

PLAN COMMISSION / ZONING BOARD OF APPEALS AGENDA

Thursday, February 9, 2023 6:30 P.M.

Frankfort Village Hall 432 W. Nebraska Street (Board Room)

- 1. Call to Order
- 2. Roll Call
- 3. Approval of Minutes of January 26, 2023
- 4. Public Hearing: 700 Birchwood Road Markunas Residence (Ref. #104)

Public Hearing Request: Request for a variation from Article 6, Section B, Part 1 to reduce the minimum required rear yard setback from 30 feet to 23 feet for a proposed addition to a home in the R-2, Single Family Residential District located at 700 Birchwood Road (PIN: 19-09-21-120-014-0000).

- 5. Public Comments
- 6. Village Board & Committee Updates
- 7. Other Business
- 8. Attendance Confirmation (February 23, 2023)
- 9. Adjournment

All applicants are advised to be present when the meeting is called to order. Agenda items are generally reviewed in the order shown on the agenda, however, the Plan Commission/Zoning Board of Appeals reserves the right to amend the agenda and consider items in a different order. The Commission may adjourn its meeting to another day prior to consideration of all agenda items. All persons interested in providing public testimony are encouraged to do so. If you wish to provide public testimony, please come forward to the podium and state your name for the record and address your comments and questions to the Chairperson.

MINUTES



MEETING OF VILLAGE OF FRANKFORT PLAN COMMISSION / ZONING BOARD OF APPEALS

January 26, 2023 - VILLAGE ADMINISTRATION BUILDING

432 W. NEBRASKA STREET

Call to Order: Chair Rigoni called the meeting to order at 6:30 PM

Commissioners Present: Chair Maura Rigoni, Brian James, Dan Knieriem, Will Markunas,

Nichole Schaeffer

Commissioners Absent: David Hogan, Jessica Jakubowski

Staff Present: Director of Community and Economic Development Mike

Schwarz, Senior Planner Christopher Gruba

Elected Officials Present: Trustee Daniel Rossi

A. Approval of the Minutes from January 12th, 2023

Motion (#1): To approve the minutes from January 12th, 2023.

Motion by: Knieriem Seconded by: Markunas

Approved: (4-0, Commissioner Schaeffer Abstained)

B. Public Hearing: Drive-Through Coffee Shop – Hickory Creek Marketplace Subdivision

Chair Rigoni swore in member of the audience wishing to provide testimony.

Chris Gruba presented the staff report and summarized the changes to the plans since the workshop meeting.

Chair Rigoni asked the applicant if she wanted to make additional comments.

Aliana Winkle approached the podium and offered to answer any additional questions from the commission.

The project architect approached the podium and offered to answer any questions from the commission. He stated that is has been about eight months since they filed an application, and they did take into account the comments that were provided at the workshop.

Chair Rigoni asked if there was anyone in the audience wishing to provide testimony. There was no response.

Motion (#2): To close the public hearing.

Motion by: Schaeffer Seconded by: Markunas

Approved: 5-0

Chair Rigoni asked the commission if there was any questions or comments on the special uses. There were none.

Chair Rigoni asked the commission if there were any questions or comments on the Major Change to the PUD. There were none.

Chair Rigoni asked the commission if there were any questions about the site plan.

Commissioner Schaeffer asked about the direction of traffic flow.

Aliana Winkle stated that the flow would be clockwise around the building.

Commissioner Knieriem asked about the order taking.

Aliana Winkle stated that all order taking will be done outdoors at the drive-up and the order takers will have head-to-toe custom clothing and outdoor heaters for the winter months.

Chair Rigoni asked if there would be a menu board.

Aliana responded that they will just have a small signpost for customers to scan a QR code, which would bring up the menu on their phone.

Chair Rigoni asked staff if they received the complete signage plan for the site including any menu boards and directional signs.

Chris Gruba responded no, only the wall and canopy signage was submitted as provided in the packet.

Commissioner Knieriem asked if the commission had any issue with the waiver of the landscaping around the bypass lane. There was consensus that this was not an issue.

Commissioner Knieriem asked about the type of brick that is proposed.

The project architect stated that they are proposing to use thin brick.

There was some discussion among the commissioner members about the dimension of the brick and Village standards that would apply.

Commissioner Schaeffer stated that she is fine with the architecture.

Commissioner Markunas stated that bringing in the arches on the canopies helps. He also stated that the thin brick has not been allowed in the Hickory Creek Marketplace development.

The project architect stated that dimensional brick would add more cost to the project, but they could install this by adding a concrete sill or brick ledge.

Commissioner James asked about the east elevation, which shows that the dominant material is the lighter color brick and the accents are the darker brick, which is different from the other buildings in the Hickory Creek Marketplace development.

The project architect responded that he looked at the brick colors on the Emagine Theatre which has a similar situation.

Chair Rigoni state that she serious concerns about the architecture and the color scheme not matching the rest of the Hickory Creek Marketplace PUD. This is the last site and the proposed building should match the other buildings such as Steak and Shake.

Chair Rigoni asked the commissioners if there were any questions or comments about parking.

There was consensus that parking was not an issue.

Chair Rigoni asked the commission if there were any questions or comments about circulation.

There was consensus that circulation was not an issue.

Chair Rigoni asked the commission if there were any questions or comments about loading.

There was consensus that loading was not an issue.

Chair Rigoni asked if the commission if there were any questions or comments about landscaping.

There was consensus that landscaping was not an issue.

Chair Rigoni asked staff about the fence detail.

Chris Gruba responded that the fence around the outdoor seating would be a black metal fence.

Chair Rigoni asked the commission if there were any questions or concerns about lighting.

There was consensus that lighting was not an issue.

Chair Rigoni asked the commission if there were any questions or comments about signage.

Chair Rigoni stated that it was clear from the feedback that the commission provided at the workshop that the applicant was supposed to comply with Ordinance No. 1654.

Chair Rigoni asked the applicant is she was choosing to deviate from the original signage.

Alaina replied yes but she will not die on that hill.

Chair Rigoni asked the commission members if there were any question or comments about signage.

Commissioner James stated that he no questions at this time.

Commissioner Markunas stated to the applicant that we talked at the workshop about matching the PUD as far as signage.

Commissioner Schaeffer stated that she likes the retro sign on the east side, but maybe if they have to remove signage, it can be done on the canopy.

Alina Winkle responded that they did flip that retro sign to the LaGrange Road (west) side.

Commissioner Knieriem stated that he agrees that the Municipal Code only allows two signs, and he supports that. They can come back later for another variation if needed.

There was some discussion about signage as related to the overall PUD and the timing of making any request for deviations.

Chair Rigoni stated that the commission didn't even let Starbucks have signage on the canopy of the drive through.

Chair Rigoni stated that the commission is looking for the applicant to meet the Village's Sign Code. She added that should they decide they do not want to meet the Sign Code staff needs more information in order to identify all of the deviations.

Chair Rigoni stated that she does not feel comfortable with the signage as presented.

Commissioner Markunas stated the commission would be comfortable with a stipulation that the signage would be in accordance with the requirements of the Hickory Creek Marketplace PUD.

Chair Rigoni noted that the Village standard condition which states "in accordance with the submitted plans" would not apply to the signage plan as it is currently presented.

Chair Rigoni asked about the parapet wall screening the rooftop units.

