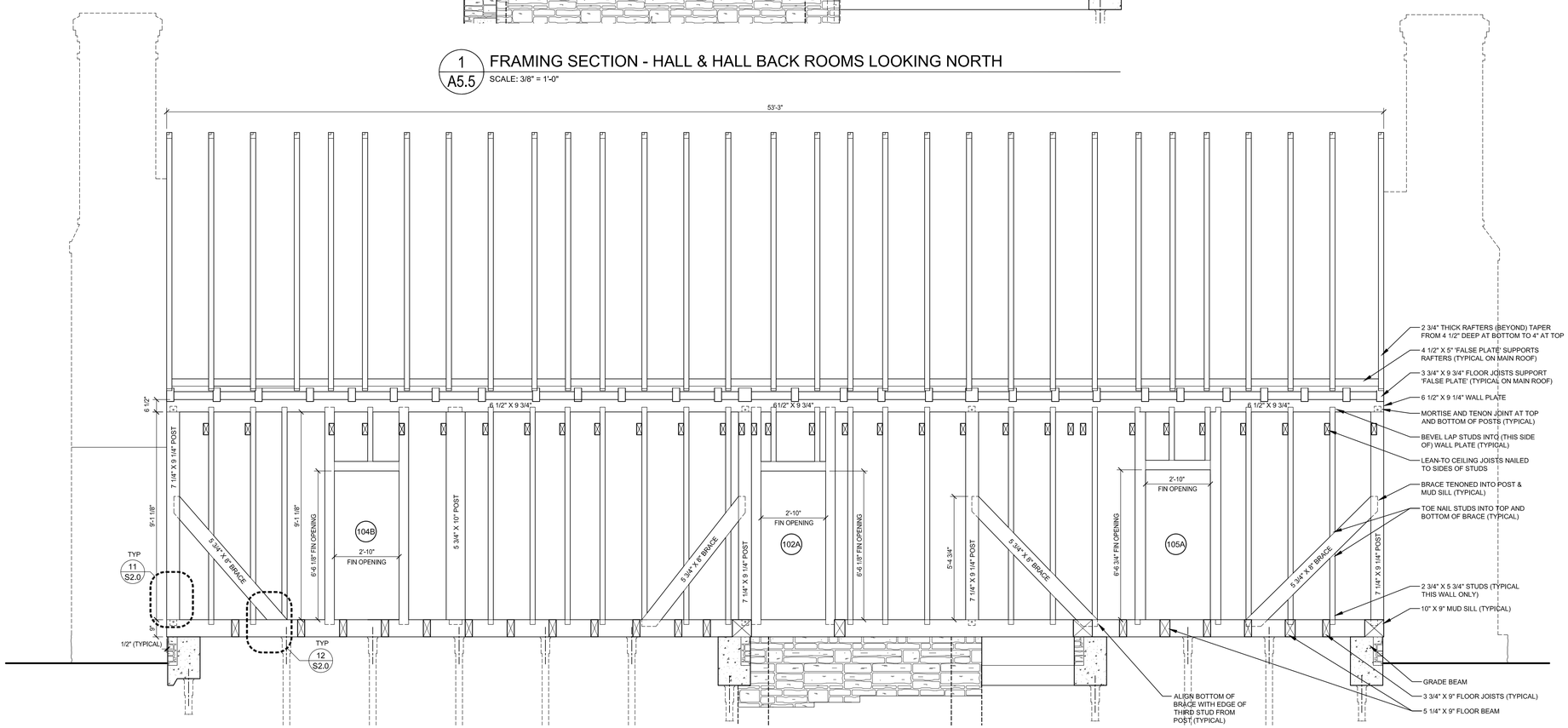
1 A5.5 FRAMING SECTION - HALL & HALL BACK ROOMS LOOKING NORTH

SCALE: 3/8" = 1'-0"



3 A5.5 FRAMING SECTION - FLOOR JOISTS NOTCHED FOR PIPE CHASE

SCALE: 3" = 1'-0"



2 A5.5 FRAMING SECTION - BACK ROOMS & PORCH LOOKING WEST

SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

388 BROADWAY, ALBANY, NY 12207
p: (518)433-9394 f: (518)433-9397
5525 OLDE TOWNE RD, SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0719 f: (757)221-0714

FRAMING SECTION

INTERPRETIVE STRUCTURE AT GEORGE WASHINGTON'S FERRY FARM

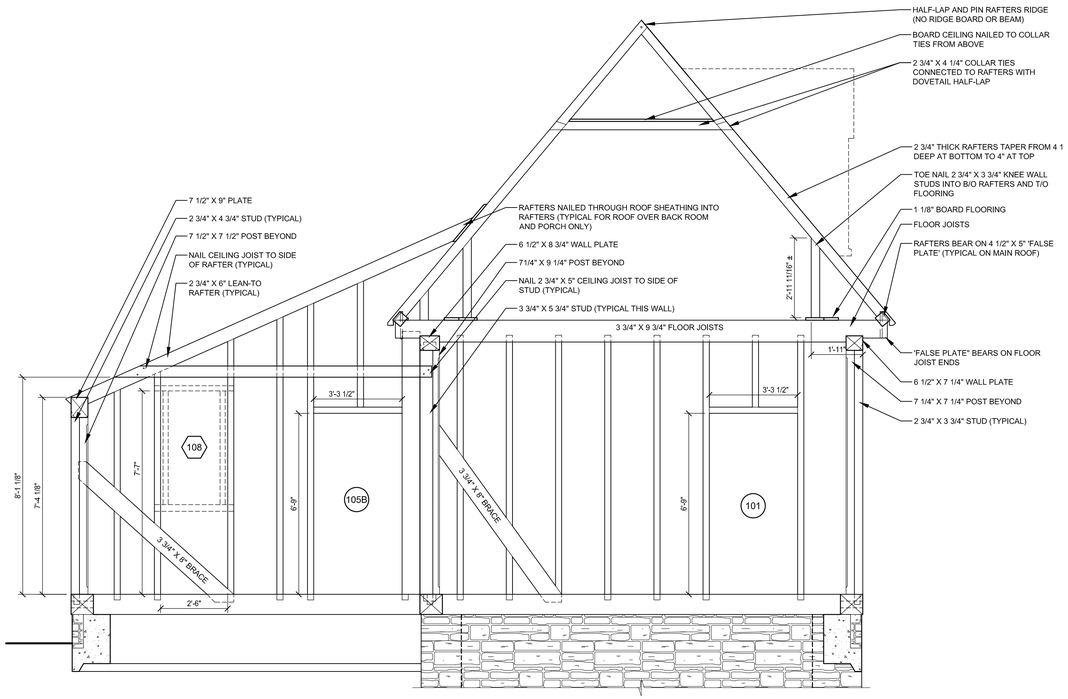
GEORGE WASHINGTON FOUNDATION

268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

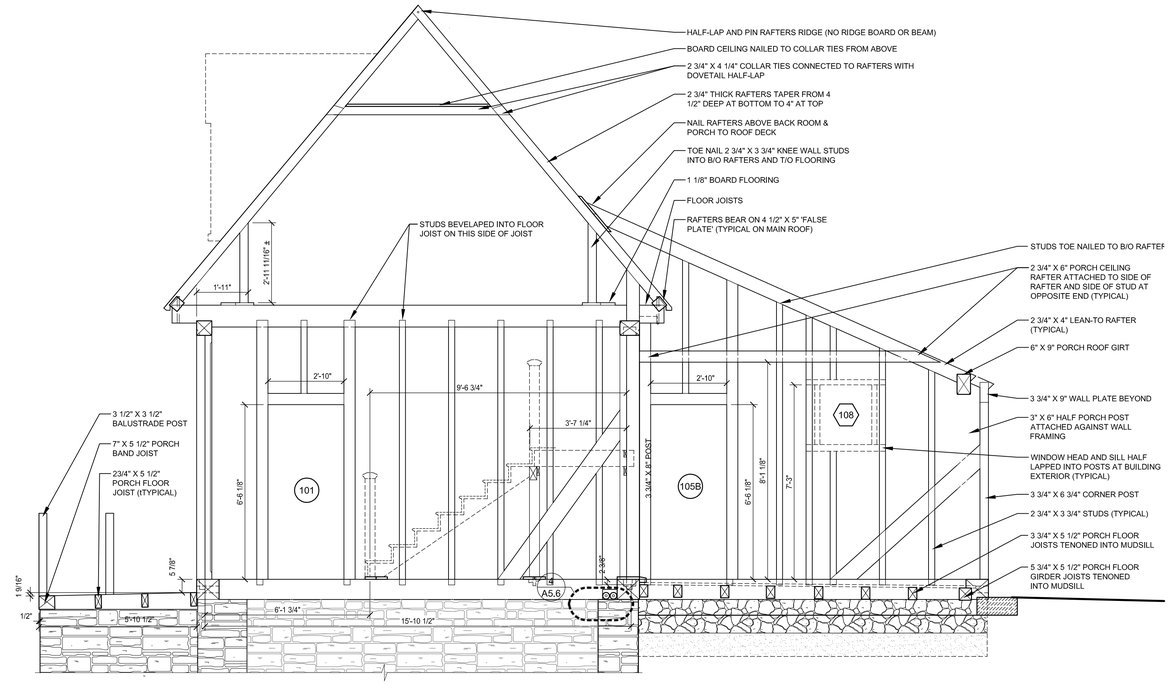
DRAWING NO.

A5.5



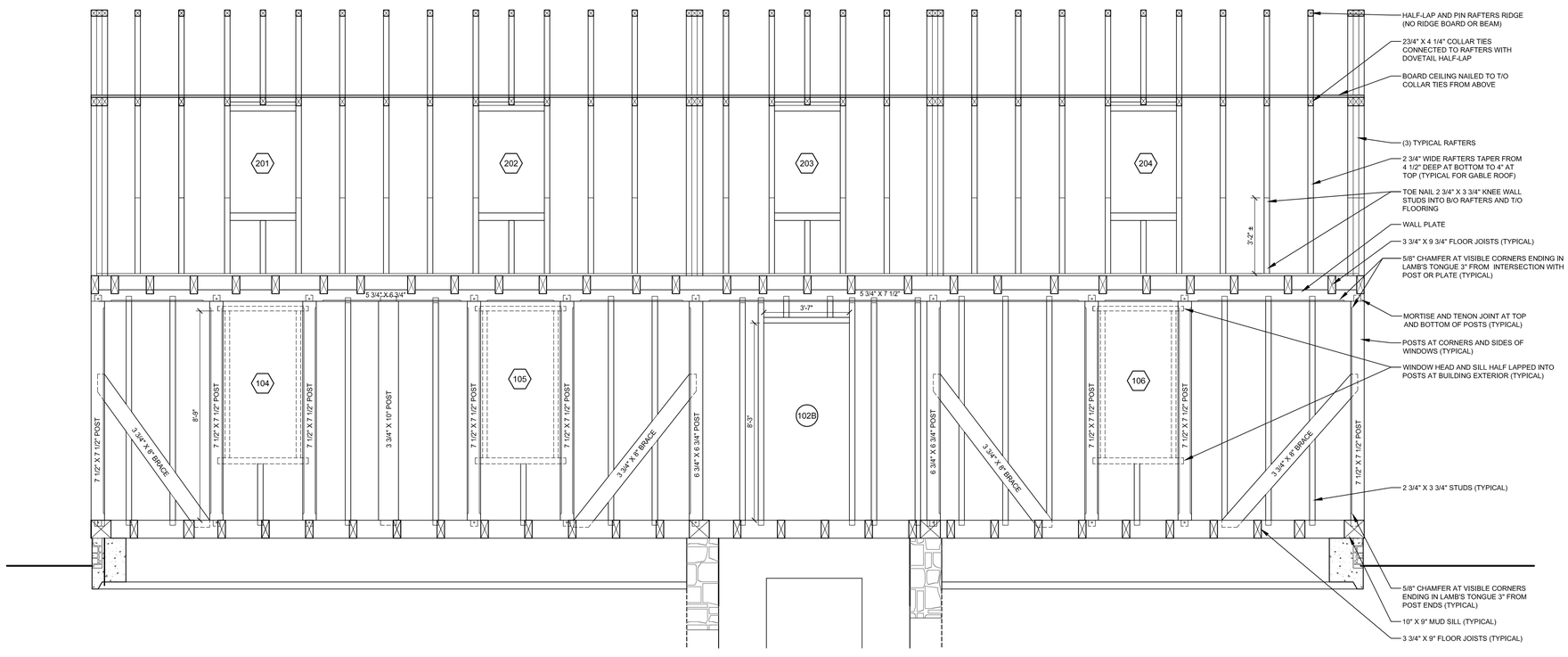
1 A5.6 FRAMING SECTION - PARLOR & PARLOR BACK ROOM LOOKING SOUTH

SCALE: 3/8" = 1'-0"



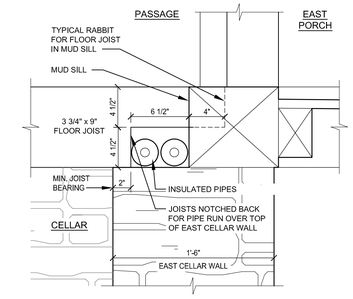
3 A5.7 FRAMING SECTION - PASSAGE & EAST PORCH - LOOKING NORTH

SCALE: 3/8" = 1'-0"



2 A5.6 FRAMING SECTION - HALL & PARLOR LOOKING WEST

SCALE: 3/8" = 1'-0"



4 A5.6 FRAMING SECTION - PIPE CHASE

SCALE: 1 1/2" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

388 BROADWAY, ALBANY, NY 12207
p: (518)433-2394 f: (518)433-9397
5525 OLDE TOWNE RD, SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0719 f: (757)221-0714

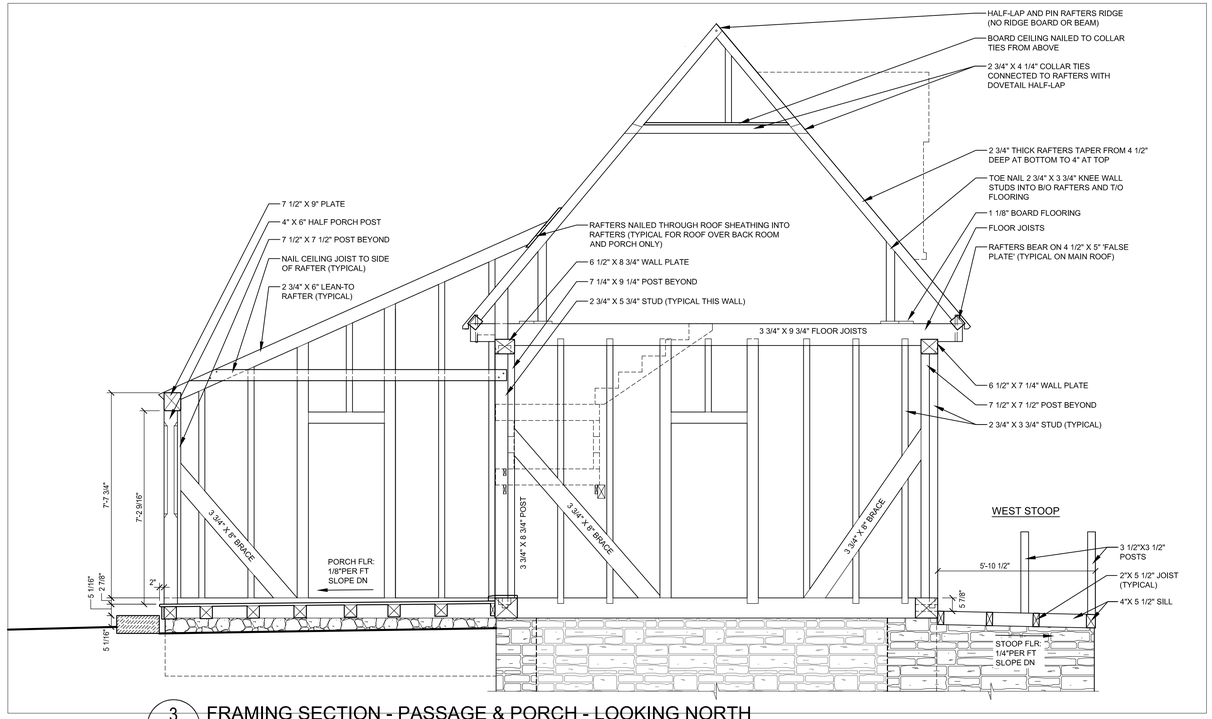
FRAMING SECTION

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

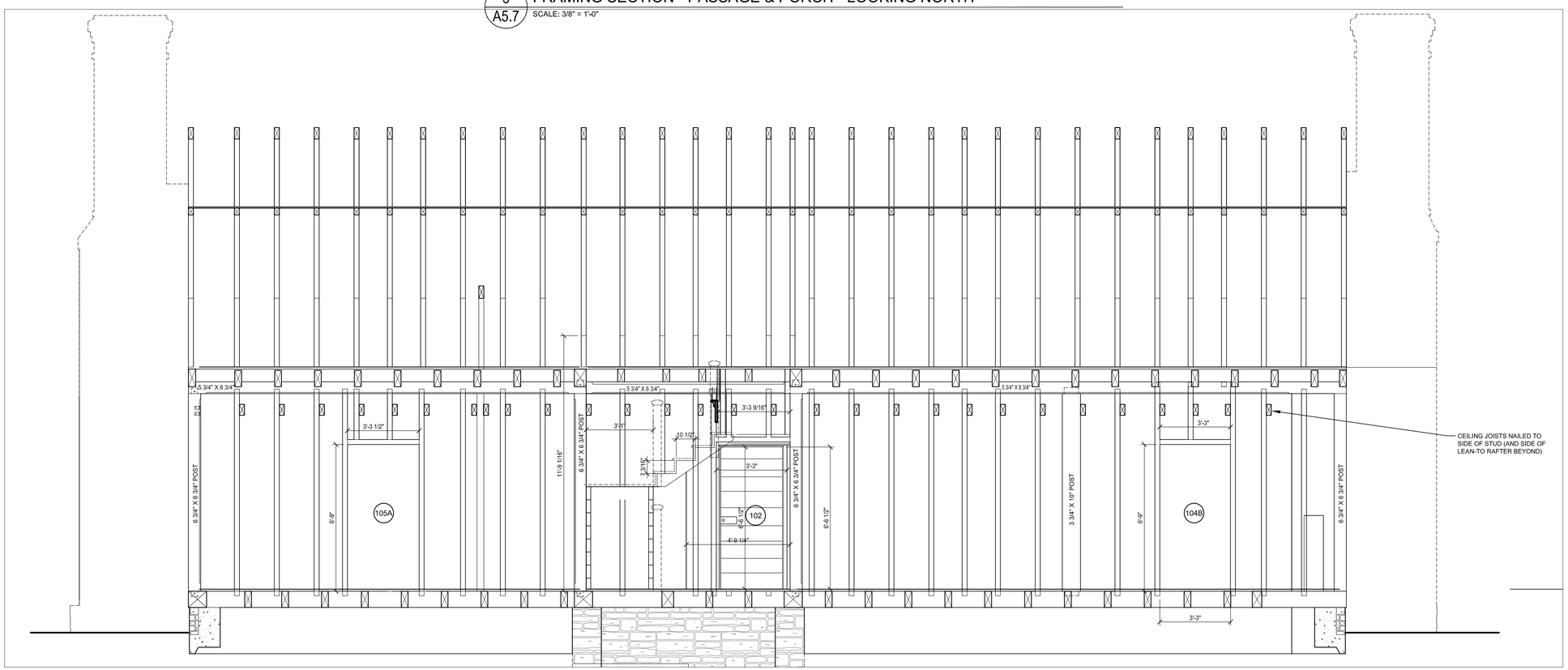
SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

DRAWING NO.

A5.6



3 A5.7 FRAMING SECTION - PASSAGE & PORCH - LOOKING NORTH
SCALE: 3/8" = 1'-0"



2 A5.7 FRAMING SECTION - PARLOR, PASSAGE, AND HALL - LOOKING EAST
SCALE: 3/8" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 009368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

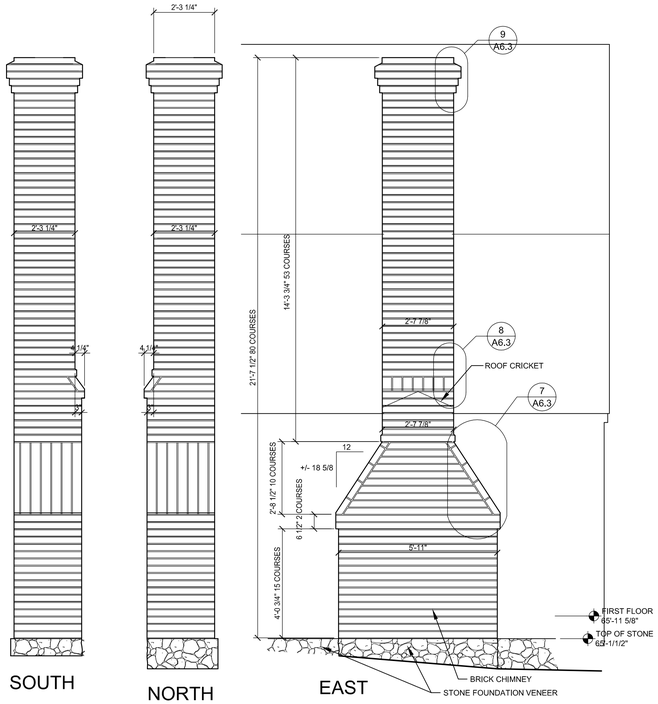
388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397
5525 OLDE TOWNE RD, SUITE D WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

FRAMING SECTION

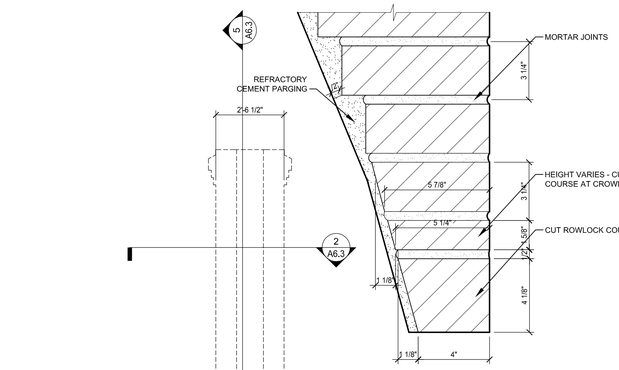
INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

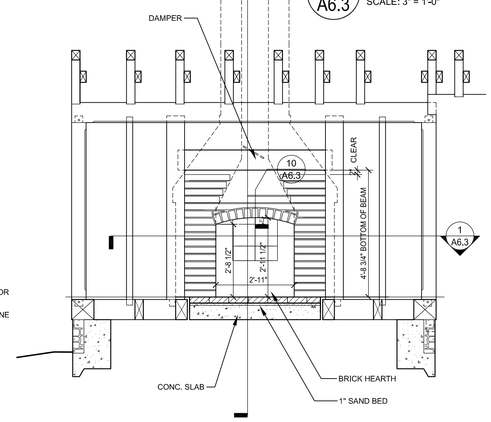
DRAWING NO.
A5.7



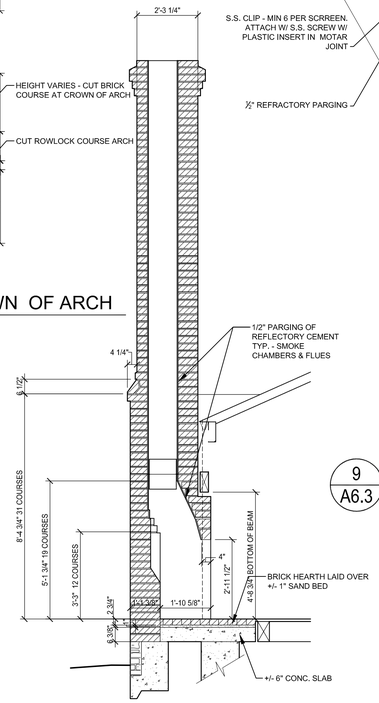
3 A6.3 EAST CHIMNEY EXTERIOR ELEVATIONS
SCALE: 3/8" = 1'-0"



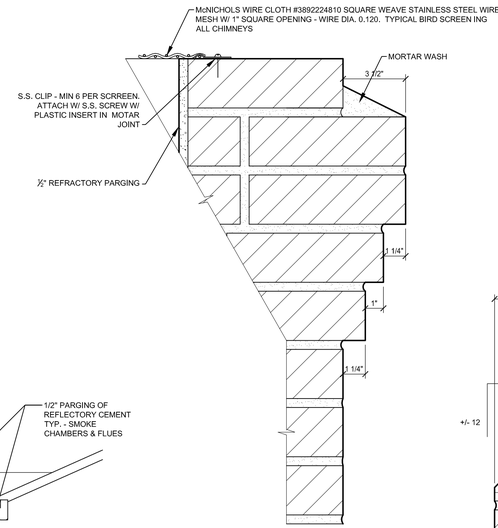
10 A6.3 SECTION @ CROWN OF ARCH
SCALE: 3" = 1'-0"



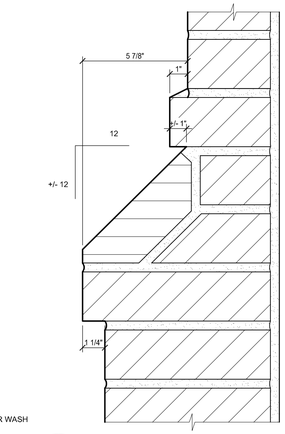
4 A6.3 EAST CHIMNEY INTERIOR ELEVATION
SCALE: 3/8" = 1'-0"



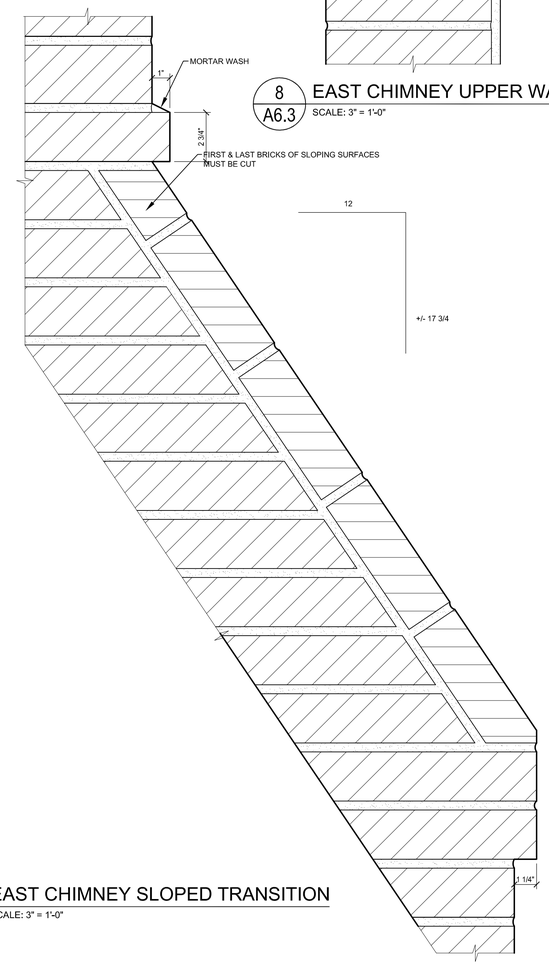
5 A6.3 EAST CHIMNEY SECTION
SCALE: 3/8" = 1'-0"



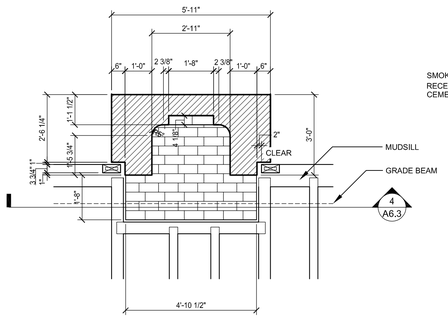
9 A6.3 EAST CHIMNEY - CAP
SCALE: 3" = 1'-0"



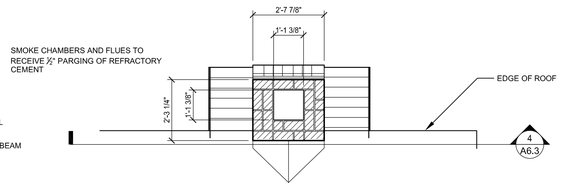
8 A6.3 EAST CHIMNEY UPPER WASH
SCALE: 3" = 1'-0"



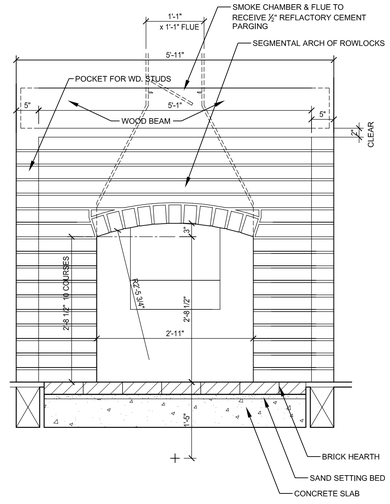
7 A6.3 EAST CHIMNEY SLOPED TRANSITION
SCALE: 3" = 1'-0"



1 A6.3 EAST CHIMNEY 1ST FLOOR PLAN
SCALE: 3/8" = 1'-0"



2 A6.3 EAST CHIMNEY ABOVE ROOF
SCALE: 3/8" = 1'-0"



6 A6.3 EAST CHIMNEY BREAST - BRICK
SCALE: 3/4" = 1'-0"

NOTE: ALL CHIMNEYS ARE CONSTRUCTED OF BRICK 8 ¾' (LENGTH) x 4 ⅛" (WIDE) x 2 ¾" (THICK) WITH ½" JOINTS. THUS COURSES ARE 3 ¼" HIGH AND 4 (FOUR) COURSES EQUALS 13"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

