Docket Item # 2
BZA #2022-00001
Board of Zoning Appeals
February 14, 2022

ADDRESS: 1031 Cross Drive
ZONE: R-8/RESIDENTIAL SINGLE-FAMILY
APPLICANT: MICHAEL D. GILL III AND BROOKE C. GILL

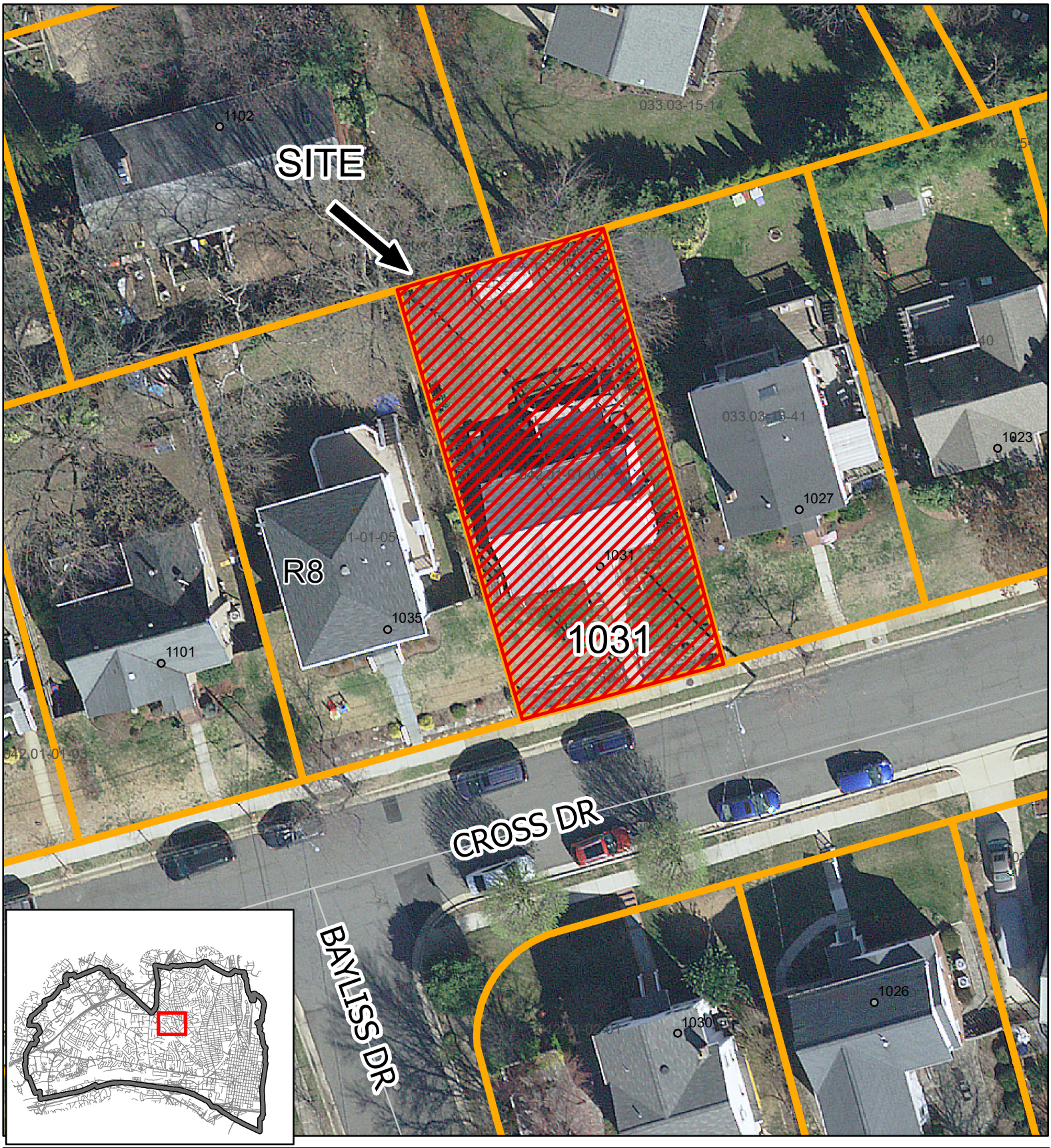
ISSUE: Special exception to construct an addition in the required side yard.

CODE SECTION	SUBJECT	CODE REQUIREMENT	APPLICANT PROPOSES	REQUESTED EXCEPTION
3-306(A)(2)	East Side Yard	8.00 feet*	7.10 feet	0.90 feet

**Based on a building height of 13.92 feet measured from average existing grade to the height of the roof along the east side yard.*

Staff **recommends approval** of the request because it meets the standards for a special exception.

If the Board grants the requested special exception, it is subject to compliance with all applicable code requirements, ordinances, and recommended conditions found in the department comments. The applicants must submit a survey plat confirming building footprint, height and setbacks and certification of floor area ratio a licensed surveyor, architect or engineer prior to all final inspections. The special exception must also be recorded with the deed of the property in the City's Land Records Office prior to the release of the building permit.



BZA #2022-00001
1031 Cross Drive

N

0 15 30 60 Feet

I. Issue

The applicants, Michael D. Gill and Brooke C. Gill, propose to add a new addition to their existing dwelling located at 1031 Cross Drive. The proposed addition would be to the rear of the existing dwelling and would increase the square footage on the second floor. The applicants request a special exception to construct a portion of the proposed rear addition in the required east side yard.

II. Background

The subject property is a substandard lot of record with 50.00 feet of frontage along Cross Drive and a lot size of 5,000 square feet. As such, it complies with the R-8 zone's minimum lot frontage but not lot size nor width requirements. Single-family dwellings surround the subject property.

Figure 1 - Subject Property

A single-family dwelling occupies the subject property. City Real Estate records indicate the one-and-a-half story dwelling was constructed in 1940. It provides a 9.10-foot west side yard, a 7.00-foot east side yard, 25.20-foot front yard, and a 49.00-foot rear yard. With the proposed addition, the dwelling would contain 1,740.90 square feet of net floor area.

The following table provides a breakdown of all applicable zoning regulations as they pertain to the proposal:

R-8 Zone	Required/Permitted	Existing	Proposed
Lot Area	8,000 Sq. Ft.	5,000 Sq. Ft.	No change
Lot Width	65.00 Ft.	50.00 Ft.	No change
Lot Frontage	40.00 Ft.	50.00 Ft.	No change
Front Yard	25.00 Ft. (minimum)	25.20 Ft.	No change

Side Yard (East)	8.78 Ft. 1:2 height-to-setback ratio	7.00 Ft.	No change*
Side Yard (West)	8.78 Ft. 1:2 height-to-setback ratio	9.1 Ft.	No change*
Rear Yard	13.3 Ft. 1:1 height-to-setback ratio	49.00 Ft.	41.00 ft
Height	30.00 Ft.	17.50 Ft.	22.35 Ft.
Net Floor Area	1,750 Sq. Ft. 0.35 FAR	1,165 Sq. Ft.	1,740.90 Ft. 0.348 FAR

**The setback will not change, but the required setback will change as the height of the dwelling at the east and west side yards has lowered from 17.56 to 13.92.*

III. Description

The applicants propose construct a one-story addition at the east corner of the existing dwelling and to increase the square footage of the second floor. The rear addition would allow for the expansion of the existing kitchen and would measure 8.00 by 21.19 feet, with a 12.00 by 6.00-foot addition to the west for a new mudroom and pantry. At 13.92 feet in height (as measured from average pre-construction grade), an 8.00-foot side yard would be required based on the R-8 zone's 1:2 height-to-setback ratio, minimum 8-foot side yard setback. The addition would be an extension of the existing noncomplying wall that is 7.00 feet from the east side yard property line, however, the addition would be roughly 1.00 inch farther away from the east side property line that the existing building wall. As such, the addition would require a special exception of 0.90 feet. The applicant is also proposing to alter the existing second story and change from a side-facing gable to a front-facing gable with dormers. This alteration will bring the height along the east side yard from 17.56 feet to 13.92 feet, reducing the required side yard setback from 8.78 feet to a minimum 8.00 feet.

The proposal would comply with all other zoning regulations and there have been no variances or special exceptions previously granted for the subject property.

IV. Noncomplying Structure/Substandard Lot

The existing lot is substandard and the existing dwelling is a noncomplying structure with respect to the following:

	Required	Provided	Noncompliance
Side Yard (East)	8.78 Ft.	7.00 Ft.	1.78 Ft.

Lot Size	8,000 Sq. Ft.	5,000 Sq. Ft.	3,000 Sq. Ft.
Lot Width	65.00 Ft.	50.00 Ft.	15.00 Ft.

V. Master Plan/Zoning

The subject property has been zoned R-8/Residential Single-Family since adoption of the Third Revised Zoning Map in 1951. The North Ridge/Rosemont Small Area Plan identifies the property for residential land use.

VI. Requested Special Exception

3-306(A)(2) Side yard (East)

Zoning Ordinance section 3-306(A)(2) requires a side yard based on a 1:2 height-to-setback ratio with a minimum depth of 8.00 feet. Figure 2, below, shows the existing dwelling's established noncomplying plane as it relates to the required east side yard. Any construction along one plane within the area shaded in blue would require a special exception from the side yard requirement. The area shaded in red shows the portion of the proposed addition that requires a special exception and the area shaded in green shows the portion of the proposed addition that complies with zoning.

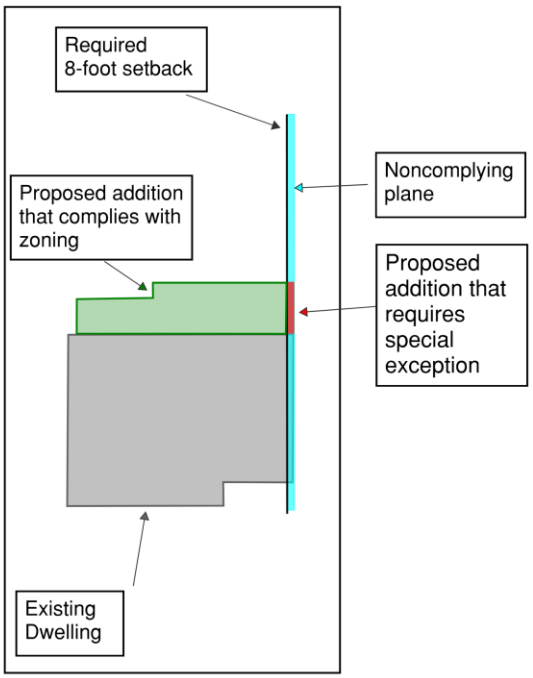


Figure 2 – Special Exception Diagram

Because the proposed rear addition would expand the existing dwelling 8.00 feet to the rear within the required side yard along the existing noncomplying building wall, special exception approval is required. Based on the 1:2 setback ratio with an 8.00-foot minimum

setback, the proposed rear addition height of 13.92 feet would require a setback of 8.00 feet. The applicants request a special exception of 0.90 feet to construct the proposed addition 7.10 feet from the east side property line.

VII. Special Exception Standards

Per Zoning Ordinance section 11-1304, the Board of Zoning Appeals "must find that the strict application of the ordinance creates an unreasonable burden on the use and enjoyment of the property which outweighs the material zoning purpose for which the specific provision of the ordinance at issue was designed." Section 11-1304 also states that the Board of Zoning Appeals "shall consider and weigh the following issues, as applicable:"

1) Whether approval of the special exception will be detrimental to the public welfare, to the neighborhood or to the adjacent properties.

   The proposed one-story rear addition would extend the existing noncomplying wall in the required east side yard by 8.00 feet. Because of the modest increase in the required east side yard, staff finds that approval of the request would not be detrimental to the public welfare, neighborhood or adjacent properties.

2) Whether approval of the special exception will impair an adequate supply of light and air to the adjacent property, or cause or substantially increase traffic congestion or increase the danger of fire or the spread of fire or endanger the public safety.

   Approval of the special exception would not impact light and air supply to adjacent properties, cause or substantially increase traffic congestion or increase fire risks due to the proposed one-story addition's modest increase of within the required east side yard in line with the dwelling's existing east-facing noncomplying building wall.

3) Whether approval of the special exception will alter the essential character of the area or zone.

   Because the proposal represents a modest change, it would not alter the essential character of the area or zone. The proposed addition would be located at the dwelling's rear and would be minimally visible from the street.

4) Whether the proposal will be compatible with the development in the surrounding neighborhood.

   Because of the addition's modest increase in square footage within the require east side yard setback, the proposal would not affect the existing dwelling's compatibility with development in the surrounding neighborhood.

5) Whether the proposed development represents the only reasonable means and location on the lot to accommodate the proposed structure given the natural constraints of the lot or the existing development of the lot.

Due to the narrowness of the subject property, location of the existing dwelling, and interior layout of the dwelling, the proposal is the only reasonable location for the rear addition to accommodate the kitchen expansion.

VIII. Staff Conclusion

Neighborhood Impact
The modest increase in square footage within the required east side yard would be minimally visible to surrounding properties. It would have no impact to the neighborhood.

Light and Air
Based on the height, size and location of the proposed addition, staff finds that it would have minimal effect on light and air supply to adjacent properties.

Lot Constraints
Due to the subject property's narrowness and size, it is substandard for the R-8 zone. The applicants' proposal would represent the least impactful and most reasonable location for an addition.

As outlined above, staff **recommends approval** of the request subject to compliance with all applicable codes, ordinances and recommended conditions found in the departmental comments of this report.

Staff
Maggie Cooper, Urban Planner, margaret.cooper@alexandriava.gov
Mary Christesen, Zoning Manager, mary.christesen@alexandriava.gov
Tony LaColla, Land Use Division Chief, anthony.lacolla@alexandriava.gov

DEPARTMENTAL COMMENTS

Legend: C - code requirement R - recommendation S - suggestion F - finding

* The applicant is advised that if the special exception and/or variance is/are approved the following additional comments apply.

Transportation and Environmental Services:
No comments.

Code Administration:
No comments.

Recreation (City Arborist):
No comments.

Historic Alexandria (Archaeology):

R-1 The statements in archaeology conditions below shall appear in the General Notes of all site plans and on all site plan sheets that involve demolition or ground disturbance (including Basement/Foundation Plans, Demolition, Erosion and Sediment Control, Grading, Landscaping, Utilities, and Sheeting and Shoring) so that on-site contractors are aware of the requirements:

a. The applicant/developer shall call Alexandria Archaeology immediately (703-746-4399) if any buried structural remains (wall foundations, wells, privies, cisterns, etc.) or concentrations of artifacts are discovered during development. Work must cease in the area of the discovery until a City archaeologist comes to the site and records the finds.

b. The applicant/developer shall not allow any metal detection to be conducted on the property, unless authorized by Alexandria Archaeology.

C-1 All required archaeological preservation measures shall be completed in compliance with Section 11-411 of the Zoning Ordinance.

F-1 The subject property is located in close proximity to a Civil War camp occupied by the 37th New York. While it is unlikely that the proposed project will cause much ground disturbance, we want to make sure the property owner and contractor are aware that the subject property has modest archaeological potential.

Other requirements brought the applicant's attention if the Board approves the request:

C-1 The special exception must be recorded with the property's deed in the City's Land Records Office prior to the release of the building permit.

BZA Case # _____

APPLICATION
BOARD OF ZONING APPEALS

SPECIAL EXCEPTION FOR ADDITIONS

Section of zoning ordinance from which request for special exception is made:

3-306(A)(2)

PART A

1. Applicant: ☐**Owner** ☐**Contract Purchaser** ☐**Agent**

Name Michael D. Gill III and Brooke C. Gill

Address 1031 Cross Dr., Alexandria VA 22302

Daytime Phone 512-507-4305

Email Address mgill@speedwelllaw.com

2. Property Location 1031 Cross Dr., Alexandria VA 22302

3. Assessment Map # 042.01 **Block** 01 **Lot** 06 **Zone** R8

4. Legal Property Owner Name Michael D. Gill III and Brooke C. Gill

Address 1031 Cross Dr., Alexandria VA 22302

OWNERSHIP AND DISCLOSURE STATEMENT

Use additional sheets if necessary

1. Applicant. State the name, address and percent of ownership of any person or entity owning an interest in the applicant, unless the entity is a corporation or partnership, in which case identify each owner of more than ten percent. The term ownership interest shall include any legal or equitable interest held at the time of the application in the real property which is the subject of the application.

Name	Address	Percent of Ownership
1. Michael and Brooke GIll	1031 Cross Dr., Alexandria VA 22302	100
2.		
3.		

2. Property. State the name, address and percent of ownership of any person or entity owning an interest in the property located at 1031 Cross Dr. Alexandria VA 22302 (address), unless the entity is a corporation or partnership, in which case identify each owner of more than ten percent. The term ownership interest shall include any legal or equitable interest held at the time of the application in the real property which is the subject of the application.

Name	Address	Percent of Ownership
1. Michael and Brooke GIll	1031 Cross Dr., Alexandria VA 22302	100
2.		
3.		

3. Business or Financial Relationships. Each person or entity indicated above in sections 1 and 2, with an ownership interest in the applicant or in the subject property are require to disclose **any** business or financial relationship, as defined by Section 11-350 of the Zoning Ordinance, existing at the time of this application, or within the12-month period prior to the submission of this application with any member of the Alexandria City Council, Planning Commission, Board of Zoning Appeals or either Boards of Architectural Review. **All fields must be filled out completely. Do not leave blank. (If there are no relationships please indicated each person or entity and "None" in the corresponding fields).**

For a list of current council, commission and board members, as well as the definition of business and financial relationship, click here.

Name of person or entity	Relationship as defined by Section 11-350 of the Zoning Ordinance	Member of the Approving Body (i.e. City Council, Planning Commission, etc.)
1. Michael Gill	NONE	NONE
2. Brooke Gill	NONE	NONE
3.		

NOTE: Business or financial relationships of the type described in Sec. 11-350 that arise after the filing of this application and before each public hearing must be disclosed prior to the public hearings.

As the applicant or the applicant's authorized agent, I hereby attest to the best of my ability that the information provided above is true and correct.

12/17/2021	Michael Gill	
Date	Printed Name	Signature

BZA Case # _____

5. Describe request briefly:

Requesting a special exception in the side yard setback requirement. We are requesting that a new addition have a setback of 7 feet from the property line consistent with the existing non-conforming structure. The setback would otherwise be 8 feet, forcing a wall to unpleasantly jut into our new kitchen.

6. If the property owner or applicant is being represented by an authorized agent, such as an attorney, realtor or other person for which there is a form of compensation, does this agent or the business in which they are employed have a business license to operate in the City of Alexandria, Virginia?

☐ Yes — Provide proof of current City business license.

☐ No — Said agent shall be required to obtain a business prior to filing application.

THE UNDERSIGNED HEREBY ATTESTS that all of the information herein provided including the site plan, building elevations, prospective drawings of the projects, etc., are true, correct and accurate. The undersigned further understands that, should such information be found incorrect, any action taken by the Board based on such information may be invalidated. The undersigned also hereby grants the City of Alexandria permission to post placard notice as required by Article XI, Division A, Section 11-301(B) of the 1992 Alexandria City Zoning Ordinance, on the property which is the subject of this application. The applicant, if other than the property owner, also attests that he/she has obtained permission from the property owner to make this application.

APPLICANT OR AUTHORIZED AGENT:

Michael D. Gill III	Michael Doud Gill III Digitally signed by Michael Doud Gill III Date: 2022.01.07 16:59:06 -05'00'
Print Name	**Signature**
512-507-4305	12/30/21
Telephone	**Date**

Pursuant to Section 13-3-2 of the City Code, the use of a document containing false information may constitute a Class 1 misdemeanor and may result in a punishment of a year in jail or $2,500 or both. It may also constitute grounds to revoke the permit applied for with such information.

BZA Case # _____

NOTE TO APPLICANT: Only one special exception per dwelling shall be approved under the provisions of Section 11-1302(B)(4).

PART B (SECTION 11-1304)

APPLICANT MUST EXPLAIN THE FOLLOWING:

(Please use additional pages where necessary.)

1. Explain how the special exception for the proposed addition, if granted, meets the applicant's needs.

Granting the special exception would allow us to build a consistent and contiguous wall in our kitchen.

2. Explain if the special exception, if granted, will harm adjoining properties or impact the neighborhood in any way.

The exception will not harm or impact the neighborhood in any way.

3. Explain how the proposed addition will affect the light and air to any

The addition will not affect the air flow between houses, and will have a de minimis effect on the light on the adjoining property.

BZA Case # _____

4. Explain how the proposed addition is compatible with other properties in the neighborhood and the character of the neighborhood as a whole.

The proposed addition is compatible with the rest of the neighborhood as many other properties have additions on them that are similar.

5. How is the proposed construction similar to other buildings in the immediate area?

The addition to the single family home would be consistent the type and character of other homes in the neighborhood.

6. Explain how this plan represents the only reasonable location on the lot to

The existing kitchen is already in the place where we are proposing to add onto the home to build a bigger kitchen, and it is the only location where a kitchen could reasonably be placed in the home.

7. Has the applicant shown the plans to the most affected property owners? Have any neighbors objected to the proposed special exception, or have any neighbors written letters of support? If so, please attach the letter.

Yes, we have shown the plans to all of our neighbors. Our immediate neighbors have each written letters in support of the application.

Department of Planning and Zoning
Floor Area Ratio and Open Space Calculations for
Single and Two-Family Residential Outside Historic Districts

A

A. Property Information

A1. 1031 Cross Dr. Alexandria VA 22302 (Street Address) | R-20 (Zone)

A2. 5,000.00 (Total Lot Area) **X** 0.35 (Floor Area Ratio Allowed by Zone) **=** 1,750.00 (Maximum Allowable Floor Area)

B. Existing Gross Floor Area

Existing Gross Area		Allowable Exclusions**	
Basement		Basement**	
First Floor		Stairways**	
Second Floor		Mechanical**	
Third Floor		Attic less than 7'**	
Attic		Porches**	
Porches		Balcony/Deck**	
Balcony/Deck		Garage**	
Garage		Other***	
Other***		Other***	
B1. Total Gross	0.00	**B2. Total Exclusions**	0.00

B1. 0.00 Sq. Ft. — Existing Gross Floor Area*

B2. 0.00 Sq. Ft. — Allowable Floor Exclusions**

B3. 0.00 Sq. Ft. — Existing Floor Area Minus Exclusions *(subtract B2 from B1)*

Comments for Existing Gross Floor Area

C. Proposed Gross Floor Area

Proposed Gross Area		Allowable Exclusions**	
Basement	956.00	Basement**	956.00
First Floor	1,090.00	Stairways**	95.00
Second Floor	1,030.00	Mechanical**	
Third Floor		Attic less than 7'**	381.00
Attic		Porches**	21.00
Porches		Balcony/Deck**	
Balcony/Deck		Garage**	
Garage		Other***	92.00
Other***		Other***	
C1. Total Gross	3,076.00	**C2. Total Exclusions**	1,545.00

C1. 3,076.00 Sq. Ft. — Proposed Gross Floor Area*

C2. 1,545.00 Sq. Ft. — Allowable Floor Exclusions**

C3. 1,531.00 Sq. Ft. — Proposed Floor Area Minus Exclusions *(subtract C2 from C1)*

D. Total Floor Area

D1. 1,531.00 Sq. Ft. — Total Floor Area *(add B3 and C3)*

D2. 1,750.00 Sq. Ft. — Total Floor Area Allowed by Zone *(A2)*

E. Open Space (RA & RB Zones)

E1. Sq. Ft. — Existing Open Space

E2. Sq. Ft. — Required Open Space

E3. Sq. Ft. — Proposed Open Space

Notes

**Gross floor area for residential single and two-family dwellings in the R-20, R-12, R-8, R-5, R-2-5, RB and RA zones (not including properties located within a Historic District) is the sum of all areas under roof of a lot, measured from exterior walls.*

*** Refer to the Zoning Ordinance (Section 2-145(A)) and consult with Zoning Staff for information regarding allowable exclusions. Sections may also be required for some exclusions.*

**** Refer to the Zoning Ordinance (Section 2-145(A)) and consult with Zoning Staff for additional allowable exclusions. Additional exclusions may include space under balconies, retractable awnings, etc.*

The undersigned hereby certifies and attests that, to the best of his/her knowledge, the above computations are true and correct.

Signature: _____ Date: 12/17/2021

Department of Planning and Zoning
Floor Area Ratio and Open Space Calculations

B

A. Property Information

A1. 1031 Cross Dr. Alexandria VA 22302 (Street Address) | R-8 (Zone)

A2. 5,000.00 (Total Lot Area) **X** 0.35 (Floor Area Ratio Allowed by Zone) **=** 1,750.00 (Maximum Allowable Floor Area)

B. Existing Gross Floor Area

Existing Gross Area		Allowable Exclusions**	
Basement		Basement**	
First Floor		Stairways**	
Second Floor		Mechanical**	
Third Floor		Attic less than 7'**	
Attic		Porches**	
Porches		Balcony/Deck**	
Balcony/Deck		Lavatory***	
Lavatory***		Other**	
Other**		Other**	
B1. Total Gross	0.00	**B2. Total Exclusions**	0.00

B1. 0.00 Sq. Ft. — Existing Gross Floor Area*

B2. 0.00 Sq. Ft. — Allowable Floor Exclusions**

B3. 0.00 Sq. Ft. — Existing Floor Area Minus Exclusions *(subtract B2 from B1)*

Comments for Existing Gross Floor Area

C. Proposed Gross Floor Area

Proposed Gross Area		Allowable Exclusions**	
Basement	956.00	Basement**	956.00
First Floor	1,090.00	Stairways**	95.00
Second Floor	1,030.00	Mechanical**	
Third Floor		Attic less than 7'**	381.00
Attic		Porches**	21.00
Porches		Balcony/Deck**	
Balcony/Deck		Lavatory***	
Lavatory***		Other**	92.00
Other		Other**	
C1. Total Gross	3,076.00	**C2. Total Exclusions**	1,545.00

C1. 3,076.00 Sq. Ft. — Proposed Gross Floor Area*

C2. 1,545.00 Sq. Ft. — Allowable Floor Exclusions**

C3. 1,531.00 Sq. Ft. — Proposed Floor Area Minus Exclusions *(subtract C2 from C1)*

D. Total Floor Area

D1. 1,531.00 Sq. Ft. — Total Floor Area *(add B3 and C3)*

D2. 1,750.00 Sq. Ft. — Total Floor Area Allowed by Zone *(A2)*

E. Open Space (RA & RB Zones)

E1. Sq. Ft. — Existing Open Space

E2. Sq. Ft. — Required Open Space

E3. Sq. Ft. — Proposed Open Space

Notes

**Gross floor area is the sum of all areas under roof of a lot, measured from the face of exterior walls, including basements, garages, sheds, gazebos, guest buildings and other accessory buildings.*

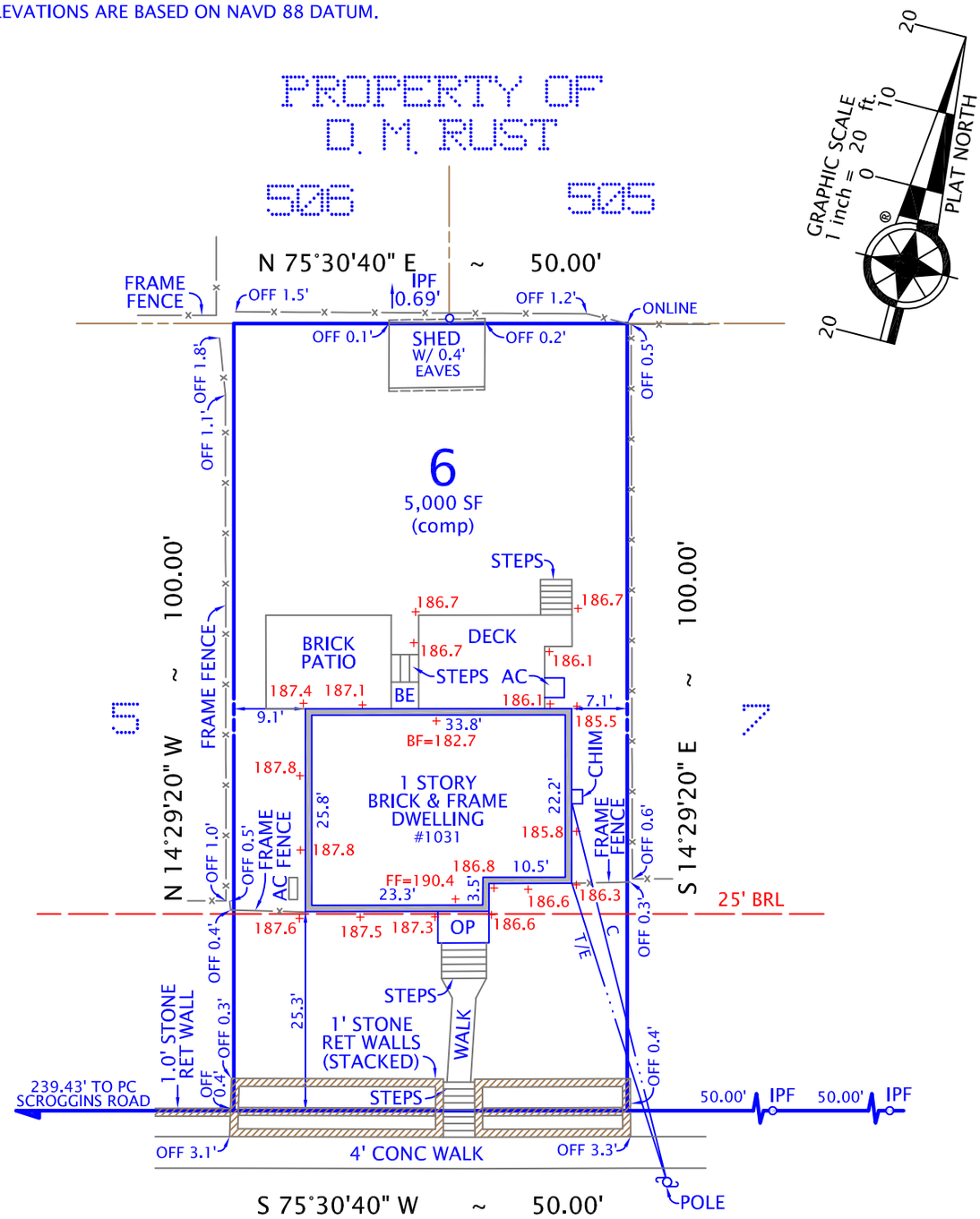
*** Refer to the Zoning Ordinance (Section 2-145(B)) and consult with Zoning Staff for information regarding allowable exclusions. Sections may also be required for some exclusions.*

****Lavatories may be excluded up to a maximum of 50 square feet, per lavatory. The maximum total of excludable area for lavatories shall be no greater than 10% of gross floor area.*

The undersigned hereby certifies and attests that, to the best of his/her knowledge, the above computations are true and correct.

Signature: _____ Date: 12/17/2021

NOTES: 1. FENCES ARE CHAIN LINK UNLESS NOTED.
2. ELEVATIONS ARE BASED ON NAVD 88 DATUM.



CROSS DRIVE
50' WIDE

PLAT
SHOWING HOUSE LOCATION ON
LOT 6
OVERLOOK TERRACE
(DEED BOOK 215, PAGE 426)
CITY OF ALEXANDRIA, VIRGINIA
SCALE: 1" = 20' DECEMBER 9, 2021 (ELEVATION)

I HEREBY CERTIFY THAT THE POSITIONS OF ALL THE EXISTING IMPROVEMENTS HAVE BEEN CAREFULLY ESTABLISHED BY A CURRENT FIELD SURVEY AND UNLESS SHOWN THERE ARE NO VISIBLE ENCROACHMENTS AS OF THIS DATE:

COMMONWEALTH OF VIRGINIA
12/09/2021
GEORGE M. O'QUINN
LICENSE NO. 2069
LAND SURVEYOR
George M. O'Quinn

CASE NAME:
MICHAEL GILL

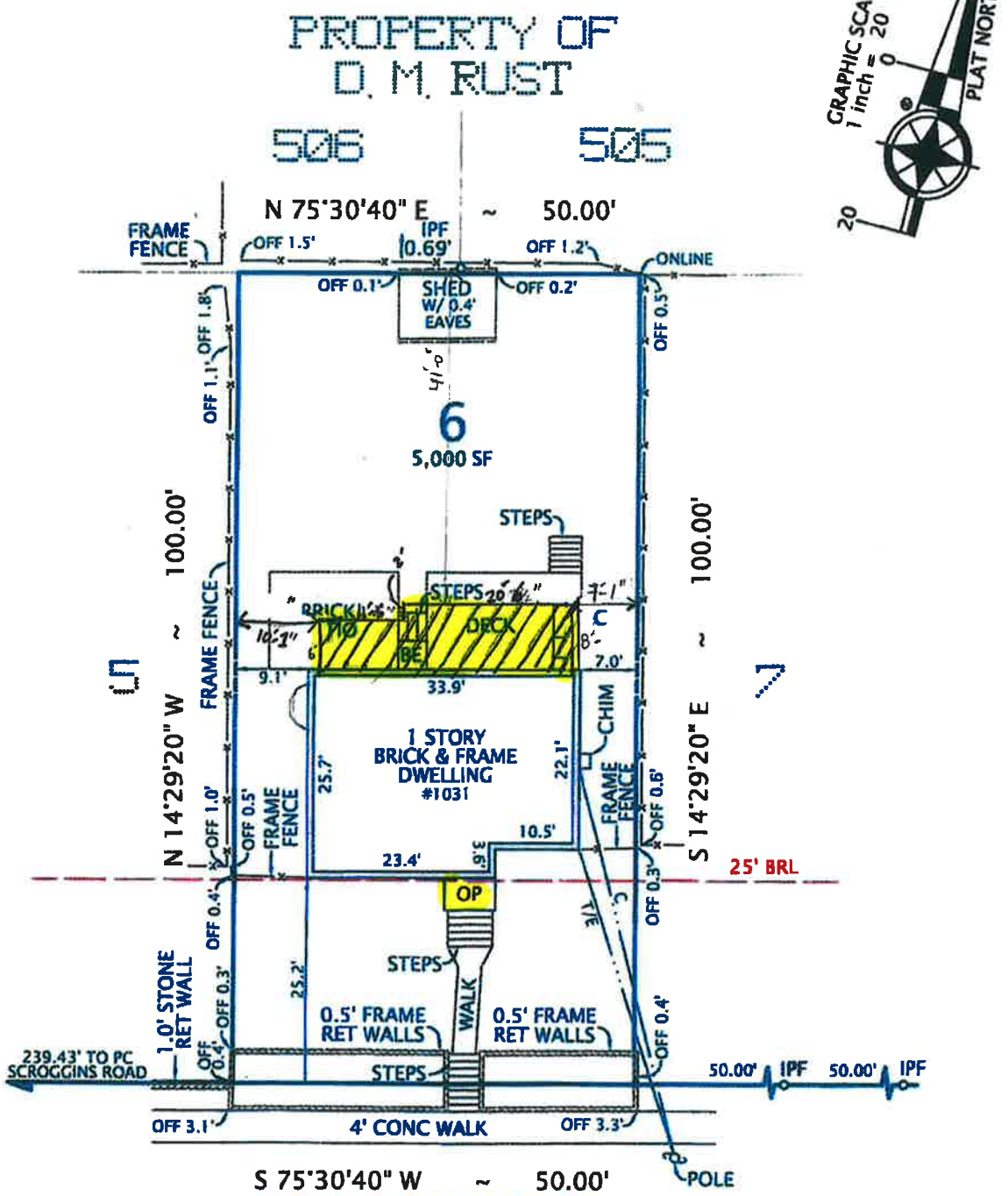
THIS PLAT IS SUBJECT TO RESTRICTIONS OF RECORD.

A TITLE REPORT WAS NOT FURNISHED.

NO CORNER MARKERS SET.

DOMINION Surveyors Inc.®
8808-H PEAR TREE VILLAGE COURT
ALEXANDRIA, VIRGINIA 22309
703-619-6555
FAX: 703-799-6412

NOTES: 1. FENCES ARE CHAIN LINK UNLESS NOTED.



PLAT

SHOWING HOUSE LOCATION ON

LOT 6

OVERLOOK TERRACE

(DEED BOOK 215, PAGE 426)

CITY OF ALEXANDRIA, VIRGINIA

SCALE: 1" = 20' NOVEMBER 29, 2016

REAR AND SECOND STORY ADDITION

ARCHITECT
JOSE (JOE) DASILVA
10486 COLONEL COURT
MANASSAS VA, 20110
(703)420-8141

1031 CROSS DRIVE
ALEXANDRIA VIRGINIA 22302

ABBREVIATIONS

DIM	DIMENSION	AB	ANCHOR BOLT	HP	HIGH POINT	PREFAB	PREFABRICATED
DISP	DISPENSER	ABV	ABOVE	HVAC	HEATING VENT, AIR	PSF	POUNDS PER SQUARE FOOT
DIV	DIVISION (DIVIDED)	ACC	ACCESS	COND		PSI	POUNDS PER SQUARE INCH
DN	DOWN	ACOUS	ACOUSTICAL	ID	INSIDE DIAMETER	PT	PAINT
DS	DOWN SPOUT	AD	AREA DRAIN	INSUL	INSULATION	PTD	PAINTED
DR	DOOR	ADJ	ADJUSTABLE	INST	INSTALLATION	QT	QUARRY TILE
DW	DISHWASHER	AFF	ABOVE FINISH	INT	INTERIOR	QTY	QUANTITY
DWGS	DRAWINGS	FLOOR		JAN	JANITOR	RAD	RADIUS
DWR	DRAWER	AHU	AIR HANDLING UNIT	JST	JOIST	RD	ROOF DRAIN
E	EAST	ALT	ALTERNATE	JT	JOINT	REF	REFRIGERATOR
EA	EACH	ALUM	ALUMINUM	KD	KNOCK DOWN	REINF	REINFORCED (ING)
EJ	EXPANSION JOINT	ANC	ANCHORS	KIT	KITCHEN	REQ	REQUIRED
EL	ELEVATION	APPROX	APPROXIMATE	KO	KNOCK OUT	RES	RESILIENT
ELEC	ELECTRICAL	ARCH	ARCHITECT	LAM	LAMINATED	REV	REVISE (REVISION)
ELEV	ELEVATION	AUTO	AUTOMATIC	LAV	LAVATORY	RO	ROUGH OPENING
ENCL	ENCLOSURE	AVG	AVERAGE	LP	LOWPOINT	RTU	ROOF TOP UNIT
ENT	ENTRANCE	B	BATHROOM	LIN	LINEAR	SC	SOLID CORE
EQ	EQUAL	BD	BEAD	LT	LIGHT	SCHED	SCHEDULE
EQUIP	EQUIPMENT	BIT	BITUMINOUS	LW	LIGHTWEIGHT	SECT	SECTION
ETR	EXISTING TO REMAIN	BLDG	BUILDING	MACH	MACHINE	SF	SQUARE FOOT (FEET)
EWC	ELEC. WATER COOLER	BLK	BLOCK	MAINT	MAINTENANCE	SHT	SHEET
EX	EXISTING	BLKG	BLOCKING	MATL	MATERIAL	SIM	SIMILAR
EXP	EXPANSION	BM	BEAM	MAX	MAXIMUM	SHR	SHOWER
EXT	EXTERIOR	BO	BY OWNER	MDF	MEDIUM DENSITY FIBERBOARD	SL	SLIDING
FD	FLOOR DRAIN	BOT	BOTTOM	MECH.	MECHANICAL	SQ	SQUARE
FE(C)	FIRE EXTINGUISHER	BRD	BOARD	MEMB	MEMBRANE	SSK	SERVICE SINK
FG	FINISH GRADE	BRKT	BRACKET	MET	METAL	S.STL.	STAINLESS STEEL
FT	FOOT (FEET)	BSL	BUILDING SETBACK LINE	MTL	METAL	STC	SOUND TRANSMISSION CLASS
FF	FINISHED FLOOR	BSMT	BASEMENT	MEZZ	MEZZANINE	STD	STANDARD
FF&E	FIXTURE FURNITURE & EQUIPMENT	BU	BUILT UP	MFR	MANUFACTURER	STL	STEEL
FVC	FIRE VALVE CABINET	CAB	CABINET	MIN	MINIMUM	STN	STAIN
FIN	FINISH	CEM	CEMENT	MISC	MISCELLANEOUS	STOR	STORAGE
FL	FLOOR	CF	CUBIC FOOT (FEET)	MLDG	MOLDING	STRUCT	STRUCTURAL
FLEX	FLEXIBLE	CI	CAST IRON	MO	MASONRY OPENING	SUSP	SUSPENDED
FLSG	FLASHING	CJ	CONTROL JOINT	MOD	MODIFIED	SW	SWITCH
FLUOR	FLUORESCENT	CLG	CEILING	MTD	MOUNTED	SYS	SYSTEM
FR	FRAME	CLL	CONTRACT LIMIT LINE	NIC	NOT IN CONTRACT	(T)	TEMPERED GLASS/WINDOW
FRPF	FIRE PROOFING	CL	CLOSET	NO	NORTH	TBR	TO BE REMOVED
FRT	FIRE RETARDANT TREATED	CLR	CLEAR	NRC	NOISE REDUCTION COEFFICIENT	TEL	TELEPHONE
FTG	FOOTING	CMU	CONCRETE MASONRY UNIT	NTS	NOT TO SCALE	TEMP	TEMPERED
FUR	FURRING	CNR	CORNER	OA	OVERALL	T&G	TONGUE & GROOVE
FX	FIXED WINDOW	CH	CONCRETE HEADER	OC	ON CENTER	THK	THICK
GA	GAUGE	CO	CLEAN OUT	OD	OUTSIDE DIAMETER	THR	THRESHOLD
GALV	GALVANIZED	COL	COLUMN	OFF	OFFICE	TV	TELEVISION
GB	GYPSUM BOARD	CONC	CONCRETE	OFCI	OWNER FURNISHED/ CONTRACTOR INSTALLED	TYP	TYPICAL
GC	GENERAL CONSTRACTOR	CONST	CONSTRUCTION	OH	OVERHEAD	UL	UNDERWRITER'S LABORATORIES
GL	GLASS	CONT	CONTINUOUS	OPG	OPENING	UNF	UNFINISHED
GR	GRADE	CS	COURSES	OP HD	OPPOSITE HAND	UNO	UNLESS NOTIFIED OTHERWISE
GWB	GYPSUM WALLBOARD	CS	CASEMENT WINDOW	OPP	OPPOSITE	UTL	UTILITY
HB	HOSE BIB	CT	CARPET	PAR	PARTIAL	VERT	VERTICAL
HC	HOLLOW CORE	CTR	CENTER	PART	PARTITION	VIF	VERIFY IN FIELD
HD	HEAVY DUTY	CTSK	COUNTER SUNK	PED	PEDESTRIAN	W	WEST
HDWD	HARDWOOD	DBL	DOUBLE	P-LAM	PLASTIC LAMINATE	WD	WOOD
HDWR	HARDWARE	DEPT	DEPARTMENT	PLYWD	PLYWOOD	WH	WATER HEATER
HT	HEIGHT	DET	DETAIL	PNL	PANEL	W/O	WITH OUT
HM	HOLLOW METAL	DF	DRINKING FOUNTAIN	POL	POLISH (POLISHED)	WP	WATERPROOFING
HORIZ	HORIZONTAL	DH	DOUBLE HUNG	PPT	PRESERVATIVE	WR	WATER RESISTANT
		DIA	DIAMETER	PRESSURE	TREATED	WT	WEIGHT
		DIFF	DIFFUSER	PR	PAIR		

CODE INFORMATION

BUILDING CODE: 2015 VRC
USE GROUP: R-5 SINGLE FAMILY RESIDENTIAL
CONSTRUCTION TYPE: (VB WOOD FRAMED CONSTRUCTION)
HEIGHT LIMITATION: 30' MAXIMUN HEIGHT PER ZOINING
AUTOMATIC SPRINKLER SYSTEM (NONE)
ENERGY CODE COMPLIANCE (PRESCRIPTIVE)

DESIGN LOADS

SOIL BEARING PRESSURE : 1500 PSF MAX FOR ALL FOOTINGS
(NOTE: ALL FOOTINGS TO BEAR ON VIRGIN SOIL IN ACCORDANCE WITH CODE
SOIL CLASSIFICATIONS SW,SP,SM,SC,GM,GC
ROOF LOADS : OPEN WEB TRUSSES
SNOW LOAD 30 PSF (TYPICAL)
DEAD LOAD 17 PSF (TOP AND BOTTOM CHORD)
FLOOR LOADS : (I JOIST SYSTEMS)
LIVE LOAD 40 PSF (TYPICAL)
SLEEPING AREA'S 30 PSF LIVED LOAD
FLOOR DEAD LOAD 12 PSF (TYPICAL)
ATTIC LIMITED STORAGE :
LIVE LOAD 20 PSF
DEAD LOAD 12 PSF
DECK LOAD :
LIVE LOAD 40 PSF
DEAD LOAD 12 PSF
BALCONIES :
LIVE LOAD 60 PSF
DEAD LOAD 12 PSF
STAIRS :
60 PSF
WIND LOADS :
WIND SPEEDS 115 MPH (3 SEC. GUST)
WIND LOAD FACTOR (1)
WIND EXPOSURE (B)
COMPONENTS CLADDING :
140 MPH OR LESS (3 SEC GUST)
MAX VALUE ROOF (+ 18.2 - 23.2)
MAX VALUE AT WALL (+ 19.8 - 26.6)
WALL BRACING :
STRUCTURAL SHEATING ON ALL EXTERIOR WALLS (PRESCRIPTIVE METHOD CS-WSP)
FOUNDATION FLUID PRESSURE DESIGN EQUIVALENT :
FOUNDATION WALLS 60 PCF
NOTE USE ONLY GRAVEL OR CLEAN FILL IN ACCORDANCE WITH CODE SOIL CLASSIFICATIONS SW,SP,SM,SC,GM,GC
HANGER MANUFACTURE :
ALL HANGERS SHALL BE SPECIFIED BY TRUSS OR JOIST MANUFACTURE (SPEC MANUFACTURED BY SIMPSON STRONG TIE)

THERMAL ENVELOPE MIN REQUIREMENTS :
SILL PLATE 1/4" FOAM MIN
FOUNDATION PERIMETER (WALKOUT AREA'S) R-10 CLOSED CELL EXTRUDED POLYSTYRENE
FOUNDATION WALL R-13 FLAME SPREAD BATT (FULL HEIGHT)
2X4 FINISH BASEMENT WALL R-13
2X4 EXTERIOR WALLS R-15
2X6 EXTERIOR WALLS R-19
CANTALIVER FLOOR OVER UNCONDITIONED SPACE R-38
BAND BOARD R-19
ATTIC R-38
R-49 AS REQUIRED BY CODE
AREA'S OVER UNCODITIONED SPACE R-38
WINDOW & DOOR THERMAL PERFORMANCE :
WINDOWS SHALL BE ANDERSON 200 SERIES DOUBLE HUNG (OR EQ)
U =0.30 (DUAL PANE LOW E) OR HIGHER U VALUE
DOORS SHALL BE ANDERSON 200 SERIES (OR EQ)
U =0.32 (DUAL PANE LOW E TEMPERED) OR HIGHER U VALUE
EMERGENCY ESCAPE:
EGRESS WINDOWS FROM SLEEPING ROOMS SHALL HAVE A MINIMUN OF 5.7 SQFT.
FROST DEPTH:
30" PER VRC CODE
WEATHERING :
SEVERE
TERMITE :
MODERATE TO HEAVY
DECAY :
SLIGHT TO MODERATE
WINTER DESIGN TEMPERATURE :
13F
FLOOD HAZARDS :
SEE SITE GRADING PLANS FOR LOCATION AS INDICATED
INTERIOR STAIR & BEARING WALLS PROTECTION :
(1) LAYER OF 1/2" GYPUM BOARD TO ALL SURFACES IN ACCESSIBLE AREAS.
GARAGE WALL & CEILING ASSEMBLY :
(2) LAYERS OF 1/2" GYPSUM BOARD OR (1) LAYER OF 5/8 TYPE X GYPSUM BOARD REQUIRED BY CODE AT WALL & CEILINGS & FIRE RATED 20 MIN GARAGE DOOR FORM HOUSE TO GARAGE.

