

1810 N. MARSTON STREET, PHILADELPHA PA

SPECIFICATION

FOLLOW IRC 2015 CODE REQUIREMENTS

- 1. GENERAL NOTE Field verify existing conditions to include foundation, walls, joists, steps, windows, and all heights. Contact this office with any modifications, alterations or deviations from these plans. Intent is to build a new three story single family dwelling unit on the existing vacant lot.
- 2. DEMOLITION None required.
- 3. EXCAVATION Contact PA One Call prior to any excavation. Excavate to a depth of +/-8' below grade and undisturbed soil. Verify existing foundation length and depth along left side existing two story rowhome. Contact this office for any foundation modifications
- 4. FOUNDATION Install concrete footings with four #4 rebar on chairs. Use 3,000psi min. Install new 10" poured concrete walls with #4 horizontal reinforcing at 12" from top of wall and same at remaining third points. Install #6 rebar at 31" oc for 9' concrete walls with 8' maximum unbalanced back fill per table R404.1.2(4) or no vertical reinforcing if unbalance back fill is 7' or less. Install ½"x12" HDG anchor bolts, two per plate with 7" minimum embedment at 60"oc maximum and 12" from all corners. Install interior perforated perimeter drain to sump pit with sealed lid and/or separate 4" radon pipe with stub in the floor for future fan and venting. Install exterior 4" perimeter foundation drain in stone with geo-tech fabric and sleeve thru footing to sump pit. Install waterproofing on exterior walls selected by owners(Rubber-wall, Mar-flex 5000 or approved equal. Install 4" stone with 6 mil vapor barrier and 6" lap joints on 3.5" concrete slab for basement floor. Install new concrete footings and foundati
- 5. FRAMING All lumber shall be #2 grade or better hem-fir. Install 2x6 pressure treated plates with sill seal for new walls. All fasteners or connectors in contact with the new ACQ pressure treated lumber shall be Simpson Zmax or HDG as specified in ASTM A-153 class D specifications for the increased corrosive properties of the new lumber. Install 3x4 exterior walls on first floor, 2x4 exterior walls on second and third floor, 2x4 interior walls, joists and rafters at 16" oc. Glue and nail 3/4" CDX or OSB floor sheathing. Install 7/16" wall sheathing and 7/16" fire resistant roof sheathing. Install Simpson H2.5A hurricane clips. All headers shall be 2x10 with 1/2" CDX plywood and double jack studs on openings greater than 71" wide. Provide all soffits and chases for new utilities and ductwork. All joists and rafters shall have 1-1/2" minimum bearing. All headers and beams over 71" shall have double 2x4 jack studs with blocking down to masonry foundation. All wood shall be 8" minimum from any earth. Double a
- Il floor joists at walls above. Posts may be composed of multiply studs and blocking down to foundation. Center all doors and windows as shown on plans. Notch rim joist for all point load columns. Provide fire caulk at all floor and ceiling penetrations in framing and holes through returns. A UL listed fire rated caulk shall be used. Provide fire stops and blocking as required by code. Follow continuous sheathing method in accordance with section R602.10 of the IRC 2006. Use only 2.0E – 3,100 Fb LVL, Microlam or Versalam beams parallams or gluelams are not acceptable.
- 6. WINDOWS Install new vinyl windows with Low-E glass as mfg by Simonton or approved equal. Install tempered safety glass on all windows over tubs or in stairways. Windows greater than 9sf and less than 18" from floor shall be tempered or within 24" of any door swing. Maintain 24" sill height AFF on any window with more than 71" drop to grade or surface outside.
- 7. DOORS Install new 6 panel hollow core pre-finished interior doors with necessary hardware centered on walls or at corners as shown. Install new insulated exterior doors to be mfg by Thermatru with 0.35 maximum U-factor. Install tempered safety glass shower doors. 8. ROOFING Install fiberglass decking with necessary flashing at parapet walls and pilot house. Per mfg specifications to rear scupper draings. Provide necessary blind flashings and aluminum capping on all walls. Provide a minimum of 2 roof drains to storm system from