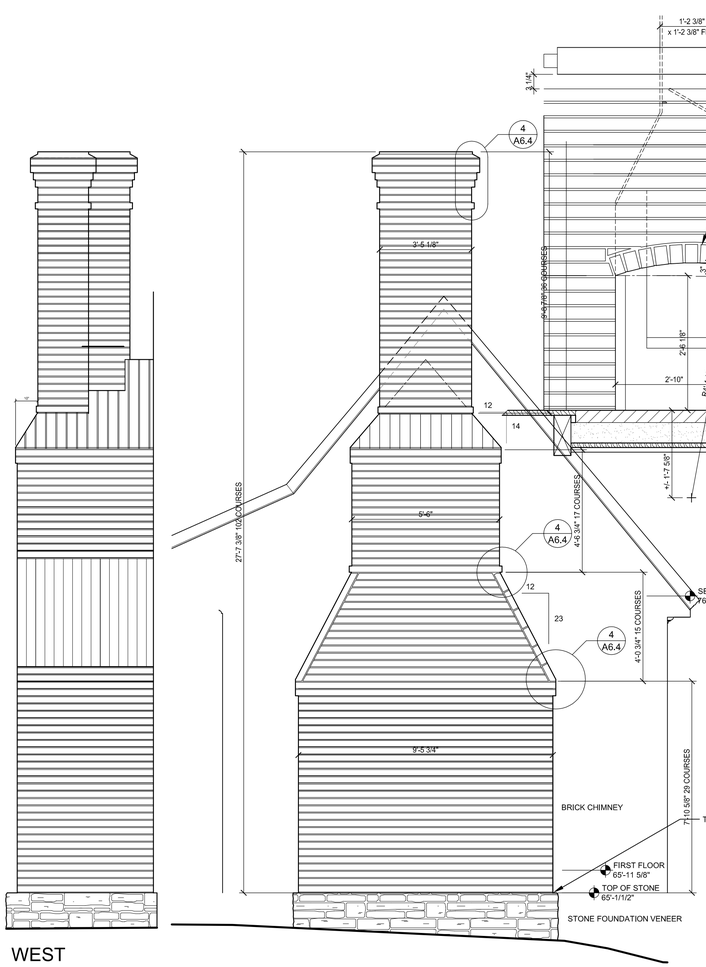
MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY, ALBANY, NY 12207
p: (518)433-9394 f: (518)433-9397
5525 OLDE TOWNE RD. SUITE D WILLIAMSBURG, VA 23188
p: (757)221-0719 f: (757)221-0714

EAST CHIMNEY

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

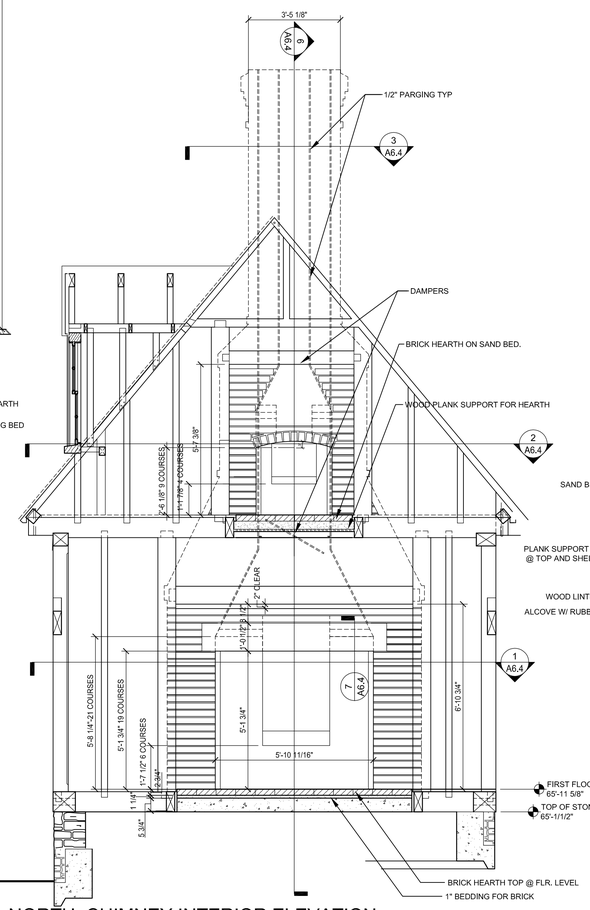
SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG MR RNP
DATE	03-18-15
REVISED	-

DRAWING NO.
A6.3

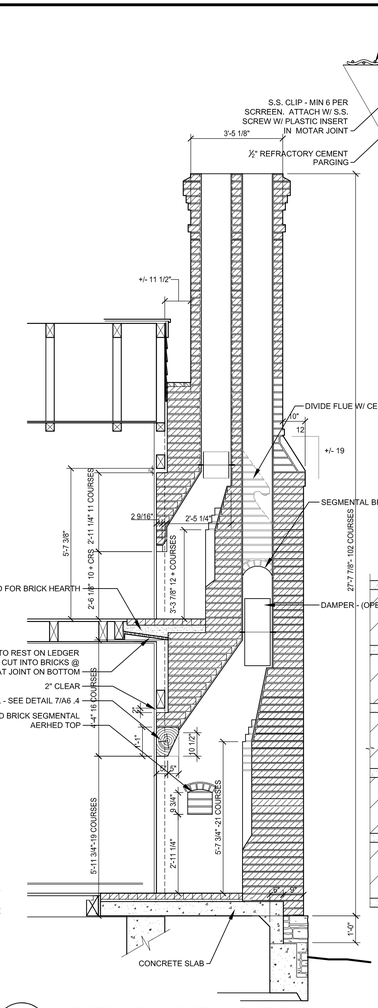


4 A6.4 NORTH CHIMNEY EXTERIOR ELEVATIONS
SCALE: 3/8" = 1'-0"

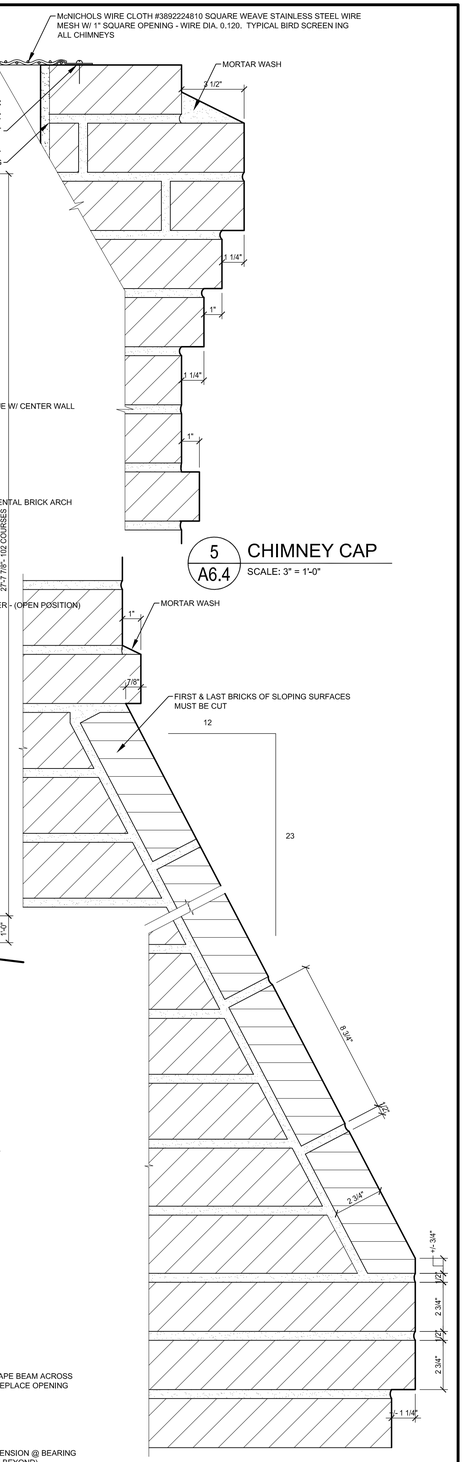
8 A6.4 N. CHIMNEY ELEVATION 2nd. FLR.
SCALE: 3/4" = 1'-0"



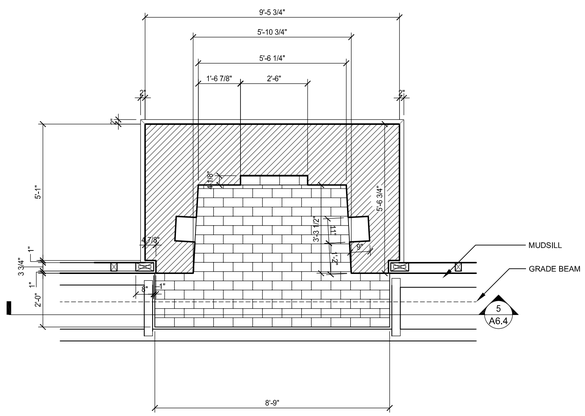
5 A6.4 NORTH CHIMNEY INTERIOR ELEVATION
SCALE: 3/8" = 1'-0"



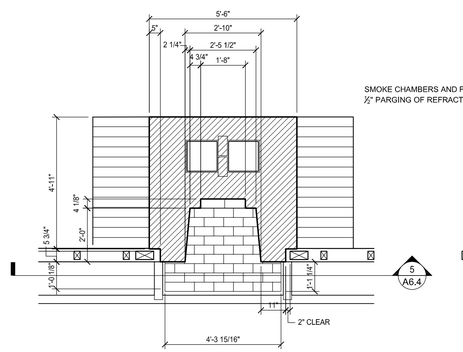
6 A6.4 NORTH CHIMNEY SECTION
SCALE: 3/8" = 1'-0"



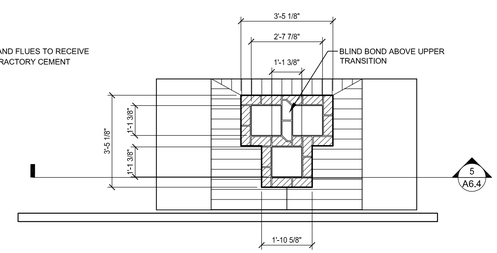
5 A6.4 CHIMNEY CAP
SCALE: 1" = 1'-0"



1 A6.4 NORTH CHIMNEY 1ST FLOOR PLAN
SCALE: 3/8" = 1'-0"

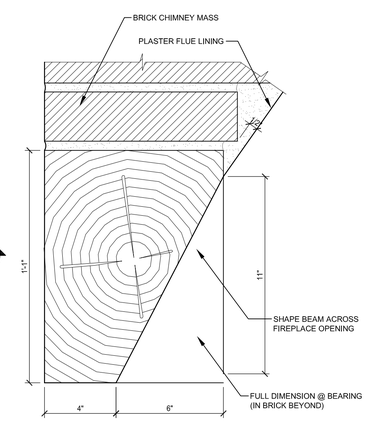


2 A6.4 NORTH CHIMNEY 2ND FLOOR PLAN
SCALE: 3/8" = 1'-0"



3 A6.4 NORTH CHIMNEY ROOF FLOOR PLAN
SCALE: 3/8" = 1'-0"

NOTE: ALL CHIMNEYS ARE CONSTRUCTED OF BRICK 8 ¾' (LENGTH) x 4 ⅛" (WIDE) x 2 ¾" (THICK) WITH ½" JOINTS. THUS COURSES ARE 3 ¼" HIGH AND 4 (FOUR) COURSES EQUALS 13"



7 A6.4 WOOD LINTEL - 1st. FL.
SCALE: 3" = 1'-0"

4 A6.4 SLOPED TRANSITION
SCALE: 3" = 1'-0"

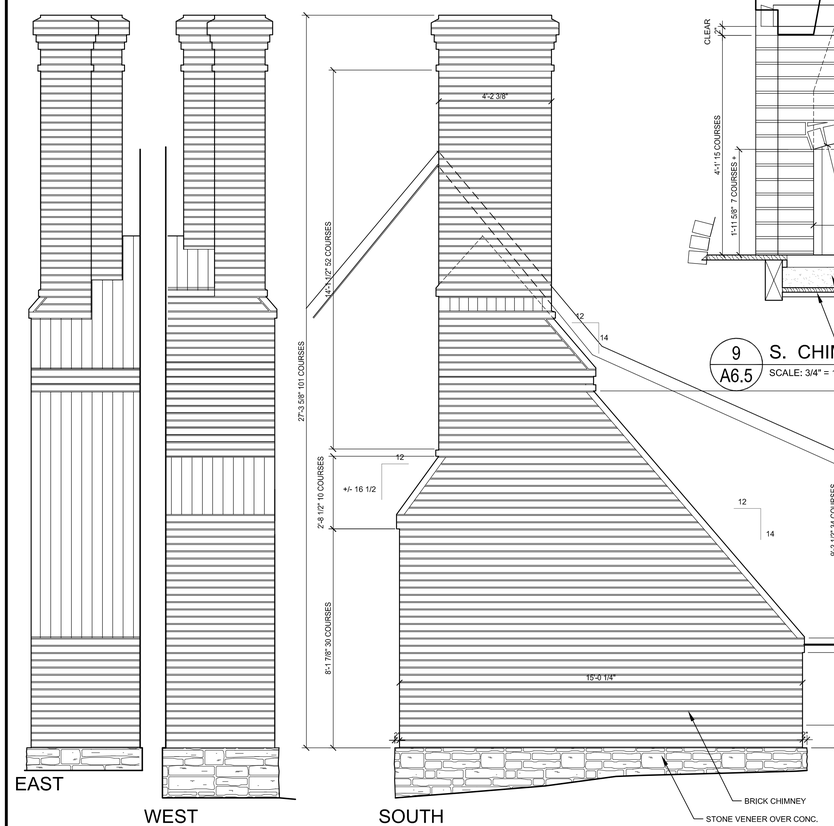
COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY, ALBANY, NY 12207
p: (518)433-9394 f: (518)433-9397
5525 OLDE TOWNE RD, SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0710 f: (757)221-0714

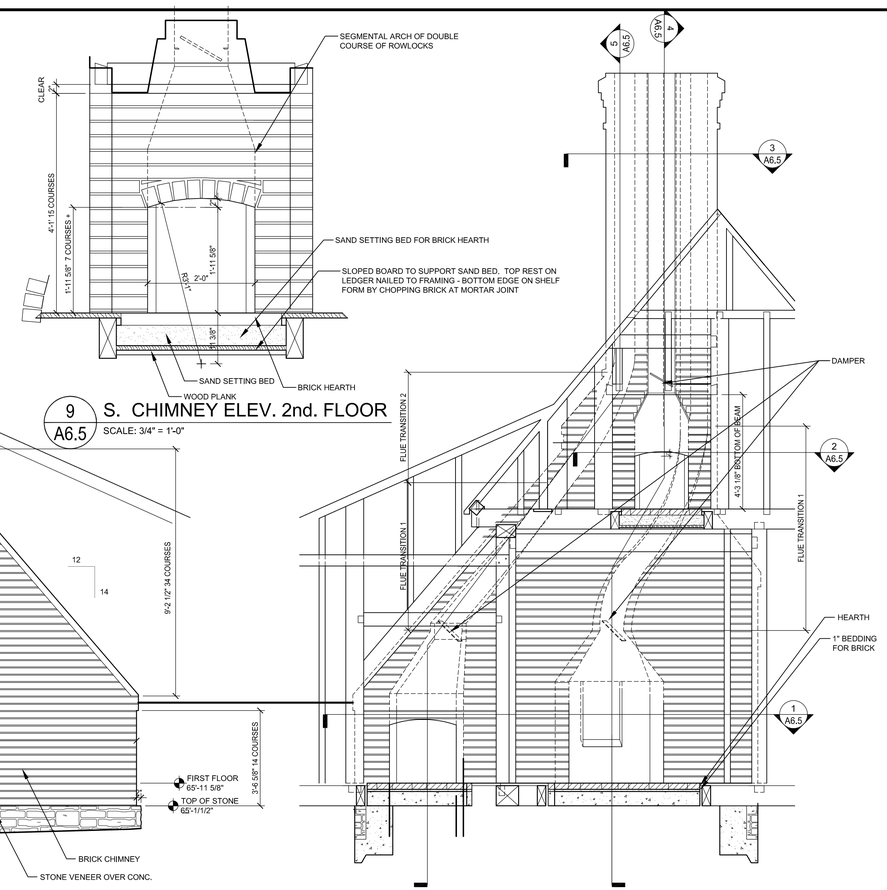
NORTH CHIMNEY
INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	9726
DRAWN BY	JGWG MR RNP
DATE	03-18-15
REVISED	-

DRAWING NO.
A6.4

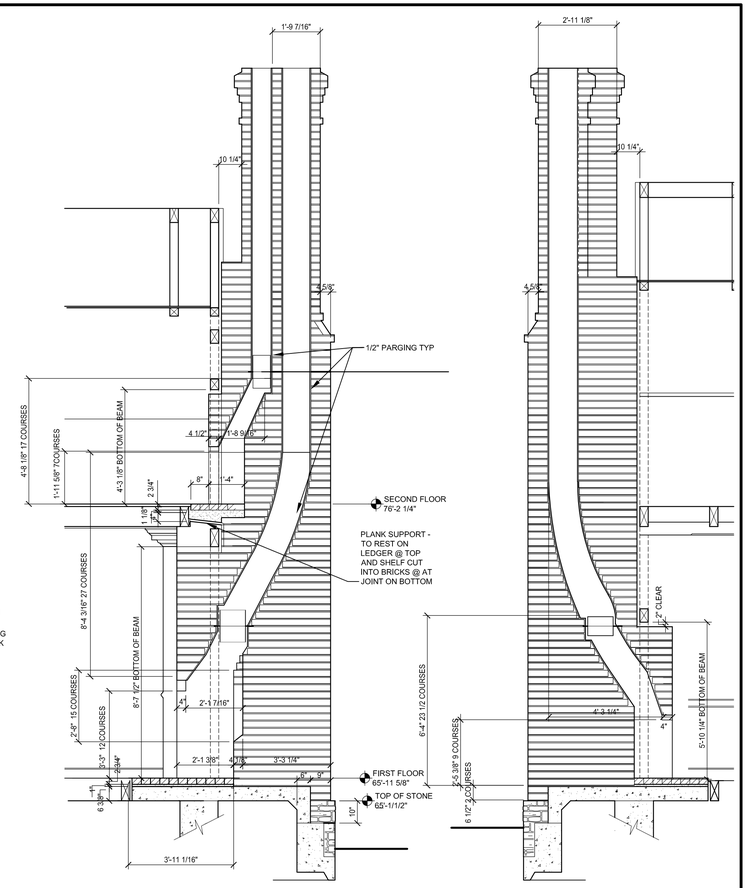


4 A6.5 SOUTH CHIMNEY EXTERIOR ELEVATIONS
SCALE: 3/8" = 1'-0"



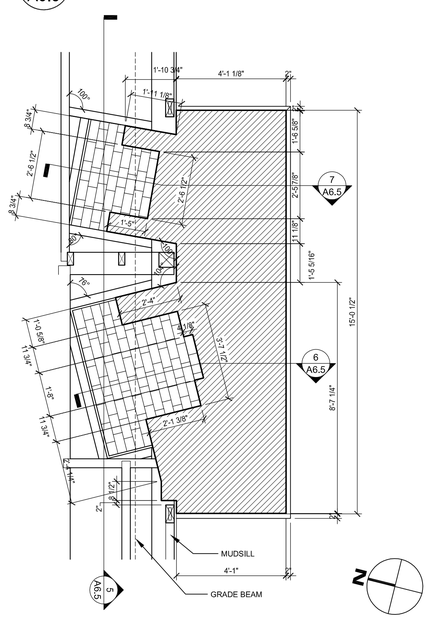
9 A6.5 S. CHIMNEY ELEV. 2nd. FLOOR
SCALE: 3/4" = 1'-0"

5 A6.5 SOUTH CHIMNEY INTERIOR ELEVATION
SCALE: 3/8" = 1'-0"

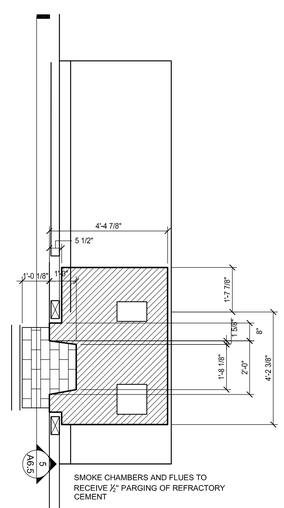


6 A6.5 SOUTH CHIMNEY SECTION
SCALE: 3/8" = 1'-0"

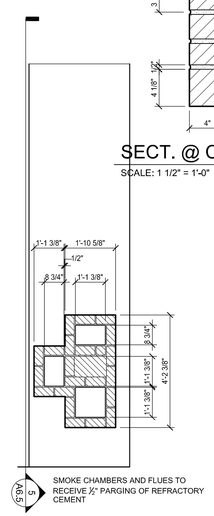
7 A6.5 SOUTH CHIMNEY SECTION
SCALE: 3/8" = 1'-0"



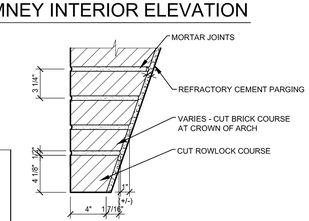
1 A6.5 SOUTH CHIMNEY 1st. FLOOR PLAN
SCALE: 3/8" = 1'-0"



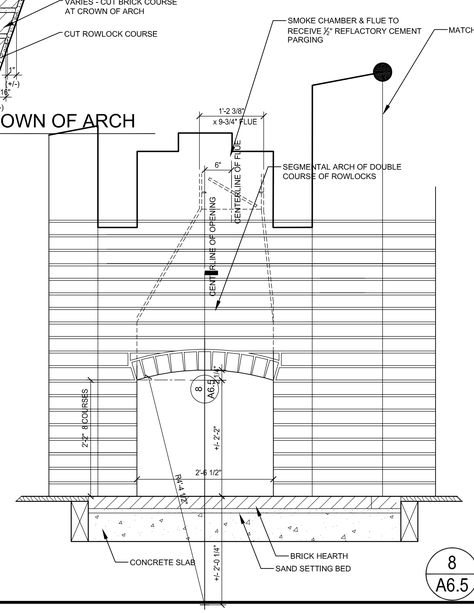
2 A6.5 SOUTH CHIMNEY 2nd. FLOOR PLAN
SCALE: 3/8" = 1'-0"

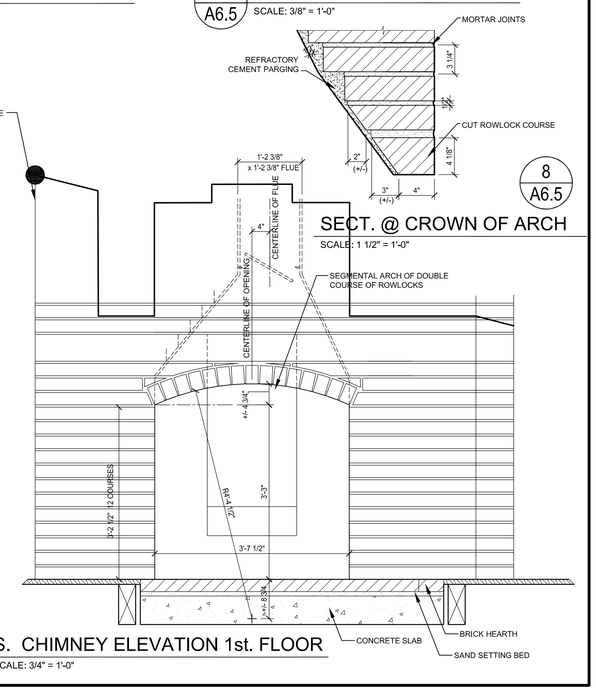


3 A6.5 S. CHIMNEY ROOF PLAN
SCALE: 3/8" = 1'-0"



SECT. @ CROWN OF ARCH
SCALE: 1 1/2" = 1'-0"





8 A6.5 SECT. @ CROWN OF ARCH
SCALE: 1 1/2" = 1'-0"

8 A6.5 S. CHIMNEY ELEVATION 1st. FLOOR
SCALE: 3/4" = 1'-0"

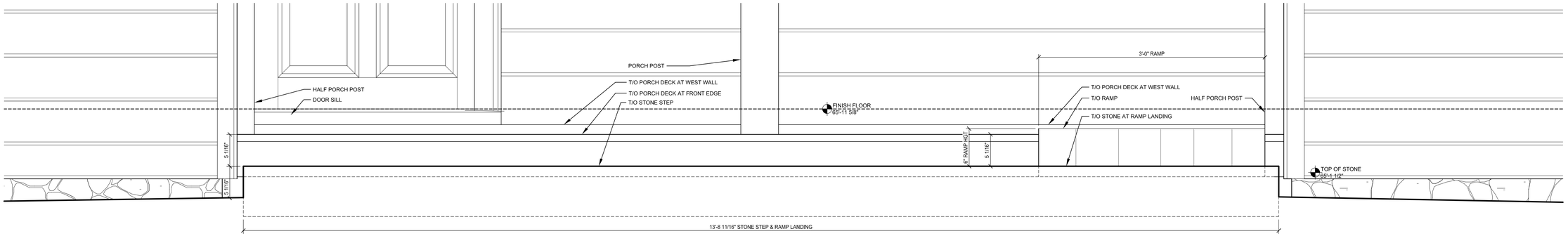
COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY, ALBANY, NY 12207
p: (518)433-0394 f: (518)433-9397
5525 OLDE TOWNE RD, SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0710 f: (757)221-0714

SOUTH CHIMNEY
INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

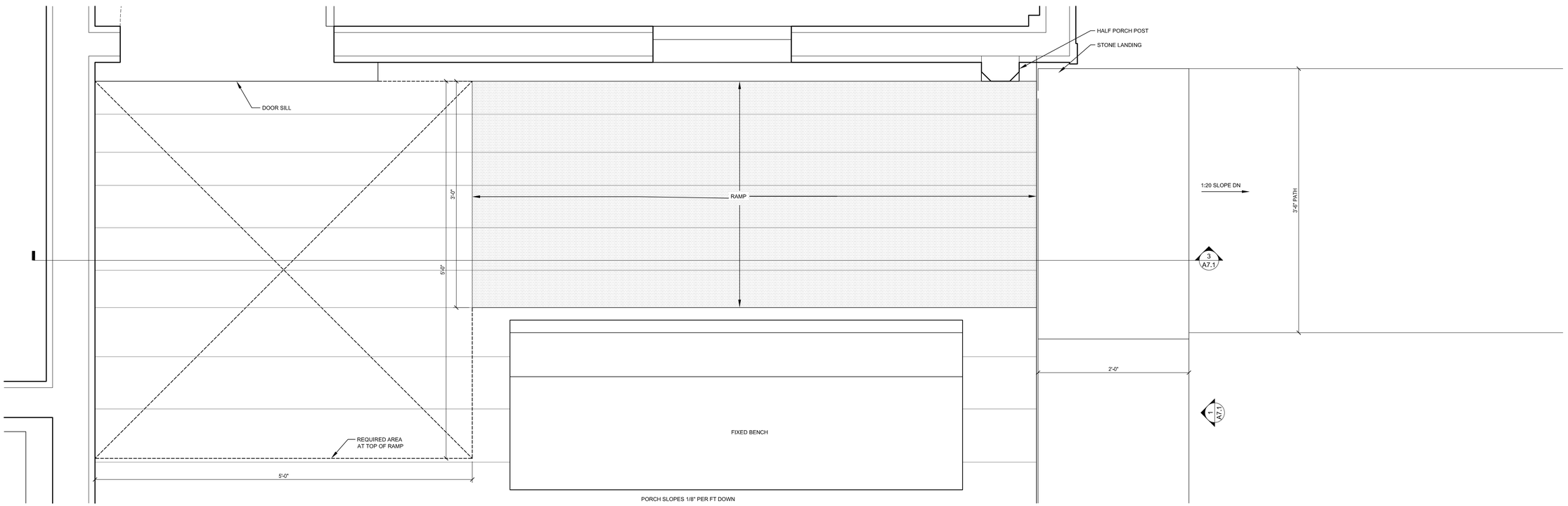
SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG MR RNP
DATE	03-18-15
REVISED	-

DRAWING NO.
A6.5



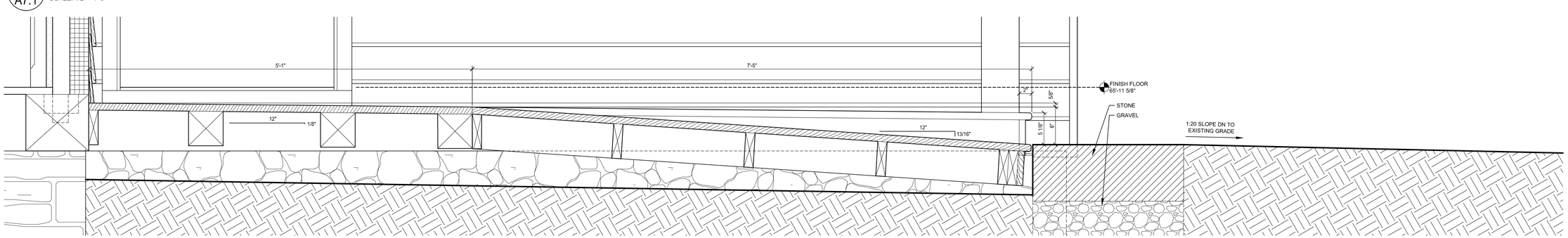
1 A7.1 EAST PORCH - RAMP ELEVATION DETAIL

SCALE: 1/2" = 1'-0"



2 A7.1 EAST PORCH - RAMP PLAN DETAIL

SCALE: 1/2" = 1'-0"



3 A7.1 EAST PORCH - RAMP SECTION DETAL

SCALE: 1/2" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

388 BROADWAY, ALBANY, NY 12207
p: (518)433-2034 f: (518)433-3037
5525 OLDE TOWNE RD, SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0710 f: (757)221-0714

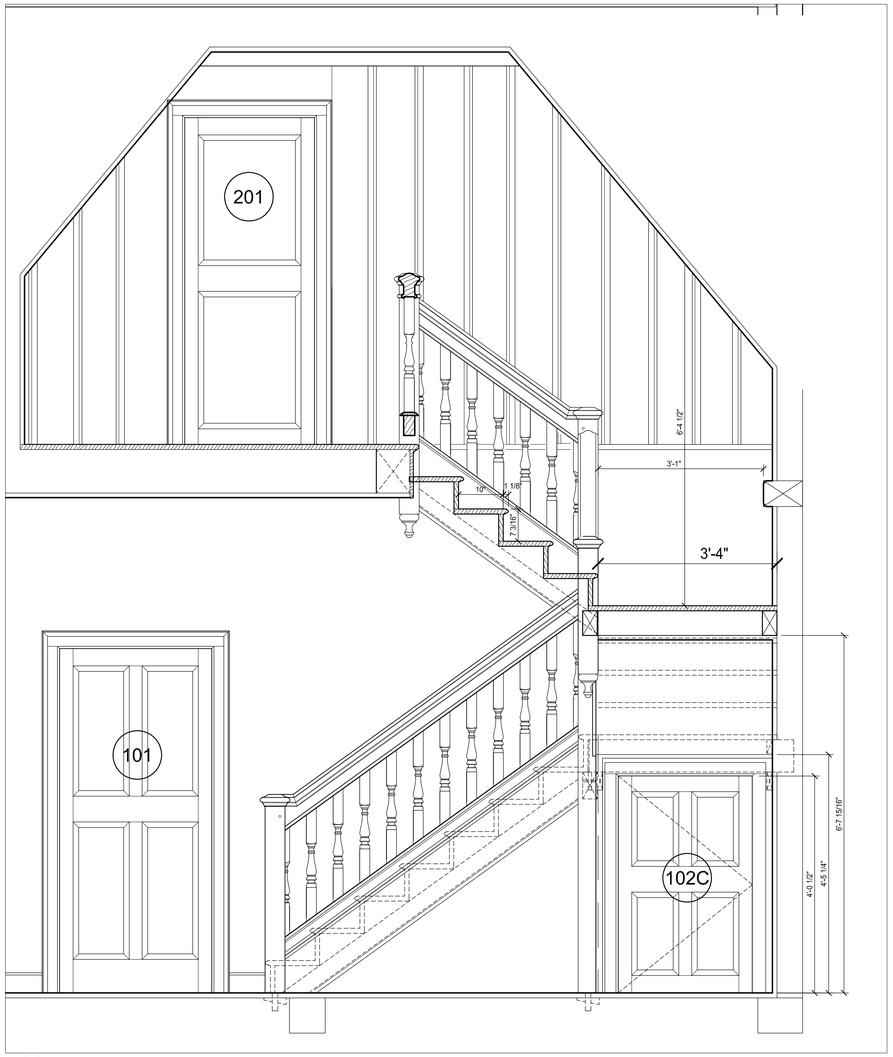
EAST PORCH RAMP PLAN, SECTION, & DETAILS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

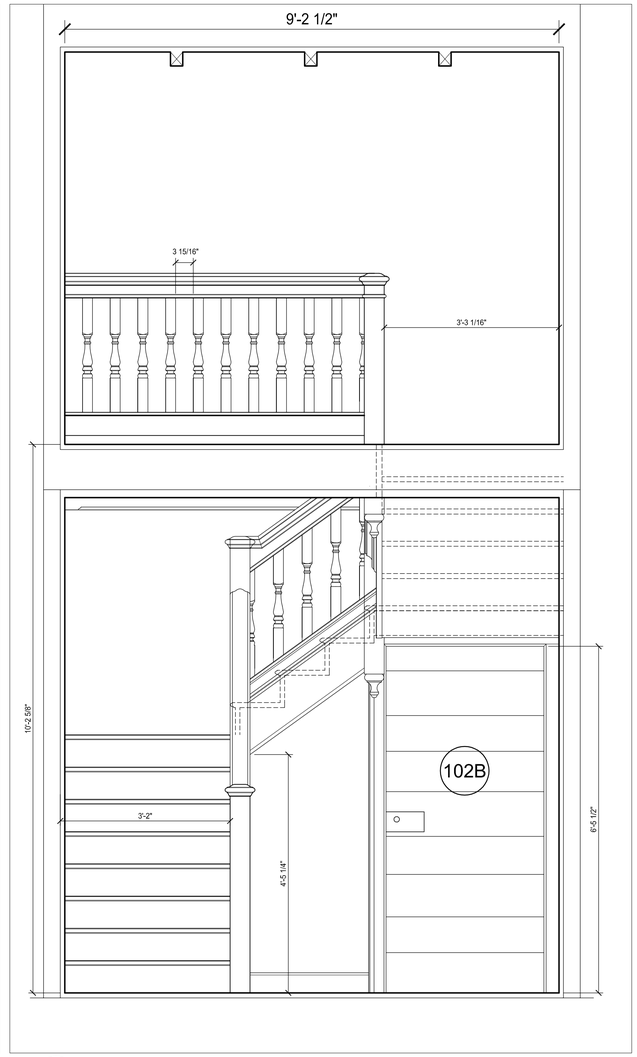
SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	JGWG JSM
DATE	03-18-15
REVISED	-

DRAWING NO.