BUILDING DATA

BASEMENT EXISTING : 774 SF
FIRST FLOOR EXISTING : 774 SF
SECOND FLOOR EXISTING: 278 SF
FIRST FLOOR PROPOSED : 231 SF
SECOND FLOOR PROPOSED : 721 SF

TOTAL BUILDING SQUARE FEET : 2,500 SF

SHEET INDEX

COMMONWEALTH OF VIRGINIA
GEORGE C. GERBER
Lic. No. 2311
08/20/2021
PROFESSIONAL ENGINEER

OFFICIAL COUNTY USE ONLY

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PROJECT NAME AND ADDRESS: REAR AND SECOND STORY ADDITION
1031 CROSS DRIVE
ALEXANDRIA VIRGINIA 22302

PROJECT # J21103

SEAL

REVISION | DATE

ISSUE DATE: 08/20/2021

SHEET TITLE: COVER SHEET

SHEET # A001

SPECIFICATIONS

NOTE: COLUMNS READ FROM RIGHT TO LEFT

GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN A PROFESSIONAL AND SAFE MATTER IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL CODES & REGULATIONS IN ACCORDANCE OF ACCEPTED GOOD PRACTICE. GENERAL CONTRASCTOR IS RESPONSIBLE FOR PRACTICING AND ENFORCING RULES ON CONSTRUCTION SITE. ARCHITECT WHEN VISITING CONSTRUCTION SITE IS ONLY VISING AS OBSERVER AND NOT RESPONSIBLE FOR SITE OR WORKERS.

2. DIMENSIONS ARE TO FACE OF WOOD FRAMING OR CONCRETE UNLESS OTHERWISE NOTED.

3. ALL INSTALLATIONS SHALL BE PERFORMED IN A STRICT ACCORDANCE W/THE MATERIAL, EQUIPMENT, AND OR MANUFACTURERS SPECIFICATIONS.

4. DIMENSIONS ARE TO BE TAKEN FROM DIMENSION STRINGS ONLY, DO NOT SCALE DRAWINGS. ANY OMISSIONS OR DISCREPANCIES ARE TO BE BROUGHT TO THE DESIGNER'S ATTENTION IMMEDIATELY, FOR THE DESIGNER TO RESOLVE.

5. MATERIALS OR ITEMS IDENTIFIED BY THE A MANUFACTURER'S NAME OR TRADE NAME MAY BE SUBSTITUTED BY A LIKE PRODUCT OF A DIFFERENT MANUFACTURER, ONLY WITH PRIOR APPROVAL OF THE DESIGNER OR OWNER PRIOR TO ORDERING/INSTALLING. CONTRACTOR IS WELCOME AND ENCOURAGED TO SUBMIT SUBSTITUTIONS.

6. PREMISES SHALL BE LEFT " BROOM CLEAN" AND EXTERIOR SHALL BE COMPLETELY FREE OF DEBRIS UPON COMPLETION OF WORK. ALL SUBCONTRACTORS ARE REQUIRED TO CLEAN PREMISES AND EXTERIOR OF THEIR DEBRIS DAILY, UNLESS SPECIFICALLY EXEMPTED BY OWNER. PARTICULAR EFFORT IS TO BE TAKEN TO MINIMIZE & CLEAN-UP DEBRIS WITHIN EXISTING PREMISES, ON A DAILY BASIS.

7. THERE IS TO BE NO SMOKIN OF ANY KIND IN RESIDENCE FROM COMMENCEMENT OF FRAMING.

8. ALL EXTERIOR WALL FRAMING TO BE 2X6 AND INTERIOR WALL FRAMING TO BE 2X4 UNLESS NOTED OTHERWISE NOTED ON THE FRAMING PLANS.

9.G.C TO COORDINATED KITCHEN LAYOUT REQUIREMENTS IN TERMS OF VENTING AND ELECTRICAL POINTS W/FINAL KITCHEN DESIGN AND SELECTED APPLIANCES.

DIVISION 1: GENERAL REQUIREMENTS

1. WORK PERFORMED SHALL COMPLY WITH THIS GENERAL NOTES UNLESS OTHERWISE NOTED ON PLANS.
2. WORK PERFORMED SHALL COMPLY WITH ALL APPLICABLE LOCAL AND STATE CODES, ORDINANCES AND REGULATIONS.
3. ON-SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACOTR AND HIS SUBCONTRACTORS.
4. DISCREPANCIS: THE GC SHALL COMPARE AND COORDINATE ALL DRAWINGS; IF IN THE OPINION OF THE GC A DISCREPANCY EXITS THE GC SHALL PROMPTLY NOTIFY ARCHITECT OF THE DISCREPANCY AND INCLUDE PROPOSED SOLUTION FOR APPROVIAL PRIOR TO PROCEEDING WITH WORK.
5. **OMISSIONS:** IN THE EVENT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS, THE CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN OR NOTED AND AS APPLICABLE TO CODES, REGULATIONS AND INDUSTRY STANDARDS.
6. ALL WORK IS TO BE PERFORMED IN A PROFESSIONAL, SAFE MANNER AND IN STRICT ACCORDANCE WITH CODES, REGULATIONS, MAUFACTURER'S SPECIFICATIONS/RECOMMENDATIONS AND STANDARD PRACTICES.
7. DIMENSIONS SHALL BE READ OR CALCULATED AND NEVER SCALED. ALL DIMENSIONS ARE TO THE ROUGH FRAMING U.N.O.
8. DEISGN LOADS:
   - ROOF LOADS (30PSF LIVE) + (17 PSF DEAD)
   - FLOOR LOADS (40PSF LIVE) + (12 PSF DEAD)
   - FLOOR LOAD SLEEPING AREAS (30 PSF LIVE) + (12 PSF DEAD)
   - DECK LOAD (40PSD LIVE) + (12 PSF DEAD)
   - BALCONIES LOAD (60PSF LIVE) + (12 PSF DEAD)
   - ATTIC LIMITED STORAGE (20PSF LIVE) + (12 PSF DEAD)
   - WIND LOAD = 115 MPH @ 3 SEC.GUST
   - STAIR LOAD = 60 PSF
   - SNOW LOAD = 30 PSF
10. WALL BRACING USE ONE OF THE FOLLOWING OPTIONS:
    A. WOOD STRUCTURAL PANEL SHEATHING WITH A THICKENESS NOT LESS THAN 1/2" (5/8" RECOMMENDED) FOR 16" AND 24" STUD SPACING. WOOD STRUCTUAL PANELS SHALL BE INSTALLED IN ACCORDANCE WITH TABLE R602.3 (3)
    B. ALTERNATE BRACED WALL PANELS. ALTERNATE BRACED WALL LINES CONSTRUCTED IN ACCORDANCE WITH ONE OF THE FOLLOWING PROVISIONS SHALL BE PERMITED TO REPLACE EACH 4 FEET (1219 MM) OF BRACED WALL PANEL AS REQUIRED BY SECTION R602.10.4.
11. ANY CHANGES TO THE PROJECT REQUIRE WRITTEN REQUEST AND APPROVAL BY ARCHITECT OR APPROPRIATE ENGINEER. ANY CONSTRUCTION CHANGES NOT CONFORMING TO THIS SET OF DRAWINGS OR REVISED SET OF DRAWINGS NO MATTER HOW SMALL SHALL INDEMNIFIES ARCHITECT AND ENGINEER OF ALL RESPONSIBILITIES AND LIABILITY. OWNER TO ASSUME AND COMPENSATE ARCHITECT AND ENGINEER FOR ALL LITIGATION, FINES AND LAWYER COSTS AND INCLUDING INTEREST ASSOCIATED WITH CHANGES, LITIGATION OR INJURY.
12. G.C. TO SUBMIT SHOP DRAWINGS FOR REVIEW TO ARCHITECT OR ENGINEER. SHOP DRAWINGS TO BE STAMPED AND SIGNED BY THE GC TO CONFORM WITH THE DRAWINGS, INTENDED DESIGN, CODES AND BEST PRACTICES.
13. ANY CHANGES TO DRAWINGS NEED TO BE SUBMITTED TO AND APPROVED BY THE ARCHITECT OR ENGINEER.
14. ARCHITECT RETAINS THE RIGHTS TO THE DESIGN OF THE PROJECT AS INTELLECTUAL PROPERTY PER UNITED STATES COPYRIGHT LAW COMPENDIOUM SECTION 903.2: ARCHITECTURAL WORKS 17 U.S.C. § 101 & 923. ARCHITECT RETAINS RIGHTS TO PHOTOGRAPH OR TAKE VIDEO OF THE PROJECT DURING AND AFTER THE CONSTRUCTION. THE ARCHITECT IS GRANTED FAIR RIGHT OF USE OF ANY PHOTOGRAPHS OF THE DESIGN & ARCHITECTURE TO BE USED BY THE ARCHITECT FOR VARIOUS USES INCLUDING STAFF EDUCATION, ADVERTISEMENT, BLOGGING, MARKETING, ETC.

DIVISION 2: EXISTING CONDITIONS & DEMOLITION

EXISTING CONDITIONS:
1. GC TO FAMILIZARIZE WITH EXISTING SITE, CONDITIONS AND DRAWINGS PRIOR TO BEGINING WORK INCLUDING UTILITIES. NOTIFY ARCHITECT / ENGINEER OF ANY DISCREPRENCISES OR CONDITIONS THAT DIFFER FROM DRAWINGS.
2. ANY CONDITIONS / ELEMENTS TO REMAIN SHALL BE COVERED AND PROTECTED DURING CONSTRUCTION/DEMOLITION.
3. ANY ELEMENT/ CONSTRUCTION THAT IS TO BE RELOCATED SHALL BE PHOTOGRAPHED AND RECORED WITH DIMENSIONS TO BE REINSTALLED IN KIND. OBJECTS TO BE RELOCATED ARE TO BE REMOVED CAREFULLY AND STORED PROTECTED FROM DAMAGE AND LABELED.

DEMOLITION:
1. GC TO VERIFY EXISTING CONDITIONS TO REMAIN PRIOR TO BEGINING DEMOLITION.
2. PRIOR TO DEMOLTIION GC TO VERIFY UTILITY LINE LOCATIONS AND SERVICES.
3. IF UNANTICIPATED HAZARDS, HAZARDOUS MATERIALS, OBJECTS OR HUMAN REMAINS ARE UNCOVERED DURING DEMOLITION / EARTH REMOVAL THE GC IS TO CEASE WORK AND CONTACT APPROPRIATE AUTHORITIES IMMEDIATELY.
4. EXPOSE FRAMING PRIOR TO DEMOLITION.
5. DO NOT DEMOLISH ANY STRUCTURAL COMPONENTS OR SYSTEM THAT IS NOT REFERENCED IN THE DRAWINGS. NOTIFY STRUCTURAL ENGINEER OF ANY STRUCTURAL ELEMENTS THAT ARE NOT INDICATED IN THE DRAWINGS.
6. HAZARDOUS MATERIALS SUCH AS ASBESTOS OR LEAD IF ENCOUNTERED IS TO BE REMIDEATED AS REQUIRED BY LOCAL OR STATE REMIDIATION REGULATIONS.

DIVISION 32: EXTERIOR IMPROVEMENTS

1. CONCRETE SLABS AND FOOTINGS CALCULATIONS ARE BASED ON A 1500 PSF VALUE PER (PER CODE)
2. FOOTINGS, FOUNDATIONS, WALLS, AND SLABS SHALL NOT BE PLACED ON MARINE CLAY, PEAT OR ANY OTHER ORGANIC MATERIAL.
3. ANY RADON MITIGATION CONSTRUCTION SHOWN ON THESE PLANS HAS BEEN INCLUDED AT THE DIRECTION OF THE OWNER AND IS NOT WARRANTED BY THE DESIGNER AS TO IT'S EFFECTIVENESS.
4. DO NOT BACKFILL AGAINST THE FOUNDATION WALL UNTIL THE FIRST FLOOR SUBFLOOR IS IN PLACE.
5. PROVIDE 4" PERIMETER FOUNDATION DRAIN AROUND THE FOUNDATION WALL AND SLOPE GRADE AWAY FROM THE STRUCTURE A MINIMUN OF 6" IN 10 FEET
6. WHERE CONDITIONS DEVELOP REQUIRING CHANGES IN EXCAVATIONS. SUCH CHANGES SHALL BE MADE AS DIRECTED BY THE GEO-TECHNICAL ENGINEER.

DIVISON 3: CONCRETE & FOUNDATIONS

CONCRETE:
1. THE CONCRETE PROPERTIES SHALL BE AS FOLLOWS:

ITEM	MINIMUN STRENGTH
FOOTINGS	3000 PSI @ 28 DAYS
WALLS	3000 PSI @ 28 DAYS
INTERIOR SLAB-ON-GRADE	3000 PSI @ 28 DAYS
GARAGE SLAB-ON-GRADE	3500 PSI @ 28 DAYS (5% AIR -ENTRAINED)
EXTERIOR SLAB-ON-GRADE	3500 PSI @ 28 DAYS (5% AIR-ENTRAINED)

2. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI-318-99, SPECIFICATIONS FOR STRUCTUAL CONCRETE FOR BUILDINGS.
3. ALL CONCRETE SLABS ON GRADE SHALL BE A MINIMUN OF 4" THICK ON 6 MIL POLYETHYLENE FILM WITH 6X6 W.W.F AT MID SLAB.
4. FILL UNDER SLABS AND FOOTINGS SHALL BE APPROVED BACKFILL MATERIAL AT 95% COMPACTION IN 6" LAYERS.
5. BACKFILL TO BE OF APPROVED MATERIAL.

REINFORCING STEEL:
1. REINFORCINF STEEL SHALL BE INTERMEDIATE GRADE NEW BILLET DEFORMED BARS CONFORMING TO ASTM A615. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.
2. ALL STEEL REINFORCEMENT FY = 60 KSI
3. DETAILING, FRABRICATING AND PLACING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI-315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES". FURNISH SUPPORT BARS AND ALL REQUIRED ACCESSORIEES IN ACCORDANCE WITH CRSI STANDARDS.
4. ALL REINFORCING BARS WHICH INTERCEPT PERPENDICULAR ELEMENTS SHALL TERMINATE IN BOOKS, PLACED TWO (2) INCHES CLEAR FROM OUTER FACE OF ELEMENT.
5. CONTRACTOR SHALL NOTIFY THE BUILDING OFFICIAL OR APPROVED ENTITY AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EACH CONCRETE POUR. NO CONCRETE SHALL BE PLACED UNTIL ALL REINFORCING HAS BEEN INSTALLED BY THE CONTRACTOR AND INSPECTED BY THE BUILDING OFFICIAL.
6. SEE FOUNDATION PLANS, DETAILS AND TYPICAL WALL SECTION FOR REINFORCED QUANTITIES AND SIZES.
7. PROTECTIVE COVERAGE FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

LOCATION	MINIMUN COVERAGE
FOOTINGS	3"
BEAMS AND COLUMNS	2"
SLABS*	3/4"
WALLS (INTERIOR FACE)	2"
WALLS (EXTERIOR FACE)	2"

*WIRE MESH TO BE PLACED AT MID-DEPTH OF SLAB.

FOUNDATION:
1. FOOTINGS DEPTHS ARE SHOWN ON THE SECTION UNLESS OTHERWISE NOTED, FOOTINGS SHALL BEAT A MINIMUN OF 12" INTO ORIGINAL UNDISTURBED SOIL AND A MINIMUN OF 24" BELOW FINISHED GRADE.
2. WHERE REQUIRED STEP FOOTINGS TO RATIO OF 2 HORIZONTAL TO 1 VERTICAL.
3. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED BY THE BUILDING OFFICIAL PRIOR TO THE PLACING OF ANY CONCRETE. THE BUILDING OFFICIAL SHALL BE GIVEN NOTICE FOR THIS OBSERVATION.
4. USE BRICK PATTERN FORMS ON ALL EXPOSED CONCRETE FOUNDATION WALLS.
5. PROVIDE 4" CONCRETE PAD FOR EXTERIOR HVAC UNIT, PROVIDE PIPE/CONDUIT SLEEVES AS REQUIRED BY MANUFACTURER.

DIVISION 4: MASONRY

1. SOLID MASONRY WALLS TO HAVE "DUR-OR-WALL" (OR APPROVED EQUAL) TRUSS TIES AT 16" O.C VERTICAL ABOVE GRADE AND 8" O.C VERTICAL BELOW GRADE.
2. BRICK VENEER WALLS TO HAVE NON-CORROSIVE METAL TIES AT 16" O.C VERTICALLY AND HORIZONTALLY.
3. PROVIDE FLASHING AT THE TOP. BOTTOM AND SIDES OF ALL OPENINGS AND BASE WITH WEEP HOLES AT 24" O.C.
4. PROVIDE AT LEAST 8" OF SOLID MASONRY UNDER CONCENTRATED LOADING CONDITIONS.
5. MORTAR TO CONFORM TO ASTM C270, TYPE N.

DIVISION 5: METALS

1. STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE 9TH EDITION OF A.I.S.C. MANUAL OF STEEL CONSTRUCTION. STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36. STEEL FOR PIPE COLUMNS SHALL BE OF EQUIVALENT CAPACITY AND WELDABILITY TO ASTM A-501. ALL WELDING SHALL BE IN ACCORDANCE TO THE AMERICAN WELDING SOCIETY CODE AND BE PERFORMED BY WELDERS QUALIFIED IN ACCORDANCE WITH AWS PROCEDURES. ELECTRODES SHALL CONFORM TO ASTM A-5.20 E-70 SERIES.
2. PROVIDE BASE PLATE FOR ALL STRUCTURAL STEEL BEAMS BEARING ON CONCRETE OR MASONRY. PROVIDE STANDARD ANGLE ANCHORS AND INSERTS, TIES, CLIPS, ANCHORS,STRAPS, HANGERS, BOLTS, AND OTHER HARDWARE AND FASTENING DEVICES AS MAY BE REQUIRED.
3. STEEL COLUMNS, LINTELS, BEAMS AND RAILINGS SHALL HAVE A SHOP COAT OF RUST INHIBITING PAINT. DO NOT PAINT STAINLESS STEEL OR ALUMINUM ELEMENTS U.N.O.
4. METAL RAILING TO WITHSTAND 200LB PER LINEAR FOOT FORCE IN ANY DIRECTION MINIMUM.

STEEL COLUMNS:
1. 11 GAUE ADJUSTABLE AND FIXED STEEL COLUMNS ARE CONSTRUCTED OF CARBON STEEL WITH A MINIMUN YIELD STRENGHT OF 33 KSI AND ULTIMATE STRENGHT OF 45 KSI. IN ACCORDANCE WITH ASTM 500 AND MANUFACTURED BY MARSHALL STAMPING COMPANY IN ACCORDANCE WITH BOCA REPORT NO.21-31 AND HAVE A MINIMUN 8" X 4" 1/4" BEARING AND CAP PLATES UNLESS NOTED OTHERWISE. SCREW JACK SHOULD BE ENCASED IN CONCRETE OR TACK WELDED AFTER INSTALLATION. EACH COLUMN SHOULD BE DESIGNED WITH THE CAPACITY RATING AND WITHSTAND COMPRESSION LOADS AS NOTED ON PLAN.

FASTENERS:
1. ALL FASTENERS IN EXTERIOR DECKS SHALL BE GALVANIZED.
2. ANCHOR BOLTS SHALL BE 1/2" DIAMETER X 10" LONG GALVANIZED (SEE DRAWINGS FOR PLACEMENT AND SPACING)
3. FLITCH BEAMS SHALL HAVE A MINIMUM FB = 1000 PSI, E=1,300,000 PSI WITH 2 ROWS 1/2" BOLTS, 16" O.C TOP AND 32" O.C AT BOTTOM U.N.O.
4. JOIST HANGERS SHALL BE USED TO SUPPORT ALL PURLINS, JOISTS AND BEAMS NOT FRAMED OVER SUPPORTING MEMBERS.
5. JOIST HANGERS SHALL BE USED "TECO" UNLESS OTHERWISE NOTED OR AN APPROVED EQUAL.
6. MACHINE BOLT AND CARRAGE BOLT HOLES IN WOOD SHALL BE DRILLED 1/16" LARGER THAN DIAMETER OF BOLT.
7. LAG SCREWS SHALL BE SQUARE HEAD, OF STRUCTURAL GRADE STEEL, BE PLACED WITH WASHERS UNDER THE HEAD.
8. BOLTS IN WOOD FRAMING SHALL BE STANDARD MACHINE BOLTS WITH STANDARD MALLEABLE IRON WASHERS OR STEEL PLATE WASHERS.
9. STEEL PLATE WASHER SIZES SHALL BE AS FOLLOWS:

BOLT DIAMETER	WASHER SIZE
1/2"	2-1/4" X 5/16"
5/8"	2-1/4" X 5/16"
3/4"	2-5/8" X 5/16"

10. SILL PLATES TO BE ATTACHED TO STEEL BEAMS W/ 1/2" THRU BOLTS STAGGERED @ 24" O.C. OR PNEUMATIC FASTEN WITH HILTI "ZF54" PINS W/36MM WASHERS @ 24" O.C.

LINTELS:
1. LINTELS SIZES SHALL BE PER THE LINTEL SHEDULE SHOWN ON THE BRICK LINTEL DETAIL, U.N.O.

DIVISION 6: WOOD, PLASTICS AND COMPOSITES

1. ALL JOISTS, RAFTERS, AND HEADERS SHALL BE, UNLESS OTHERWISE NOTED, HEM-FIR #2 OF EQUAL WITH THE FOLLOWING MINIMUM ALLOWABLE STRESSES AND MODULUS OF ELASTICITY:
   - EXTREME FIBER STRESS: FB=850 PSI (REPETITIVE MEMBER)
   - HORIZONTAL SHEAR: FV=75 PSI
   - COMPRESSION PERPENDICULAR TO GRAIN: FC=405 PSI
   - MODULUS OF ELASTICITY: E=1,300,000 PSI
   - MOISTURE CONTENT: 19%
2. ALL EXTERIOR LUMBER AND LUMBER IN CONTACT WITH MASONRY AND CONCRETE SHALL BE PRESSURE PRESERVATIVE TREATED IN ACCORDANCE WITH AWPA STANDARDS.
3. ALL NAILINGS SHALL COMPLY WITH IRC CODE, LATEST EDITION AND ALL STATE AND LOCAL BUILDING CODES.
4. BUILT-UP BEAMS OT JOISTS FORMED BY A MULTIPLE OF 3-PLY OR LESS 2X MEMEBERS SHALL BE CONNECTED W/16D NAILS AT 8" O.C
5. BUILD-UP BEAMS FORMED BY 3 PLYS OF LAMINATED VENEER LUMBER SHALL BE FASTEN W 3-ROWS 16D NAILS AT 12" O.C ON EACH SIDE OR PER MANUFACTURES RECOMMNENDATION.
6. BLOCK SOLID AT ALL BEARING SUPPORTS WHERE ADEQUATE LATERAL SUPPORT IS NOT OTHERWISE PROVIDED.

DIVISION 6: WOOD, PLASTICS AND COMPOSITES CONT.

7. WHEN FRAMING END TO END JOIST SHALL BE SECURED TOGETHER BY METAL STRAPS.
8. ALL RAFTERS AND JOISTS FRAMING FROM OPPOSITE SIDES SHALL LAP AT LEAST THREE (3) INCHES AND BE SPIKED TOGETHER.
9. DO NOT ALTER SIZES OF MEMBERS NOTED WITHOUT APPROVAL OF STRUCTURAL ENGINEER/ARCHITECT.
10. FASTENERS TO BE IN ACCORDANCE WITH IRC FASTENER SCHEDULE FOR STRUCTURAL MEMBERS R602.3(1).

CUTTING OF BEAMS, JOIST AND RAFTERS:
1. NO STRUCTURAL MEMBER SHALL BE OMITTED; NOTCHED, CUT, BLOCKED OUT OR RELOCATED WITHOUT PRIOR APPROVAL BY THE DESIGNER.
2. CUTTING OF WOOD BEAMS, JOIST AND RAFTERS SHALL BE LIMITED TO CUTS AND BORED HOLES NOT DEEPER THAN ONE-SIXTH (1/6TH) THE DEPTH OF THE MEMBER AND SHALL NOT BE LOCATED IN THE MIDDLE ONE-THIRD (1/3TH) OF THE SPAN. NOTCHES LOCATED CLOSER TO SUPPORTS THAN THREE TIMES THE DEPTH OF THE MEMBER SHALL NOT EXCEED ONE-FITH (1/5TH) THE DEPTH. HOLES BORED OR CUT INTO JOIST SHALL NOT EXCEED ONE-THIRD (1/3RD) THE DEPTH OF THE JOIST.

BRIDGING:
1. WHERE JOIST DEPTH EXCEEDS TWELVE NOMINAL INCHES THERE SHALL BE NOT LESS THAN ONE LINE OF BRIDGING IN EVERY EIGHT FEET OF SPAN IN FLOOR, ATTIC AND ROOF FRAMING THE BRIDGING SHALL CONSIST OF NOT LESS THAN ONE BY THREE INCH LUMBER DOUBLE NAILED AT EACH END OR OF EQUIVALENT METAL BRACING OF EQUAL RIDGIDITY.

SUB-FLOOR:
1. ALL PLYWOOD SHALL BE PINE OR EQUAL AND SHALL BE MANUFACTURED AND GRADED IN ACCORDANCE WITH "PRODUCT STANDARD P-1-65" FOR 80FT PLYWOOD-CONSTRUCTION AND INDUSTRIAL.
2. EACH PLYWOOD SHEET SHALL BEAR THE "APA" GRADE TRADEMARK.
3. ALL END JOINTS SHALL BE STAGGERED AND SHALL BUTT ALONG THE CENTER LINES OF FRAMING MEMBERS.
4.THE FACE GRAIN OF THE PLYWOOD SHALL BE LAID AT RIGHT ANGLES TO THE JOISTS AND TRUSSES AND PARALLEL TO THE STUDS.
5. NAILS SHALL BE PLACED 3/8" MINIMUN FROM THE EDGE OF THE SHEETS. THE MINIMUM NAIL PENETRATION INTO FRAMIMG MEMBERS SHALL BE 1-1/2" FOR 8D NAILS AND 1-3/8" FOR 10D NAILS.
6. ALL FLOORS SHALL BE GLUED/SCREW WITH #12 WOOD SCREWS AT 6" O.C. ON DIRECT EDGES AND AT 10" O.C AT INTERMEDIATE.

WALLS:
1. ALL EXTERIOR BEARING WALLS SHALL BE 2 X 4 (SPF STUD GRADE) @ 16" O.C W/8' - 1 1/8" & 9' - 1 1/8" CEILING HGT. OR DBL STUD @ 16" O.C OR SINGLE STD @ 12" O.C W/10'- 1 1/8" CEILING HGT UNLESS OTHERWISE NOTED.
2. ALL INTEIOR BEARING WALLS SHALL BE 2 X 4 (SPF STUD GRADE) @16" O.C UNLESS NOTED OTHERWISE.
3. ALL INTERIOR NON-BEARING WALLS TO BE 2 X 4 (SPF STUD GRADE) SINGLE TOP PLATE @ 24" O.C UNLESS NOTED OTHERWISE.
4. ALL BEARING WALLS TO BE 2 X 4 (SPF) DOUBLE TOP PLATES, LAPPED AT ALL CORNERS AND INTERSECTIONS AND STAGGER SPLICE 48" O.C AND LOCATE OVER WALL STUDS.
5. ALL EXTERIOR CORNERS SHALL BE BRACE WITH 1 X 4 DIAGONALS, LET INTO STUDS, OR WITH 4 X 8 STRUCTUAL SHEETING FOR THICKNESS TO MATCH THAT OF SHEATING, OR WITH METAL BRACING OF EQUAL RIDIDITY.
6. PROVIDE ADDITIONAL STUDS AT CONCENTRATED LOAD LOCATION TO MATCH NUMBER OF STUDS ABOVE AND EXTEND TO FOUNDATION.
7. NOTCHES OR BORED HOLES IN STUDS OF BEARING WALLS OR PARTITIONS SHALL NOT BE MORE THAN ONE-THIRD THE DEPTH OF THE STUD.
8. THE FOLLOWING JACK/STUD SCHEDULE WILL BE USED UNLESS OTHERWISE NOTED:

EXTERIOR BEARING WALLS (MINIMUM UNLESS NOTED):

OPENING	**WITH ROOF ROOF ONLY**	**ROOF & 1 FLOOR**	**ROOF &2 FLOORS**
UP TO 3'-0"	1J & 1S	1J & 1S	1J & 1S
3'-0" TO 5'-0"	1J & 1S	1J & 1S	2J & 1S
5'-0" TO 7'-0"	2J & 1S	2J & 1S	2J & 2S
7-0" TO 9'-0"	2J & 1S	2J & 1S	2J & 2S
9'-0" TO 12'-0"	2J & 1S	2J & 1S	3J & 2S

INTERIOR BEARING WALLS (MINIMUM UNLESS NOTED):

OPENING	**1 FLOOR**	**2 FLOOR**
UP TO 3'-0"	1J & 1S	1J & 1S
3'-0" TO 5'-0"	2J 7 1S	2J & 2S
6'-0" TO 9'-0"	2J & 1S	3J & 2S
9'-0" TO 12'-0"	3J & 1S	4J & 3S

WHERE J = JACK UNDER HEADER
S = STUD NAILED TO JACK ALONG SIDE HEADER.
NOTE: ALL JACKS AND STUDS ASSUMED TO BE 2 X 4 SPF-STUD GRADE OR BETTER WITH MAXIMUM WALL HEIGHT OF 9'-1 1/8". ALL JACKS AND STUDS TO BE GLUED AND NAILED W/16D NAILS AT 8" O.C.

FIRE STOPPING:
1. FIRE STOPPING SHALL BE PROVIDED TO CUTOFF ALL-CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) IN THE FOLLOWING LOCATIONS:
   A. IN AL STUD WALL AND PARTITIONS INCLUDING FORCED SPACES AT FLOOR AND CEILING LEVELS AND NOT MORE THAN 10'-0" APART
   B. BETWEEN STAIR STRINGERS AT TOP AND BOTTOM AND BETWEEN STUDS IN LINE WITH STAIR RUN.
   C. FIRE STOPS, WHEN OF WOOD, SHALL BE 2" NOMINAL THICKNESS AND MAY BE MADE OF GYPSUM BOARD.
   D. SPACES BETWEEN CHIMNEYS AND WOOD FRAMING SHALL BE FILLED WITH LOOSE NONCOMBUSTIBLE MATERIAL (2" MINIMUM THICKNESS).

WOOD ROOF TRUSSES:
1. ROOF TRUSS MANUFACTURER TO SUPPLY SHOP DRAWINGS AND ERECTION DRAWINGS AND MUST BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE GOVERNING JURISDICTION. FLOOR TRUSS MANUFACTURER TO SUPPLY CONNECTION AND BEARING DETAILS, BRIDGING AND BRACING DETAILS WITH NOMINAL DIMENSIONS, TRUSS CONFIGURATIONS, LUMBER GRADE AND SPECIES AND MAGNITUDES OF FORCE IN ALL MEMBERS.
2. TRUSS DIAGRAMS SHOW DESIGN INTENT ONLY.TRUSS MANUFACTURER TO VERIFY ALL SPANS, DIMENSIONS, PITCHES, ETC. AND SUBMIT SHOP DRAWINGS TO DESIGNER PRIOR TO FABRICATION.
3. WOOD ROOF TRUSSES TO BE INSTALLED PER MANUFACTURE'S INSTRUCTIONS.
4. WOOD ROOF TRUSSES TO BE BRACED IN ACCORDANCE WITH TPL-BWT LISTED IN IRC R602.10.

OPEN WEB FLOOR TRUSSES:
1. FLOOR TRUSS MANUFACTURER TO SUPPLY SHOP DRAWINGS AND ERECTION DRAWINGS AND MUST BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE GOVERNING JURISDICTION. FLOOR TRUSS MANUFACTURER TO SUPPLY CONNECTION AND BEARING DETAILS, BRIDGING AND BRACING DETAILS WITH NOMINAL DIMENSIONS. TRUSS CONFIGURATIONS, LUMBER GRADE AND SPECIES AND MAGNITUDES OF FORCE IN ALL MEMBERS.
2. BAND BOARD 2 X CONTINUOUS U.N.O.
3. FLOOR TRUSSES SHALL BE DESIGNED TO ACCOMMODATE HVAC DUCT LAYOUT AS INDICATED AN CONVENTIONAL FRAMING AS INDICATED.
4. FLOOR TRUSSES SHALL BE DESIGNED TO LIMIT DEFLECTION TO L/480 LIVE LOAD OR FOR DEAD LOAD OF 16 PSF WHICH EVER IS GRADER EXCEPT IN ROOMS CONSISTING OF DIFFERENT LENGHTS OF WHICH THE DEFLECTION OF THE SHORTEST SPAN SHALL GOVERN.

WOOD "I"-JOISTS:
1. "I"-JOIST MANUFACTURER TO SUPPLY SHOP DRAWINGS AND ERECTION DRAWINGS AND MUST BE SEALED BY A PROFESIONAL ENGINEER REGISTERED IN THE GOVERNING JURISDITION. FLOOR JOIST MANUFACTURER TO SUPPLY CONNCECTION AND BEARING DETAILS, BRIDGING AND BRACING DETAILS, NOMINAL DIMENSIONS AND JOIST LAYOUT CONFIGURATIONS.
2. PROVIDE SOLID MATERIAL, 1 1/4" MINIMUM, AT ALL BAND BOARDS, END CONDITIONS AND RING JOIST AS RECOMMENDED BY THE MANUFACTURER.
3. FLOOR JOISTS SHALL BE DESIGNED TO LIMIT DEFLECTION TO L/480 LIVE LOAD, OR L/720 LIVE LOAD, FOR FLOORS WITH MARBLE, CERAMIC TILE, OR LIMESTONE. FOR SPANS GREATER THAN 14'-0" THE TOTAL LOAD DEFLECTION SHALL NOT EXCEED 7/32" AS SPECIFIED BY THE MARBLE INSTITUTE OF AMERICA.
4. PROVIDE 2 X 4 CRIPPLES @ ALL INTERIOR BEARING CONDITIONS.

DIVISION 22: PLUMBING

1. PLUMBING AND ASSOCIATED COMPONENTS TO BE COORDINATED, PERMITTED, FURNISHED AND INSTALLED BY G.C. PER STATE AND LOCAL CODES AND REGULATIONS.
2. EQUIPMENT TO BE INSTALLED PER MANUFACTURER RECCOMENDATIONS.

DIVISION 7: THERMAL & MOISTURE PROTECTION

DAMP PROOFING:
1. ONE HEAVY COAT OF ASPHALT EMULSION SHALL BE APPLIED TO AL BELOW GRADE WALLS AT BASEMENT CONDITIONS.
2. IN AREAS WHERE A HIGH WATER TABLE OR OTHER SEVERE SOIL-WATER CONDITIONS ARE KNOWN TO EXIST, EXTERIOR FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE HABITABLE OR USABLE SPACES LOCATED BELOW GRADE SHALL WATERPROOFED WITH A MEMBRANE TO FINISHED GRADE. THE MEMBRANE SHALL CONSIST OF 2-PLY HOT MOPPED FELTS. THE JOINTS IN THE MEMBRANE SHALL BE LAPPED MEMBRANE (PER IRC R406.1 & R406.2).
3. EXTEND DAMP PROOFING DOWN TO BASE OF FOOTING U.N.O.
4. LAP WALL VAPOR BARRIER OVER DAMP PROOFING.
5. IF CONDITIONS CONTAIN SUNLIGHT EXPOSED DAMP PROOFING BETWEEN GRADE AND EXTERIOR FINISH PROVIDE EITHER PROTECTIVE COATING OR PROTECTION PANELS AS RECOMMENDED BY MANUFACTURER. COORDINATE FINISH WITH ARCHITECT TO BE GREY OR MATCH EXTERIOR FINISH/TRIM.

ROOFING:
1. FIBERGLASS SHINGLES SHALL BE INSTALL OVER 1 LAYER OF 15# ASPALT SATURATED FELT. (MINIMUM CLASS C SHINGLES).

FLASHING:
1. ALL FLASHING TO BE OF THE APPROVED CORROSION- RESISTIVE TYPE AND SHALL BE PROVIDED WHERE EXTERIOR PORCHES, DECKS OR STAIRS ATTACH TO A WALL OR FLOOR ASSEMBLY OR WOOD-FRAMED CONSTRUCTION. FLASH AND CAULK WOOD BEAMS AND OTHER PROJECTIONS THROUGH EXTERIOR WALLS OR ROOF SURFACES.
2. ALL FLASING, COUNTER FLASHING AND COPING WHEN OF METAL SHALL BE OF NOT LESS THAN NO.26 U.S GAUGE APPROVED CORROSION RESISTANT METAL.
3. PROVIDE METAL FLASHING ABOVE ALL WINDOWS, DOORS & CAPITALS.
4. PROVIDE EAVE FLASHING AND DRIP EDGE FLASHING AT THE ROOF EDGES.

ROOF VENTILATION:
1. PROVIDE CONTINOUS RIDGE AND EAVE WITH A TOTAL NET FREE VENTILATING AREA OF NOT LESS THAN 1 TO 150 OF THE AREA OF THE SPACE TO BE VENTILATED. PROVIDE A MINIMUM OF 1" SPACE BETWEEN THE ROOF SHEATING AND INSULATION.
2. ENCLOSED ATTIC TRUSS SPECIES AND ENCLOSED ROOF RAFTERS SHALL HAVE A CROSS VENTILATION FOR EACH SEPERATE SPACE WITH SCREENED VENTILATION OPENINGS PROTECTED AGAINST THE ENTRANCE OF MOISTURE AND RAIN IN ACCORDANCE WITH IRC CODE, LATEST EDITION.

EXTERIOR INSULATION FINISH SYSTEMS:
1. INSTALL R.I.F.S IN STRICT ACCORDANCE TO THE MANUFACTURES SPECIFICATIONS AND INSTALLATION INSTRUCTIONS. IT IS THE RESPONSIBILITY OF THE INTALLATION CONTRACTOR TO INSURE THAT ALL FLASHING IN IN PLACE TO PREVENT THE ENTRY OF WATER OR MOISTURE.

INSULATION:
1. THE FOLLOWING INSULATION SHEDULE WILL BE USED UNLESS OTHERWISE NOTED:

LOCATION	R-VALUE/TYPE
SILL PLATE	1/2" FOAM SILL SEALER
PERIMETER	R-10 CLOSED CELL EXTRUDED POLYSTYRENE
FOUNDATION WALL	R-13 FLAME SPREAD BATT (FULL HEIGHT)
EXTERIOR WALL	R-19 BATT 2X6 (2X4 R-15 BATT)
FLOOR AND SOFFIT	R-30
FLAT CEILING	R-38 BATT OR BLOWN
CATHEDRAL CEILING	R-38 BATT

DIVISION 8: OPENINGS (DOORS & WINDOWS)

WINDOWS:
1. ALL WINDOWS SHALL HAVE INSULATION GLASS.
2. SIZES INDICATED ON PLANS ARE NOMINAL ONLY. BUILDER TO CONSULT WITH WINDOW MANUFACTURER TO DETERMINE EXACT SIZES, ROUGH OPENINGS, ETC.
3. EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPERABLE WINDOW OR EXTERIOR DOOR APPROVED FOR EMERGENCY EGRESS OR RESCUE.
4. WHERE WINDOW ARE PROVIDED AS A MEANS OF EGRESS OR RESCUE THEY SHALL HAVE A SILL HEIGHT OF NOT MONE THAN 44 INCHES ABOVE THE FLOOR.
5. ALL EGRESS OR RESCUE WINDOW FROM SLEEPING ROOMS MUST HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET. THE MINIMUM NET CLEAR OPENING WIDTH DIMENSION SHALL BE 20 INCHES AND HEIGHT OF 41 INCHES IF 20INCHES WIDTH IS USED.

TEMPERED GLASS LOCATIONS:
THE FOLLOWING SHALL BE CONSIDERED SPECIFIC HAZARDOUS LOCATIONS FOR THE PURPOSES OF GLAZING AND SHALL BE TEMPERED GLASS:
1. GLAZING IN ALL DOORS.
2. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24" ARC OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR OR WALKING SURFACE.
3. GLAZING IN DOORS AND ENCLOSURES FOR HOT TUBS,WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS AND SHOWERS, GLAZING IN ANY PART OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE DRAIN INLET.
4. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE WINDOWS THAT MEETS ALL OF THE FOLLOWINGS CONDITIONS:
   A. EXPOSED AREA OF AN INDIVIDUAL PANE GREATER THAN 9S SQ FT.
   B. BOTTOM EDGE LESS THAN 18 INCHES ABOVE THE FLOOR.
   C. TOP EDGE GREATER THAN 36 INCHES ABOVE THE FLOOR.
   D. ONE OR MORE WALKING SUFACES WITHIN 36 INCHES HORIZONTALLY OF THE GLAZING
9. ALL GLAZING IN RAILINGS REGARDLES OF AN AREA OR HEIGHT ABOVE WALKING SURFACE. INCLUDED ARE STRUCTUAL BALUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS.
10. EXCEPTIONS THE FOLLOWING PRODUCTS, MATERIALS AND USES ARE EXEMPT FROM THE ABOVE HAZARDAOUS LOCATIONS:
    A. OPENINGS IN DOORS THROUGH WHICH A 3-INCH SPHERE IS UNABLE TO PASS.
    B. LEADED GLASS PANELS.
    C. FACETED AND DECORATIVE GLASS.

ATTIC ACCESS:
1. ATTIC ACCESS TO BE INSULATED TYPE.

DIVISION 9: FINISHES

GYPSUM WALLBOARD:
1. ALL GYPSUM WALLBOARD SHALL BE INSTALLED AND FASTENED IN ACCORDANCE WITH THE PROVISIONS OF THE IRC CODE, LATEST EDITION, STATE AND LOCAL CODES.
2. ALL EDGES AND ENDS OF GYPSUM WALLBOARD SHALL OCCUR ON THE FRAMING MEMBERS EXCEPT THOSE EDGES WHICH ARE PERPENDICULAR TO THE FRAMING MEMBERS. ALL EDGES OF GYPSUM WALLBOARD SHALL BE IN MODERATE CONTACT EXCEPT IN CONCEALED SPACES WHERE FIRE RESISTING CONSTRUCTION IS NOT REQUIRED.
3. PROVIDE MOISTURE RESISTANT DRYWALL AT TUBS AND SHOWERS.
4. THE GARGE SHALL BE SEPARATED FROM THE LIVING SPACE BY 5/8" TYPE X GYPSUM WALL BOARD.
5. ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHAL HAVE WALLS AND SOFFITS PROTECTED BY ON THE ENCLOSED SIDE WITH 1/2" DRYWALL.

PAINTING:
1. PAINTING SHAL BE APPLIED ACCORDING THO THE FOLLOWING:

LOCATION	PAINT TYPE	APPLICATION
CEILINGS	LATEX FLAT	1 COAT PRIMER AND 1 FINISH COAT
WALL	LATEX FLAT	1 COAT PRIMER AND 1 FINISH COAT
INTERIOR TRIM	LATEX	1 COAT PRIMER AND 2 FINISH COAT
	SEMI-GLOSS	1 COAT PRIMER AND 2 FINISH COAT
EXTERIOR TRIM	EXTERIOR LATEX	1 SHOP COAT PRIMER AND
	SEMI-GLOSS	2 FINISH COATS

DIVISION 11: EQUIPMENT (COORDINATE WITH OWNER)
DIVISION 12: FURNISHINGS (COORDINATE WITH OWNER)
DIVISION 13: SPECIAL CONSTRUCTION (NOT USED)
DIVISION 14: CONVEYING EQUIPMENT (NOT USED)
DIVISION 21: FIRE SUPPRESSION (NOT USED)

DIVISION 23: HEATING, VENTING, AND AIR CONDITIONING (HVAC)

1. MECHANICAL SUBCONTRACTOR TO REVIEW DUCT LAYOUTS, CONDENSER LOCATION DUCT SIZES, ETC, AS NOTED HEREIN AND NOTIFY ARCHITECT PRIOR TO INSTALLACTION OF ANY CONFLICTS IN THE DESIGN, SIZING OR INSTALLATION OF THE SUSTEM. MECHANICAL SUBCONTRACTOR TO REVIEW STRUCTUAL SHOP DRAWINGS AN NOTIFY THE ARCHITECT OF ANY MECHANICAL AND STRUCTURAL CONFLICTS PRIOR TO CONSTRUCTION.
2. ALL WORK SHALL BE IN FULL ACCORDANCE WITH ALL CODES, RULES, AND REGULATIONS OF THE GOVERNING AGENCIES.
3. ALL KITCHENS AND BATH ROOMS SHALL BE MECHANICALLY VENTED TO THE EXTERIOR.
4. SECURE HVAC EQUIPMENT PER MANUFACTURER RECOMMENDATIONS.

DIVISION 10: SPECIALTIES

FIREPLACES:
1. PREFAB FIREPLACES, SHALL BE U.L. APPROVED AND BE INSTALL PER IRC CODE.
2. EXHAUST TO THE OUTSIDE PER CODE AND MANUFACTURER RECCOMENDATION.

CLOSET SHELVES /TOWELS BARS:
- 1R/1S CLOSET SHELVELS @ 68" A.F.F.
- 2R/1S CLOSET SHELVES @ 42" & 84" A.F.F
- LOCATE DBL TOWEL BARS @ 38" & 68" A.F.F
- LOCATE SINGLE TOWE BARS @ 38" A.F.F
- SET 18" TOWEL BARS @ 24" ABOVE VANITY TOP

STAIRWAYS:
1. THE MAXIMUM RISER HEIGHT SHALL BE 8 1/4" AND MINIMUM TREAD WIDTH OF 9".
2. STAIRWAYS SHALL NOT BE LESS THAN 36" IN CLEAR WIDTH AND HEADROOM OF NOT LESS THAN 6'-8". THE MINIMUM AT THE HANDRAIL SHALL NOT BE LESS THAN 32" WITH A HAND RAIL ON ONE SIDE AND 28" WITH A HAND RAIL ON BOTH SIDES.
3. ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS AND SOFFITS PROTECTED BY ON THE ENCLOSED SIDE WITH 1/2" DRYWALL.
4. HEIGHT OF HADRAIL (R315.1)- TO BE NOT LESS THAN 34" & NOT GREATER THAN 38" IN HEIGHT.
5. HANDRAIL SIZE (R315.2) - TO BE NOT LESS THAN 1 1/4" & NOT GREATER THAN 2" IN DIAMETER.

GUARDRAILS:
1. PORCHES, BALCONIES OR RAISED FLOOR SURFACES LOCATED MORE THAN 30 INCHES ABOVE THE FLOOR OR GRADE BELOW SHALL HAVE GUARDRAILS NOT LESS THAN 36 INCHES IN HEIGHT.
2. OPEN SIZES OF STAIRS WITH A TOTAL RISE OF MORE THAN 30 INCHES ABOVE THE FLOOR OR GRADE BELOW SHALL HAVE GUARDRAISL NOT LESS THAN 34 INCHES IN HEIGHT MEASURED VERTICALLY FROM THE NOSING OF THE TREADS.
3. REQUIRED QUARDRAILS ON OPEN SIDES OF STAIRWAYS, RAISED FLOOR AREAS, BALCONIES AND PORCHES SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL CLOSURES WHICH WILLNOT ALLOW PASSAGE OF A SPHERE 4 INCHES IN DIAMETER.
4. EXCEPTION THE TRIANGULA OPENINGS FORMED BY THE RISER, TREAD AND BOTTOM RAIL OF A GUARD AT THE OPEN SIDE OF A STAIRWAY MAY BE OF SUCH A SIZE THAT A SPHERE 6 INCHES IN DIAMETER CANNOT PASS THROUGH.
5. RAILING TO WITHSTAND FORCE OF 200LB PER LINEAR FOOT IN EACH DIRECTION.