- 9. EXTERIOR FINISHES Install vinyl siding per 2015 IRC section 703.6. Owners to select all colors and styles. Provide brick veneer over split face block or limestone with necessary flashing, weep holes and attachments.
- 10. ELECTRICAL Provide all electrical in accordance with the IRC 2015 and local codes. Include outlets at 12' oc max and 15" from floor All decorative lighting is provided by owners. Provide interconnected battery backup hardwired smoke detectors in each bedroom, 3rd floor hall, 2nd floor hall and first floor hall and basement. Install 50cfm exhaust fans in bath with venting per code and mfg specifications ducted thru wall or roof but not into soffits. Install all electric required for HVAC equipment, washer, dryer, hot water heater and kitchen appliances. Provide a minimum of two circuits in kitchen with dedicated circuit for refrigerator and garbage disposal. All kitchen, laundry, exterior and bath circuits shall be GFCI protected. All other circuits shall be arc fault protected. Recessed lighting in attics or in contact with insulation shall meet ASTM 283E for air tightness. Provide exterior rated outdoor receptacles within 25' of any exterior mechanical equipment. Per section N1104.1 of the IRC 2009 a
- minimum of 75% of the lamps in permanently installed lighting fixtures shall be high-efficacy lamps. Install all tamperproof outlets. Install switch and vanity light along with 50 CFM minimum exhaust fans in all baths that do not have a window.
- 11. PLUMBING Install Schedule 40 PVC waste lines and PEX supply lines. Follow Philadelphia plumbing code. Provide exterior hose bibs per owne'rs locations. Install washer pan. Connect rain gutters and downspouts to the existing storm water system located in the
- 12. HVAC Install new system for entire house with a 8.7 minimum HSPF or gas furnace with a 90 AFUE. All mastic tapes used on any duct connection shall be UL 181 listed and no standard duct tape shall be acceptable. Install 4" minimum dryer venting to exterior with 26 gage round metal duct terminated thru exterior wall with a minimum of three screws per connection and penetration of less than 1/8" accordance with section M1502 of the IRC 2015 vented thru exterior side wall. Provide metal fire stops at all floors and ceiling for flues and b-vents. All flexible gas piping shall be installed in strict conformance with the manufacturer's specifications and have mfg's recommended accessories (i.e. nail plates, termination outlets, etc). Provide programmable thermostat with readings set for final inspection
- 13. RESIDENTIAL SPRINKLER SYSTEM Provide installation of residential 13D sprinkler system in accordance with NFPA 72. 14. INSULATION Provide R49 fiberglass insulation or R38 insulation in flat ceilings with R11 rigid foam on roof, R20 on exterior walls and R10 or R13 on basement walls. Follow 2018 IECC table R402.1.2.
- 15. INTERIOR FINISHES Provide 1/2" gypsum board on all walls and ceilings. Install 5/8" Type X gypsum board on all side walls. Tape and spackle to smooth finish. Provide moisture resistant gypsum board in bath areas but not behind tubs or showers. Provide cement board behind showers or tubs for tile per section R 72.4.2 of the IRC 2015.
- 16. TRIM Provided by owners.
- 17. STAIRWAYS Handrails shall be continuous with returns. Install new pine or oak stairway to second and third floors and basement in accordance with section R311.7 of the IRC 2015 code to include continuous handrails with returns and 36" high guardrails.
- 18. PAINTING Apply prime coat and two finish coats using MAB or approved equal.
- 19. FLOORING Provided by owner.
- 20. KITCHEN Install new cabinets, countertops and appliances provided by owners.
- 21. MISCELLANEOUS Relocate any utilities as necessary. 22. CLEAN-UP Remove all construction debris.