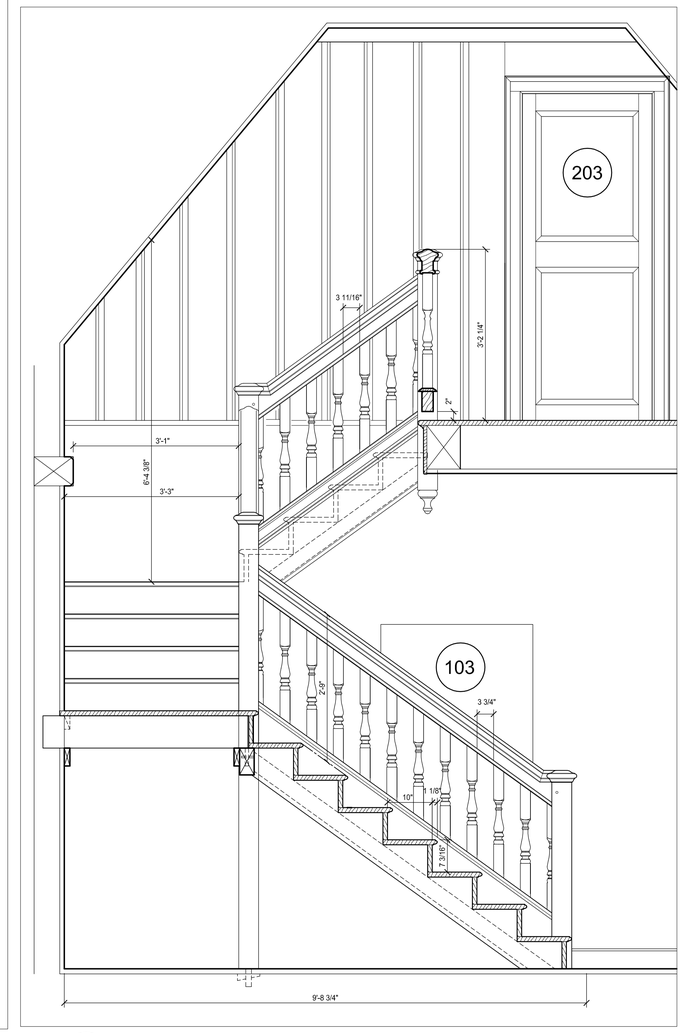
A7.1



1 A9.1 STAIR SECTION - LOOKING NORTH
SCALE: 3/4" = 1'-0"



2 A9.1 STAIR SECTION - LOOKING EAST
SCALE: 3/4" = 1'-0"



3 A9.1 STAIR SECTION - LOOKING SOUTH
SCALE: 3/4" = 1'-0"

COMMONWEALTH OF VIRGINIA
JOHN I. MESICK
No. 002368
ARCHITECT

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397
5525 OLDE TOWNE RD, SUITE D WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

STAIR

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE
AS NOTED
COMMISSION NO.
0726
DRAWN BY
JGWG JSM
DATE
03-18-15
REVISED
-

DRAWING NO.
A8.1

GENERAL

1. These notes highlight but do not replace the specifications contained in the Project Manual.
2. The applicable building code is 2009 VUSBC.
3. Refer to the Design Loads and Factors table, this sheet, for code required loads for the project.
4. Refer to the Special Inspections tables on sheet S0.01 for special inspection requirements for the project.
5. Contractor is solely responsible for means and methods and protecting archaeological resources during the course of the work. Do not damage or endanger the structural integrity of the Work or Existing Structure.
6. Contractor shall be responsible for the proper and safe design of shoring systems for trenches and excavations.
7. Notify Engineer in case of discrepancies between drawings, these notes, and Project Manual before proceeding with the work.
8. Use architectural drawings and drawings of other trades in conjunction with the structural drawings to properly perform the work.
9. If conditions disclosed during excavation reveal unforeseen conditions, promptly request direction from Architect before proceeding.
10. Contractor is responsible for coordinating between trades.
11. Do not scale drawings.
12. Field dimensions
    A. If structural drawings are used for laying out wall lines, all dimensions shall first be verified with the architectural drawings. Layout shall be closed before work is begun.
    B. Verify all dimensions and accurately locate all existing foundations before beginning work.
13. Sections and details shown, while drawn for specific locations, are intended to establish the general types of details to be used throughout.
14. The Engineer's review of a shop drawing or submittal shall not relieve the Contractor of his responsibility to follow the intent of the contract drawings.

SITE PREPARATION

1. Locate and mark all underground utility lines before starting work and call Miss Utility 800-552-7001.
2. Provide for the proper and safe design and installation of all sheeting and shoring excavation support systems. All sheeting and shoring systems shall be designed by a professional engineer engaged by the Contractor and registered in the state of the project. Submit signed and sealed shop drawings and calculations to the Engineer for review.
3. Permanent or abandoned timber lagging must be preservative treated prior to use to prevent insect infestation.
4. Construct and maintain a series of ditches and sumps to remove ground water from the working area.
5. Discharge pumped water as directed by architect and in accordance with applicable federal, state & local regulations.
6. Preliminary grading shall be such that surface water is diverted away from the excavation.

PERFORMANCE SPECIFIED ITEMS

1. Employ or retain a licensed Professional Engineer in the project jurisdiction to design and detail the following performance specified structural components:
    A. Precast Grade Beams
    B. Helical Piles
2. Contractor shall submit signed & sealed shop drawings and calculations for all performance specified items listed above for review & record.

FOUNDATIONS

1. Foundations are designed for 35 kip helical piles, unless noted otherwise.
2. Design piles for 10 kips uplift at concrete grade beams.
3. See specifications for pile driving procedures.
4. Refer to specifications and architectural drawings for waterproofing details and procedures.
5. Perimeter perforated foundation drain shall be installed where shown. See specifications. Care must be exercised to avoid breaking perforated foundation drain tile when backfilling.

REINFORCED CONCRETE

1. Concrete construction shall follow requirements of the project specifications and ACI 301 "Specifications for Structural Concrete".
2. Detail, fabricate and place reinforcing in accordance with the provisions set forth by the American Concrete Institute and the CRSI "Manual of Standard Practice."
3. Design precast beams in accordance with ACI 318 and the design recommendations of "PCI Design Handbook--Precast and Prestressed Concrete".
4. Provide shop drawings showing full information for reinforcing placement.
    A. Precast manufacturer and reinforcing steel detailer shall adequately cross reference the structural drawings to the satisfaction of the engineer.
    B. Precast manufacturer and reinforcing steel detailer shall develop all elevations and sections with pertinent elevations given, to clearly indicate the position of the reinforcement and construction joints, without reproducing sections, plans, or elevations from the design drawings.
5. Provide reinforcing steel conforming to ASTM A615, Grade 60.
6. Length of reinforcing bars, if shown, does not include hooks.
7. Reinforcing Bar Couplers shall develop 125% of the yield strength of the bar and conform to ACI 318. Submit product information and ICC-ES Evaluation Report.
8. Threaded dowel bar connections shall conform to ACI 318 and shall develop 125% of the yield strength of the bar in tension and compression. The mechanical connection shall be a forged and parallel threaded type coupler manufactured from ASTM A615 grade 60 deformed bar material, free of external welding and machining. All couplers shall be installed per the manufacturer's approved procedures. Submit product information and ICC-ES Evaluation Report.
9. Concrete properties:
    A. Precast grade beams shall attain a minimum compressive strength of 4000 psi within 28 days.
    B. Cast-in-place concrete shall attain a minimum compressive strength of 4000 psi within 28 days
10. Clear cover for cast-in-place concrete reinforcing: See schedule S0.1.
11. Reinforcement not shown on sections and plans is the same as that shown in similar sections and at similar locations.
12. Allow concrete to dry as required by floor finish/adhesive manufacturer before installing finishes. Test slab for moisture content and/or moisture vapor evaporation rates per ASTM E 1907 to verify adequate dryness in accordance with the flooring manufacturer's preparation requirements. Refer to ACI 302.1R and NRMCA CIP 28 for further discussion.
13. Contractor shall notify Owner's inspection agency before placement of concrete to allow for inspection of reinforcing placement, clearance, stud quantities on steel beams, and to confirm debris has been removed from forms.
14. Refer to special inspections table for testing requirements.
15. No field cutting for pipes or ducts permitted without prior approval or indicated on the shop drawings.
16. Connections of precast beams to helical piles are shown for design intent only. It is the contractor's responsibility to provide all connections & details.
17. Contractor shall provide design for grade beam to grade beam connections & details.

POST-INSTALLED ANCHORS

1. Drill and install post-installed anchors according to manufacturer's printed installation instructions.
2. All post-installed anchors shall meet ICC-ES Compliance for each type of application.
3. Submit product information and ICC-ES Evaluation Report for each anchor.
4. All anchor designs are for installation in the following conditions, unless noted otherwise. Written approval must be received from Engineer prior to installation of adhesive anchors in alternate conditions.
    A. Dry concrete, unless noted otherwise.
    B. Concrete temperature at time of installation must be between 14° F and 104° F. See manufacturer's printed installation instruction for adhesive gel and cure times.
    C. Anchor holes to be hammer drilled.
    D. Anchor holes to be cleaned per manufacturer's printed installation instructions prior to adhesive injection.
5. All installers of post-installed anchors shall be Hilti Certified. Submit certificates for record.
6. All post-installed anchors in concrete shall be suited for use in seismic and cracked concrete applications.
7. Adhesive anchors in concrete shall be Hilti HIT HY-200, or approved equal.
8. Adhesive anchors in masonry shall be Hilti HIT HY-70 with mesh sleeves, or approved equal.
9. Provide standard AISC holes in all steel members receiving post-installed anchors. If oversized holes are provided to ease installation of the anchors, a plate washer (1/4"x2"x2") with an AISC standard hole shall be installed and 1/8" fillet welded (all around) to the member.
10. Testing: 10% of each type and size of drilled-in anchor shall be proof loaded by the independent testing laboratory. Adhesive anchors and capsule anchors shall not be torque tested unless otherwise directed by the Engineer. If more than 10% of the tested anchors fail to achieve the specified torque or proof load within the limits as defined in the Drawings, all anchors of the same diameter and type as the failed anchors shall be tested, unless otherwise instructed by the Engineer.
    A. Perform tension testing in accordance with ASTM E488.
    B. Apply torque with a calibrated torque wrench.
    C. Apply proof loads with a calibrated hydraulic ram. Displacement of adhesive and capsule anchors at proof load shall not exceed D/10, where D is the nominal anchor diameter.

STRUCTURAL STEEL

1. Detail, fabricate, and erect structural steel in accordance with AISC 360 and AISC 303 "Code of Standard Practice".
2. Materials shall conform to the following:

ASTM A36	Bars, rods, angles, channels and plates
ASTM A325	High strength bolts
AWS A5.1 E70XX	Welding electrodes
ASTM A36	All other structural shapes

3. Connections:
    A. All bolts, nuts, washers and related hardware for exterior applications shall be mechanically galvanized according to ASTM B695, Class 50.
    B. Provide minimum weld sizes in accordance with AISC 360 Specification for Structural Steel Buildings.
    C. Electrodes shall be suited to grade and metallurgical composition of base metal.
    D. Use AWS certified welders for structural welding.
    E. Remove galvanizing from steel in the area of field welding. Repair abraded surfaces and coat weld with zinc-rich coating.
5. Steel framing shall be properly guyed, aligned and plumbed within AISC tolerances before proceeding with final connections.
6. Galvanize exterior exposed steel in accordance with ASTM A_123. Repair scratched or abraded galvanized surfaces with zinc-rich coating. After galvanizing, straighten members to meet AISC standard mill tolerances.
7. Galvanize all lintels, shelf angles, beams and plates (including their associated shims, bolts and accessories) in direct contact with the exterior wythe of masonry. Additional members/assemblies shall be galvanized where noted on the drawings.
8. Where plates, angles or other miscellaneous members require welding (either field or shop) or slip-critical connections, mask connection surfaces prior to shop priming and touch-up with primer after completing connection.

WOOD CONNECTORS AND FASTENING

1. All connectors for wood construction shall be galvanized steel as manufactured by Simpson Strong Tie or approved equal. Special nails as supplied by the manufacturer shall be used for connector installation.
2. Connectors shall be of type and size shown on details.
3. Fastening shall be in accordance with the most restrictive of the International Residential Code (Latest Edition), IBC fastening schedule Table 2304.9.1, and relevant manufacturer's requirements.
4. All nails shall meet the requirements of ASTM F1667. Wood screws shall meet the requirements of ANSI/ASME B18.6.1. Bolts and lag screws shall meet the requirements of ANSI/ASME B18.2.1.
5. Power-Driven Fasteners shall comply with NES NER-272.
6. Where rough carpentry is exposed to weather, in contact with ground, and/or preservative-treated, fasteners shall be stainless steel or hot-dip galvanized complying with ASTM A153; connectors shall be hot-dip galvanized complying with ASTM A653, G185 coating designation.
7. Install metal framing connectors to comply with manufacturer's guidelines.
8. Connectors in contact with preservative treated members shall be ASTM A653 G185 galvanized Fasteners shall match the selected hanger finish and material.
9. For wall and roof sheathing panels, provide fasteners with corrosion-protective coating having a salt-spray resistance of more than 800 hours according to ASTM B117.

SHORING/SCAFFOLDING

1. The contractor shall submit shoring/scaffolding shop drawings, prepared and sealed by a professional engineer licensed in the state of the project for the following:
    A. Earthwork sheeting and shoring.
2. Shoring and scaffolding shall comply with O.S.H.A. regulations.
3. The structural engineer of record (SER) will review shoring/scaffolding submittals only for loads transmitted to the building structure. Submittals shall clearly indicate the location and magnitude of all loads applied to the building or structure. The contractor is responsible for design and performance of the shoring/scaffold system.

DESIGN LOADS AND FACTORS

DESIGN CODE: VIRGINIA UNIFORM STATE WIDE BUILDING CODE 2009

DEAD + LIVE LOAD DATA		SNOW LOAD DATA		WIND LOAD DATA		EARTHQUAKE DESIGN DATA	
FLOOR OR ROOF AREA	LL (psf)	ROOF AREA	LOAD (psf)	FACTOR	VALUE	FACTOR	VALUE
GROUND FLOOR	60	GROUND SNOW LOAD (P_g)	25	BASIC WIND SPEED (V_{3S}) (MPH)	90	SEISMIC IMPORTANCE FACTOR (I_E)	1.0
ATTIC	60	FLAT ROOF ROOF SNOW LOAD (P_f)	20	WIND IMPORTANCE (I_W)	1.0	OCCUPANCY CATEGORY	II
STAIRS	60	DRIFT		OCCUPANCY CATEGORY	II	SPECTRAL RESPONSE ACCELERATION 0.2 SEC (S_S)	0.16
RAMP	60			WIND EXPOSURE	C	SPECTRAL RESPONSE ACCELERATION 1.0 SEC (S_1)	0.06
		FACTOR	VALUE	INTERNAL PRESSURE COEFFICIENT	±0.18	SITE CLASS	D
		SNOW EXPOSURE (C_e)	0.9			DESIGN SPECTRAL RESPONSE COEFFICIENT (S_{DS})	0.17
		SNOW LOAD IMPORTANCE (I_S)	1.0			DESIGN SPECTRAL RESPONSE COEFFICIENT (S_{D1})	0.096
		THERMAL FACTOR (C_t)	1.0			SEISMIC DESIGN CATEGORY	B
				COMPONENTS AND CLADDING WIND PRESSURE (PSF)	VARIES	ANALYSIS PROCEDURE - EQUIVALENT LATERAL FORCE	
						NORTH-SOUTH DIRECTION / EAST-WEST DIRECTION	
ALLOWABLE SOIL BEARING PRESSURE (psf)	2000					BASIC SEISMIC-FORCE-RESISTING SYSTEM	LIGHT-FRAMED WALLS
LATERAL SOIL LOAD (pcf)	60						Cs = 0.064 R = 2.5

* INDICATES LIVE LOAD IS REDUCIBLE

© 2015 KEAST & HOOD CO.

SYMBOLS:

- MOMENT CONNECTION (TYPE 1)
- MOMENT CONNECTION (TYPE 2)
- A — FLOOR/ROOF CONSTRUCTION & SPAN DIRECTION
- SPAN DIRECTION
- [#] ¾"Ø COMPOSITE BEAM SHEAR STUD QUANTITY (TOTAL PER BEAM DISTRIBUTED EVENLY ALONG LENGTH UNO)
- EMBEDDED PLATE CONNECTION (SEE SCHEDULE)
- BASE OF DISCONTINUOUS COLUMN
- TOP OF DISCONTINUOUS COLUMN
- P_ PIER MARK
- Ø DIAMETER
- L_ LINTEL (LOAD-BEARING)

STANDARD ABBREVIATIONS

ABV	Above	EQ	Equal	OSL	Outstanding Leg, Oriented Strand Lumber
ADDL	Additional	EQP	Equipment	OVS	Oversized-Hole
ADH	Adhesive	ES	Each Side	PAF	Powder Actuated Fastener
ADJ	Adjacent, Adjustment	EXCAV	Excavate/Excavation	PC	Precast Concrete, Piece
AESS	Architecturally Exposed Structural Steel	EXP	Expansion	PCF	Pounds per Cubic Foot
AFF	Above Finished Floor	EXT	Exterior	PED	Pedestal
AGG	Aggregate	EW	Each Way	PERP	Perpendicular
ALT	Alternate	F/	Face of	PREFAB	Prefabricate(d)
ANCH	Anchor	FAB	Fabricate	PL	Plate
APRX	Approximate	FDN	Foundation	PLF	Pounds per Lineal Foot
AR	Anchor Rod	FIN.	Finish(ed)	PLYWD	Plywood
ARCH	Architect(ural)	FL	Floor	PMF	Premolded Filler
BOT, B	Bottom	FLG	Flange	PROJ	Project(ion)
B/	Bottom of	FP	Fireproofing	PSF	Pounds per Square Foot
B-B	Back-to-Back	FRMG	Framing	PSI	Pounds per Square Inch
BAL	Balance	FRP	Fiber-Reinforced Polymer	PSL	Parallel Strand Lumber
BEL	Below	FS	Far Side	PT	Preservative-Treated, Post-Tensioned
BF	Braced Frame	FT	Feet	PVC	Polyvinyl Chloride
BLDG	Building	FTG	Footing	QTY	Quantity
BLK(G)	Block(ing)	FUT	Future	R	Radius
BM	Beam	GA	Gage	RCMU	Reinforced Concrete Masonry Unit
BP	Base Plate	GALV	Galvanize(d)	RD	Roof Drain
BR	Brace(ing)	GC	General Contractor	RDK	Roof Deck
BRDG	Bridging	GR	Grade	REF	Reference
BRG	Bearing	GYP	Gypsum	REINF	Reinforce(d)/ Reinforcement
BRK	Brick	HDR	Header	REQ(D)	Require(d)
BRKT	Bracket	HEF	Horizontal Each Face	RET	Retaining
BS	Both Sides	HGR	Hanger	REV	Revise(d)/Revision
BSMT	Basement	HI.	High	RO	Rough Opening
BT	Bent	HIF	Horizontal Inside Face	RQMT(S)	Requirement(s)
BTWN	Between	HK	Hook(ed)	RXN	Reaction
BYD	Beyond	HOF	Horizontal Outside Face	SC	Slip-Critical (connection)
CAIS	Caisson	HORIZ	Horizontal	SCHED	Schedule
CANT.	Cantilever	HP	High Point	SECT	Section
CAP.	Capacity	HSB	High Strength Bolt	SF	Square Foot
C-C	Center-to-Center	HT	Height	SHRG	Shoring
CE	Concrete Encased	H&V	Horizontal & Vertical	SHTHG	Sheathing
CHAM	Chamfer	HVAC	Heating, Ventilating, & Air Conditioning	SIM	Similar
CI	Cast Iron	I.D.	Inside Diameter	SL	Slope(d)
CIP	Cast In Place	I.F.	Inside Face	SLBB	Short Legs Back to Back
CJ	Control/Contraction Joint	INFO	Information	SLV	Sleeve
CL	Centerline	INSTL	Install/Installation	SOD	Slab On Deck
CLG	Ceiling	INSUL	Insulation	SOG	Slab On Grade
CLR	Clear	INT	Interior	SPA	Space(s)/Spacing
CM	Construction Manager	JST(S)	Joist(s)	SPEC(S)	Specification(s)
CMU	Concrete Masonry Unit	JT	Joint	SQ	Square
COL	Column	k	Kip (thousand pounds)	SS	Stainless Steel
COMB.	Combined	KB	Knee Brace	SSL	Short-Slotted Hole
COMP	Composite	LB, #	Pound	STD	Standard
CONC	Concrete	LDGR	Ledger (board)	STIFF	Stiffener
COND	Condition	LEN	Length	STIR.	Stirrup
CONN	Connection	LG	Long	STL	Steel
CONST	Construction	LL	Live Load	STRUC	Structural
CONT	Continuous	LLBB	Long Legs Back to Back	SUPT	Support
CONTR	Contractor	LLH	Long-Leg Horizontal	SW	Short Way
COORD	Coordinate	LLV	Long-Leg Vertical	SYM	Symmetrical
COV	Cover	LOCN	Location	T	Top
CP	Cap Plate	LONGIT	Longitudinal	T/	Top of
CSK	Countersunk	LP	Low Point	T&B	Top and Bottom
CTR	Center(ed)	LSL	Long-Slotted Hole, Laminated Strand Lumber	TC	Terra Cotta
CY	Cubic Yard	LVL	Laminated Veneer Lumber	TEMP	Temporary, Temperature
DBL	Double	LW	Long Way	T&G	Tongue and Groove
DEMO	Demolition/Demolish	LWC	Light Weight Concrete	THD	Thread(ed)
DEPR	Depress(ed)/Depression	M	Moment	THK	Thick(ness)
DET(S)	Detail(s)	MAS	Masonry	TYP	Typical
DEV	Develop/Development	MATL	Material	UNO	Unless Noted Otherwise
DIA, Ø	Diameter	MAX	Maximum	U-P	Underpinning
DIAG	Diagonal	MECH	Mechanical	V	Shear
DIM(S).	Dimension(s)	MFR	Manufacturer	VAR	Varies
DIR	Direction	MIN	Minimum	VB	Vapor Barrier
DK	Deck	MISC	Miscellaneous	VEF	Vertical Each Face
DL	Dead Load	MO	Masonry Opening	VERT	Vertical
DN	Down	MONO	Monolithic	VIF	Vertical Inside Face, Verify In Field
do.	Ditto	MTL	Metal	VOF	Vertical Outside Face
DP	Deep	NIC	Not In Contract	VR	Vapor Retarder
DWG(S)	Drawing(s)	NO.	Number	w/	With
DWL	Dowel	NOM	Nominal	w/o	Without
(E)	Existing	NS	Near Side	WD	Wood
EA	Each	NTS	Not To Scale	WI	Wrought Iron
EF	Each Face	NWC	Normal Weight Concrete	WP	Work Point, Waterproofing
EJ	Expansion Joint	OC	On Centers	WT	Weight
EL	Elevation	OD	Outside Diameter	WWF	Welded Wire Fabric
ELEC	Electrical	O.F.	Outside Face	XS	Extra Strong
ELEV	Elevator	O-O	Out-to-Out	XXS	Double Extra Strong
EMBED	Embedment/Embedded	OPG	Opening	±	Exist Dim or El (VIF)
ENGR	Engineer	OPP	Opposite		
EOD	Edge Of Deck	OSB	Oriented Strand Board		
EOS	Edge Of Slab				

STRUCTURAL DRAWING LIST

SHEET NO.	DRAWING TITLE
S0.0	GENERAL NOTES & ABBREVIATIONS
S0.1	SPECIAL INSPECTIONS & SCHEDULES
S1.0	HELICAL PILE & FOUNDATION PLAN
S2.0	SECTIONS & DETAILS

COMMONWEALTH OF VIRGINIA
MATTHEW JOEL DAW
No. 0402 041026
PROFESSIONAL ENGINEER

KEAST & HOOD
STRUCTURAL ENGINEERS
Philadelphia | Washington
1330 Connecticut Avenue NW, Suite 412 | Washington, DC 20036
(202) 223-1941 | keasthood.com

MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY ALBANY NY 12207
p. (518)433-9394 f. (518)433-9897
5525 OLDE TOWNE RD. SUITE D WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

GENERAL NOTES & ABBREVIATIONS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	
COMMISSION NO.	0726
DRAWN BY	
DATE	03-18-15
REVISED	-

DRAWING NO.
S0.0

SPECIAL INSPECTIONS PROGRAM - CONCRETE & PRECAST CONCRETE

VERIFICATION AND INSPECTION		CONTINUOUS	PERIODIC	2009 IBC REFERENCE SECTION	REFERENCE STANDARD	COMMENTS
GENERAL	INSPECTION OF FABRICATORS		X	1704.2		SEE NOTE 2.
INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, & PLACEMENT			X	1913.4	ACI 318: 3.5, 7.1-7.7	
INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE w/ REQUIREMENTS IN THE SPECIAL INSPECTIONS PROGRAM - STEEL.					AWS D1.4 ACI 318: 3.5.2	
INSPECTION OF BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO & DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED		X		1911.5, 1912.1	ACI 318: 8.1.3, 21.1.8	
INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE			X	1912.1	ACI 318: 3.8.6, 8.1.3, 21.1.8	
VERIFYING USE OF REQUIRED DESIGN MIX			X	1904.2.2, 1913.2, 1913.3	ACI 318: Ch. 4, 5.2-5.4	
AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE		X		1913.10	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	
INSPECTION OF CONCRETE & SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES		X		1913.6, 1913.7, 1913.8	ACI 318: 5.9, 5.10	
INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE & TECHNIQUES			X	1913.9	ACI 318: 5.11-5.13	
ERECTION OF PRECAST CONCRETE MEMBERS			X		ACI 318: Ch. 16	
INSPECT FORMWORK FOR SHAPE, LOCATION & DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED			X		ACI 318: 6.1.1	

SPECIAL INSPECTIONS PROGRAM - DRIVEN DEEP FOUNDATIONS

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	2009 IBC REFERENCE SECTION	REFERENCE STANDARD	COMMENTS
VERIFY ELEMENT MATERIALS, SIZES AND LENGTHS COMPLY WITH THE REQUIREMENTS	X		1704.8		OBTAIN APPROVED GEOTECH REPORT IF APPLICABLE
DETERMINE CAPACITIES OF TEST ELEMENTS AND CONDUCT ADDITIONAL LOAD TESTS, AS REQUIRED	X				
OBSERVE DRIVING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT	X				
VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM TYPE AND SIZE OF HAMMER, RECORD NUMBER OF BLOWS PER FOOT OF PENETRATION, DETERMINE REQUIRED PENETRATIONS TO ACHIEVE DESIGN CAPACITY, RECORD TIP AND BUTT ELEVATIONS AND DOCUMENT ANY DAMAGE TO FOUNDATION ELEMENT	X				
FOR STEEL ELEMENTS PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1704.3					
FOR SPECIALTY ELEMENTS, PERFORM ADDITIONAL INSPECTIONS AS INDICATED IN THE APPROVED CONSTRUCTION DOCUMENTS					

SPECIAL INSPECTIONS PROGRAM - WOOD

VERIFICATION AND INSPECTION		CONTINUOUS	PERIODIC	2009 IBC REFERENCE SECTION	REFERENCE STANDARD	COMMENTS
MAIN LATERAL FORCE-RESISTING SYSTEM	VERIFY NAILING, BOLTING, ANCHORING, AND OTHER FASTENING OF COMPONENTS INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG STRUTS, BRACES, AND HOLD-DOWNS		X	1706.2, 1707.3		

STRUCTURAL TESTING & INSPECTION PROGRAM NOTES:

1. THE INTENTION OF THIS TABLE IS TO IDENTIFY THE CONSTRUCTION REQUIRING SPECIAL INSPECTION AS REQUIRED BY THE 2009 VIRGINIA UNIFORM STATEWIDE BUILDING CODE (VUSBC). EACH SPECIAL INSPECTOR IS RESPONSIBLE FOR JOB SPECIFIC ITEMS AS DEFINED IN CHAPTER 17 OF THE IBC (AND IN ACCORDANCE WITH THE SPECIFICATIONS).
2. INSPECTIONS OF FABRICATORS IS NOT REQUIRED IF THE FABRICATOR IS APPROVED IN ACCORDANCE TO IBC SECTION 1704.2.2 AND CERTIFIES COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.
3. THE ITEMS CHECKED WITH AN "X" SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE MATERIAL SAMPLING AND TESTING SECTION OF THE PROJECT SPECIFICATIONS AND THE GENERAL NOTES. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ENGINEER, CONTRACTOR AND BUILDING OFFICIAL. ANY CONSTRUCTION WHICH FAILS TO MEET THE PROJECT SPECIFICATIONS AND IBC REQUIREMENTS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION AND THE ENGINEER IF UNCORRECTED. SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
4. CONTINUOUS SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR SHALL BE ON SITE AT ALL TIMES OBSERVING THE WORK REQUIRING SPECIAL INSPECTION. PERIODIC SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON THE SITE AT THE TIME INTERVALS NECESSARY TO CONFIRM THAT ALL WORK REQUIRING SPECIAL INSPECTIONS IS IN COMPLIANCE.
5. ALL WELDS SHALL BE VISUALLY INSPECTED BY AN AWS CERTIFIED WELDING INSPECTOR.