DIVISION 25: INTEGRATED AUTOMATION (NOT USED)
DIVISION 26. ELECTRICAL

1. ALL WORK SHALL BE IN FULL ACCORDANCE WITH ALL CODES, RULES AND REGULATIOS OF GOVERNING AGENCIES AND SHALL COMPLY WITH THE REQUIREMENTS OF THE SERVING POWER AND TELEPHIONE COMPANIES.
2. SMOKE DETECTORS SHALL BE INSTALLED IN EACH SLEEPING ROOM OUT SIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS AND ON EACH ADDITIONAL STORY PER IRC CODE. LATEST EDITION.
3.ALL EQUIPMENT INTALLED OUTDOORS AND ESPOSED TO WEATHER SHALL BE WEATHER-PROOF.
4. RECEPTACLES AT REFRIGERATOR, KITCHEN COUNTERS AND BATHROOM OTHERWISE NOTED ON DRAWINGS.
5. BEDTOOM ELECTRICAL RECEPTACLES EQUIPPED WITH ARC FAULT INTERRUPTERS. (E3802.9)
6. PROVIDE TWO GROUNDING RODS FOR ELECTRICAL SERVICE. THE PLANS AND SPECIFICATIONS ARE NOT INTENDED TO DEPICT EACH AND EVERY CONDITION OR DETAIL OF CONSTRUCTION. AS THE KNOWLEDGEABLE PARTY IN THE FIELD. THE CONTRACTOR IS IN THE BEST POSITION TO VERIFY THAT ALL CONSTRUCTION IS COMPLETED IN A MANNER WHICH WILL PROVIDE A WATERTIGHT STRUCTURE THE CONTRACTOR HAS A SOLE RESPONSIBILITY FOR ENSURING THE WATERTIGHT INTEGRITY OF THE STRUCTURE.

DIVISION 27: COMMUNICATIONS (COORDINATE WITH OWNER)
DIVISION 28: ELECTRONIC SAFETY AND SECURITY (COORDINATE WITH OWNER)
DIVISION 48: ELECTRICAL POWER GENERATION (COORDINATE WITH OWNER)

UNDERPINNING NOTES:

1. UNDERPINNING WORK SHALL BE PERFORMED BY A LICENSED, BONDED AND INSURED SPECIALTY CONTRACTORS HAVING BONDED AND INSURED SPECIALTY CONTRACTORS HAVING EXPERIENCE UNDER SIMILAR SITUATION AND REGULARLY ENGAGED IN THIS TYPE OF WORK.

2. CONTRACTOR SHALL REVIEW THE CONSTRUCTION DOCUMENTS FOR ANY CONFLICTS WITH THE EXISTING FIELD CONDITIONS, RESOLVE SUCH CONFLICTS AND COORDINATE COMPATIBILITY OF NEW WORK WITH THE EXISTING CONDITIONS BEFORE PROCEEDING WITH THE UNDERPINNING WORK. PROTECT ALL EXISTING STRUCTURAL AND ARCHITECTURAL BUILDING ELEMENTS AND UTILITIES/SERVICES FROM DAMAGE DURING UNDERPINNING WORK.

3. FOLLOW STRICTLY THE SEQUENCE OF UNDERPINNING IN THE DIRECTION SPECIFIED ON THE PLAN FOR EACH SEQUENCE GROUP DO NOT MOVE TO THE NEXT SEQUENCE GROUP UNTIL ALL SEGMENTS IN THE SEQUENCE UNDERTAKEN ARE UNDERPINNED.

4. LAYOUT AND MARK NUMBERING OF ALL SEGMENTS ALONG THE EXISTING WALL AS SHOWN ON THE PLAN. NOT EXCEED THE LENGTH OF SEGMENTS SPECIFIED ON THE PLAN. COMPLETE UNDERPINNING OF ALL SEGMENTS MARKED AS A'S FIRST, C'S SECOND, B'S LAST. DO NOT OPEN PITS IN THE OTHER SEQUENCE GROUP UNTIL ALL SEGMENTS IN THE SEQUENCE GROUP UNDERTAKEN HAVE BEEN COMPLETED, CURED AND ABLE TO SUPPORT THE EXISTING WALL AND THE LOAD CARRIED BY IT.

5. EXCAVATE THE SEGMENT TO THE DESIGN DEPTH SPECIFIED ON THE DRAWINGS USING MANUAL TOOLS/METHODS. EXCAVATION FOR SEGMENT BEING UNDERPINNED. IF UNSTABLE, SHALL BE BRACE/SUPPORTED IMMEDIATELY. EXCAVATION SHALL BE LIMITED TO THE SEGMENT UNDERTAKEN. DO NOT EXCAVATE THE ENTIRE BASEMENT IN THE BEGINNING. EXCAVATION OF THE ENTIRE BASEMENT TO THE SPECIFIED DEPTH SHALL BE COMPLETED ONLY AFTER ALL UNDERPINNING WORK IS COMPLETED.

6. LIMIT TO A MAXIMUM OF THREE OPEN PITS IN EACH GROUP ON ANY WALL AT ANY TIME.

7. FOR SEGMENT TOT SEGMENT DOWEL INSTALLATION, DRILL HOLES IN THE EXISTING EARTH ON BOTH SIDES OF FOOTING SEGMENTS UNDER TAKEN IF THE EARTH PRESENT IS ON ONE SIDE OF THE SEGMENTS UNDER TAKEN. PROTECT PART OF THE DOWEL IN DIRT WITH A PLASTIC WRAP WHICH SHALL BE REMOVED PRIOR TO PLACING CONCRETE IN ADJACENT SEGMENT. REPEAT PROCESS FOR WALL SEGMENTS. THOROUGHLY CLEAN CONCRETE SURFACES OF UNDERPINNED FOOTINGS AND WALL SEGMENTS ALREADY COMPLETED AND TO BE IN CONTACT WITH NEW WORK (NEW SEGMENT, DRY PACK, ISOLATION JOINT MATERIALS, ETC.) OF ALL LOOSE MATERIALS AND DIRT FORM. PLACE REINFORCEMENT INCLUDING DOWELS, CONSTRUCTION JOINT KEYS BETWEEN SEGMENTS, RX WATER STOPS AND DOWELS FOR THE SEGMENTS UNDERTAKEN PLACE, VIBRATE AND CONSOLIDATE CONCRETE TO FILL ALL VOIDS. PLACE ENOUGH CONCRETE TO MAKE SURE THAT THE VOID SPACE ON THE ADJOINING NEIGHBOR'S SIDE IS COMPLETELY FILED.

8. DRY PACKING SHALL BE A MINIMUM OF 2 INCHES AND SHALL PROCEED ONLY 48 HOURS MINIMUM AFTER CONCRETE POUR FOR THE SEGMENTS, CONCRETE MUST ACHIEVE 75% OF SPECIFIED 28-DAY DESIGN STRENGTH, ESTABLISHED BY TESTING CONCRETE CYLINDERS AT THREE DAYS OF AGE PRIOR TO REMOVAL OF SHORING/ BRACING SYSTEM FOR THE SEGMENT AND TRANSFERRING WALLS LOADS TO NEW WALL AND FOOTING.

9. FINALLY EXCAVATE THE EXISTING FLOOR SLAB AND EARTH BELOW THE REQUIRED/SPECIFIED DEPTH/ELEVATION. PLACE THE INTERIOR PERIMETER DRAIN PER DETAIL AS SHOWN ON THE DRAWINGS AND CONNECT TO THE SUMP PIT. PREPARE THE SOIL SUB-GRADE THROUGH AT LEAST 95% COMPACTION PER ASTM D698. REPLACE ANY SOFT SOILS WITH COMPACTED APPROVED SOILS OF $57 CRUSHED STONE OR GRAVEL. PLACE SLAB-ON-GRADE PER CONSTRUCTION DETAILS SHOWN ON THE DRAWINGS.

10. INSTALL A CRACK MONITOR GAUGE ON THE FOUNDATION WALL VERTICALLY BELOW 1ST FLOOR FRAMING, AND PLACE A 4 FT LONG CONSTRUCTION LEVEL ON THE 1ST FLOOR PERPENDICULAR TO PARTY WALLS AT THE SPECIFIED LOCATIONS. CONTACT THE ENGINEER IF ANY MOVEMENT AND/OR CRACK HAPPEN.

11. SOIL BEARING CAPACITY SHOULD BE AT LEAST 1500 PSF (ASSUMED). PLEASE VERIFY IN FIELD.

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PROJECT NAME AND ADDRESS

REAR AND SECOND STORY ADDITION

1031 CROSS DRIVE
ALEXANDRIA VIRGINIA 22302

PROJECT #
J21103

SEAL
GEORGE C. GERBER
Lic. No. 2311
08/20/2021

REVISION	DATE

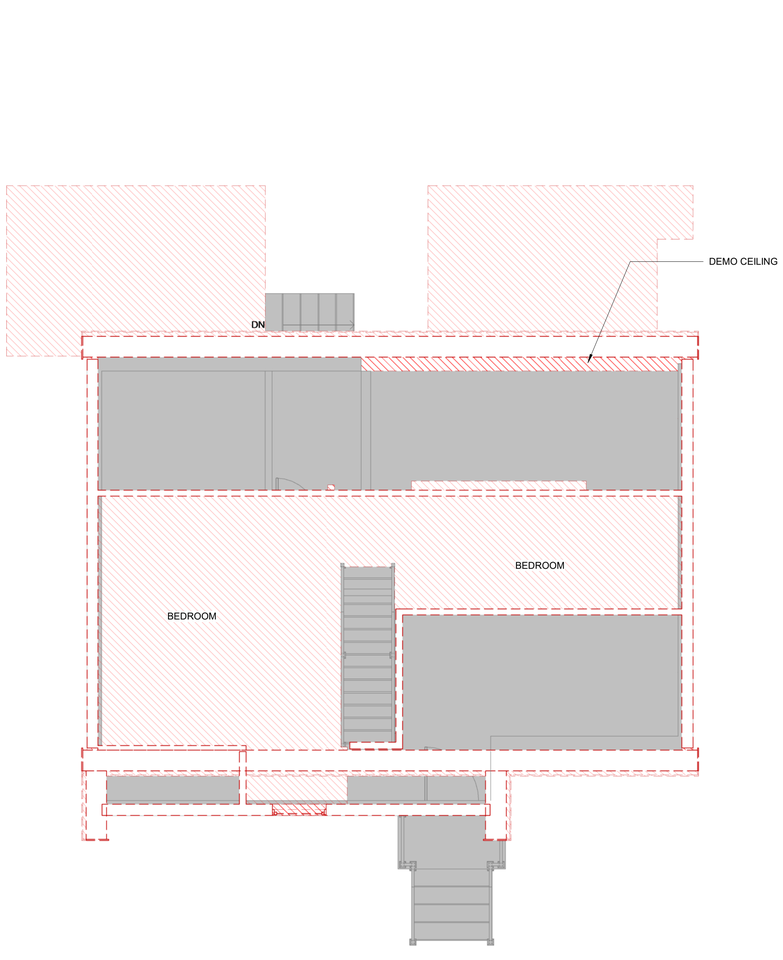
ISSUE DATE
08/20/2021

SHEET TITLE
GENERAL SPECIFICATIONS

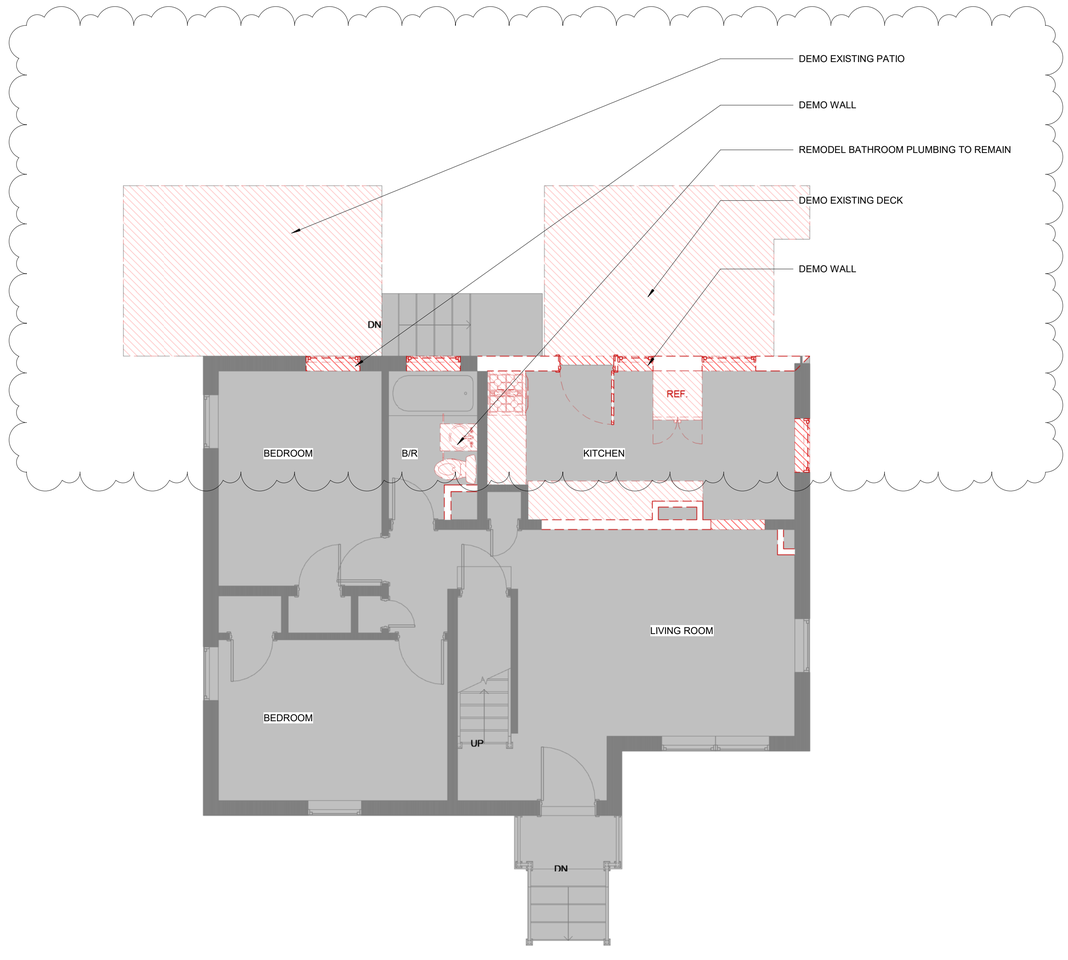
SHEET #
A002

DEMOLITION NOTES

A. COORDINATE ALL DEMOLITION WORK WITH DEMOLITION WORK.
B. PREPARE EXISTING AREAS AS REQUIRED TO RECEIVE NEW WORK.



2 A003 **DEMOLITION - 2ND FL**
1/4" = 1'-0"



1 A003 **DEMOLITION - 1ST FL**
1/4" = 1'-0"

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PROJECT NAME AND ADDRESS

REAR AND SECOND STORY ADDITION

1031 CROSS DRIVE
ALEXANDRIA VIRGINIA 22302

PROJECT # J21103

SEAL

COMMONWEALTH OF VIRGINIA
GEORGE C. GERBER
Lic. No. 2311
PROFESSIONAL ENGINEER
08/20/2021

REVISION	DATE
Revision 1	Date 1

ISSUE DATE 08/20/2021

SHEET TITLE **DEMOLITION PLAN**

SHEET # **A003**

CONCRETE REINFORCEMENT SCHEDULE BY EQUIVALENT SOIL PRESSURE
SOIL EQUIVALENT LATERAL FLUID PRESSURE 60 PCF (ACTIVE PRESSURE)

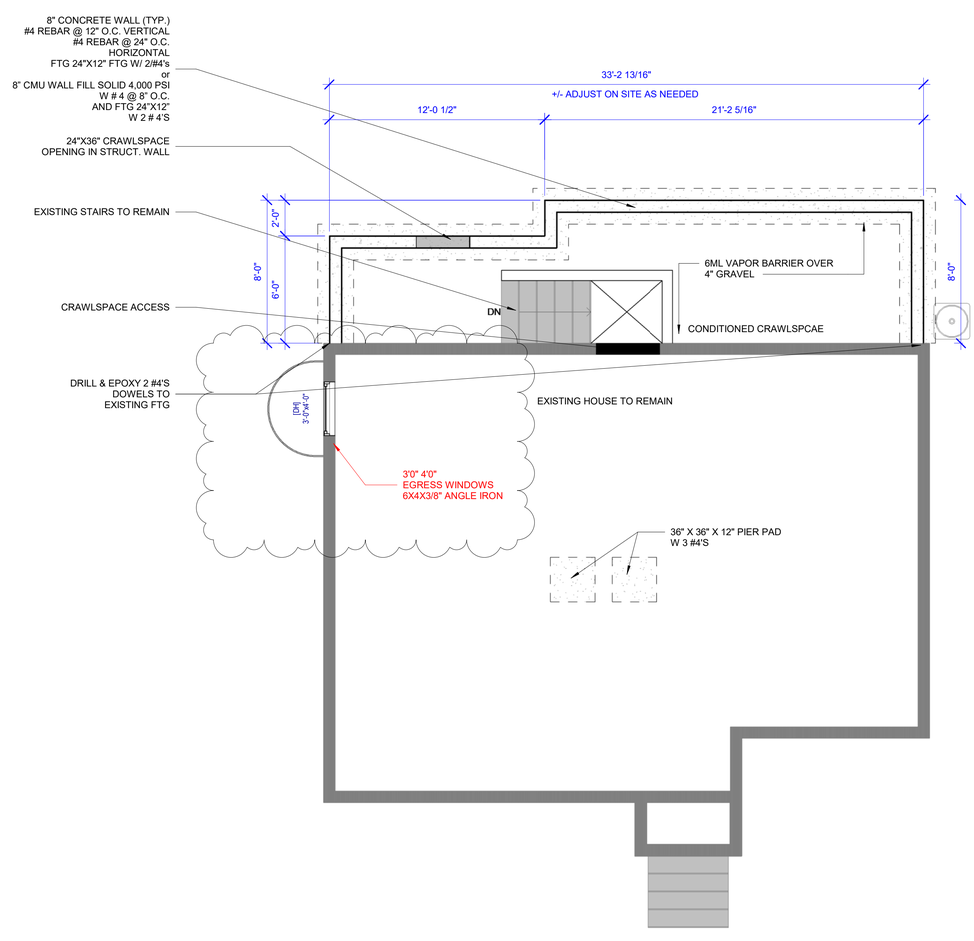
WALL HEIGHT (H)	GRADE HEIGHT (G)	MAXIMUM BRICK LEDGE HEIGHT (L)	MAXIMUM WALL THICKNESS (T)	DISTANCE FROM EARTH SIDE FACE OF WALL TO CL OF BAR (d)	SPACING OF VERTICAL WALL REINF. (#4 BARS)	SPACING OF WALL REINF. (#4 BARS)	SPACING OF STEM REINF. (#4 BARS)	SPACING OF HORIZONTAL REINF. (#4 BARS)
4'	3'	12"	7.5"	5.75"	12" O.C.	12" O.C.	12" O.C.	24" O.C.
4'	3'	24"	7.5"	5.75"	16" O.C.	16" O.C.	8" O.C.	24" O.C.
4'	2' AND LESS	0"	7.5"	5.75"	NONE REQ	NONE REQ	NONE REQ	24" O.C.
4'	2' AND LESS	48"	9.5"	6.75"	16" O.C.	16" O.C.	16" O.C.	24" O.C.

GENERAL FOUNDATION NOTES

A. FOR SI: 1 INCH=25.4 mm, 1 FOOT = 304.8 mm, 1 POUND PER SQUARE FOOT= 0.0479 kPa; 1 POUND PER SQUARE FOOT PER FOOT= 0.157 kPa/mm
B. SOIL CLASSES ARE IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM. REFER TO TABLE R405.1 IN THE IRC 2015.
C. UNBALANCED BACKFILL HEIGHT IS THE DIFFERENCE IN HEIGHT OF THE EXTERIOR AND INTERIOR FINISH GROUND LEVELS. WHERE THERE IS AN INTERIOR CONCRETE SLAB , THE UNBALANCED BACKFILL HEIGHT SHALL BE MEASURED FROM THE EXTERIOR FINISH GROUND LEVEL TO THE TOP OF THE INTERIOR CONCRETE SLAB.
D. THE SIZE AND SPACING OF VERTICAL REINFORCEMENT SHOWN IN THE TABLE IS BASED ON THE USE OF REINFORCEMENT WITH A MINIMUM YIELD STRENGTH OF 60,000 PSI. VERTICAL REINFORCEMENT WITH A MINIMUM YIELD STRENGTH OF 40,000 PSI OR 50,000 PSI IS PERMITTED, PROVIDED THE SAME SIZE BAR IS USED AND THE SPACING SHOWN IN THE TABLE IS REDUCE BY MULTIPLYING THE SPACING BY 0.67 OR 0.83, RESPECTIVELY.
E. VERTICAL REINFORCEMENT, WHEN REQUIRED, SHALL BE PLACED NEAREST THE INSIDE FACE OF THE WALL A DISTANCE d FROM THE OUTSIDE FACE (SOIL SIDE) OF THE WALL THE DISTANCE d IS EQUAL TO THE WALL THICKNESS, t, MINUS 1.25 INCHES PLUS ONE-HALF THE BAR DIAMETER, db (d=t-(1 25+db/2)). THE REINFORCEMENT SHALL BE PLACED WITHIN AA TOLERANCE OF +/- 3 8 INCH WHERE d IS LESS THAN OR EQUAL TO 8 INCHES, OR +/- 1 2 INCH WHERE d IS GREATER THAN 8 INCHES.
F. CONCRETE COVER FOR REINFORCEMENT MEASURED FROM THE INSIDE FACE OF THE WALL SHALL NO BE LESS THAN 3 4 INCH. CONCRETE COVER FOR REINFORCEMENT MEASURED FROM THE OUTSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 1-1/2 INCHES FOR NO. 5 BARS AND SMALLER AND NOT LESS THAN 2 INCHES FOR LARGER BARS.
G. ALL FOOTINGS TO BE 2'-6" MINIMUM BELOW GRADE FROST DEPTH.
H. THE MINIMUM THICKNESS IS PERMITTED TO BE REDUCED 2 INCHES, PROVIDED THE MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE f'c, IS 4,000 PSI.
I. "PC" MEANS PLAN CONCRETE.
J. WHERE VERTICAL REINFORCEMENT IS REQUIRED, HORIZONTAL REINFORCEMENT SHAL BE PROVIDED @ 24" O.C
K. ALL CONCRETE SHALL BE 3,000 PSI (AT 28 DAYS) AIR ENTRAINED, U.N.O REF FOUNDATION DRAWINGS FOR REINFORCEMENT.
L. MORTAR SHALL BE TYPE "S" FOR ALL BELOW GRADE APPLICATIONS.
M. BACKFILL WALLS IN EQUAL LIFTS, DO NOT BACKFILL WALLS UNTIL BASEMENT SLAB IS POURED AND 1ST FLOOR DECK IS INSTALLED AND FULLY SHEATHED.
N. ALL WATERPROOFNG AND DRAINAGE INSTALLED PER MANUF. AND CODE RECOOMENDATION.

MINIMUM 30" FROST DEPTH

NOTE: REFFER TO WIND BRACING & DETAILS FOR WIND BRACING AND REQUIRED COMPONENTS (HOLD DOWNS ETC.)



1 / A010 **FOUNDATION PLAN**
1/4" = 1'-0"

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Revision 1	Date 1

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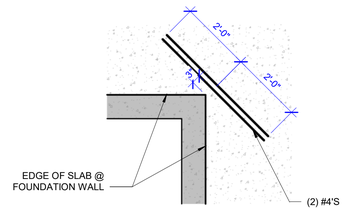
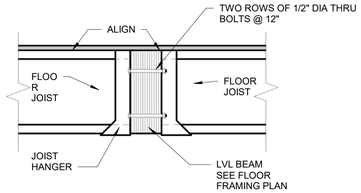
SHEET TITLE **FOUNDATION PLAN**

SHEET # **A010**



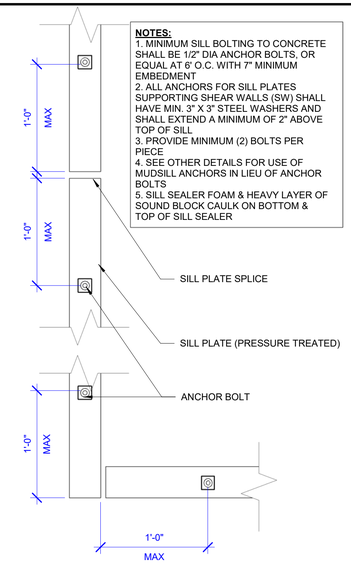
6 SLAB CORNER REINFORCEMENT

A011 — 1/2" = 1'-0"



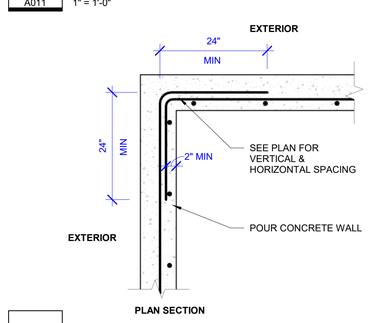
5 JOIST @ FLUSH LVL BEAM

A011 — 1" = 1'-0"



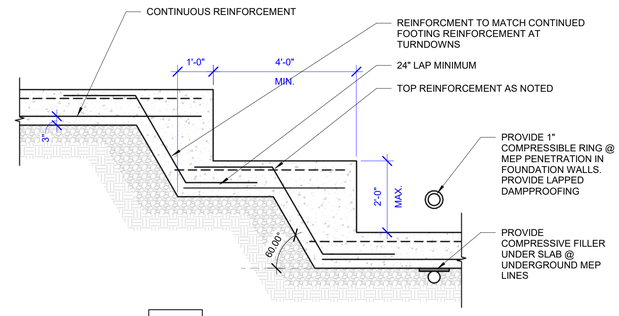
3 SILLPLATE ANCHORAGE TYP.

A011 — 1 1/2" = 1'-0"



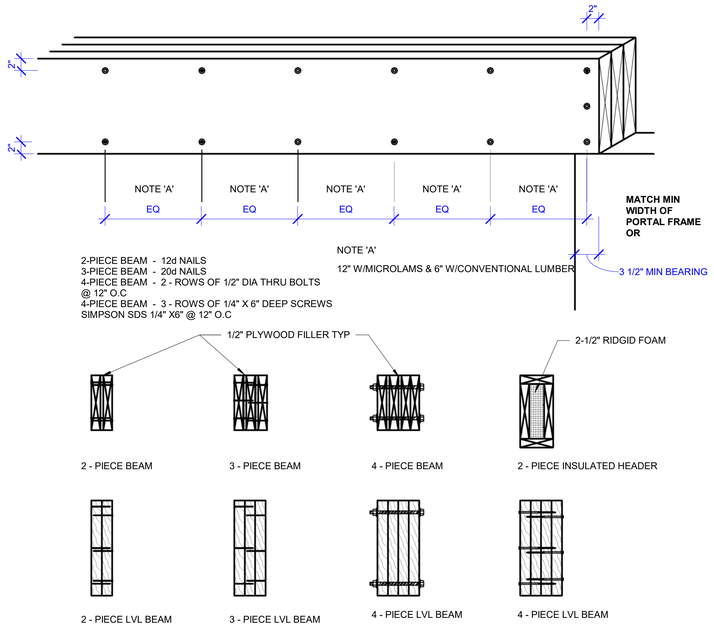
4 CORNER REINFORCEMENT

A011 — 3/4" = 1'-0"



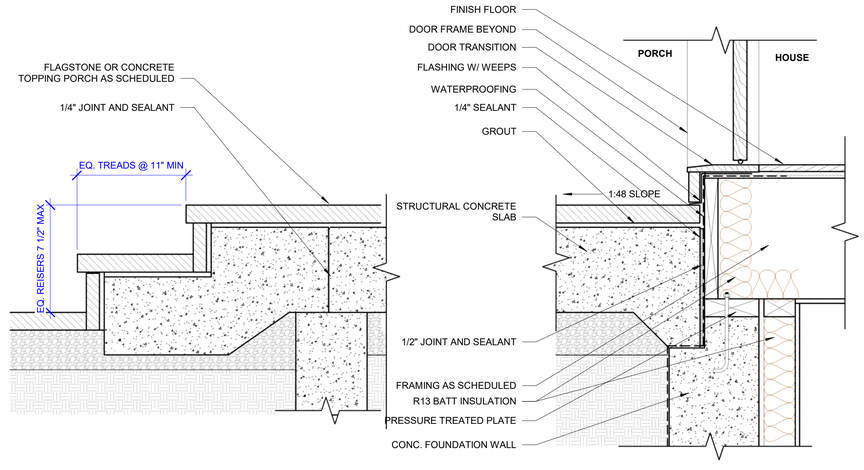
2 STEP FOOTING (TYP.)

A011 — 1/2" = 1'-0"



7 MULTI MEMBER WOOD BEAM

A011 — 1" = 1'-0"



1 DETAIL - FRONT PORCH

A011 — 1 1/2" = 1'-0"

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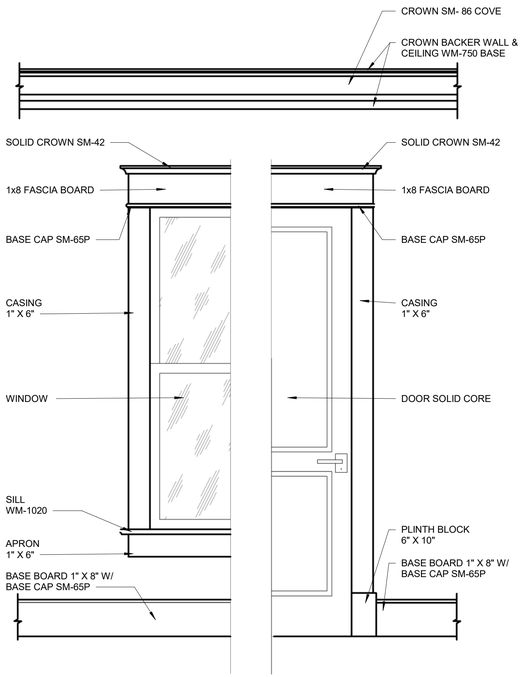
SHEET TITLE: DETAILS - FOUNDATION & STRUCTURE

SHEET # A011



3 / A020 **DOOR & WINDOW TRIM**
NTS

SCHEDULE - WINDOWS

FLOOR	TYPE	COUNT	WINDOW WIDTH	WINDOW HEIGHT	HEAD HEIGHT FROM LEVEL	MANUFACTURER
BASEMENT FLOOR	DH	1	3'-0"	4'-0"	6'-8"	TBD
FIRST FLOOR	DH	2	3'-0"	4'-0"	7'-0"	TBD
FIRST FLOOR	DH	1	3'-0"	5'-0"	6'-8"	TBD
SECOND FLOOR	DH	1	3'-0"	2'-0"	6'-8"	TBD
SECOND FLOOR	DH	3	3'-0"	4'-0"	6'-8"	TBD
SECOND FLOOR	DH	4	3'-0"	5'-0"		TBD

SCHEDULE - DOORS

FLOOR	DOOR TYPE	COUNT	WIDTH	HEIGHT	MANUFACTURER
FIRST FLOOR	A	1	2'-4"	6'-8"	TBD
FIRST FLOOR	CC	1	6'-0"	6'-8"	TBD
FIRST FLOOR	CO	1	3'-0"	7'-0"	
FIRST FLOOR	CO	1	12'-0"	7'-0"	
SECOND FLOOR	A	5	2'-6"	6'-8"	TBD
SECOND FLOOR	PP	3	4'-0"	6'-8"	
SECOND FLOOR	SP	1	2'-6"	7'-0"	

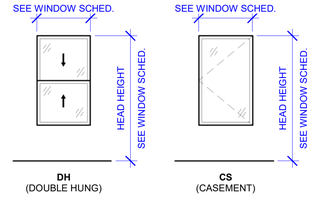
DOORS AND FRAME NOTES

A. SEE FLOOR PLANS FOR DOOR SWINGS.
B. DOORS HIGHER THAN 7' TO HAVE MORTESE HARDWARE.
C. PROVIDE 20MINUTE RATED DOORS FROM GARAGE TO INTERIOR. PROVIDE SELF-CLOSING HINGES.
D. DO NOT PAINT ALUMNIUM,GLASS OR VINYL DOORS/FRAMES U.N.O.
E. FRAMES TO NOT HAVE EXPOSED FASTENERS
F. DOORS TO OPERATE SMOOTHLY OVER FINISHED FLOOR. UNDERCUT TO BE 1/4" MAXIMUM UNLESS NOTED OTHERWISE (VERIFY W/ MECHANICAL REQUIREMENTS)
G. PAINTED OR STAINED DOORS ARE TO BE FINISHED ON ALL SIDES INCLUDING TOP AND BOTTOM. SMOOTH/SAND ALL SIDES PRIOR TO FINISHING.
H. PROVIDE PRIVACY FUNCTION ON RESTROOMS, ENTRY FUNCTION ON EXTERIOR DOORS. COORDINATE OTHER FUNCTION WITH OWNER AND GENERAL INDUSTRY ACCEPTED ROOM TYPE STANDARDS.
I. PROVIDE SEALANT AT FRAME EDGES AT WALLS, FLOORS AND HEAD PRIOR TO FINISHING.
J. PROVIDE HINGE PIN DOOR STOPS, FINISH TO MATCH HINGES. PROVIDE 2 PER DOOR FOR DOORS OVER 7' TALL.
K. DOOR CORES NOT TO HAVE UREA-FORMALDEHYDES.
L. PROVIDE STONE FLOOR TRANSITION BETWEEN TILE AND OTHER FINISHES 1/4" MAX A.F.F. FROM TILE.
M. PROVIDE STAINLESS STEEL HINGES AT EXTERIOR DOORS.
N. PROVIDE 3 HINGES PER DOORS 7' TALL OR LESS. PROVIDE 4 HINGES PER DOOR OVER 7' TALL.
O. COORDINATE ROUGH OPENING WITH MANUFACTURER REQUIREMENTS.
P. PROVIDE TEMPERED INSULATING GLASS ON ALL EXTERIOR DOORS WITH GLAZING.
Q. DOOR GLAZING TINT TO MATCH WINDOWS.

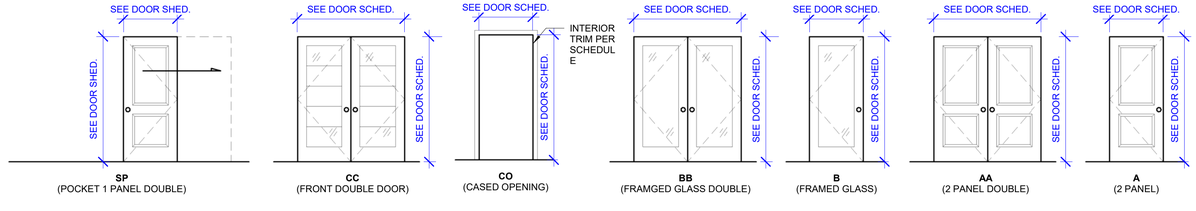
WINDOWS AND FRAME NOTES

A. SEE ELEVATIONS FOR WINDOW SWINGS.
B. PROVIDE INSECT SCREENS ON OPERABLE WINDOWS
C. EXTERIOR GLAZING TO BE INSULATED GLASS, LOW E TO MEET MINIMUM ENERGY CODE REQUIREMENTS FOR INSULATION U VALUE AND SHGC.
D. PROVIDE SEALANT AT FRAME EDGES AT WALLS, FLOORS AND HEAD PRIOR TO FINISHING.

ABBREVIATIONS:
SC - SOLID CORE
HC - HOLLOW CORE
GL - GLASS



2 / A020 **WINDOW TYPES**
1/4" = 1'-0"



1 / A020 **DOOR TYPES**
1/4" = 1'-0"

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SHEET TITLE
DOOR AND WINDOW SCHEDULES

SHEET # A020

GENERAL NOTES

A. ALL EXTERIOR FRAMED WALLS TO BE 2X6 STUDS @ 16" O.C U.N.O.
B. ALL BEARING INTERIOR WALLS 2 X 6 @ 16" O.C. UNO
C. ALL INTERIOR FRAMED WALLS TO BE 2X4 STUDS @ 16" O.C U.N.O.
D. ALL BEARING WALLS TO BE 16" O.C AND DBL TOP PLATES U.N.O.
E. ALL INTERIOR FRAMED WALLS W/ CASE OR POCKET DOORS TO BE 2X6 STUDS U.N.O.
F. ALL FOUNDATION WALLS TO SIZED PER STRUCTURAL PLANS.
G. ALL LUMBER EXPOSED TO THE ELEMENTS TO BE PRESSURE TREATED.
H. ALL DIMENSIONS ARE TO ROUGH STUDS U.N.O.
I. NOTIFY ARCHITECT OF ANY DISCREPANCIES WITH PLANS & SITE CONDITIONS PRIOR TO PROCEEDING WITH ANY WORK.
J. ALL EXTERIOR DOOR AND WINDOW ARE SHOWN ARE GENERIC AND MUST BE COORDINATED BY THE GENERAL CONTRACTOR AND MANUFACTURE SPECIFICATIONS.
K. ALL 2X FRAME WALLS ADJACENT TO CONC. WALLS TO HAVE PT. SILLS PLATES AND ARE TO BE SET 1/2" OFF OF CONC WALL.
L. ALL RAILING TO BE INSTALLED PER IRC SECTION R311.5.6
M. EXTERIOR HOSE BIBS (HB) ARE TO BE FROST PROOF
N. U.N.O. HEAD HEIGHT FOR ALL EXTERIOR WINDOWS 8'0" @ 1ST FLOOR & 2ND FLOOR AND 6'8" IN BASEMENT
O. FOR ROUGH OPENINGS REFER TO DOOR WINDOW MANUFACTURER SPECS
P. ALL 1ST FLOOR INTERIOR DOORS 8' TALL, BASEMENT AND 2ND FLOOR ARE 6'8" TALL.
Q. UNO, FOLLOW MANUFACTURER'S GUIDELINES FOR TEMPERED GLASS IN WINDOWS
R. ALL FINISHED AREAS OF BASEMENT TO RECEIVE R-15 BATT INSULATION IN EXTERIOR WALLS
S. UNFINISHED AREAS TO RECEIVE FOIL FACED R-15 BATTS
T. WATER PROOF WALLS MIN 6" ABOVE GRADE UNO, PARGE WALLS MIN 12" BELOW GRADE, TYP

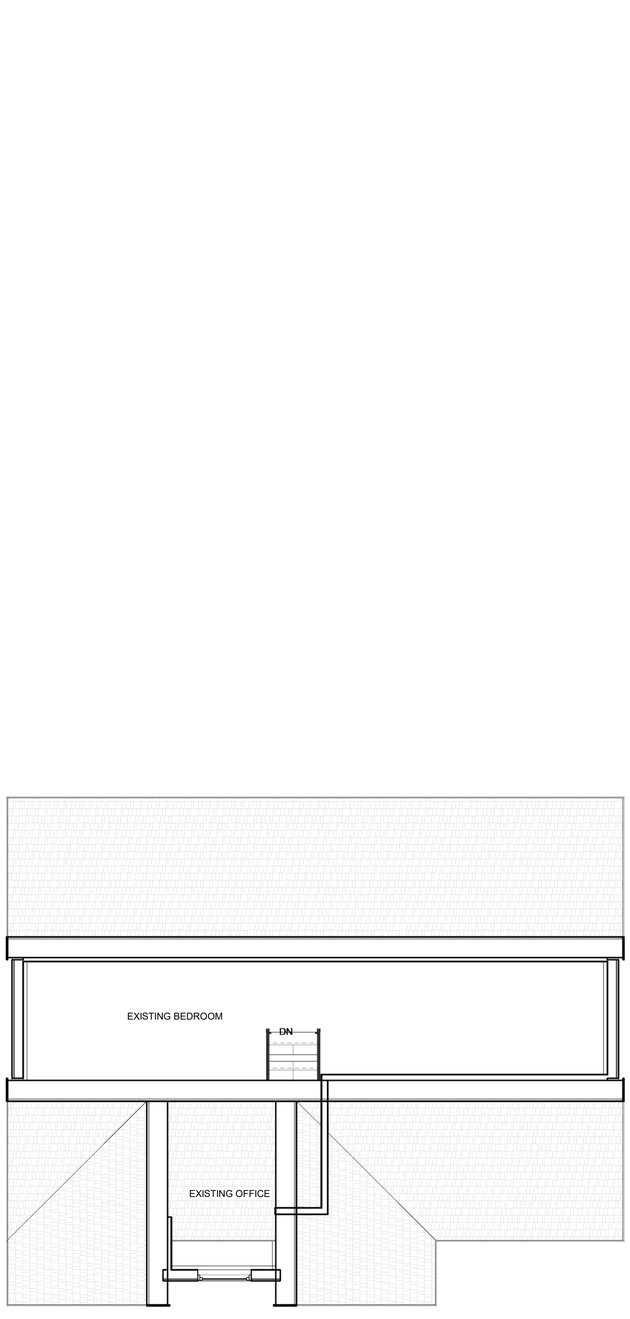
ENERGY CONSERVATION AND REQUIRED INSULATION VALUES PER IRC

ELEMENT	R-VALUE	U-VALUE	SHGC
WINDOWS/DOORS		0.30	0.35
CEILING	R-38		
WALLS (2X6 WOOD)	R-19		
WALLS (CONCRETE)	R-13		
FLOORS	R-19		
CANTILEVER FLORS*	R-30		

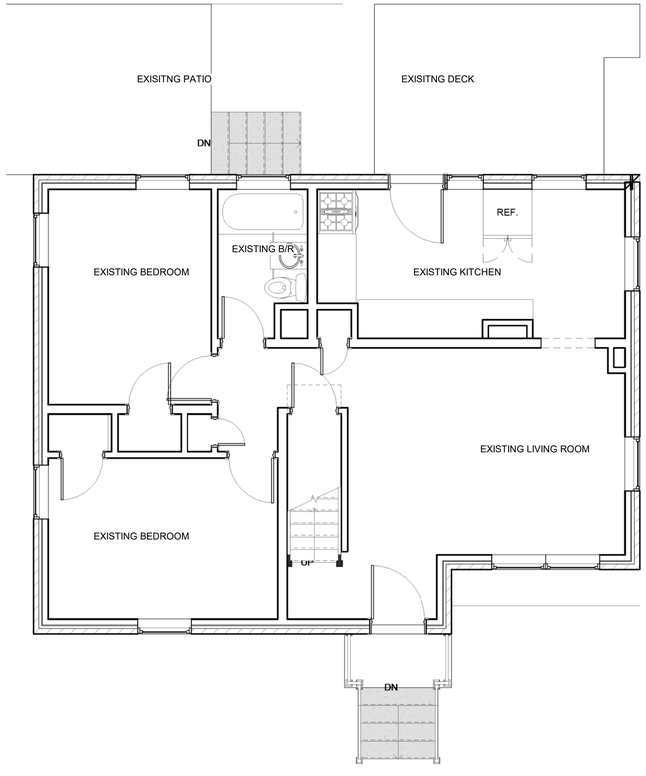
*TO EXTERIOR & UNCONDITIONED SPACE, SPRAY FOAM CLOSED CELL FOAM

LEGEND

(T) 'T' INDICATES TEMPERED GLASS IN DOOR OR WINDOW.