DESIGN LOADS - IRC 2015 CHAPTER 3 USE GROUP R3 CONSTRUCTION TYPE 5B

		Use	Live load
		Attics without storage	10psf
		Balconies & decks	60psf
BASEMENT	4946F	Guardrails and handrails	200lb
FIRST FLOOR	4946F	Guardrail in-fill components	50psf
		Rooms other than sleeping room	40psf
SECOND FLOOR	4946F	Sleeping room	30psf
THIRD FLOOR	4946F	Stair	40psf
+0+41 4054	107465	Ground snow load	30psf
TOTAL AREA	1,9766F	Wind load	115MPH - 3 sec gusts
ROOF DECK	4226F	Soil bearing capacity per report	1,500psf

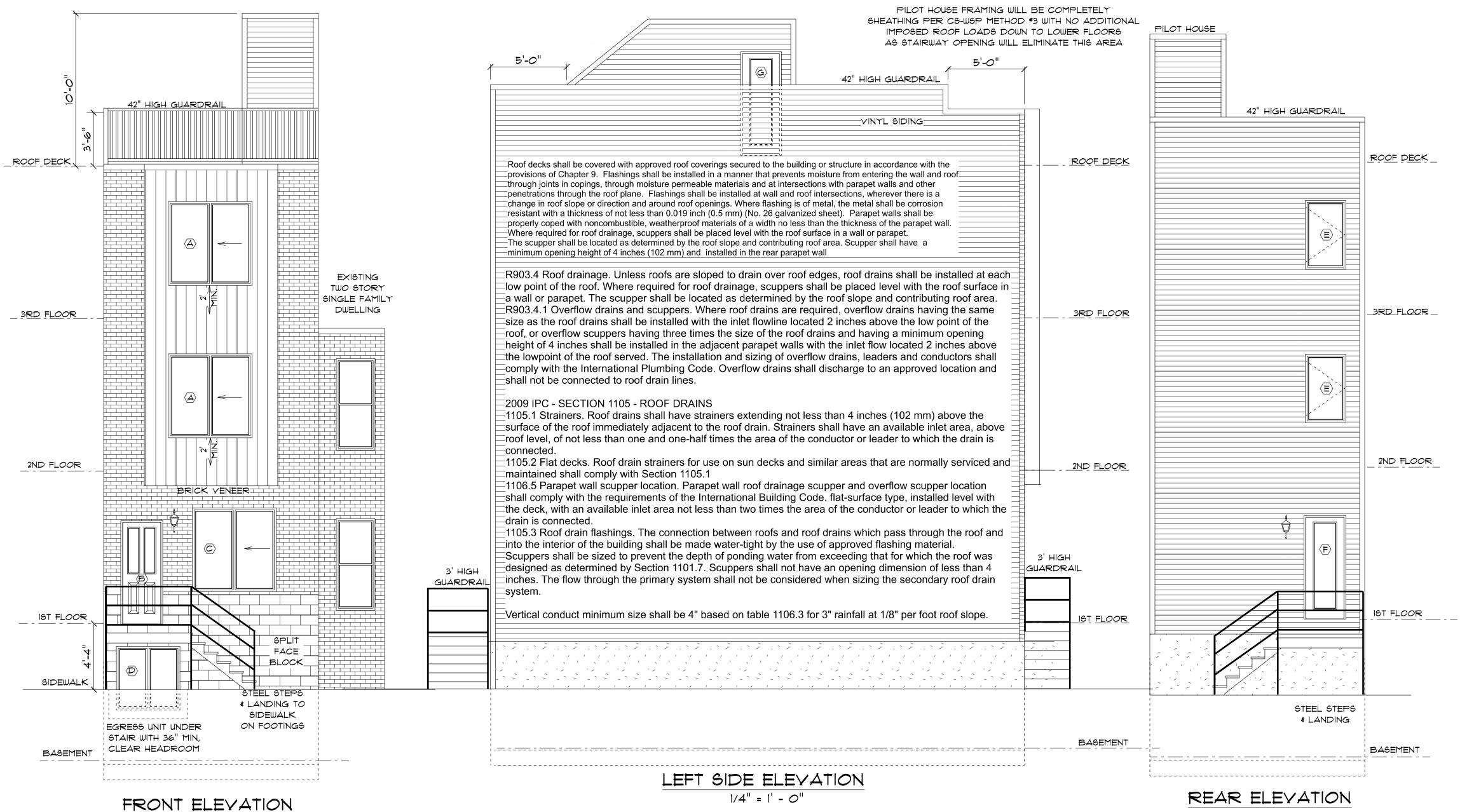
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PROFESSIONAL AT
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NEW 3 STORY ATTACHED SINGLE FAMILY DWELLING

