

COMMISSION OF ARCHITECTURAL REVIEW APPLICATION FOR CERTIFICATE OF APPROPRIATENESS

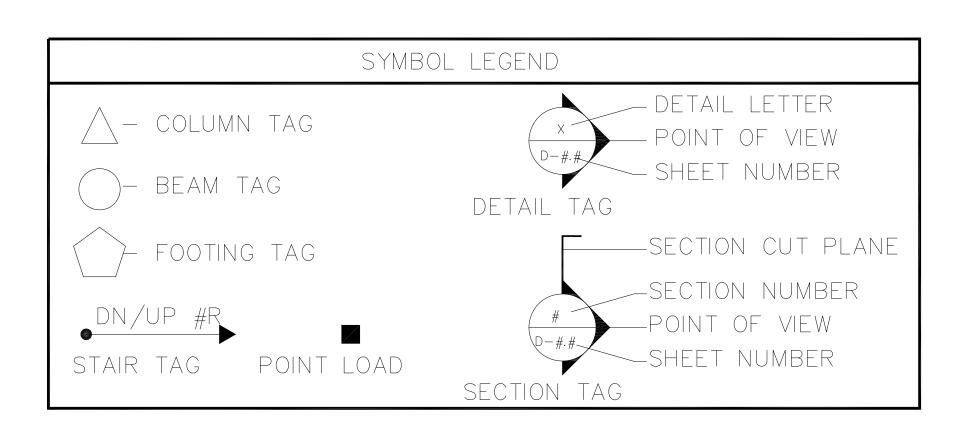
PROPERTY (location of work)	
	Date/time rec'd: 11-20-18
Address 2217-2219 (edar 84.	Rec'd by: Jeffrie'S
Historic district Union Hill	Application #: (0A - 045476 - 2018 Hearing date: 12 - 18 - 18
ADDITORNE NEGOTIANTON	The state of the s
APPLICANT INFORMATION	
Name Matt Jarreau	Phone 804-306-9019
Company	Email Mattich tysi. Com
Mailing Address 114 N 3rd 84	Applicant Type: ☐ Owner ☐ Agent
Richmond Va 23219	☐ Lessee ☐ Architect ☐ Contractor
	Other (please specify):
OWNER INFORMATION (if different from above)	
Name	Company
Mailing Address	Phone
	Email
PROJECT INFORMATION	
Review Type: Conceptual Review	w.
Project Type: Alteration Demolition	■ New Construction
	(Conceptual Review Required)
Project Description: (attach additional sheets if needed)	1
Building two single family	attached homes.
	NOV 2 0 2018
ACKNOWLEDGEMENT OF RESPONSIBILITY	
Compliance: If granted, you agree to comply with all conditions of the CO and may require a new application and CAR approval. Failure to comply we action. The COA is valid for one (1) year and may be extended for an addi	with the COA may result in project delays or legal
Requirements: A complete application includes all applicable information and accurate description of existing and proposed conditions. Preliminary necessary to process the application. Owner contact information and sign will not be considered.	requested on checklists to provide a complete review meeting or site visit with staff may be
coning Requirements: Prior to CAR review, it is the responsibility of the a equired and application materials should be prepared in compliance with	n zoning.
Signature of Owner	11/2014

2217 & 2219 CEDAR STREET DEVELOPMENT

CHURCH HILL - RICHMOND, VA 23223

P.O. BOX 4481

FAIRFAX, VA 22038



SHEET INDEX				
PAGE NUMBER	DESCRIPTION			
C-001	COVER SHEET			
C-002	STREET SCAPE			
CS-001	CONSTRUCTION PLAT			
A-101	FOUNDATION AND FIRST FLOOR PLAN			
A-102	SECOND FLOOR AND ROOF PLAN			
A-103	BUILDING SECTION			
A-104	SCHEDULES AND FIRE WALL INFORMATION			
A-201	ALL VIEW ELEVATIONS			
S-001	GENERAL NOTES			
S-101	FIRST AND SECOND FLOOR FRAMING PLAN			
S-102	ROOF FRAMING PLAN			
S-103	FIRST AND SECOND FLOOR BRACED WALL PLAN			
S-104	SECTIONS AND DETAILS AND BRACED WALL CALCULATIONS			



Phone: (703) 675-4592

SQUARE FOOTAGE CALCULATIONS						
ELEVATION:	ITALIANATE					
AREA	FINISHED	AREA	UNFINISHED			
1ST FLOOR	766 SF	FRONT PORCH	38 SF			
2ND FLOOR	766 SF	REAR PATIO	84 SF			
TOTAL	1,532 SF	TOTAL	122 SF			



BUILDING CODE:

PROJECT SHALL CONFORM TO THE 2012 VIRGINIA UNIFORM STATEWIDE BUILDING CODE

CITY OF RICHMOND APPLICABLE DOCUMENTS/PERMITS:

COMMISSION OF ARCHITECTURAL REVIEW PROJECT NUMBER:

RICHMOND CITY ORDINANCE:

ZONING: R63 SETBACKS: DESIGNED FRONT YARD: 15'-0" MAX DESIGNED SIDE YARDS: 3'-0" DESIGNED REAR YARD: 5'-0" DESIGNED HEIGHT: 2 STORIES, 24'±

LOT SIZE & COVERAGE:

LOT AREAS: 2,200 S.F. LOT WIDTH: 18'-0" DESIGNED COVERAGE: 794 S.F. EACH COVERAGE: 65%



VICINITY MAP

PENN&CO. 42296 BENFOLD SQUARE ASHBURN, VA 20148 (703) 675-4592 PHONE

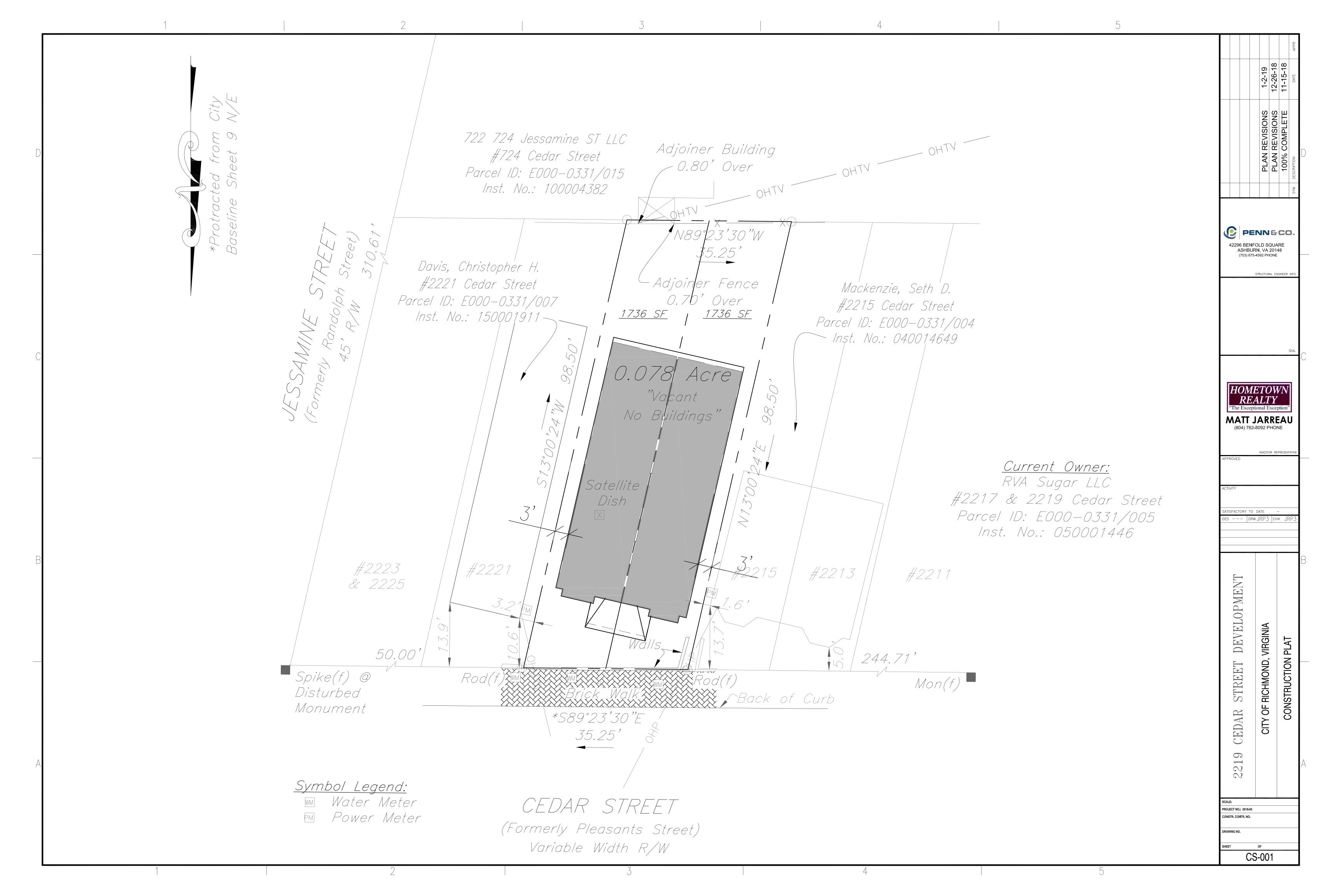


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DEVELOPMEN RICHMOND, VIRGINIA

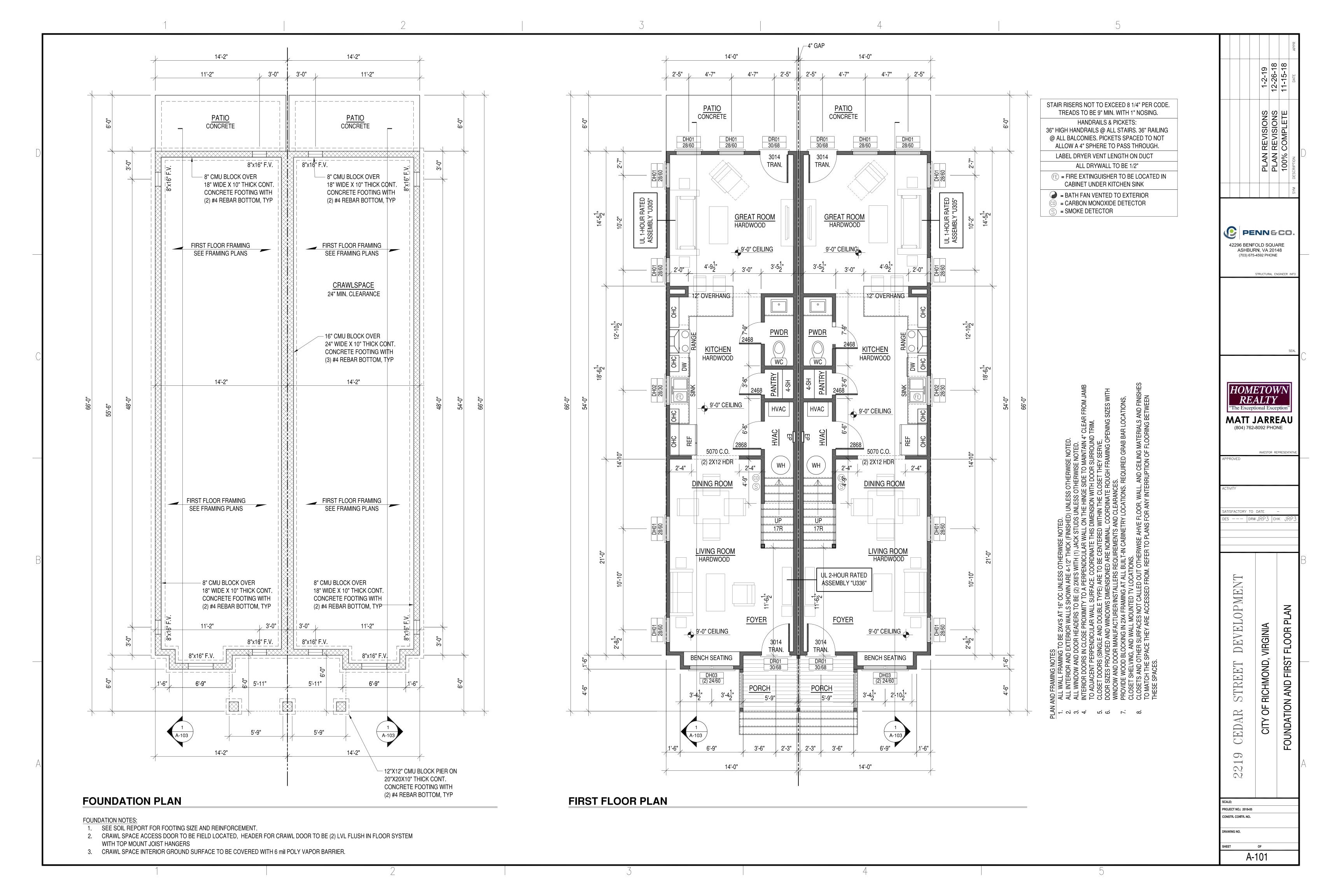
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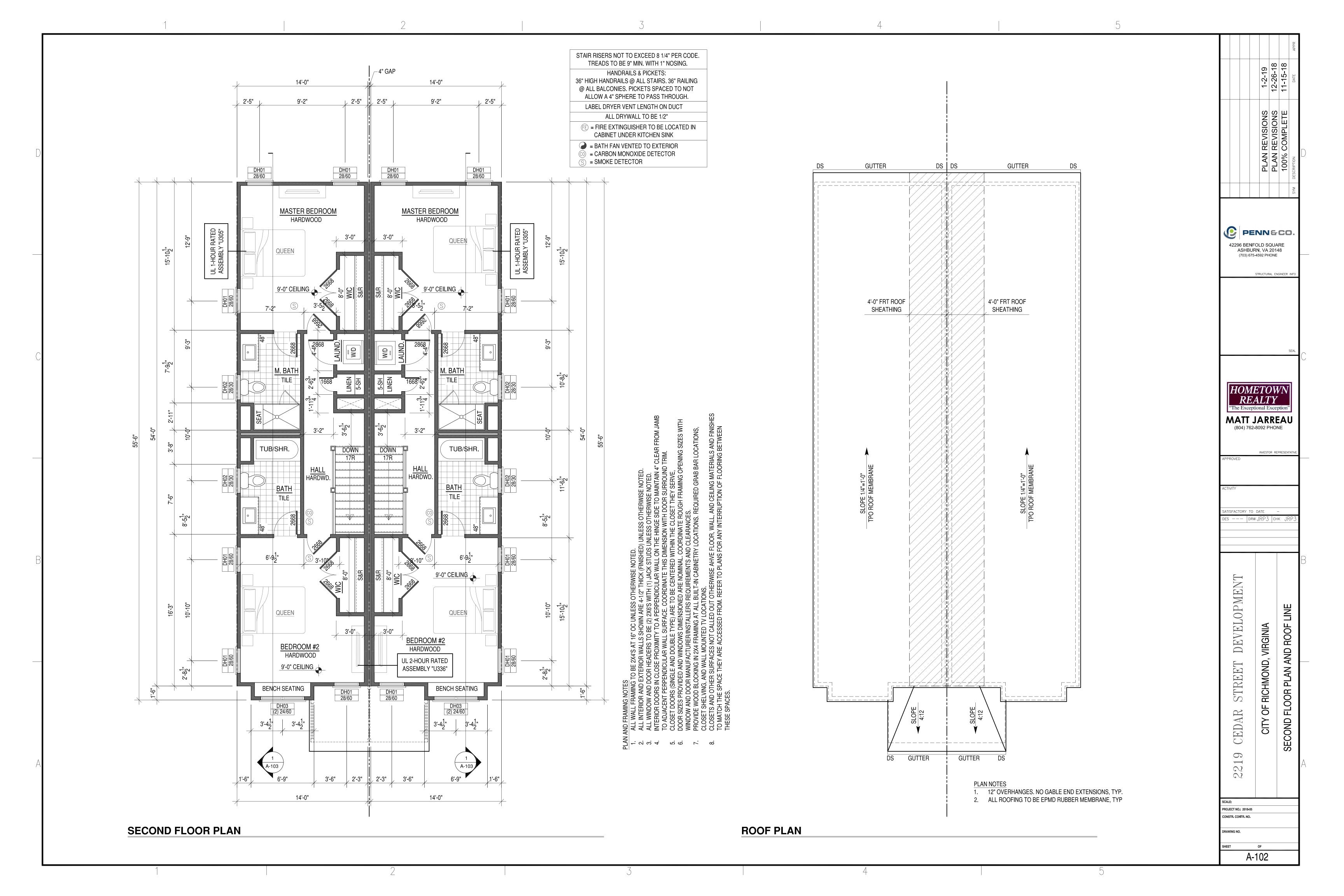
C-001