Chris Gruba affirmed that the rooftop HVAC units would be screened from view.

There was some discussion about the location of the rooftop ladder.

Commissioner Knieriem stated that this exterior ladder will invite trouble.

The project architect state that the ladder does not need to be on the La Grange Road (west) side, so thank you for pointing that out. The ladder will have a lock-up cage to keep people from climbing.

Chair Rigoni asked staff why two trees had to be removed.

Chris Gruba deferred to the applicant to respond.

Robin Ersfeldt, the project engineer, approached the podium stated that one tree was removed to clear the sight triangle as vehicles enter and exit the site.

Chair Rigoni stated that she was concerned about the net loss of one tree when there is room on the site to add another tree.

Chair Rigoni asked if there were any other questions or comments.

Mike Schwarz mentioned that the light poles within the parking lot will be lower than the other lots within the development and just wanted to make sure that was on the record should there be any concerns from the commission. He noted that the new light poles will have LED style fixtures and will not have the "shoe-box" style fixtures which are found on the excising taller parking lot light poles in the development. The paint color of the new light poles and fixtures as well as the concrete bases would match the existing light poles and fixtures.

Motion (#3): Recommend to the Village Board to approve the Major Change to a PUD including the following exceptions to the Zoning Ordinance:

- 1. Reduced trash enclosure setback of 5' (10' required from any lot line);
- 2. Relief from the required 5' wide landscape bed adjacent to drive through lanes; and,
- 3. Relief from the required sidewalk connection from the building to the existing sidewalk along La Grange Road,

in accordance with the reviewed plans and public testimony, conditioned on:

- 1. Final engineering approval;
- 2. Using standard brick instead of thin brick on the building;
- 3. Submittal and staff review and approval of a complete signage package which is in accordance with Ordinance No. 1654; and,
- 4. Relocation of the exterior rooftop access ladder to a side other than the west façade.

Motion by: Markunas Seconded by: Schaeffer

Approved: (3-2) (Rigoni, James voted no)

Motion (#4): Recommend the Village Board approve a Special Use Permit to allow a carry-out restaurant use on the property located at Outlot 1E in Hickory Creek Marketplace, in accordance with the reviewed plans and public testimony and conditioned on final engineering approval.

Motion by: Knieriem Seconded by: Schaeffer

Approved: (5-0)

<u>Motion (#5):</u> Recommend the Village Board approve a Special Use Permit to allow drive-up service windows associated with a permitted use on the property located at Outlot 1E in Hickory Creek Marketplace, in accordance with the reviewed plans and public testimony and conditioned on final engineering approval.

Motion by: James Seconded by: Knieriem

Approved: (5-0)

<u>Motion (#6):</u> Recommend the Village Board approve a Special Use Permit to allow outdoor seating associated with a permitted restaurant on the property located at Outlot 1E in Hickory Creek Marketplace, in accordance with the reviewed plans and public testimony and conditioned on final engineering approval.

Motion by: James Seconded by: Schaeffer

Approved: (5-0)

Motion (#7): Recommend the Village Board approve a Special Use Permit to allow extended hours of operation (5:30 am – 8 pm Monday – Saturday and from 6 am – 6 pm on Sunday) on the property located at Outlot 1E in Hickory Creek Marketplace, in accordance with the reviewed plans and public testimony and conditioned on final engineering approval.

Motion by: Markunas Seconded by: Schaeffer

Approved: (5-0)

C. Public Comments

There were none.

D. Village Board & Committee Updates

Mike Schwarz noted that the Village Board approved the following items at their meeting on January 17th, 2023, which had previously appeared before the Plan Commission:

- Taqueria Mammy Chaya Special Use Permit for Accessory Liquor Sales: 21206
 S. LaGrange Road Ordinance was approved.
- Formal Legal Objection to Rezoning: Will County Zoning Case ZC-22-045 PIN: 18-13-08-100-014-0000 Resolution was approved.

E. Other Business

There was no other business.

F. Attendance Confirmation (February 9th, 2023)

could not attend the February 9 th meeting.					
Motion (#6): Adjournment 7:26 P.M.					
Unanimously approved by voice vote.					
Approved February 9 th , 2023					
As Presented As Amended					
/s/ Maura Rigoni, Chair					
/s/ Secretary					

Chair Rigoni asked the members of the Plan Commission to notify staff if they knew they

Planning Commission / ZBA



February 9, 2022

Project: Markunas Residence First Floor Addition

Meeting Type: Public Hearing

Request(s): Reduce rear yard setback from 30 feet to 23 feet to allow construction of an addition to the

rear yard of a single-family home.

Location: 700 Birchwood Road **Applicant:** Will and Jaime Markunas

Prop. Owner: Same as above

Consultants: Gabe Garcia, Architect

Representative: None

Report By: Drew Duffin

Site Details

Lot Size: 13,344 SF +/-

PIN(s): 19-09-21-120-014-0000

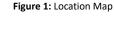
Existing Zoning: R-2, Single-Family Detached Residential

Prop. Zoning: N/A

Building(s) / Lot(s): 1 building / 1 lot

Adjacent Land Use Summary:

	Land Use	Comp. Plan	Zoning
Subject Property	Single-family Residential	Single Family Detached Residential	R-2
North	Single-family Residential	Single Family Detached Residential	R-2
South	Undeveloped Land	Open Space/Environmental Conservation	R-2
East	Single-family Residential	Single Family Detached Residential	R-2
West	Single-family Residential	Single Family Detached Residential	R-2





Project Summary -

The applicants, Will and Jaime Markunas, are seeking to build a first-floor addition to their two-story home located at 700 Birchwood Road. The applicants intend to remove the existing rear deck to create an additional living space on the west side of the home, as well as additional storage space in the basement. The additional living space would extend to the existing, 30-foot rear yard setback. A new covered deck would be built on the west side of the home, extending out from the proposed addition. The applicants are requesting a variance to reduce the required rear yard setback from 30 feet to 23 feet to accommodate the proposed covered deck.

Attachments -

- 2022 Aerial Photograph from Will County GIS
- Photographs of site taken on February 2nd, 2022
- PC/ZBA Evaluation Form for Variation Findings of Fact
- Architectural Plans dated November 8th, 2022

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In consideration of the requests, staff offers the following points of discussion:

• The following table is provided to compare the subject property with the R-2 District dimensional and bulk standards:

	R-2 Single-Family Detached Residential District Requirement	Subject Property	Comments
Minimum Lot Size (square feet) (Single-Family Dwelling)	15,000 SF	13,344 SF	Legally nonconforming
Minimum Lot Width (Feet)	100 feet	90 feet	Legally nonconforming
Minimum Lot Depth	150 feet	150 feet	
Minimum Required Yards (feet) • Front • Side • Rear • Corner Side	 30 feet Total 25 feet; min. 10 feet on any side 30 feet 30 feet 	 43 feet existing 14.17 feet existing 30 feet existing, 23 feet proposed 24.58 feet existing 	Variation rear yard requested. Corner side yard is legally nonconforming
Maximum Height (feet)	35 feet	19 feet	
Maximum Lot Coverage	20%	17% existing, 19.5% proposed	
Maximum Impervious Coverage	40%	35.93% existing, 37.12% proposed	
Maximum Rear Yard Coverage	30%	5.82% existing, 10.71% proposed	
Minimum Gross Floor Area (square feet, includes basement)	2,600 (for a two-story)	2,141 SF existing, 2,475 SF proposed	Legally nonconforming
Minimum Basement Size	80% of the ground floor area	42.5% existing, 51.86% proposed	Legally nonconforming

- The existing lot is Lot 7 in the Colorado Hills Subdivision, which was recorded in 1972. At the time the subdivision was recorded, the lot complied with the minimum standards for the R-2 district.
- The existing lot is smaller than the typical R-2 lot as described in the Zoning Ordinance. It is equal in depth to a standard R-2 lot, which must be 150 feet deep, but is only 90 feet wide, where the Zoning Ordinance requires at least 100 feet. If the existing home was built on a standard R-2 lot, and if the same addition were proposed, the applicants would still need to request the same variance from the required rear yard setback.