2 A100 **SECOND FLOOR PLAN EXISTING**
1/4" = 1'-0"



1 A100 **FIRST FLOOR PLAN EXISTING**
1/4" = 1'-0"

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SHEET TITLE **EXISTING PLANS**

SHEET # **A100**

REAR AND SECOND STORY ADDITION

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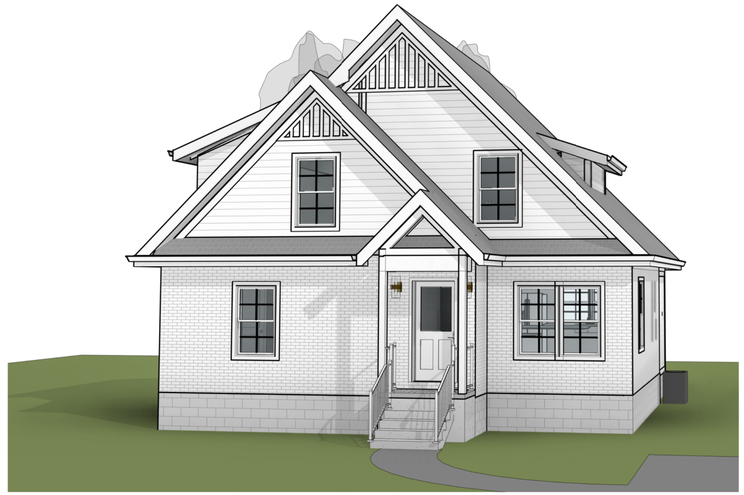

1031 CROSS DRIVE
ALEXANDRIA VIRGINIA 22302

ABBREVIATIONS

DIM DIMENSION
DISP DISPENSER
DIV DIVISION (DIVIDED)
DN DOWN
DS DOWN SPOUT
DR DOOR
DW DISHWASHER
DWGS DRAWINGS
DWR DRAWER
E EAST
EA EACH
EJ EXPANSION JOINT
EL ELEVATION
ELEC ELECTRICAL
ELEV ELEVATION
ENCL ENCLOSURE
ENT ENTRANCE
EQ EQUAL
EQUIP EQUIPMENT
ETR EXISTING TO REMAIN
EWC ELEC. WATER COOLER
EX EXISTING
EXP EXPANSION
EXT EXTERIOR
FD FLOOR DRAIN
FE(C) FIRE EXTINGUISHER
FG FINISH GRADE
FT FOOT (FEET)
FF FINISHED FLOOR
FF&E FIXTURE FURNITURE & EQUIPMENT
FVC FIRE VALVE CABINET
FIN FINISH
FL FLOOR
FLEX FLEXIBLE
FLSG FLASHING
FLUOR FLUORESCENT
FR FRAME
FRPF FIRE PROOFING
FRT FIRE RETARDANT TREATED
FTG FOOTING
FUR FURRING
FX FIXED WINDOW
GA GAUGE
GALV GALVANIZED
GB GYPSUM BOARD
GC GENERAL CONSTRACTOR
GL GLASS
GR GRADE
GWB GYPSUM WALLBOARD
HB HOSE BIB
HC HOLLOW CORE
HD HEAVY DUTY
HDWD HARDWOOD
HDWR HARDWARE
HT HEIGHT
HM HOLLOW METAL
HORIZ HORIZONTAL
AB ANCHOR BOLT
ABV ABOVE
ACC ACCESS
ACOUS ACOUSTICAL
AD AREA DRAIN
ADJ ADJUSTABLE
AFF ABOVE FINISH FLOOR
AHU AIR HANDLING UNIT
ALT ALTERNATE
ALUM ALUMINUM
ANC ANCHORS
APPROX APPROXIMATE
ARCH ARCHITECT
AUTO AUTOMATIC
AVG AVERAGE
B BATHROOM
BD BEAD
BIT BITUMINOUS
BLDG BUILDING
BLK BLOCK
BLKG BLOCKING
BM BEAM
BO BY OWNER
BOT BOTTOM
BRD BOARD
BRKT BRACKET
BSL BUILDING SETBACK LINE
BSMT BASEMENT
BU BUILT UP
CAB CABINET
CEM CEMENT
CF CUBIC FOOT (FEET)
CI CAST IRON
CJ CONTROL JOINT
CLG CEILING
CLL CONTRACT LIMIT LINE
CL CLOSET
CLR CLEAR
CMU CONCRETE MASONRY UNIT
CNR CORNER
CH CONCRETE HEADER
CO CLEAN OUT
COL COLUMN
CONC CONCRETE
CONST CONSTRUCTION
CONT CONTINUOUS
CS COURSES
CS CASEMENT WINDOW
CT CARPET
CTR CENTER
CTSK COUNTER SUNK
DBL DOUBLE
DEPT DEPARTMENT
DET DETAIL
DF DRINKING FOUNTAIN
DH DOUBLE HUNG
DIA DIAMETER
DIFF DIFFUSER
HP HIGH POINT
HVAC HEATING VENT, AIR COND
ID INSIDE DIAMETER
INSUL INSULATION
INST INSTALLATION
INT INTERIOR
JAN JANITOR
JST JOIST
JT JOINT
KD KNOCK DOWN
KIT KITCHEN
KO KNOCK OUT
LAM LAMINATED
LAV LAVATORY
LP LOWPOINT
LIN LINEAR
LT LIGHT
LW LIGHTWEIGHT
MACH MACHINE
MAINT MAINTENANCE
MATL MATERIAL
MAX MAXIMUM
MDF MEDIUM DENSITY FIBERBOARD
MECH. MECHANICAL
MEMB MEMBRANE
MET METAL
MTL METAL
MEZZ MEZZANINE
MFR MANUFACTURER
MIN MINIMUM
MISC MISCELLANEOUS
MLDG MOLDING
MO MASONRY OPENING
MOD MODIFIED
MTD MOUNTED
NIC NOT IN CONTRACT
NO NORTH
NRC NOISE REDUCTION COEFFICIENT
NTS NOT TO SCALE
OA OVERALL
OC ON CENTER
OD OUTSIDE DIAMETER
OFF OFFICE
OFCI OWNER FURNISHED/ CONTRACTOR INSTALLED
OH OVERHEAD
OPG OPENING
OP HD OPPOSITE HAND
OPP OPPOSITE
PAR PARTIAL
PART PARTITION
PED PEDESTRIAN
P-LAM PLASTIC LAMINATE
PLYWD PLYWOOD
PNL PANEL
POL POLISH (POLISHED)
PPT PRESERVATIVE
PRESSURE TREATED
PR PAIR
PREFAB PREFABRICATED
PSF POUNDS PER SQUARE FOOT
PSI POUNDS PER SQUARE INCH
PT PAINT
PTD PAINTED
QT QUARRY TILE
QTY QUANTITY
RAD RADIUS
RD ROOF DRAIN
REF REFRIGERATOR
REINF REINFORCED (ING)
REQ REQUIRED
RES RESILIENT
REV REVISE (REVISION)
RO ROUGH OPENING
RTU ROOF TOP UNIT
SC SOLID CORE
SCHED SCHEDULE
SECT SECTION
SF SQUARE FOOT (FEET)
SHT SHEET
SIM SIMILAR
SHR SHOWER
SL SLIDING
SQ SQUARE
SSK SERVICE SINK
S.STL. STAINLESS STEEL
STC SOUND TRANSMISSION CLASS
STD STANDARD
STL STEEL
STN STAIN
STOR STORAGE
STRUCT STRUCTURAL
SUSP SUSPENDED
SW SWITCH
SYS SYSTEM
(T) TEMPERED GLASS/WINDOW
TBR TO BE REMOVED
TEL TELEPHONE
TEMP TEMPERED
T&G TONGUE & GROOVE
THK THICK
THR THRESHOLD
TV TELEVISION
TYP TYPICAL
UL UNDERWRITER'S LABORATORIES
UNF UNFINISHED
UNO UNLESS NOTIFIED OTHERWISE
UTL UTILITY
VERT VERTICAL
VIF VERIFY IN FIELD
W WEST
WD WOOD
WH WATER HEATER
W/O WITH OUT
WP WATERPROOFING
WR WATER RESISTANT
WT WEIGHT

CODE INFORMATION

BUILDING CODE: 2015 VRC
USE GROUP: R-5 SINGLE FAMILY RESIDENTIAL
CONSTRUCTION TYPE: (VB WOOD FRAMED CONSTRUCTION)
HEIGHT LIMITATION: 30' MAXIMUN HEIGHT PER ZOINING
AUTOMATIC SPRINKLER SYSTEM (NONE)
ENERGY CODE COMPLIANCE (PRESCRIPTIVE)

DESIGN LOADS

SOIL BEARING PRESSURE : 1500 PSF MAX FOR ALL FOOTINGS
(NOTE: ALL FOOTINGS TO BEAR ON VIRGIN SOIL IN ACCORDANCE WITH CODE
SOIL CLASSIFICATIONS SW,SP,SM,SC,GM,GC
ROOF LOADS : OPEN WEB TRUSSES
SNOW LOAD 30 PSF (TYPICAL)
DEAD LOAD 17 PSF (TOP AND BOTTOM CHORD)
FLOOR LOADS : (I JOIST SYSTEMS)
LIVE LOAD 40 PSF (TYPICAL)
SLEEPING AREA'S 30 PSF LIVED LOAD
FLOOR DEAD LOAD 12 PSF (TYPICAL)
ATTIC LIMITED STORAGE :
LIVE LOAD 20 PSF
DEAD LOAD 12 PSF
DECK LOAD :
LIVE LOAD 40 PSF
DEAD LOAD 12 PSF
BALCONIES :
LIVE LOAD 60 PSF
DEAD LOAD 12 PSF
STAIRS :
60 PSF
WIND LOADS :
WIND SPEEDS 115 MPH (3 SEC. GUST)
WIND LOAD FACTOR (1)
WIND EXPOSURE (B)
COMPONENTS CLADDING :
140 MPH OR LESS (3 SEC GUST)
MAX VALUE ROOF (+ 18.2 - 23.2)
MAX VALUE AT WALL (+ 19.8 - 26.6)
WALL BRACING :
STRUCTURAL SHEATING ON ALL EXTERIOR WALLS
(PRESCRIPTIVE METHOD CS-WSP)
FOUNDATION FLUID PRESSURE DESIGN EQUIVALENT :
FOUNDATION WALLS 60 PCF
NOTE USE ONLY GRAVEL OR CLEAN FILL IN ACCORDANCE WITH CODE SOIL CLASSIFICATIONS SW,SP,SM,SC,GM,GC
HANGER MANUFACTURE :
ALL HANGERS SHALL BE SPECIFIED BY TRUSS OR JOIST MANUFACTURE (SPEC MANUFACTURED BY SIMPSON STRONG TIE)

THERMAL ENVELOPE MIN REQUIREMENTS :
SILL PLATE 1/4" FOAM MIN
FOUNDATION PERIMETER (WALKOUT AREA'S) R-10 CLOSED CELL EXTRUDED POLYSTYRENE
FOUNDATION WALL R-13 FLAME SPREAD BATT (FULL HEIGHT)
2X4 FINISH BASEMENT WALL R-13
2X4 EXTERIOR WALLS R-15
2X6 EXTERIOR WALLS R-19
CANTALIVER FLOOR OVER UNCONDITIONED SPACE R-38
BAND BOARD R-19
ATTIC R-38
R-49 AS REQUIRED BY CODE
AREA'S OVER UNCODITIONED SPACE R-38
WINDOW & DOOR THERMAL PERFORMANCE :
WINDOWS SHALL BE ANDERSON 200 SERIES DOUBLE HUNG (OR EQ)
U =0.30 (DUAL PANE LOW E) OR HIGHER U VALUE
DOORS SHALL BE ANDERSON 200 SERIES (OR EQ)
U =0.32 (DUAL PANE LOW E TEMPERED) OR HIGHER U VALUE
EMERGENCY ESCAPE:
EGRESS WINDOWS FROM SLEEPING ROOMS SHALL HAVE A MINIMUN OF 5.7 SQFT.
FROST DEPTH:
30" PER VRC CODE
WEATHERING :
SEVERE
TERMITE :
MODERATE TO HEAVY
DECAY :
SLIGHT TO MODERATE
WINTER DESIGN TEMPERATURE :
13F
FLOOD HAZARDS :
SEE SITE GRADING PLANS FOR LOCATION AS INDICATED
INTERIOR STAIR & BEARING WALLS PROTECTION :
(1) LAYER OF 1/2" GYPUM BOARD TO ALL SURFACES IN ACCESSIBLE AREAS.
GARAGE WALL & CEILING ASSEMBLY :
(2) LAYERS OF 1/2" GYPSUM BOARD OR (1) LAYER OF 5/8 TYPE X GYPSUM BOARD REQUIRED BY CODE AT WALL & CEILINGS & FIRE RATED 20 MIN GARAGE DOOR FORM HOUSE TO GARAGE.

BUILDING DATA

BASEMENT EXISTING : 774 SF
FIRST FLOOR EXISTING : 774 SF
SECOND FLOOR EXISTING: 278 SF
FIRST FLOOR PROPOSED : 231 SF
SECOND FLOOR PROPOSED : 721 SF

TOTAL BUILDING SQUARE FEET : 2,500 SF

SHEET INDEX

COMMONWEALTH OF VIRGINIA
GEORGE C. GERBER
Lic. No. 2311
08/20/2021
PROFESSIONAL ENGINEER

OFFICIAL COUNTY USE ONLY

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PROJECT NAME AND ADDRESS
REAR AND SECOND STORY ADDITION
1031 CROSS DRIVE
ALEXANDRIA VIRGINIA 22302
PROJECT # J21103

SEAL

REVISION | DATE

ISSUE DATE
08/20/2021

SHEET TITLE
COVER SHEET

SHEET #
A001

PER THE UNITED STATES COPYRIGHT LAW *COMPENDIUM OF U.S. COPYRIGHT OFFICE PRACTICES* SECTION 903.2: ARCHITECTURAL WORKS 17 U.S.C. § 101 & SECTION 923. THE DESIGN, DRAWING COMPOSITION, ARRANGEMENT OF SPACES, ELEMENTS, THE LAYOUT AND DETAILS OF THIS PROJECT AS CREATED BY S2R ARCHITECTS IS INTELLECTUAL PROPERTY OF THE CREATOR; NOTHING IS BE COPIED, REPRODUCED, TRANSMITTED OR RECREATED BY ANY MEANS WITHOUT WRITTEN APPROVAL FROM S2R ARCHITECTS. FAILURE TO COMPLY WILL RESULT IN LEGAL ACTION AND PROSECUTION.

SPECIFICATIONS

NOTE: COLUMNS READ FROM RIGHT TO LEFT

GENERAL NOTES:

1. ALL WORK SHALL BE PERFORMED IN A PROFESSIONAL AND SAFE MATTER IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL CODES & REGULATIONS IN ACCORDANCE OF ACCEPTED GOOD PRACTICE. GENERAL CONTRASCTOR IS RESPONSIBLE FOR PRACTICING AND ENFORCING RULES ON CONSTRUCTION SITE. ARCHITECT WHEN VISITING CONSTRUCTION SITE IS ONLY VISING AS OBSERVER AND NOT RESPONSIBLE FOR SITE OR WORKERS.

2. DIMENSIONS ARE TO FACE OF WOOD FRAMING OR CONCRETE UNLESS OTHERWISE NOTED.

3. ALL INSTALLATIONS SHALL BE PERFORMED IN A STRICT ACCORDANCE W/THE MATERIAL, EQUIPMENT, AND OR MANUFACTURERS SPECIFICATIONS.

4. DIMENSIONS ARE TO BE TAKEN FROM DIMENSION STRINGS ONLY, DO NOT SCALE DRAWINGS. ANY OMISSIONS OR DISCREPANCIES ARE TO BE BROUGHT TO THE DESIGNER'S ATTENTION IMMEDIATELY, FOR THE DESIGNER TO RESOLVE.

5. MATERIALS OR ITEMS IDENTIFIED BY THE A MANUFACTURER'S NAME OR TRADE NAME MAY BE SUBSTITUTED BY A LIKE PRODUCT OF A DIFFERENT MANUFACTURER, ONLY WITH PRIOR APPROVAL OF THE DESIGNER OR OWNER PRIOR TO ORDERING/INSTALLING. CONTRACTOR IS WELCOME AND ENCOURAGED TO SUBMIT SUBSTITUTIONS.

6. PREMISES SHALL BE LEFT " BROOM CLEAN" AND EXTERIOR SHALL BE COMPLETELY FREE OF DEBRIS UPON COMPLETION OF WORK. ALL SUBCONTRACTORS ARE REQUIRED TO CLEAN PREMISES AND EXTERIOR OF THEIR DEBRIS DAILY, UNLESS SPECIFICALLY EXEMPTED BY OWNER. PARTICULAR EFFORT IS TO BE TAKEN TO MINIMIZE & CLEAN-UP DEBRIS WITHIN EXISTING PREMISES, ON A DAILY BASIS.

7. THERE IS TO BE NO SMOKIN OF ANY KIND IN RESIDENCE FROM COMMENCEMENT OF FRAMING.

8. ALL EXTERIOR WALL FRAMING TO BE 2X6 AND INTERIOR WALL FRAMING TO BE 2X4 UNLESS NOTED OTHERWISE NOTED ON THE FRAMING PLANS.

9.G.C TO COORDINATED KITCHEN LAYOUT REQUIREMENTS IN TERMS OF VENTING AND ELECTRICAL POINTS W/FINAL KITCHEN DESIGN AND SELECTED APPLIANCES.

DIVISION 1: GENERAL REQUIREMENTS

1. WORK PERFORMED SHALL COMPLY WITH THIS GENERAL NOTES UNLESS OTHERWISE NOTED ON PLANS.
2. WORK PERFORMED SHALL COMPLY WITH ALL APPLICABLE LOCAL AND STATE CODES, ORDINANCES AND REGULATIONS.
3. ON-SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACOTR AND HIS SUBCONTRACTORS.
4. DISCREPANCIS: THE GC SHALL COMPARE AND COORDINATE ALL DRAWINGS; IF IN THE OPINION OF THE GC A DISCREPANCY EXITS THE GC SHALL PROMPTLY NOTIFY ARCHITECT OF THE DISCREPANCY AND INCLUDE PROPOSED SOLUTION FOR APPROVIAL PRIOR TO PROCEEDING WITH WORK.
5. **OMISSIONS:** IN THE EVENT CERTAIN FEATURES OF THE CONSTRUCTION ARE NOT FULLY SHOWN ON THE DRAWINGS, THE CONSTRUCTION SHALL BE OF THE SAME CHARACTER AS FOR SIMILAR CONDITIONS THAT ARE SHOWN OR NOTED AND AS APPLICABLE TO CODES, REGULATIONS AND INDUSTRY STANDARDS.
6. ALL WORK IS TO BE PERFORMED IN A PROFESSIONAL, SAFE MANNER AND IN STRICT ACCORDANCE WITH CODES, REGULATIONS, MAUFACTURER'S SPECIFICATIONS/RECOMMENDATIONS AND STANDARD PRACTICES.
7. DIMENSIONS SHALL BE READ OR CALCULATED AND NEVER SCALED. ALL DIMENSIONS ARE TO THE ROUGH FRAMING U.N.O.
8. DEISGN LOADS:
   ROOF LOADS (30PSF LIVE) + (17 PSF DEAD)
   FLOOR LOADS (40PSF LIVE) + (12 PSF DEAD)
   FLOOR LOAD SLEEPING AREAS (30 PSF LIVE) + (12 PSF DEAD)
   DECK LOAD (40PSD LIVE) + (12 PSF DEAD)
   BALCONIES LOAD (60PSF LIVE) + (12 PSF DEAD)
   ATTIC LIMITED STORAGE (20PSF LIVE) + (12 PSF DEAD)
   WIND LOAD = 115 MPH @ 3 SEC.GUST
   STAIR LOAD = 60 PSF
   SNOW LOAD = 30 PSF
10. WALL BRACING USE ONE OF THE FOLLOWING OPTIONS:
   A. WOOD STRUCTURAL PANEL SHEATHING WITH A THICKENESS NOT LESS THAN 1/2" (5/8" RECOMMENDED) FOR 16" AND 24" STUD SPACING. WOOD STRUCTURAL PANELS SHALL BE INSTALLED IN ACCORDANCE WITH TABLE R602.3 (3)
   B. ALTERNATE BRACED WALL PANELS. ALTERNATE BRACED WALL LINES CONSTRUCTED IN ACCORDANCE WITH ONE OF THE FOLLOWING PROVISIONS SHALL BE PERMITED TO REPLACE EACH 4 FEET (1219 MM) OF BRACED WALL PANEL AS REQUIRED BY SECTION R602.10.4.
11. ANY CHANGES TO THE PROJECT REQUIRE WRITTEN REQUEST AND APPROVAL BY ARCHITECT OR APPROPRIATE ENGINEER. ANY CONSTRUCTION CHANGES NOT CONFORMING TO THIS SET OF DRAWINGS OR REVISED SET OF DRAWINGS NO MATTER HOW SMALL SHALL INDEMNIFIES ARCHITECT AND ENGINEER OF ALL RESPONSIBILITIES AND LIABILITY. OWNER TO ASSUME AND COMPENSATE ARCHITECT AND ENGINEER FOR ALL LITIGATION, FINES AND LAWYER COSTS AND INCLUDING INTEREST ASSOCIATED WITH CHANGES, LITIGATION OR INJURY.
12. G.C. TO SUBMIT SHOP DRAWINGS FOR REVIEW TO ARCHITECT OR ENGINEER. SHOP DRAWINGS TO BE STAMPED AND SIGNED BY THE GC TO CONFORM WITH THE DRAWINGS, INTENDED DESIGN, CODES AND BEST PRACTICES.
13. ANY CHANGES TO DRAWINGS NEED TO BE SUBMITTED TO AND APPROVED BY THE ARCHITECT OR ENGINEER.
14. ARCHITECT RETAINS THE RIGHTS TO THE DESIGN OF THE PROJECT AS INTELLECTUAL PROPERTY PER UNITED STATES COPYRIGHT LAW COMPENDIOUM SECTION 903.2: ARCHITECTURAL WORKS 17 U.S.C. § 101 & 923. ARCHITECT RETAINS RIGHTS TO PHOTOGRAPH OR TAKE VIDEO OF THE PROJECT DURING AND AFTER THE CONSTRUCTION. THE ARCHITECT IS GRANTED FAIR RIGHT OF USE OF ANY PHOTOGRAPHS OF THE DESIGN & ARCHITECTURE TO BE USED BY THE ARCHITECT FOR VARIOUS USES INCLUDING STAFF EDUCATION, ADVERTISEMENT, BLOGGING, MARKETING, ETC.

DIVISION 2: EXISTING CONDITIONS & DEMOLITION

EXISTING CONDITIONS:
1. GC TO FAMILIZARIZE WITH EXISTING SITE, CONDITIONS AND DRAWINGS PRIOR TO BEGINING WORK INCLUDING UTILITIES. NOTIFY ARCHITECT / ENGINEER OF ANY DISCREPRENCISES OR CONDITIONS THAT DIFFER FROM DRAWINGS.
2. ANY CONDITIONS / ELEMENTS TO REMAIN SHALL BE COVERED AND PROTECTED DURING CONSTRUCTION/DEMOLITION.
3. ANY ELEMENT/ CONSTRUCTION THAT IS TO BE RELOCATED SHALL BE PHOTOGRAPHED AND RECORED WITH DIMENSIONS TO BE REINSTALLED IN KIND. OBJECTS TO BE RELOCATED ARE TO BE REMOVED CAREFULLY AND STORED PROTECTED FROM DAMAGE AND LABELED.

DEMOLITION:
1. GC TO VERIFY EXISTING CONDITIONS TO REMAIN PRIOR TO BEGINING DEMOLITION.
2. PRIOR TO DEMOLTIION GC TO VERIFY UTILITY LINE LOCATIONS AND SERVICES.
3. IF UNANTICIPATED HAZARDS, HAZARDOUS MATERIALS, OBJECTS OR HUMAN REMAINS ARE UNCOVERED DURING DEMOLITION / EARTH REMOVAL THE GC IS TO CEASE WORK AND CONTACT APPROPRIATE AUTHORITIES IMMEDIATELY.
4. EXPOSE FRAMING PRIOR TO DEMOLITION.
5. DO NOT DEMOLISH ANY STRUCTURAL COMPONENTS OR SYSTEM THAT IS NOT REFERENCED IN THE DRAWINGS. NOTIFY STRUCTURAL ENGINEER OF ANY STRUCTURAL ELEMENTS THAT ARE NOT INDICATED IN THE DRAWINGS.
6. HAZARDOUS MATERIALS SUCH AS ASBESTOS OR LEAD IF ENCOUNTERED IS TO BE REMIDEATED AS REQUIRED BY LOCAL OR STATE REMIDIATION REGULATIONS.

DIVISION 32: EXTERIOR IMPROVEMENTS

1. CONCRETE SLABS AND FOOTINGS CALCULATIONS ARE BASED ON A 1500 PSF VALUE PER (PER CODE)
2. FOOTINGS, FOUNDATIONS, WALLS, AND SLABS SHALL NOT BE PLACED ON MARINE CLAY, PEAT OR ANY OTHER ORGANIC MATERIAL.
3. ANY RADON MITIGATION CONSTRUCTION SHOWN ON THESE PLANS HAS BEEN INCLUDED AT THE DIRECTION OF THE OWNER AND IS NOT WARRANTED BY THE DESIGNER AS TO IT'S EFFECTIVENESS.
4. DO NOT BACKFILL AGAINST THE FOUNDATION WALL UNTIL THE FIRST FLOOR SUBFLOOR IS IN PLACE.
5. PROVIDE 4" PERIMETER FOUNDATION DRAIN AROUND THE FOUNDATION WALL AND SLOPE GRADE AWAY FROM THE STRUCTURE A MINIMUN OF 6" IN 10 FEET
6. WHERE CONDITIONS DEVELOP REQUIRING CHANGES IN EXCAVATIONS. SUCH CHANGES SHALL BE MADE AS DIRECTED BY THE GEO-TECHNICAL ENGINEER.

DIVISON 3: CONCRETE & FOUNDATIONS

CONCRETE:
1. THE CONCRETE PROPERTIES SHALL BE AS FOLLOWS:

ITEM	MINIMUN STRENGTH
FOOTINGS	3000 PSI @ 28 DAYS
WALLS	3000 PSI @ 28 DAYS
INTERIOR SLAB-ON-GRADE	3000 PSI @ 28 DAYS
GARAGE SLAB-ON-GRADE	3500 PSI @ 28 DAYS (5% AIR -ENTRAINED)
EXTERIOR SLAB-ON-GRADE	3500 PSI @ 28 DAYS (5% AIR-ENTRAINED)

2. CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF ACI-318-99, SPECIFICATIONS FOR STRUCTUAL CONCRETE FOR BUILDINGS.
3. ALL CONCRETE SLABS ON GRADE SHALL BE A MINIMUN OF 4" THICK ON 6 MIL POLYETHYLENE FILM WITH 6X6 W.W.F AT MID SLAB.
4. FILL UNDER SLABS AND FOOTINGS SHALL BE APPROVED BACKFILL MATERIAL AT 95% COMPACTION IN 6" LAYERS.
5. BACKFILL TO BE OF APPROVED MATERIAL.

REINFORCING STEEL:
1. REINFORCINF STEEL SHALL BE INTERMEDIATE GRADE NEW BILLET DEFORMED BARS CONFORMING TO ASTM A615. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185.
2. ALL STEEL REINFORCEMENT FY = 60 KSI
3. DETAILING, FRABRICATING AND PLACING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI-315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES". FURNISH SUPPORT BARS AND ALL REQUIRED ACCESSORIEES IN ACCORDANCE WITH CRSI STANDARDS.
4. ALL REINFORCING BARS WHICH INTERCEPT PERPENDICULAR ELEMENTS SHALL TERMINATE IN BOOKS, PLACED TWO (2) INCHES CLEAR FROM OUTER FACE OF ELEMENT.
5. CONTRACTOR SHALL NOTIFY THE BUILDING OFFICIAL OR APPROVED ENTITY AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EACH CONCRETE POUR. NO CONCRETE SHALL BE PLACED UNTIL ALL REINFORCING HAS BEEN INSTALLED BY THE CONTRACTOR AND INSPECTED BY THE BUILDING OFFICIAL.
6. SEE FOUNDATION PLANS, DETAILS AND TYPICAL WALL SECTION FOR REINFORCED QUANTITIES AND SIZES.
7. PROTECTIVE COVERAGE FOR REINFORCING STEEL SHALL BE AS FOLLOWS:

LOCATION	MINIMUN COVERAGE
FOOTINGS	3"
BEAMS AND COLUMNS	2"
SLABS*	3/4"
WALLS (INTERIOR FACE)	2"
WALLS (EXTERIOR FACE)	2"

*WIRE MESH TO BE PLACED AT MID-DEPTH OF SLAB.

FOUNDATION:
1. FOOTINGS DEPTHS ARE SHOWN ON THE SECTION UNLESS OTHERWISE NOTED, FOOTINGS SHALL BEAT A MINIMUN OF 12" INTO ORIGINAL UNDISTURBED SOIL AND A MINIMUN OF 24" BELOW FINISHED GRADE.
2. WHERE REQUIRED STEP FOOTINGS TO RATIO OF 2 HORIZONTAL TO 1 VERTICAL.
3. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED BY THE BUILDING OFFICIAL PRIOR TO THE PLACING OF ANY CONCRETE. THE BUILDING OFFICIAL SHALL BE GIVEN NOTICE FOR THIS OBSERVATION.
4. USE BRICK PATTERN FORMS ON ALL EXPOSED CONCRETE FOUNDATION WALLS.
5. PROVIDE 4" CONCRETE PAD FOR EXTERIOR HVAC UNIT, PROVIDE PIPE/CONDUIT SLEEVES AS REQUIRED BY MANUFACTURER.

DIVISION 4: MASONRY

1. SOLID MASONRY WALLS TO HAVE "DUR-OR-WALL" (OR APPROVED EQUAL) TRUSS TIES AT 16" O.C VERTICAL ABOVE GRADE AND 8" O.C VERTICAL BELOW GRADE.
2. BRICK VENEER WALLS TO HAVE NON-CORROSIVE METAL TIES AT 16" O.C VERTICALLY AND HORIZONTALLY.
3. PROVIDE FLASHING AT THE TOP. BOTTOM AND SIDES OF ALL OPENINGS AND BASE WITH WEEP HOLES AT 24" O.C.
4. PROVIDE AT LEAST 8" OF SOLID MASONRY UNDER CONCENTRATED LOADING CONDITIONS.
5. MORTAR TO CONFORM TO ASTM C270, TYPE N.

DIVISION 5: METALS

1. STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF THE 9TH EDITION OF A.I.S.C. MANUAL OF STEEL CONSTRUCTION. STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36. STEEL FOR PIPE COLUMNS SHALL BE OF EQUIVALENT CAPACITY AND WELDABILITY TO ASTM A-501. ALL WELDING SHALL BE IN ACCORDANCE TO THE AMERICAN WELDING SOCIETY CODE AND BE PERFORMED BY WELDERS QUALIFIED IN ACCORDANCE WITH AWS PROCEDURES. ELECTRODES SHALL CONFORM TO ASTM A-5.20 E-70 SERIES.
2. PROVIDE BASE PLATE FOR ALL STRUCTURAL STEEL BEAMS BEARING ON CONCRETE OR MASONRY. PROVIDE STANDARD ANGLE ANCHORS AND INSERTS, TIES, CLIPS, ANCHORS,STRAPS, HANGERS, BOLTS, AND OTHER HARDWARE AND FASTENING DEVICES AS MAY BE REQUIRED.
3. STEEL COLUMNS, LINTELS, BEAMS AND RAILINGS SHALL HAVE A SHOP COAT OF RUST INHIBITING PAINT. DO NOT PAINT STAINLESS STEEL OR ALUMINUM ELEMENTS U.N.O.
4. METAL RAILING TO WITHSTAND 200LB PER LINEAR FOOT FORCE IN ANY DIRECTION MINIMUM.

STEEL COLUMNS:
1. 11 GAUE ADJUSTABLE AND FIXED STEEL COLUMNS ARE CONSTRUCTED OF CARBON STEEL WITH A MINIMUN YIELD STRENGHT OF 33 KSI AND ULTIMATE STRENGHT OF 45 KSI. IN ACCORDANCE WITH ASTM 500 AND MANUFACTURED BY MARSHALL STAMPING COMPANY IN ACCORDANCE WITH BOCA REPORT NO.21-31 AND HAVE A MINIMUN 8" X 4" 1/4" BEARING AND CAP PLATES UNLESS NOTED OTHERWISE. SCREW JACK SHOULD BE ENCASED IN CONCRETE OR TACK WELDED AFTER INSTALLATION. EACH COLUMN SHOULD BE DESIGNED WITH THE CAPACITY RATING AND WITHSTAND COMPRESSION LOADS AS NOTED ON PLAN.

FASTENERS:
1. ALL FASTENERS IN EXTERIOR DECKS SHALL BE GALVANIZED.
2. ANCHOR BOLTS SHALL BE 1/2" DIAMETER X 10" LONG GALVANIZED (SEE DRAWINGS FOR PLACEMENT AND SPACING)
3. FLITCH BEAMS SHALL HAVE A MINIMUM FB = 1000 PSI, E=1,300,000 PSI WITH 2 ROWS 1/2" BOLTS, 16" O.C TOP AND 32" O.C AT BOTTOM U.N.O.
4. JOIST HANGERS SHALL BE USED TO SUPPORT ALL PURLINS, JOISTS AND BEAMS NOT FRAMED OVER SUPPORTING MEMBERS.
5. JOIST HANGERS SHALL BE USED "TECO" UNLESS OTHERWISE NOTED OR AN APPROVED EQUAL.
6. MACHINE BOLT AND CARRAGE BOLT HOLES IN WOOD SHALL BE DRILLED 1/16" LARGER THAN DIAMETER OF BOLT.
7. LAG SCREWS SHALL BE SQUARE HEAD, OF STRUCTURAL GRADE STEEL, BE PLACED WITH WASHERS UNDER THE HEAD.
8. BOLTS IN WOOD FRAMING SHALL BE STANDARD MACHINE BOLTS WITH STANDARD MALLEABLE IRON WASHERS OR STEEL PLATE WASHERS.
9. STEEL PLATE WASHER SIZES SHALL BE AS FOLLOWS:

BOLT DIAMETER	WASHER SIZE
1/2"	2-1/4" X 5/16"
5/8"	2-1/4" X 5/16"
3/4"	2-5/8" X 5/16"

10. SILL PLATES TO BE ATTACHED TO STEEL BEAMS W/ 1/2" THRU BOLTS STAGGERED @ 24" O.C. OR PNEUMATIC FASTEN WITH HILTI "ZF54" PINS W/36MM WASHERS @ 24" O.C.

LINTELS:
1. LINTELS SIZES SHALL BE PER THE LINTEL SHEDULE SHOWN ON THE BRICK LINTEL DETAIL, U.N.O.

DIVISION 6: WOOD, PLASTICS AND COMPOSITES

1. ALL JOISTS, RAFTERS, AND HEADERS SHALL BE, UNLESS OTHERWISE NOTED, HEM-FIR #2 OF EQUAL WITH THE FOLLOWING MINIMUM ALLOWABLE STRESSES AND MODULUS OF ELASTICITY:
   EXTREME FIBER STRESS: FB=850 PSI (REPETITIVE MEMBER)
   HORIZONTAL SHEAR: FV=75 PSI
   COMPRESSION PERPENDICULAR TO GRAIN: FC=405 PSI
   MODULUS OF ELASTICITY: E=1,300,000 PSI
   MOISTURE CONTENT: 19%
2. ALL EXTERIOR LUMBER AND LUMBER IN CONTACT WITH MASONRY AND CONCRETE SHALL BE PRESSURE PRESERVATIVE TREATED IN ACCORDANCE WITH AWPA STANDARDS.
3. ALL NAILINGS SHALL COMPLY WITH IRC CODE, LATEST EDITION AND ALL STATE AND LOCAL BUILDING CODES.
4. BUILT-UP BEAMS OT JOISTS FORMED BY A MULTIPLE OF 3-PLY OR LESS 2X MEMEBERS SHALL BE CONNECTED W/16D NAILS AT 8" O.C
5. BUILD-UP BEAMS FORMED BY 3 PLYS OF LAMINATED VENEER LUMBER SHALL BE FASTEN W 3-ROWS 16D NAILS AT 12" O.C ON EACH SIDE OR PER MANUFACTURES RECOMMNENDATION.
6. BLOCK SOLID AT ALL BEARING SUPPORTS WHERE ADEQUATE LATERAL SUPPORT IS NOT OTHERWISE PROVIDED.

DIVISION 6: WOOD, PLASTICS AND COMPOSITES CONT.

7. WHEN FRAMING END TO END JOIST SHALL BE SECURED TOGETHER BY METAL STRAPS.
8. ALL RAFTERS AND JOISTS FRAMING FROM OPPOSITE SIDES SHALL LAP AT LEAST THREE (3) INCHES AND BE SPIKED TOGETHER.
9. DO NOT ALTER SIZES OF MEMBERS NOTED WITHOUT APPROVAL OF STRUCTURAL ENGINEER/ARCHITECT.
10. FASTENERS TO BE IN ACCORDANCE WITH IRC FASTENER SCHEDULE FOR STRUCTURAL MEMBERS R602.3(1).

CUTTING OF BEAMS, JOIST AND RAFTERS:
1. NO STRUCTURAL MEMBER SHALL BE OMITTED; NOTCHED, CUT, BLOCKED OUT OR RELOCATED WITHOUT PRIOR APPROVAL BY THE DESIGNER.
2. CUTTING OF WOOD BEAMS, JOIST AND RAFTERS SHALL BE LIMITED TO CUTS AND BORED HOLES NOT DEEPER THAN ONE-SIXTH (1/6TH) THE DEPTH OF THE MEMBER AND SHALL NOT BE LOCATED IN THE MIDDLE ONE-THIRD (1/3TH) OF THE SPAN. NOTCHES LOCATED CLOSER TO SUPPORTS THAN THREE TIMES THE DEPTH OF THE MEMBER SHALL NOT EXCEED ONE-FITH (1/5TH) THE DEPTH. HOLES BORED OR CUT INTO JOIST SHALL NOT EXCEED ONE-THIRD (1/3RD) THE DEPTH OF THE JOIST.

BRIDGING:
1. WHERE JOIST DEPTH EXCEEDS TWELVE NOMINAL INCHES THERE SHALL BE NOT LESS THAN ONE LINE OF BRIDGING IN EVERY EIGHT FEET OF SPAN IN FLOOR, ATTIC AND ROOF FRAMING THE BRIDGING SHALL CONSIST OF NOT LESS THAN ONE BY THREE INCH LUMBER DOUBLE NAILED AT EACH END OR OF EQUIVALENT METAL BRACING OF EQUAL RIDGIDITY.

SUB-FLOOR:
1. ALL PLYWOOD SHALL BE PINE OR EQUAL AND SHALL BE MANUFACTURED AND GRADED IN ACCORDANCE WITH "PRODUCT STANDARD P-1-65" FOR 80FT PLYWOOD-CONSTRUCTION AND INDUSTRIAL.
2. EACH PLYWOOD SHEET SHALL BEAR THE "APA" GRADE TRADEMARK.
3. ALL END JOINTS SHALL BE STAGGERED AND SHALL BUTT ALONG THE CENTER LINES OF FRAMING MEMBERS.
4.THE FACE GRAIN OF THE PLYWOOD SHALL BE LAID AT RIGHT ANGLES TO THE JOISTS AND TRUSSES AND PARALLEL TO THE STUDS.
5. NAILS SHALL BE PLACED 3/8" MINIMUN FROM THE EDGE OF THE SHEETS. THE MINIMUM NAIL PENETRATION INTO FRAMIMG MEMBERS SHALL BE 1-1/2" FOR 8D NAILS AND 1-3/8" FOR 10D NAILS.
6. ALL FLOORS SHALL BE GLUED/SCREW WITH #12 WOOD SCREWS AT 6" O.C. ON DIRECT EDGES AND AT 10" O.C AT INTERMEDIATE.

WALLS:
1. ALL EXTERIOR BEARING WALLS SHALL BE 2 X 4 (SPF STUD GRADE) @ 16" O.C W/8' - 1 1/8" & 9' - 1 1/8" CEILING HGT. OR DBL STUD @ 16" O.C OR SINGLE STD @ 12" O.C W/10'- 1 1/8" CEILING HGT UNLESS OTHERWISE NOTED.
2. ALL INTEIOR BEARING WALLS SHALL BE 2 X 4 (SPF STUD GRADE) @16" O.C UNLESS NOTED OTHERWISE.
3. ALL INTERIOR NON-BEARING WALLS TO BE 2 X 4 (SPF STUD GRADE) SINGLE TOP PLATE @ 24" O.C UNLESS NOTED OTHERWISE.
4. ALL BEARING WALLS TO BE 2 X 4 (SPF) DOUBLE TOP PLATES, LAPPED AT ALL CORNERS AND INTERSECTIONS AND STAGGER SPLICE 48" O.C AND LOCATE OVER WALL STUDS.
5. ALL EXTERIOR CORNERS SHALL BE BRACE WITH 1 X 4 DIAGONALS, LET INTO STUDS, OR WITH 4 X 8 STRUCTUAL SHEETING FOR THICKNESS TO MATCH THAT OF SHEATING, OR WITH METAL BRACING OF EQUAL RIDIDITY.
6. PROVIDE ADDITIONAL STUDS AT CONCENTRATED LOAD LOCATION TO MATCH NUMBER OF STUDS ABOVE AND EXTEND TO FOUNDATION.
7. NOTCHES OR BORED HOLES IN STUDS OF BEARING WALLS OR PARTITIONS SHALL NOT BE MORE THAN ONE-THIRD THE DEPTH OF THE STUD.
8. THE FOLLOWING JACK/STUD SCHEDULE WILL BE USED UNLESS OTHERWISE NOTED:

EXTERIOR BEARING WALLS (MINIMUM UNLESS NOTED):

OPENING	**WITH ROOF** **ROOF ONLY**	**ROOF &** **1 FLOOR**	**ROOF &2** **FLOORS**
UP TO 3'-0"	1J & 1S	1J & 1S	1J & 1S
3'-0" TO 5'-0"	1J & 1S	1J & 1S	2J & 1S
5'-0" TO 7'-0"	2J & 1S	2J & 1S	2J & 2S
7-0" TO 9'-0"	2J & 1S	2J & 1S	2J & 2S
9'-0" TO 12'-0"	2J & 1S	2J & 1S	3J & 2S

INTERIOR BEARING WALLS (MINIMUM UNLESS NOTED):

OPENING	**1 FLOOR**	**2 FLOOR**
UP TO 3'-0"	1J & 1S	1J & 1S
3'-0" TO 5'-0"	2J 7 1S	2J & 2S
6'-0" TO 9'-0"	2J & 1S	3J & 2S
9'-0" TO 12'-0"	3J & 1S	4J & 3S

WHERE J = JACK UNDER HEADER
S = STUD NAILED TO JACK ALONG SIDE HEADER.
NOTE: ALL JACKS AND STUDS ASSUMED TO BE 2 X 4 SPF-STUD GRADE OR BETTER WITH MAXIMUM WALL HEIGHT OF 9'-1 1/8". ALL JACKS AND STUDS TO BE GLUED AND NAILED W/16D NAILS AT 8" O.C.

FIRE STOPPING:
1. FIRE STOPPING SHALL BE PROVIDED TO CUTOFF ALL-CONCEALED DRAFT OPENINGS (BOTH VERTICAL AND HORIZONTAL) IN THE FOLLOWING LOCATIONS:
   A. IN AL STUD WALL AND PARTITIONS INCLUDING FORCED SPACES AT FLOOR AND CEILING LEVELS AND NOT MORE THAN 10'-0" APART
   B. BETWEEN STAIR STRINGERS AT TOP AND BOTTOM AND BETWEEN STUDS IN LINE WITH STAIR RUN.
   C. FIRE STOPS, WHEN OF WOOD, SHALL BE 2" NOMINAL THICKNESS AND MAY BE MADE OF GYPSUM BOARD.
   D. SPACES BETWEEN CHIMNEYS AND WOOD FRAMING SHALL BE FILLED WITH LOOSE NONCOMBUSTIBLE MATERIAL (2" MINIMUM THICKNESS).

WOOD ROOF TRUSSES:
1. ROOF TRUSS MANUFACTURER TO SUPPLY SHOP DRAWINGS AND ERECTION DRAWINGS AND MUST BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE GOVERNING JURISDICTION. FLOOR TRUSS MANUFACTURER TO SUPPLY CONNECTION AND BEARING DETAILS, BRIDGING AND BRACING DETAILS WITH NOMINAL DIMENSIONS, TRUSS CONFIGURATIONS, LUMBER GRADE AND SPECIES AND MAGNITUDES OF FORCE IN ALL MEMBERS.
2. TRUSS DIAGRAMS SHOW DESIGN INTENT ONLY.TRUSS MANUFACTURER TO VERIFY ALL SPANS, DIMENSIONS, PITCHES, ETC. AND SUBMIT SHOP DRAWINGS TO DESIGNER PRIOR TO FABRICATION.
3. WOOD ROOF TRUSSES TO BE INSTALLED PER MANUFACTURE'S INSTRUCTIONS.
4. WOOD ROOF TRUSSES TO BE BRACED IN ACCORDANCE WITH TPL-BWT LISTED IN IRC R602.10.

OPEN WEB FLOOR TRUSSES:
1. FLOOR TRUSS MANUFACTURER TO SUPPLY SHOP DRAWINGS AND ERECTION DRAWINGS AND MUST BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE GOVERNING JURISDICTION. FLOOR TRUSS MANUFACTURER TO SUPPLY CONNECTION AND BEARING DETAILS, BRIDGING AND BRACING DETAILS WITH NOMINAL DIMENSIONS. TRUSS CONFIGURATIONS, LUMBER GRADE AND SPECIES AND MAGNITUDES OF FORCE IN ALL MEMBERS.
2. BAND BOARD 2 X CONTINUOUS U.N.O.
3. FLOOR TRUSSES SHALL BE DESIGNED TO ACCOMMODATE HVAC DUCT LAYOUT AS INDICATED AN CONVENTIONAL FRAMING AS INDICATED.
4. FLOOR TRUSSES SHALL BE DESIGNED TO LIMIT DEFLECTION TO L/480 LIVE LOAD OR FOR DEAD LOAD OF 16 PSF WHICH EVER IS GRADER EXCEPT IN ROOMS CONSISTING OF DIFFERENT LENGHTS OF WHICH THE DEFLECTION OF THE SHORTEST SPAN SHALL GOVERN.

WOOD "I"-JOISTS:
1. "I"-JOIST MANUFACTURER TO SUPPLY SHOP DRAWINGS AND ERECTION DRAWINGS AND MUST BE SEALED BY A PROFESIONAL ENGINEER REGISTERED IN THE GOVERNING JURISDITION. FLOOR JOIST MANUFACTURER TO SUPPLY CONNCECTION AND BEARING DETAILS, BRIDGING AND BRACING DETAILS, NOMINAL DIMENSIONS AND JOIST LAYOUT CONFIGURATIONS.
2. PROVIDE SOLID MATERIAL, 1 1/4" MINIMUM, AT ALL BAND BOARDS, END CONDITIONS AND RING JOIST AS RECOMMENDED BY THE MANUFACTURER.
3. FLOOR JOISTS SHALL BE DESIGNED TO LIMIT DEFLECTION TO L/480 LIVE LOAD, OR L/720 LIVE LOAD, FOR FLOORS WITH MARBLE, CERAMIC TILE, OR LIMESTONE. FOR SPANS GREATER THAN 14'-0" THE TOTAL LOAD DEFLECTION SHALL NOT EXCEED 7/32" AS SPECIFIED BY THE MARBLE INSTITUTE OF AMERICA.
4. PROVIDE 2 X 4 CRIPPLES @ ALL INTERIOR BEARING CONDITIONS.

DIVISION 22: PLUMBING

1. PLUMBING AND ASSOCIATED COMPONENTS TO BE COORDINATED, PERMITTED, FURNISHED AND INSTALLED BY G.C. PER STATE AND LOCAL CODES AND REGULATIONS.
2. EQUIPMENT TO BE INSTALLED PER MANUFACTURER RECCOMENDATIONS.

DIVISION 7: THERMAL & MOISTURE PROTECTION

DAMP PROOFING:
1. ONE HEAVY COAT OF ASPHALT EMULSION SHALL BE APPLIED TO AL BELOW GRADE WALLS AT BASEMENT CONDITIONS.
2. IN AREAS WHERE A HIGH WATER TABLE OR OTHER SEVERE SOIL-WATER CONDITIONS ARE KNOWN TO EXIST, EXTERIOR FOUNDATION WALLS THAT RETAIN EARTH AND ENCLOSE HABITABLE OR USABLE SPACES LOCATED BELOW GRADE SHALL WATERPROOFED WITH A MEMBRANE TO FINISHED GRADE. THE MEMBRANE SHALL CONSIST OF 2-PLY HOT MOPPED FELTS. THE JOINTS IN THE MEMBRANE SHALL BE LAPPED MEMBRANE (PER IRC R406.1 & R406.2).
3. EXTEND DAMP PROOFING DOWN TO BASE OF FOOTING U.N.O.
4. LAP WALL VAPOR BARRIER OVER DAMP PROOFING.
5. IF CONDITIONS CONTAIN SUNLIGHT EXPOSED DAMP PROOFING BETWEEN GRADE AND EXTERIOR FINISH PROVIDE EITHER PROTECTIVE COATING OR PROTECTION PANELS AS RECOMMENDED BY MANUFACTURER. COORDINATE FINISH WITH ARCHITECT TO BE GREY OR MATCH EXTERIOR FINISH/TRIM.

ROOFING:
1. FIBERGLASS SHINGLES SHALL BE INSTALL OVER 1 LAYER OF 15# ASPALT SATURATED FELT. (MINIMUM CLASS C SHINGLES).

FLASHING:
1. ALL FLASHING TO BE OF THE APPROVED CORROSION- RESISTIVE TYPE AND SHALL BE PROVIDED WHERE EXTERIOR PORCHES, DECKS OR STAIRS ATTACH TO A WALL OR FLOOR ASSEMBLY OR WOOD-FRAMED CONSTRUCTION. FLASH AND CAULK WOOD BEAMS AND OTHER PROJECTIONS THROUGH EXTERIOR WALLS OR ROOF SURFACES.
2. ALL FLASING, COUNTER FLASHING AND COPING WHEN OF METAL SHALL BE OF NOT LESS THAN NO.26 U.S GAUGE APPROVED CORROSION RESISTANT METAL.
3. PROVIDE METAL FLASHING ABOVE ALL WINDOWS, DOORS & CAPITALS.
4. PROVIDE EAVE FLASHING AND DRIP EDGE FLASHING AT THE ROOF EDGES.

ROOF VENTILATION:
1. PROVIDE CONTINOUS RIDGE AND EAVE WITH A TOTAL NET FREE VENTILATING AREA OF NOT LESS THAN 1 TO 150 OF THE AREA OF THE SPACE TO BE VENTILATED. PROVIDE A MINIMUM OF 1" SPACE BETWEEN THE ROOF SHEATING AND INSULATION.
2. ENCLOSED ATTIC TRUSS SPECIES AND ENCLOSED ROOF RAFTERS SHALL HAVE A CROSS VENTILATION FOR EACH SEPERATE SPACE WITH SCREENED VENTILATION OPENINGS PROTECTED AGAINST THE ENTRANCE OF MOISTURE AND RAIN IN ACCORDANCE WITH IRC CODE, LATEST EDITION.

EXTERIOR INSULATION FINISH SYSTEMS:
1. INSTALL R.I.F.S IN STRICT ACCORDANCE TO THE MANUFACTURES SPECIFICATIONS AND INSTALLATION INSTRUCTIONS. IT IS THE RESPONSIBILITY OF THE INTALLATION CONTRACTOR TO INSURE THAT ALL FLASHING IN IN PLACE TO PREVENT THE ENTRY OF WATER OR MOISTURE.

INSULATION:
1. THE FOLLOWING INSULATION SHEDULE WILL BE USED UNLESS OTHERWISE NOTED:

LOCATION	R-VALUE/TYPE
SILL PLATE	1/2" FOAM SILL SEALER
PERIMETER	R-10 CLOSED CELL EXTRUDED POLYSTYRENE
FOUNDATION WALL	R-13 FLAME SPREAD BATT (FULL HEIGHT)
EXTERIOR WALL	R-19 BATT 2X6 (2X4 R-15 BATT)
FLOOR AND SOFFIT	R-30
FLAT CEILING	R-38 BATT OR BLOWN
CATHEDRAL CEILING	R-38 BATT

DIVISION 8: OPENINGS (DOORS & WINDOWS)

WINDOWS:
1. ALL WINDOWS SHALL HAVE INSULATION GLASS.
2. SIZES INDICATED ON PLANS ARE NOMINAL ONLY. BUILDER TO CONSULT WITH WINDOW MANUFACTURER TO DETERMINE EXACT SIZES, ROUGH OPENINGS, ETC.
3. EVERY SLEEPING ROOM SHALL HAVE AT LEAST ONE OPERABLE WINDOW OR EXTERIOR DOOR APPROVED FOR EMERGENCY EGRESS OR RESCUE.
4. WHERE WINDOW ARE PROVIDED AS A MEANS OF EGRESS OR RESCUE THEY SHALL HAVE A SILL HEIGHT OF NOT MONE THAN 44 INCHES ABOVE THE FLOOR.
5. ALL EGRESS OR RESCUE WINDOW FROM SLEEPING ROOMS MUST HAVE A MINIMUM NET CLEAR OPENING OF 5.7 SQUARE FEET. THE MINIMUM NET CLEAR OPENING WIDTH DIMENSION SHALL BE 20 INCHES AND HEIGHT OF 41 INCHES IF 20INCHES WIDTH IS USED.