REINFORCING DEVELOPMENT LENGTHS (INCHES)

BEAMS, FOOTINGS, + SLABS ≤ 13" DEEP AND VERTICAL BARS IN WALLS

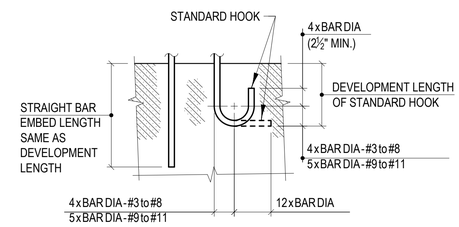
BAR SIZE	CONDITION	3000 psi CONCRETE	3500 psi CONCRETE	4000 psi CONCRETE	5000 psi CONCRETE
#3	DEV. LENGTH	17	16	15	13
	CLASS B SPLICE	22	20	19	17
#4	DEV. LENGTH	22	21	19	17
	CLASS B SPLICE	29	27	25	22
#5	DEV. LENGTH	28	26	24	22
	CLASS B SPLICE	36	33	31	28
#6	DEV. LENGTH	33	31	29	26
	CLASS B SPLICE	43	40	37	33
#7	DEV. LENGTH	48	45	42	37
	CLASS B SPLICE	63	58	54	49
#8	DEV. LENGTH	55	51	48	43
	CLASS B SPLICE	72	66	62	55
#9	DEV. LENGTH	62	57	54	48
	CLASS B SPLICE	81	74	70	63
#10	DEV. LENGTH	70	64	61	54
	CLASS B SPLICE	91	84	79	70
#11	DEV. LENGTH	78	72	67	60
	CLASS B SPLICE	101	93	87	78

BEAMS, FOOTINGS, + SLABS > 13" DEEP AND HORIZONTAL BARS IN WALLS

BAR SIZE	CONDITION	3000 psi CONCRETE		3500 psi CONCRETE		4000 psi CONCRETE		5000 psi CONCRETE	
		TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
#3	DEV. LENGTH	22	17	20	16	19	15	17	13
	CLASS B SPLICE	28	22	26	20	24	19	22	17
#4	DEV. LENGTH	29	22	27	21	25	19	22	17
	CLASS B SPLICE	37	29	35	27	32	25	29	22
#5	DEV. LENGTH	36	28	33	26	31	24	28	22
	CLASS B SPLICE	47	36	43	33	40	31	36	28
#6	DEV. LENGTH	43	33	40	31	37	29	33	25
	CLASS B SPLICE	56	43	52	40	48	37	43	33
#7	DEV. LENGTH	63	48	58	45	54	42	49	37
	CLASS B SPLICE	81	63	75	58	70	54	63	49
#8	DEV. LENGTH	72	55	66	51	62	47	55	42
	CLASS B SPLICE	93	72	86	66	80	62	72	55
#9	DEV. LENGTH	81	62	74	57	70	54	63	48
	CLASS B SPLICE	105	81	97	74	91	70	81	63
#10	DEV. LENGTH	91	70	84	64	79	60	70	54
	CLASS B SPLICE	118	91	109	84	102	79	91	70
#11	DEV. LENGTH	101	77	93	72	87	67	78	60
	CLASS B SPLICE	131	101	121	93	113	87	101	78

DEVELOPMENT LENGTH NOTES:

1. SCHEDULE IS BASED ON GRADE 60, UNCOATED REINFORCING IN NORMAL WEIGHT CONCRETE.
2. CONCRETE STRENGTH INDICATED IS 28-DAY COMPRESSIVE STRENGTH.
3. ALL LAP SPLICES SHALL BE CLASS B, UNLESS NOTED OTHERWISE.
4. CLASS A SPLICE IS THE SAME AS DEVELOPMENT LENGTH.
5. WHEN BARS OF DIFFERENT SIZE ARE SPLICED, SPLICE LENGTH SHALL BE THE LARGER OF EITHER DEVELOPMENT LENGTH OF THE LARGER BAR OR SPLICE LENGTH OF THE SMALLER BAR.
6. FOR HOOKED DOWELS IN FOOTINGS MEETING REQUIREMENTS OF ACI 318 12.5.3.a, THE HOOK LENGTH CAN BE 0.7 x TABLE VALUE.
7. TOP BAR DESIGNATES HORIZONTAL BAR PLACED SUCH THAT MORE THAN 12" OF FRESH CONCRETE IS CAST BELOW THE BAR.



DEVELOPMENT LENGTH OF STANDARD HOOK

BAR SIZE	CONCRETE STRENGTH			
	3000 psi	3500 psi	4000 psi	5000 psi
#3	9	8	7	7
#4	11	11	10	9
#5	14	13	12	11
#6	17	16	15	13
#7	20	18	17	15
#8	22	21	19	17
#9	25	23	22	19
#10	28	26	24	22
#11	31	29	27	24

CAST-IN-PLACE CONCRETE CLEAR COVER FOR REINFORCING

TYPE	COVER
Footings	3"
Walls:	
Interior face	¾"
Face permanently exposed to earth or weather	2"
Exterior Slab	1½"
Interior Slab	¾"
Interior Beams & Columns	1½"

COMMONWEALTH OF VIRGINIA
MATTHEW JOEL DAW
No. 0402 041026
PROFESSIONAL ENGINEER

KEAST & HOOD
STRUCTURAL ENGINEERS
Philadelphia | Washington
1330 Connecticut Avenue NW, Suite 412 | Washington, DC 20036
(202) 223-1941 | keasthood.com

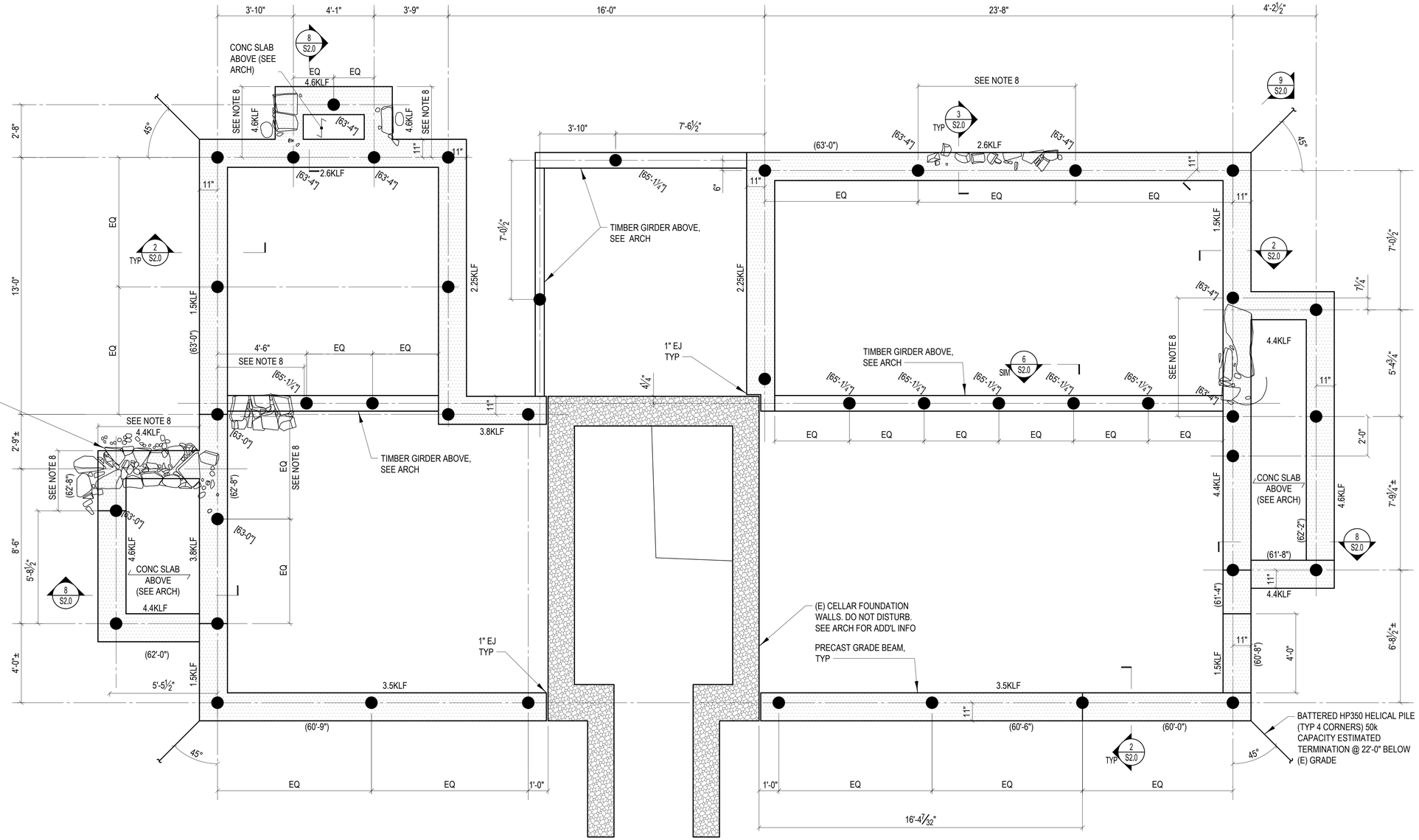
MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY ALBANY NY 12207
p. (518)463-9394 f. (518)463-9897
5525 OLDE TOWNE RD. SUITE D WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

SPECIAL INSPECTIONS & SCHEDULES

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE
COMMISSION NO. 0726
DRAWN BY
DATE 03-18-15
REVISED -

DRAWING NO.
S0.1



1 / S1.0 **PLAN** - HELICAL PILE & FOUNDATION PLAN

2' 1' 0 3' 6'

SCALE AT FULL SIZE 3/8"=1'-0"

PLAN NOTES:

1. ELEVATIONS SHOWN (XX'-XX") REFER TO BOTTOM OF GRADE BEAM.
2. ● INDICATES FOUNDATION SUPPORTWORKS HP288 HELICAL PILE ESTIMATED TERMINATION @ 17'-6" BELOW EXISTING GRADE, UNLESS NOTED OTHERWISE, SEE DETAIL 1/S2.0 FOR ADD'L INFO.
3. CENTER PILES ON GRIDS UNLESS NOTED OTHERWISE
4. VERIFY HELICAL PILES DO NOT CONFLICT w/ (E) FOUNDATION
5. T/ HELICAL PILE ELEVATION TO MATCH B/ GRADE BEAM ELEVATION OF LOWEST ADJACENT GRADE BEAM UNLESS NOTED THUS [xx'-xx"]
6. X.XXKLF INDICATES LINE LOAD APPLIED TO PRECAST GRADE BEAMS EXCLUDING THE SELF-WEIGHT OF THE GRADE BEAM. SEE GENERAL NOTES SHEET S0.0 FOR MAXIMUM REACTION AT HELICAL PILE.
7. SEE DETAILS 4, 5 AND 7/S2.0 FOR TYPICAL PRECAST BEAM DETAILS.
8. GRADE BEAMS SPANNING ARCHAEOLOGICAL REMAINS SHALL HAVE PROFILE SHOWN IN DETAIL 3/S2.0. DETAIL 3/S2.0 TO APPLY AT A MINIMUM TO THE AREAS INDICATED.

COMMONWEALTH OF VIRGINIA
MATTHEW JOEL DAW
No. 0402 041026
PROFESSIONAL ENGINEER

KEAST & HOOD
STRUCTURAL ENGINEERS
Philadelphia | Washington
1330 Connecticut Avenue NW, Suite 412 | Washington, DC 20036
(202) 223-1941 | keasthood.com

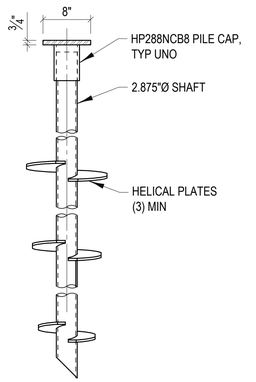
MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY, ALBANY, NY 12207
p: (518)436-0394 f: (518)432-8307
5525 OLDE TOWNE RD, SUITE D, WILLIAMSBURG, VA 23188
p: (757)221-0719 f: (757)221-0714

HELICAL PILE & FOUNDATION PLAN

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

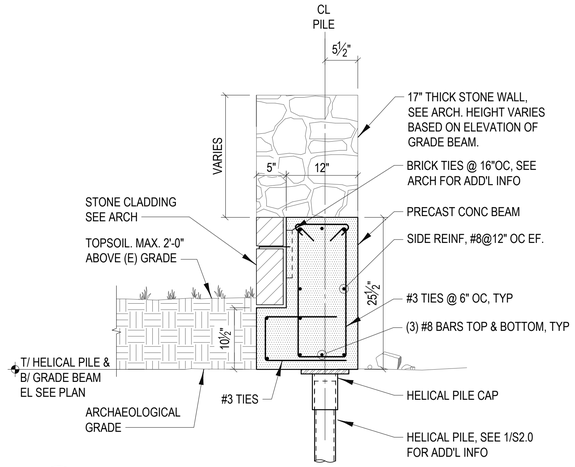
SCALE	
COMMISSION NO.	0726
DRAWN BY	
DATE	03-18-15
REVISED	-

DRAWING NO.
S1.0



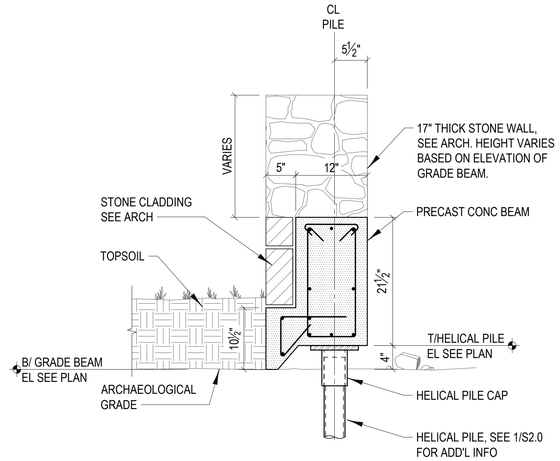
1 S2.0 **DETAIL** - TYPICAL HELICAL PILE

1' 0 1' 2'
SCALE AT FULL SIZE 1"=1'-0"



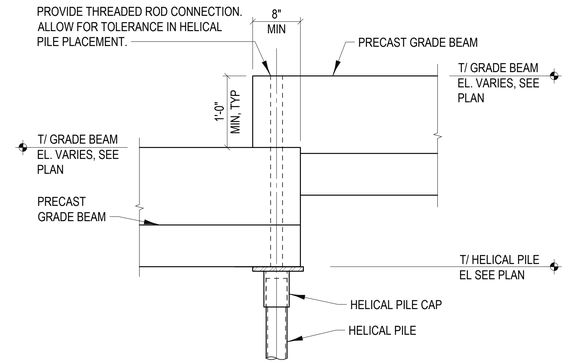
2 S2.0 **SECTION** - BEAM SECTION AT EXTERIOR WALL
NTS

NOTE:
SEE DETAIL 3/S2.0 FOR GRADE BEAM PROFILE AT (E) REMAINS OF HISTORIC FOUNDATION. SEE PLAN FOR LOCATIONS.

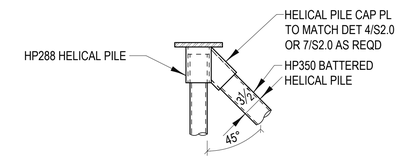


3 S2.0 **SECTION** - BEAM SECTION AT EXTERIOR WALL
NTS

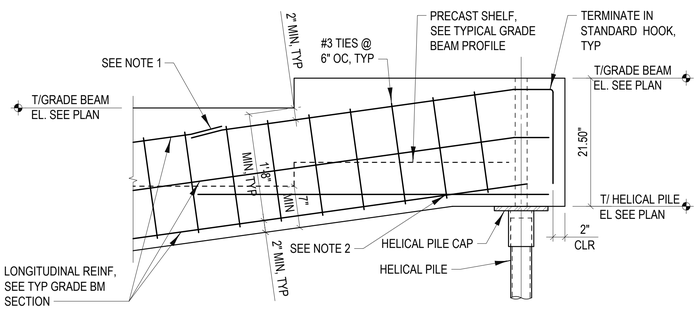
NOTE:
SEE DETAIL 2/S2.0 FOR REINF AND ADDL INFO.



4 S2.0 **DETAIL** - GRADE BEAM STEP AT PILE
NTS

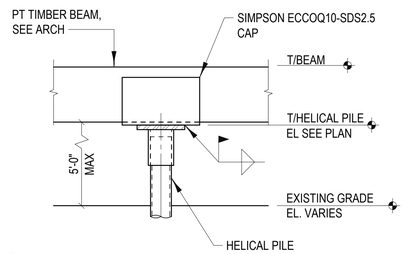


9 S2.0 **DETAIL** - TYPICAL BATTERED PILE
NTS



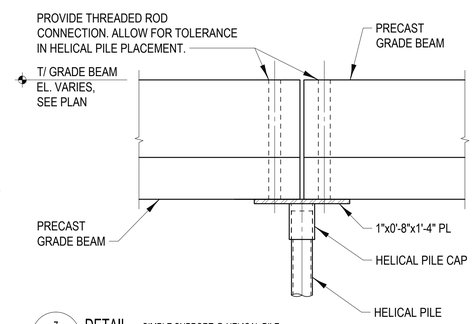
5 S2.0 **DETAIL** - GRADE BEAM STEP IN SPAN
NTS

NOTES:
1. SPLICE OF CONT. TOP REINF SHALL OCCUR AT OR NEAR MIDSPAN AND SHALL BE 6" TYPICAL.
2. SPLICE OF CONT. BOT REINF SHALL OCCUR NEAR THE SUPPORT AND SHALL BE A CLASS B TENSION SPLICE.

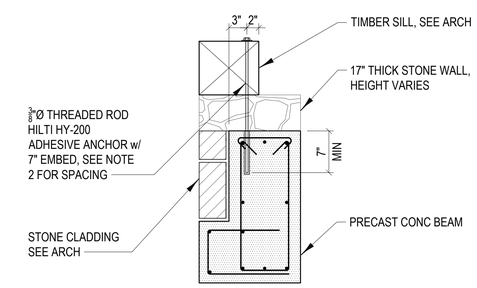


6 S2.0 **DETAIL** - TYPICAL HELICAL PILE AT TIMBER BEAM

1' 0 1' 2'
SCALE AT FULL SIZE 1"=1'-0"

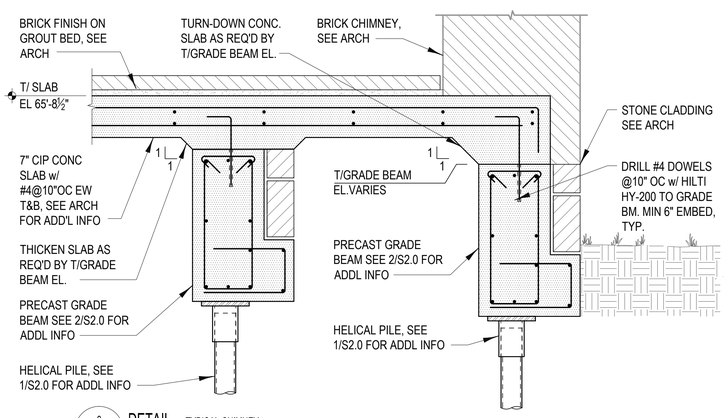


7 S2.0 **DETAIL** - SIMPLE SUPPORT @ HELICAL PILE
NTS



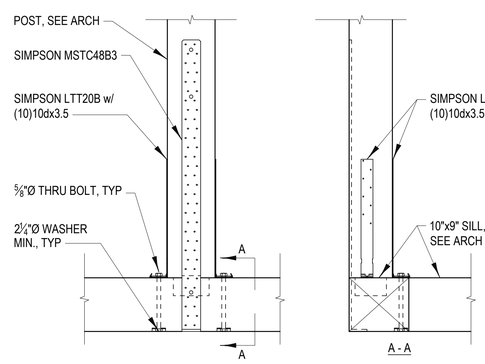
10 S2.0 **SECTION** - SILL ANCHORAGE
NTS

NOTE:
1. SEE DETAILS 1 AND 2/ S2.0 FOR ADDITIONAL INFORMATION.
2. PROVIDE ANCHOR ROD AT 4'-0" OC, TYPICAL. PROVIDE (3) ANCHORS AT 12" OC AT TIMBER POST AND BRACE LOCATIONS.



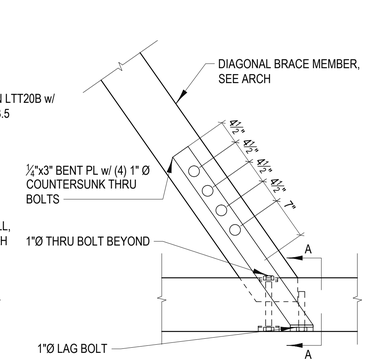
8 S2.0 **DETAIL** - TYPICAL CHIMNEY
NTS

NOTE:
1. AT SECOND FLOOR CONCRETE HEARTHS, PROVIDE #4 DOWELS @10" OC w/ HILTI HY-70 TO MULTI-WYTH BRICK WALLS, MINIMUM 6" EMBED.

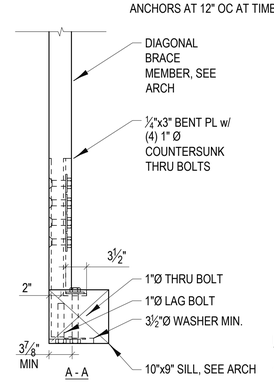


11 S2.0 **SECTION** - POST ANCHORAGE
NTS

NOTE:
1. MINIMUM (4) STRAPS PER POST.
2. PROVIDE SIMPSON MSTC48B3 AT ALL LOCATIONS WHERE FACE OF POST ALIGNS WITH FACE OF SILL.
3. EXTERIOR EDGE OF SIMPSON LTT20B SHALL ALIGN WITH INTERIOR FACE OF WALL.



12 S2.0 **SECTION** - BRACE ANCHORAGE
NTS



DRAWING NOTES:

1. PRECAST CONTRACTOR SHALL BE RESPONSIBLE FOR THE FOLLOWING:
   A. HELICAL PILE TO GRADE BEAM CONNECTIONS.
   B. GRADE BEAM TO GRADE BEAM CONNECTIONS.
2. CONNECTIONS OF PRECAST GRADE BEAMS TO HELICAL PILES SHALL BE DESIGNED FOR A SHEAR LOAD OF 5k IN ANY DIRECTION UNLESS NOTED OTHERWISE.

COMMONWEALTH OF VIRGINIA
MATTHEW JOEL DAW
No. 0402 041026
PROFESSIONAL ENGINEER

KEAST & HOOD
STRUCTURAL ENGINEERS
Philadelphia | Washington
1330 Connecticut Avenue NW, Suite 412 | Washington, DC 20036
(202) 223-1941 | keasthood.com

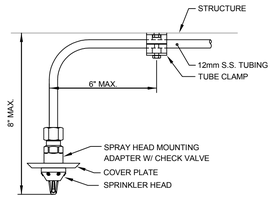
MESICK·COHEN·WILSON·BAKER·ARCHITECTS
388 BROADWAY ALBANY, NY 12207
p. (518)463-9394 f. (518)463-9897
5525 OLDE TOWNE RD., SUITE D WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

SECTIONS & DETAILS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

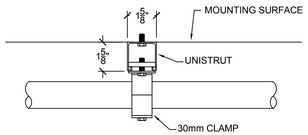
SCALE	
COMMISSION NO. 0726	
DRAWN BY	
DATE 03-18-15	
REVISED -	

DRAWING NO.
S2.0



PENDANT MOUNTING SPRINKLER HEAD DETAIL

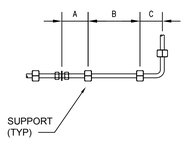
NO SCALE



APPLIES IN CRAWL SPACE AND ATTIC MINIMUM

TUBE CLAMPING WITH UNISTRUT DETAIL

NO SCALE



TUBE CLAMP SPACING			
TUBE O.D.	A	B	C
12	4"	4'-0"	8"
16	4"	5'-0"	8"
25	4"	6'-0"	8"
30	6"	7'-0"	12"
38			

MAXIMUM BENDING RADIUS		
PIPE DIAMETER	USAGE	BENDING RADIUS
12mm	BRANCH	30mm
16mm	DISTRIBUTION	40mm
20mm	MAIN DISTRIBUTION	63mm
30mm	MAIN RISER	75mm
38mm	MAIN RISER	95mm

CLAMP SPACING AND TUBE BENDING MATRIX

NO SCALE

FIRE PROTECTION LEGEND

FP – M	FIRE MIST PIPING
FP – M	FIRE MIST PIPING BELOW SLAB
NIT	NITROGEN PIPING
DCW	DOMESTIC COLD WATER PIPING
SAN	SANITARY PIPING
	SIDEWALL SPRINKLER 57°C
	PENDENT SPRINKLER 57°C
	UPRIGHT SPRINKLER 93°C
	SHUT-OFF VALVE

THE DWELLING OCCUPANCY IS CLASSIFIED A3 WITH LESS THAN FIFTY (50) PEOPLE.

PLUMBING SPECIFICATIONS:

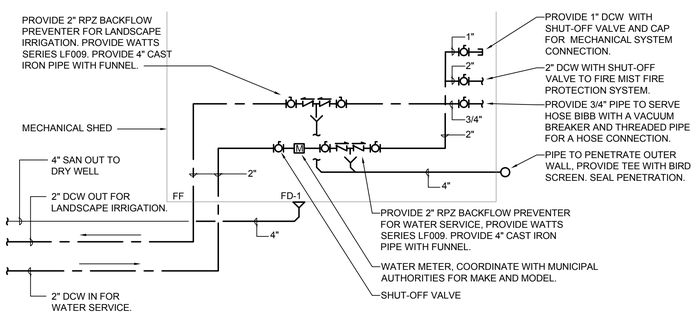
1. ALL WORK SHALL BE IN ACCORDANCE WITH VIRGINIA UNIFORM STATE BUILDING CODE (VUSBC), VIRGINIA STATE ENERGY CODE, 2012 VSUBC, 2012 IPC, 2012 IECC AND VIRGINIA DEPARTMENT OF HEALTH REGULATIONS.
2. ALL VALVES, AND PIPING SHALL BE LABELED AS FOLLOWS:
   A. ALL VALVES TAGS SHALL BE BRASS WITH INTERLOCKING CHAIN.
   B. ALL INSULATED AND NON-INSULATED PIPING RUNNING EXPOSED OR ABOVE ACCESS DOORS SHALL HAVE WRAP-AROUND PIPE LABELS AND FLOW ARROWS AT A MAXIMUM OF 20' ON CENTER.
3. ALL DOMESTIC HOT AND COLD PIPING SHALL BE INSULATED WITH 1" THICK PRE-SIZED FIBERGLASS INSULATION WITH KRAFT AL-SERVICE SCRIM AND SELF ADHESIVE LAPS AT JOINTS. PROVIDE INSERT AND PVC COVERS FOR FITTINGS
4. ALL PIPING SHALL BE CONSTRUCTED OF THE FOLLOWING MATERIALS:

SERVICE	MATERIALS	FITTINGS
DOMESTIC COLD	TYPE L COPPER	SWEAT
ABOVE SLAB SANITARY AND VENT	CAST IRON FOAM CORE PVC COPPER DWV	HUBLESS SOCKET/CEMENT SOLDER
BELOW SLAB SANITARY	CAST IRON FOAM CORE PVC	HUB AND SPIGOT SOCKET/CEMENT

5. NO PIPING SHALL BE ROUTED OVER ELECTRICAL EQUIPMENT AREAS AND TELECOMMUNICATIONS ROOMS.
6. PROVIDE 6 HARD COPIES OF SUBMITTALS FOR ALL COMPONENTS TO BE USED ON PROJECT INCLUDING PIPING, INSULATION, HANGERS, VALVES AND FIXTURES. DO NOT PROCEED WITH INSTALLATION UNTIL SUBMITTALS HAVE BEEN APPROVED.
7. NEATLY MARK ONE COPY OF DRAWINGS AS AN AS-BUILT SET. NOTE ALL DISCREPANCIES FROM PLAN INCLUDING EXISTING DISCREPANCIES. TURN AS-BUILT SET OVER TO OWNER AT END OF PROJECT.
8. ALL HOT AND COLD WATER PIPING SHALL BE TYPE "L" COPPER WITH SOLDER JOINTS PER ASTM B-88 WITH 95/5 TIN ANTIMONY OR OF OTHER APPROVED LEAD FREE SOLDER FITTINGS. ALL DOMESTIC WATER PIPING INSULATION SHALL BE 1" THICK FIBERGLASS INSULATION WITH ASJ JACKET, TAPED JOINTS AND SELF ADHESIVE LAPS AT SEAMS. PROVIDE INSERTS AND PVC COVERS FOR ELBOWS.
9. VALVES - PROVIDE TWO PIECE, REGULAR PORT, BRONZE BALL VALVES WITH STAINLESS STEEL TRIM, NIBCO MODEL S-585-66-LF OR EQUAL.
10. HANGERS - SUPPORT FROM BEAMS OR JOISTS. PROVIDE HANGERS, THREADED RODS AND CLAMPS SUITABLE TO PROPERLY SUPPORT EQUIPMENT IN ACCORDANCE WITH MSS SP-69 AND MSS 89. PROVIDE COPPER HANGERS FOR COPPER PIPE.
11. TEST NEW SANITARY AND VENT PIPING TO 10' OF HEAD WITH NO VISIBLE DROP IN WATER LEVEL FOR 15 MINUTES. REPAIR OR REPLACE ANY PIPING THAT FAILS TEST.
12. ALL PIPING SYSTEMS SHALL BE HYDROSTATICALLY TESTED AFTER INSTALLATION. THE TEST PRESSURE SHALL BE 200 PSI OR 1-1/2 TIMES THE WORKING PRESSURE, WHICHEVER IS GREATER. COMPONENTS THAT ARE NOT SUITABLE FOR A 200 PSI TEST MAY BE TESTED AT A LOWER PRESSURE THEN VALVED OFF FOR THE 200 PSI TEST. TEST DURATION SHALL BE AT LEAST 2 HOURS.
13. IN ACCORDANCE WITH IPC-610 AND VIRGINIA DEPARTMENT OF HEALTH REGULATIONS, CLEAN AND FLUSH NEW AND MODIFIED PORTIONS OF DOMESTIC SYSTEM WITH CLEAN POTABLE WATER. FILL SYSTEM WITH SOLUTION OF 200 PPM OF CHLORINE. ALLOW TO STAND FOR 4 HOURS. FLUSH SYSTEM UNTIL NO CHLORINE IS PRESENT.