1810 N. MARSTON STREET	DRAWN BY: R.A.		
PHILADELPHIA, PA	DATE: MARCH 17, 2020		
	REY.	DRAWING NUMBER	
PLANS, SPECIFICATIONS, SECTION		A1 of 4	

PAUL DIETZ, III P.E.



WINDOW & DOOR SCHEDULE

	DESCRIPTION	U-Factor	R.O.	MFG.	QTY
Α	Sliding unit to meet 5.7sf egress	0.35 max.	64" x 66"	SIMONTON	2
В	Insulated exterior door	0.35 max.	38" x 82"	SIMONTON	1
С	Sliding unit - TEMPERED	0.35 max.	64" x 66"	SIMONTON	1
D	Sliding unit to meet 5.7sf egress	0.35 max.	50" x 50"	SIMONTON	1
Е	Casement unit	0.35 max.	32" x 54"	SIMONTON	2
F	Insulated exterior door - full view	0.35 max.	34" x 82"	SIMONTON	2

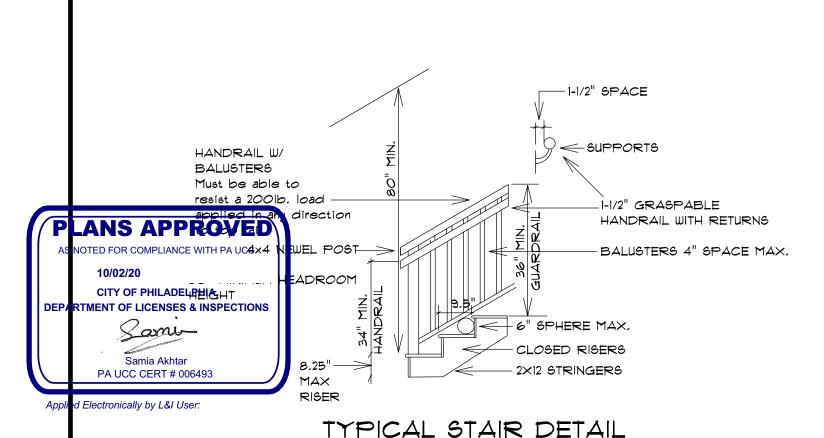
1/4" = 1' - 0"

GENERAL NOTES: ALL UNITS TO HAVE LOW-E GLASS WITH GRILLES INTEGRAL J-CHANNEL AND NAILING FLANGES

FIELD VERIFY ROUGH OPENINGS PRIOR TO FRAMING.

EGRESS UNITS MUST HAVE 20" WIDE AND 24" HIGH MINIMUM CLEAR OPENING WITH SASH IN FULL OPEN POSITION AND MEET THE 5.7SF FOR SECOND FLOOR SLEEPING ROOMS OR LOCATED WITHIN 24" OF ANY DOOR SHALL BE TEMPERED SAFETY GLASS OPERABLE

WINDOWS MORE THAN 72" FROM THE BOTTTOM SILL TO GRADE OR SURFACE BELOW SHALL HAVE A MINIMUM SILL HEIGHT OF 24" ABOVE FINISHED FLOOR



3/8" = 1' - 0"

TREAD DEPTH & RISER HEIGHT SET PER PENNSYLYANIA HOUSE BILL 1654 ENACTED IN APRIL 2004 ALLOWING STAIR DESIGN TO MEET PREVIOUS BOCA/CABO STANDARDS IN LIEU OF NEW IRC 2006 CODE