TEMPERED GLASS LOCATIONS:
THE FOLLOWING SHALL BE CONSIDERED SPECIFIC HAZARDOUS LOCATIONS FOR THE PURPOSES OF GLAZING AND SHALL BE TEMPERED GLASS:
1. GLAZING IN ALL DOORS.
2. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE PANEL ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE IS WITHIN A 24" ARC OF THE DOOR IN A CLOSED POSITION AND WHOSE BOTTOM EDGE IS LESS THAN 60 INCHES ABOVE THE FLOOR OR WALKING SURFACE.
3. GLAZING IN DOORS AND ENCLOSURES FOR HOT TUBS,WHIRLPOOLS, SAUNAS, STEAM ROOMS, BATHTUBS AND SHOWERS, GLAZING IN ANY PART OF A BUILDING WALL ENCLOSING THESE COMPARTMENTS WHERE THE BOTTOM EDGE OF THE GLAZING IS LESS THAN 60 INCHES ABOVE THE DRAIN INLET.
4. GLAZING IN AN INDIVIDUAL FIXED OR OPERABLE WINDOWS THAT MEETS ALL OF THE FOLLOWINGS CONDITIONS:
   A. EXPOSED AREA OF AN INDIVIDUAL PANE GREATER THAN 9S SQ FT.
   B. BOTTOM EDGE LESS THAN 18 INCHES ABOVE THE FLOOR.
   C. TOP EDGE GREATER THAN 36 INCHES ABOVE THE FLOOR.
   D. ONE OR MORE WALKING SUFACES WITHIN 36 INCHES HORIZONTALLY OF THE GLAZING
9. ALL GLAZING IN RAILINGS REGARDLES OF AN AREA OR HEIGHT ABOVE WALKING SURFACE. INCLUDED ARE STRUCTUAL BALUSTER PANELS AND NONSTRUCTURAL IN-FILL PANELS.
10. EXCEPTIONS THE FOLLOWING PRODUCTS, MATERIALS AND USES ARE EXEMPT FROM THE ABOVE HAZARDAOUS LOCATIONS:
   A. OPENINGS IN DOORS THROUGH WHICH A 3-INCH SPHERE IS UNABLE TO PASS.
   B. LEADED GLASS PANELS.
   C. FACETED AND DECORATIVE GLASS.

ATTIC ACCESS:
1. ATTIC ACCESS TO BE INSULATED TYPE.

DIVISION 9: FINISHES

GYPSUM WALLBOARD:
1. ALL GYPSUM WALLBOARD SHALL BE INSTALLED AND FASTENED IN ACCORDANCE WITH THE PROVISIONS OF THE IRC CODE, LATEST EDITION, STATE AND LOCAL CODES.
2. ALL EDGES AND ENDS OF GYPSUM WALLBOARD SHALL OCCUR ON THE FRAMING MEMBERS EXCEPT THOSE EDGES WHICH ARE PERPENDICULAR TO THE FRAMING MEMBERS. ALL EDGES OF GYPSUM WALLBOARD SHALL BE IN MODERATE CONTACT EXCEPT IN CONCEALED SPACES WHERE FIRE RESISTING CONSTRUCTION IS NOT REQUIRED.
3. PROVIDE MOISTURE RESISTANT DRYWALL AT TUBS AND SHOWERS.
4. THE GARGE SHALL BE SEPARATED FROM THE LIVING SPACE BY 5/8" TYPE X GYPSUM WALL BOARD.
5. ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHAL HAVE WALLS AND SOFFITS PROTECTED BY ON THE ENCLOSED SIDE WITH 1/2" DRYWALL.

PAINTING:
1. PAINTING SHAL BE APPLIED ACCORDING THO THE FOLLOWING:

LOCATION	PAINT TYPE	APPLICATION
CEILINGS	LATEX FLAT	1 COAT PRIMER AND 1 FINISH COAT
WALL	LATEX FLAT	1 COAT PRIMER AND 1 FINISH COAT
INTERIOR TRIM	LATEX	1 COAT PRIMER AND 2 FINISH COAT
	SEMI-GLOSS	1 COAT PRIMER AND 2 FINISH COAT
EXTERIOR TRIM	EXTERIOR LATEX	1 SHOP COAT PRIMER AND
	SEMI-GLOSS	2 FINISH COATS

DIVISION 11: EQUIPMENT (COORDINATE WITH OWNER)
DIVISION 12: FURNISHINGS (COORDINATE WITH OWNER)
DIVISION 13: SPECIAL CONSTRUCTION (NOT USED)
DIVISION 14: CONVEYING EQUIPMENT (NOT USED)
DIVISION 21: FIRE SUPPRESSION (NOT USED)

DIVISION 23: HEATING, VENTING, AND AIR CONDITIONING (HVAC)

1. MECHANICAL SUBCONTRACTOR TO REVIEW DUCT LAYOUTS, CONDENSER LOCATION DUCT SIZES, ETC, AS NOTED HEREIN AND NOTIFY ARCHITECT PRIOR TO INSTALLACTION OF ANY CONFLICTS IN THE DESIGN, SIZING OR INSTALLATION OF THE SUSTEM. MECHANICAL SUBCONTRACTOR TO REVIEW STRUCTUAL SHOP DRAWINGS AN NOTIFY THE ARCHITECT OF ANY MECHANICAL AND STRUCTURAL CONFLICTS PRIOR TO CONSTRUCTION.
2. ALL WORK SHALL BE IN FULL ACCORDANCE WITH ALL CODES, RULES, AND REGULATIONS OF THE GOVERNING AGENCIES.
3. ALL KITCHENS AND BATH ROOMS SHALL BE MECHANICALLY VENTED TO THE EXTERIOR.
4. SECURE HVAC EQUIPMENT PER MANUFACTURER RECOMMENDATIONS.

DIVISION 10: SPECIALTIES

FIREPLACES:
1. PREFAB FIREPLACES, SHALL BE U.L. APPROVED AND BE INSTALL PER IRC CODE.
2. EXHAUST TO THE OUTSIDE PER CODE AND MANUFACTURER RECCOMENDATION.

CLOSET SHELVES /TOWELS BARS:
   1R/1S CLOSET SHELVELS @ 68" A.F.F.
   2R/1S CLOSET SHELVES @ 42" & 84" A.F.F
   LOCATE DBL TOWEL BARS @ 38" & 68" A.F.F
   LOCATE SINGLE TOWE BARS @ 38" A.F.F
   SET 18" TOWEL BARS @ 24" ABOVE VANITY TOP

STAIRWAYS:
1. THE MAXIMUM RISER HEIGHT SHALL BE 8 1/4" AND MINIMUM TREAD WIDTH OF 9".
2. STAIRWAYS SHALL NOT BE LESS THAN 36" IN CLEAR WIDTH AND HEADROOM OF NOT LESS THAN 6'-8". THE MINIMUM AT THE HANDRAIL SHALL NOT BE LESS THAN 32" WITH A HAND RAIL ON ONE SIDE AND 28" WITH A HAND RAIL ON BOTH SIDES.
3. ENCLOSED ACCESSIBLE SPACE UNDER STAIRS SHALL HAVE WALLS AND SOFFITS PROTECTED BY ON THE ENCLOSED SIDE WITH 1/2" DRYWALL.
4. HEIGHT OF HADRAIL (R315.1)- TO BE NOT LESS THAN 34" & NOT GREATER THAN 38" IN HEIGHT.
5. HANDRAIL SIZE (R315.2) - TO BE NOT LESS THAN 1 1/4" & NOT GREATER THAN 2" IN DIAMETER.

GUARDRAILS:
1. PORCHES, BALCONIES OR RAISED FLOOR SURFACES LOCATED MORE THAN 30 INCHES ABOVE THE FLOOR OR GRADE BELOW SHALL HAVE GUARDRAILS NOT LESS THAN 36 INCHES IN HEIGHT.
2. OPEN SIZES OF STAIRS WITH A TOTAL RISE OF MORE THAN 30 INCHES ABOVE THE FLOOR OR GRADE BELOW SHALL HAVE GUARDRAISL NOT LESS THAN 34 INCHES IN HEIGHT MEASURED VERTICALLY FROM THE NOSING OF THE TREADS.
3. REQUIRED QUARDRAILS ON OPEN SIDES OF STAIRWAYS, RAISED FLOOR AREAS, BALCONIES AND PORCHES SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL CLOSURES WHICH WILLNOT ALLOW PASSAGE OF A SPHERE 4 INCHES IN DIAMETER.
4. EXCEPTION THE TRIANGULA OPENINGS FORMED BY THE RISER, TREAD AND BOTTOM RAIL OF A GUARD AT THE OPEN SIDE OF A STAIRWAY MAY BE OF SUCH A SIZE THAT A SPHERE 6 INCHES IN DIAMETER CANNOT PASS THROUGH.
5. RAILING TO WITHSTAND FORCE OF 200LB PER LINEAR FOOT IN EACH DIRECTION.

DIVISION 25: INTEGRATED AUTOMATION (NOT USED)
DIVISION 26. ELECTRICAL

1. ALL WORK SHALL BE IN FULL ACCORDANCE WITH ALL CODES, RULES AND REGULATIOS OF GOVERNING AGENCIES AND SHALL COMPLY WITH THE REQUIREMENTS OF THE SERVING POWER AND TELEPHIONE COMPANIES.
2. SMOKE DETECTORS SHALL BE INSTALLED IN EACH SLEEPING ROOM OUT SIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS AND ON EACH ADDITIONAL STORY PER IRC CODE. LATEST EDITION.
3.ALL EQUIPMENT INTALLED OUTDOORS AND ESPOSED TO WEATHER SHALL BE WEATHER-PROOF.
4. RECEPTACLES AT REFRIGERATOR, KITCHEN COUNTERS AND BATHROOM OTHERWISE NOTED ON DRAWINGS.
5. BEDTOOM ELECTRICAL RECEPTACLES EQUIPPED WITH ARC FAULT INTERRUPTERS. (E3802.9)
6. PROVIDE TWO GROUNDING RODS FOR ELECTRICAL SERVICE. THE PLANS AND SPECIFICATIONS ARE NOT INTENDED TO DEPICT EACH AND EVERY CONDITION OR DETAIL OF CONSTRUCTION. AS THE KNOWLEDGEABLE PARTY IN THE FIELD. THE CONTRACTOR IS IN THE BEST POSITION TO VERIFY THAT ALL CONSTRUCTION IS COMPLETED IN A MANNER WHICH WILL PROVIDE A WATERTIGHT STRUCTURE THE CONTRACTOR HAS A SOLE RESPONSIBILITY FOR ENSURING THE WATERTIGHT INTEGRITY OF THE STRUCTURE.

DIVISION 27: COMMUNICATIONS (COORDINATE WITH OWNER)
DIVISION 28: ELECTRONIC SAFETY AND SECURITY (COORDINATE WITH OWNER)
DIVISION 48: ELECTRICAL POWER GENERATION (COORDINATE WITH OWNER)

UNDERPINNING NOTES:

1. UNDERPINNING WORK SHALL BE PERFORMED BY A LICENSED, BONDED AND INSURED SPECIALTY CONTRACTORS HAVING BONDED AND INSURED SPECIALTY CONTRACTORS HAVING EXPERIENCE UNDER SIMILAR SITUATION AND REGULARLY ENGAGED IN THIS TYPE OF WORK.

2. CONTRACTOR SHALL REVIEW THE CONSTRUCTION DOCUMENTS FOR ANY CONFLICTS WITH THE EXISTING FIELD CONDITIONS, RESOLVE SUCH CONFLICTS AND COORDINATE COMPATIBILITY OF NEW WORK WITH THE EXISTING CONDITIONS BEFORE PROCEEDING WITH THE UNDERPINNING WORK. PROTECT ALL EXISTING STRUCTURAL AND ARCHITECTURAL BUILDING ELEMENTS AND UTILITIES/SERVICES FROM DAMAGE DURING UNDERPINNING WORK.

3. FOLLOW STRICTLY THE SEQUENCE OF UNDERPINNING IN THE DIRECTION SPECIFIED ON THE PLAN FOR EACH SEQUENCE GROUP DO NOT MOVE TO THE NEXT SEQUENCE GROUP UNTIL ALL SEGMENTS IN THE SEQUENCE UNDERTAKEN ARE UNDERPINNED.

4. LAYOUT AND MARK NUMBERING OF ALL SEGMENTS ALONG THE EXISTING WALL AS SHOWN ON THE PLAN. NOT EXCEED THE LENGTH OF SEGMENTS SPECIFIED ON THE PLAN. COMPLETE UNDERPINNING OF ALL SEGMENTS MARKED AS A'S FIRST, C'S SECOND, B'S LAST. DO NOT OPEN PITS IN THE OTHER SEQUENCE GROUP UNTIL ALL SEGMENTS IN THE SEQUENCE GROUP UNDERTAKEN HAVE BEEN COMPLETED, CURED AND ABLE TO SUPPORT THE EXISTING WALL AND THE LOAD CARRIED BY IT.

5. EXCAVATE THE SEGMENT TO THE DESIGN DEPTH SPECIFIED ON THE DRAWINGS USING MANUAL TOOLS/METHODS. EXCAVATION FOR SEGMENT BEING UNDERPINNED. IF UNSTABLE, SHALL BE BRACE/SUPPORTED IMMEDIATELY. EXCAVATION SHALL BE LIMITED TO THE SEGMENT UNDERTAKEN. DO NOT EXCAVATE THE ENTIRE BASEMENT IN THE BEGINNING. EXCAVATION OF THE ENTIRE BASEMENT TO THE SPECIFIED DEPTH SHALL BE COMPLETED ONLY AFTER ALL UNDERPINNING WORK IS COMPLETED.

6. LIMIT TO A MAXIMUM OF THREE OPEN PITS IN EACH GROUP ON ANY WALL AT ANY TIME.

7. FOR SEGMENT TOT SEGMENT DOWEL INSTALLATION, DRILL HOLES IN THE EXISTING EARTH ON BOTH SIDES OF FOOTING SEGMENTS UNDER TAKEN IF THE EARTH PRESENT IS ON ONE SIDE OF THE SEGMENTS UNDER TAKEN. PROTECT PART OF THE DOWEL IN DIRT WITH A PLASTIC WRAP WHICH SHALL BE REMOVED PRIOR TO PLACING CONCRETE IN ADJACENT SEGMENT. REPEAT PROCESS FOR WALL SEGMENTS. THOROUGHLY CLEAN CONCRETE SURFACES OF UNDERPINNED FOOTINGS AND WALL SEGMENTS ALREADY COMPLETED AND TO BE IN CONTACT WITH NEW WORK (NEW SEGMENT, DRY PACK, ISOLATION JOINT MATERIALS, ETC.) OF ALL LOOSE MATERIALS AND DIRT FORM. PLACE REINFORCEMENT INCLUDING DOWELS, CONSTRUCTION JOINT KEYS BETWEEN SEGMENTS, RX WATER STOPS AND DOWELS FOR THE SEGMENTS UNDERTAKEN PLACE, VIBRATE AND CONSOLIDATE CONCRETE TO FILL ALL VOIDS. PLACE ENOUGH CONCRETE TO MAKE SURE THAT THE VOID SPACE ON THE ADJOINING NEIGHBOR'S SIDE IS COMPLETELY FILED.

8. DRY PACKING SHALL BE A MINIMUM OF 2 INCHES AND SHALL PROCEED ONLY 48 HOURS MINIMUM AFTER CONCRETE POUR FOR THE SEGMENTS, CONCRETE MUST ACHIEVE 75% OF SPECIFIED 28-DAY DESIGN STRENGTH, ESTABLISHED BY TESTING CONCRETE CYLINDERS AT THREE DAYS OF AGE PRIOR TO REMOVAL OF SHORING/ BRACING SYSTEM FOR THE SEGMENT AND TRANSFERRING WALLS LOADS TO NEW WALL AND FOOTING.

9. FINALLY EXCAVATE THE EXISTING FLOOR SLAB AND EARTH BELOW THE REQUIRED/SPECIFIED DEPTH/ELEVATION. PLACE THE INTERIOR PERIMETER DRAIN PER DETAIL AS SHOWN ON THE DRAWINGS AND CONNECT TO THE SUMP PIT. PREPARE THE SOIL SUB-GRADE THROUGH AT LEAST 95% COMPACTION PER ASTM D698. REPLACE ANY SOFT SOILS WITH COMPACTED APPROVED SOILS OF $57 CRUSHED STONE OR GRAVEL. PLACE SLAB-ON-GRADE PER CONSTRUCTION DETAILS SHOWN ON THE DRAWINGS.

10. INSTALL A CRACK MONITOR GAUGE ON THE FOUNDATION WALL VERTICALLY BELOW 1ST FLOOR FRAMING, AND PLACE A 4 FT LONG CONSTRUCTION LEVEL ON THE 1ST FLOOR PERPENDICULAR TO PARTY WALLS AT THE SPECIFIED LOCATIONS. CONTACT THE ENGINEER IF ANY MOVEMENT AND/OR CRACK HAPPEN.

11. SOIL BEARING CAPACITY SHOULD BE AT LEAST 1500 PSF (ASSUMED). PLEASE VERIFY IN FIELD.

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PROJECT NAME AND ADDRESS

REAR AND SECOND STORY ADDITION
1031 CROSS DRIVE
ALEXANDRIA VIRGINIA 22302

PROJECT #
J21103

SEAL

COMMONWEALTH OF VIRGINIA
GEORGE C. GERBER
Lic. No. 2311
08/20/2021
PROFESSIONAL ENGINEER

REVISION	DATE

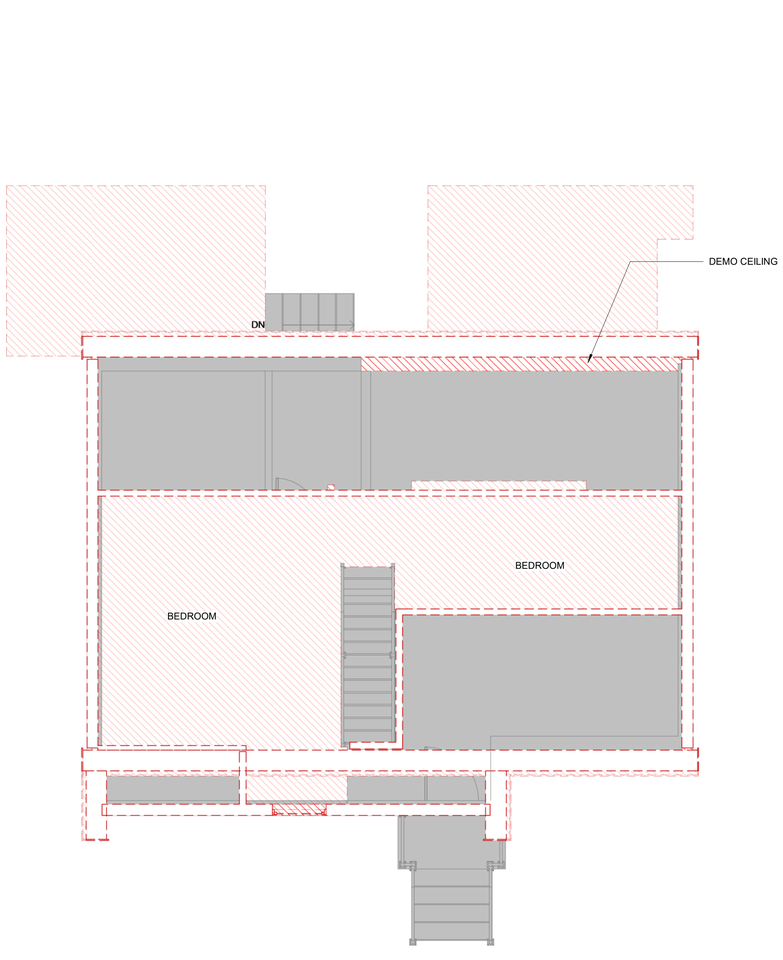
ISSUE DATE
08/20/2021

SHEET TITLE
GENERAL SPECIFICATIONS

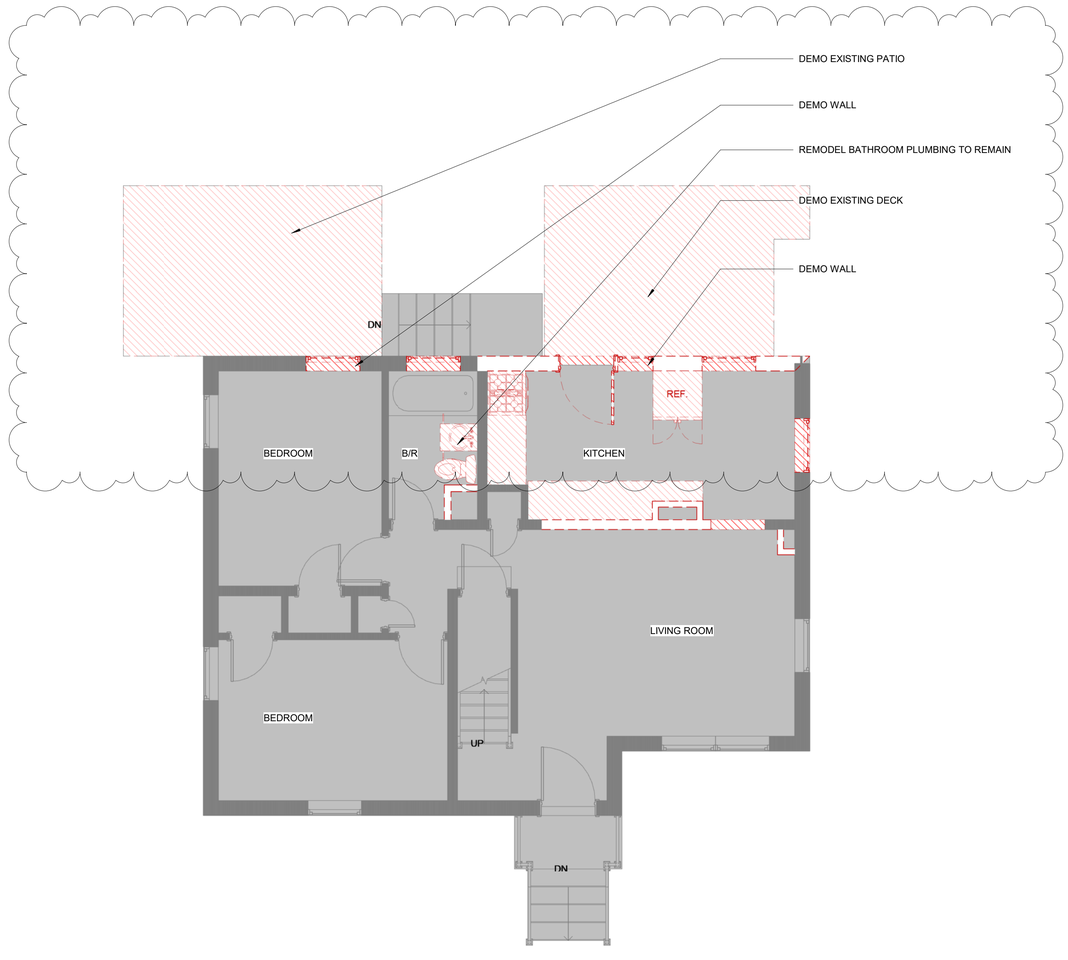
SHEET #
A002

DEMOLITION NOTES

A. COORDINATE ALL DEMOLITION WORK WITH DEMOLITION WORK.
B. PREPARE EXISTING AREAS AS REQUIRED TO RECEIVE NEW WORK.



2 A003 **DEMOLITION - 2ND FL**
1/4" = 1'-0"



1 A003 **DEMOLITION - 1ST FL**
1/4" = 1'-0"

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08/20/2021

REVISION	DATE
Revision 1	Date 1

ISSUE DATE 08/20/2021

SHEET TITLE **DEMOLITION PLAN**

SHEET # **A003**

CONCRETE REINFORCEMENT SCHEDULE BY EQUIVALENT SOIL PRESSURE
SOIL EQUIVALENT LATERAL FLUID PRESSURE 60 PCF (ACTIVE PRESSURE)

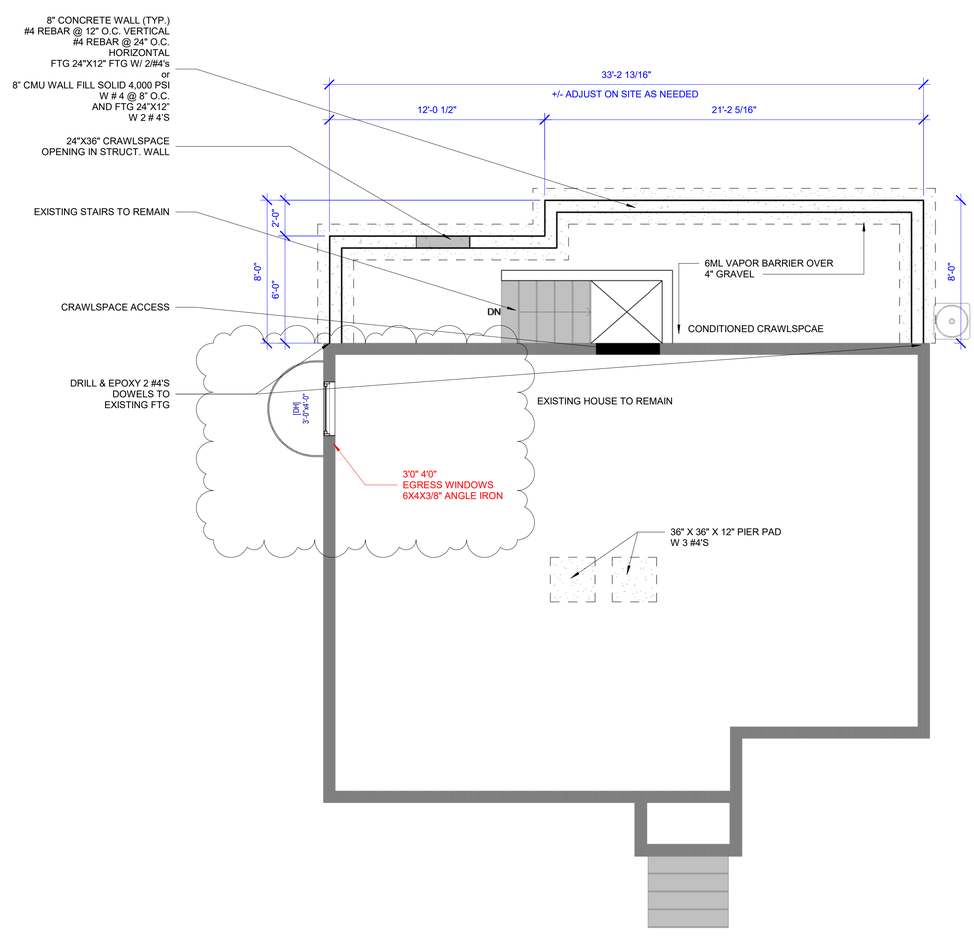
WALL HEIGHT (H)	GRADE HEIGHT (G)	MAXIMUM BRICK LEDGE HEIGHT (L)	MAXIMUM WALL THICKNESS (T)	DISTANCE FROM EARTH SIDE FACE OF WALL TO CL OF BAR (d)	SPACING OF VERTICAL WALL REINF. (#4 BARS)	SPACING OF WALL REINF. (#4 BARS)	SPACING OF STEM REINF. (#4 BARS)	SPACING OF HORIZONTAL REINF. (#4 BARS)
4'	3'	12"	7.5"	5.75"	12" O.C.	12" O.C.	12" O.C.	24" O.C.
4'	3'	24"	7.5"	5.75"	16" O.C.	16" O.C.	8" O.C.	24" O.C.
4'	2' AND LESS	0"	7.5"	5.75"	NONE REQ	NONE REQ	NONE REQ	24" O.C.
4'	2' AND LESS	48"	9.5"	6.75"	16" O.C.	16" O.C.	16" O.C.	24" O.C.

GENERAL FOUNDATION NOTES

A. FOR SI: 1 INCH=25.4 mm, 1 FOOT = 304.8 mm, 1 POUND PER SQUARE FOOT= 0.0479 kPa; 1 POUND PER SQUARE FOOT PER FOOT= 0.157 kPa/mm
B. SOIL CLASSES ARE IN ACCORDANCE WITH THE UNIFIED SOIL CLASSIFICATION SYSTEM. REFER TO TABLE R405.1 IN THE IRC 2015.
C. UNBALANCED BACKFILL HEIGHT IS THE DIFFERENCE IN HEIGHT OF THE EXTERIOR AND INTERIOR FINISH GROUND LEVELS. WHERE THERE IS AN INTERIOR CONCRETE SLAB , THE UNBALANCED BACKFILL HEIGHT SHALL BE MEASURED FROM THE EXTERIOR FINISH GROUND LEVEL TO THE TOP OF THE INTERIOR CONCRETE SLAB.
D. THE SIZE AND SPACING OF VERTICAL REINFORCEMENT SHOWN IN THE TABLE IS BASED ON THE USE OF REINFORCEMENT WITH A MINIMUM YIELD STRENGTH OF 60,000 PSI. VERTICAL REINFORCEMENT WITH A MINIMUM YIELD STRENGTH OF 40,000 PSI OR 50,000 PSI IS PERMITTED, PROVIDED THE SAME SIZE BAR IS USED AND THE SPACING SHOWN IN THE TABLE IS REDUCE BY MULTIPLYING THE SPACING BY 0.67 OR 0.83, RESPECTIVELY.
E. VERTICAL REINFORCEMENT, WHEN REQUIRED, SHALL BE PLACED NEAREST THE INSIDE FACE OF THE WALL A DISTANCE d FROM THE OUTSIDE FACE (SOIL SIDE) OF THE WALL THE DISTANCE d IS EQUAL TO THE WALL THICKNESS, t, MINUS 1.25 INCHES PLUS ONE-HALF THE BAR DIAMETER, db (d=t-(1 25+db/2)). THE REINFORCEMENT SHALL BE PLACED WITHIN AA TOLERANCE OF +/- 3 8 INCH WHERE d IS LESS THAN OR EQUAL TO 8 INCHES, OR +/- 1 2 INCH WHERE d IS GREATER THAN 8 INCHES.
F. CONCRETE COVER FOR REINFORCEMENT MEASURED FROM THE INSIDE FACE OF THE WALL SHALL NO BE LESS THAN 3 4 INCH. CONCRETE COVER FOR REINFORCEMENT MEASURED FROM THE OUTSIDE FACE OF THE WALL SHALL NOT BE LESS THAN 1-1/2 INCHES FOR NO. 5 BARS AND SMALLER AND NOT LESS THAN 2 INCHES FOR LARGER BARS.
G. ALL FOOTINGS TO BE 2'-6" MINIMUM BELOW GRADE FROST DEPTH.
H. THE MINIMUM THICKNESS IS PERMITTED TO BE REDUCED 2 INCHES, PROVIDED THE MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE f'c, IS 4,000 PSI.
I. "PC" MEANS PLAN CONCRETE.
J. WHERE VERTICAL REINFORCEMENT IS REQUIRED, HORIZONTAL REINFORCEMENT SHAL BE PROVIDED @ 24" O.C
K. ALL CONCRETE SHALL BE 3,000 PSI (AT 28 DAYS) AIR ENTRAINED, U.N.O REF FOUNDATION DRAWINGS FOR REINFORCEMENT.
L. MORTAR SHALL BE TYPE "S" FOR ALL BELOW GRADE APPLICATIONS.
M. BACKFILL WALLS IN EQUAL LIFTS, DO NOT BACKFILL WALLS UNTIL BASEMENT SLAB IS POURED AND 1ST FLOOR DECK IS INSTALLED AND FULLY SHEATHED.
N. ALL WATERPROOFNG AND DRAINAGE INSTALLED PER MANUF. AND CODE RECOOMENDATION.

MINIMUM 30" FROST DEPTH

NOTE: REFFER TO WIND BRACING & DETAILS FOR WIND BRACING AND REQUIRED COMPONENTS (HOLD DOWNS ETC.)



1 / A010 **FOUNDATION PLAN**
1/4" = 1'-0"

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PROJECT NAME AND ADDRESS
REAR AND SECOND STORY ADDITION
1031 CROSS DRIVE
ALEXANDRIA VIRGINIA 22302

PROJECT # J21103

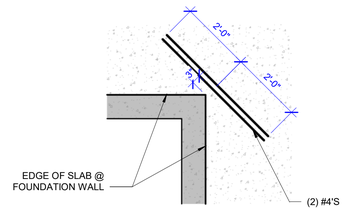
SEAL
COMMONWEALTH OF VIRGINIA
GEORGE C. GERBER
Lic. No. 2311
PROFESSIONAL ENGINEER
08/20/2021

REVISION	DATE
Revision 1	Date 1

ISSUE DATE 08/20/2021

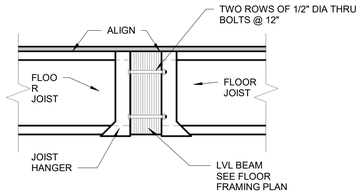
SHEET TITLE **FOUNDATION PLAN**

SHEET # **A010**



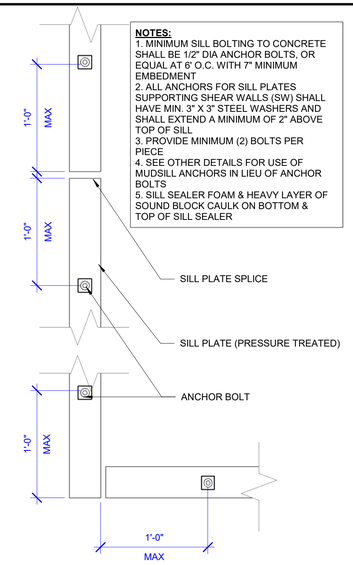
6 SLAB CORNER REINFORCEMENT

A011 — 1/2" = 1'-0"



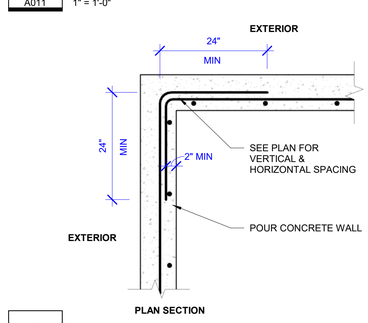
5 JOIST @ FLUSH LVL BEAM

A011 — 1" = 1'-0"



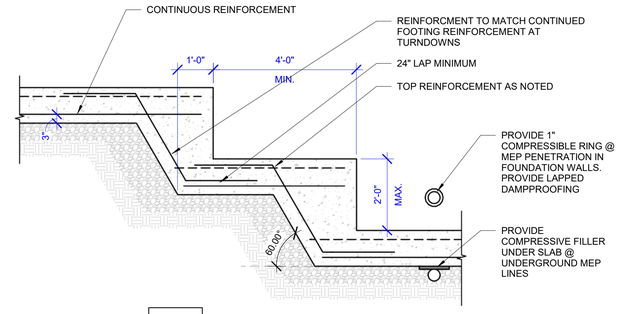
3 SILLPLATE ANCHORAGE TYP.

A011 — 1 1/2" = 1'-0"



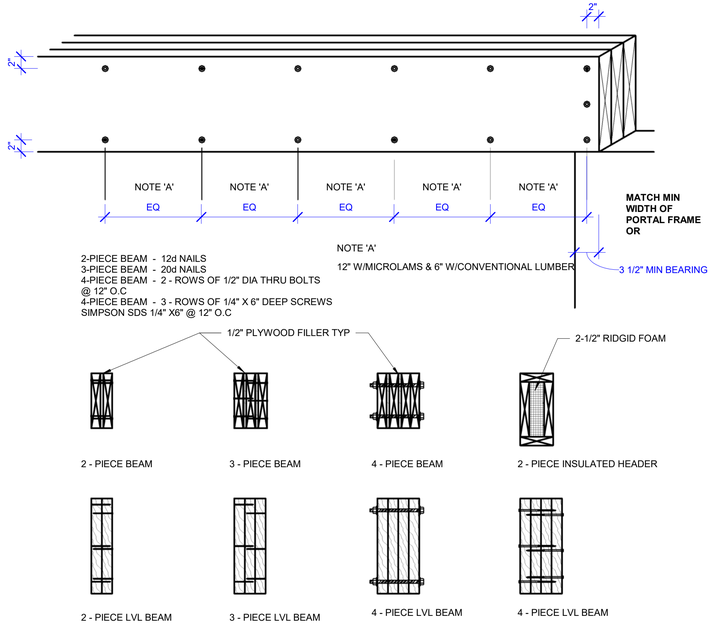
4 CORNER REINFORCEMENT

A011 — 3/4" = 1'-0"



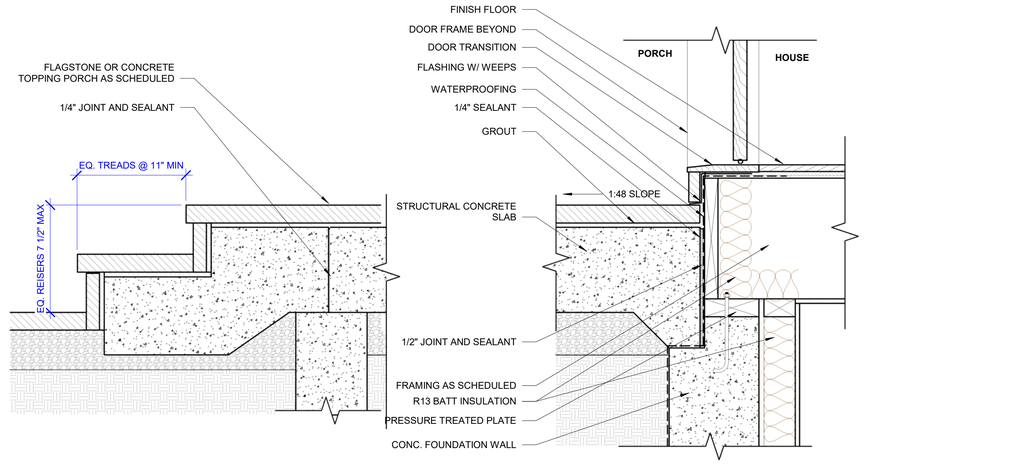
2 STEP FOOTING (TYP.)

A011 — 1/2" = 1'-0"



7 MULTI MEMBER WOOD BEAM

A011 — 1" = 1'-0"



1 DETAIL - FRONT PORCH

A011 — 1 1/2" = 1'-0"

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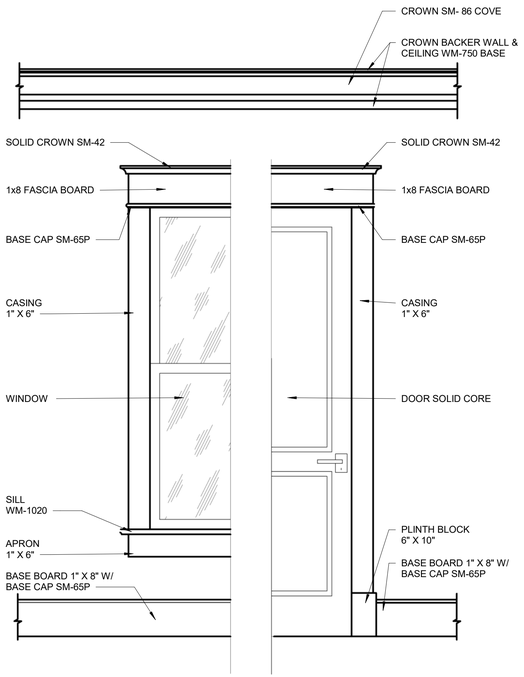
SHEET TITLE

DETAILS - FOUNDATION & STRUCTURE

SHEET # A011



3 A020 **DOOR & WINDOW TRIM**
NTS

SCHEDULE - WINDOWS

FLOOR	TYPE	COUNT	WINDOW WIDTH	WINDOW HEIGHT	HEAD HEIGHT FROM LEVEL	MANUFACTURER
BASEMENT FLOOR	DH	1	3'-0"	4'-0"	6'-8"	TBD
FIRST FLOOR	DH	2	3'-0"	4'-0"	7'-0"	TBD
FIRST FLOOR	DH	1	3'-0"	5'-0"	6'-8"	TBD
SECOND FLOOR	DH	1	3'-0"	2'-0"	6'-8"	TBD
SECOND FLOOR	DH	3	3'-0"	4'-0"	6'-8"	TBD
SECOND FLOOR	DH	4	3'-0"	5'-0"		TBD

SCHEDULE - DOORS

FLOOR	DOOR TYPE	COUNT	WIDTH	HEIGHT	MANUFACTURER
FIRST FLOOR	A	1	2'-4"	6'-8"	TBD
FIRST FLOOR	CC	1	6'-0"	6'-8"	TBD
FIRST FLOOR	CO	1	3'-0"	7'-0"	
FIRST FLOOR	CO	1	12'-0"	7'-0"	
SECOND FLOOR	A	5	2'-6"	6'-8"	TBD
SECOND FLOOR	PP	3	4'-0"	6'-8"	
SECOND FLOOR	SP	1	2'-6"	7'-0"	

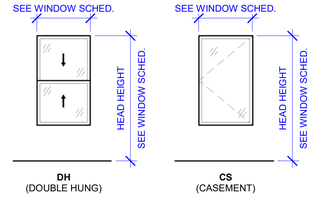
DOORS AND FRAME NOTES

A. SEE FLOOR PLANS FOR DOOR SWINGS.
B. DOORS HIGHER THAN 7' TO HAVE MORTESE HARDWARE.
C. PROVIDE 20MINUTE RATED DOORS FROM GARAGE TO INTERIOR. PROVIDE SELF-CLOSING HINGES.
D. DO NOT PAINT ALUMNIUM,GLASS OR VINYL DOORS/FRAMES U.N.O.
E. FRAMES TO NOT HAVE EXPOSED FASTENERS
F. DOORS TO OPERATE SMOOTHLY OVER FINISHED FLOOR. UNDERCUT TO BE 1/4" MAXIMUM UNLESS NOTED OTHERWISE (VERIFY W/ MECHANICAL REQUIREMENTS)
G. PAINTED OR STAINED DOORS ARE TO BE FINISHED ON ALL SIDES INCLUDING TOP AND BOTTOM. SMOOTH/SAND ALL SIDES PRIOR TO FINISHING.
H. PROVIDE PRIVACY FUNCTION ON RESTROOMS, ENTRY FUNCTION ON EXTERIOR DOORS. COORDINATE OTHER FUNCTION WITH OWNER AND GENERAL INDUSTRY ACCEPTED ROOM TYPE STANDARDS.
I. PROVIDE SEALANT AT FRAME EDGES AT WALLS, FLOORS AND HEAD PRIOR TO FINISHING.
J. PROVIDE HINGE PIN DOOR STOPS, FINISH TO MATCH HINGES. PROVIDE 2 PER DOOR FOR DOORS OVER 7' TALL.
K. DOOR CORES NOT TO HAVE UREA-FORMALDEHYDES.
L. PROVIDE STONE FLOOR TRANSITION BETWEEN TILE AND OTHER FINISHES 1/4" MAX A.F.F. FROM TILE.
M. PROVIDE STAINLESS STEEL HINGES AT EXTERIOR DOORS.
N. PROVIDE 3 HINGES PER DOORS 7' TALL OR LESS. PROVIDE 4 HINGES PER DOOR OVER 7' TALL.
O. COORDINATE ROUGH OPENING WITH MANUFACTURER REQUIREMENTS.
P. PROVIDE TEMPERED INSULATING GLASS ON ALL EXTERIOR DOORS WITH GLAZING.
Q. DOOR GLAZING TINT TO MATCH WINDOWS.

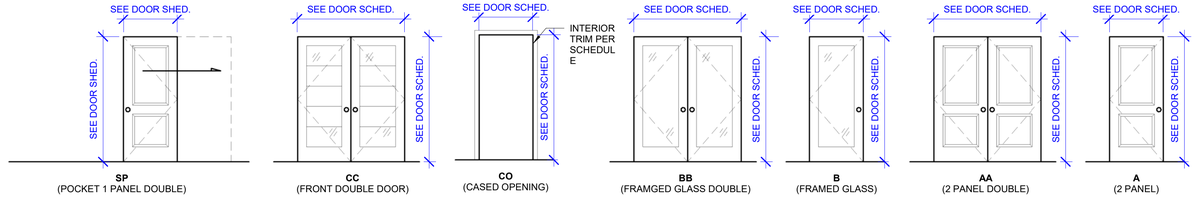
WINDOWS AND FRAME NOTES

A. SEE ELEVATIONS FOR WINDOW SWINGS.
B. PROVIDE INSECT SCREENS ON OPERABLE WINDOWS
C. EXTERIOR GLAZING TO BE INSULATED GLASS, LOW E TO MEET MINIMUM ENERGY CODE REQUIREMENTS FOR INSULATION U VALUE AND SHGC.
D. PROVIDE SEALANT AT FRAME EDGES AT WALLS, FLOORS AND HEAD PRIOR TO FINISHING.

ABBREVIATIONS:
SC - SOLID CORE
HC - HOLLOW CORE
GL - GLASS



2 A020 **WINDOW TYPES**
1/4" = 1'-0"



1 A020 **DOOR TYPES**
1/4" = 1'-0"

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SHEET TITLE
DOOR AND WINDOW SCHEDULES

SHEET # A020

GENERAL NOTES

A. ALL EXTERIOR FRAMED WALLS TO BE 2X6 STUDS @ 16" O.C U.N.O.
B. ALL BEARING INTERIOR WALLS 2 X 6 @ 16" O.C. UNO
C. ALL INTERIOR FRAMED WALLS TO BE 2X4 STUDS @ 16" O.C U.N.O.
D. ALL BEARING WALLS TO BE 16" O.C AND DBL TOP PLATES U.N.O.
E. ALL INTERIOR FRAMED WALLS W/ CASE OR POCKET DOORS TO BE 2X6 STUDS U.N.O.
F. ALL FOUNDATION WALLS TO SIZED PER STRUCTURAL PLANS.
G. ALL LUMBER EXPOSED TO THE ELEMENTS TO BE PRESSURE TREATED.
H. ALL DIMENSIONS ARE TO ROUGH STUDS U.N.O.
I. NOTIFY ARCHITECT OF ANY DISCREPANCIES WITH PLANS & SITE CONDITIONS PRIOR TO PROCEEDING WITH ANY WORK.
J. ALL EXTERIOR DOOR AND WINDOW ARE SHOWN ARE GENERIC AND MUST BE COORDINATED BY THE GENERAL CONTRACTOR AND MANUFACTURE SPECIFICATIONS.
K. ALL 2X FRAME WALLS ADJACENT TO CONC. WALLS TO HAVE PT. SILLS PLATES AND ARE TO BE SET 1/2" OFF OF CONC WALL.
L. ALL RAILING TO BE INSTALLED PER IRC SECTION R311.5.6
M. EXTERIOR HOSE BIBS (HB) ARE TO BE FROST PROOF
N. U.N.O. HEAD HEIGHT FOR ALL EXTERIOR WINDOWS 8'0" @ 1ST FLOOR & 2ND FLOOR AND 6'8" IN BASEMENT
O. FOR ROUGH OPENINGS REFER TO DOOR WINDOW MANUFACTURER SPECS
P. ALL 1ST FLOOR INTERIOR DOORS 8' TALL, BASEMENT AND 2ND FLOOR ARE 6'8" TALL.
Q. UNO, FOLLOW MANUFACTURER'S GUIDELINES FOR TEMPERED GLASS IN WINDOWS
R. ALL FINISHED AREAS OF BASEMENT TO RECEIVE R-15 BATT INSULATION IN EXTERIOR WALLS
S. UNFINISHED AREAS TO RECEIVE FOIL FACED R-15 BATTS
T. WATER PROOF WALLS MIN 6" ABOVE GRADE UNO, PARGE WALLS MIN 12" BELOW GRADE, TYP

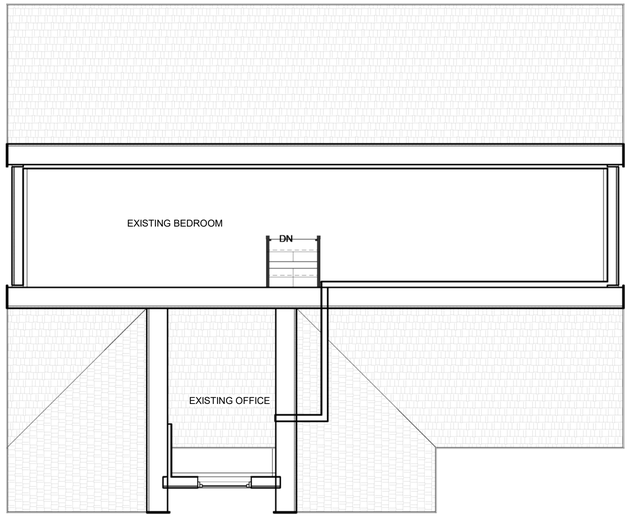
ENERGY CONSERVATION AND REQUIRED INSULATION VALUES PER IRC

ELEMENT	R-VALUE	U-VALUE	SHGC
WINDOWS/DOORS		0.30	0.35
CEILING	R-38		
WALLS (2X6 WOOD)	R-19		
WALLS (CONCRETE)	R-13		
FLOORS	R-19		
CANTILEVER FLORS*	R-30		

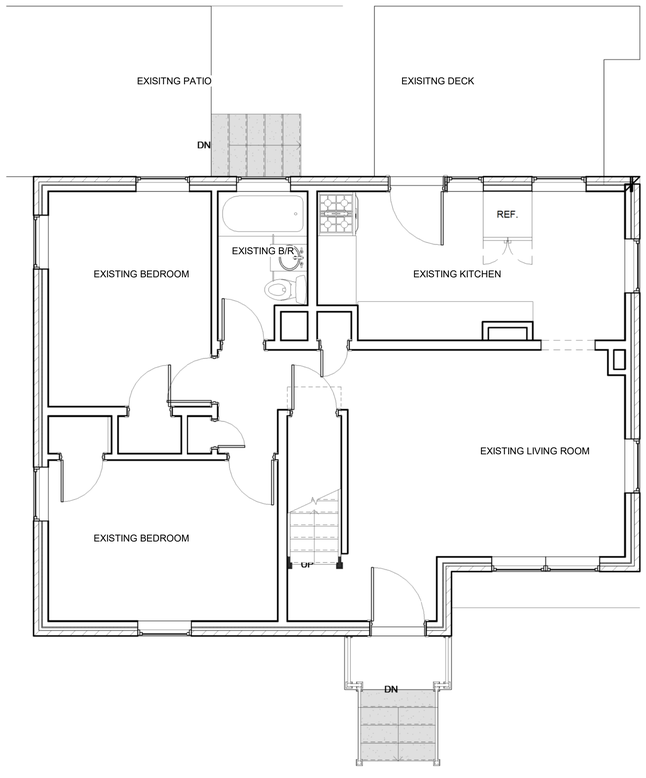
*TO EXTERIOR & UNCONDITIONED SPACE, SPRAY FOAM CLOSED CELL FOAM

LEGEND

(T) 'T' INDICATES TEMPERED GLASS IN DOOR OR WINDOW.