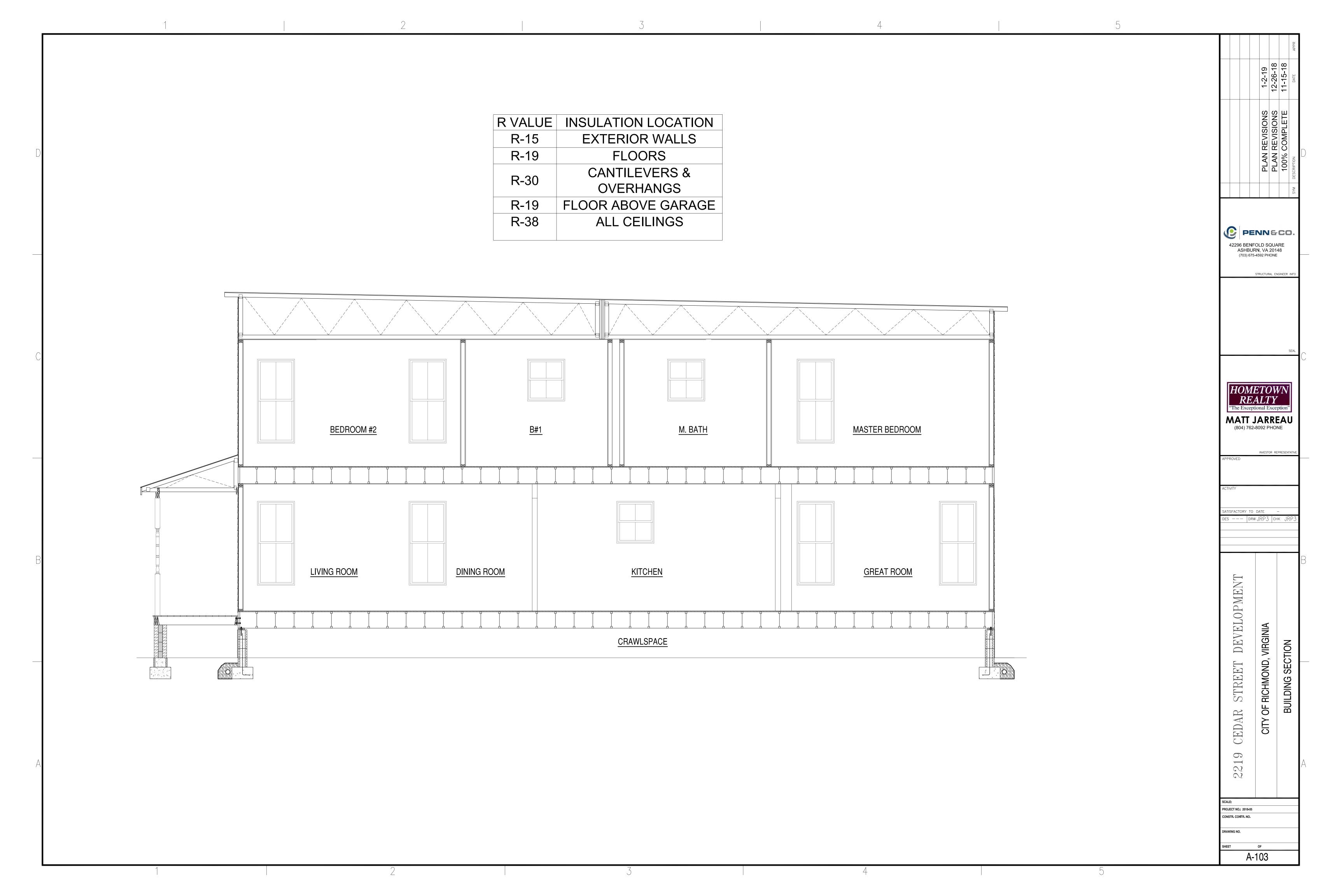




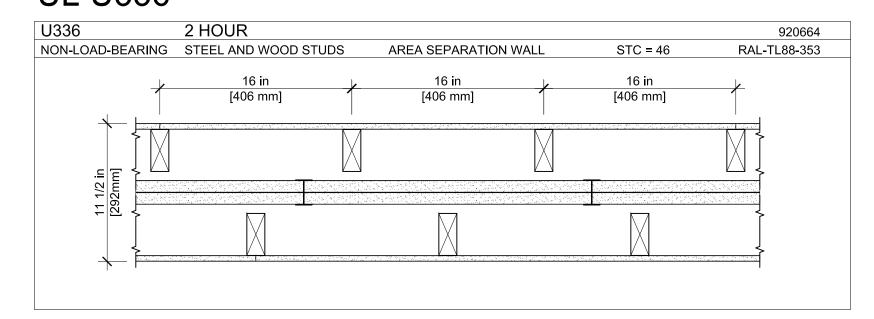
CS-002







UL U336



AREA SEPARATION WALL: STEEL AND WOOD STUDS (NON-LOAD-BEARING)

FIRE RATING: 2 HOUR
STC: 46
SOUND TEST: RAL-TL88-353
SYSTEM THICKNESS: 11-1/2"

ASSEMBLY OPTIONS:

GYPSUM BOARD: MIN. 1/2 IN. THICK GYPSUM BOARD APPLIED HORIZONTALLY OR VERTICALLY.

WOOD STUDS: 2 IN. X 4 IN. WOOD STUDS SPACED MAX. 16 IN. O.C.

AIR CAVITY: MIN. 3/4 IN. THICK AIR SPACE

STEEL STUDS: H-STUD 25 GA., 2 IN. DEEP BY 1-3/8 IN. WIDE, SPACED MAX. 24 IN. O.C.

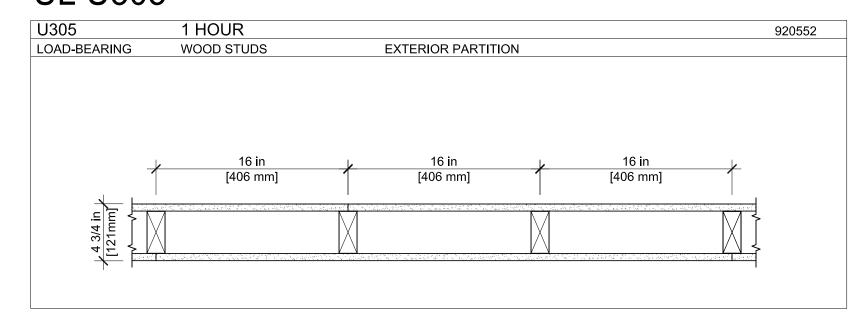
GYPSUM BOARD: TWO LAYERS OF 1 IN. THICK BY NOM. 2 FT. WIDE GYPSUM LINER PANELS FRICTION FIT.

AIR CAVITY: MIN. 3/4 IN. THICK AIR SPACE

WOOD STUDS: 2 IN. X 4 IN. WOOD STUDS SPACED MAX. 16 IN. O.C.

GYPSUM BOARD: MIN. 1/2 IN. THICK GYPSUM BOARD APPLIED HORIZONTALLY OR VERTICALLY.