Although previous Village approvals of variation requests do not set any precedent, the following information is provided as background:

On June 7th, 2021, the Village Board approved a similar request for a variation from the required rear yard setback from 30 feet to 23.4 feet for the proposed single-family home located at 99 N. White Street (Ord. No. 3302). While the site remains undeveloped at the time of writing, the underlying land shares similarities with the lot at 700 Birchwood Road. Both have similar lot depths (147 feet vs. 150 feet), and both are corner lots.

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For reference during the Public Hearing, Article 3, Section B, Part 3 of the Village of Frankfort Zoning Ordinance lists "findings" or "standards" that the Zoning Board of Appeals must use to evaluate every variation request.

- a. The Zoning Board of Appeals shall not vary the provisions of this Ordinance as authorized in this Article 3, Section B, unless they have made findings based upon the evidence presented to it in the following cases:
 - 1. That the property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in that zone;
 - 2. That the plight of the owner is due to unique circumstances;
 - 3. That the variation, if granted, will not alter the essential character of the locality.
- b. For the purpose of supplementing the above standards, the Zoning Board of Appeals, in making this determination, whenever there are practical difficulties or hardships, shall also take into consideration the extent to which the following facts, favorable to the applicant, have been established by the evidence:
 - 1. That the particular physical surroundings, shape or topographical conditions of the specific property involved will bring a particular hardship upon the owner, as distinguished from a mere inconvenience, if the strict letter of the regulations was carried out;
 - 2. That the conditions upon which the petition for variation is based would not be applicable, generally, to other property within the same zoning classification;
 - 3. That the purpose of the variation is not based exclusively upon a desire to make more money out of the property;
 - 4. That the alleged difficulty or hardship has not been created by any person presently having an interest in the property;
 - 5. That the granting of the variation will not be detrimental to the public welfare or unduly injurious to other property or improvements in the neighborhood in which the property is located;
 - 6. That the exterior architectural appeal and functional plan of any proposed structure will not be so at variance with either the exterior architectural appeal and functional plan of the structures already constructed, or in the course of construction in the immediate neighborhood or the character of the applicable district, as to cause a substantial depreciation in the property values within the neighborhood;
 - 7. That the proposed variation will not impair an adequate supply of air to adjacent property, substantially increase the danger of fire, otherwise endanger the public safety or substantially diminish or impair property values within the neighborhood.

Affirmative Motion —

For the Commission's consideration, staff provides the following potential affirmative motions:

 Recommend that the Village Board approve the request for a variation from Article 6, Section B, Part 1 to reduce the required rear yard setback from 30 feet to 23 feet for a property in the R-2 Single-Family Residential District located at 700 Birchwood Road in accordance with the submitted plans, public testimony, and Findings of Fact.



700 Birchwood Road



DuPage Kane Cook Kendal **Kankakee**

Roadways Federal State County Local and Private **Parcels**

Townships

WGS_1984_Web_Mercator_Auxiliary_Sphere

0.04 0.1 Miles

1: 2,257

Disclaimer of Warranties and Accuracy of Data: Although the data developed by Will County for its maps, websites, and Geographic Information System has been produced and processed from sources believed to be reliable, no warranty, expressed or implied, is made regarding accuracy, adequacy, completeness, legality, reliability or usefulness of any information. This disclaimer applies to both isolated and aggregate uses of the information. The County and elected officials provide this information on an "as is" basis. All warranties of any kind, express or implied, including but not limited to the implied warranties of merchantability, fitness for a particular purpose, freedom from contamination by computer viruses or hackers and non-infringement of proprietary rights are disclaimed. Changes may be periodically made to the information herein; these changes may or may not be incorporated in any new version of the publication. If you have obtained information from any of the County web pages from a source other than the County pages, be aware that electronic data can be altered subsequent to original distribution. Data can also quickly become out of date. It is recommended that careful attention be paid to the contents of any data, and that the originator of the data or information be contacted with any questions regarding appropriate use. Please direct any questions or issues via email to gis@willcountyillinois.com.

Notes



East façade



SE facade



SW façade



SW façade



Standards of Variation Commissioner Evaluation Form

Article 3, Section B, Part 3 of the Village of Frankfort Zoning Ordinance lists "findings" or "standards" that the Zoning Board of Appeals must use to evaluate every variation request. The Zoning Board of Appeals must answer the following three findings favorable to the applicant based upon the evidence provided.

	STANDARD	NOTES	MEE	TS
1.	That the property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in that zone;		YES	NO
2.	That the plight of the owner is due to unique circumstances;		YES	NO
3.	That the variation, if granted, will not alter the essential character of the locality.		YES	NO

For the purpose of supplementing the above standards, the Zoning Board of Appeals also determines if the following seven facts, favorable to the applicant, have been established by the evidence.

	STANDARD	NOTES	MEET	S
1.	That the particular physical surroundings, shape			
	or topographical conditions of the specific			
	property involved will bring a particular		YES	NO
	hardship upon the owner, as distinguished from			
	a mere inconvenience, if the strict letter of the			
	regulations was carried out;			

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2.	That the conditions upon which the petition for		
	variation is based would not be applicable,	YES	NO
	generally, to other property within the same		
	zoning classification;		
3.	That the purpose of the variation is not based		
	exclusively upon a desire to make more money	YES	NO
	out of the property;		
4.	That the alleged difficulty or hardship has not		
	been created by any person presently having an	YES	NO
	interest in the property;		
5.	That the granting of the variation will not be		
	detrimental to the public welfare or unduly		
	injurious to other property or improvements in	YES	NO
	the neighborhood in which the property is		
	located;		
6.	That the exterior architectural appeal and		
	functional plan of any proposed structure will		
	not be so at variance with either the exterior		
	architectural appeal and functional plan of the		
	structures already constructed, or in the course	YES	NO
	of construction in the immediate neighborhood		
	or the character of the applicable district, as to		
	cause a substantial depreciation in the property		
	values within the neighborhood; or		
7.	That the proposed variation will not impair an		
	adequate supply of air to adjacent property,		
	substantially increase the danger of fire,	YES	NO
	otherwise endanger the public safety or		
	substantially diminish or impair property values		
	within the neighborhood.		