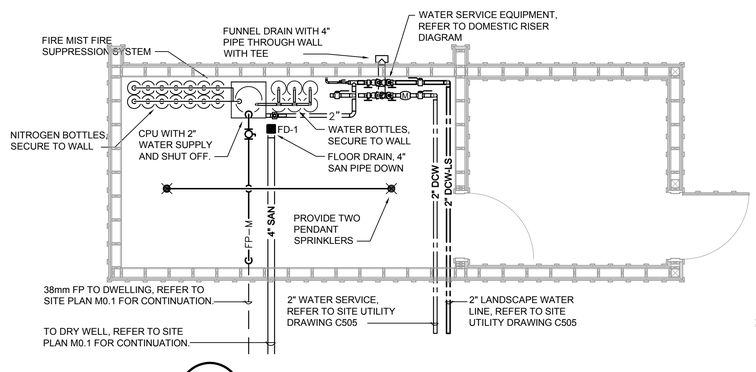
FIRE PROTECTION DRAWING NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH VIRGINIA STATEWIDE BUILDING CODE 2012 EDITION (VSUBC) , AND ALL APPLICABLE REFERENCED STANDARDS.
2. THERE SHALL BE NO VALVES OR OTHER EQUIPMENT INSTALLED ABOVE INACCESSIBLE CEILINGS.
3. ALL WORK SHALL BE IN ACCORDANCE WITH NFPA STANDARD 750 (2010) FOR THE INSTALLATION OF WATER MIST SYSTEMS SYSTEMS. SUBJECT TO REVIEW BY THE ENGINEER AND AUTHORITY HAVING JURISDICTION.
4. ALL INDOOR AREAS SHALL BE CLASSIFIED LIGHT HAZARD. THE ATTIC SHALL BE CLASSIFIED ORDINARY HAZARD (GROUP 1).
5. ALL PIPING SHALL BE CONSTRUCTED OF THE FOLLOWING MATERIALS, PIPING TO BE ANSI 304 OR 316 STAINLESS STEEL CONFORMING TO DIN 17457. FITTINGS SHALL BE OF THE ISO FLARELESS DESIGN AND SHALL COMPLY WITH DIN 3861.
6. PROVIDE AUXILIARY DRAINS AS NECESSARY IN ACCORDANCE WITH NFPA 13 TO DRAIN LOW PORTIONS OF THE SPRINKLER SYSTEM. LOCATIONS SHALL BE IN AN INCONSPICUOUS AREA AND BE PRE-APPROVED BY THE ARCHITECT OR ENGINEER BEFORE ANY PIPING IS INSTALLED.
7. PROVIDE AS-BUILT DRAWINGS DEPICTING THE INSTALLATION OF ALL NEW PIPING AND SPRINKLER HEADS.
8. ALL MIST SPRINKLER HEADS SHALL BE INDIVIDUALLY ACTUATED THERMAL NOZZLES WITH ORDINARY TEMPERATURE 57°-93°C RATING. INDOOR SPRINKLER HEAD SHALL HAVE TEMPERATURE RATING OF 57°C AND THE ATTIC SHALL BE 97°C.
9. ALL PIPING PENETRATIONS THROUGH FULL HEIGHT WALLS SHALL BE FIRE SAFED REGARDLESS OF WHETHER THE WALL IS DESIGNATED AS FIRE RATED OR NOT. SILICONE BASED FIRE CAULKS FOR 1-HOUR RATED WALLS SHALL BE USED IN ALL CASES UNLESS OTHERWISE NOTED.
10. SHUT OFF VALVES SHALL CONFORM TO NFPA #750 AND THE MANUFACTURER'S LISTING. VALVES SHALL BE CAPABLE OF BEING LOCKED IN THE OPEN POSITION TO PREVENT UNAUTHORIZED CLOSURE. THE TAMPER SWITCH SUPERVISORY ALARMS OF THE MIST SYSTEM SHALL BE INTERFACED TO THE FIRE ALARM SYSTEM. ALL VALVES SHALL BE ELECTRONICALLY SUPERVISED TO INDICATE NORMAL AND CLOSED (SUPERVISORY) CONDITION. ALL ALARM SYSTEM WIRING SHALL BE AS PER NFPA 72.
11. COORDINATE THE EXACT SPRINKLER PIPING AND HEAD LOCATION WITH ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL COMPONENTS.
12. PRODUCTS AND DESIGNS BY MARIOFF (HI-FOG) OR (ULTRA FOG) OR ACCEPTABLE. THE BASIS OF DESIGN IS A MARIOFF GPU6 WF+7+7NSW COMPONENTS IN A NON PACKAGED DISTRIBUTED ARRANGEMENT.
13. THE SYSTEM SHALL BE CONFIGURED AS A DRY HP MIST SYSTEM. THE ATTIC IS DESIGNED AS A COLD ATTIC AND ALL THE PIPES AND HEADS SHALL BE CONFIGURED FOR DRAINAGE AND SUB-FREEZING CONDITIONS, PROVIDE RELEASING VALVE ASSEMBLY.
14. THE CONTRACTOR SHALL PERFORM A HYDRANT FLOW TEST SO THAT SPRINKLER SYSTEM MODIFICATION CAN BE HYDRAULICALLY CALCULATED. PROVIDE TEST REPORTS TO AHJ AND ENGINEER.
15. SUBMIT SHOP DRAWINGS AND CALCULATIONS TO ENGINEER FOR APPROVAL AFTER ENGINEER APPROVAL, SUBMIT TO BUILDING OFFICIAL FOR REVIEW AND ACCEPTANCE PRIOR TO INSTALLATION. ALLOW THREE WEEKS FOR REVIEW.



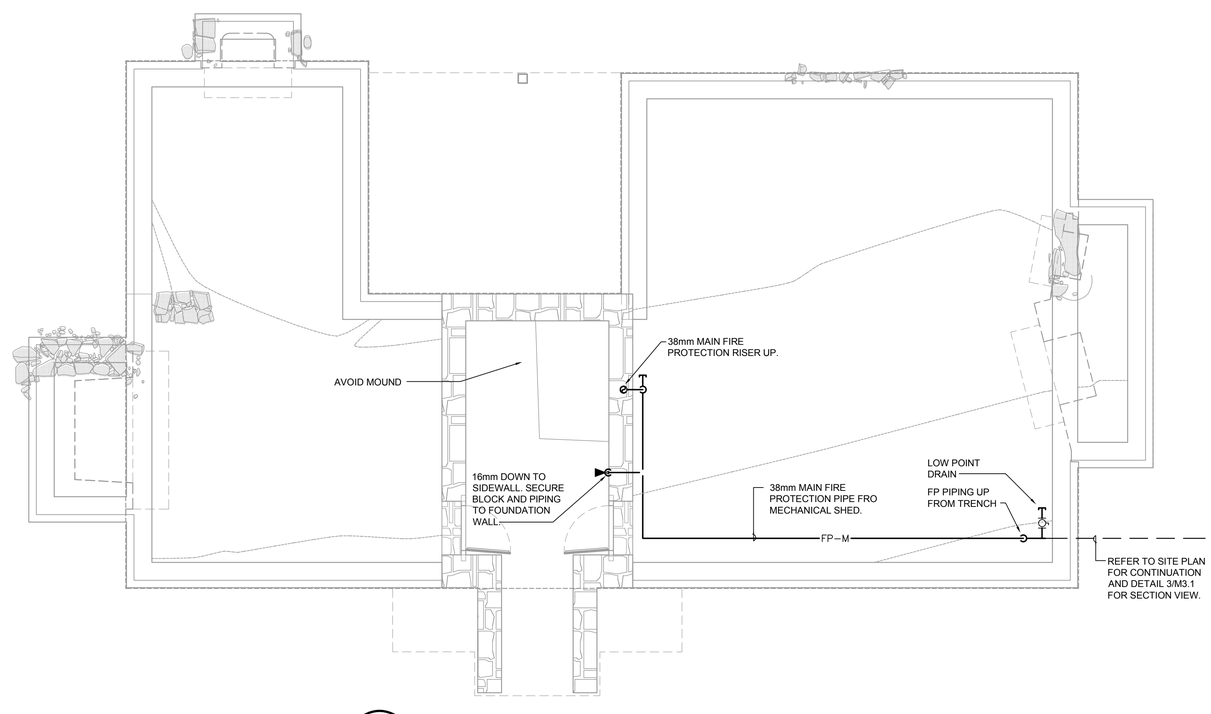
3 FP0.0 PLUMBING RISER DIAGRAM AT MECHANICAL SHED

SCALE: NO SCALE



1 FP0.0 FIRE PROTECTION AT MECHANICAL SHED PLAN

SCALE: 1/4"=1'-0"



2 FP0.0 FIRE PROTECTION CRAWL SPACE PLAN

SCALE: 1/4"=1'-0"

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

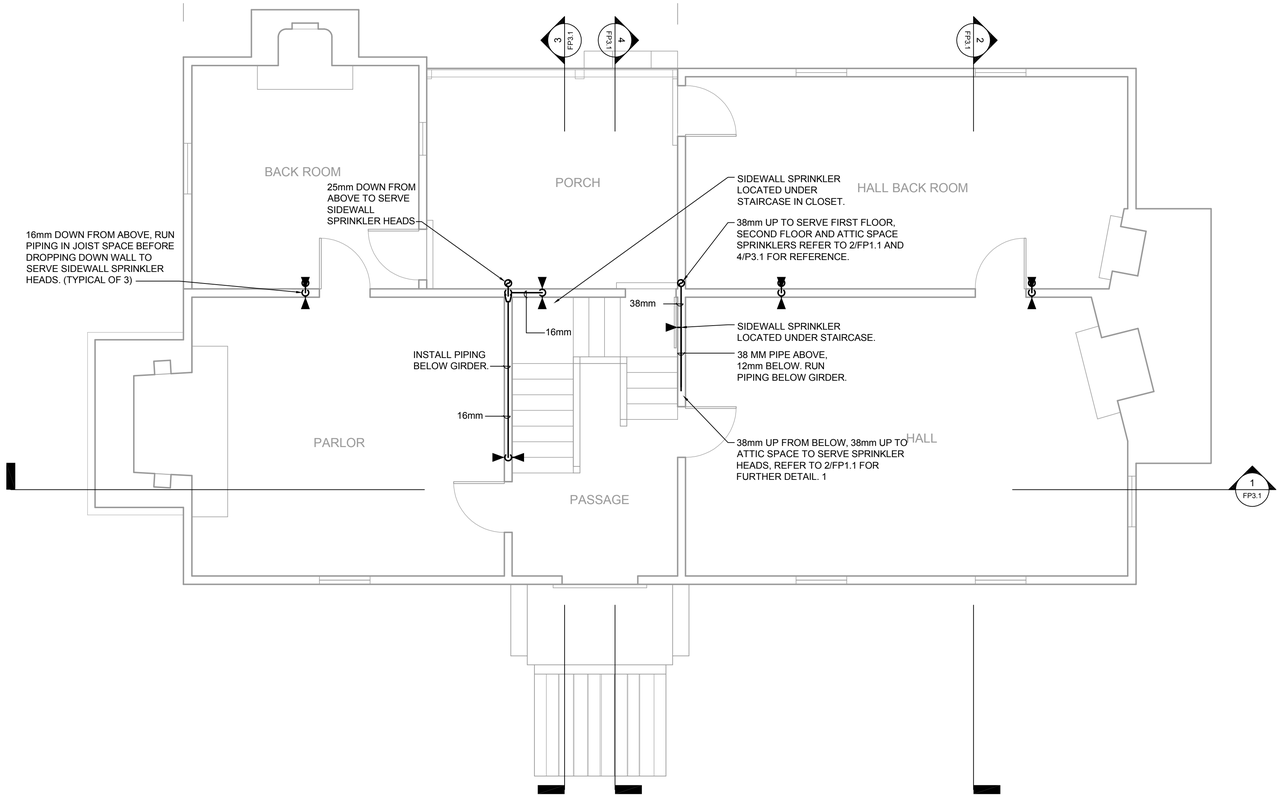
FIRE PROTECTION LEGEND, SPECIFICATIONS
DETAILS AND PLANS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	1/4"=1'-0"
COMMISSION NO.	0726
DRAWN BY	MS
DATE	03-18-15
REVISED	-

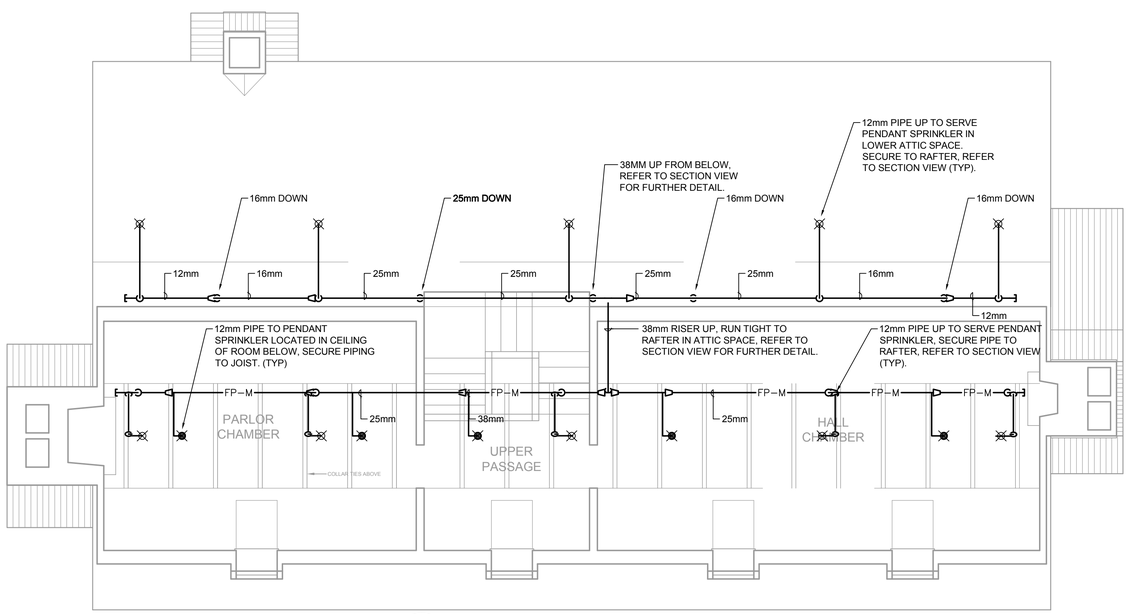
DRAWING NO.
FP0.0

Z:\PROJECTS\2051 George Washington's Ferry Farm\Fire Protection\2051 FP 1.1.dwg, FP0.0, 3/25/2015 4:33:33 PM



1 FP1.1 FIRE PROTECTION FIRST FLOOR PLAN

SCALE: 1/4"=1'-0"



2 FP1.1 FIRE PROTECTION SECOND FLOOR PLAN

SCALE: 1/4"=1'-0"

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
46 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23185
p. (757)221-0713 f. (757)221-0714

FIRE PROTECTION FLOOR PLANS

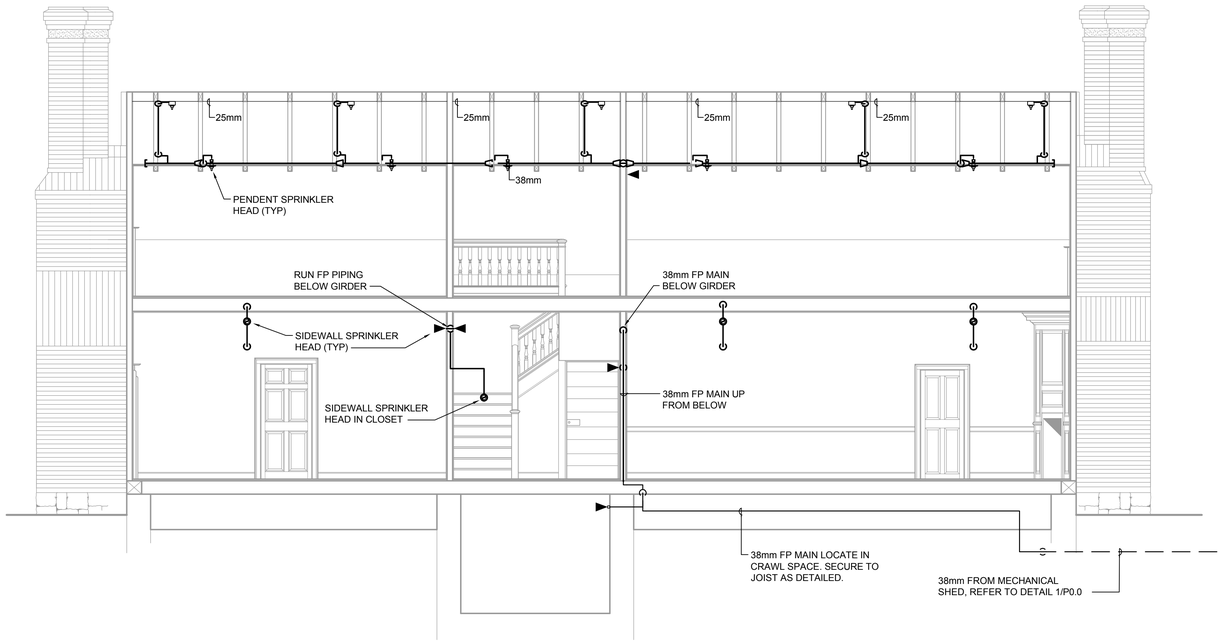
INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	1/4"=1'-0"
COMMISSION NO.	0726
DRAWN BY	MS
DATE	03-18-15
REVISED	-

DRAWING NO.

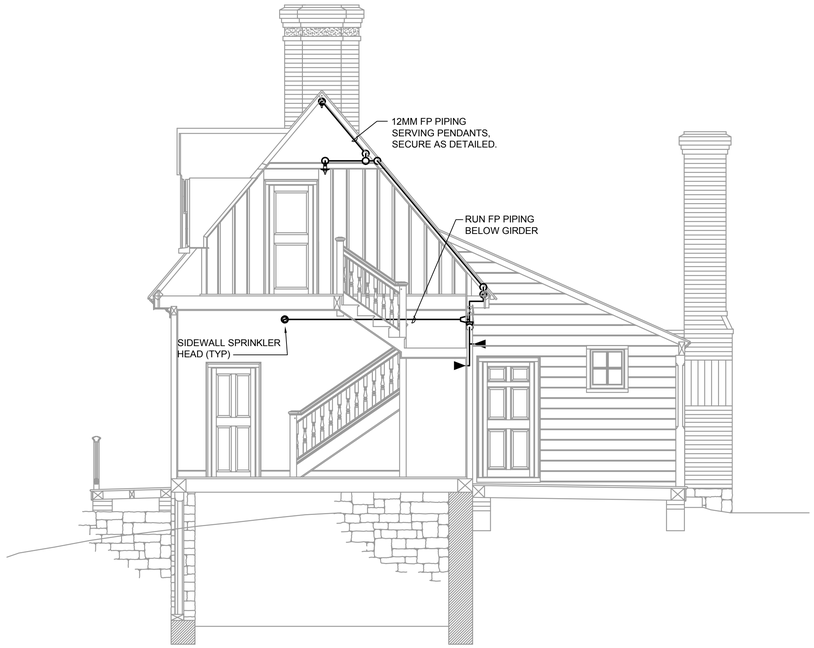
FP1.1

Z:\PROJECTS\2051 George Washington's Ferry Farm\Fire Protection\2051 FP1.1.dwg, FP1.1, 3/25/2015 4:38:58 PM



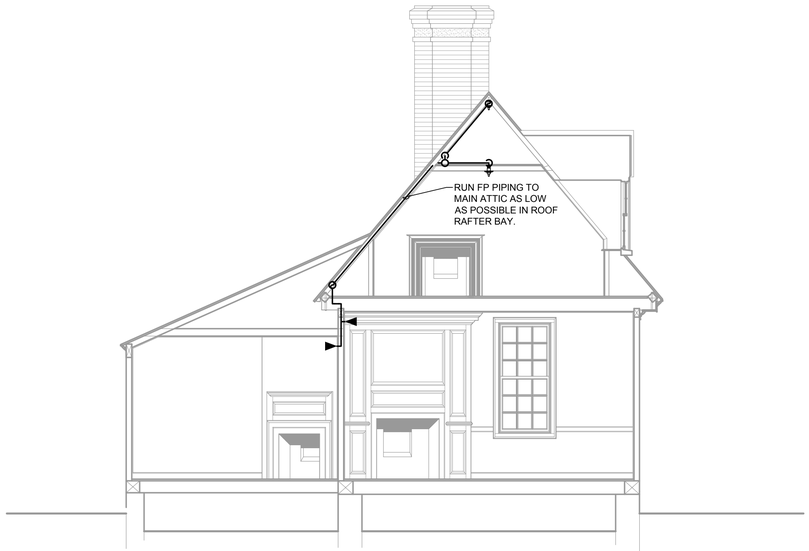
1 / FP3.1 SECTION VIEW LOOKING EAST

SCALE: 1/4"=1'-0"



3 / FP3.1 SECTION VIEW LOOKING NORTH

SCALE: 1/4"=1'-0"



2 / FP3.1 SECTION VIEW LOOKING SOUTH

SCALE: 1/4"=1'-0"

4 / FP3.1 SECTION VIEW PASSAGE SOUTH

SCALE: 1/4"=1'-0"

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

FIRE PROTECTION SECTION VIEWS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	1/4"=1'-0"
COMMISSION NO.	0726
DRAWN BY	MS
DATE	03-18-15
REVISED	-

DRAWING NO.
FP3.1

Z:\PROJECTS\2051 George Washington's Ferry Farm\Fire Protection\2051 FP1.1.dwg, FP3.1, 3/25/2015 4:38:22 PM

MECHANICAL LEGEND

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
	POINT OF CONNECTION OF NEW WORK TO EXISTING	CD-1 / 100	SUPPLY GRILLE WITH TAG AND CFM INDICATED
# OR #	DRAWING REFERENCED NOTE	R-1 / 100	RETURN / EXHAUST GRILLE WITH TAG AND CFM INDICATED
M	ELECTRIC MOTORIZED OPERATOR		SUPPLY DUCT UP
M	CONTROL DAMPER, MOTORIZED		SUPPLY DUCT DOWN
T	THERMOSTAT, TAMPER PROOF, 48" AFF		RETURN / EXHAUST DUCT UP
	VOLUME DAMPER		RETURN / EXHAUST DUCT DOWN
	ELBOW TURNED UP		FLEXIBLE DUCTWORK
	ELBOW TURNED DOWN	**ABBREVIATION**	**DESCRIPTION**
	REDUCER	AD	ACCESS DOOR
	TEE TURNED UP	AFC	ABOVE FINISHED CEILING
	TEE (SIDE)	AFF	ABOVE FINISHED FLOOR
	RISE OR DROP IN PIPE	AFG	ABOVE FINISHED GRADE
	UNION	ATC	AUTOMATIC TEMPERATURE CONTROL
	PIPE CAP	BOD	BOTTOM OF DUCT
	BALL VALVE	BMS	BUILDING MANAGEMENT SYSTEM
	CHECK VALVE	CFM	CUBIC FEET PER MINUTE
	STRAINER	DDC	DIRECT DIGITAL CONTROL
	MANUAL BALANCE VALVE	EC	ELECTRICAL CONTRACTOR
	PRESSURE GAUGE	SC	SPRINKLER CONTRACTOR
	THERMOMETER	GC	GENERAL CONTRACTOR
	MANUAL AIR VENT	GPM	GALLONS PER MINUTE
	IN-LINE CIRCULATOR	LRG	LINEAR RETURN GRILL
	FLEXIBLE CONNECTION	LSD	LINEAR SLOT DIFFUSER
	RELIEF VALVE	MBH	THOUSAND BTU PER HOUR
D	DRAIN VALVE WITH HOSE THREADS	MC	MECHANICAL CONTRACTOR
PR	PRESSURE REDUCING VALVE (SELF-CONTAINED)	PC	PLUMBING CONTRACTOR
	LINED OR INSULATED DUCT	SD	SMOKE DETECTOR
		VFD	VARIABLE FREQUENCY DRIVE
		OED	OPEN ENDED DUCT
		UON	UNLESS OTHERWISE NOTED
		VD	VOLUME DAMPER
		KW	KILO WATTS

MECHANICAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH 2012 VUSBC, 2012 IMC, 2012 IECC AND ALL APPLICABLE REFERENCED STANDARDS.
2. THE JOB SITE SHALL BE KEPT FREE OF DEBRIS. ALL UNWANTED MATERIAL AND TRASH SHALL BE REMOVED FROM THE SITE DAILY.
3. FULLY COORDINATE ALL PIPE, DUCT, CONDUIT AND CONTROL WIRING RUNS BEFORE FABRICATION AND INSTALLATION. NO EXTRAS SHALL BE PERMITTED FOR REROUTING OR REMOVAL OF INSTALLED WORK DUE TO COORDINATION WITH BUILDING STRUCTURE, WORK OF OTHER TRADES, OR BUILDING COMPONENTS. DUCTWORK AND PIPING PLANS ARE TWO DIMENSIONAL AND ALL DUCTWORK AND PIPING RUNS DO NOT SHOW ALL NECESSARY CHANGES IN ELEVATION OR OFFSETS REQUIRED FOR A COMPLETE INSTALLATION. PROVIDE DUCT AND PIPE OFFSETS AS REQUIRED FOR THE INSTALLATION OF THE DUCT AND PIPE RUNS SHOWN ON PLANS.
4. ADDITIONAL DUCT AND PIPE OFFSETS MAY BE REQUIRED TO ROUTE AROUND UTILITIES AND STRUCTURE. PROVIDE REQUIRED OFFSETS.
5. DUCTWORK RUN-OUTS / RISERS TO GRILLES SHALL BE SIZED EQUAL TO THE GRILLE NECK SIZE SCHEDULED UNLESS NOTED OTHERWISE.
6. ALL NEW METAL DUCTWORK (ABOVE GRADE DUCTWORK) SHALL BE GALVANIZED STEEL (UNLESS NOTED OTHERWISE), AND BE CONSTRUCTED PER SMACNA STANDARDS FOR 2"WG AND SEAL CLASS A. INSULATE ALL GALVANIZED STEEL DUCTWORK WITH 1-1/2" FIBERGLASS DUCT WRAP WITH FSK JACKET.
7. PROVIDE REQUIRED TRANSITIONS AND ADAPTERS TO CONNECT SIZES INDICATED ON THE PLANS TO THE SCHEDULED EQUIPMENT.
8. DUCT DIMENSIONS INDICATED ON THE PLANS FOR LINED DUCTWORK ARE NET INSIDE DIMENSIONS. DUCTWORK SHALL BE BUILT TO PROVIDE FREE AREA INDICATED.
9. PROVIDE FLEXIBLE SUPPLY AND RETURN DUCT AND PIPING CONNECTORS FOR EACH UNIT (TYP).
10. FIELD COORDINATE EXACT LOCATIONS OF EQUIPMENT WITH STUDS AND JOISTS.
11. ALL AIR SYSTEMS SHALL BE BALANCED BY AN INDEPENDENT BALANCING CONTRACTOR IN ACCORDANCE WITH AABC AND TAB INDUSTRY STANDARDS.
12. NEW ABOVE GRADE DTS/R AND DRAIN PIPING SHALL BE TYPE L COPPER. PROVIDE 1" FIBERGLASS PIPE INSULATION WITH SELF ADHERING SEAMS AND PRE-FORMED INSULATED PVC FITTING COVERS.
13. NEW BELOW GRADE CHWS/R PIPING SHALL BE PREINSULATED PIPING SYSTEM AND BE COMPRISED OF CROSS-LINKED POLYETHYLENE (PEX), CLOSED CELL INSULATION AND HDPE OUTER JACKET. ALL FITTINGS SHALL BE SPECIFICALLY DESIGNED FOR PREINSULATED PIPING SYSTEMS.
14. PROVIDE HANGERMATE THREADED ROD ANCHORING SYSTEM, OR APPROVED EQUAL, FOR ATTACHMENT AND SUPPORT OF EQUIPMENT FROM THE JOISTS.
15. PROVIDE DDC CONTROLLERS AS REQUIRED, FOR CONNECTION OF EQUIPMENT AS OUTLINED IN THE SEQUENCE OF OPERATIONS, AND DRAWINGS.
16. CONTROL WIRING SHALL BE RUN IN CONDUIT WITHIN THE MECHANICAL SHED AND BELOW GRADE.
17. PROVIDE CONTROLS SUBMITTAL INCLUDING SEQUENCE OF OPERATIONS, GRAPHICS, INDICATING ALL REQUIRED CONTROL POINTS, AND PRODUCT DATA FOR APPROVAL.
18. PRIOR TO BEGINNING EXCAVATION WORK, COORDINATE THE WITH THE ARCHITECT AND OWNER TO ENSURE ARCHEOLOGICALLY SENSITIVE AREAS ARE NOT DISTURBED.
19. THE SUPPLY DUCTWORK SHALL BE INSULATED AS FOLLOWS:
    a. ALL DUCTWORK SHALL BE INSULATED WITH 1" THICK SEMI-RIGID FIBERGLASS INSULATION WITH ALL SERVICE JACKET. ALL JOINTS & SEAMS SHALL BE SEALED WITH MASTIC
20. THE DUAL TEMPERATURE PIPING SHALL BE INSULATED WITH PRE-SIZED 1 1/2" THICK FIBERGLASS INSULATION WITH WHITE KRAFT PAPER ALL SERVICE JACKET. BUTT-ENDS AND SEAMS SHALL BE WRAPPED, SEALED AND COVERED WITH PVC FITTING COVERS.