UL U305



EXTERIOR PARTITIONS: WOOD STUD (LOAD-BEARING)

FIRE RATING: 1 HOUR
STC: 33
SOUND TEST: RAL-TL11-172
SYSTEM THICKNESS: 4-3/4"

ASSEMBLY OPTIONS:

GYPSUM BOARD: 5/8 IN. THICK GYPSUM BOARD APPLIED HORIZONTALLY OR VERTICALLY.
WOOD STUDS: 2 IN. X 4 IN. WOOD STUDS SPACED MAX. 16 IN. O.C.
GYPSUM BOARD: 5/8 IN. THICK GYPSUM BOARD APPLIED HORIZONTALLY OR VERTICALLY.

DOOR SCHEDULE							
MARK DESCRIPTION WIDTH HEIGHT OPERATION HARDWARE NOTES						NOTES	
DR01	FRONT & REAR ENTRY	3'-0"	6'-8"	SEE PLAN	01	STEEL, TEMPERED WITH 14" TRANSOM	

DOOR NOTES:

- 1. GENERAL CONTRACTOR SHALL VERIFY ALL DOOR SCHEDULE INFORMATION PRIOR TO ORDERING DOORS AND FRAMES.
- 2. ALL EXTERIOR DOORS SHALL BE PROVIDED WITH WEATHERSTRIPPING AND THRESHOLD.
- 3. ALL SWING DOORS SHALL BE PROVIDED WITH HINGE-OR WALL-MOUNTED DOOR STOPS.
- 4. ALL GLASS IN DOORS AND TRANSOMS SHALL BE TEMPERED.

DOOR HARDWARE SETS:

1. (3) HINGES, ENTRY HANDLE LOCK SET, DEAD BOLT.

WINDOW SCHEDULE							
MARK	DESCRIPTION	WIDTH	HEIGHT	HEADER HEIGHT	NOTES		
DH01	DOUBLE HUNG	2'-8"	6'-0"	7'-10"	PVC 2 OVER 2		
DH02	DOUBLE HUNG	2'-8"	3'-0"	7'-10"	PVC 2 OVER 2		
(2) DH03	TWIN DOUBLE HUNG	2'-4"	6'-0"	7'-10"	PVC 2 OVER 2		

WINDOW NOTES:

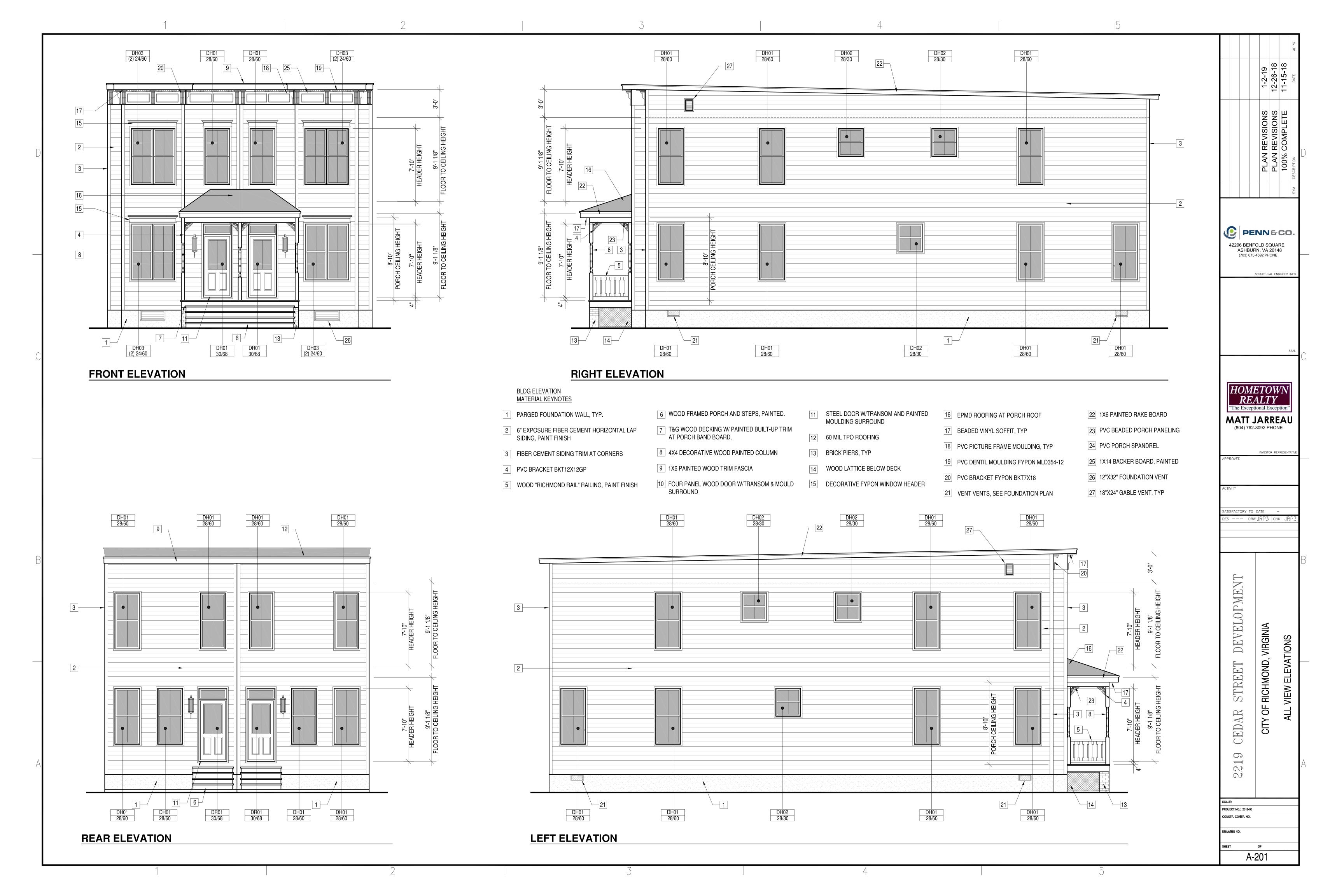
- 1. GENERAL CONTRACTOR SHALL VERIFY ALL WINDOW SCHEDULE INFORMATION PRIOR TO ORDERING WINDOWS AND FRAMES.
- 2. ALL WINDOWS NOMINAL. GENERAL CONTRACTOR TO VERIFY ACTUAL SIZES AND FRAMING REQUIREMENTS WITH WINDOW MANUFACTURER.
- 3. SECOND FLOOR WINDOWS REQUIRED FOR EMERGENCY EGRESS SHALL MEET THE REQUIREMENTS OF IRC R310.1, GENERALLY 20" MIN. CLEAR WIDTH, 24" MIN. CLEAR HEIGHT, AND 5.7 SQUARE FEET NET CLEAR OPENING.
- 4. NO WINDOW GLAZING SHALL BE WITHIN 18" OF FINISH FLOOR.
- 5. SAFETY GLAZING SHALL BE TEMPERED.

							APP	
				1-2-19	12-26-18	11-15-18	DATE	
				PLAN REVISIONS	PLAN REVISIONS	100% COMPLETE	SYM DESCRIPTION	
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SCALI				CITY OF RICHMOND, VIRGINIA		SCHEDIII ES AND EIBE WALL INFORMATION		
PROJ	ECT NO	.: 2018- NTR. NC						
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GENERAL NOTES

- DESIGN BUILD CODE: 2012 VIRGINIA RESIDENTIAL BUILDING CODE THE CONTRACTOR SHALL COORDINATE ALL DIMENSIONS AND ELEVATIONS SHOWN ON THESE DRAWINGS WITH ARCHITECTURAL AND OTHER TRADES DRAWINGS. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES OR OMISSIONS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY BRACING AND SHORING. AS REQUIRED TO INSURE VERTICAL AND LATERAL STABILITY OF THE ENTIRE STRUCTURE OR PORTION THEREOF DURING CONSTRUCTION. THE DESIGN PROCEDURES SHALL CONFORM TO ALL GOVERNING CODES AND SAFETY REQUIREMENTS. TEMPORARY BRACING AND SHORING SHALL BE IN CONFORMANCE WITH OCHA DECLII ATIONS

	WITH OSHA REGULATIONS.					
1.	DESIGN LOADS:	LIVE	LIVE LOADS		DEAD LOADS	
	A. FLOOR	40	PSF	10	PSF	
	B. EXTERIOR DECKS	40	PSF	10	PSF	
	C. ROOF	20	PSF	10	PSF	
	D. SNOW (Pg)	20	PSF			
	SLOPED	16	PSF			

MPH, 3 SECOND GUST (ASD) - 115 MPH (ULTIMATE)

SUBGRADE DESIGN VALUES: THE FOLLOWING SUBSURFACE INFORMATION IS ASSUMED FOR DESIGN PURPOSES. THE CONTRACTOR SHALL ENGAGE A QUALIFIED GEOTECHNICAL ENGINEER TO VERIFY THE ADEQUACY OF THE SUBGRADE ASSUMPTIONS FOR THE PROPOSED CONSTRUCTION.