DESIGN CRITERIA 30 LB/FT² GROUND SNOW LOAD 90 MPH WIND DESIGN SEISMIC DESIGN CATEGORY WEATHERING SEVERE SUBJECT TO DAMAGE FROM: 42" FROST LINE DEPTH MODERATE TO SEVERE -4⁰F, 97 1/2% WINTER DESIGN TEMPERATURE 89°F, DRY BULB, 2 1/2% SUMMER DESIGN TEMPERATURE 76°F, DRY BULB, 2 1/2% ICE BARRIER UNDERLAYMENT REQUIRED FIRM # 170214 PANELS 0606H-0609H FLOOD HAZARDS 12/16/2004 AIR FREEZING INDEX 1543° (F-DAYS) 49.4⁰ F ANNUAL MEAN TEMPERATURE 6,155 HEATING DEGREE DAYS (HDD) 942 COOLING DEGREE DAYS (CDD) CLIMATE ZONE 5A MAX. 72⁰ F - HEATING MAX. 75⁰ F - COOLING INDOOR DESIGN CONDITIONS 100 - YEAR HOURLY RAINFALL RATE

USE	LIVE LOAD	DEAD LOAD
BALCONIES(EXTERIOR)	100 psf	7
DECKS	100 psf	7
ROOF LIVE LOAD	30 psf	10
ROOF RAFTERS	30 psf	10
ROOF RAFTERS W/ CATHEDRAL CEILING	30 psf	15
ROOF RAFTERS (HEAVY ROOF)-EX. CLAY, TILE, CEMENT, SLATE	30 psf	17
ATTICS (NO STORAGE WITH ROOF SLOPE NOT STEEPER THAN 3:12)	10 psf	10
ATTICS(LIMITED ATTIC STORAGE)	20 psf	10
FLOORS (EXCEPT SLEEPING ROOMS	40 psf	10
FLOORS (SLEEPING ROOMS)	30 psf	10
STAIRS	40 psf	10
GUARDRAILS AND HANDRAILS (A SINGLE CONCENTRATED LOAD APPLIED IN ANY DIRECTION AT ANY POINT ALONG THE TOP)	200 psf	
WALLS-STUD	5 psf	
WALLS-BRICK(STD)	40 psf	
PARTITIONS OR WALLS (INTERIOR), HORIZONTALLY	5 psf	
HORIZONTAL WIND LOAD (90 mph 3-SEC GUST) < 30 '	15 psf	
HORIZONTAL WIND LOAD (90 mph 3-SEC GUST) 30' TO 49'	20 psf	
GARAGES (PASSENGER CARS ONLY)	50 psf	
FOR SI: 1 PSF=0.0479 kN/ m^2 , 1 SQUARE INCH=645 mm ²		

BASE LUMBER VALUES		
TYPE	Fb	Е
HEM FIR #2 (DOMESTIC)	850 PSI	1,300,000
S.P.F. #1/#2 (CANADIAN)	875 PSI	1,400,000
MICROLLAM LVL	2600 PSI	1,900,000
PARALLAM PSL	2900 PSI	2,000,000
1.3 E TIMBERSTRAND LSL(4 3/4" TO 11 1/4")	1700 PSI	1,300,000
1.5E TIMBERSTRAND LSL(11 7/8" TO 18")	2250 PSI	1,500,000
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SEE SHEET SP-1 FOR SPECIFICATIONS FOR SITE WORK, CONCRETE, MASONRY, STEEL, CARPENTRY, INSULATION, ROOFING, DRYWALL, PLUMBING, HEATING, AND

ELECTRICAL.

ALLOWABLE FRAMING SPANS:					
FLOOR AND CEILING JOIST: CEILING JOISTS, FLOOR JOISTS AND HEADERS SHA U.S. SPAN BOOKS	ALL BE CANADIAN	LUMBER BAS	SED UPON		
ALLOWABLE SPANS ARE AS FOLLOWS:	SPRUCE-PINE-I	FIR #2 H	EM-FIR #2		
12" O.C.	2"x6" 2"x8" 14'-9" 18'-9" 12'-10" 16'-3"	22'-1 1"	23'- 6"		
2nd FLOOR, FLOOR JOISTS — 30lbs LIVE LOAD 12" O.C. 16" O.C.		19'-0" 17'-2"	22'-6" 19'-8"		
1st FLOOR, FLOOR JOISTS — 40lbs LIVE LOAD 12" O.C. ROOF RAFTERS:		17'-3" 15'-5"			
USE CANADIAN SPRUCE-PINE-FIR NO. 2 FOR ROOF CANADIAN HEM-FIR NO. 2 PER "U.S. SPAN I					
2"x6" @ 12" O.C. = 13'-9" 2"x8" @ 12" O. 2"x6" @ 16" O.C. = 11'-11" 2"x8" @ 16" O.					
HEM FIR 2"x12" @ 12" O.C. = 24'-4" 2"x10" @ 12 2"x12" @ 16" O.C. = 21'-1" 2"x10" @ 16					

A REAR COVERED DECK/OUTDOOR LIVING FOR THE MARKUNAS RESIDENCE

700 BIRCHWOOD ROAD FRANKFORT, ILLINOIS



OWNER:

WILL & JAMIE MARKUNAS 700 BIRCHWOOD RD. FRANKFORT, ILLINOIS Tel: 312.498.0858

E-mail: wmarkunas@gmail.com

AUTHORITY: VILLAGE OF FRANKFORT 432 NEBRASKA ST. FRANKFORT, ILLINOIS Tel: 815.469.2177 Fax: 815.469.7999 E-mail: N/A

BUILDING CODE INFORMATION

2012 INTERNATIONAL BUILDING CODE

- 2012 INTERNATIONAL RESIDENTIAL CODE ONE & TWO FAMILY DWELLINGS

2014 ILLINOIS STATE PLUMBING CODES 2012 INTERNATIONAL MECHANICAL CODE

- 2015 INTERNATIONAL ENERGY CONSERVATION CODE

- 2012 INTERNATIONAL FIRE CODE

- 2012 INTERNATIONAL PROPERTY MAINTENANCE CODE

- 2011 NATIONAL ELECTRICAL CODE

- 2012 FUEL GAS CODE

RECEIVED

By Mike Schwarz at 11:38 am, Jan 09, 2023

SYMBOL	S	
2 D-1	SECTION NUMBER SHEET NUMBER	WOOD FRAME WALL
A D-1	DETAIL LETTER SHEET NUMBER	E.I.F.S.
12 8 OR 8:12	ROOF PITCH RATIO	CONCRETE
•	LEVEL LINE	GRAVEL FILL BATT INSULATION
1	REVISION	CONCRETE BLOCK MINIMUM 3"x3" SOLID BEARING
	CELLING DATTERN	 OR AS REQUIRED