FAN COIL UNIT SCHEDULE

TAG	CONFIGURATION	CFM	ESP	HEATING CAPACITY MBH	COOLING CAPACITY TOTAL MBH	COOLING CAPACITY SENSIBLE MBH	MAKE / MODEL	ACCESSORIES	COMMENTS	MAX GPM	MAX ΔP
FCU-1	HORIZONTAL DUCTED CONCEALED	425	0.1	16.0	13.8	9.99	FC-C-B-Ø4Ø-1-C-F-Ø-A-Ø-Ø-B-C-4-M-ØØØ-Ø-Ø-Ø-1-Ø-Ø-H-Ø-Ø-A	1, 3, 5, 6, 7, 8, 9, 10, 11, 12	RIGHT HAND HIGH STATIC ECM	2.80	11.8
FCU-2	HORIZONTAL DUCTED CONCEALED	425	0.1	16.0	13.8	9.99	FC-C-B-Ø4Ø-1-D-F-Ø-A-Ø-Ø-B-C-4-M-ØØØ-Ø-Ø-Ø-1-Ø-Ø-H-Ø-Ø-A	1, 3, 5, 6, 7, 8, 9, 10, 11, 12	LEFT HAND HIGH STATIC ECM	2.80	11.8
FCU-3	HORIZONTAL DUCTED CONCEALED	425	0.1	16.0	13.8	9.99	FC-C-B-Ø4Ø-1-C-F-Ø-A-Ø-Ø-B-C-4-M-ØØØ-Ø-Ø-Ø-1-Ø-Ø-H-Ø-Ø-A	1, 3, 5, 6, 7, 8, 9, 10, 11, 12	RIGHT HAND HIGH STATIC ECM	2.80	11.8
FCU-4	HORIZONTAL DUCTED CONCEALED	425	0.1	16.0	13.8	9.99	FC-C-B-Ø4Ø-1-D-F-Ø-A-Ø-Ø-B-C-4-M-ØØØ-Ø-Ø-Ø-1-Ø-Ø-H-Ø-Ø-A	1, 3, 5, 6, 7, 8, 9, 10, 11, 12	LEFT HAND HIGH STATIC ECM	2.80	11.8
FCU-5	VERTICAL DUCTED CONCEALED	325	0.1	10.1	8.6	6.5	FC-K-B-Ø3Ø-1-C-L-Ø-J-Ø-Ø-A-C-4-M-ØØØ-Ø-Ø-Ø-1-Ø-Ø-H-Ø-Ø-A	1, 2, 4, 5, 6, 7	BOTTOM FILTER FREE DISCHARGE	1.88	4.5

WATER & AIR CONDITIONS:

SUMMER EWT: 45°F
LWT: 53°F
EAT: 78°F

WINTER EWT: 120°F
LWT: 80°F
EAT: 60°F

NOTE:
TRANE BASIS OF DESIGN MODEL NUMBER STOPS AT DIGIT 35 (CONDENSATE OVERFLOW DETECTION) ALL REMAINING DIGITS ARE Ø=NONE
THE HEATING CAPACITY VALUES HAVE BEEN DERATED TO ACCOUNT FOR THE REDUCED WATER TEMPERATURE

ACCESSORIES:
1. PROVIDE AUXILIARY DRAIN PAN
2. BOTTOM FILTER
3. HIGH STATIC ECM MOTOR
4. FREE DISCHARGE ECM MOTOR
5. 4-ROW COOLING COIL WITH CHANGE OVER SENSOR HEATING
6. STAINLESS STEEL DRAIN PAN
7. MANUAL COIL AIR VENT
8. FIELD SUPPLIED ANALOG CONTROL VALVE
9. FIELD SUPPLIED VALVE & PIPING PACKAGE
10. FIELD SUPPLIED DDC CONTROLLER
11. REDUCED FLA ECM MODULE
12. CONDENSATE OVERFLOW DETECTION

CIRCULATING PUMP SCHEDULE

TAG	LOCATION	SERVICE	GPM	FT H_2O	FLUID	ELECTRICAL VOLTS	ELECTRICAL HP	ELECTRICAL RPM	MAKE & MODEL
P-1	MECH SHED	DUAL TEMP PUMP	20	45	WATER	208/3PH	1-1/2	1750	TACO SKV 1507-1760-1.5
P-2	MECH SHED	DUAL TEMP PUMP	20	45	WATER	208/3PH	1-1/2	1750	TACO SKV 1507-1760-1.5
P-3	MECH SHED	BOILER (OPTIONAL)	6	12	WATER	120	.68	-	TACO VR 15 @ 23'
P-4A	MECH SHED	WATER HEAT PUMP	INTEGRAL WITH HEAT PUMP						
P-4B	MECH SHED	WATER HEAT PUMP	INTEGRAL WITH HEAT PUMP						
P-5	CRAWL SPACE	RADIANT	2	15	WATER	120	.68	-	TACO VR 15 @ 29'
P-6	CRAWL SPACE	RADIANT	3	15	WATER	120	.68	-	TACO VR 15 @ 29'

INDOOR WATER HEAT PUMP SCHEDULE

TAG	*COOLING CAPACITY GPM	LWT	TOTAL MBH	WATER ΔP	**HEATING CAPACITY GPM	LWT	TOTAL MBH	WATER ΔP	***ELECTRICAL MCA	MOCP	VOLTAGE	BACK-UP HEATER	MAXIMUM OVERALL SIZE H x W x D	BASIS OF DESIGN DAIKIN-ALTHERMA MODEL NUMBER
HP-1A	9.90	42°F	57.1	6.79 PSI	12.12	125°F	54.6	5.08 PSI	28.6	30.0	208V/1 PH	6 KW	36-5/16" x 19-3/4" x 14-7/32"	EKHBX054BA6VJU
HP-2A	9.90	42°F	57.1	6.79 PSI	12.12	125°F	54.6	5.08 PSI	28.6	30.0	208V/1 PH	6 KW	36-5/16" x 19-3/4" x 14-7/32"	EKHBX054BA6VJU

PROVIDE TWO STAGE AUXILIARY HEAT 3KW/6KW
OUTDOOR UNIT TO BE MATCHED TO INDOOR HEAT PUMP UNIT AND BE OF SAME MANUFACTURER.
PROVIDE CONDENSATE KITS EKHBDP FOR EACH UNIT
NOTE: THE CATALOGED DATA FOR THE UNIT ARE BASED ON:
HEATING: OA = 44.6 DEGREES F, LWT = 95 DEGREES F, DELTA T = 9 DEGREES
COOLING: OA = 95 DEGREES F, LWT = 64.4 DEGREES F, DELTA = 9 DEGREES

OUTDOOR AIR HEAT PUMP SCHEDULE

TAG	*COOLING CAPACITY EER	TOTAL MBH	KW	**HEATING CAPACITY COP	TOTAL MBH	KW	***ELECTRICAL MCA	MOCP	VOLTAGE	BACK-UP HEATER	EER	COP	MAXIMUM OVERALL SIZE H x W x D	BASIS OF DESIGN DAIKIN-ALTHERMA MODEL NUMBER
HP-1B	8.73	60.6	6.94	4.03	54.6	3.97	26.5	30	208V/1 PH	6 KW	8.9	4.1	55-27/32" x 56-1/2" x 15-1/32"	EBLQ054BA6VJU
HP-2B	8.73	60.6	6.94	4.03	54.6	3.97	26.5	30	208V/1 PH	6 KW	8.9	4.1	55-27/32" x 56-1/2" x 15-1/32"	EBLQ054BA6VJU

PROVIDE 7 YEAR COMPRESSOR WARRANTY FROM DATE OF INSTALLATION, 5 YEAR PARTS, AND 1 YEAR LABOR WARRANTY. INVERTER CONTROLLED COMPRESSOR.
PROVIDE INTEGRAL OUTSIDE AIR RESET CONTROL
RATED AT 110 DEGREES OA COOLING/-4 DEGREES OA HEATING

RADIANT TUBING SIZE SCHEDULE

CIRCUIT LENGTH	TUBE DIAMETER	O.D.	MINIMUM BEND RADIUS	△P @ 1 GPM
0-250'	1/2"	3/4"	6"	.012' PER FT.

BASED ON UPONOR ONIX

EXPANSION TANK (BLADDER TYPE) SCHEDULE

TAG	LOCATION	SERVICE	FLUID	TANK VOLUME (GALLONS)	ACCEPTANCE VOLUME (GALLONS)	DIMENSIONS (L x DIA.)	MAKE & MODEL
EX-1	MECH SHED	DUAL TEMP	WATER	21.7	11.3	29" x 16"Ø	EXTROL AX-40

DIFFUSER, REGISTER & GRILLE SCHEDULE

TAG	TYPE	APPROX. FACE SIZE	NO. OF SLOTS (W x H)	APPROX. NECK SIZE	PATTERN	MAXIMUM CFM	MAX. NC	MATERIAL	FINISH	ACCESSORIES/ARRANGEMENT	BASIS OF DESIGN
SG-1	SUPPLY W/ LATTICE FACE	20x9	18x6	18x7	LATTICE	250	<20	BRONZE	MILL	SUPPLY GRILLE WITH SQUARE LATTICE FACE PLATE (3/4" CENTER TO CENTER WITH 3/16" FRET, 10 GAUGE)	KEES LA075
SG-2	SUPPLY W/ LATTICE FACE	20x9	18x6	18x7	LATTICE	250	<20	BRONZE	MILL	SUPPLY GRILLE WITH SQUARE LATTICE FACE PLATE (3/4" CENTER TO CENTER WITH 3/16" FRET, 10 GAUGE)	KEES LA075
SG-3	SUPPLY W/ LATTICE FACE	20x9	18x6	18x7	LATTICE	250	<20	BRONZE	MILL	SUPPLY GRILLE WITH SQUARE LATTICE FACE PLATE (3/4" CENTER TO CENTER WITH 3/16" FRET, 10 GAUGE)	KEES LA075
SG-4	SUPPLY W/ LATTICE FACE	20x9	18x6	18x7	LATTICE	250	<20	BRONZE	MILL	SUPPLY GRILLE WITH SQUARE LATTICE FACE PLATE (3/4" CENTER TO CENTER WITH 3/16" FRET, 10 GAUGE)	KEES LA075
SG-5	SUPPLY W/ LATTICE FACE	20x9	18x6	18x7	LATTICE	250	<20	BRONZE	MILL	SUPPLY GRILLE WITH SQUARE LATTICE FACE PLATE (3/4" CENTER TO CENTER WITH 3/16" FRET, 10 GAUGE)	KEES LA075
SG-6	SUPPLY W/ LATTICE FACE	20x9	18x6	18x7	LATTICE	250	<20	BRONZE	MILL	SUPPLY GRILLE WITH SQUARE LATTICE FACE PLATE (3/4" CENTER TO CENTER WITH 3/16" FRET, 10 GAUGE)	KEES LA075
SG-7	SUPPLY W/ LATTICE FACE	20x9	18x6	18x7	LATTICE	250	<20	BRONZE	MILL	SUPPLY GRILLE WITH SQUARE LATTICE FACE PLATE (3/4" CENTER TO CENTER WITH 3/16" FRET, 10 GAUGE)	KEES LA075
SG-8	SUPPLY W/ LATTICE FACE	20x9	18x6	18x7	LATTICE	250	<20	BRONZE	MILL	SUPPLY GRILLE WITH SQUARE LATTICE FACE PLATE (3/4" CENTER TO CENTER WITH 3/16" FRET, 10 GAUGE)	KEES LA075
SG-9	SUPPLY W/ LATTICE FACE	20x9	18x6	18x7	LATTICE	125	<20	BRONZE	MILL	SUPPLY GRILLE WITH SQUARE LATTICE FACE PLATE (3/4" CENTER TO CENTER WITH 3/16" FRET, 10 GAUGE)	KEES LA075
SG-10	SUPPLY W/ LATTICE FACE	20x9	18x6	18x7	LATTICE	325	<20	BRONZE	MILL	SUPPLY GRILLE WITH SQUARE LATTICE FACE PLATE (3/4" CENTER TO CENTER WITH 3/16" FRET, 10 GAUGE)	KEES LA075

THE INSIDE OF DUCTWORK BEHIND ALL GRILLES SHALL BE PAINTED FLAT BLACK. THIS SHALL INCLUDE A MINIMUM OF 4' OF DUCT LENGTH OR UP TO AND THROUGH THE FIRST ELBOW, WHICHEVER IS CLOSER.

UNIT HEATER SCHEDULE

TAG	LOCATION	KW	VOLTS	CFM	MAKE & MODEL
UH-1	MECH SHED	2.5	208V	270	MARLEY MWUH5004

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

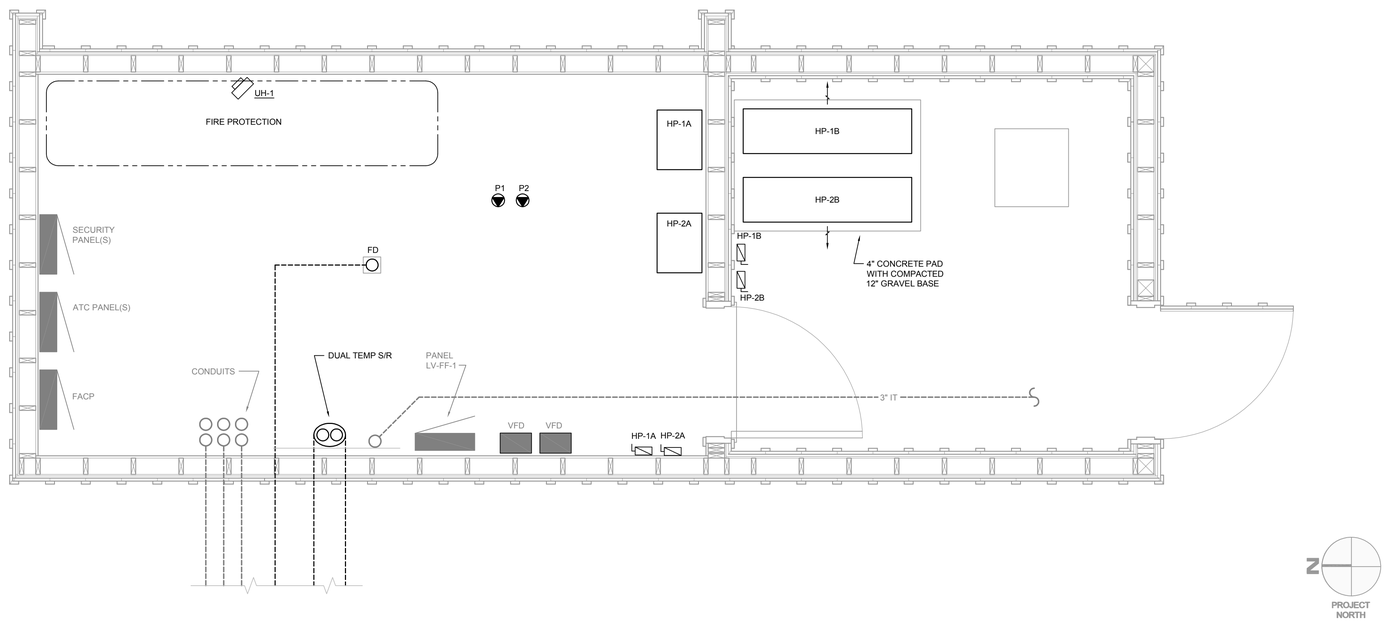
MESICK•COHEN•WILSON•BAKER•ARCHITECTS
398 BROADWAY ALBANY, NY 12207
p. (518)433-8394 f. (518)433-8357
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

MECHANICAL LEGEND, SCHEDULES & NOTES

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	DS
DATE	03-18-15
REVISED	-

DRAWING NO.
M0.0



1 / M0.2 MECHANICAL HVAC SHED PLAN

SCALE: 1/2" = 1'-0"

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

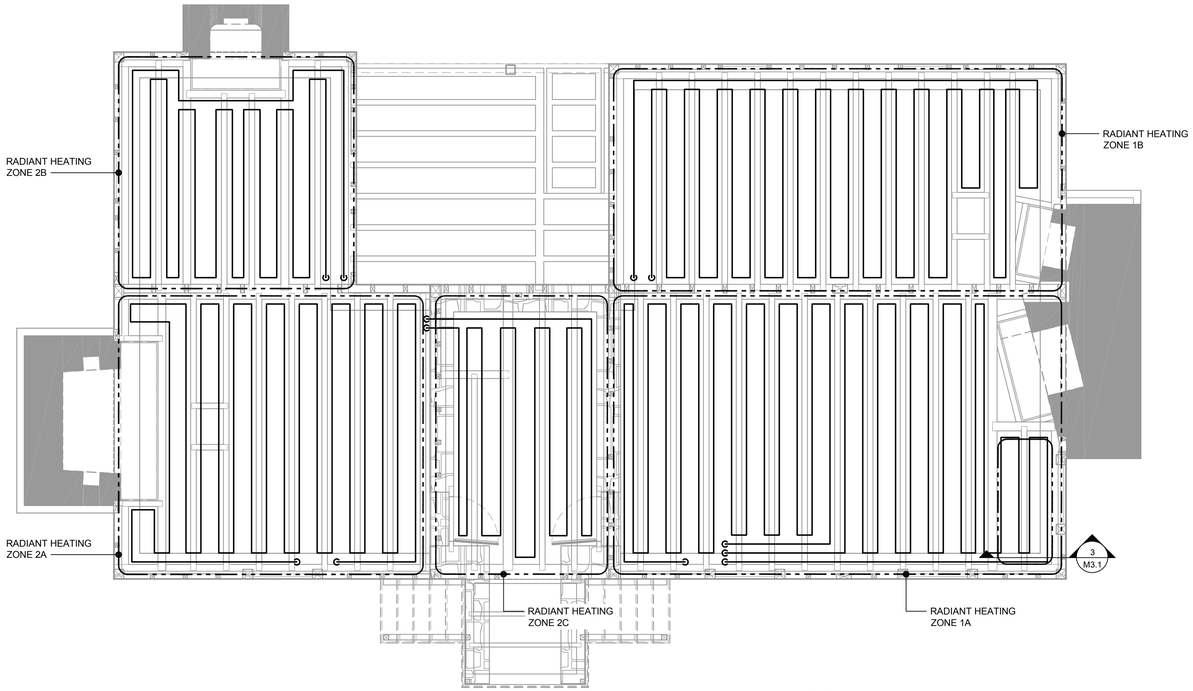
MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

MECHANICAL HVAC SHED PLAN

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	DS
DATE	03-18-15
REVISED	-

DRAWING NO.
M0.2



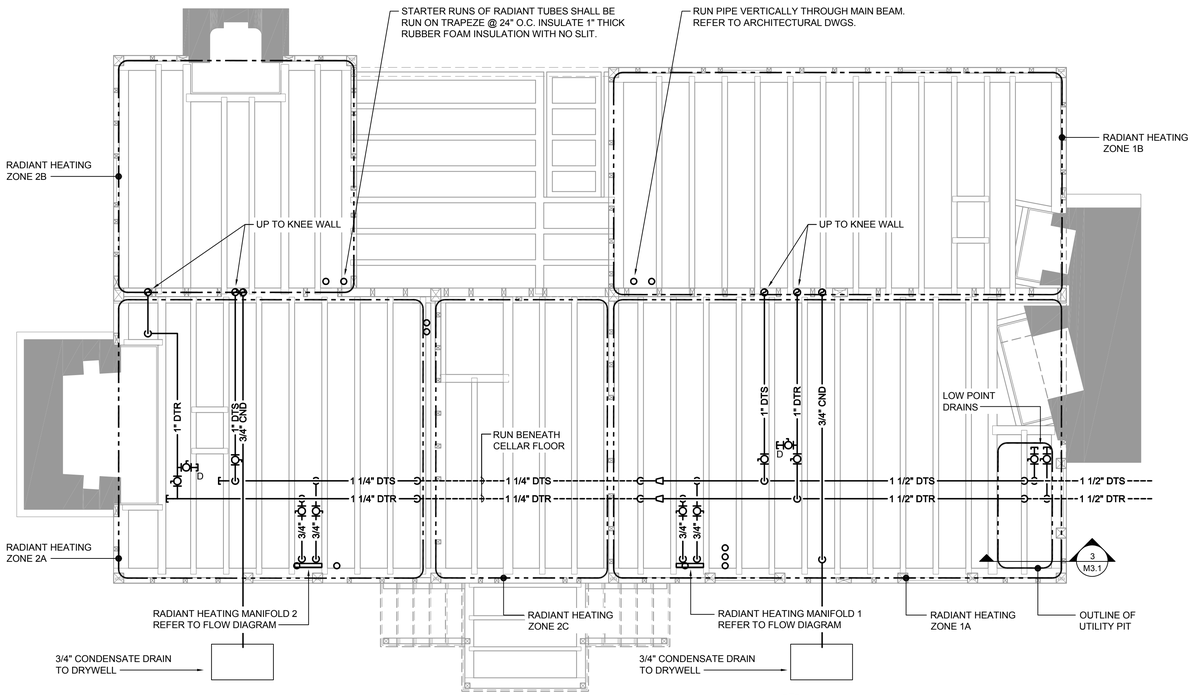
1 / M1.0 MECHANICAL HVAC RADIANT PIPING PLAN

SCALE: 1/4" = 1'-0"

PROJECT NORTH

RADIANT HEATING SYSTEM NOTES

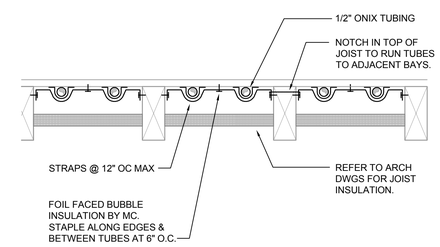
1. REFER TO ARCHITECTURAL DRAWINGS FOR INSULATION SYSTEM BENEATH RADIANT TUBES.
2. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION AND DEPTH OF NOTCHES IN JOISTS FOR TUBES TO PASS BETWEEN JOIST BAYS.
3. PRESSURE TEST SYSTEM IMMEDIATELY AFTER STAPLE-UP COMPLETED AND MAINTAIN PRESSURE IN TUBES THROUGHOUT CONSTRUCTION AND BEFORE APPLYING INSULATION BELOW TUBES.



2 / M1.0 MECHANICAL HVAC CELLAR PLAN

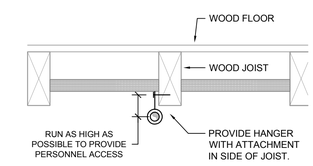
SCALE: 1/4" = 1'-0"

PROJECT NORTH



3 / M1.0 RADIANT TUBING SECTION DETAIL

SCALE: NTS



4 / M1.0 PIPE HANGER SECTION DETAIL

SCALE: NTS

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

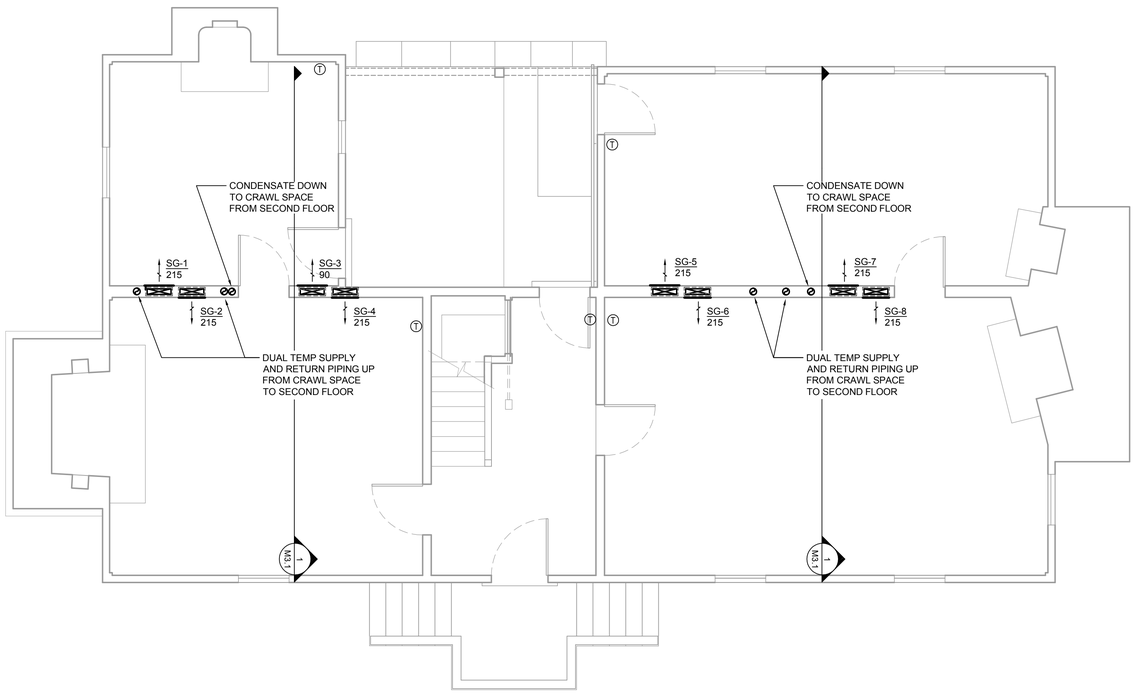
MESICK•COHEN•WILSON•BAKER•ARCHITECTS
398 BROADWAY ALBANY, NY 12207
p. (518)433-8394 f. (518)433-8357
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

MECHANICAL HVAC CELLAR PLANS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	1/4" = 1'-0"
COMMISSION NO.	0726
DRAWN BY	DS
DATE	03-18-15
REVISED	-

DRAWING NO.
M1.0



1 / M1.1 MECHANICAL HVAC FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"

N

PROJECT NORTH

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

MESICK•COHEN•WILSON•BAKER•ARCHITECTS

388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

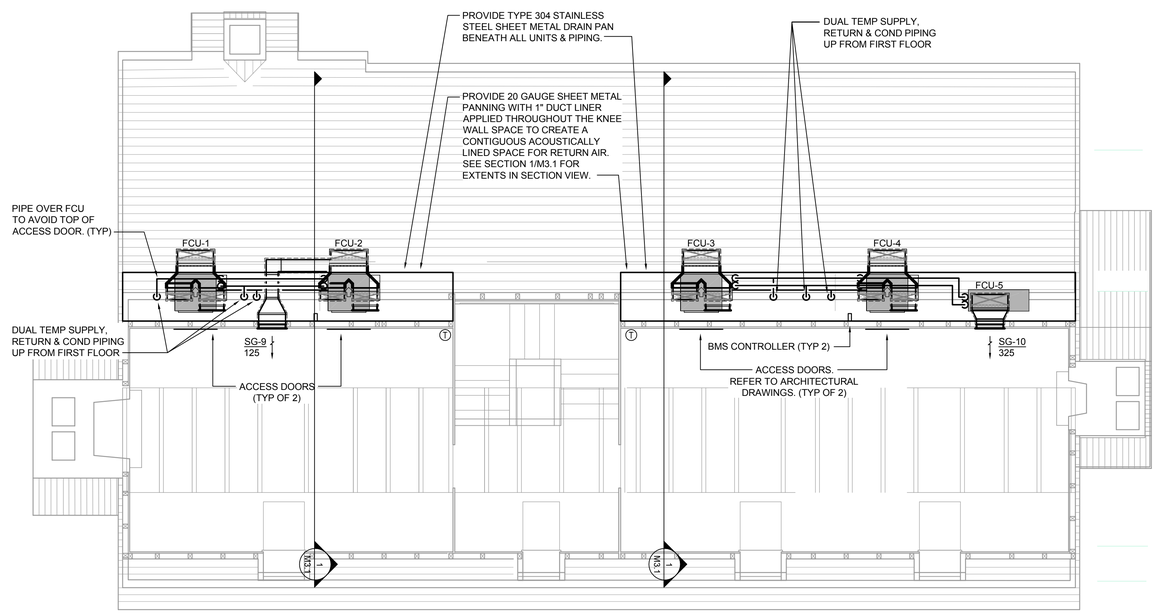
MECHANICAL HVAC FIRST FLOOR PLAN

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	1/4" = 1'-0"
COMMISSION NO.	0726
DRAWN BY	DS
DATE	03-18-15
REVISED	-

DRAWING NO.