THE MAXIMUM RISER HEIGHT SHALL BE 8.25", THE RISER SHALL BE MEASURED VERTICALLY BETWEEN LEADING EDGES OF THE ADJACENT TREADS, THE GREATEST RISER HEIGHT WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8". THE MINIMUM TREAD DEPTH SHALL BE 9.5", THE TREAD DEPTH SHALL BE MEASURED HORIZONTALLY BETWEEN THE VERTICAL PLANES OF THE FOREMOST PROJECTION OF ADJACENT TREADS AND AT A RIGHT ANGLE TO THE TREAD'S LEADING EDGE, THE GREATEST TREAD DEPTH WITHIN ANY FLIGHT OF STAIRS SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8", WINDER TREADS SHALL HAVE A MINIMUM TREAD DEPTH OF 10" MEASURED AS ABOYE AT A POINT 12" FROM THE SIDE WHERE THE TREADS ARE NARROWER, WINDER TREADS SHALL HAVE A MINIMUM TREAD DEPTH OF 6" AT ANY POINT, WITHIN ANY FLIGHT OF STAIRS, THE LARGEST WINDER TREAD DEPTH AT THE 12" WALK LINE SHALL NOT EXCEED THE SMALLEST BY MORE THAN 3/8". THE RADIUS OF CURYATURE AT THE LEADING EDGE OF THE TREAD SHALL BE NO GREATER THAN 9/16", A NOSING NOT LESS THAN 3/4" BUT NOT MORE THAN 1.25" SHALL BE PROVIDED ON STAIRS WITH SOLID RISERS, A

NOSING IS NOT REQUIRED WHERE THE TREAD DEPTH IS A MINIMUM OF II"

ALL REQUIRED HANDRAILS SHALL BE OF ONE OF THE FOLLOWING TYPES OR PROVIDE EQUIVALIENT GRASPABILITY,

TYPE 1: HANDRAILS WITH A CIRCULAR CROSS SECTION SHALL HAVE AN OUTSIDE DIAMETER OF AT LEAST 1,25" AND NOT GREATER THAN 2", IF THE HANDRAIL IS NOT CIRCULAR IS SHALL HAVE A PERIMETER DIMENSION OF AT LEAST 4" AND NOT GREATHER THAN 6.25" WITH A MAXIMUM CROSS SECTION DIMENSION OF 2.25"

TYPE 2: HANDRAILS WITH A PERIMETER GREATER THAN 6.25" SHALL PROVIDE A GRASPABLE FINGER RECESS AREA ON BOTH SIDES OF THE PROFILE, THE FINGER RECESS SHALL BEGIN WITH A DISTANCE OF 3/4" MEASURED VERTICALLY FROM THE TALLEST PORTION OF THE PROFILE AND ACHIEVE A DEPTH OF AT LEAST 5/16" WITHIN 7/8" BELOW THE WIDEST PORTION OF THE PROFILE, THIS REQUIRED DEPTH SHALL CONTINUE FOR AT LEAST 3/8" TO A LEYEL THAT IS NOT LESS THAN 1.75" BELOW THE TALLEST PORTION OF THE PROFILE, THE MINIMUM WIDTH OF THE HANDRAIL ABOYE THE RECESS SHALL BE 1.25" TO A MAX, OF 2.75", EDGES SHALL HAVE A MINIMUM RADIUS OF 0.01"GRASPABLE HANDRAIL SHALL BE PROVIDED ON AT LEAST ONE SIDE OF EACH CONTINUOUS RUN OF TREADS OR FLIGHT WITH 4 OR MORE RISERS, HANDRAIL HEIGHT, MEASURED VERTICALLY FROM THE SLOPED PLANE ADJOINING THE TREAD NOSING SHALL BE NOT LESS THAN 34" OR NOT MORE THAN 38", HANDRAILS SHALL BE CONTINUOUS FOR THE FULL LENGTH OF THE FLIGHT, FROM A POINT DIRECTLY ABOVE THE TOP RISER OF THE FLIGHT TO A POINT DIRECTLY ABOVE THE LOWEST RISER OF THE FLIGHT, HANDRAIL ENDS SHALL BE RETURNED OR SHALL TERMINATE IN NEWEL POSTS OR SAFETY TERMINALS, HANDRAILS ADJACENT TO A WALL SHALL HAVE A SPACE OF NOT LESS THAN 1.5" BETWEEN THE WALL AND THE HANDRAILS.