SILLCOCK

DETAIL W/ HEIGHT

ALUM ABD. BBLK. BBLK'G BM. BCAB. CAB. C.L.	ABOVE FIN. FLOOR ALUMINUM BOARD BLOCK BLOCKING BEAM BOTTOM OF CABINET CENTER LINE CERAMIC	H.P. INSUL. NT. JAN. LAV. L.P. MAX. M.C. MECH. MTL.	HIGH POINT INSULATION INTERIOR JANITOR LAVATORY LOW POINT MAXIMUM MEDICINE CABINET MECHANICAL METAL, MATERIAL	PLYWD. Q.T.	OPENING OPPOSITE PLATE PLASTIC LAMINATE PLYWOOD QUARRY TILE ROOF DRAIN REFERENCE REFRIGERATOR REINFORCED
CLR. COL. CONST. CONT. C.M.U. Ø DET. DN. D.W. DWG. EXIST. EA. EXP. JT. ELEV. EX. EXT. F.D.	CLEAR COLUMN CONSTRUCTION CONSTRUCTION CONTINUOUS CONCRETE MASONRY UNIT DIAMETER DETAIL DOWN DISHWASHER DRAWING EXPANSION JOINT ELEVATION COUNDATION COUNDATION	MIN. M.O. N.T.S. O.C. FIN. FLR. FLASH. FT. GA. GALV. GL. GYP. BD. HDCP. HDWR. H.M. HORIZ. HGT.	MINIMUM MASONRY OPENING NOT TO SCALE ON CENTER FINISH FLOOR FLASHING FOOT FOOTING GAUGE GALVANIZED GLASS	REQ'D. R.O. SCHED. SHT. SIM. SPEC. ST. STL. STD. T/ T. TEL. THK. TYP. VERT. W/ WD. WP. W.W.F.	REQUIRED ROUGH OPENING SCHEDULE SHEET SIMILAR SPECIFICATION STAINLESS STEEL STANDARD TOP OFF TREAD TELEPHONE THICK TYPICAL VERTICAL WITH WOOD WATERPROOF WIRE WELDED FABRIC

DISCLAIMER STATEMENT:

THE ARCHITECT SHALL NOT HAVE CONTROL OVER CHARGE OR AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, OR PROCEDURES, OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK, SINCE THESE ARE SOLELY THE OWNERS AND THE CONTRACTORS RESPONSIBILITY UNDER THE CONTRACT FOR CONSTRUCTION. THE ARCHITECT SHALL NOT BE RESPONSIBLE FOR THE OWNERS OR CONTRACTORS SCHEDULES OR FAILURE TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS. THE ARCHITECT SHALL NOT HAVE CONTROL OVER ACTS OR OMISSIONS OF THE OWNER, CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.

RESPONSIBILITY STATEMENT:

T SHALL BE THE RESPONSIBILITY OF CONTRACTOR, OWNER/CONTRACTOR CARPENTER AND CONCRETE CONTRACTOR TO HAVE FULL SET OF DRAWINGS "MARKED CONSTRUCTION", WITH LATEST REVISION DATE MARKED. IF DIMENSIONAL ERRORS ARE FOUND BETWEEN DIMENSIONS ON FOUNDATION, FIRST, AND SECOND FLOOR DRAWINGS, ARCHITECT SHALL BE NOTIFIED IMMEDIATELY AND WORK SHALL NOT PROCEED UNTIL THE DISCREPANCY IS RESOLVED. A LETTER OF DIRECTION OR A REVISED DRAWING SHALL BE PREPARED IMMEDIATELY FOR CONTRACTORS, OWNER, AND ARCHITECT'S RECORD.

	DRAWING INDEX
T-1	TITLE SHEET
T-1.1	SITE PLANS & ZONING DATA
A-1	REAR & SIDE ELEVATIONS & ROOF PLAN
A-2	EXISTING/DEMO. PLANS
A-3	FOUNDATION PLAN
A-4	FIRST FLOOR PLAN
A-5	ENERGY CODE REQUIREMENTS
M-1	MECHANICAL PLAN
E-1	ELECTRICAL PLAN
D-1	SECTION/DETAILS

CERTIFICATION				
MICHAEL J. ROOT	ARCHITECT ARCHITECT			
LICENSE NO. 001-006715	ARCHITECT LICENSE EXPIRES: 11-30-24			



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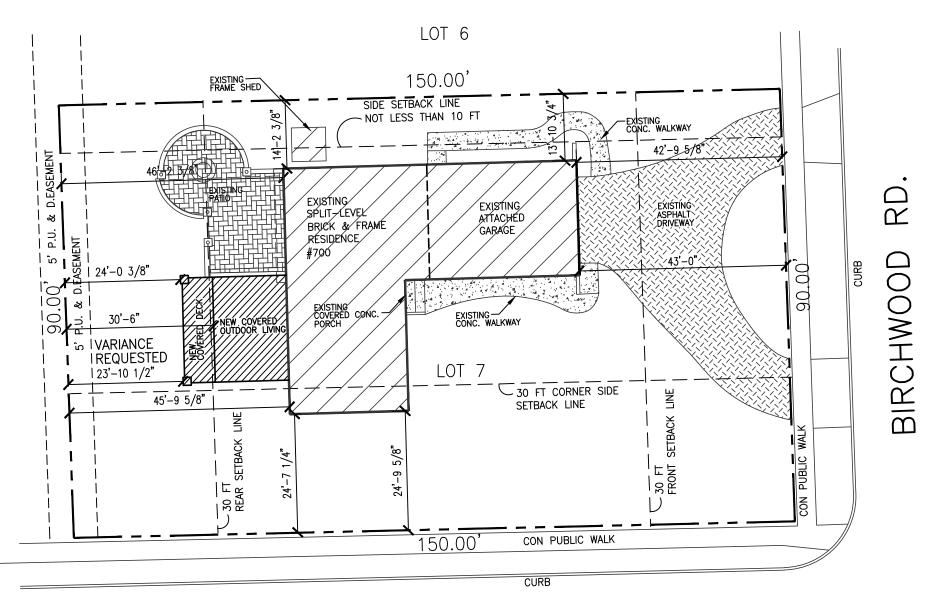
12/23/22 MICHAEL J. ROOT No. 001-006715 EXP. DATE:

> DESIGN FIRM REG. NO. 184.006972

> > EXP. DATE 4-30-23

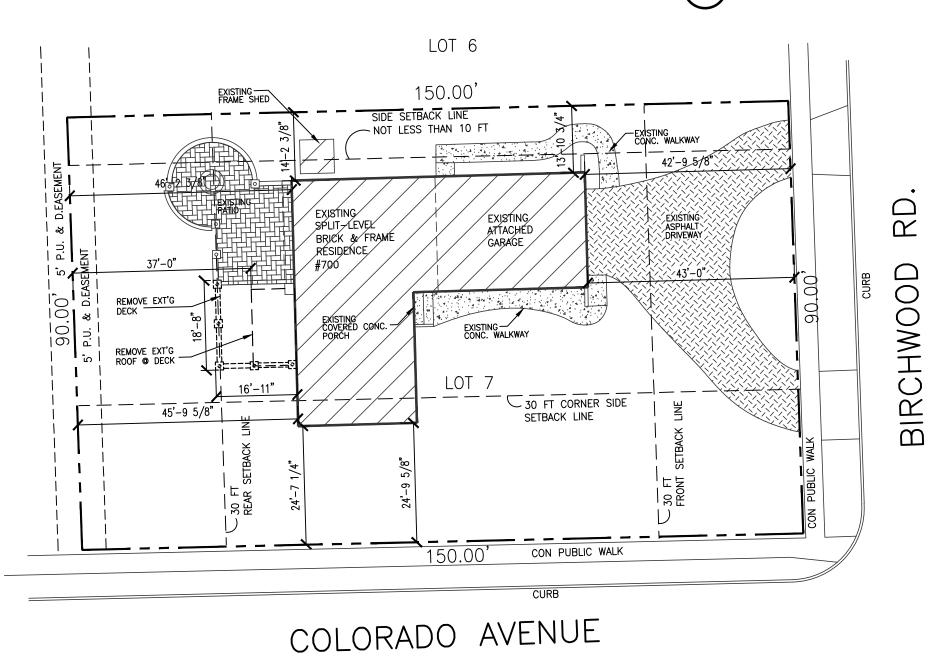
REVISIONS REV #DATE: DATE: DRAWN BY:

PREVIOUS NO. PROJECT NO.