M1.1



1 / M1.2 MECHANICAL HVAC SECOND FLOOR PLAN

SCALE: 1/4" = 1'-0"

N

PROJECT NORTH

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

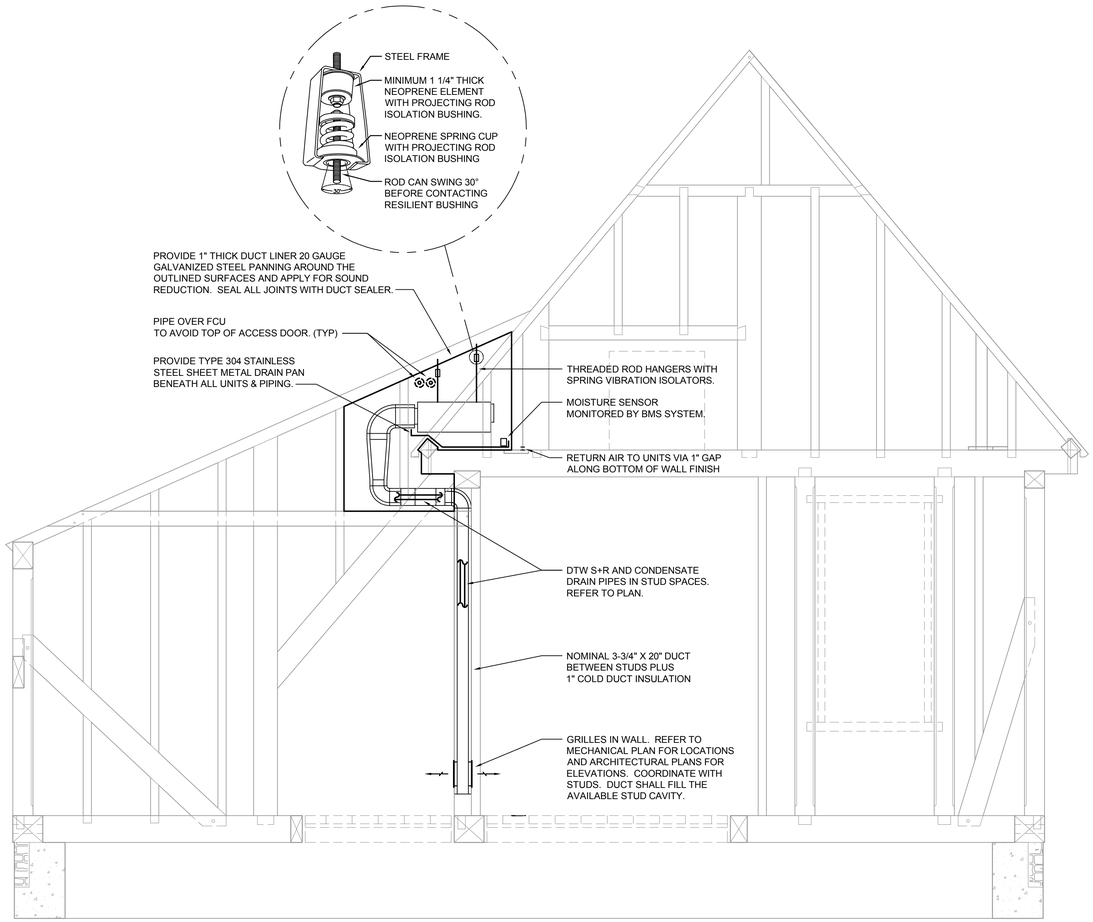
MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

MECHANICAL HVAC SECOND FLOOR PLAN

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

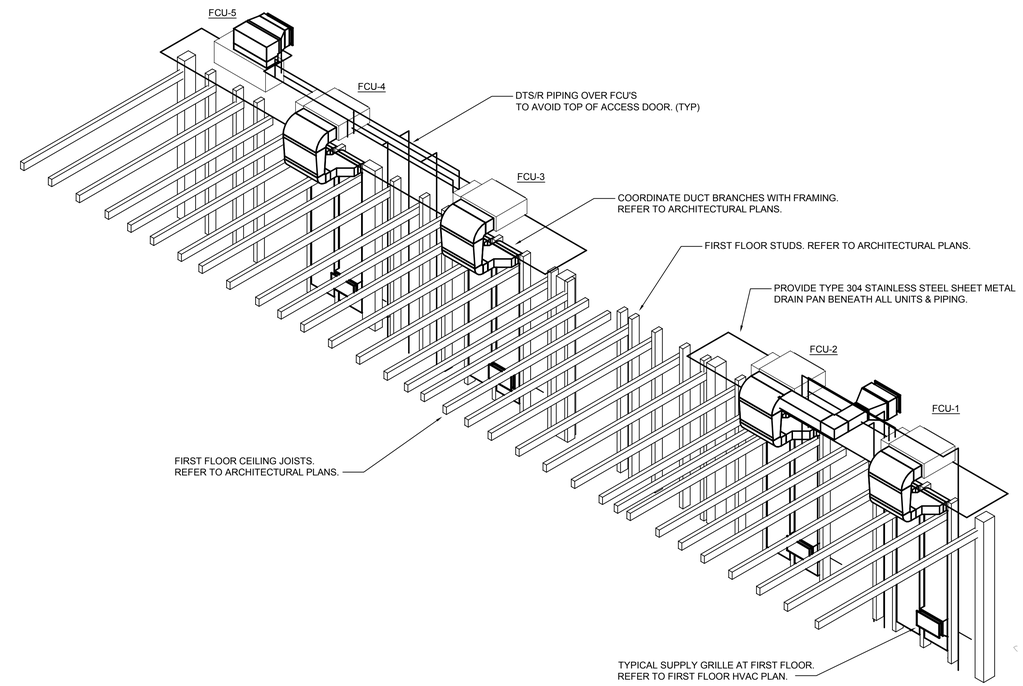
SCALE	1/4" = 1'-0"
COMMISSION NO.	0726
DRAWN BY	DS.
DATE	03-18-15
REVISED	-

DRAWING NO.
M1.2



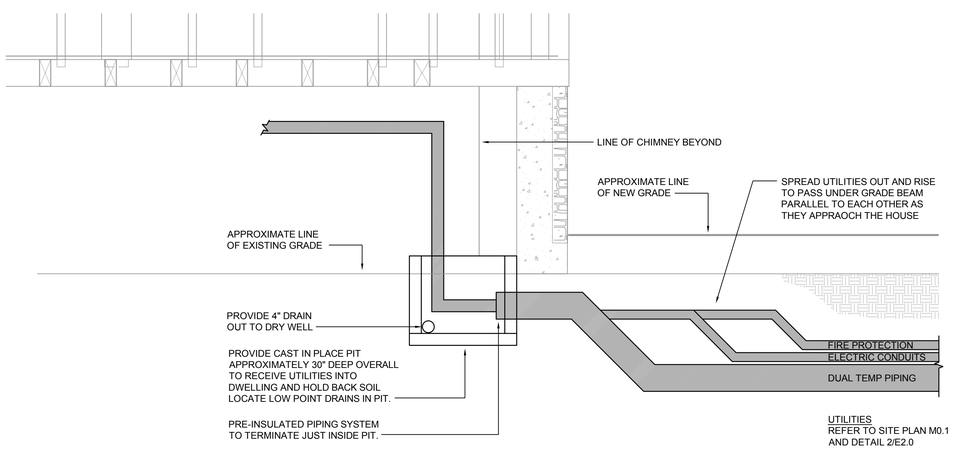
1 / M3.1 MECHANICAL HVAC SECTION LOOKING SOUTH

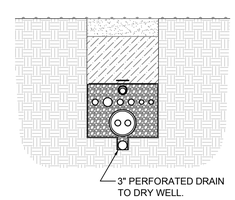
SCALE: 1/2" = 1'-0"



2 / M3.1 MECHANICAL HVAC ISOMETRIC LOOKING SOUTHWEST

SCALE: 1/4" = 1'-0"





3 / M3.1 MECHANICAL HVAC SECTION THROUGH CRAWL SPACE

SCALE: 1/2" = 1'-0"

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

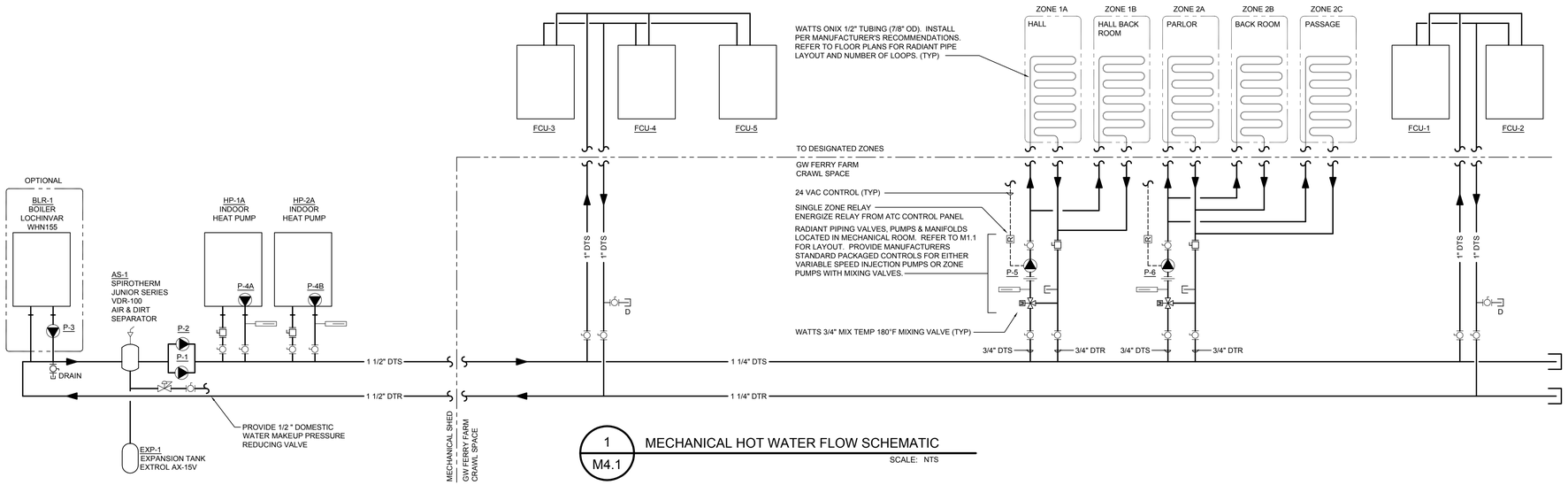
MESICK•COHEN•WILSON•BAKER•ARCHITECTS
398 BROADWAY ALBANY, NY 12207
p. (518)433-8394 f. (518)433-8357
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

MECHANICAL HVAC SECTIONS AND DETAILS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

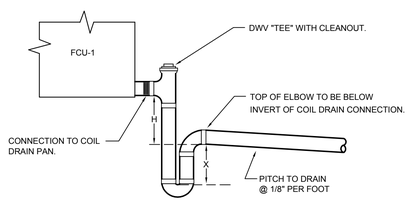
SCALE	1/4" = 1'-0"
COMMISSION NO.	0726
DRAWN BY	DS
DATE	03-18-15
REVISED	-

DRAWING NO.
M3.1



1 M4.1 MECHANICAL HOT WATER FLOW SCHEMATIC

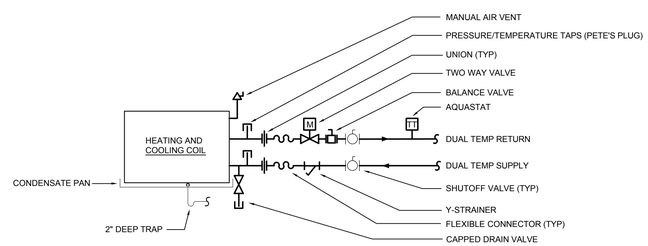
SCALE: NTS



	"H"- HEIGHT IN INCHES (MINIMUM)	"X"- HEIGHT IN INCHES (MINIMUM)
DRAW-THROUGH COIL	FAN SUCTION PRESSURE PLUS 1"	H/2
MINIMUM "H" DIMENSION TO BE 4". DRAIN LINE TO BE SIZE AS SHOWN ON PLAN, OR 1-1/4" MINIMUM.		

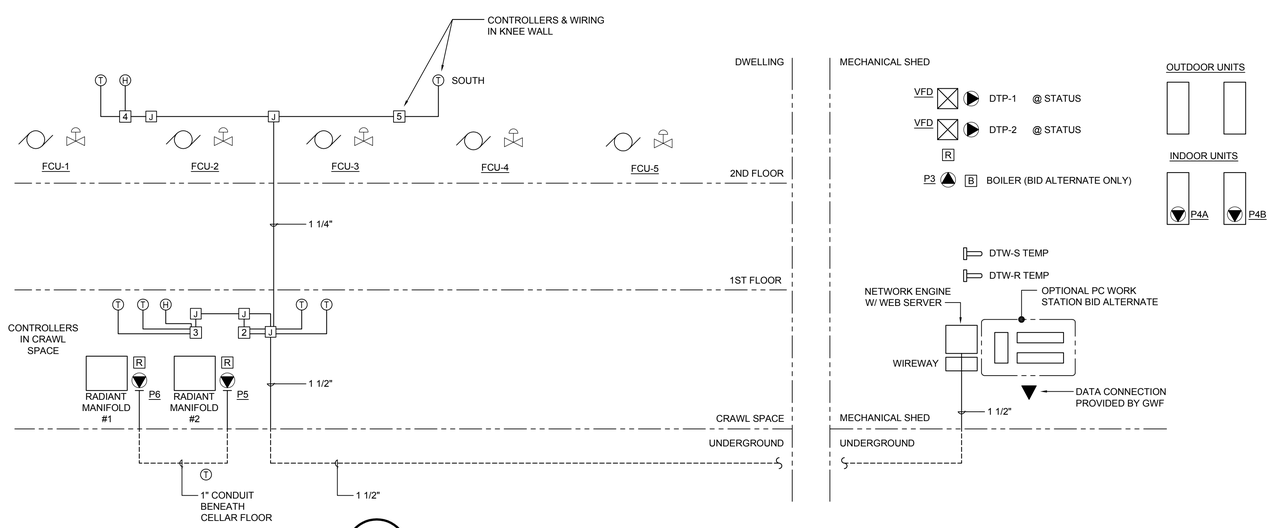
2 M4.1 COOLING COIL DRAIN TRAP DETAIL

SCALE: NTS



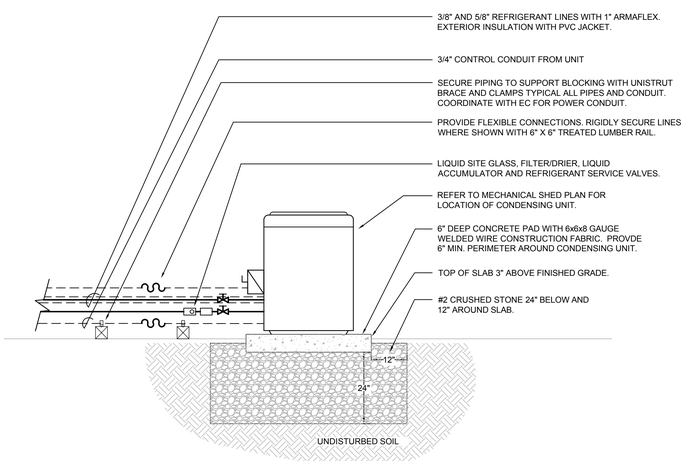
3 M4.1 FAN COIL UNIT DUAL TEMP PIPING DETAIL

SCALE: NTS



4 M4.1 ATC CONDUIT & DEVICE ARCHITECTURE DIAGRAM

SCALE: NTS



5 M4.1 OUTSIDE UNIT AND REFRIGERANT PIPING DETAIL

SCALE: NTS

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

MESICK•COHEN•WILSON•BAKER•ARCHITECTS
388 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-9397
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23185
p. (757)221-0713 f. (757)221-0714

MECHANICAL SCHEMATICS AND DETAILS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	DS
DATE	03-18-15
REVISED	-

DRAWING NO.
M4.1

GENERAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH 2012 VUSBC, 2012 IMC, 2012 IECC AND ALL APPLICABLE REFERENCE STANDARDS. STANDARDS.
2. ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE.
3. THE ELECTRICAL WORK INCLUDES THE FURNISHING, INSTALLATION AND CONNECTING OF ALL NECESSARY ELECTRICAL APPARATUS, CONTROLS AND RELATED EQUIPMENT TO MAKE ALL FACILITIES UNDER THE CONTRACT FULLY OPERATIONAL, INCLUDING BUT NOT LIMITED TO CONDUITS, RACEWAYS, WIRE, PULL BOXES, CIRCUIT BREAKERS, WIRING DEVICES, DISCONNECT SWITCHES, CONTROLS, MOTORS, LIGHTING FIXTURES, ETC.
4. ALL PRODUCTS SHALL BE NEW, CLEAN, UNDAMAGED, AND FREE OF DEFECTS AND CORROSION.
5. ALL PRODUCTS SHALL BE SHIPPED AND STORED IN A MANNER WHICH SHALL PROTECT THEM FROM DAMAGE, WEATHER AND ENTRY OF DEBRIS. IF ITEMS ARE DAMAGED, THEY SHALL NOT BE INSTALLED. THE EC SHALL TAKE IMMEDIATE MEASURE TO OBTAIN REPLACEMENT OR REPAIR IN ORDER TO MAINTAIN THE SCHEDULE.
6. THE EC SHALL VERIFY THAT ALL MATERIALS HE OR HIS SUPPLIERS SELECT CONFORM TO THE REQUIREMENTS OF THE DRAWINGS. TRANSMITTAL OF DRAWING INFORMATION TO MANUFACTURERS SUPPLYING MATERIALS, AND ADHERENCE TO THESE REQUIREMENTS IS THE EC'S RESPONSIBILITY. APPROVAL OF MANUFACTURER'S NAME BY THE ENGINEER DOES NOT RELEASE THE EC OF THE RESPONSIBILITY FOR PROVIDING MATERIALS WHICH COMPLY IN ALL RESPECTS WITH THE REQUIREMENTS IN THE CONTRACT DOCUMENTS. THE EC SHALL SUBMIT PRODUCT INFORMATION AND SHOP DRAWINGS FOR ALL MATERIALS USED ON THE PROJECT.
7. THE EC SHALL MINIMIZE INTERFERENCE WITH THE WORKING ROUTINE OF OCCUPIED AREAS, BY COORDINATING THE PERFORMANCE OF THE WORK IN A MANNER ACCEPTABLE TO ALL GROUPS INVOLVED.
8. THE EC SHALL NOT INTERRUPT ANY OF THE SITE'S ELECTRICAL SERVICES IN ANY WAY WITHOUT EXPRESSED PERMISSION OF THE OWNER. AMPLE WRITTEN NOTICE OF SHUTDOWNS SHALL BE GIVEN WELL IN ADVANCE TO THE OWNER. INTERRUPTIONS AND INTERFERENCE SHALL BE MADE AS BRIEF AS POSSIBLE AND ONLY AT TIMES AS STATED BY THE OWNER. WHEN TEMPORARY LOSS OF SERVICES IS UNAVOIDABLE, IT SHALL BE MADE AT TIMES AS SHALL CAUSE THE LEAST INTERFERENCE WITH THE ESTABLISHED ROUTINE.
9. ALL WORK DESCRIBED ON THE DRAWINGS AND ALL WORK REQUIRED BY THIS CONTRACT SHALL BE EXECUTED IN A THOROUGHLY SUBSTANTIAL AND WORKMANLIKE MANNER BY SKILLED MECHANICS IN THE VARIOUS TRADES INVOLVED. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLING, CONNECTING AND ADJUSTING ALL EQUIPMENT.
10. ALL CONDUCTORS SHALL BE AT LEAST #12 AWG COPPER UNLESS OTHERWISE NOTED.
11. THE EC SHALL PROVIDE AND INSTALL BOX AND CONDUIT FOR ALL TELECOMMUNICATIONS AND A/V DEVICES. WIRING SHALL BE INSTALLED BY THE OWNER.
12. THE EC SHALL LAYOUT AND INSTALL THEIR WORK IN ADVANCE OF FINISH CONSTRUCTION.
13. THE EC SHALL FURNISH AND INSTALL ALL NECESSARY CLAMPS, BRACKETS, ANGLES, AND ALL OTHER ITEMS FOR THE PROPER SUPPORT OF EQUIPMENT WHETHER INDICATED ON DRAWINGS OR NOT.
14. ALL SUPPORT NECESSARY FOR MOUNTING AND/OR SUPPORTING EQUIPMENT, FIXTURES, APPARATUS, ETC., SHALL BE OF STEEL OR SIMILAR MATERIAL (WOOD SUPPORTS ARE NOT ACCEPTABLE.
15. ALL DEVICES, EQUIPMENT, FIXTURES, AND THE LIKE MUST BE GROUNDED BY USE OF A PROPERLY SIZED GROUNDING CONDUCTOR. MECHANICAL/ELECTRICAL BONDS OF THE METALLIC RACEWAY SYSTEM SHALL BE MAINTAINED.
16. WIRE SIZES ARE BASED ON THE 60 DEGREE CELSIUS AMPACITIES FOR WIRE SIZES #12 THRU #1 AWG AND 75 DEGREE CELSIUS AMPACITIES FOR WIRE SIZES LARGER THAN #1/0 AWG PER NEC 110.14(C).
17. REFER TO SITE CIVIL DRAWINGS AND SPECIFICATIONS FOR STORM WATER PROTECTION PLAN REQUIREMENTS WHICH APPLY TO THE WORK TO INSTALL UTILITIES BETWEEN THE DWELLING AND MECHANICAL SHED.

DEFINITIONS:

CONCEALED: EMBEDDED MASONRY OR OTHER CONSTRUCTION, INSTALLED BEHIND WALL FURRING, WITHIN PARTITIONS, OR HUNG CEILINGS (PERMANENT OR REMOVABLE), IN TRENCHES, OR IN CRAWL SPACES.

EXPOSED: NOT INSTALLED UNDERGROUND OR CONCEALED.

NOTED: AS INDICATED ON THE DRAWINGS AND/OR SPECIFIED.

INDICATED: AS INDICATED ON THE DRAWINGS.

SHOWN: AS SHOWN ON THE DRAWINGS.

WIRING: CONDUITS, FITTINGS, WIRES, JUNCTION AND OUTLET BOXES, SWITCHES, CUTOUTS, RECEPTACLES, AND ITEMS NECESSARY OR REQUIRED IN CONNECTION WITH OR RELATING THERETO.

CLOSE-OUT NOTES:

1. THE EC SHALL PROVIDE THE OWNER WITH ALL SPECIAL TOOLS NEEDED FOR PROPER OPERATION, ADJUSTMENT AND MAINTENANCE OF EQUIPMENT.

WORK ENVIRONMENT:

1. THE EC SHALL CLEAN UP AND REMOVE FROM THE SITE ALL RUBBISH, DEBRIS AND TRASH ACCUMULATED DURING THE DAY AS A RESULT OF EC'S WORK OR HIS PRESENCE ON THE JOB.

MECHANICAL RELATED NOTES:

1. REFER TO MECHANICAL PLANS FOR EXACT LOCATION OF MECHANICAL EQUIPMENT AND LOCATE DISCONNECT SWITCHES IN ACCORDANCE WITH THE NEC.

SECURITY NOTES:

1. EC SHALL COORDINATE WITH THE OWNER THE INSTALLATION OF BOX AND CONDUITS FOR SECURITY DEVICES.

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
A	ABANDON IN PLACE
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
BFG	BELOW FINISHED GRADE
C	MOUNTED ON OR ABOVE CEILING
D	DEDICATED CIRCUIT
E	EXISTING TO REMAIN
EC	ELECTRICAL CONTRACTOR
EM	EMERGENCY
FLTMC	FLEXIBLE LIQUID-TIGHT METAL CONDUIT
FMC	FLEXIBLE METAL CONDUIT
LA	LIGHTNING ARRESTOR
MC	MECHANICAL CONTRACTOR
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
N/R	NOT REQUIRED
NTS	NOT TO SCALE
PC	PLUMBING CONTRACTOR
R	EXISTING TO BE RELOCATED
SS	SURGE SUPPRESSOR
UON	UNLESS OTHERWISE NOTED
VIF	VERIFY IN FIELD
VR	VANDAL RESISTANT
WG	WIRE GUARD
WP	WEATHER PROOF

WIRING METHODS

	CONDUIT	MC CABLE
BRANCH CIRCUIT WIRING ABOVE PLASTER CEILINGS	X	
ALL WIRING IN MASONRY, CONCRETE OR BELOW GRADE	X	
EXPOSED WIRING	X	
BRANCH CIRCUIT WIRING WITHIN FRAMED PARTITIONS	X	
FEEDERS	X	
WIRING IN MECHANICAL SHED	X	
BURIED WIRING	X	
FIRE ALARM WIRING	X	

MECHANICAL EQUIPMENT DISCONNECT SWITCH AND FEEDER SCHEDULE

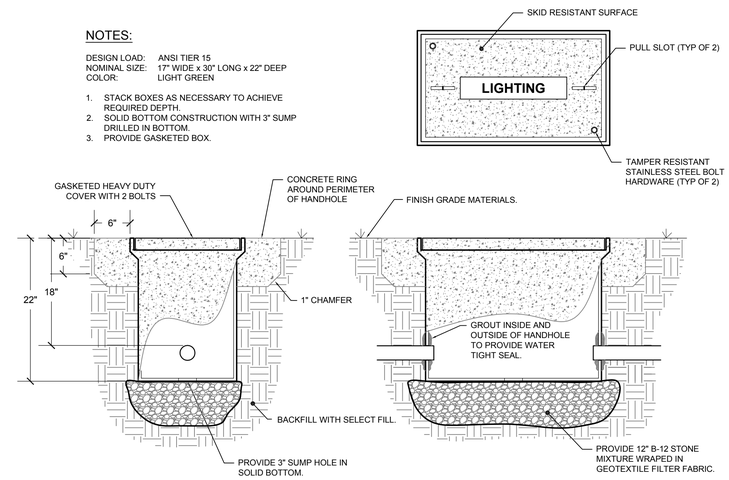
TAG	DESCRIPTION	LOCATION	FED FROM	VOLTS/Ø	HP	FEEDER	DISCONNECT SWITCH	MOTOR CONTROL	NOTES
P-1	DUAL TEMP PUMP	MECH SHED	LVFF1	208V/3Ø	1-1/2 HP	(3) #12 + (1) #12 G IN 3/4" C	INTEGRAL TO UNIT	VFD	-
P-2	DUAL TEMP PUMP	MECH SHED	LVFF1	208V/3Ø	1-1/2 HP	(3) #12 + (1) #12 G IN 3/4" C	INTEGRAL TO UNIT	VFD	-
P-3	BOILER	MECH SHED	LVFF1	120V	.68	(2) #12 + (1) #12 G IN 3/4" C	INTEGRAL TO UNIT	VFD	-
P-4A	WATER HEAT PUMP	MECH SHED	-	-	-	-	-	-	1
P-4B	WATER HEAT PUMP	MECH SHED	-	-	-	-	-	-	1
P-5	RADIANT	CRAWL SPACE	LVFF2	120V	.68	(2) #12 + (1) #12 G IN 3/4" C	INTEGRAL TO UNIT	-	-
P-6	RADIANT	CRAWL SPACE	LVFF2	120V	.68	(2) #12 + (1) #12 G IN 3/4" C	INTEGRAL TO UNIT	-	-
HP-1A	WATER HEAT PUMP	OUTDOOR	LVFF1	208V/1Ø	28.6 MCA	(2) #10 + (1) #10 G IN 3/4" C	N1/30/30	INTEGRAL	
HP-2A	WATER HEAT PUMP	OUTDOOR	LVFF1	208V/1Ø	28.6 MCA	(2) #10 + (1) #10 G IN 3/4" C	N1/30/30	INTEGRAL	
HP-1B	AIR HEAT PUMP	OUTDOOR	LVFF1	208V/1Ø	28.6 MCA	(2) #10 + (1) #10 G IN 3/4" C	N1/30/30	INTEGRAL	
HP-2B	AIR HEAT PUMP	OUTDOOR	LVFF1	208V/1Ø	28.6 MCA	(2) #10 + (1) #10 G IN 3/4" C	N1/30/30	INTEGRAL	
UH-1	UNIT HEATER	MECH SHED	LVFF1	208V/1Ø	2.5kW	(2) #10 + (1) #10 G IN 3/4" C	N1/30/30	LINE VOLTAGE 'STAT	

NOTES:
1. PUMP IS INTEGRAL TO UNIT AND DOES NOT NEED TO BE POWERED SEPARATELY.

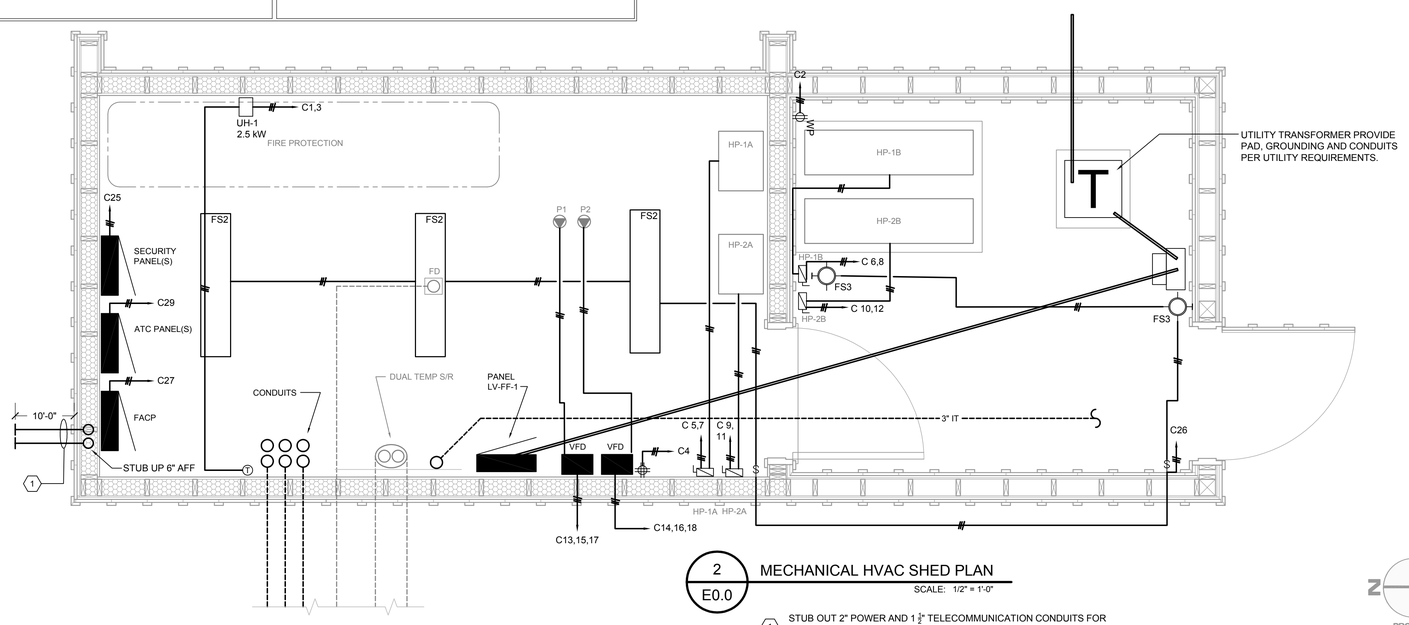
NOTES:

DESIGN LOAD: ANSI TIER 15
NOMINAL SIZE: 17" WIDE x 30" LONG x 22" DEEP
COLOR: LIGHT GREEN

1. STACK BOXES AS NECESSARY TO ACHIEVE REQUIRED DEPTH.
2. SOLID BOTTOM CONSTRUCTION WITH 3" SUMP DRILLED IN BOTTOM.
3. PROVIDE GASKETED BOX.