A. BEARING OF VIRGIN MATERIAL: LEAN CLAY OR BETTER

B. BEARING PRESSURE: 1500 PSF

BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE MINIMUM OF 1'-6" BELOW GRADE,

ALL FOOTINGS SHALL PROJECT AT LEAST 1'-0" INTO UNDISTURBED NATURAL SOIL OR COMPACTED STRUCTURAL FILL. ALL BEARING STRATA SHALL BE ADEQUATELY DRAINED BEFORE FOUNDATION CONCRETE IS PLACED. NO EXCAVATION SHALL BE CLOSER THAT AT A SLOPE OF 2:1 (TWO HORIZONTAL TO ONE VERTICAL) TO A FOOTING. DO NOT PLACE CONCRETE OVER FROZEN SOIL. FOOTINGS SHALL NOT BE FOUNDED ON EXISTING FILL, LOOSE OR WET SOIL. STEP FOOTINGS WITH A RATIO OF 2 HORIZONTAL TO 1 VERTICAL.

CAST-IN-PLACE CONCRETE

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH ACI 301, ACI 318 AND ACI 302, EDITIONS REFERENCED BY BUILDING CODE.
- REINFORCING STEEL SHALL BE DEFORMED BILLET STEEL CONFORMING TO ASTM A615 GRADE 60.
- REINFORCEMENT SPLICES SHALL BE LAP SPLICES WITH A MINIMUM LAP OF 40 BAR DIAMETERS UNLESS
- CONCRETE COMPRESSIVE STRENGTHS AT 28 DAY CURE = 3000 PSI.
- CAST-IN-PLACE CONCRETE SHALL BE READY-MIX PER ASTM C94. THE MIX SHALL BE PROPORTIONED

A. PORTLAND CEMENT. ASTM C150

- B. AGGREGATES, ASTM C33 WITH .75 INCH MAXIMUM DIAMETER
- C. NO CALCIUM CHLORIDE SHALL BE PERMITTED
- D. AIR ENTRAINMENT, ASTM C260
- E. WATER REDUCING ADMIXTURE, ASTM C494
- F. FLYASH, ASTM C618-78 CLASS F, 15% MAXIMUM BY WEIGHT
- G. WATER. CLEAN AND POTABLE
- 6. PROVIDE PROPERLY TIED SPACERS, CHAIRS, BOLSTERS, ETC, AS REQUIRED AND NECESSARY TO ASSEMBLE, PLACE AND SUPPORT ALL REINFORCING IN PLACE. USE WIRE BAR TYPE SUPPORTS COMPLYING WITH CRSI RECOMMENDATIONS. USE PLASTIC TIP LEGS ON ALL EXPOSED SURFACES.
- CONTRACTOR SHALL VERIFY EMBEDDED ITEMS. INCLUDING BUT NOT LIMITED TO ANCHOR BOLTS. BOLT CLUSTERS, WELD PLATES, ETC., BEFORE PLACING CONCRETE NOTIFY ENGINEER OF ANY CONFLICTS WITH REBAR.
- STEP AND SLOPE ALL BALCONIES, WALKWAYS, AND PATIOS AWAY FROM THE BUILDING.
- RESTRICT THE ADDITION OF MIX WATER AT THE JOB SITE. DO NOT ADD WATER WITHOUT THE APPROVAL OF THE GENERAL CONTRACTOR AND DO NOT EXCEED SLUMP LIMITATIONS. USE COLD WATER FROM THE TRUCK TANK AND REMIX TO ACHIEVE CONSISTENCY. THE REPORTS SHALL INDICATE HOW MUCH WATER WAS ADDED AT THE JOB SITE.
- 10. CONCRETE SHALL BE PLACED WITHIN 90 MINUTES IF BATCH TIME.

WOOD

- ALL FOLLOWING DESIGN VALUES ARE IN ACCORDANCE WITH THE NATIONAL DESIGN SPECIFICATIONS (NDS) AND SUPPLEMENT NATIONAL DESIGN SPECIFICATIONS (EDITION REFERENCED BY BUILDING CODE.)
- ALL HEADERS AND BEAMS SHALL BE SPF NO. 2 OR OTHER SPECIES HAVING THE FOLLOWING MINIMUM
- PROPERTIES: UNLESS NOTED OTHERWISE Fb = 875425
- EXTERIOR AND INTERIOR BEARING WALL STUDS SHALL BE SPF NO. 2 OR OTHER SPECIES HAVING THE FOLLOWING MINIMUM PROPERTIES: UNLESS NOTED OTHERWISE

875 PSI Fb = 425 PSI Fc =

E = 1.400.000

E = 1,400,000PSI

4. WALL TOP PLATES AT BEARING LOCATIONS, TO BE SYP #2 MIN OR OTHER SPECIES HAVING THE

FOLLOWING MINIMUM PROPERTIES (UNO) Fb = 1500PSI 565 PSI E = 1,600,000PSI

5. ALL LUMBER IN CONTACT WITH MASONRY OR CONCRETE AND EXPOSED TO WEATHER (FOR BALCONY DECK BOARDS, LEDGER, JOISTS, BEAMS, AND SILL PLATES) SHALL BE SOUTHERN PINE PRESSURE TREATED TO .40 LB RETENTION, PER AWPA STANDARDS, HAVING THE FOLLOWING MINIMUM PROPERTIES:

> Fb = 1500 PSI, 1250 PSI, 1200 PSI, 1050 PSI AND 975 PSI FOR 4, 6, 8,10 AND 12 INCH WIDE SECTIONS RESPECTIVELY.

Fc = 565PSI Fv = 90E = 1,600,000

6. LVL (LAMINATED VENEER LUMBER) SHALL BE 1-3/4" WIDE, OF THE DEPTH SPECIFIED ON THE PLANS, AND SHALL BE SECURED TOGETHER AS DIRECTED BY THE MANUFACTURER UNO. THE FOLLOWING MINIMUM PROPERTIES SHALL APPLY.