2 A100 **SECOND FLOOR PLAN EXISTING**
1/4" = 1'-0"



1 A100 **FIRST FLOOR PLAN EXISTING**
1/4" = 1'-0"

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PROJECT NAME AND ADDRESS
REAR AND SECOND STORY ADDITION
1031 CROSS DRIVE
ALEXANDRIA VIRGINIA 22302

PROJECT # J21103

SEAL
COMMONWEALTH OF VIRGINIA
GEORGE C. GERBER
Lic. No. 2311
PROFESSIONAL ENGINEER
08/20/2021

REVISION	DATE

ISSUE DATE 08/20/2021

SHEET TITLE **EXISTING PLANS**

SHEET # **A100**

GENERAL NOTES

A. ALL EXTERIOR FRAMED WALLS TO BE 2X6 STUDS @ 16" O.C U.N.O.
B. ALL BEARING INTERIOR WALLS 2 X 6 @ 16" O.C. UNO
C. ALL INTERIOR FRAMED WALLS TO BE 2X4 STUDS @ 16" O.C U.N.O.
D. ALL BEARING WALLS TO BE 16" O.C AND DBL TOP PLATES U.N.O.
E. ALL INTERIOR FRAMED WALLS W/ CASE OR POCKET DOORS TO BE 2X6 STUDS U.N.O.
F. ALL FOUNDATION WALLS TO SIZED PER STRUCTURAL PLANS.
G. ALL LUMBER EXPOSED TO THE ELEMENTS TO BE PRESSURE TREATED.
H. ALL DIMENSIONS ARE TO ROUGH STUDS U.N.O.
I. NOTIFY ARCHITECT OF ANY DISCREPANCIES WITH PLANS & SITE CONDITIONS PRIOR TO PROCEEDING WITH ANY WORK.
J. ALL EXTERIOR DOOR AND WINDOW ARE SHOWN ARE GENERIC AND MUST BE COORDINATED BY THE GENERAL CONTRACTOR AND MANUFACTURE SPECIFICATIONS.
K. ALL 2X FRAME WALLS ADJACENT TO CONC. WALLS TO HAVE PT. SILLS PLATES AND ARE TO BE SET 1/2" OFF OF CONC WALL.
L. ALL RAILING TO BE INSTALLED PER IRC SECTION R311.5.6
M. EXTERIOR HOSE BIBS (HB) ARE TO BE FROST PROOF
N. U.N.O. HEAD HEIGHT FOR ALL EXTERIOR WINDOWS 8'0" @ 1ST FLOOR & 2ND FLOOR AND 6'8" IN BASEMENT
O. FOR ROUGH OPENINGS REFER TO DOOR WINDOW MANUFACTURER SPECS
P. ALL 1ST FLOOR INTERIOR DOORS 8' TALL, BASEMENT AND 2ND FLOOR ARE 6'8" TALL.
Q. UNO, FOLLOW MANUFACTURER'S GUIDELINES FOR TEMPERED GLASS IN WINDOWS
R. ALL FINISHED AREAS OF BASEMENT TO RECEIVE R-15 BATT INSULATION IN EXTERIOR WALLS
S. UNFINISHED AREAS TO RECEIVE FOIL FACED R-15 BATTS
T. WATER PROOF WALLS MIN 6" ABOVE GRADE UNO, PARGE WALLS MIN 12" BELOW GRADE, TYP

GARAGE NOTES

A. (1) LAYER OF 5/8" RATED GWB ALL WALLS AND STRUCTURAL ELEMENTS & (1) LAYER OF 5/8" RATED GWB @ CEILING
B. PROVIDE RATED WALLS AND CEILINGS TO ADJACENT LIVING SPACES

ENERGY CONSERVATION AND REQUIRED INSULATION VALUES PER IRC

ELEMENT	R-VALUE	U-VALUE	SHGC
WINDOWS/DOORS		0.30	0.35
CEILING	R-38		
WALLS (2X6 WOOD)	R-19		
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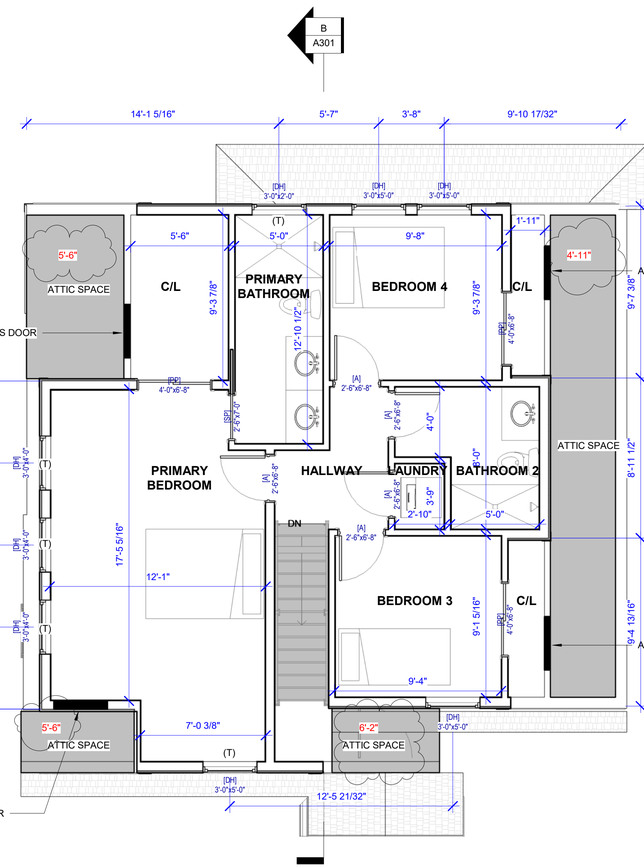
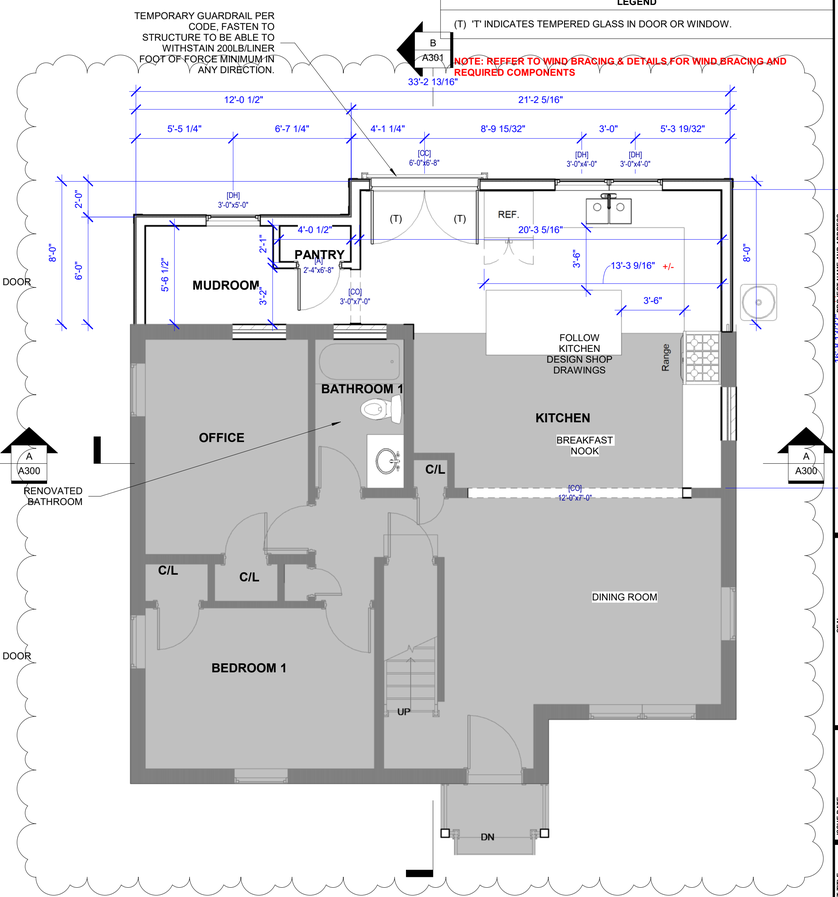
(T) 'T' INDICATES TEMPERED GLASS IN DOOR OR WINDOW.



2 A101 **SECOND FLOOR PLAN PROPOSED**
1/4" = 1'-0"



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1/4" = 1'-0"

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SHEET TITLE
FIRST FLOOR AND SECOND FLOOR PLAN

SHEET #
A101

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B. ALL BEARING INTERIOR WALLS 2 X 6 @ 16" O.C. UNO
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D. ALL BEARING WALLS TO BE 16" O.C AND DBL TOP PLATES U.N.O.
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R. ALL FINISHED AREAS OF BASEMENT TO RECEIVE R-15 BATT INSULATION IN EXTERIOR WALLS
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T. WATER PROOF WALLS MIN 6" ABOVE GRADE UNO, PARGE WALLS MIN 12" BELOW GRADE, TYP

GARAGE NOTES

A. (1) LAYER OF 5/8" RATED GWB ALL WALLS AND STRUCTURAL ELEMENTS & (1) LAYER OF 5/8" RATED GWB @ CEILING
B. PROVIDE RATED WALLS AND CEILINGS TO ADJACENT LIVING SPACES

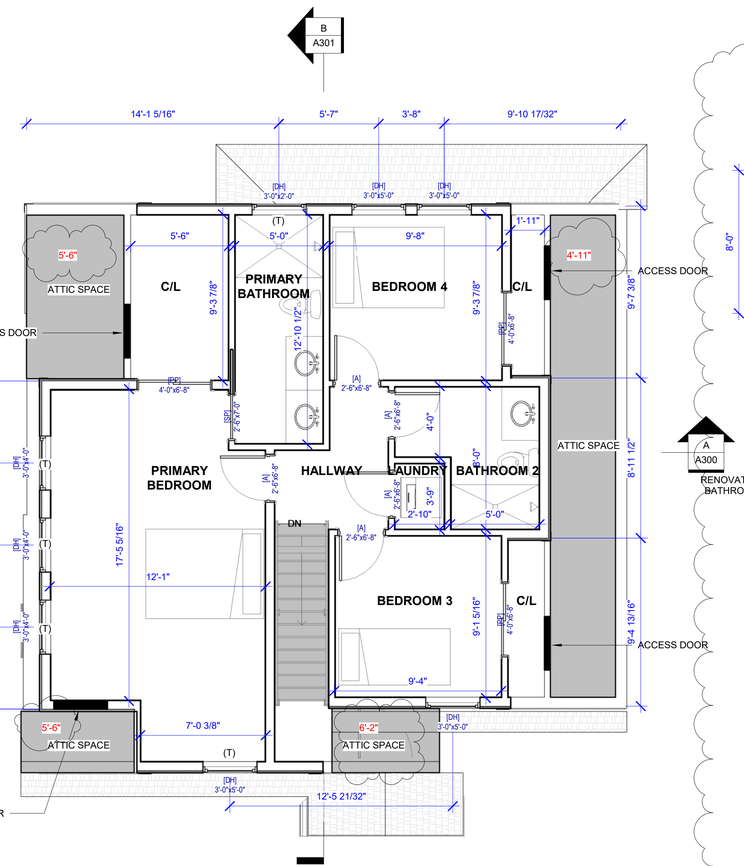
ENERGY CONSERVATION AND REQUIRED INSULATION VALUES PER IRC

ELEMENT	R-VALUE	U-VALUE	SHGC
WINDOWS/DOORS		0.30	0.35
CEILING	R-38		
WALLS (2X6 WOOD)	R-19		
WALLS (CONCRETE)	R-13		
FLOORS	R-19		
CANTILEVER FLORS*	R-30		

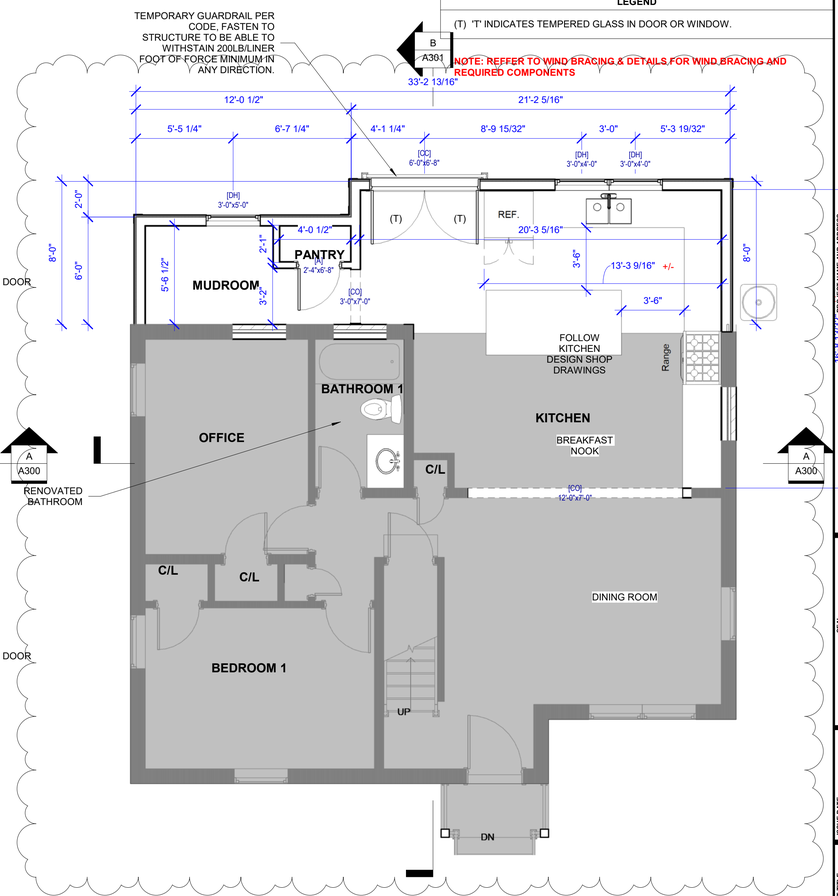
*TO EXTERIOR & UNCONDITIONED SPACE, SPRAY FOAM CLOSED CELL FOAM

LEGEND

(T) 'T' INDICATES TEMPERED GLASS IN DOOR OR WINDOW.



2 A101 SECOND FLOOR PLAN PROPOSED
1/4" = 1'-0"



1 A101 FIRST FLOOR PLAN PROPOSED
1/4" = 1'-0"

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PROJECT #: J21103

PROJECT NAME AND ADDRESS:
REAR AND SECOND STORY ADDITION
1031 CROSS DRIVE
ALEXANDRIA VIRGINIA 22302

SEAL:
COMMONWEALTH OF VIRGINIA
GEORGE C. GERBER
Lic. No. 2311
PROFESSIONAL ENGINEER
08/20/2021

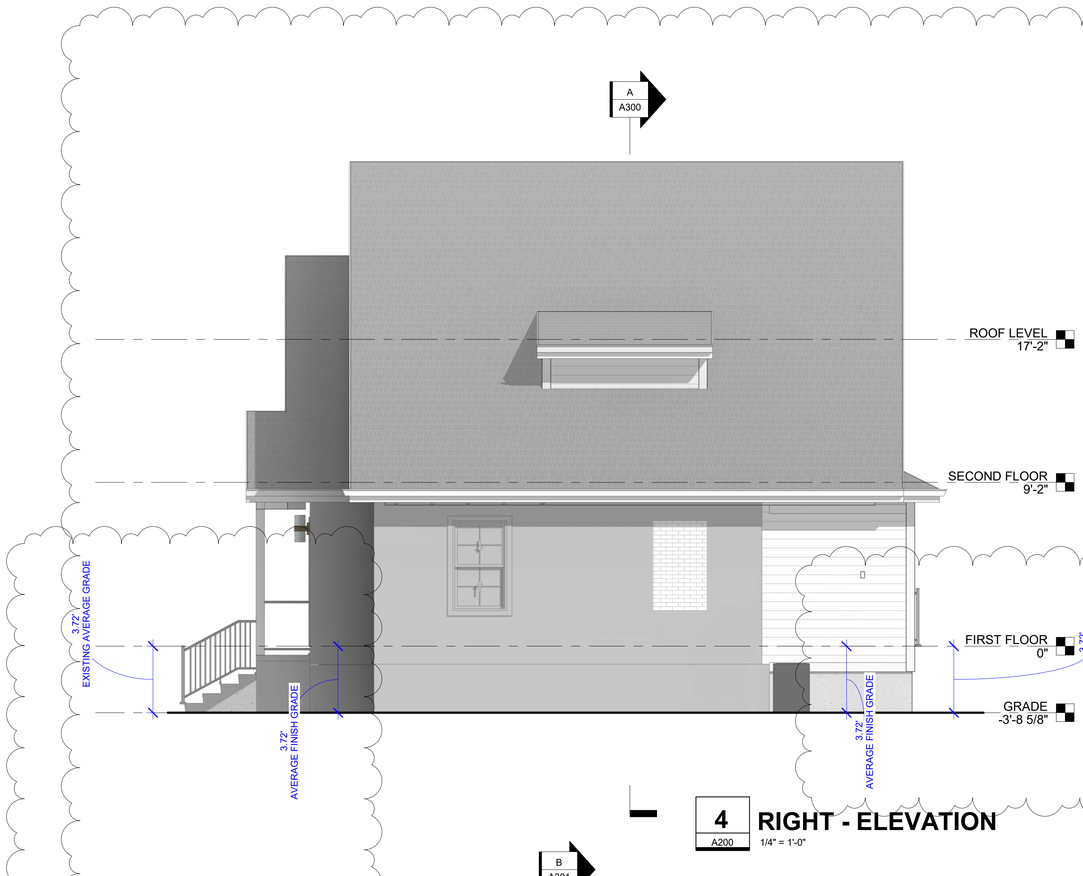
ISSUE DATE:

REVISION	DATE
Revision 1	Date 1

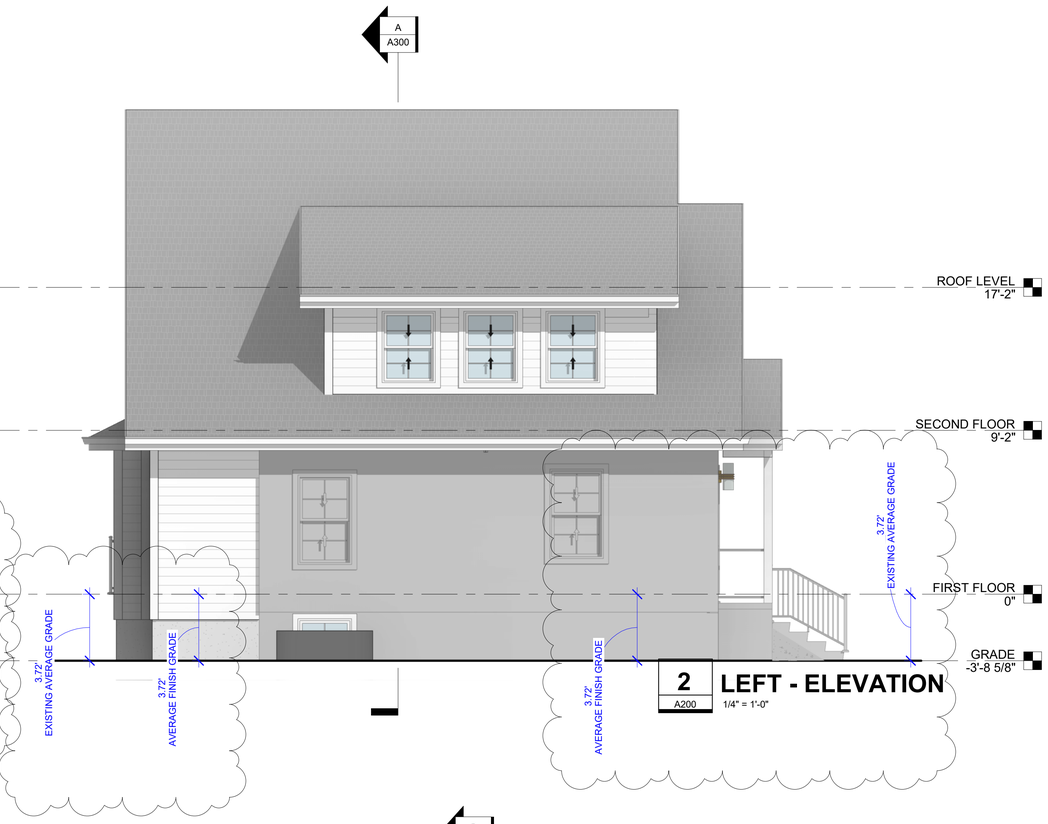
08/20/2021

SHEET TITLE:
FIRST FLOOR AND SECOND FLOOR PLAN

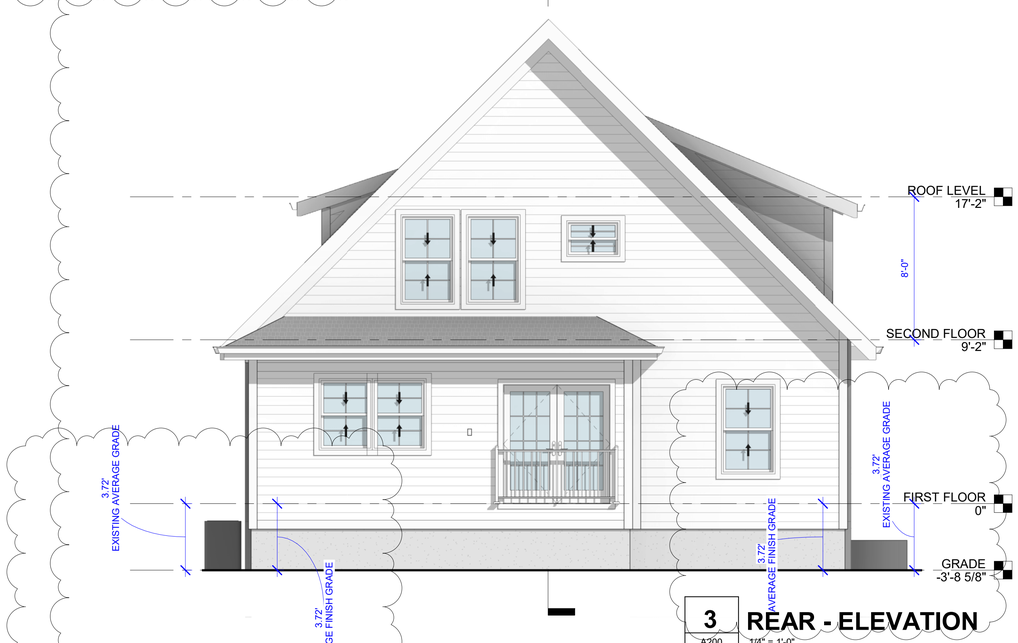
SHEET #:
A101



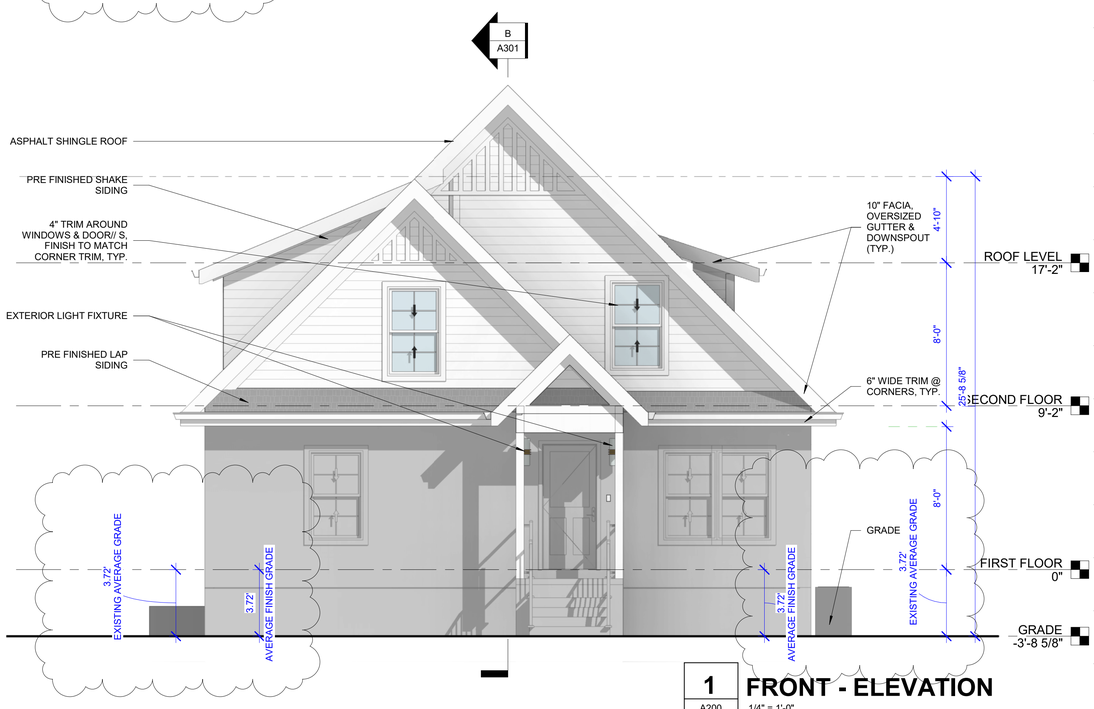
4 A200 **RIGHT - ELEVATION**
1/4" = 1'-0"



2 A200 **LEFT - ELEVATION**
1/4" = 1'-0"



3 A200 **REAR - ELEVATION**
1/4" = 1'-0"



1 A200 **FRONT - ELEVATION**
1/4" = 1'-0"

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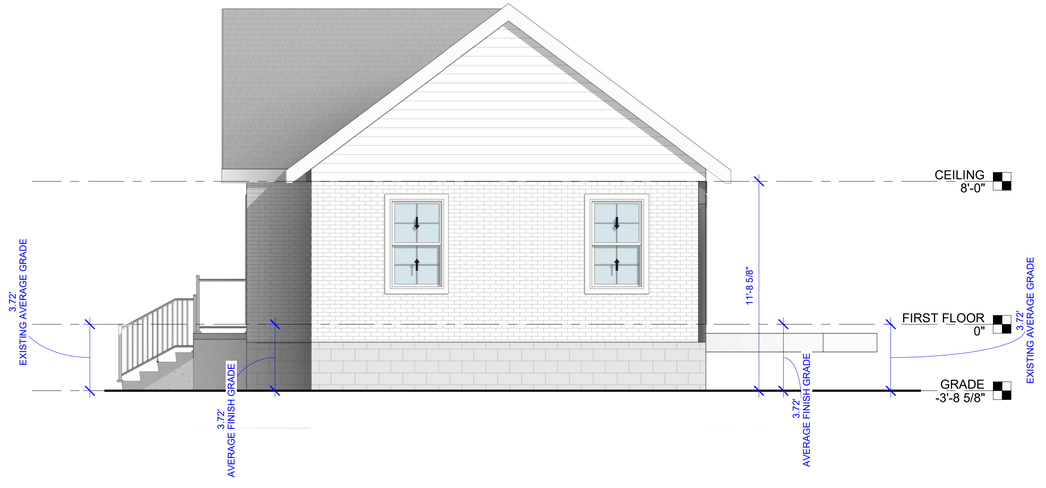
SHEET TITLE **FRONT, LEFT, RIGHT AND REAR ELEVATIONS**

SHEET # **A200**

1/4/2022 11:05:06 AM



1 A201 **RIGHT EXISTING - ELEVATION**

1/4" = 1'-0"

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REVISION	DATE

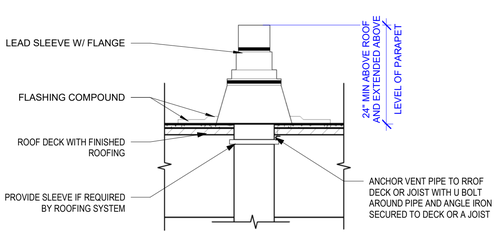
08/20/2021

SHEET TITLE

EXISTING ELEVATION

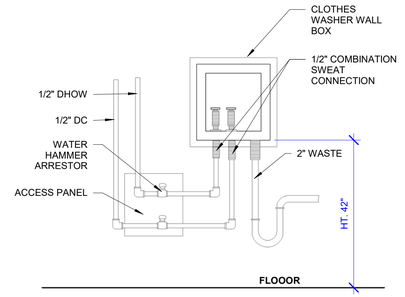
SHEET #

A201

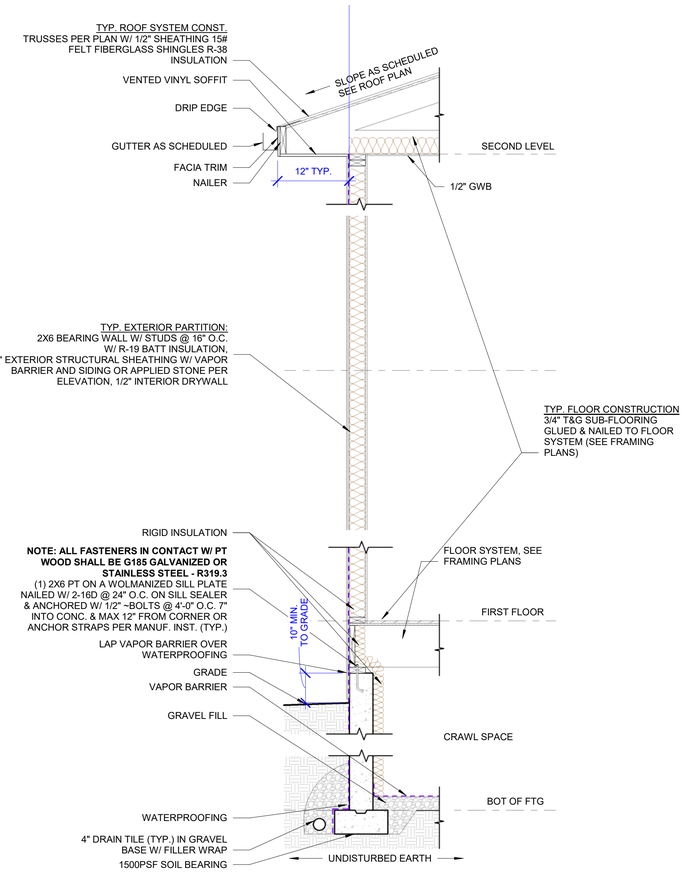


REFER TO PALNS FOR VENT TO ROOF (VTR) PIPE SIZES AND LOCATIONS, LOCATE VTR MINIMUM 10' HORIZONTAL OR 3' VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE, AND 1' FROM ANY VERTICAL SURFACE. PROVIDE 1" FIBERGLASS INSULATION WITH ALL SERVICE JACKET ON VENT PIPE INSIDE BUILDING WITHIN 6' OF THRU VENT ROOF LOCATION. FLASHING AND COUNTER FLASHING ARE TO BE COMPATIBLE WITH THE ROOFING SYSTEM

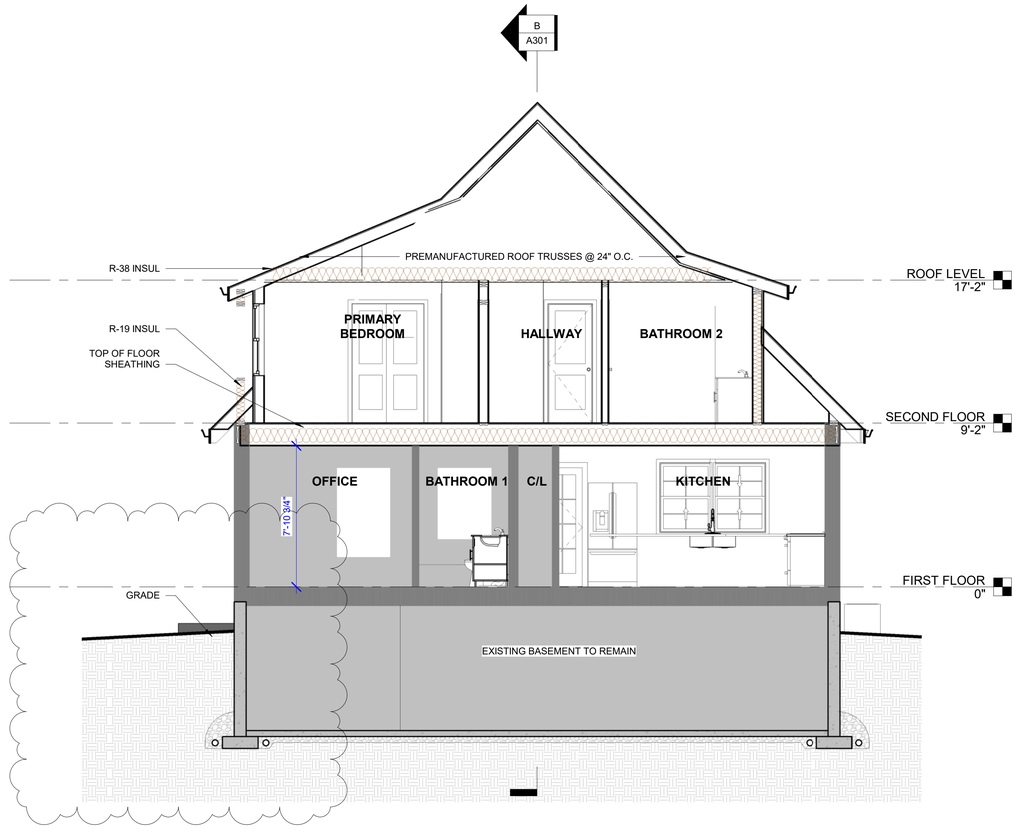
4 A300 **DETAIL - VENT THROUGH ROOF**
NTS



3 A300 **DETAIL - WASHER UTILITY BOX**
NTS



1 A300 **WALL SECTION - CRAWL SPACE**
1/2" = 1'-0"



A A300 **BUILDING SECTION AA**
1/4" = 1'-0"

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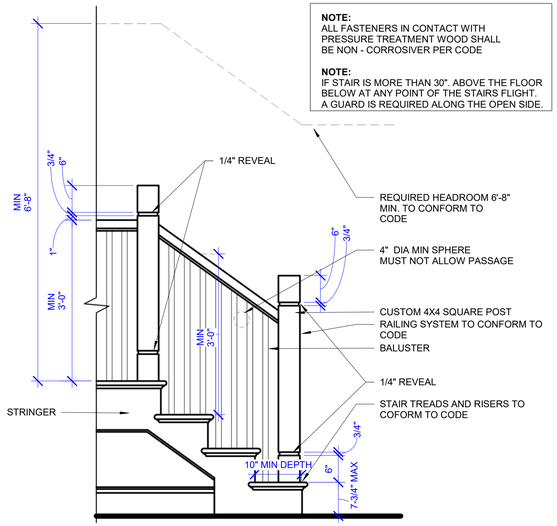
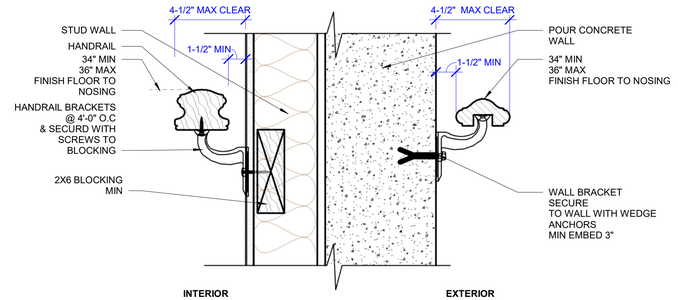
SHEET TITLE
BUILDING SECTIONS, WALL SECTION & DETAILS

SHEET # **A300**

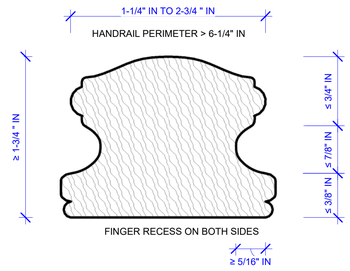
1/4/2022 11:05:07 AM



5 A301 — **STAIR GUARD REQUIREMENTS**
3/4" = 1'-0"

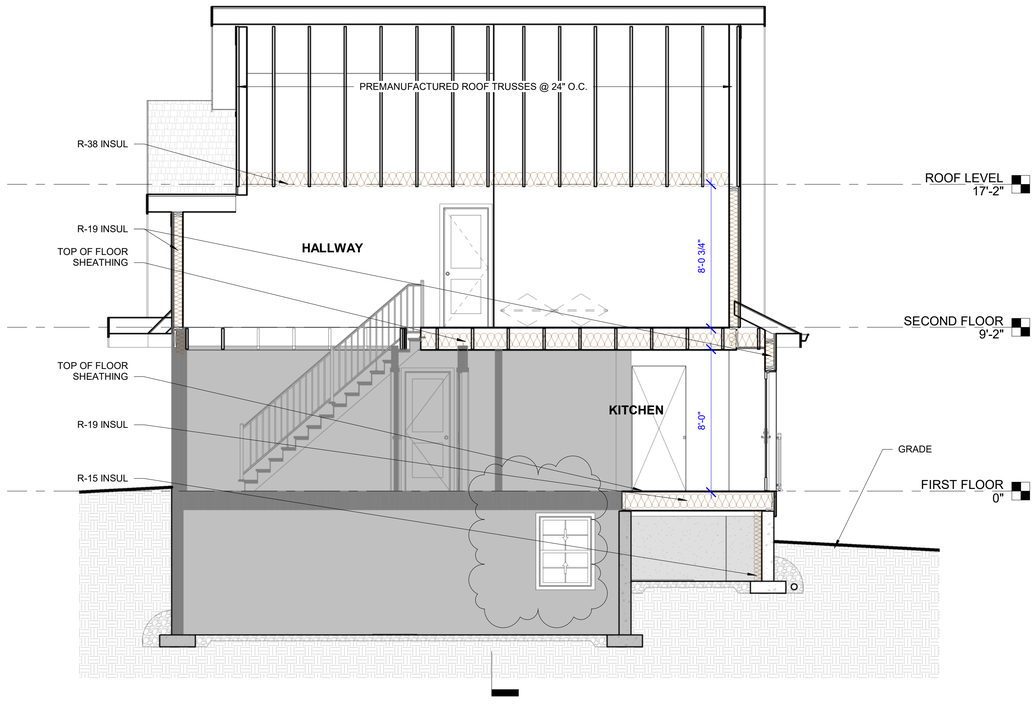


4 A301 — **DETAIL - HANDRAIL (TYP.)**
3" = 1'-0"



3 A301 — **HAND RAIL PROFILE (TYP.)**
NTS

A300



B A301 — **BUILDING SECTION BB**
1/4" = 1'-0"

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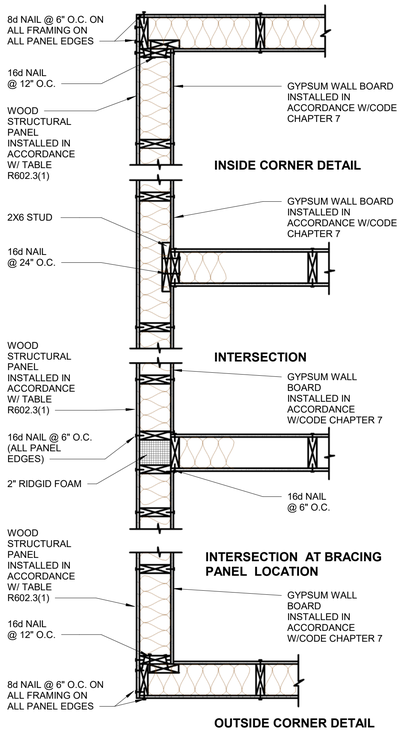
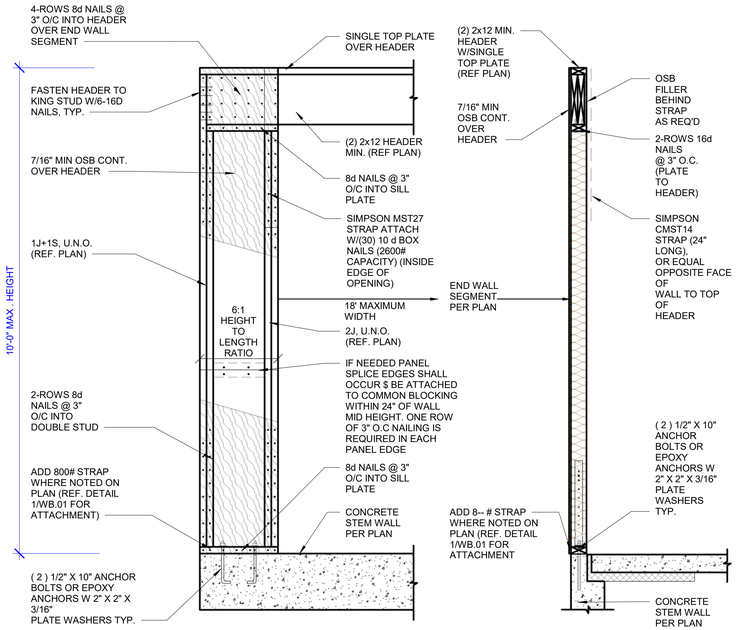
SHEET TITLE
BUILDING SECTIONS & DETAILS

SHEET # **A301**

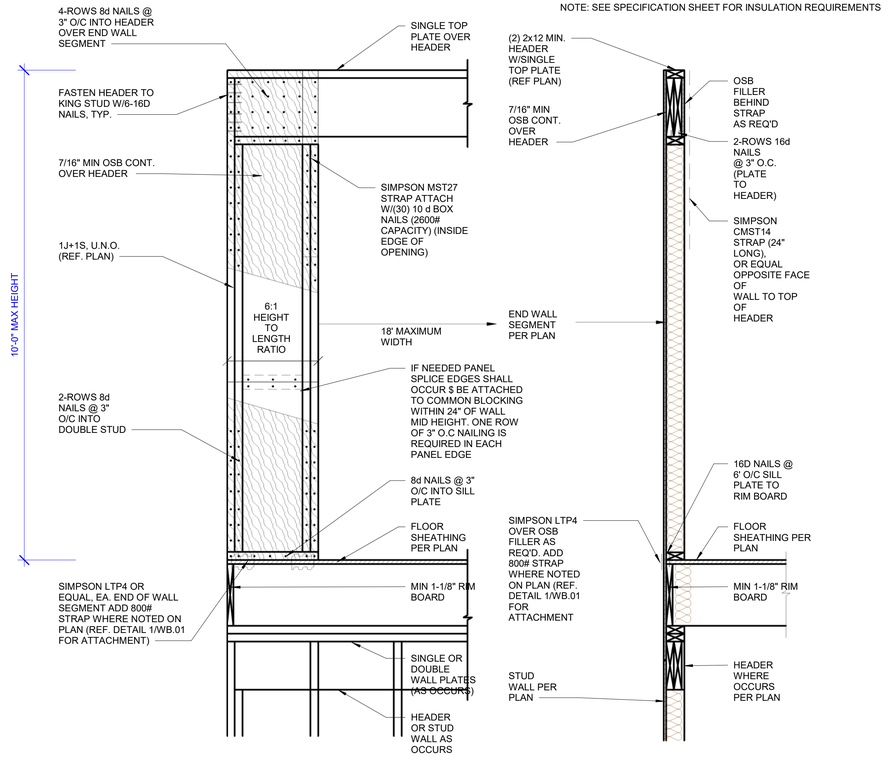




PORTAL FRAME - SLAB

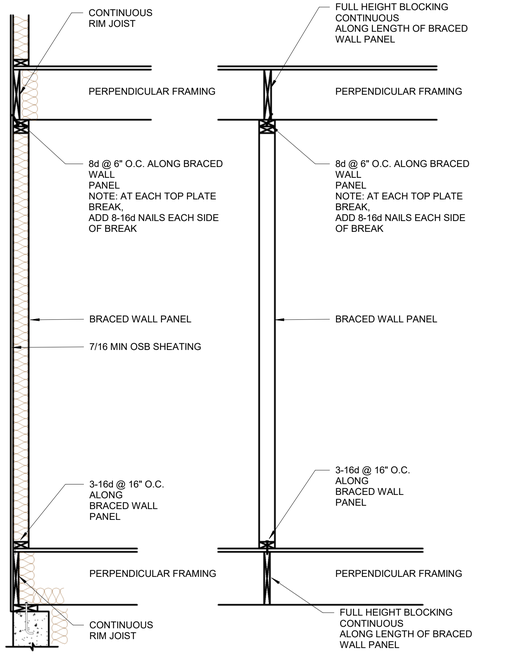
BRACING METHOD - (CS-PF)