GUARDRAILS SHALL BE PROVIDED ON ALL WALLS, BALCONIES, RAMPS OR PORCHES LOCATED MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW, GUARDS SHALL BE NOT LESS THAN 36" IN HEIGHT, OPEN SIDES OF STAIRS WITH A TOTAL RISE OF MORE THAN 30" ABOVE THE FLOOR OR GRADE BELOW SHALL HAVE GUARDS NOT LESS THAN 34" IN HEIGHT MEASURED VERTICALLY FROM THE NOSING OF THE TREADS, REQUIRED GUARDS SHALL HAVE INTERMEDIATE RAILS OR BALUSTERS WHICH DO NOT ALLOW PASSAGE OF A SPHERE 4" OR MORE IN DIAMETER EXCEPT THE TRIANGULAR OPENINGS FORMED BY RISERS, TREAD AND BOTTOM RAILS OF A GUARD AT THE OPEN SIDE OF A STAIRWAY ARE PERMITTED TO BE OF SUCH A SIZE THAT A SPHERE 6" CANNOT PASS THROUGH.

	BUILDING ELEMENT DESCRIPTION	# & FASTENER	SPACING
	ROOF		
1	Blocking between joists or rafters to top plate, toe nail	3-8d	-
2	Ceiling joists to plate, toe nail	3-8d	-
3	Ceiling joists not attached to parallel rafter, face nail	3-10d	-
4	Collar tie rafter face nail	3-10d	-
5	Rafter to plate, toe nail	2-16d	-
6	Roof rafter to ridge, toe nail	4-16d	-
	WALLS		
7	Built up corner stud	10d	24"oc
3	Built up header. 2 piece with 1/2" spacer	16d	16"oc along each edge
9	Continued header, 2 piece	16d	16"oc along each edge
10	Continuous header to stud, toe nail	4-8d	-
11	Double studs, face nail	10d	24"oc
12	Double top plates,, face nail	10d	24"oc
13	Double top plate, min 48" offset of end joints, face nail	8-16d	-
14	Sole plate to joist or blocking, face nail	16d	16"oc
15	Sole plate to joist or blocking at braced wall panels	2-8d	16"oc
16	Stud to sole plae, toe nailed	8-8d	-
17	Top or sole plate to stud, end nail	2-16d	-
18	Top plates, laps at corners & intersections, face nail	2-10d	-
19	1" brace to each stud & plate, face nail	2-8d	-
20	1" x 6" sheathing to each bearing, face nail	2-8d	-
21	1" x 8" sheathing to each bearing, face nail	2-8d	-
22	Wider than 1" x 8" sheathing to each bearing, face nail	3-8d	-
	FLOOR		
23	Joist to sill or girder, toe nail	3-8d	-
24	1" x 6" subfloor or less to each joist, face nail	2-8d	-
25	2" subfloor to joist or girder, blind & face nail	2-16d	-
26	Rim joist to top plate, toe nail (roof application also)	8d	6"oc
27	2" planks	2-16d	at each bearing
28	Built up girder and beams, 2" lumber layers	10d	32"oc top & bottom
29	Ledger strip supporting joists or rafters	3-16d	At each joist or rafter

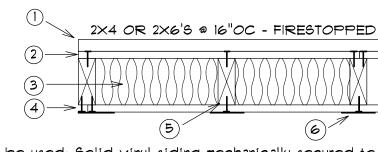
TABLE R602.3 FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ctural panels, subfloor, roof and interior wall sheathing to framing & particleboard sheathing to framing					
	Description of building materials	Description of fasteners	Edges	Intermediate supports	
30	3/8" - 1/2" OSB or CDX	6d common(subfloor wall)	6	12	
31	5/16" - 1/2" OSB or CDX	6d common (subfloor, wall	6	12	
32	19/32" - 1" OSB or CDX	6d common	6	12	

6d common Gypsum board sheathing shall be applied vertically and 8d sheathing nails in lieu of 6's

Wood struc

For wind speeds greater than 100, nails for attaching panel roof sheathing to intermediatte supporsts shall be spaced 6" oc minimum 48" distance from ridges, eaves and gable end walls and 4"oc to gable end wall framing.