1 / E0.0 QUAZITE BOX DETAIL
SCALE: 1/2" = 1'-0"



2 / E0.0 MECHANICAL HVAC SHED PLAN
SCALE: 1/2" = 1'-0"

1 STUB OUT 2" POWER AND 1 ½" TELECOMMUNICATION CONDUITS FOR FUTURE SECURITY BOOTH. BURY AT 24" BFG.

PROJECT NORTH

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

MESICK•COHEN•WILSON•BAKER•ARCHITECTS
398 BROADWAY ALBANY, NY 12207
p. (518)433-3994 f. (518)433-3357
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

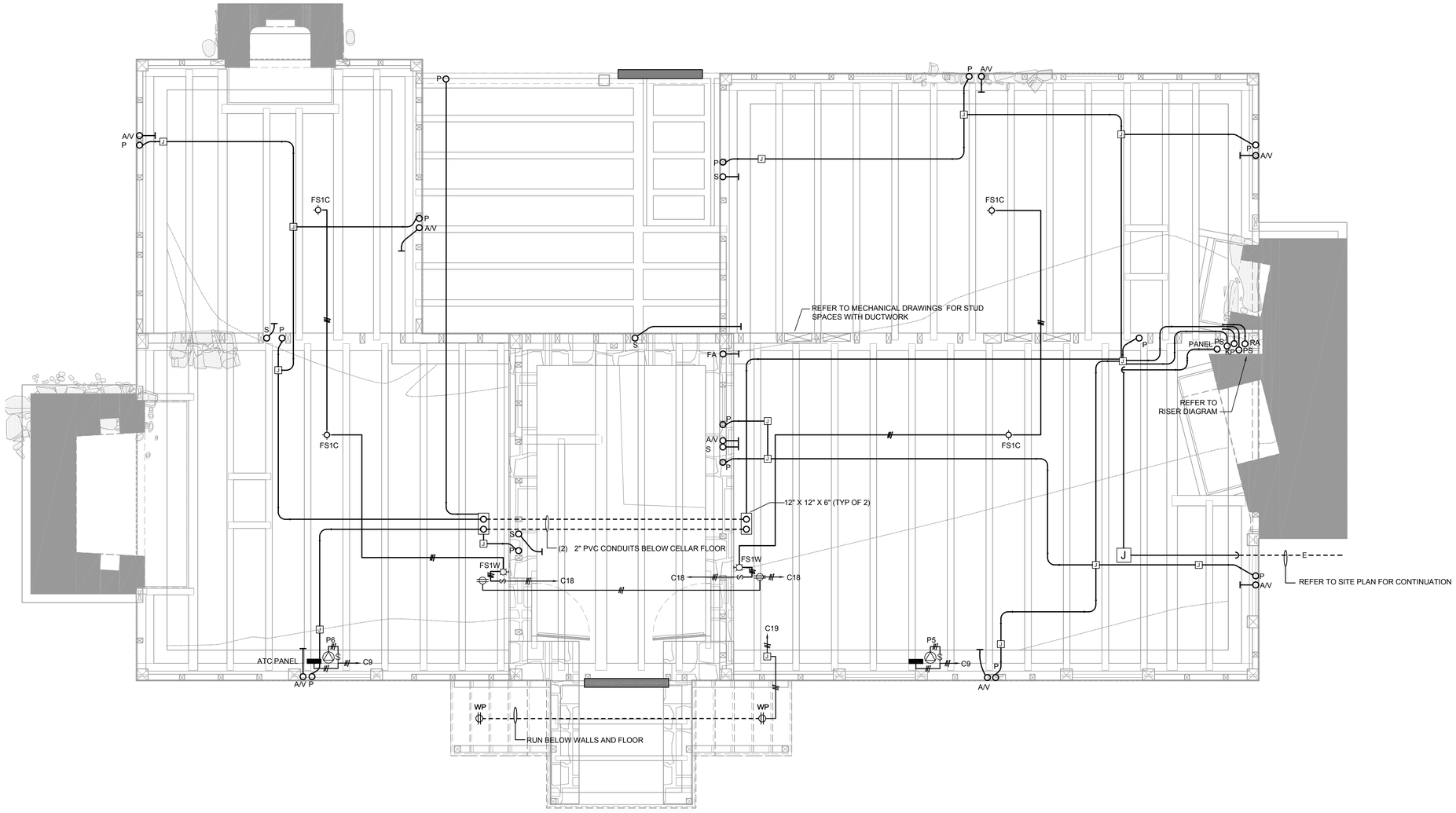
ELECTRICAL LEGENDS, NOTES & DETAILS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	NO SCALE
COMMISSION NO.	0726
DRAWN BY	AM
DATE	03-18-15
REVISED	

DRAWING NO.
E0.0

Z:\PROJECTS\2051 George Washington's Ferry Farm\Electrical\2051 E0.0.dwg, E0.0, 03-26-2015 03:45:01 pm, ARCH_D_(24.00_x_36.00_inches), 1:1

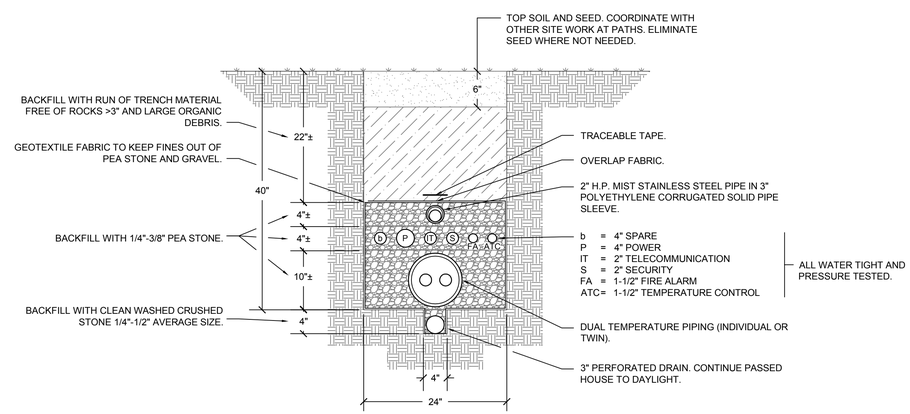


1 E2.0 ELECTRICAL CRAWL SPACE PLAN

SCALE: 3/8"=1'-0"

LIGHTING FIXTURE SCHEDULE

TAG	WATTS	LAMPS		MANUFACTURER	CATALOG NUMBER	DESCRIPTION
		QTY	TYPE			
FS1C	13W	1	T2 SPIRAL COMPACT FLUORESCENT SCREW-IN BULB MED. (E26) BASE	GE	18304	MEDIUM BASE PORCELAIN LAMPHOLDER MOUNTED ON CEILING. PROVIDE CFL 120 VOLT T2 SCREW-IN BULB.
FS1W	13W	1	T2 SPIRAL COMPACT FLUORESCENT SCREW-IN BULB MED. (E26) BASE	GE	18304	MEDIUM BASE PORCELAIN LAMPHOLDER MOUNTED ON WALL. PROVIDE CFL 120 VOLT T2 SCREW-IN BULB.
FS2	32W	2	4 FOOT T8 FLUORESCENT LAMPS	COLUMBIA LIGHTING	WC-4-2-32-E-U	4 FOOT WRAPAROUND FIXTURE WITH CLEAR ACRYLIC PRISMATIC DIFFUSER. PROVIDE (2) 4' T8 LAMPS WITH 120 VOLT ELECTRONIC BALLAST.
FS3	32W	1	SPIRAL COMPACT FLUORESCENT SCREW-IN BULB MED. BASE	HUBBELL OUTDOOR LIGHTING	VWGG-150	9 3/4" HIGH WALL MOUNTED JELLY JAR OUTDOOR GLOBE FIXTURE WITH GUARD AND CAST ALUMINUM WALL BRACKET AND WIRING BOX. UL LISTED FOR USE IN WET LOCATIONS. PROVIDE (1) 32 WATT SCREW-IN MED. BASE LAMP.



2 E2.0 UTILITY TRENCH SECTION

SCALE: NO SCALE

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

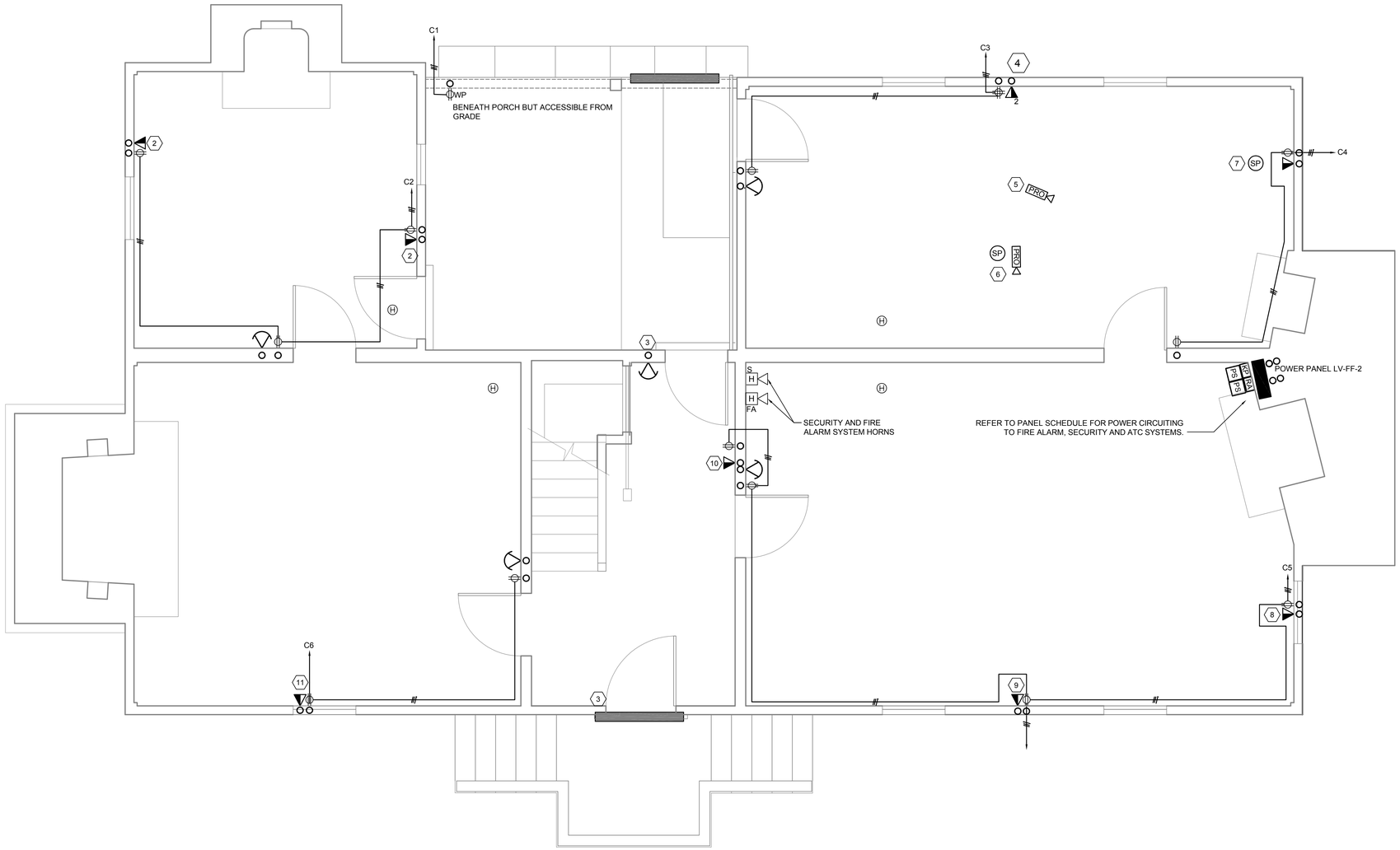
MESICK•COHEN•WILSON•BAKER•ARCHITECTS
398 BROADWAY ALBANY, NY 12207
p. (518)433-3394 f. (518)433-3357
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

ELECTRICAL CRAWL SPACE PLAN

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	As Noted
COMMISSION NO.	0726
DRAWN BY	AM
DATE	03-18-15
REVISED	-

DRAWING NO.
E2.0



1 / E2.1 ELECTRICAL FIRST FLOOR PLAN

SCALE: 3/8"=1'-0"

ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	IP CAMERA USED FOR MOTION DETECTION AND IMAGE CAPTURE. PROVIDE RECESSED DEVICE BOX AND 3/4" CONDUIT TO PATCH PANEL.
#	A/V FACEPLATE, # = NUMBER OF ACTIVE PORTS. PROVIDE RECESSED DEVICE BOX AND 3/4" CONDUIT TO A/V EQUIPMENT LOCATION. QUANTITY = 1 UON
	120 VOLT, 20 AMPERE DOUBLE DUPLEX RECEPTACLE
	120 VOLT, 20 AMPERE DOUBLE DUPLEX RECEPTACLES IN COMMON FACEPLATE
SP	A/V SYSTEM SPEAKER
S	SINGLE STATION ANALOG, ADDRESSABLE, MULTI-FUNCTION SMOKE DETECTOR WITH SOUNDER BASE.
KP	SECURITY SYSTEM KEYPAD TO ARM/DISARM IN ZONES.
FACP	FIRE ALARM SYSTEM CONTROL PANEL.
RA	FIRE ALARM SYSTEM REMOTE ANNOUNCIATORS WITH SILENCE AND ACKNOWLEDGE FUNCTIONALITY.
H FA	FIRE ALARM SYSTEMS HORN
H S	SECURITY SYSTEM ALARM HORN
PS S	SECURITY SYSTEM POWER SUPPLY
	PROJECTOR
	MOTOR

A/V CODED NOTES:

1. FOR FUTURE USE: A/V AND POWER, AT BED.
2. FOR FUTURE USE: A/V AND POWER, AT CHEST.
3. TRANSDUCERS LOCATED IN DOOR. ACTIVATED ON/OFF WITH DOOR OPEN/SHUT.
4. QUAD RECEPTACLE AND 2-PORT SIGNAL JACK, 6" AFF, ON WALL AT BED.
5. PROJECTOR MOUNTED AT TOP OF CANOPY ABOVE FIXED BED.
6. SPEAKER AND PROJECTOR MOUNTED IN TRUNK AT FOOT OF BED. DOCENT ON/OFF.
7. SPEAKER HIDDEN IN BOTTOM DRAWER OF DRESSER, 6" AFF. DOCENT ON/OFF.
8. FOR FUTURE USE: A/V AND POWER, AT SMALL TABLE.
9. FOR FUTURE USE: A/V AND POWER, AT SCRENFORE.
10. FOR FUTURE USE: A/V AND POWER, UPSTAIRS SOUNDS.
11. FOR FUTURE USE: A/V AND POWER, AT WALL, 12" AFF.

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

MESICK•COHEN•WILSON•BAKER•ARCHITECTS
398 BROADWAY ALBANY, NY 12207
p. (518)433-9394 f. (518)433-8357
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

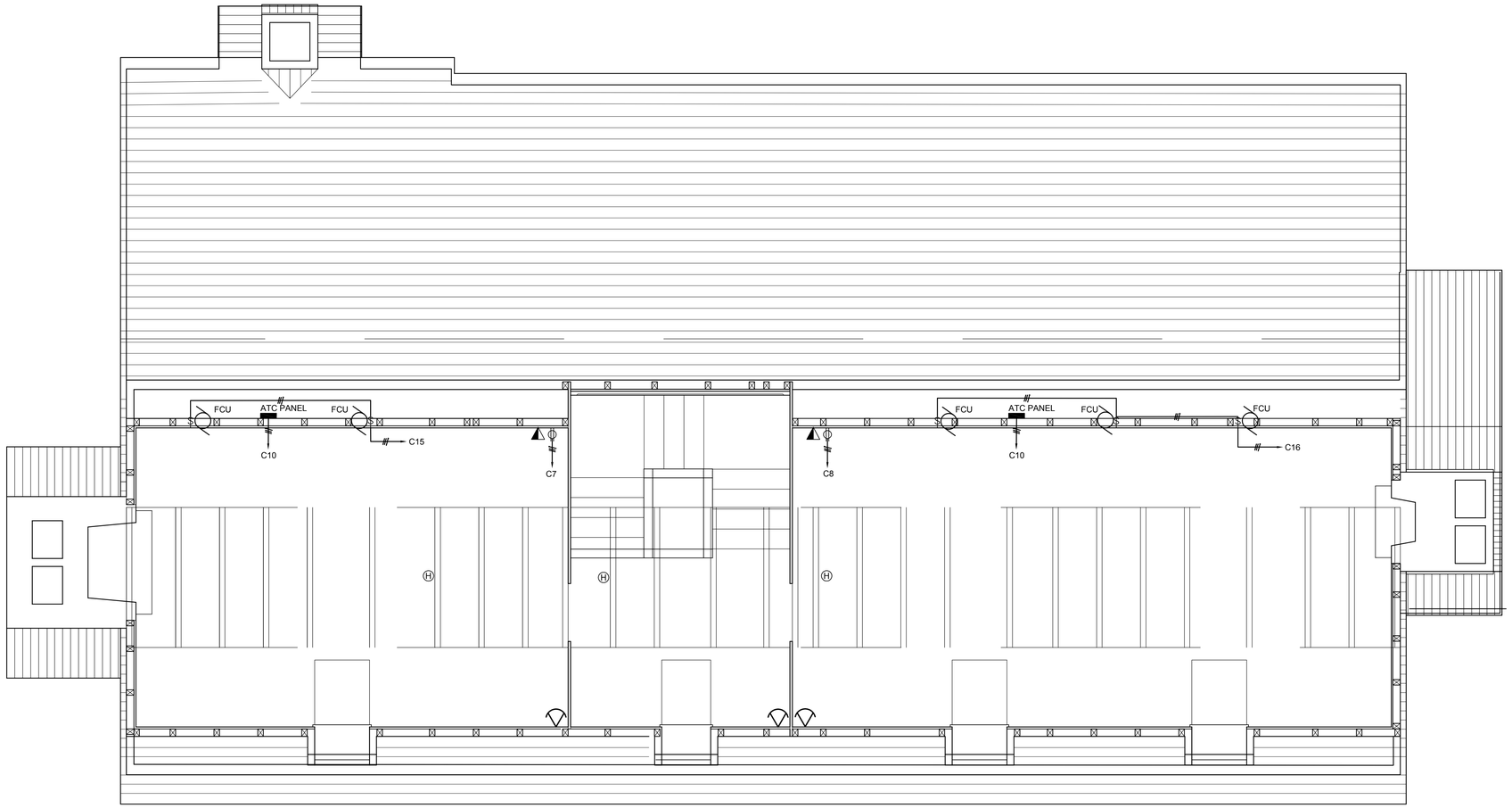
ELECTRICAL FIRST FLOOR PLAN

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	As Noted
COMMISSION NO.	0726
DRAWN BY	AM
DATE	03-18-15
REVISED	

DRAWING NO.
E2.1

Z:\PROJECTS\2051 George Washington's Ferry Farm\Electrical\2051 E2.1.dwg, E2.1, 03-26-2015 02:30:56 pm, ARCH_D_(24.00_x_36.00_inches), 1:1



1 / E2.2 ELECTRICAL SECOND FLOOR PLAN

SCALE: 3/8"=1'-0"

N

PANEL LV-FF-1 NEW 208/120 VOLTS

MAINS 225A MAIN BKR MCB 3 PHASE 4 WIRE

OPTIONS:

☒ TOP FEED ☐ SUBFEED LUGS ☒ SUBFEED BKR 150A ☐ SURFACE MTD 100% NEUTRAL

☐ BOTTOM FEED ☐ FEEDTHRU LUGS ☐ ISOLATED GND ☐ RECESSED MTD BREAKER AIC MINIMUM 22kAIC

NOTES

DESCRIPTION	WATTS	TRIP			TRIP	WATTS	DESCRIPTION
UH-1	–	20	1	2	20	–	EXTERIOR RECEPT
I	I	I	3	4	20	–	INTERIOR RECEPT
HP-1A	–	30	5	6	30	–	HP-1B
I	–	I	7	8	I	–	I
HP2-A	–	30	9	10	30	–	HP2B
I	–	I	11	12	I	–	I
P-1	–	20	13	14	20	–	P-2
I	–	I	15	16	I	–	I
I	–	I	17	18	I	–	I
P-3	–	20	19	20	60	–	SECURITY BOOTH
SPARE	–	20	21	22	I	–	I
SPARE	–	20	23	24	I	–	I
SECURITY	–	20	25	26	20	–	SHED LIGHTS
FIRE ALARM	–	20	27	28	20	–	SPARE
ATC	–	20	29	30	20	–	SPARE
SPARE	–	20	31	32	20	–	SPARE
SPARE	–	20	33	34	20	–	SPARE
SPARE	–	20	35	36	20	–	SPARE
SPARE	–	20	37	38	20	–	SPARE
SPARE	–	20	39	40	20	–	SPARE
SPARE	–	20	41	42	20	–	SPARE
		TOTAL			TOTAL		

BASIS OF DESIGN SQUARE D NF NOTES – NEMA 1

PANEL LV-FF-2 NEW 208/120 VOLTS

MAINS 150A MAIN BKR MCB 3 PHASE 4 WIRE

OPTIONS:

☒ TOP FEED ☐ SUBFEED LUGS ☐ SUBFEED BKR – ☐ SURFACE MTD 100% NEUTRAL

☐ BOTTOM FEED ☐ FEEDTHRU LUGS ☐ ISOLATED GND ☐ RECESSED MTD BREAKER AIC MINIMUM 10kAIC

NOTES

DESCRIPTION	WATTS	TRIP			TRIP	WATTS	DESCRIPTION
RECEPTACLE	–	20	1	2	20	–	RECEPTACLE
RECEPTACLE	–	20	3	4	20	–	RECEPTACLE
RECEPTACLE	–	20	5	6	20	–	RECEPTACLE
RECEPTACLE	–	20	7	8	20	–	RECEPTACLE
RADIANT PUMPS	–	20	9	10	20	–	ATC
SPARE	–	20	11	12	20	–	SECURITY POWER SUPPLY
SPARE	–	20	13	14	20	–	FIRE ALARM SYSTEM PWR SUPPLY
FAN COIL UNITS	–	20	15	16	20	–	FAN COIL UNITS
SPARE	–	20	17	18	20	–	CRAWL SPACE LTS & REC.
EXTERIOR RECEPTACLE	–	20	19	20	20	–	SPARE
SPARE	–	20	21	22	20	–	SPARE
SPARE	–	20	23	24	20	–	SPARE
		TOTAL			TOTAL		

BASIS OF DESIGN SQUARE D QO LOAD CENTER NOTES – NEMA 1

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

MESICK•COHEN•WILSON•BAKER•ARCHITECTS
398 BROADWAY ALBANY, NY 12207
p. (518)433-3394 f. (518)433-3357
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

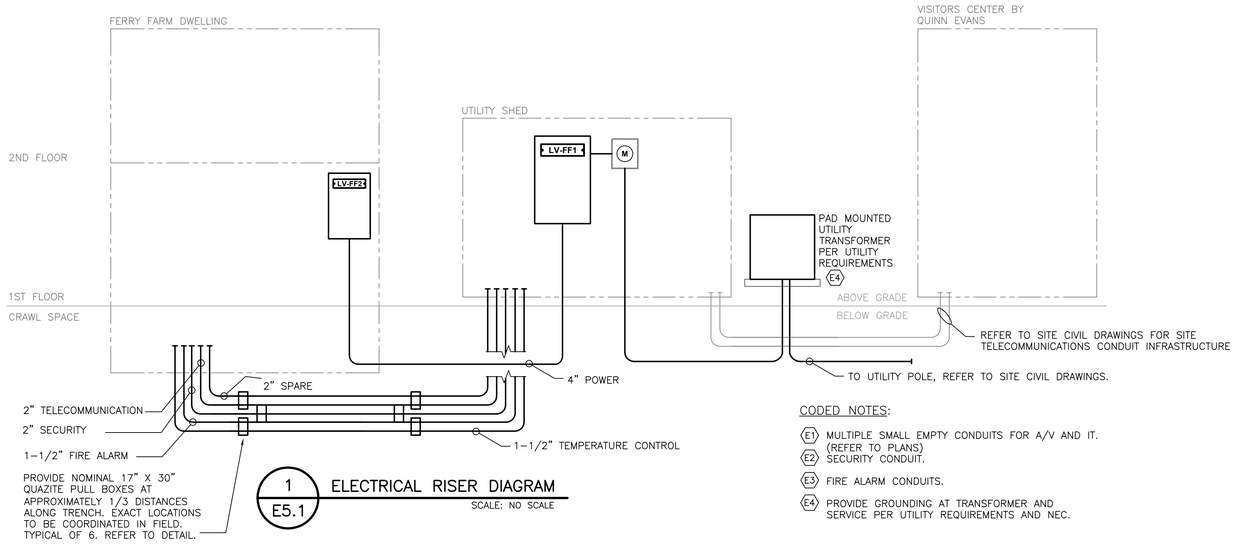
ELECTRICAL SECOND FLOOR PLAN

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	As Noted
COMMISSION NO.	0726
DRAWN BY	AM
DATE	03-18-15
REVISED	

DRAWING NO.
E2.2

Z:\PROJECTS\2051 George Washington's Ferry Farm\Electrical\2051 E2.2.dwg, E2.2, 03-26-2015 02:31:56 pm, ARCH_D_(24.00_x_36.00_inches), 1:1

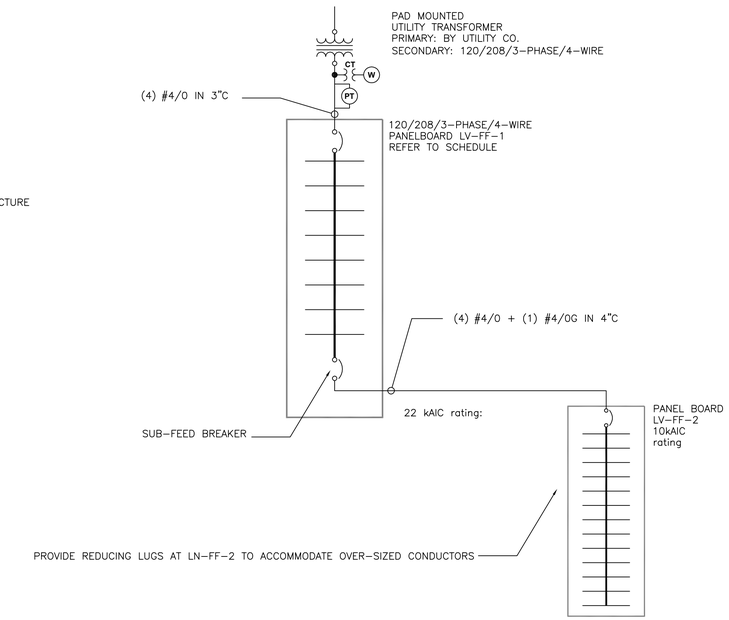


1 / E5.1 ELECTRICAL RISER DIAGRAM

SCALE: NO SCALE

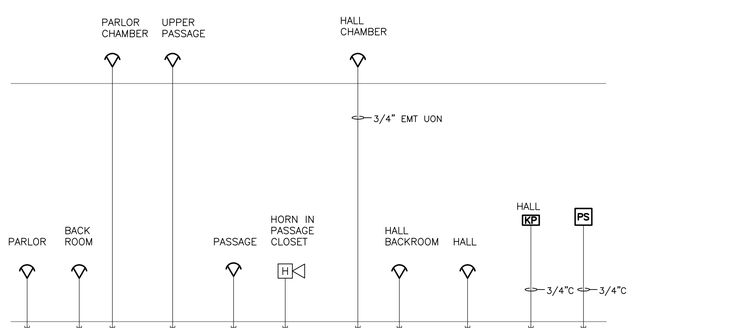
CODED NOTES:

- E1 MULTIPLE SMALL EMPTY CONDUITS FOR A/V AND IT. (REFER TO PLANS)
- E2 SECURITY CONDUIT.
- E3 FIRE ALARM CONDUITS.
- E4 PROVIDE GROUNDING AT TRANSFORMER AND SERVICE PER UTILITY REQUIREMENTS AND NEC.



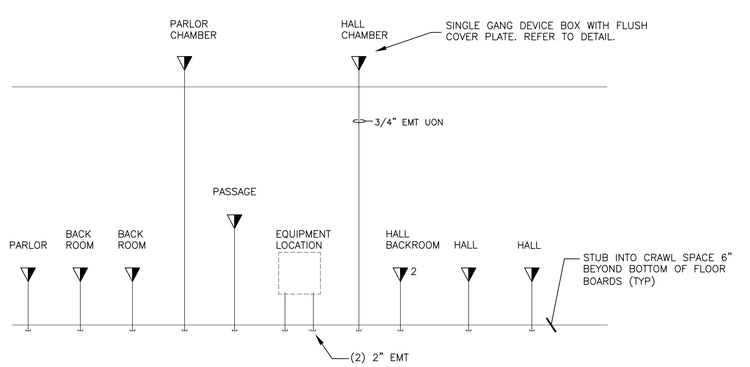
4 / E5.1 ONE-LINE DIAGRAM

SCALE: NO SCALE



2 / E5.1 SECURITY SYSTEM RISER DIAGRAM

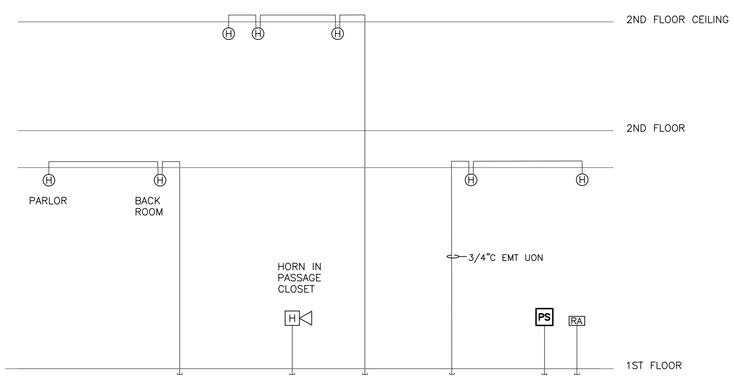
SCALE: NO SCALE



3 / E5.1 A/V CONDUIT RISER DIAGRAM

SCALE: NO SCALE

FIRE ALARM SYSTEM OPERATION MATRIX	Annunciation						Notification
	Alarm Annunciation at FACP	Supervisory Annunciation at FACP	Trouble Annunciation at FACP	System control common alarm signal via DACT	System control common supervisory signal via DACT	System Control Common Trouble Signal via DACT	Activate Horns in the House
Attic Heat Detector	X			X			X
Sprinkler Flow	X			X			X
Sprinkler Tamper Switch		X			X		
Low Nitrogen Supervisory Switch		X			X		
Room Heat Detector	X				X		X
AC Power Fail (FACP)			X			X	
Low Battery (FACP)			X			X	
Open Circuit (FACP)			X			X	
Ground Fault (FACP)			X			X	
Horn Circuit Short (FACP)			X			X	
FACP Fail			X			X	



5 / E5.1 FIRE ALARM RISER DIAGRAM

SCALE: NO SCALE

COMMONWEALTH OF VIRGINIA
A. CURTIS WILSEY
Lic. No. 0402049522
PROFESSIONAL ENGINEER

Quantum Engineering Co., P.C.
48 THATCHER ST. SELKIRK, NEW YORK 12158
TEL. 518-767-9450 FAX 518-767-9442

MESICK•COHEN•WILSON•BAKER•ARCHITECTS
398 BROADWAY ALBANY, NY 12207
p. (518)433-8394 f. (518)433-8357
3302 CRAGGY OAK COURT WILLIAMSBURG, VA 23188
p. (757)221-0713 f. (757)221-0714

ELECTRICAL ONE-LINE DIAGRAM & DETAILS

INTERPRETIVE STRUCTURE AT
GEORGE WASHINGTON'S FERRY FARM
GEORGE WASHINGTON FOUNDATION
268 KINGS HIGHWAY, FREDERICKSBURG, VIRGINIA 22405

SCALE	AS NOTED
COMMISSION NO.	0726
DRAWN BY	AM
DATE	03-18-15
REVISED	

DRAWING NO.
E5.1