COLORADO AVENUE

PROPOSED SITE PLAN 1"=20"



EXISTING SITE PLAN 1"=20'

ZONING DISTRICT:	R-2 SINGLE FAMILY RESIDENTIAL DIST	RICT		
USE:	SINGLE FAMILY DWELLING			
DENSITY, DIMENSIONAL, AND	OTHER STANDARDS			
	REQUIRED	ACTUAL (EXISTING)	ACTUAL (PROPOSED)	COMPLY
DWELLING UNITS:	2.25 MAX.	1	1	YES
LOT SIZE:	15,000 S.F.	13,500 S.F.	13,500 S.F.	NO
LOT WIDTH:	100 FT.	90 FT.	90 FT.	NO
LOT DEPTH:	150 FT.	150 FT.	150 FT.	YES
MINIMUM REQUIRED YARDS.	,			
	REQUIRED MINIMUM	ACTUAL (EXISTING)	ACTUAL (PROPOSED)	COMPLY
FRONT	30 FT.	42'-9 5/8"	42'-9 5/8"	YES
CORNER LOT SIDE (SOUTH)	30 FT.	24'-7 1/4"	24'-7 1/4"	NO
SIDE (NORTH)	10 FT.	13'-10 3/4"	13'-10 3/4"	YES
REAR	30 FT.	37'-0" TO EXT'G DECK ROOF	23'-10 1/2" TO ROOF COVERED DECK	NO
		45'-9 5/8" TO EXT'G RESIDENCE	30'-6" TO NEW FND/BASEMENT	YES
BULK DIMENSIONS:				
	REQUIRED	ACTUAL (EXISTING)	ACTUAL (PROPOSED)	COMPLY
HEIGHT:	35 FT. MAX.	19 FT. MAX	19 FT. MAX	YES
LOT COVERAGE:	2,700 S.F. MAX. (20% MAX.)	2,303 S.F. (17.0%) (HOUSE, GAR, & COV. PORCH & DECK)	2,634 S.F. (19.5%) (HOUSE, GAR, & COV. PORCH & DECK)	YES
IMPERVIOUS COVERAGE:	5,400 S.F. MAX (40% MAX.)	4,825 S.F. (35.7%)	5,012 S.F. (37.1%)	YES
GROSS FLOOR AREA:	MIN. 2,600 S.F.	2,141 S.F.	2,475 S.F.	NO

HOUSE GROSS SQ. FT. AREA	S			
	EXISTING	TO REMOVE	PROPOSED ADDITION	TOTAL PROPOSED
BASEMENT:	595		288	883
FIRST FLOOR:	1,385		334	1,719
SECOND FLOOR:	756		0	756
TOTAL GROSS LIVING AREA (1ST + 2ND):	2,141			2,475
SHED:	50			50
COVERED PORCH:	29			29
REAR PATIO/WALK AREAS:	568			568
GARAGE:	745			745
DRIVEWAY:	1,366			1,366
FRONT WALKS	394			394
REAR DECK	144	144		0
REAR DECK, COVERED	144	144	141	141

DESIGNS

ADCLITECTS / DESIGNEDS

ARCHITECTS / DESIGNERS

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A COVERED DECK FOR THE ARKUNAS RESIDENCE 700 BIRCHWOOD RD.

DATE:

EXP. DATE:

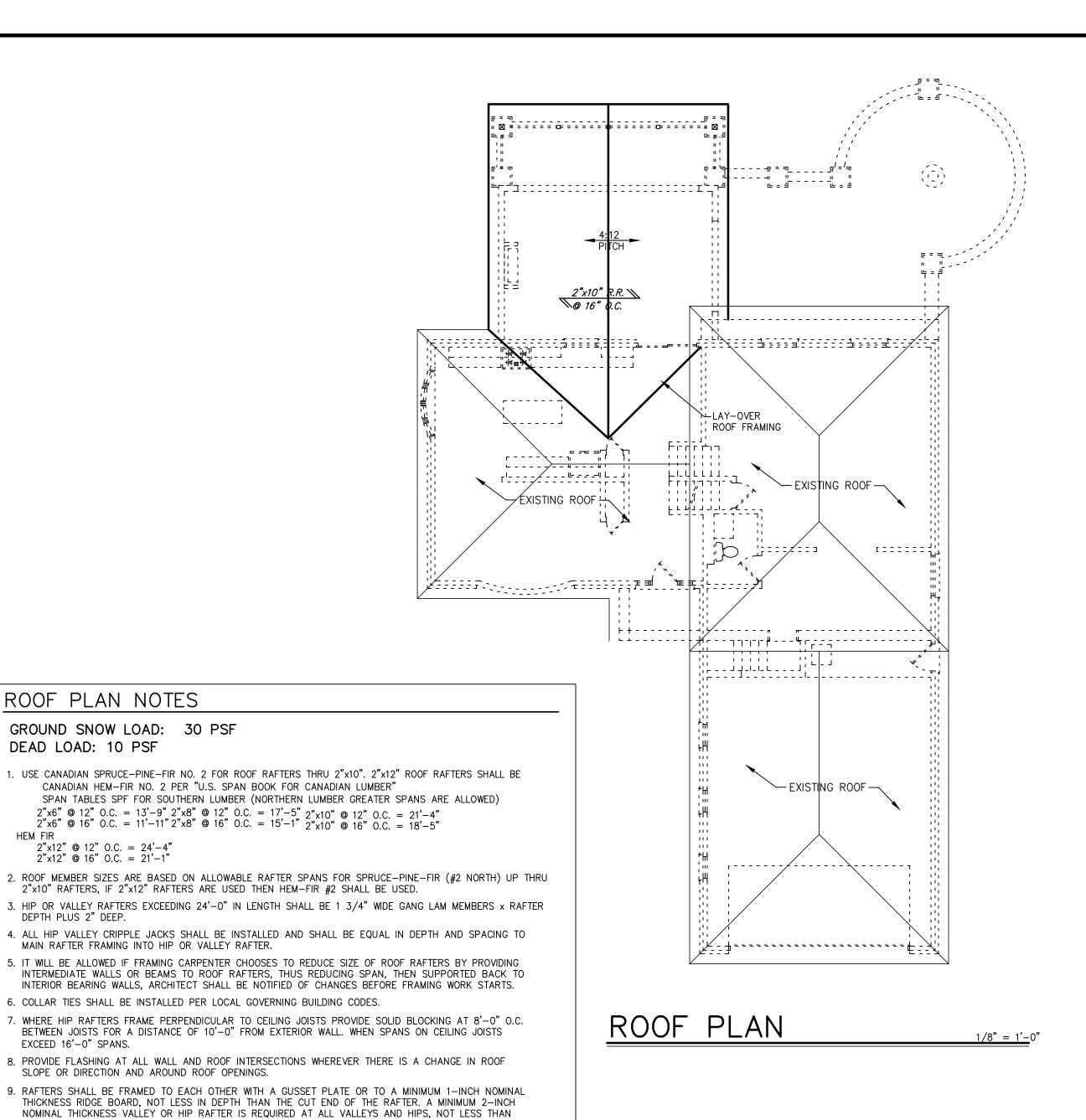
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22080

PROJECT NO.