> PSI FOR 12" DEPTH, FOR OTHERS MULTIPLY BY [12/D].136 Fb = 2600PSI PER Fc = 750PSI 285 = 2,000,000

- ALL LUMBER SHALL BE SOUND, SEASONED, AND FREE FROM WARP.
- ALL STUDS SHALL BE INSTALLED IN ACCORDANCE WITH AF & PA (AMERICAN FOREST & PAPER ASSOCIATION) REQUIREMENTS. MEMBERS ARE NOT TO BE DRILLED IN EXCESS OF NDS OR LOCAL CODE REQUIREMENTS. WHICHEVER IS MORE STRINGENT, ALL POSTS AND STUDS SHALL STACK CONTINUOUSLY TO SOLID BEARING ON FOUNDATION WALLS OR BEAMS; PROVIDE SOLID BLOCKING AND OR CRIPPLES AS REQUIRED BETWEEN FLOORS.
- STUD BEARING WALLS AND EXTERIOR STUD WALLS SHALL BE CONTINUOUSLY BRIDGED WITH WOOD BLOCKING AT MIDSPAN VERTICAL SPACING BETWEEN FLOORS (AND ROOF) LEVELS. STUDS AND POSTS SHALL BE ONE-PIECE-CONTINUOUS BETWEEN FLOOR LEVELS AND BETWEEN FLOOR LEVEL AND ROOF DIAPHRAGMS. ALL DOUBLE STUDS SHALL BE NAILED TO EACH OTHER AT 8" MAXIMUM SPACING FULL
- 10. MINIMUM GRADES, FOR DIMENSIONED LUMBER, SHALL BE SPF NO. 2 GRADE AS DEFINED BY THE NDS FOR WOOD CONSTRUCTION, NFPA. ALL WOOD MEMBERS SHALL BE MANUFACTURED TO COMPLY WITH PS20 OF "AMERICAN SOFTWOOD LUMBER STANDARDS" AND SHALL HAVE 19% MAXIMUM MOISTURE CONTENT
- 11. ALL MULTIPLE MEMBERS ARE TO BE FASTENED TOGETHER WITH 16d NAILS AT 12" OC 2 ROWS FOR BEAMS 9"-12" DEEP. 3 ROWS FOR BEAMS 14"-18" DEEP (STAGGERED)
- 12. PLYWOOD SHALL BE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
- 13. FASTENING OF WOOD FRAMING MEMBERS AND SHEATHING BY BUILDING CODE, SEE STRUCTURAL DETAILS FOR INCREASED FASTENING SCHEDULES WHERE APPLICABLE.
- 14. WALL SHEATHING .50" WOOD STRUCTURAL PANEL EXTERIOR, .50" MIN GYPSOM WALL BOARD INTERIOR. INSTALLATION OF GYPSUM SHEATHING SHALL COMPLY TO IRC.
- 15. WOOD COLUMNS AND POST SHALL BE FRAMED TO TRUE END BEARINGS, AND SHALL BE POSITIVELY ANCHORED TO FOUNDATION WITH APPROVED POST BASES. SUPPORT COLUMN AND POST SECURELY IN POSITION AND PROTECT BASE FROM DETERIORATION. COLUMNS AND POSTS OF TREATED WOOD MAY BE PLACED DIRECTLY ON CONCRETE OR MASONRY. USE TREATED WOOD FOR ALL FLOOR JOIST AND BEAMS, WHICH ARE EXPOSED, OR WITHIN 18" OF THE GROUND, OR IN PERMANENT CONTACT WITH EARTH. ALL EXTERIOR P.T. WOOD SECURED WITH HOT SIPPED GALVANIZED FASTENERS.
- 16. BEAR BEAMS AND GIRDERS AT LEAST 4" ON MASONRY OR CONCRETE, FLOOR, JOISTS, CEILING JOISTS AND ROOF RAFTERS SHALL HAVE 4" MIN BEARING ON WOOD OR WOOD PLATES ON METAL OR MASONRY.
- 17. PROVIDE 2" NOMINAL THICKNESS FULL DEPTH SOLID BLOCKING FOR JOISTS AND RAFTERS AT ENDS AND AT SUPPORTS. OMIT SOLID BLOCKING WHEN JOISTS ARE NAILED TO A CONTINUOUS HEADER. LAP JOISTS FRAMING FROM OPPOSITE SIDES OF A BEAM, GIRDER OR PARTITION AT LEAST 6". SECURE JOISTS FRAMED END TO END WITH METAL STRAPS. USE APPROVED FRAMING ANCHORS TO SUPPORT JOISTS FRAMING INTO THE SIDES OF WOOD OR STEEL BEAMS.
- 18. FLOOR DECKING SHALL BE APA RATED FLOOR SHEATHING. GLUED AND NAILED PER APA RECOMMENDATIONS FOR THE STURDI-FLOOR SYSTEM.

CONCRETE MASONRY

- HOLLOW LOAD BEARING UNITS SHALL CONFORM TO ASTM C90, NORMAL WEIGHT, TYPE 1, GRADE N WITH A MINIMUM 28 DAY NET COMPRESSIVE UNIT STRENGTH OF 1900 PSI. NET AREA COMPRESSIVE MASONRY STRENGTH f'm = 1500 PSI.
- 2. MORTAR SHALL BE TYPE M BELOW GRADE AND IN CONTACT WITH SOIL AND TYPE S AT ALL OTHER LOCATIONS. MORTAR SHALL CONFORM TO ASTM C270 (PROPORTION OR PROPERTY SPECIFICATIONS)
- 3. FILLED CELLS SHALL BE FILLED WITH COARSE GROUT. COARSE GROUT SHALL CONFORM TO ASTM C476, PROPERTIES SHALL INCLUDE: 2500 PSI AT 28 DAY. 3/8" MAX. AGGREGATE, AND 8"-11" SLUMP. FILLED CELLS MAY ALTERNATIVELY BE FILLED WITH A 3000 PSI PEA GRAVEL MIX CONCRETE. THE PEA GRAVEL MIX SHALL BE PROPORTIONED WITH A MAX. AGGREGATE SIZE OF 3/8 INCH DIAMETER TO PROVIDE A MIN. OF 1/2" CLEARANCE. ADDITIONALLY, THE PEA GRAVEL MIX SHALL PROVIDE AN 8" TO 11" SLUMP.
- 4. CODES AND STANDARDS INCLUDE: ACI 530/ASCE 5. "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES", ACI 530.1/ASCE 6, "SPECIFICATIONS FOR MASONRY STRUCTURES"
- 5. VERTICAL REINFORCING BARS SHALL BE HELD IN POSITION, WITH BAR POSITIONERS, AT THE TOP AND BOTTOM OF BAR AND AT 8'-0" OC MAX. WITH A MIN CLEARANCE OF 1/2" FROM MASONRY. THE CLEAR DISTANCE BETWEEN BARS SHALL NOT BE LESS THAN ONE BAR DIAMETER, NOR LESS THAN 1". CENTER BARS IN WALLS UNO.
- 6. PROVIDE ACI 90 DEGREE STANDARD HOOKS INTO FOOTINGS AND ROOF TIE BEAM. MAINTAIN VERTICAL REINFORCING SHOWN ON DRAWINGS, ABOVE AND BELOW MASONRY OPENINGS EXCEEDING 10'-0" CLEAR. CONTINUE FOUNDATION DOWELS BELOW ALL MASONRY OPENINGS.
- 7. REINFORCING BARS SHALL BE STRAIGHT EXCEPT FOR BENDS AROUND CORNERS AND WHERE BENDS OR HOOKS ARE DETAILED ON THE PLANS.
- 8. MINIMUM LAP SPLICE SHALL BE 48 BAR DIAMETERS. WIRE TIE LAP SPLICES.
- 9. WHEN FOUNDATION DOWELS DOES NOT LINE UP WITH VERTICAL CORE, IT SHALL NOT BE SLOPED MORE THEN ONE HORIZONTAL IN SIX VERTICAL. DOWELS SHALL BE GROUTED INTO A CORE IN VERTICAL
- ALIGNMENT. EVEN IF IT IS IN A CELL ADJACENT TO THE VERTICAL WALL REINFORCEMENT. 10. HORIZONTAL WALL REINFORCEMENT SHALL BE 9 GA. GALVANIZED LADUR TYPE DUR-O-WAL (OR
- EQUIVALENT) SPACED AT 16" OC MAX., VERTICAL LAP SPLICE 12" MIN. 11. PROVIDE HORIZONTAL JOINT REINFORCEMENT AT MASONRY OPENINGS SUCH AS DOORS AND WINDOWS. CONTINUE JOINT REINFORCING FOR THE FIRST AND SECOND BLOCK COURSE ABOVE AND
- BELOW MASONRY OPENING. EXTEND JOINT REINFORCING A MINIMUM OF TWO FEET BEYOND OPENING. 12. CLEANOUTS SHALL BE PROVIDED IN THE BOTTOM COURSE OF MASONRY IN EACH GROUT POUR WHEN
- THE POUR HEIGHT EXCEEDS 5'-0". CLEANOUTS SHALL BE SAW-CUT 4"X4".
- 13. GROUT POUR HEIGHT SHALL NOT EXCEED 24'. PLACE GROUT IN 5' MAXIMUM LIFTS HEIGHTS. 14. CONSOLIDATE GROUT POURS AT THE TIME OF PLACEMENT BY MECHANICAL MEANS AND
- RECONSOLIDATE AFTER INITIAL WATER LOSS AND SETTLEMENT. 15. PLACE ALL MASONRY IN RUNNING BOND WITH 3/8" MORTAR JOINTS. PROVIDE COMPLETE COVERAGE FACE SHELL MORTAR BEDDING, HORIZONTAL AND VERTICAL. FULLY MORTAR WEBS IN ALL COURSES OR
- PIERS, COLUMNS, AND PILASTERS AND ADJACENT TO GROUTED CELLS. 16. MASONRY CONTROL JOINTS SHALL BE INSTALLED AT LOCATIONS INDICATED ON THE DRAWINGS. ADDITIONALLY, INSTALL MASONRY CONTROL JOINTS SPACE AT 26'-0" OC AT EXTERIOR WALLS, 32'-0" AT INTERIOR WALLS UNO.