NOTE: SEE SPECIFICATION SHEET FOR INSULATION REQUIREMENTS

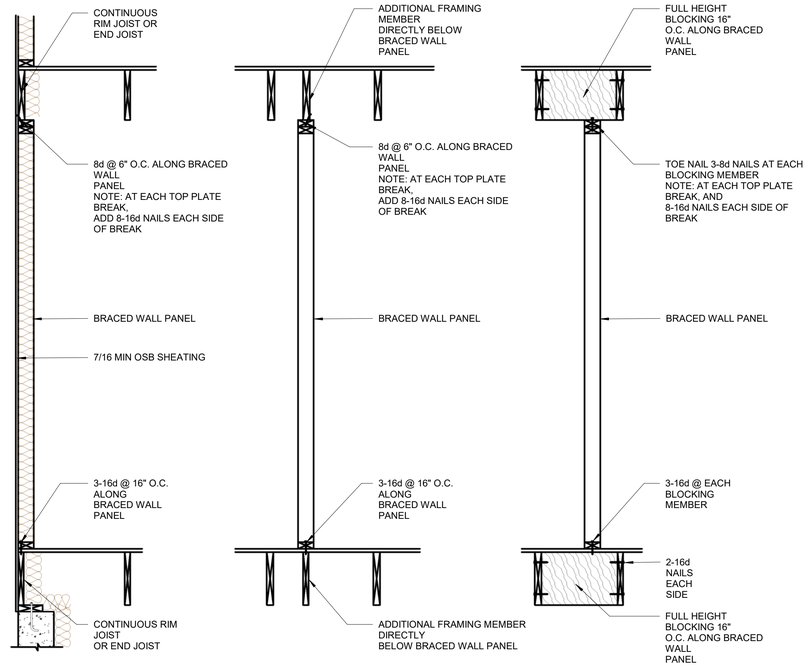


PORTAL FRAME - RAISED FLOOR

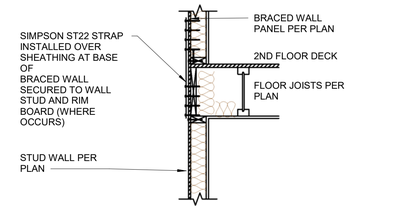
BRACING METHOD - (CS-PF)



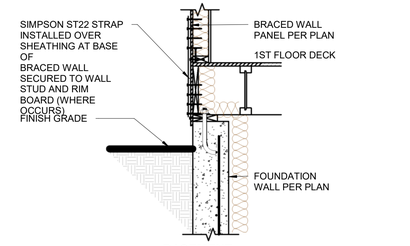
BRACED WALL PANEL CONNECTION WHEN PERPENDICULAR TO FLOOR & CEILING FRAMING



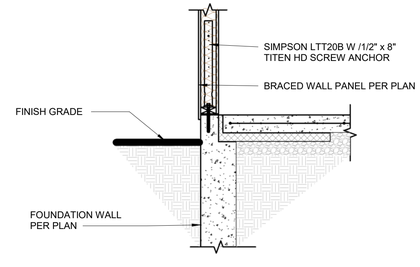
BRACED WALL PANEL CONECTION WHEN PARALLEL TO FLOOR/CEILING FRAMING



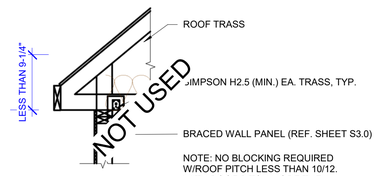
2ND FLOOR/LOFT



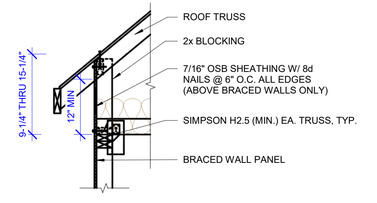
BASEMENT



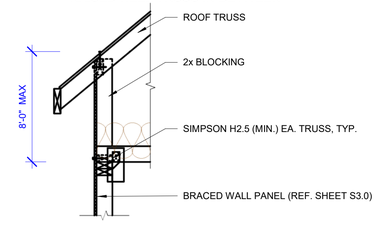
SLAB ON GRADE



STANDARD HEEL TRUSS



RAISED HEEL TRUSS IN BETWEEN



RAISED HEEL TRUSS

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SEAL

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SHEET TITLE

TYP. WALL SECTIONS AND DETAILS

SHEET # A400

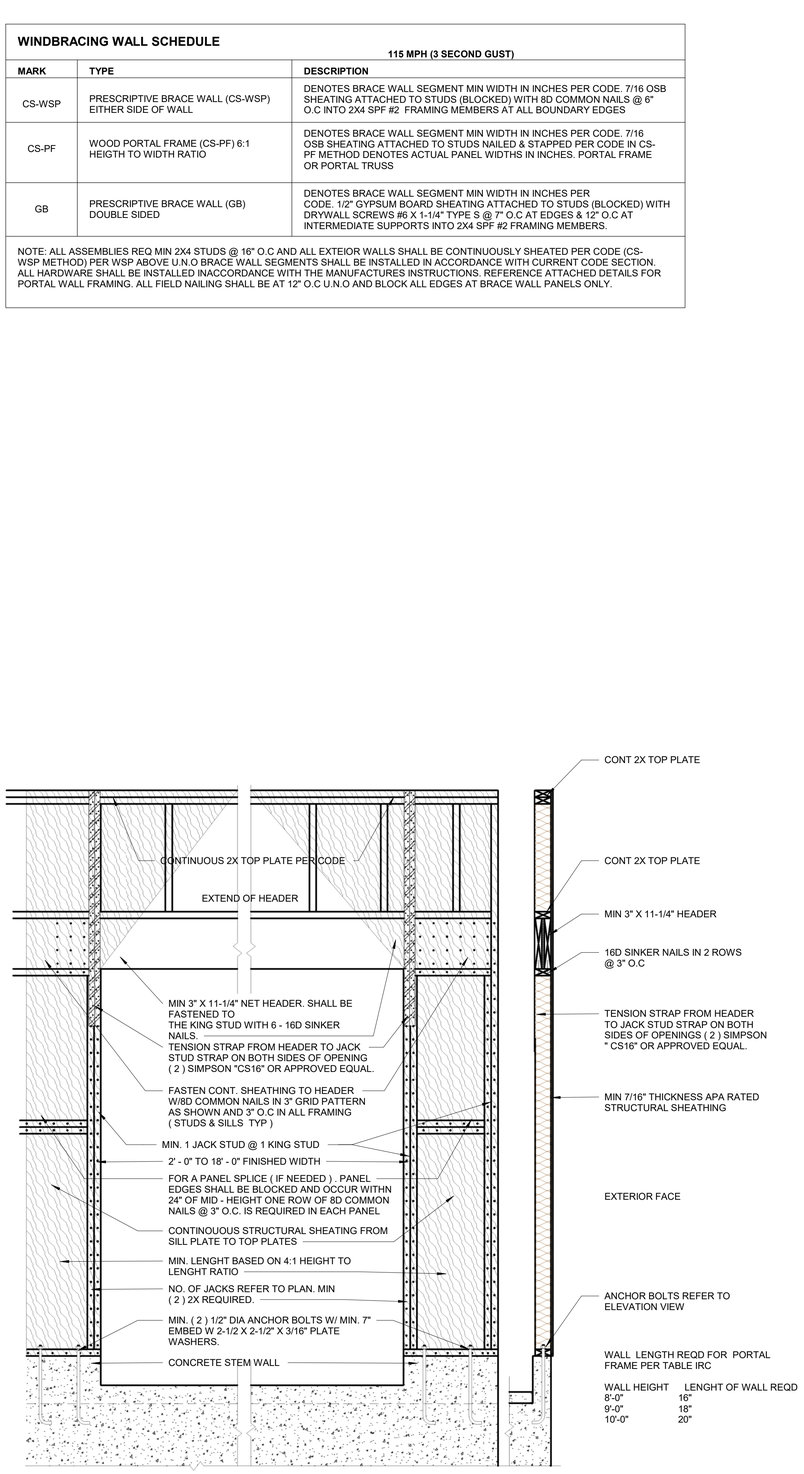
1/4/2022 11:05:11 AM

WINDBRACING WALL SCHEDULE

115 MPH (3 SECOND GUST)

MARK	TYPE	DESCRIPTION
CS-WSP	PRESCRIPTIVE BRACE WALL (CS-WSP) EITHER SIDE OF WALL	DENOTES BRACE WALL SEGMENT MIN WIDTH IN INCHES PER CODE. 7/16 OSB SHEATING ATTACHED TO STUDS (BLOCKED) WITH 8D COMMON NAILS @ 6" O.C INTO 2X4 SPF #2 FRAMING MEMBERS AT ALL BOUNDARY EDGES
CS-PF	WOOD PORTAL FRAME (CS-PF) 6:1 HEIGTH TO WIDTH RATIO	DENOTES BRACE WALL SEGMENT MIN WIDTH IN INCHES PER CODE. 7/16 OSB SHEATING ATTACHED TO STUDS NAILED & STAPPED PER CODE IN CS-PF METHOD DENOTES ACTUAL PANEL WIDTHS IN INCHES. PORTAL FRAME OR PORTAL TRUSS
GB	PRESCRIPTIVE BRACE WALL (GB) DOUBLE SIDED	DENOTES BRACE WALL SEGMENT MIN WIDTH IN INCHES PER CODE. 1/2" GYPSUM BOARD SHEATING ATTACHED TO STUDS (BLOCKED) WITH DRYWALL SCREWS #6 X 1-1/4" TYPE S @ 7" O.C AT EDGES & 12" O.C AT INTERMEDIATE SUPPORTS INTO 2X4 SPF #2 FRAMING MEMBERS.

NOTE: ALL ASSEMBLIES REQ MIN 2X4 STUDS @ 16" O.C AND ALL EXTEIOR WALLS SHALL BE CONTINUOUSLY SHEATED PER CODE (CS-WSP METHOD) PER WSP ABOVE U.N.O BRACE WALL SEGMENTS SHALL BE INSTALLED IN ACCORDANCE WITH CURRENT CODE SECTION. ALL HARDWARE SHALL BE INSTALLED INACCORDANCE WITH THE MANUFACTURES INSTRUCTIONS. REFERENCE ATTACHED DETAILS FOR PORTAL WALL FRAMING. ALL FIELD NAILING SHALL BE AT 12" O.C U.N.O AND BLOCK ALL EDGES AT BRACE WALL PANELS ONLY.



3 / A410 **PORTAL FRAME @ GARAGE**

3/4" = 1'-0"

NOTE: SEE SPECIFICATION SHEET FOR INSULATION REQUIREMENTS

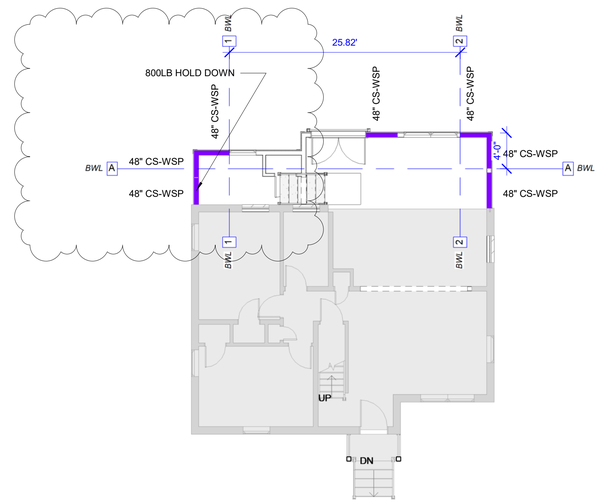
Classic Wall Bracing Worksheet

per 2015 Virginia Residential Code Section R602.10

Ultimate Wind Speed (mph)		115																													
BWL Designation		1		2		A																									
No. of Floors above BWL		1		1		1																									
BWP Method		CS-WSP		CS-WSP		CS-WSP																									
Average BWL Spacing (ft)		25.52		25.52		4																									
Tabular Requirement (ft)		7.88		7.88		3.50																									
Adjustments	Exposure	B	1.00	B	1.00	B	1.00																								
	Eave-to-Ridge Ht. (ft)	18.00	1.24	18.00	1.24	18.00	1.24																								
	Max. Wall Ht. (ft)	8.00	0.90	8.00	0.90	8.00	0.90																								
	No. of BWLs	2	1.00	2	1.00	2	1.00																								
	Omit Interior Finish?	No	1.00	No	1.00	No	1.00																								
	Added Hold-downs?	No	1.00	No	1.00	No	1.00																								
	Joints Blocked?	Yes	1.00	Yes	1.00	Yes	1.00																								
	Fasteners @ 4" o.c.?	Yes	0.83	Yes	0.83	No	1.00																								
Required BWP Length (ft)		7.30		7.30		3.91																									
Actual BWPs	BWP	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length	Method	Length
	Contributing Length (ft) 1	CS-PF	4.00	CS-WSP	4.00	CS-WSP	4.00																								
	Contributing Length (ft) 2	CS-PF	4.00	CS-WSP	4.00	CS-WSP	4.00																								
	Contributing Length (ft) 3					CS-WSP	4.00																								
	Contributing Length (ft) 4																														
	Contributing Length (ft) 5																														
	Contributing Length (ft) 6																														
	Contributing Length (ft) 7																														
	WSP=actual SFB=actual GB(sw)=0.5xactual GB(b)=actual CS-PF=1.5xactual PFG=1.5xactual PFH=F ABW=F																														
Actual BWP Length (ft)		8.00		8.00		12.00																									
Actual ≥ Required?		PASS		PASS		PASS																									
BWPs ≤ 20' Apart?		Yes		Yes		Yes																									
≥ 2 Panels in BWL?		Yes		Yes		Yes																									
BWP 10' from Ends?		Yes		Yes		Yes																									
Continuous Sheathing		End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2	End 1	End 2
End Conditions		1	1	1	1	2	1	2	1																						
BWL Compliance		PASS		PASS		PASS																									

FIRST FLOOR
WIND BRACING CALCULATION SHEET

HORIZONTAL BLOCKING REQUIRED AT ALL BRACED WALL PANELS
REDUCED FASTNER SPACING TO 4" AT ALL BRACED WALL PANELS
BRACED WALL LINES 1 AND 2
HEADERS ARE TO EXTEND TO PORTAL FRAMING IN LENGTH



1 / A410 **WIND BRACING - FIRST FLOOR**

1/8" = 1'-0"

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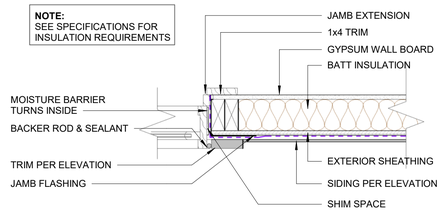
ISSUE DATE 08/20/2021

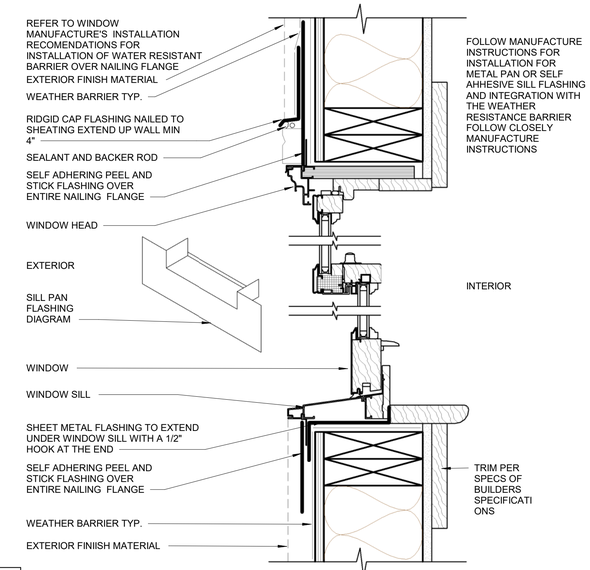
SHEET TITLE **WIND BRACING & DETAILS**

SHEET # **A410**



4 A420 — **DETAIL - DOOR & WINDOW JAMB (TYP.)**

1 1/2" = 1'-0"



1 A420 — **DETAIL - WINDOW HEAD & SILL (TYP.)**

3" = 1'-0"

FLASHING GENERAL NOTES

THE DETAILS ON THIS PAGE ARE IN NO WAY INTENDED TO REPRESENT A COMPLETE LIST OF THE LOCATIONS IN A BUILDING THAT REQUIRE FLASHING. THESE DETAILS ARE INTENDED TO HELP TO CLARIFY SOME OF THE STANDARD SITUATIONS THAT ARE COMMON IN RESIDENTIAL CONSTRUCTION. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR ALL OF THE FLASHING CONDITIONS AND THE PREVENTION OF WATER INTRUSION IN THE BUILDING. ALL FLASHING SHOULD BE INSTALLED TO MANUFACTURE SPECIFICATIONS.

DOOR AND WINDOW FLASHING :

FLASHING OVER A WOOD DOOR AND WINDOW HEAD SHALL EXTEND UP THE WALL A MINIMUM OF 4" AND IS NAILED TO THE SHEATHING. SHEET METAL IS RECOMMENDED FOR THIS FLASHING

FLASHING UNDER A WOOD WINDOW IS INSTALLED BEFORE SILLS ARE SET INTO PLACE. SHEET METAL IS RECOMMENDED FOR THIS FLASHING.

DECK FLASHING @ OPEN DECKS

WALL FLASHING SHOULD EXTEND A MINIMUM OF 4" ABOVE THE FINISHED DECK,AND MUST ALLOW FOR A 4" LAP BY THE FINAL WALL FINISH. THE METAL SHOULD ALSO EXTEND OUT OVER THE LEDGER OR JOIST AT A 5 DEGREE SLOPE. WHERE THIS FLASHING CROSSES A TRANSVERSE BEAM OR JOIST CARRYING THE DECK PLANKS, THE BEAM OR JOIST IS NOTCHED TO ACCEPT THE METAL.

PROPER FLASHING IS ALSO CRITICAL BELOW ANY BEAMS UNDERNEATH DECKS OR WALLS AND SHOULD BE SIMILARLY FLASHED WITH A STANDARD Z-FLASHING.

OPEN PLANK DECKS. TYPICAL ATTACHED TO THE SILL LINE OF THE BUILDING WITH BOLTS, REAUIRE FLASHING. THE FLASHING SHALL RUN UP THE WALL A MINIMUM OF 4" ABOVE THE FINISHED DECK. IT SHALL CONTINUE VERTICALLY DOWN THE SHEATHING, OR LEDGER IF PRESENT, TERMINATING IN A HEMMED DIVERTER BELLOW THE DECK.

DECK FLASHING @ COATED DECKS

DECK TO WALL FLASHING --- WHEN THE DECK SURFACE MEETS A WALL, THE MEMBRANE OR COATING TYPICALLY EXTENDS A MINIMUM OF 4" UP THE WALL BEFORE IT MEETS THE EXTERIOR FINISH. (COATING MANUFACTURERS HAVE THEIR OWN SPECIFICATIONS). PRIOR TO INSTALLING THE MEMBRANE OR COATING, THIS CORNER SHOULD BE FLASHED WITH A SHEET METAL BACKING (GALVANIZED STEEL, COPPER, OR OTHER METAL SPECIFIED BY THE COATING MANUFACTURER) THE EXTENDS A MINIMUM OF 4" UP UNDER THE EXTERIOR FINISH AND 4" OUT ONTO THE DECK. THE HORIZONTAL FLANGE IS FASTENED EVERY 3 IN., OR AS RECOMMENDED BY THE MANUFACTURER AND THE JOINTS ARE SEALED. AT THE DECK EDGE THE SHEET METAL SHOULD EXTEND OUT OVER THE FRONT FACE WITH A MINIMUM 4" COVERAGE, AND TERMINATE IN A HEMMED DIVERTER.

WHERE A DECK EDGE MEETS A CONTINUOUS WALL, IT OFTEN INCORPORATES A SHEET METAL DIVERTER - AN EXTENSION OF THE DECK EDGE THAT IS PERPENDICULAR TO THE WALL. THIS DIVERTER IS TYPICALLY 4 IN. TALL AND EXTENDS 4 IN. BEYOND THE EXTERIOR FINISH. SOME INSTALLATIONS MAY ALSO REQUIRE A WALL FLANGE THAT EXTENDS BEYOND THE DECK EDGE TO GUARD AGAINST SPLASHBACK.

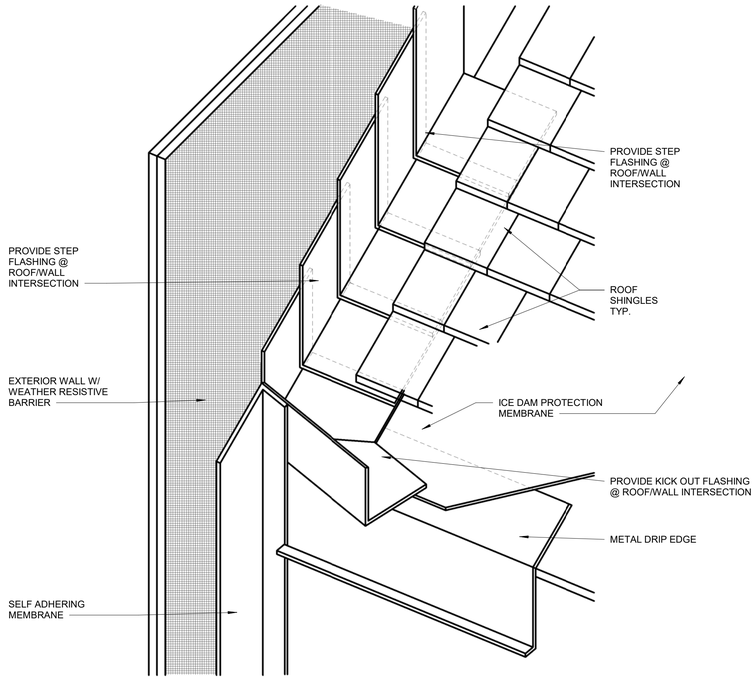
POSTS ---- THE EDGES AND CORNERS OF COATED DECKS FREQUENTLY INCORPORATE VERTICAL OSTS IN THE FORM OF RAILING NEWELS OR PRIMARY STRUCTURAL SUPPORTS FOR THE DECK. SQUARE OR ROUND, THESE FEATURES MUST BE FLASHED CAREFULLY TO ENSURE THEIR LONGEVITY.

TYPICAL POST FLASHING INVOLVES CUTTING A REGLET OR KERF IN THE POST TO ACCEPT EITHER A ONE-PIECE OR TWO- PIECE SYSTEM OF COPPER, GALVANIZED STEEL, OR OTHER METAL SPECIFIED BY THE COATING MANUFACTURER. IN A TWO-PIECE SYSTEM BASE FLASHING EXTENDS UP TO THE REGLET AND ONTO THE DECK, WHERE IT IS SECURED WITH COMPATIBLE FASTENERS. THE DECK COATING OR MEMBRANE COVERS THIS FLASHING UP THE POST AS SPECIFIED BY THE MANUFACTURER. COUNTER FLASHING, SECURED IN THE REGLET WITH APPROPRIATE SEALANT, EXTENDS DOWN THE POST OVER THE BASE FLASHING A MINIMUM OF 4 IN.

WHERE THE POST APPREARS AT A DECK CORNER, THE REGLET WILL NEED TO BE CUT IN TWO FACES OF THE POST. THE GEOMETRY OF THE CORNER USUALLY DEMANDS A TWO-PIECE SYSTEM, WITH BASE AND COUNTER FLASHINGS FABRICATED AS CORNERS, AND ALL JOINTS SEALED.

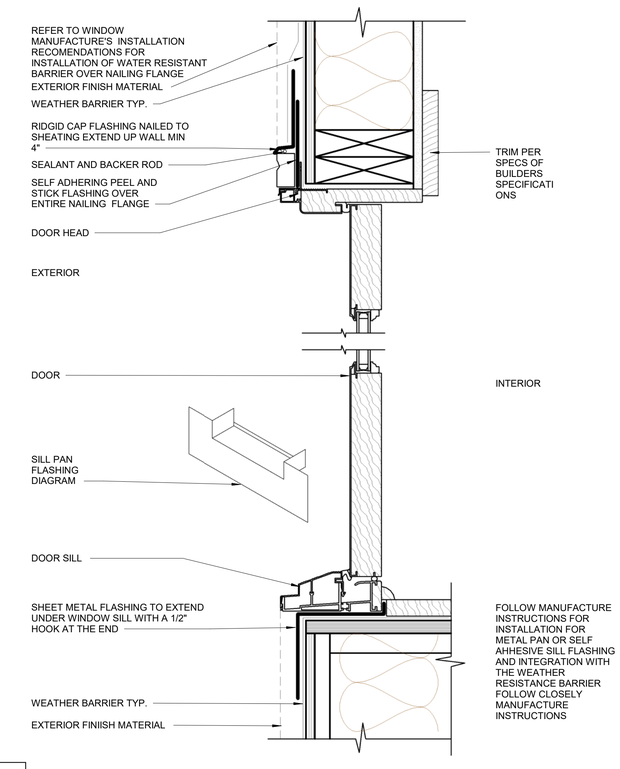
SHEET METAL FLASHING OVERVIEW

SPECIFICATIONS ARE FROM THE "RESIDENTIAL SHEET METAL GUIDELINES", SHEET METAL AND AIR CONDITIONING CONTRCTORS' NATIONAL ASSOCIATION (SMACNA). ALL FLASHING FOLLOW THE MANUFACTURES INSTALLATION SPECIFICATIONS GUIDE LINES.



3 A420 — **DETAIL - ROOF SIDE FLASHING DETAIL**

3" = 1'-0"



2 A420 — **DETAIL - DOOR SILL & DOOR HEAD (TYP.)**

3" = 1'-0"

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PROJECT NAME AND ADDRESS

REAR AND SECOND STORY ADDITION

1031 CROSS DRIVE
ALEXANDRIA VIRGINIA 22302

PROJECT # J21103

SEAL

COMMONWEALTH OF VIRGINIA
GEORGE C. GERBER
Lic. No. 2311
PROFESSIONAL ENGINEER
08/20/2021

REVISION	DATE

ISSUE DATE: 08/20/2021

SHEET TITLE: DETAILS - FLASHING, HEAD & SILL

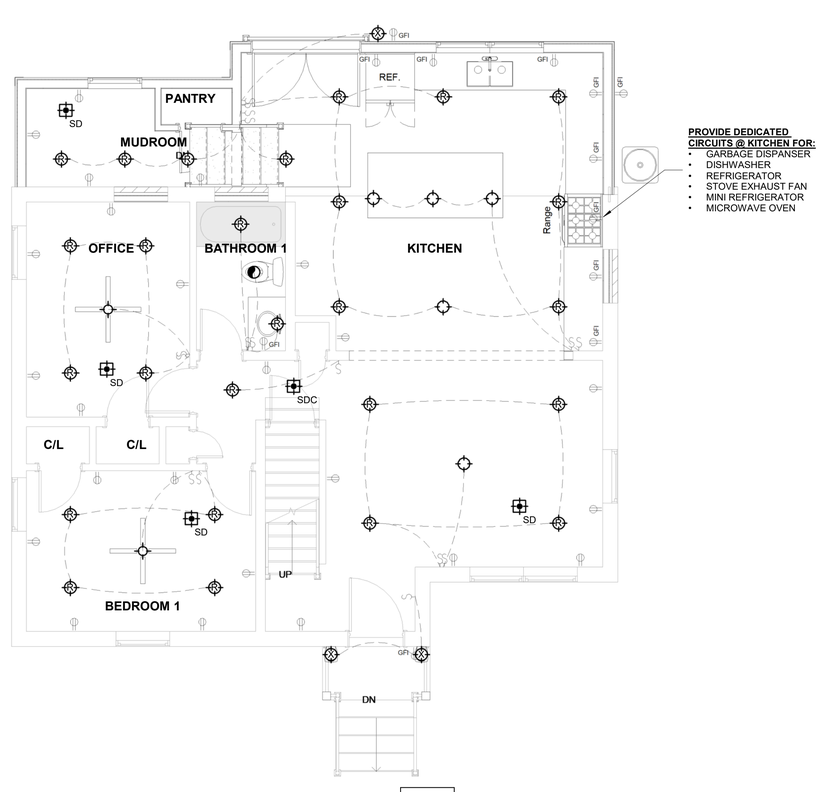
SHEET # A420

GENERAL ELECTRICAL & LIGHTING NOTES

A. ALL WORK SHALL BE IN ACCORDANCE WITH IEC, NEC. AND LOCAL REQUIREMENTS
B. ALL KITCHEN, BATH, MECHANICAL RM & GARAGE OUTLETS TO BE ON GFI CIRCUITS
C. ALL OVER-COUNTER OUTLETS TO BE 42" AFF, U.N.O.
D. ALL SMOKE DETECTORS MUST BE HARD WIRED WITH BATTERY BACKUP & BE INTERCONNECTED.
E. PROVIDE DEDICATED UNDER COUNTER POWER FOR EQUIPMENT: REFRIGERATOR, GARGBAGE DISPOSAL, MICROWAVE/OVEN. MINI-REFRIGERATOR, WINE COOLER, AND DISH WASHER.
F. EXTERIOR RECEPTACLES TO BE GFI W/ WEATHER CAP

LEGEND

- SINGLE DUPLEX
- GFI OUTLET
- CEILING OUTLET
- SINGLE POLE SWITCH
- TV JUNCTION BOX
- CEILING / WALL LIGHT
- 4" RECESSED LIGHT
- EXTERIOR WEATHER PROOF LIGHT
- EXHAUST FAN
- SMOKE DETECTOR
- COMBINATION SMOKE DETECTOR



PROVIDE DEDICATED CIRCUITS @ KITCHEN FOR:
- GARBAGE DISPANSER
- DISHWASHER
- REFRIGERATOR
- STOVE EXHAUST FAN
- MINI REFRIGERATOR
- MICROWAVE OVEN

1 E101 **LIGHTING & POWER - 1ST FLOOR**
1/4" = 1'-0"

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08/20/2021

REVISION	DATE

ISSUE DATE 08/20/2021

SHEET TITLE **LIGHTING & POWER - 1ST FLOOR**

SHEET # **E101**

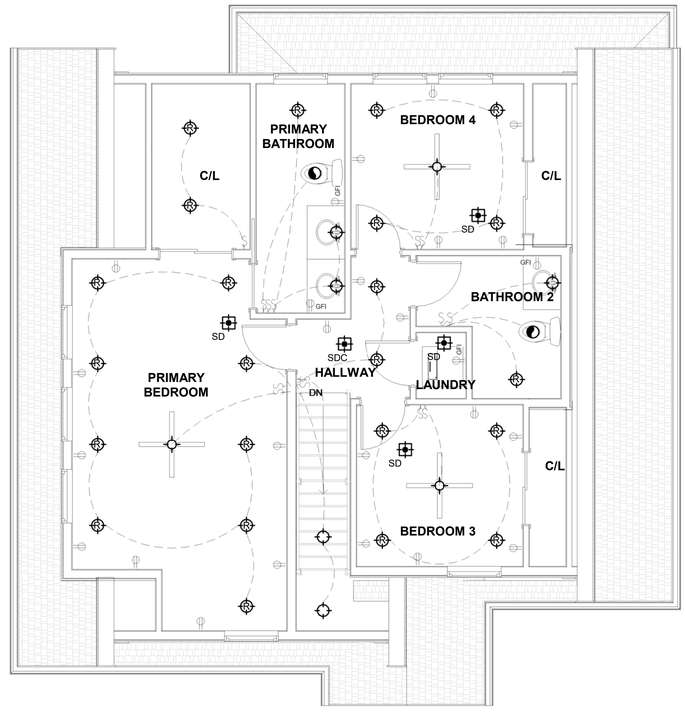
1/4/2022 11:05:15 AM

GENERAL ELECTRICAL & LIGHTING NOTES

A. ALL WORK SHALL BE IN ACCORDANCE WITH IEC, NEC. AND LOCAL REQUIREMENTS
B. ALL KITCHEN, BATH, MECHANICAL RM & GARAGE OUTLETS TO BE ON GFI CIRCUITS
C. ALL OVER-COUNTER OUTLETS TO BE 42" AFF, U.N.O.
D. ALL SMOKE DETECTORS MUST BE HARD WIRED WITH BATTERY BACKUP & BE INTERCONNECTED.
E. PROVIDE DEDICATED UNDER COUNTER POWER FOR EQUIPMENT: REFRIGERATOR, GARGBAGE DISPOSAL, MICROWAVE/OVEN. MINI-REFRIGERATOR, WINE COOLER, AND DISH WASHER.
F. EXTERIOR RECEPTACLES TO BE GFI W/ WEATHER CAP

LEGEND

- SINGLE DUPLEX
- GFI OUTLET
- CLG CEILING OUTLET
- SINGLE POLE SWITCH
- TV TV JUNCTION BOX
- CEILING / WALL LIGHT
- 4" RECESSED LIGHT
- EXTERIOR WEATHER PROOF LIGHT
- EXHAUST FAN
- SD SMOKE DETECTOR
- SDC COMBINATION SMOKE DETECTOR



1 E102 **LIGHTING & POWER - 2ND FLOOR**
1/4" = 1'-0"

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08/20/2021

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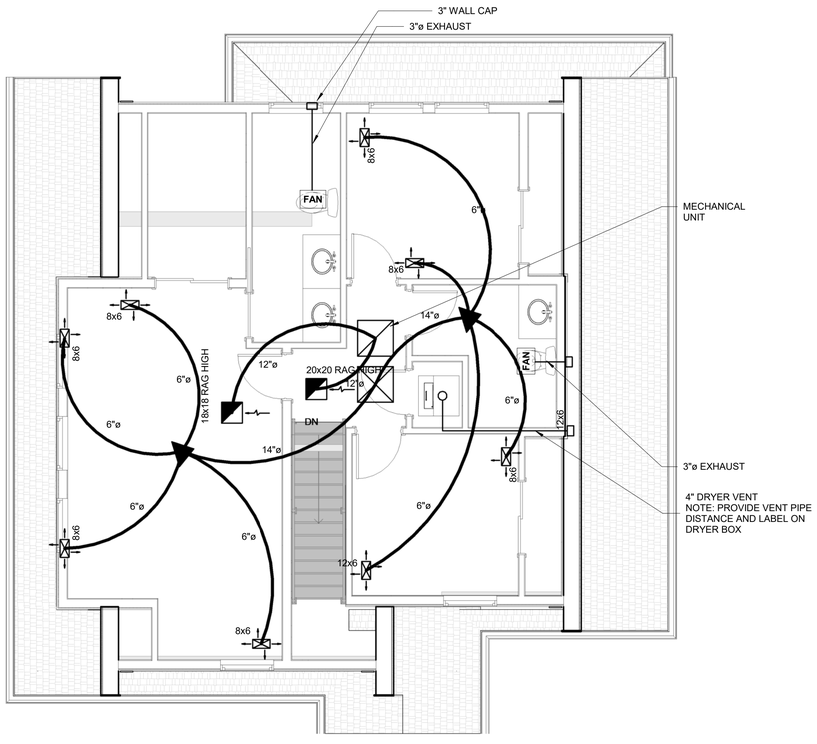
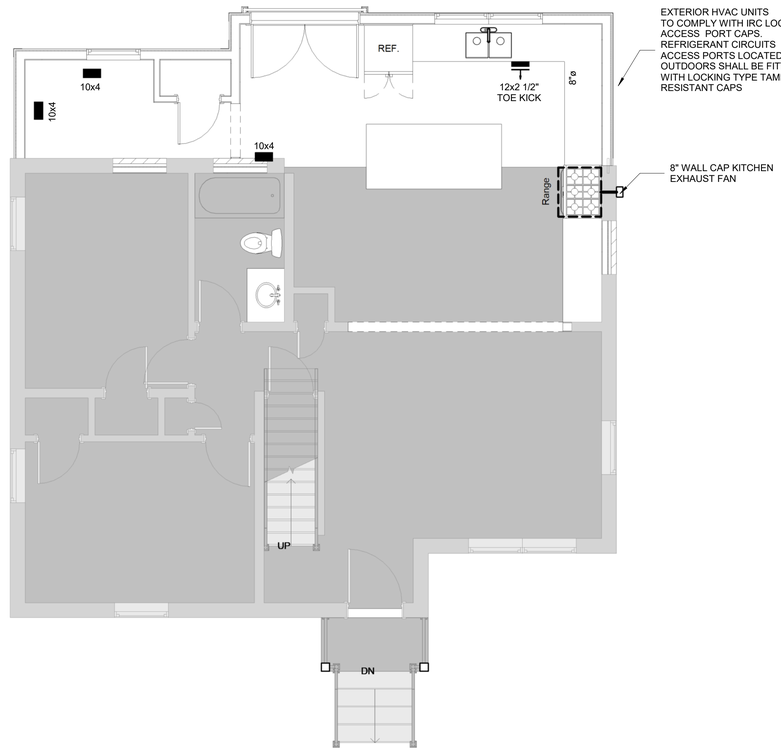
SHEET TITLE: LIGHTING & POWER - 2ND FLOOR & ATTIC

SHEET # E102



1 M100 **SECOND FLOOR - MECHANICAL**

1/4" = 1'-0"



EXTERIOR HVAC UNITS TO COMPLY WITH IRC LOCKING ACCESS PORT CAPS. REFRIGERANT CIRCUITS ACCESS PORTS LOCATED OUTDOORS SHALL BE FITTED WITH LOCKING TYPE TAMPER-RESISTANT CAPS

2 M100 **FIRST FLOOR - MECHANICAL**

1/4" = 1'-0"

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SHEET TITLE: MECHANICAL -2ND FLOOR

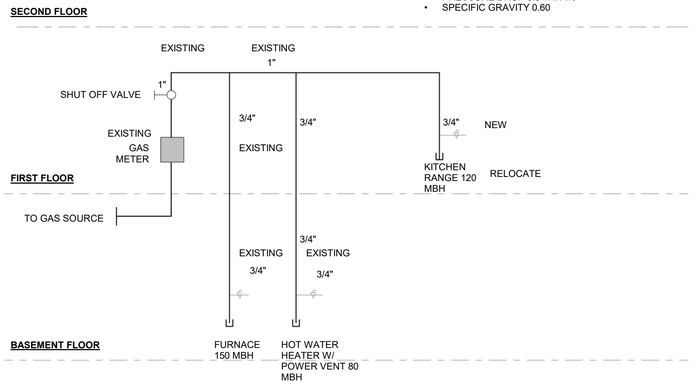
SHEET # M100

GENERAL GAS NOTES

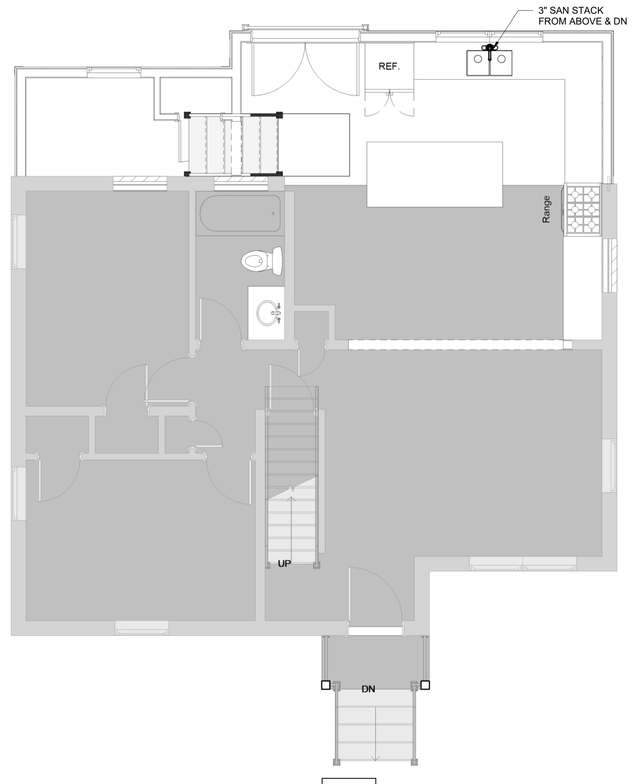
A. ALL PLUMBING WORK TO COMPLETE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL CODES AND ORDINANCES.
B. COORDINATE PLUMBING WORK WITH OTHER TRADES, STRUCTURAL AND ARCHITECTURE.
C. GC IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCING, TECHNIQUES AND SAFETY INCLUDING OSHA REGULATIONS. WORK SHALL BE EXECUTED IN A GOOD INDUSTRY STANDARD MANNER WITH MECHANICS SKILLED IN RESPECTIVE TRADES.
D. GAS PIPING TO BE INSTALLED PER CURRENT **IFGC**, LOCAL AUTHORITY AND UTILITY COMPANY REQUIREMENTS.
E. GAS LINES TO BE LEAK TESTED BY GC TO DETERMINE NO LEAKS PRIOR TO EQUIPMENT START-UP.
F. GAS VALVES, CONNECTORS AND EQUIPMENT MUST BE ACCESSIBLE. GAS SHUT OFF VALVES TO BE LOCATED ON THE OUTSIDE OF HOUSING OF EQUIPMENT.
G. SCHEDULE 40 METALLIC PIPE PER CODE & ALL PIPES TO BE PAINTED TO PROTECT FROM OXIDATION PER CODE.

GENERAL PLUMBING NOTES

A. COORDINATE WORK WITH OTHER DISCIPLINES.
B. ALL PLUMBING WORK TO BE COMPLETE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL CODES AND ORDINANCES.
C. COORDINATE PLUMBING WORK WITH OTHER TRADES, STRUCTURAL AND ARCHITECTURE.
D. GC IS RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCING, TECHNIQUES AND SAFETY INCLUDING OSHA REGULATIONS. WORK SHALL BE EXECUTED IN A GOOD INDUSTRY STANDARD MANNER WITH MECHANICS SKILLED IN RESPECTIVE TRADES.
E. ANY PLUMBING EQUIPMENT / FIXTURE THAT CONVEYS DOMESTIC WATER TO BE THE TYPE AND INSTALLED IN A WAY TO PROTECT DOMESTIC WATER FROM CONTAMINATION.
F. COORDINATE AND ROUTE PIPING TO BE AS HIGH AS POSSIBLE AND ABOVE CLEARANCES. LOCATE PIPING ABOVE CEILING IN ACT SPACES. LOCATE EXPOSED AREA PIPING 3/4" MIN FROM ADJACENT WALLS UNO.
G. CLEANOUTS TO BE INSTALLED AS INDICATED ON DRAWINGS AND CONFORM WITH CURRENT CODES.
H. CONTRACTOR TO FURNISH ALL REQUIRED PERMITS AND INSPECTIONS.
I. WATER PIPING ABOVE FLOOR TO BE 'L' TYPE COPPER OR CPVC.
J. SANITARY, SEWER AND VENT PIPING TO BE '40 PVC' UNLESS IN RETURN AIR PLENUM SPACES. IN RETURN AIR PLENUM PROVIDE D.W.V. COPPER OR CAST IRON PIPING COMPLIANT WITH CURRENT C.I.S.P.I. STANDARD 301, ASTM A 888 OR ASTM 74. PIPING AND FITTINGS TO HAVE COLLECTIVE TRADEMARK OF C.I.S.P.I. CONFIRM WITH EXISTING.
K. PIPE HANGERS TO BE CLEVIS TYPE. PROVIDE 16GA PIPING SHIELD FOR INSULATED PIPES. PIPE SADDLES AND HANGERS TO BE SIMILAR METALS TO NOT HAVE GALVANIC REACTION. PROVIDE COPPER COATED SADDLES AND HANGERS FOR COPPER PIPING. PROVIDE HANGER SPACING PER IPC 308.5.
L. PROVIDE TRAP PRIMERS AT FLOOR DRAINS.
M. PROVIDE ALL BLOCKING AND FRAMING AS REQUIRED PER FIXTURE/EQUIPMENT MANUFACTURER RECOMMENDATION.
N. PROVIDE MINIMUM SANITARY DRAIN SLOPE AS REQUIRED PER CODE.