T-11



ROOF PLAN NOTES

2"x12" @ 12" 0.C. = 24'-4" 2"x12" @ 16" 0.C. = 21'-1"

MAIN RAFTER FRAMING INTO HIP OR VALLEY RAFTER.

SLOPE OR DIRECTION AND AROUND ROOF OPENINGS.

BY ADJUSTMENT IN HIS BIRDS MOUTH CUT.

WOOD OR METAL AND NOT LESS THAN 3" ON MASONRY OR CONCRETE.

THE DEPTH OF THE CUT END OF THE RAFTER, AND SUPPORTED AT THE RIDGE BY A BRACE TO A BEARING PARTITION.

CARPENTER CONTRACTOR NOTE: THE ABOVE SPAN TABLES ARE TO BE USED FOR REFERENCE FOR MAXIMUM ROOF RAFTER SPANS. IF CARPENTER SUBCONTRACTOR IS ABLE TO SHORTEN SPAN,

ALLOWED BY LOCAL CODE. FURTHER, IF RAFTER SPAN IN A ROOF AREA CHANGES FROM MAX. SPAN ALLOWED TO LESSER SPAN CONTRACTOR MAY MAKE THAT ADJUSTMENT, SAY FROM 2"x10"s TO 2"x8"s

10. THE ENDS OF EACH RAFTER AND CEILING JOIST SHALL HAVE NOT LESS THAN 1-1/2" OF BEARING ON

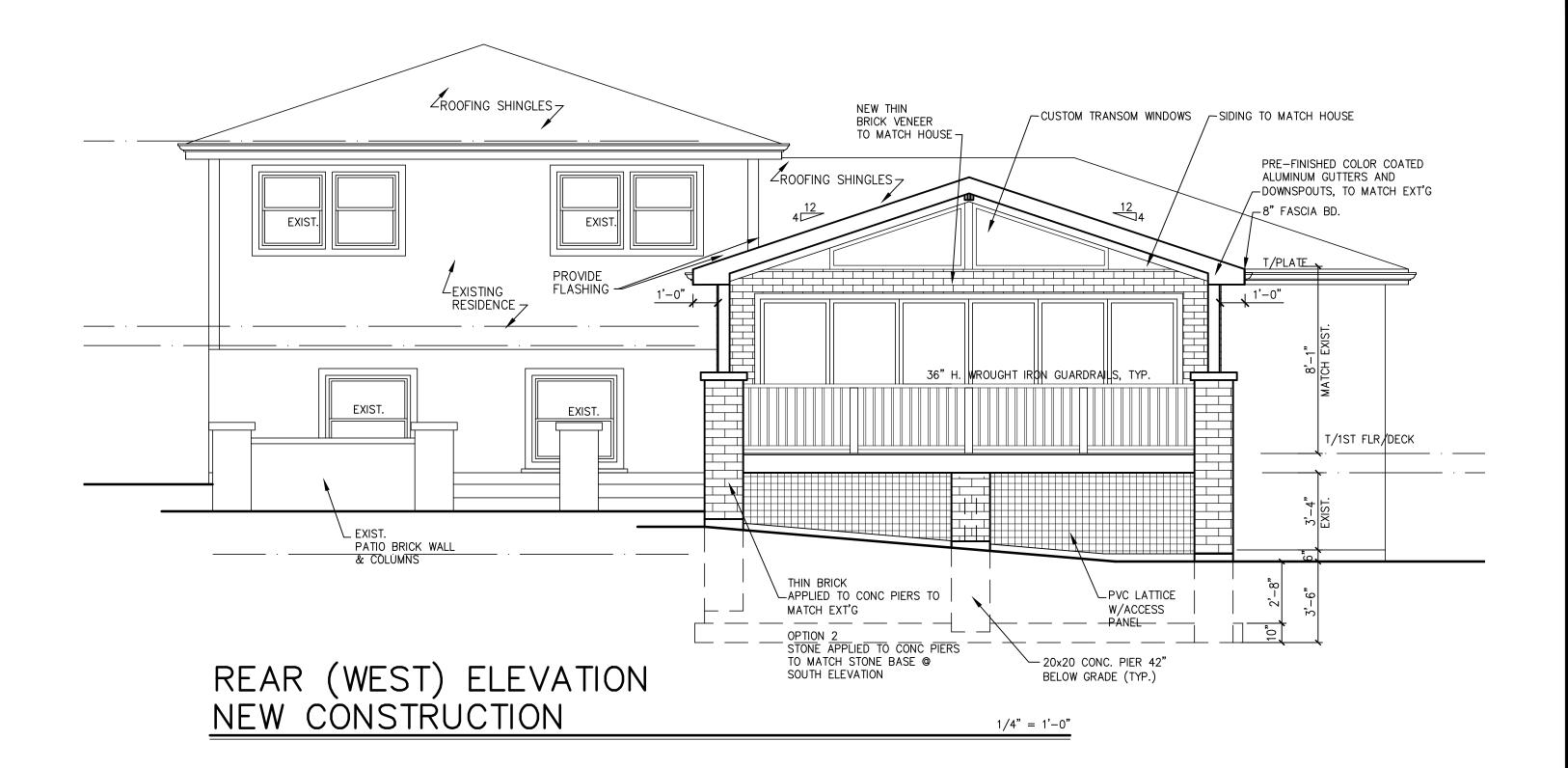
HE IS PERMITTED TO DO SO AS LONG AS HE DOES NOT EXCEED RAFTER SPANS

DEPTH PLUS 2" DEEP.