- 1. Molded Plastic may be used: Solid vinyl siding mechanically secured to framing members in accordance with manufacturer's recommended installation instructions.
- 2. Gypsum Board Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U3O5. Nom 5/8 in. thick gypsum sheathing supplied in min 2 ft wide sheets, installed horizontally. Attached to each wood stud with 2 in. long 6d nails spaced vertically 8 in. OC.

30" HIGH I HOUR FIRE

RATED PARAPET WALLS

EACH SIDE

MASTER BEDROOM

3/4" T&G SHEATHING

BD.

BEDROOM #2

3/4" T&G SHEATHING

3/4" T&G SHEATHING

BEDROOM #1

. 4. 5. . 4 . 4. 5. . 4 .

3.5" CONCRETE SLAB

OVER 6 MIL YB

ON 4" STONE

SECTION A-A

1/4" = 1' - 0"

LIVING ROOM

2×6 WALL

1 HOUR

FIRE RATED

R20

VINYL SIDING

OVER TYVEK

7/16" SHEATHING

FLASHING

2×6 WALL

1 HOUR

FIRE RATED

R20

2×6 WALL

1 HOUR

FIRE RATED

EXISTING MASONRY PARTY WALL

NEW EXCAYATION TO

AYOID GOING BELOW

THIS WALL FOR NO

UNDERPINNING

R20

ROOF DECK

2×6 WALL

1 HOUR

FIRE RATED

YINYL SIDING

OVER TYVEK

7/16" SHEATHING

2×6 WALL

1 HOUR

FIRE RATED

SECOND FLOOR

2×6 WALL

1 HOUR

FIRE RATED

R20

FIRST FLOOR

4" PERFORATED

INTERIOR & EXTERIOR

FOUNDATION DRAINS

TO SUMP PIT IN

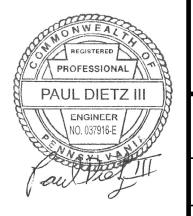
STONE & GEO-FABRIC

THIRD FLOOR

- 3. Batts and Blankets Min. 3 in. thick mineral or glass fiber batts.
- 4. Gypsum Board Nom 5/8 in. thick wallboard, with beveled, square or tapered edges. Wallboard nailed 7 in. O.C. with 6d nails 1-7/8 in. long. When used in widths other than 48 in., wallboard is to be installed horizontally. Any UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305. 4A. Gypsum Board (As an alternate to Item 4) Nominal 5/8 in. thick, 4 ft wide panels, applied vertically only and
- 4B. Gypsum Board (As an alternate to Item 4) 5/8 in. thick, 4 ft. wide, paper surfaced applied vertically or horizontally and secured as described in Item 4 or with 1-1/4 in. Type W screws spaced 8 in. OC. 4C. Wall and Partition Facings and Accessories (As an alternate to Item 4) Nominal 5/8 in. thick, 4 ft wide panels,
- 5. Nailheads Covered with joint compound.
- 6. Joints Covered with paper tape and joint compound.

applied vertically only and secured as described in Item 4.

I HOUR EXTERIOR WALL FIRE RATED ASSEMBLY PER UL U032 - ANSI/UL 263



Here's The Plan, LLC

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NEW 3 STORY ATTACHED SINGLE FAMILY DWELLING

DRAWN BY: R.A. 1810 N. MARSTON STREET DATE: MARCH 17, 2020 PHILADELPHIA, PA REV. DRAWING NUMBER A2 of 4

PAUL DIETZ, III P.E.

PLANS, SPECIFICATIONS, SECTION