1 P100 **DIAGRAM - GAS RISER**
NTS



3 P100 **FIRST FLOOR - PLUMBING**
1/4" = 1'-0"

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PROJECT NAME AND ADDRESS

REAR AND SECOND STORY ADDITION

1031 CROSS DRIVE
ALEXANDRIA VIRGINIA 22302

PROJECT # J21103

SEAL

COMMONWEALTH OF VIRGINIA
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08/20/2021

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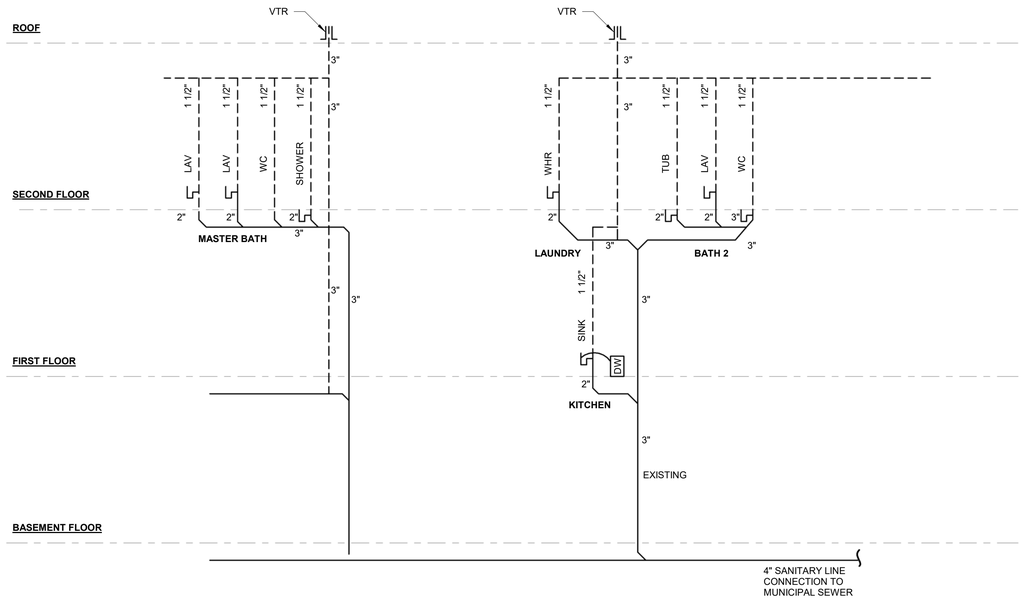
SHEET TITLE: PLUMBING - FLOOR PLANS AND DIAGRAMS

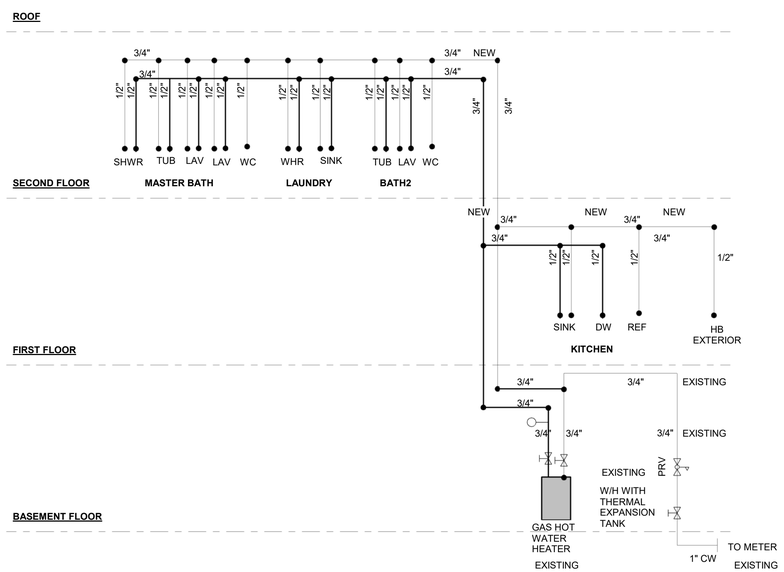
SHEET # P100



2 DIAGRAM - SANITARY RISER

P101

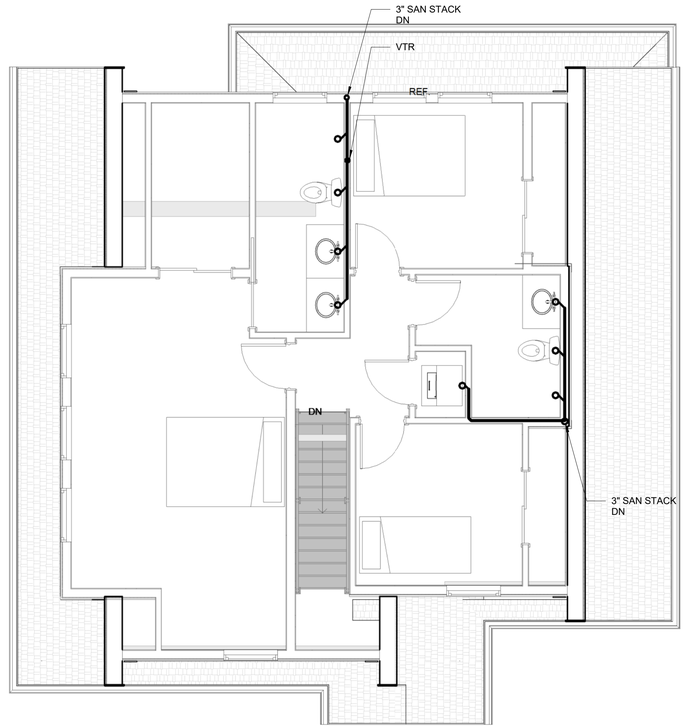
3/8" = 1'-0"



1 DIAGRAM - WATER RISER

P101

3/8" = 1'-0"



3 SECOND FLOOR - PLUMBING

P101

1/4" = 1'-0"

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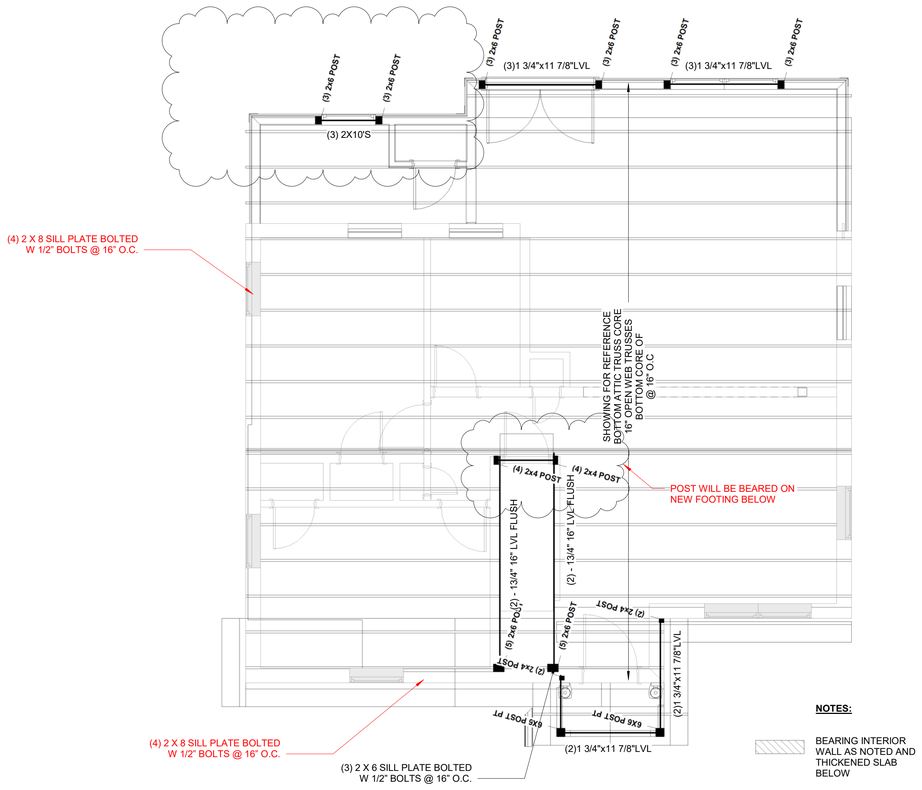
SHEET TITLE **PLUMBING - FLOOR PLANS AND DIAGRAMS**

SHEET # **P101**

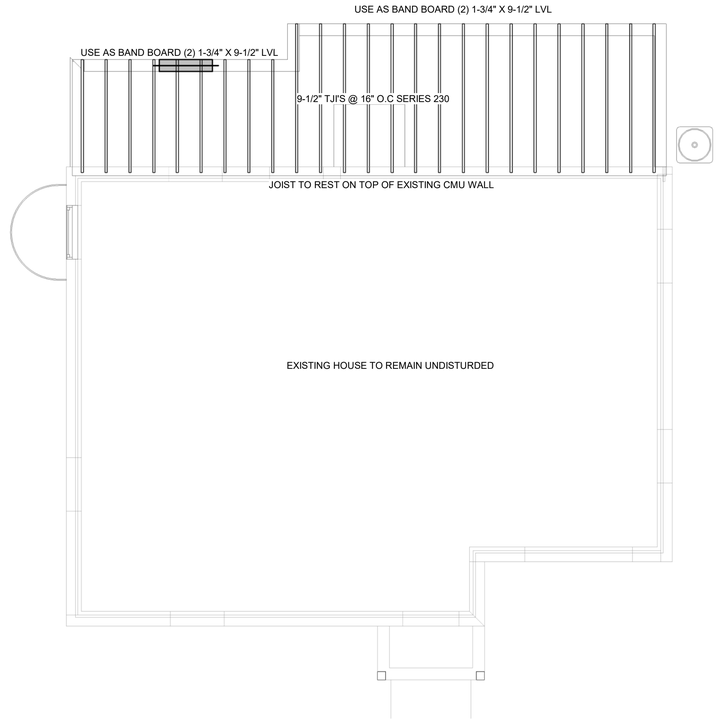
GENERAL FRAMING NOTES

A. DO NOT SCALE DRAWINGS, SEE ARCHITECTURAL PLANS FOR DIMENSIONS.
B. 1ST FLOOR FRAMING JOISTS TO BE 16" TJI SERIES 560 @ 16" O.C. PROVIDE BRIDGING OR BLOCKING @ 8' O.C. PER MANUF. SPECS
A. 2ND FLOOR FRAMING JOISTS TO BE 16" TJI SERIES 560 @ 16" O.C. PROVIDE BRIDGING OR BLOCKING @ 8' O.C. PER MANUF. SPECS
B. TRUSS/JOIST LAYOUT AS SHOWN IS FOR REFERENCE ONLY, SEE TRUSS/JOIST MANUF DRAWINGS FOR CONSTRUCTION.
C. TRUSS/JOIST MANUF. TO REFERENCE INTENDED DESIGN LAYOUT FOR BEARING POINTS & INTENT.
D. JOIST MANUF. AS SELECTED BY ARCHITECT. JOIST SERIES AS DETERMINED BY ARCHITECT.
E. CONTRACTOR/BUILDER TO PROVIDE INFORMATION FOR PERMIT ISSUACE
F. JOIST MANUF. ENGINEER RESPONSIBLE FOR ALL FL. JOIST DESIGN
G. LIVE LOAD DEFLECTION = L/480 REQ'D.
H. PROVIDE BEARING STIFFENERS AND BLOCKING AS REQUIRED FT FRAMED CONNECTIONS.
I. ALL ROOF STRUCTURE TO BE PRE-MANUFACTURED WOOD TRUSSES @ 24" O.C. U.N.O.
J. TRUSS MANUF. AS SELECTED BY BUILDER.
K. TRUSS MANUF. TO BE LICENSED IN STATE THE PROJECT WITHIN AND TO COMPLY WITH ALL STATE AND LOCAL CODES.
L. TRUSS MANUF. TO DESIGN, SUPPLY AND COORDINATE ANY GABLE END TRUSS HANGERS AND TRUSS HANGERS AS REQUIRED.
M. ALL POSTS FOR ROOF BEARING TO CONTINUE TO FOUNDATION OR TO HEADERS AS REQUIRED.
N. NOTIFY DESIGNER OF ANY DISCREPRANCIES PRIOR TO FABRICATION
O. (2) SETS OF FLOOR AND ROOF TRUSS SHOP DRAWINGS TO BE SUBMITTED PRIOR TO INSTALLATION. (1) SET TO INCLUDE ORIGINAL SEAL AND SIGNATURE OF DESIGN ENGINEER. COMPLETED COUNTY 'TRUSS PLAN COVER SHEET' MUST BE ATTACHED TO EACH SET.
P. ALL FASTENERS IN CONTACT W/ PAINTED WOOD TO BE G185 GALV. OR STAINLESS STEEL - R319.3.
Q. HEADERS/BEAMS OVER PORTAL FRAMES ARE TO BE CONTINUOUS AND TO EXTEND OVER WIDTH OF PORTAL FRAME.
T. ALL SUB FLOOR TO BE GLUED AND SCREWED
U. TYP OVERHANG 16" UNLESS MENTIONED OTHERWISE
V. ALIGN FASCIA PER ELEVATION

NOTE: ROOF SHOP DRAWINGS WILL BE SUBMITTED AFTER PERMIT ISSUED FOR APPROVAL



1 S101 **FRAMING PLAN - 2ND FLOOR**
1/4" = 1'-0"



2 S101 **FRAMING PLAN - 1ST FLOOR**
1/4" = 1'-0"

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Revision 1	Date 1

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SHEET TITLE **FRAMING PLANS**

SHEET # **S101**

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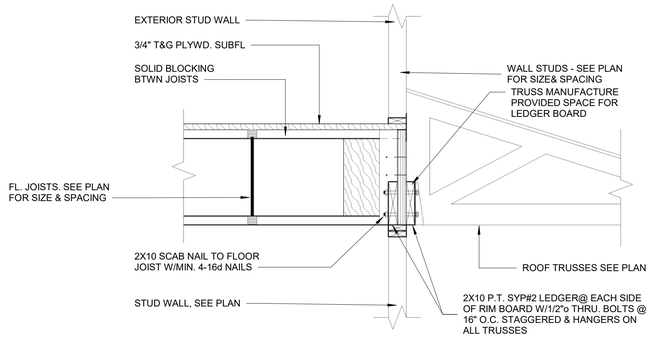
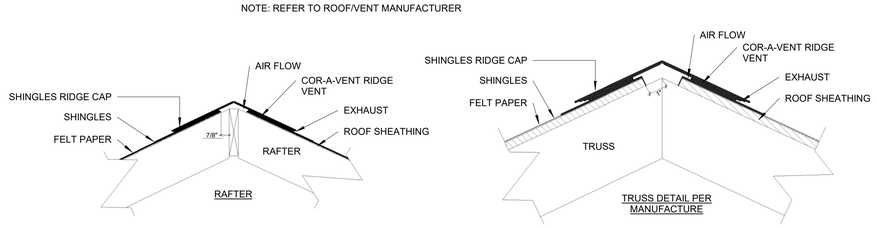


5 DETAIL - TRUSS @ WALL (TYP.)

S102 — 1" = 1'-0"



4 DETAIL - RIDGE VENT (TYP.)

S102 — 3" = 1'-0"

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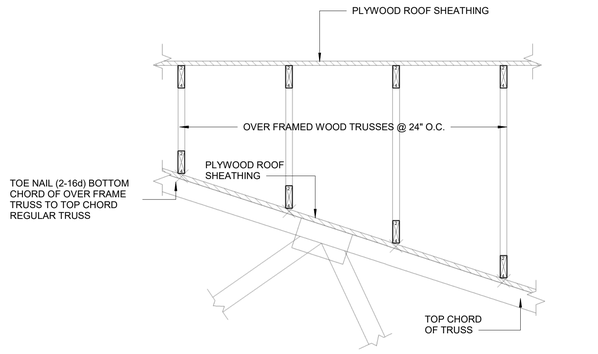
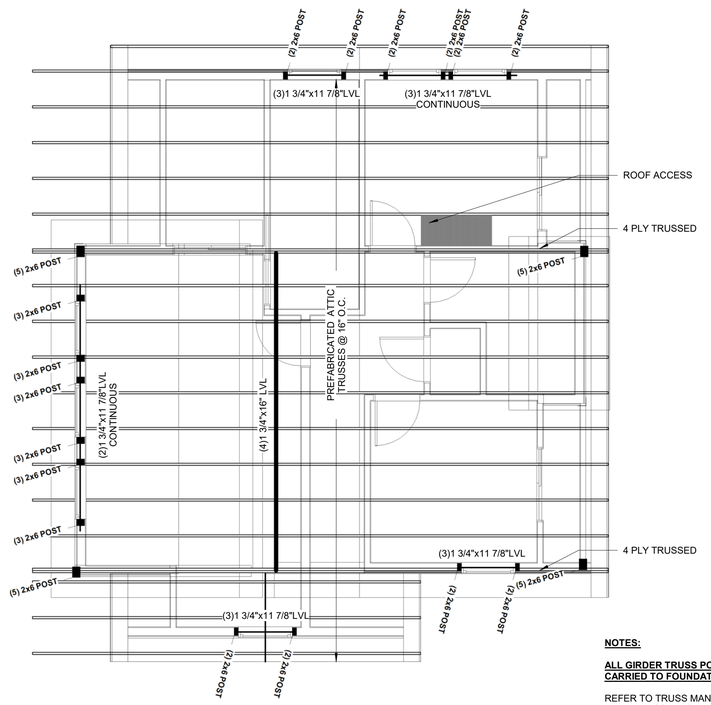
M. ALL POSTS FOR ROOF BEARING TO CONTINUE TO FOUNDATION OR TO HEADERS AS REQUIRED.
N. NOTIFY DESIGNER OF ANY DISCREPRANCIES PRIOR TO FABRICATION
O. (2) SETS OF FLOOR AND ROOF TRUSS SHOP DRAWINGS TO BE SUBMITTED PRIOR TO INSTALLATION. (1) SET TO INCLUDE ORIGINAL SEAL AND SIGNATURE OF DESIGN ENGINEER. COMPLETED COUNTY 'TRUSS PLAN COVER SHEET' MUST BE ATTACHED TO EACH SET.
P. ALL FASTENERS IN CONTACT W/ PAINTED WOOD TO BE G185 GALV. OR STAINLESS STEEL - R319.3.
Q. HEADERS/BEAMS OVER PORTAL FRAMES ARE TO BE CONTINUOUS AND TO EXTEND OVER WIDTH OF PORTAL FRAME.
T. ALL SUB FLOOR TO BE GLUED AND SCREWED
U. TYP OVERHANG 16" UNLESS MENTIONED OTHERWISE
V. ALIGN FASCIA PER ELEVATION



6 DETAIL - OVERFRAMING

S102 — 3/4" = 1'-0"



NOTES:

ALL GIRDER TRUSS POINT LOADS TO BE CARRIED TO FOUNDATION WALL

REFER TO TRUSS MANUFACTURER'S DWGS FOR FINAL TRUSS LAYOUT

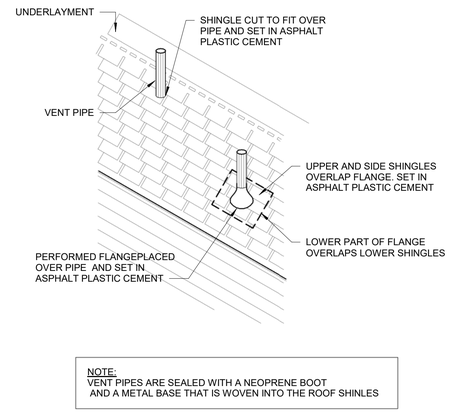
ROOF TRUSSES ARE RAISED HEEL W/ HT 1' , TRUSSES CANTILEVERED . OVERALL TRUSS LENGTH TO INCLUDE OVERHANG

TYP OVERHANG 1'0" UNLESS MENTIONED OTHERWISE

ALIGN FASCIA PER ELEVATION

2 FRAMING PLAN - ROOF

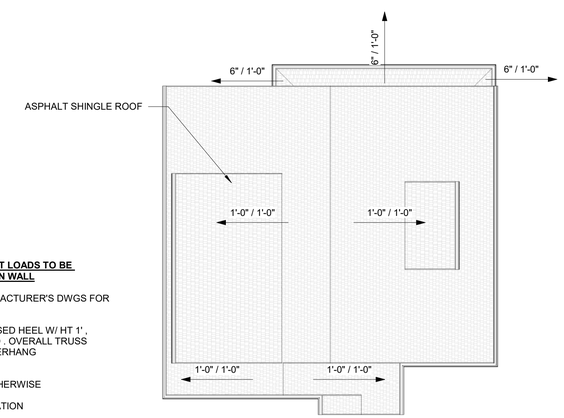
S102 — 1/4" = 1'-0"



NOTE:
VENT PIPES ARE SEALED WITH A NEOPRENE BOOT AND A METAL BASE THAT IS WOVEN INTO THE ROOF SHINLES

3 DETAIL - ROOF VENT FLASHING

S102 — NTS



1 ROOF KEY PLAN

S102 — 1/8" = 1'-0"

OFFICIAL COUNTY USE ONLY

S2R ARCHITECTS
10486 COLONEL COURT
MANASSAS VA 20110
(703)420-8141
www.S2RArchitects.com
JD@S2RArchitects.com

PROJECT NAME AND ADDRESS

REAR AND SECOND STORY ADDITION

1031 CROSS DRIVE
ALEXANDRIA VIRGINIA 22302

PROJECT # J21103

SEAL

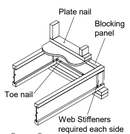
COMMONWEALTH OF VIRGINIA
GEORGE C. GERBER
Lic. No. 2311
PROFESSIONAL ENGINEER
08/20/2021

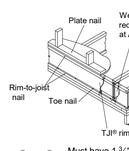
REVISION	DATE

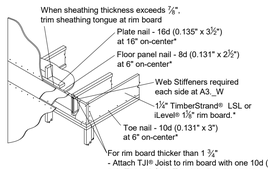
ISSUE DATE: 08/20/2021

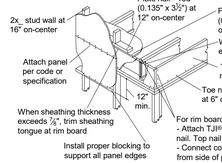
SHEET TITLE: ROOF FRAMING PLANS

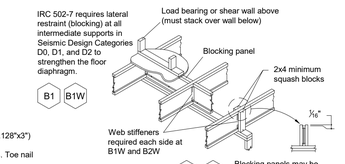
SHEET # S102

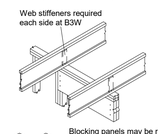


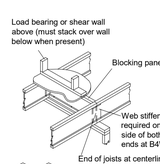


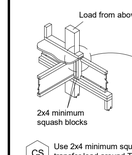


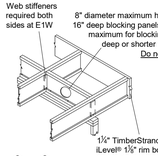


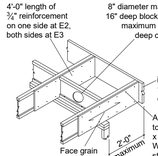


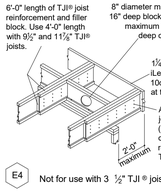


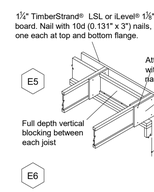


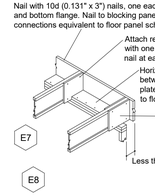


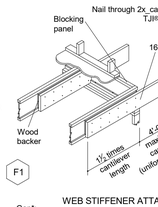


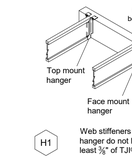


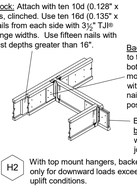


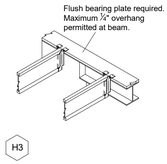


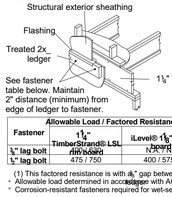


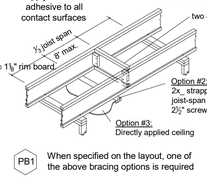


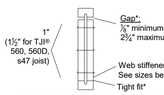


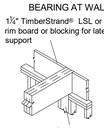


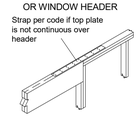


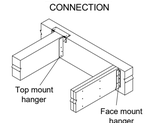


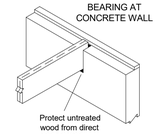


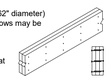


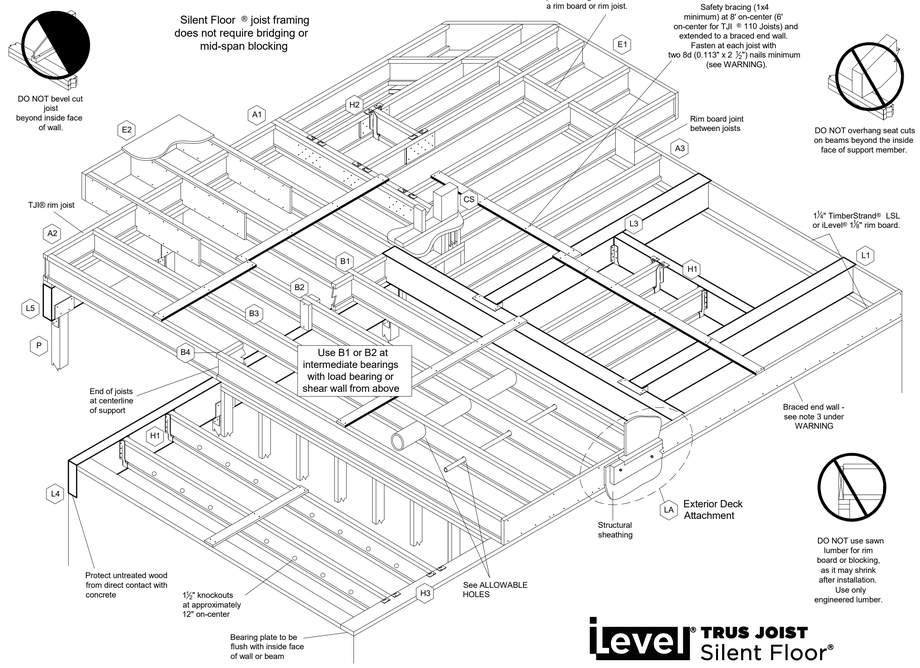


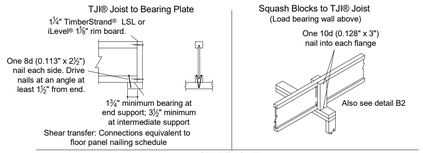


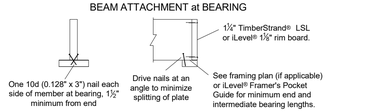


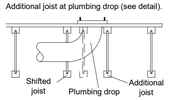


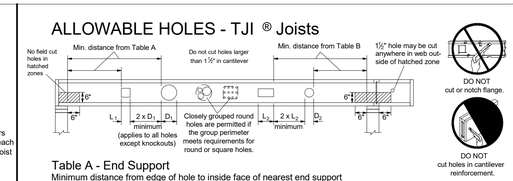


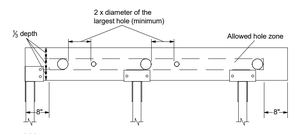


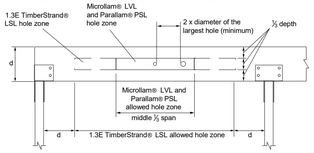












JOIST DETAILS

Must have 1 ¾" minimum joist bearing at ends. Attach rim joist per A3 detail.

When sheathing thickness exceeds ⅞", trim sheathing tongue at rim board

Plate nail - 16d (0.135" x 3½") at 16" on-center*

Floor panel nail - 8d (0.131" x 2½") at 6" on-center*

Web Stiffeners required each side at A3._W

1¼" TimberStrand® LSL or iLevel® 1⅛" rim board.*

Toe nail - 10d (0.131" x 3") at 6" on-center*

For rim board thicker than 1 ¾"
- Attach TJI® Joist to rim board with one 10d (0.128"x3") nail. Top nail from TJI® joist into rim board.
- Connect corner with four 10d (0.128"x3") nails. Toe nail from side of parallel closure into rim board

*Conventional construction code minimum for use with A3 only. See the iLevel TJI® Specifier's Guide, #TJ-4000, and the iLevel® Rim Board Specifier's Guide, #TJ-8000, for A3.1-A3.3 installation specifications and applications.

2x_ stud wall at 16" on-center

Plate nail - 16d (0.135" x 3½") at 12" on-center

Floor panel nail - 8d (0.131" x 2½") at 6" on-center

Web Stiffeners required each side at A3.4W

1¼" TimberStrand® LSL rim board.*

Attach panel per code or specification

Toe nail - 10d (0.131" x 3") at 6" on-center

When sheathing thickness exceeds ⅞", trim sheathing tongue at rim board

Install proper blocking to support all panel edges

For rim board thicker than 1 ¾"
- Attach TJI® Joist to rim board with one 10d (0.128"x3") nail. Top nail from TJI® joist into rim board.
- Connect corner with four 10d (0.128"x3") nails. Toe nail from side of parallel closure into rim board

*See iLevel TJI® Joist Specifier's Guide, #TJ-4000, and iLevel® Rim Board Specifier's Guide, #TJ-8000, for additional installation specifications and applications.

IRC 502-7 requires lateral restraint (blocking) at all intermediate supports in Seismic Design Categories D0, D1, and D2 to strengthen the floor diaphragm.

Blocking panels may be required with shear walls above or below - see detail B1

INTERMEDIATE BEARING
NO LOAD BEARING WALL ABOVE

Blocking panels may be required with shear walls above or below (See detail B1)

Use 2x4 minimum squash blocks to transfer load around TJI ® joist

8" diameter maximum hole for 11⅞" - 16" deep blocking panels; 6" diameter maximum for blocking panels 9½" deep or shorter than 12" long. Do not cut flanges.

1¼" TimberStrand® LSL or iLevel® 1⅛" rim board. Nail with 10d (0.131" x 3") nails, one each at top and bottom flange.

4'-0" length of ¾" reinforcement on one side at E2, both sides at E3

8" diameter maximum hole for 11⅞" - 16" deep blocking panels; 6" diameter maximum for blocking panels 9½" deep or shorter than 12" long. Do not cut flanges.

1¼" TimberStrand® LSL or iLevel® 1⅛" rim board. Nail with 10d (0.131" x 3") nails, one each at top and bottom flange.

Attach reinforcement to joist flange with 8d (0.131" x 2½") nails at 6" on-center. When reinforcing both sides, stagger nails.

6'-0" length of TJI® joist reinforcement and filler block. Use 4'-0" length with 9½" and 11⅞" TJI® joists.

8" diameter maximum hole for 11⅞" - 16" deep blocking panels; 6" diameter maximum for blocking panels 9½" deep or shorter than 12" long. Do not cut flanges.

1¼" TimberStrand® LSL or iLevel® 1⅛" rim board. Nail with 10d (0.131" x 3") nails, one each at top and bottom flange.

Attach reinforcement to joist web with 3 rows 10d (0.148" x 3") nails at 6" on-center, clinched. Use 2 rows with 9½" and 11⅞" TJI® joists.

Not for use with 3 ½" TJI ® joist flange widths

1¼" TimberStrand® LSL or iLevel® 1⅛" rim board. Nail with 10d (0.131" x 3") nails, one each at top and bottom flange.

Attach reinforcement to joist with one 8d (0.131" x 2½") nail at each corner

12" length of ¾" reinforcement on one side at E5, both sides at E6

Full depth vertical blocking between each joist

1¼" TimberStrand® LSL or iLevel® 1⅛" rim board. Nail with 10d (0.131" x 3") nails, one each at top and bottom flange. Nail to blocking panel with connections equivalent to floor panel schedule.

Attach reinforcement to joist with one 8d (0.131" x 2½") nail at each corner

Horizontal blocking panels between each joist. Nail to top plate with connections equivalent to floor panel schedule.

12" length of ¾" reinforcement on one side at E7, both sides at E8

Nail through 2x_cantilever, wood backer and TJI® joist web with 2 rows 10d (0.148" x 3") nails at 6" on-center, clinched. Use 16d (0.135" x 3½") nails with 3½" TJI® joist flange widths.

F1 applies to uniformly loaded joists only.

Web stiffeners required if sides of hanger do not laterally support at least ⅜" of TJI® joist top flange

Filler block: Attach with ten 10d (0.128" x 3") nails, clinched. Use ten 16d (0.135" x 3½") nails from each side with 3½" TJI® joist flange widths. Use fifteen nails with TJI® joist depths greater than 16".

Backer block: Install tight to top mount (tight to bottom flange with face mount hangers). Attach with ten 10d (0.128" x 3") nails, clinched when possible.

With top mount hangers, backer block required only for downward loads exceeding 250 lbs or for uplift conditions.

Flush bearing plate required. Maximum ¼" overhang permitted at beam.

EXTERIOR DECK ATTACHMENT

See fastener table below. Maintain 2" distance (minimum) from edge of ledger to fastener.

Fastener	Allowable Load / Factored Resistance (lbs) 1¼" TimberStrand® LSL rim board	iLevel® 1⅛" rim board
⅜" lag bolt	400 / 630	N.A. / N.A.
½" lag bolt	475 / 750	400 / 575 (1)

(1) This factored resistance is with a ⅜" gap between the rim board and deck ledger.
- Allowable load determined in accordance with AC 124.
- Corrosion-resistant fasteners required for wet-service applications.

Option #1: TJI® Joist blocking with end blocks installed at ⅓ joist-span locations using two 8d (0.113" x 2½") nails or 2½" screws, typical

Option #2: 2x_ strapping installed at ⅓ joist-span locations using two 2½" screws per joist, typical

Option #3: Directly applied ceiling

When specified on the layout, one of the above bracing options is required

WEB STIFFENER ATTACHMENT

* With point load from above, install web stiffener tight to top flange (gap at bottom flange) when there is no support below.

TJI Joist Series	Depth (in.)	Minimum Web Stiffener Size	Nailing Requirements Type	Number Nails End	Number Nails Intermediate
110 210 230 & 360 s31 & s33	All All All All	⅝" x 2 5/16" ¾" x 2 5/16" ⅞" x 2 5/16" 1" x 2 5/16"	8d (0.113" x 2½")	3	3
560 & s47	All	2x4	16d (0.135" x 3½")		
560D	18" 20" 22" 24"	2x4	16d (0.135" x 3½")	4 5 6 6	4 5 11 13

BEAM and COLUMN DETAILS

BEARING AT WALL

1¼" TimberStrand® LSL or iLevel® 1⅛" rim board or blocking for lateral support

BEARING FOR DOOR OR WINDOW HEADER

Strap per code if top plate is not continuous over header

BEAM TO BEAM CONNECTION

See current iLevel ® literature for framing connectors

BEARING AT CONCRETE WALL

Protect untreated wood from direct contact with concrete

MULTIPLE MEMBER CONNECTIONS
FOR TOP-LOADED BEAMS (1)

1¾"- Wide Pieces:
- Minimum of 3 rows 10d (0.128" x 3") nails at 12" o.c.
- Minimum of 4 rows 10d (0.128" x 3") nails at 12" o.c. for 14" and deeper beams
- If using 12d-16d (0.148"-0.162" diameter) nails, the number of nailing rows may be reduced by one.

3½"- Wide Pieces:
- Minimum of 2 rows ½" bolts at 24" o.c. staggered

(1) Load must be applied evenly across entire beam width. Otherwise, use connections for side-loaded beams.

Additional nailing or bolting may be required with side-loaded multiple-member beams. Refer to current product literature.

BEARING AT COLUMN

Verify column capacity and beam bearing length. See current iLevel ® literature.

BEAM ON COLUMN CAP

COLUMN BASE

ELEVATED COLUMN BASE

TJI® JOIST NAILING REQUIREMENTS at BEARING

TJI® Joist to Bearing Plate

1¼" TimberStrand® LSL or iLevel® 1⅛" rim board.

One 8d (0.113" x 2½") nail each side. Drive nails at an angle at least 1½" from end.

1¾" minimum bearing at end support; 3½" minimum at intermediate support

Shear transfer: Connections equivalent to floor panel nailing schedule

Squash Blocks to TJI® Joist
(Load bearing wall above)

One 10d (0.128" x 3") nail into each flange

Also see detail B2

Rim to TJI ® Joist

1¼" TimberStrand ® LSL or iLevel ® 1⅛" rim board or 1¾" wide TJI ® rim joist: One 10d (0.128" x 3") nail into each flange

2 1/16" - 2 5/16" wide TJI ® rim joist: One 16d (0.135" x 3½") nail into each flange

3½" wide TJI ® rim joist: Toe nail with 10d (0.128" x 3") nails, one each side of TJI® joist flange

3½" wide TJI® floor joist

3½" wide TJI® rim joist

1¾" minimum bearing

Locate rim board joint between joists.

BEAM ATTACHMENT at BEARING

One 10d (0.128" x 3") nail each side of member at bearing, 1½" minimum from end

Drive nails at an angle to minimize splitting of plate

1¼" TimberStrand® LSL or iLevel® 1⅛" rim board.

See framing plan (if applicable) or iLevel® Framer's Pocket Guide for minimum end and intermediate bearing lengths.

INSTALLATION TIPS

Subfloor adhesive will improve floor performance, but may not be required.

Squash blocks and blocking panels carry stacked vertical loads (details B1 and B2). Packing out the web of a TJI® joist (with web stiffeners) is not a substitute for squash blocks or blocking panels.

When joists are doubled at non-load bearing parallel partitions, space joists apart the width of the wall for plumbing or HVAC.

Additional joist at plumbing drop (see detail).

FASTENING of FLOOR PANELS

Guidelines for Closest On-Center Spacing per Row

Nail Size	TJI®(1) 110, 210, and 230	TJI®(1) 360 and 560	Rim Board iLevel ® 1⅛"	Rim Board 1¼" TimberStrand ® LSL	1½" TimberStrand ® LSL or wider	Microllam ® LVL	Parallam ® PSL
8d (0.131" x 2 ½")	4"	3"	6"	4"	3"	3"	3"
10d (0.148"x 3"), 12d (0.148"x 3 ¼")	4"	4"	6"	4"	4"	4"	4"
16d (0.162"x 3 ½")	6"	6"	16"	6"(2)	6"(2)	8"	6"

(1) One row of fasteners permitted (two at abutting panel edges) for diaphragms. Stagger nails when using 4" on-center spacing and maintain ⅜" joist and panel edge distance. For other applications, multiple rows of fasteners are permitted if the rows are offset at least ½" and staggered.

(2) Can be reduced to 4" on-center if nail penetration into the narrow edge is no more than 1 ⅜" (to avoid splitting).

- Recommended nailing is 12" on-center in field and 6" on-center along panel edge. Fastening requirements on engineered drawings supersede recommendations listed above.
- iLevel recommends using a non-polyurethane subfloor adhesive on all contact points between panels and floor framing.
- Nailing rows must be offset at least ½" and staggered.
- 14 ga. staples may be substituted for 8d (0.113" x 2½") nails if minimum penetration of 1" into the TJI® joist or rim board is achieved.
- Maximum spacing of nails is 18" on-center for TJI® joists.

FILLER and BACKER BLOCK SIZES

TJI® Joists	110		210		230 or 360			560		
Depth	9½" or 11⅞"	14"	9½" or 11⅞"	14" or 16"	9½" or 11⅞"	14" or 16"	18" or 20"	11⅞"	14" or 16"	18" or 20"
Filler Block (1) (Detail H2)	2x6	2x8	2x6 + ⅜" sheathing	2x8 + ⅜" sheathing	2x6 + ½" sheathing	2x8 + ½" sheathing	2x12 + ½" sheathing	Two 2x6	Two 2x8	Two 2x12
Cantilever Filler (Detail E4)	2x6 4'-0" long	2x10 6'-0" long	2x6 + ⅜" sheathing 4'-0" long	2x10 + ⅜" sheathing 6'-0" long	2x6 + ½" sheathing 4'-0" long	2x10 + ½" sheathing 6'-0" long	Not applicable	Not applicable		
Backer Block (1) (Detail F1 or H2)	⅝" or ¾"		¾" or ⅞"		1" Net			2x6	2x8	2x12

(1) If necessary, increase filler and backer block height for face mount hangers and maintain ⅛" gap at top of joist; see detail W. Filler and backer block lengths should accomodate required nailing without splitting (12" minimum for backer blocks and 24" minimum for filler blocks).

DO NOT bevel cut joist beyond inside face of wall.

Silent Floor ® joist framing does not require bridging or mid-span blocking

Joists must be laterally supported at cantilever and end bearings by blocking panels, hangers, or direct attachment to a rim board or rim joist.

Safety bracing (1x4 minimum) at 8' on-center (6' on-center for TJI ® 110 Joists) and extended to a braced end wall. Fasten at each joist with two 8d (0.113" x 2 ½") nails minimum (see WARNING).

Rim board joint between joists

1¼" TimberStrand® LSL or iLevel® 1⅛" rim board.

Use B1 or B2 at intermediate bearings with load bearing or shear wall from above

End of joists at centerline of support

Braced end wall - see note 3 under WARNING

Protect untreated wood from direct contact with concrete

1½" knockouts at approximately 12" on-center

See ALLOWABLE HOLES

Bearing plate to be flush with inside face of wall or beam

DO NOT overhang seat cuts on beams beyond the inside face of support member.

DO NOT use sawn lumber for rim board or blocking, as it may shrink after installation. Use only engineered lumber.

iLevel® TRUS JOIST Silent Floor®

ALLOWABLE HOLES - TJI ® Joists

DO NOT cut or notch flange.

DO NOT cut holes in cantilever reinforcement.

Table A - End Support

Minimum distance from edge of hole to inside face of nearest end support

JOIST DEPTH	TJI®	ROUND HOLE SIZE 2"	3"	4"	5"	6½"	7"	8⅞"	11"	13"	SQUARE OR RECTANGULAR HOLE SIZE 2"	3"	4"	5"	6½"	7"	8⅞"	11"	13"
9½"	110	1'-6"	1'-6"	2'-0"	3'-0"	5'-0"					1'-0"	1'-6"	2'-6"	3'-6"	4'-6"				
	210	1'-6"	2'-0"	2'-6"	3'-0"	5'-6"					1'-6"	2'-0"	2'-6"	4'-0"	5'-0"				
	230	1'-6"	2'-0"	2'-6"	3'-6"	5'-6"					1'-6"	2'-0"	3'-0"	4'-6"	5'-0"				
11⅞"	110	1'-0"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	5'-6"			1'-0"	1'-6"	2'-0"	2'-6"	4'-6"	5'-0"	6'-0"		
	210	1'-0"	1'-6"	2'-0"	2'-0"	3'-0"	3'-6"	6'-0"			1'-0"	1'-6"	2'-6"	3'-0"	5'-0"	5'-6"	6'-6"		
	230	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	6'-6"			1'-0"	2'-0"	2'-6"	3'-6"	5'-6"	5'-6"	7'-0"		
	360	1'-6"	2'-0"	3'-0"	3'-6"	4'-6"	5'-0"	7'-0"			1'-6"	2'-6"	3'-6"	4'-6"	6'-6"	6'-6"	7'-6"		
	560	1'-6"	2'-6"	3'-0"	4'-0"	5'-6"	6'-0"	8'-0"			2'-6"	3'-6"	4'-6"	5'-6"	7'-0"	7'-6"	8'-0"		
14"	110	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	2'-0"	3'-0"	5'-6"		1'-0"	1'-0"	1'-6"	2'-0"	3'-6"	4'-0"	6'-0"	8'-0"	
	210	1'-0"	1'-0"	1'-0"	1'-6"	2'-0"	2'-6"	3'-6"	6'-0"		1'-0"	1'-0"	2'-0"	2'-6"	4'-0"	4'-6"	6'-6"	8'-6"	
	230	1'-0"	1'-0"	1'-0"	1'-6"	2'-6"	2'-6"	4'-0"	7'-0"		1'-0"	1'-0"	2'-0"	3'-0"	4'-0"	5'-0"	7'-0"	9'-0"	
	360	1'-0"	1'-0"	1'-6"	2'-6"	3'-6"	4'-0"	5'-6"	8'-0"		1'-0"	1'-6"	2'-6"	4'-0"	6'-0"	6'-6"	8'-0"	9'-6"	
	560	1'-0"	1'-0"	2'-0"	3'-0"	4'-6"	5'-0"	6'-6"	9'-0"		1'-6"	3'-0"	4'-0"	5'-0"	7'-0"	7'-6"	9'-0"	10'-0"	
16"	210	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	2'-6"	3'-6"	6'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-0"	3'-6"	6'-6"	8'-0"	11'-0"
	230	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	1'-6"	3'-0"	4'-0"	7'-0"	1'-0"	1'-0"	1'-0"	2'-0"	3'-6"	4'-0"	7'-0"	9'-0"	11'-0"
	360	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	2'-6"	4'-6"	6'-6"	9'-0"	1'-0"	1'-0"	1'-6"	3'-0"	5'-0"	5'-6"	9'-0"	10'-0"	11'-6"
	560	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	3'-0"	5'-0"	7'-6"	10'-0"	1'-0"	2'-0"	3'-0"	4'-6"	6'-6"	7'-0"	10'-0"	11'-0"	12'-0"
		4"	5"	6"	7"	8"	10"	12"	15"	17"	4"	5"	6"	7"	8"	10"	12"	15"	17"
18"	360	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	5'-0"	10'-0"		1'-0"	1'-0"	1'-0"	3'-0"	5'-0"	10'-0"	11'-0"	13'-6"	
	560	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	5'-0"	11'-0"		1'-0"	1'-0"	1'-6"	4'-0"	6'-6"	11'-0"	12'-0"	14'-6"	
20"	360	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	7'-0"	10'-6"	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	8'-0"	11'-6"	14'-0"	15'-6"
	560	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	7'-0"	11'-0"	1'-0"	1'-0"	1'-0"	1'-0"	4'-0"	9'-6"	12'-6'	14'-6"	15'-6"

Table B - Intermediate or Cantilever Support

Minimum distance from edge of hole to inside face of nearest intermediate or cantilever support

JOIST DEPTH	TJI®	ROUND HOLE SIZE 2"	3"	4"	5"	6½"	7"	8⅞"	11"	13"	SQUARE OR RECTANGULAR HOLE SIZE 2"	3"	4"	5"	6½"	7"	8⅞"	11"	13"
9½"	110	2'-0"	2'-6"	3'-6"	4'-6"	7'-6"					1'-6"	2'-6"	3'-6"	5'-6"	6'-6"				
	210	2'-0"	2'-6"	3'-6"	5'-0"	8'-0"					2'-0"	3'-0"	4'-0"	6'-6"	7'-6"				
	230	2'-6"	3'-0"	4'-0"	5'-6"	8'-6					2'-0"	3'-6"	4'-6"	6'-6"	7'-6"				
11⅞"	110	1'-0"	1'-0"	1'-6"	2'-6"	4'-0"	4'-6"	8'-6"			1'-0"	1'-6"	2'-6"	4'-0"	7'-0"	7'-0"	9'-6"		
	210	1'-0"	1'-0"	2'-0"	3'-0"	4'-6"	5'-0"	9'-0"			1'-0"	2'-0"	3'-0"	4'-6"	8'-0"	8'-0"	10'-0"		
	230	1'-0"	2'-0"	2'-6"	3'-6"	5'-0"	5'-6"	10'-0"			1'-0"	2'-6"	3'-6"	5'-0"	8'-6"	9'-0"	10'-6"		
	360	2'-0"	3'-0"	4'-0"	5'-6"	7'-0"	7'-6"	11'-0"			2'-0"	3'-6"	5'-0"	7'-0"	9'-6"	9'-6"	11'-0"		
	560	1'-6"	3'-0"	4'-6"	5'-6"	8'-0"	8'-6"	12'-0"			3'-0"	4'-6"	6'-0"	8'-0"	10'-6"	11'-0"	12'-0"		
14"	110	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	2'-6"	4'-6"	8'-6"		1'-0"	1'-0"	1'-0"	2'-6"	5'-0"	6'-0"	9'-0"	12'-0"	
	210	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	3'-0"	5'-6"	9'-6"		1'-0"	1'-0"	2'-0"	3'-6"	6'-0"	7'-0"	10'-0"	13'-0"	
	230	1'-0"	1'-0"	1'-0"	2'-0"	3'-6"	4'-0"	6'-0"	10'-6"		1'-0"	1'-0"	2'-6"	4'-0"	6'-6"	7'-6"	11'-0"	13'-6"	
	360	1'-0"	1'-0"	2'-0"	3'-6"	5'-6"	6'-0"	8'-6"	12'-6"		1'-0"	2'-0"	4'-0"	5'-6"	9'-0"	10'-0"	12'-0"	14'-0"	
	560	1'-0"	1'-0"	1'-6"	3'-6"	5'-6"	6'-6"	9'-6"	13'-6"		1'-0"	3'-0"	5'-0"	7'-0"	10'-0"	11'-0"	13'-6"	15'-0"	
16"	210	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-6"	6'-0"	10'-0"	1'-0"	1'-0"	1'-0"	1'-6"	4'-6"	5'-6"	10'-0"	12'-6"	16'-0"
	230	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	2'-0"	4'-0"	6'-6"	11'-0"	1'-0"	1'-0"	1'-0"	2'-6"	5'-0"	6'-0"	10'-6"	13'-6"	16'-6"
	360	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	4'-0"	6'-6"	10'-0"	13'-6"	1'-0"	1'-0"	2'-0"	4'-0"	7'-6"	8'-6"	13'-0"	14'-6"	17'-0"
	560	1'-0"	1'-0"	1'-0"	1'-0"	2'-6"	3'-6"	7'-0"	11'-0"	15'-0"	1'-0"	1'-0"	3'-6"	5'-6"	9'-0"	10'-0"	14'-6"	16'-0"	18'-0"
		4"	5"	6"	7"	8"	10"	12"	15"	17"	4"	5"	6"	7"	8"	10"	12"	15"	17"
18"	360	1'-0"	1'-0"	1'-0"	1'-6"	3'-0"	6'-0"	9'-0"	15'-0"		1'-0"	1'-6"	4'-0"	6'-6"	9'-0"	14'-6"	16'-6"	19'-6"	
	560	1'-0"	1'-0"	1'-0"	1'-0"	2'-0"	6'-0"	10'-0"	16'-6"		1'-0"	3'-6"	6'-0"	8'-6"	11'-6"	16'-6"	18'-0"	20'-0"	
20"	360	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	3'-0"	6'-0"	11'-0"	15'-6"	1'-0"	1'-0"	1'-6"	4'-0"	7'-0"	12'-6"	16'-6"	19'-0"	21'-0"
	560	1'-0"	1'-0"	1'-0"	1'-0"	1'-0"	1'-6"	5'-6"	12'-0"	16'-0"	1'-0"	1'-0"	3'-0"	6'-0"	8'-6"	14'-0"	17'-6'	19'-6"	20'-6"

Rectangular holes based on measurement of longest side.

- Holes may be located vertically anywhere within the web. Leave ⅛" of web (minimum) at top and bottom of hole.
- Knockouts are located in web at approximately 12" on-center; they do not affect hole placement.
- For simple span (5' minimum), uniformly loaded joists used in residential applications, one maximum size round hole may be located at the center of the joist span provided that no other holes occur in the joist.
- Distances are based on the maximum uniform loads from current iLevel specifier's guides. For other load conditions or hole configurations use iLevel® TJ-Beam® software or contact your iLevel representative.

ALLOWABLE HOLES - Headers and Beams

1.55E TimberStrand ® LSL Headers and Beams

Header or Beam Depth	Maximum Round Hole Size
9¼"-9½"	3"
11¼"-11 ⅞"	3⅝"
14"-16"	4⅝"

See illustration for allowed hole zone

General Notes
- Allowed hole zone suitable for headers and beams with uniform and/or concentrated loads .
- Round holes only
- No holes in headers or beams in plank orientation.

Other iLevel ® Trus Joist ® Headers and Beams

DO NOT cut, notch or drill holes in headers or beams except as indicated in illustrations and tables.

Header or Beam Depth	Maximum Round Hole Size
4⅜"	1"
5½"	1¾"
7¼"- 20"	2"

See illustration for Allowed Hole Zone

General Notes
- Allowed hole zone suitable for headers and beams with uniform loads only.
- Round holes only
- No holes in cantilevers.
- No holes in headers or beams in plank orientation.

WARNING

Joists are unstable until braced laterally

Bracing Includes:
- Blocking
- Hangers
- Sheathing
- Rim Board
- Strut Lines
- Rim Joist

DO NOT walk on joists until braced. INJURY MAY RESULT.

DO NOT walk on joists that are lying flat.

DO NOT stack building materials on unsheathed joists. Stack only over beams or walls.

WARNING NOTES:

Lack of proper bracing during construction can result in serious accidents. Observe the following guidelines:

1. All blocking, hangers, rim boards and rim joists at the end supports of the TJI® joists must be completely installed and properly nailed.
2. Establish a permanent deck (sheathing), fastened to the first 4 feet of joists at the end of the bay or braced end wall.
3. Safety bracing of 1x4 (minimum) must be nailed to a braced end wall or sheathed area and to each joist.
4. Sheathing must be completely attached to each TJI® joist before additional loads can be placed on the system.
5. Ends of cantilevers require safety bracing on both the top and bottom flanges.
6. The flanges must remain straight within 1/2" from true alignment.

Warning: Drilling, sawing, sanding or machining wood products generates wood dust, a substance known to the state of California to cause cancer. For more information on Proposition 65, visit www.wy.com/inform .

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PROJECT NAME AND ADDRESS

REAR AND SECOND
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1031 CROSS DRIVE
ALEXANDRIA VIRGINIA 22302

PROJECT #
J21103

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COMMONWEALTH OF VIRGINIA
GEORGE C. GERBER
Lic. No. 2311
08/20/2021
PROFESSIONAL ENGINEER

REVISION	DATE

ISSUE DATE
08/20/2021

SHEET TITLE
TJI'S DETAILS

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