MASONRY

- 1. ALL MASONRY SHALL CONFORM TO BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" (ACI 530/ASCE 5/TMS 402) AND "SPECIFICATIONS FOR MASONRY STRUCTURES" (ACI 530.1/ASCE 6/TMS 602) FOR THE YEAR REFERENCED IN THE BUILDING CODE NOTED.
- 2. ALL BRICK AND CONCRETE MASONRY AND CONSTRUCTION SHALL COMPLY WITH THE RECOMMENDATIONS OF BRICK INSTITUTE OF AMERICA (BIA) AND THE NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA) AND MINIMUM REQUIREMENTS ESTABLISHED BY NOTED BUILDING CODES.
- 3. GROUT TO FILL CORES SHALL BE ASTM C476, COARSE GROUT (3/8" MAXIMUM AGGREGATE) WITH A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI IN 28 DAYS.
- 4. CONCRETE MASONRY UNITS (CMU) SHALL BE MEDIUM WEIGHT UNITS CONFORMING TO ASTM C90. ASTM C270 TYPE "S" MORTAR WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 PSI SHALL BE USED FOR ALL MASONRY. MASONRY SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F'M)=1500 PSI
- UNLESS NOTED OTHERWISE. 5. WHEN STRUCTURAL REINFORCEMENT IS INCORPORATED IN MASONRY CEMENT MORTAR, THE MAXIMUM AIR CONTENT SHALL BE 18%.
- REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60.
- DEFORMED BAR ANCHORS (DBA) SHALL CONFORM TO ASTM 496, 75 KSI YIELD STRENGTH.
- 8. ALL MASONRY UNITS SHALL HAVE GALVANIZED HORIZONTAL JOINT REINFORCEMENT AS FOLLOWS: A.A. 9 GA. SIDE AND CROSS RODS (LADDER TYPE) SPACED 16" O.C. VERTICALLY
- LAP JOINT REINFORCING AS SHOWN IN THE TABLE BELOW.

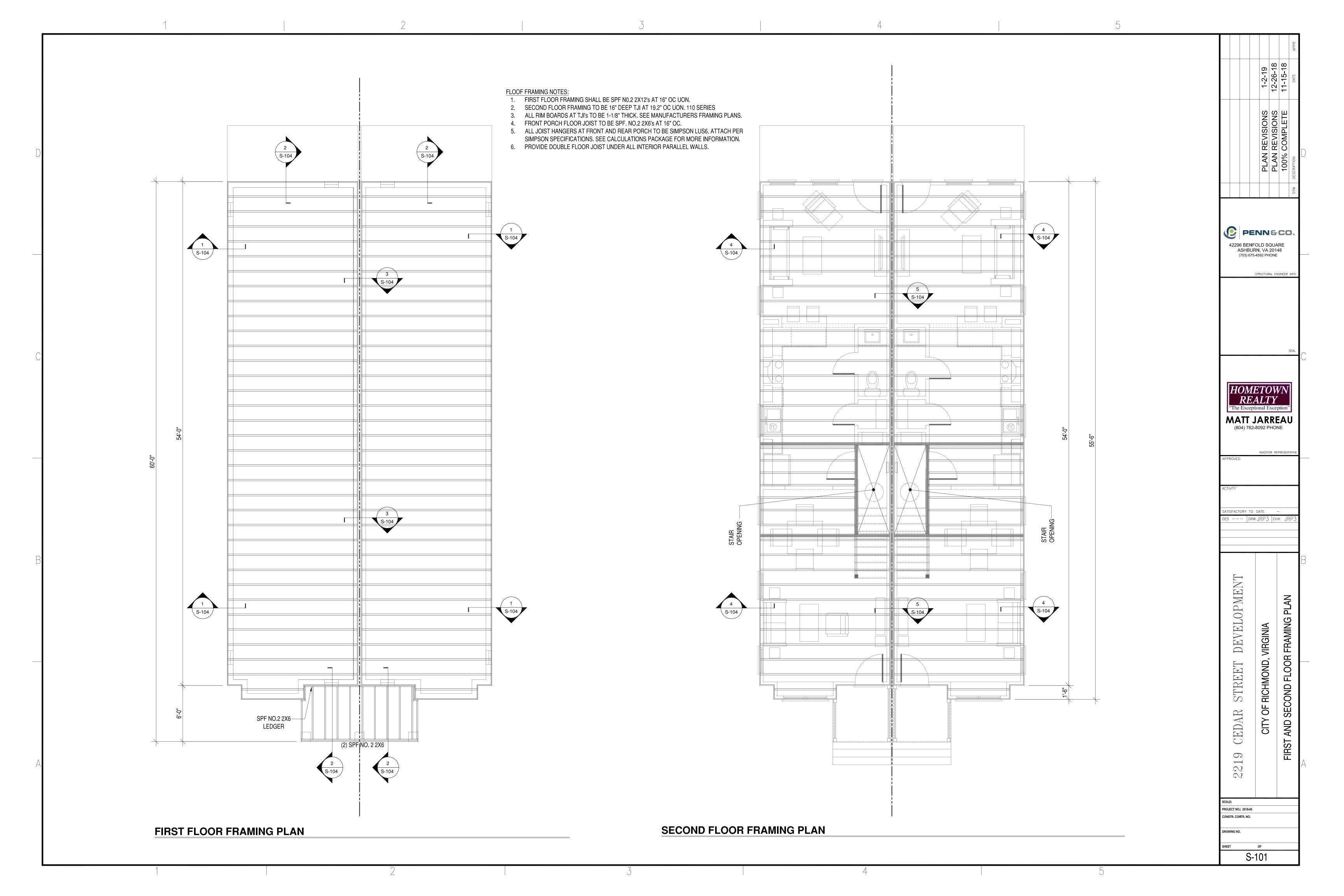
WIRE JOINT REINFORCING SPLICE LENGTH W1.1 (11 GA.) W1.7 (9 GA.) W2.1 (8 GA.) W2.8 (3/16 WIRE) W4.9 (1/4 WIRE)

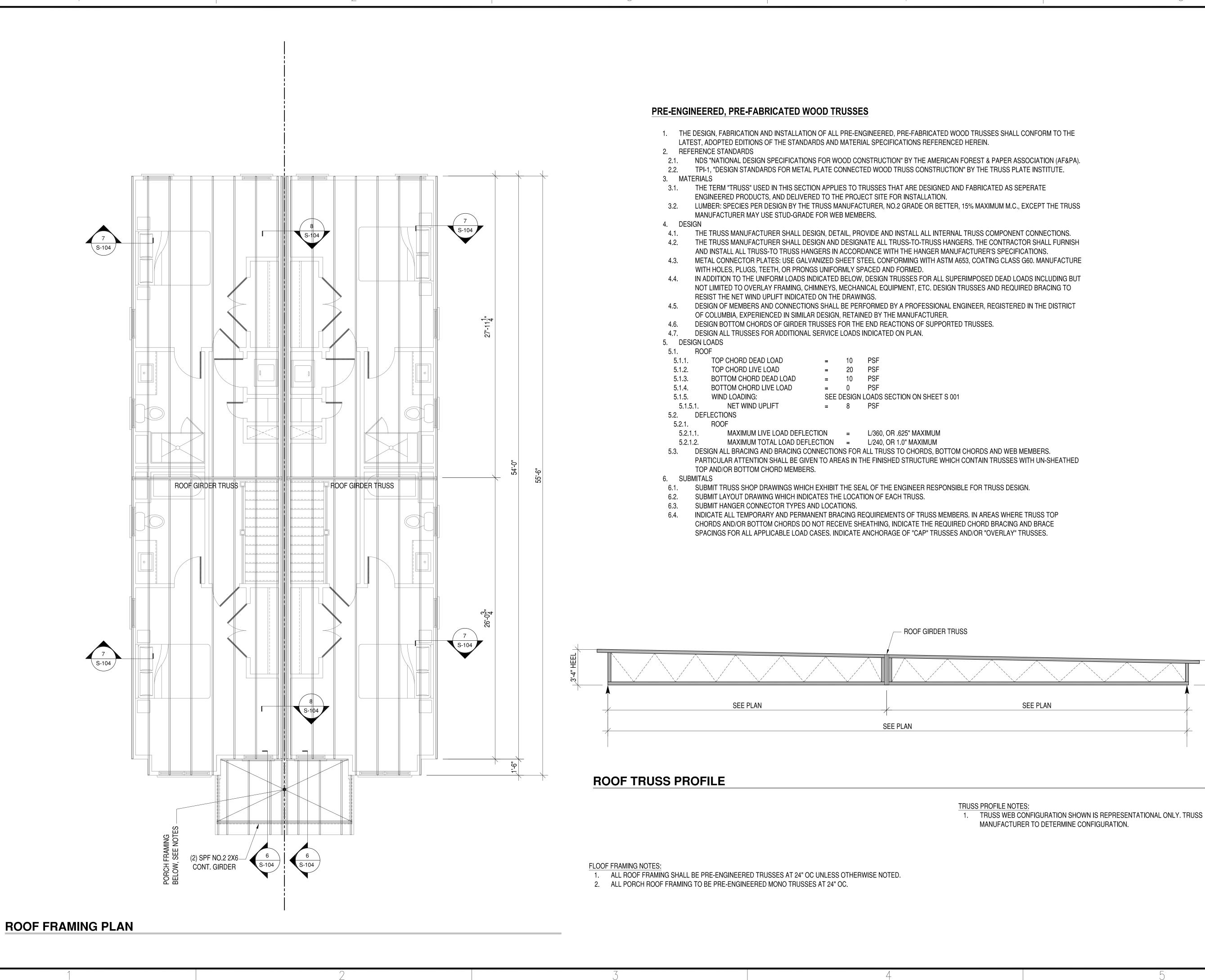
- 10. ALL CORES WITH REINFORCEMENT SHALL BE FILLED SOLID WITH GROUT. ALL GROUT SHALL BE CONSOLIDATED IN PLACE BY VIBRATION TO INSURE COMPLETE FILLING OF CELLS.
- 11. PLACE REINFORCING BARS BEFORE GROUTING. PLACE GROUTS IN LIFTS NOT EXCEEDING 5 FEET. CONSOLIDATE EACH LIFT BY MECHANICAL VIBRATION. THE NEXT LIFT OF THE POUR MAY BE MADE
- AFTER THE INITIAL WATER LOSS AND RECONSOLIDATION OF THE PRIOR LIFT, WHILE IT IS STILL PLASTIC. 12. PROPERLY SECURE REINFORCING BARS TO MAINTAIN THE POSITIONS INDICATED ON THE DRAWINGS. BARS TO BE LOCATED IN CENTER OF CELLS UNLESS OTHERWISE NOTED.
- 13. MORTAR PROTRUSIONS, EXTENDING INTO CELLS OR CAVITIES TO BE REINFORCED AND FILLED, SHALL BE REMOVED.
- 14. LAY MASONRY UNITS WITH FULL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS. BED WEBS IN MORTAR IN STARTING COURSE OF FOOTING AND IN ALL COURSES OF COLUMN AND PILASTERS, AND WHERE ADJACENT TO CELLS OR CAVITIES TO BE REINFORCED OR FILLED WITH CONCRETE GROUT.
- 15. GROUT ONE (1) COURSE OF MASONRY SOLID UNDER ALL WALL BEARING SLABS.
- 16. PROVIDE 16" OF SOLID MASONRY UNDER WALL BEARING BEAMS AND JOIST GIRDERS UNLESS NOTED
- 17. ALL CORNERS TO BE TIED BY MASONRY BOND.
- 18. GROUT CORES SOLID A MINIMUM OF ONE COURSE BELOW ANY CHANGE IN WALL THICKNESS.
- 19. PROVIDE 8" SOLID MASONRY 24" WIDE MINIMUM UNDER WALL BEARING JOISTS.
- 20. ALL MASONRY WALLS SHALL HAVE VERTICAL CONTROL JOINTS AT A MAXIMUM SPACING OF 25'. COORDINATE WITH LOCATIONS INDICATED ON ARCHITECTURAL DRAWINGS. CONTROL JOINTS SHALL EXTEND THROUGH THE ENTIRE WALL THICKNESS, EXCEPT AT 21. CONTINUOUS BOND BEAMS AT THE ROOF LINE THE MASONRY SHALL BE SCORED ONLY.
- 22. ALL CMU SHALL BE TEMPORARILY BRACED DURING CONSTRUCTION FOR THE GOVERNING BUILDING CODE FOR LATERAL DESIGN LOADS UNTIL PERMANENT RESTRAINTS HAVE BEEN INSTALLED. TEMPORARY BRACING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH REPAIRS RESULTING FROM IMPROPER OR INSUFFICIENT BRACING.
- 23. THE COLLAR JOINT IN MULTI-WYTHE WALLS BELOW GRADE SHALL BE FULLY GROUTED AS THE WALL IS CONSTRUCTED.
- 24. MISCELLANEOUS STEEL LINTEL SCHEDULE
- A.A. FOR MASONRY WALLS 8" OR THICKER OR MASONRY VENEER AND WOOD STUDS:
 - FOR OPENINGS UP TO 4'-0" USE 3 1/2X3 1/2X5/16 ANGLE. - FOR OPENINGS FROM 4'-0" TO 5'-0" USE 4X3 1/2X5/16 LLV. - FOR OPENINGS FROM 5'-0" TO 6-'0" USE 5X3 1/2X5/16 LLV.
 - FOR OPENINGS FROM 6'-0" TO 7-'0" USE 6X3 1/2X5/16 LLV. - FOR OPENINGS FROM 7'-0" TO 10-0" USE W8X21+5/16" BOTTOM PLATE.
- USE ONE ANGLE FOR EACH 4" WYTHE OF MASONRY.
- ALL LINTELS SHALL HAVE A BEARING AT EACH END OF 1 INCH PER FOOT OF OPENING WITH A MINIMUM OF 6".
- ALL LINTELS SHALL BEAR ON 16" SOLID MASONRY EXTENDING 16" BEYOND END OF LINTEL.
- ALL LINTELS ON THE BUILDING EXTERIOR SHALL BE GALVANIZED.
- ALL LINTELS ARE NOT DESIGNED FOR MASONRY WALLS THAT CARRY FLOOR LOADS.
- PROVIDE (1) #5 IN FULLY GROUTED CELLS (ONE CELL BELOW LINTEL BEARING, AND ONE CELL ADJACENT FULL HEIGHT) AT EACH SIDE OF OPENINGS.
- 25. LAP SPLICES SHALL BE AS FOLLOWS: #5 BAR SIZE = 45" SPLICE LENGTH
 - #6 BAR SIZE = 54" SPLICE LENGTH
 - #7 BAR SIZE = 63" SPLICE LENGTH
- 26. POWER ACTUATED FASTENERS (PAFS) NOT PERMITTED AT MASONRY.
- 27. ALL REINFORCING HOOKS AND BENDS SHALL BE STANDARD ACI TYPE.
- 28. ALL WALL DOWELS SHALL MATCH REINFORCING SIZE AND QTY.

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PENN&CO. 42296 BENFOLD SQUARE ASHBURN, VA 20148 (703) 675-4592 PHONE **HOMETOWN** "The Exceptional Exception" **MATT JARREAU** (804) 762-8092 PHONE . —— | DRW JRP3 | СНК | J DEVELOPMEN VIRGINIA RICHMOND, STREET PF CEDAR \bigcirc $\overline{}$ PROJECT NO.: 2018-05 CONSTR. CONTR. NO.

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