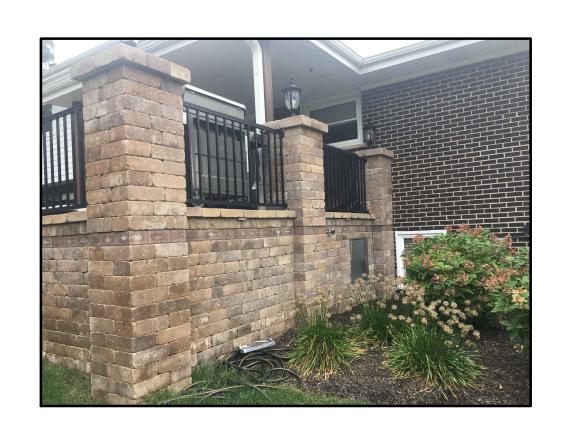
DEAD LOAD: 10 PSF

HEM FIR

GROUND SNOW LOAD: 30 PSF

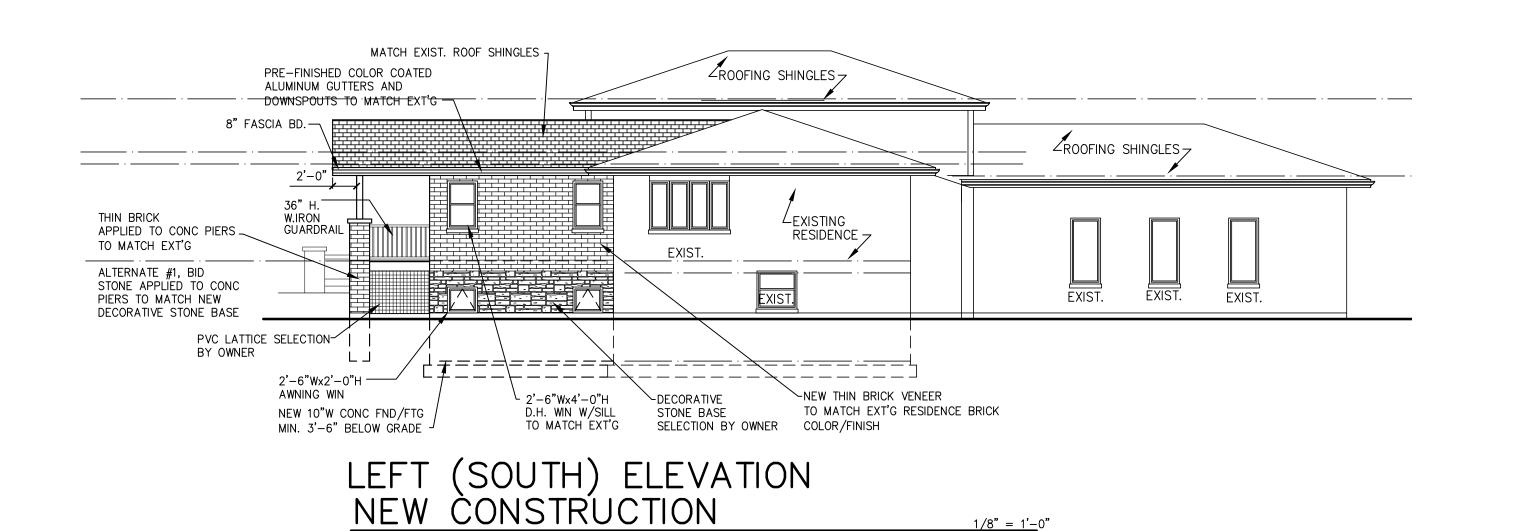


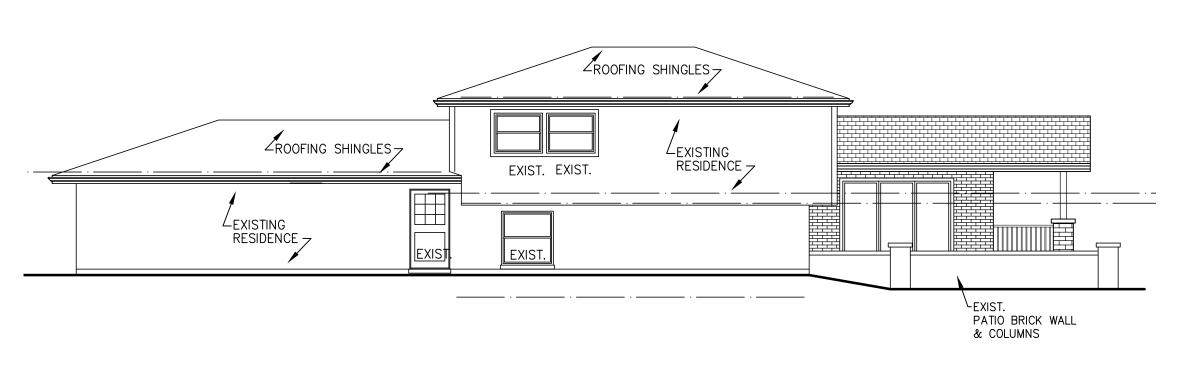












RIGHT (NORTH) ELEVATION NEW CONSTRUCTION 1/8" = 1'-0"

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DECK FOR SIDE 700 FRA

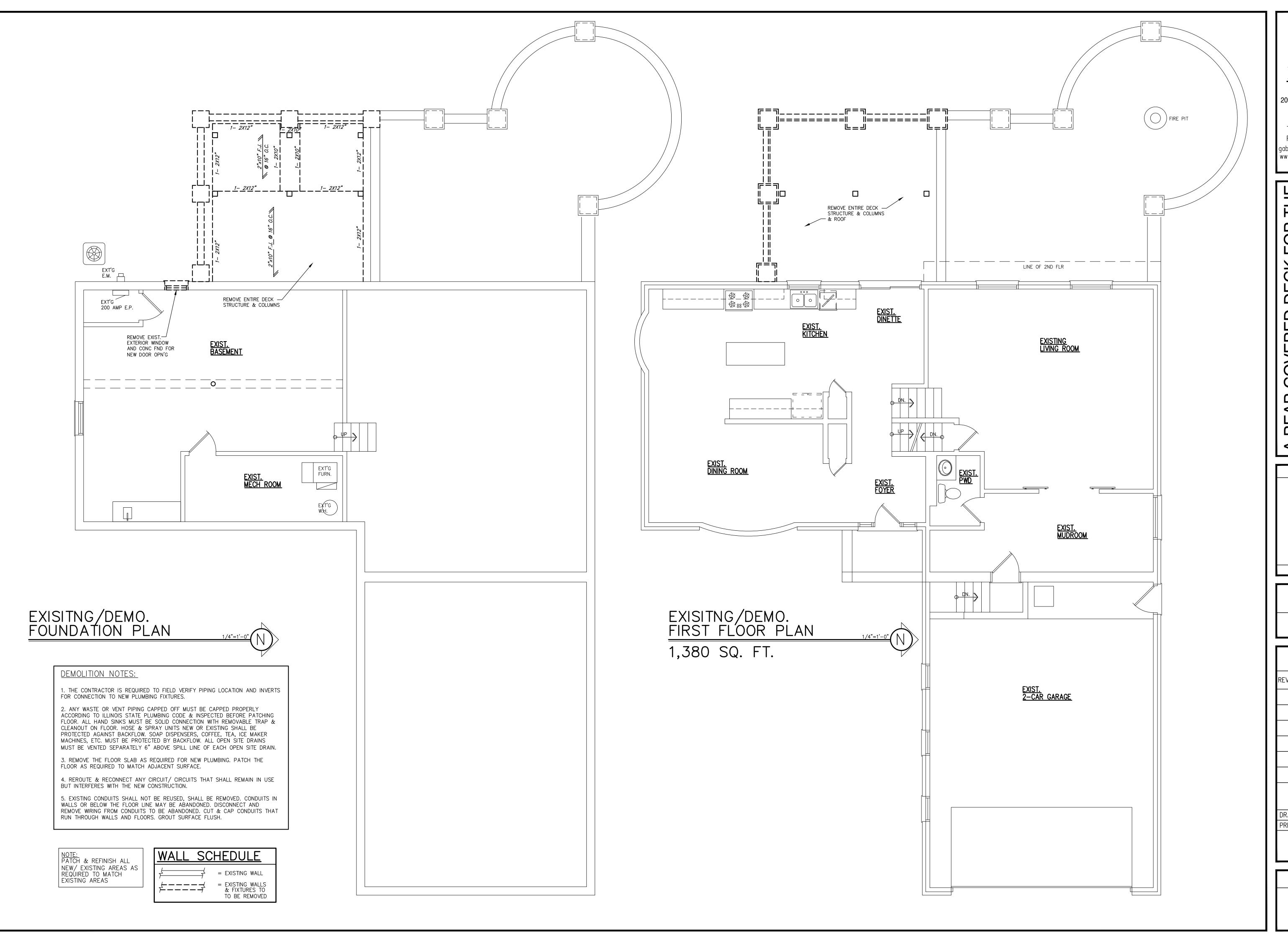
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REAR COVERED DECK FOR MARKUNAS RESIDENCE

DATE: EXP. DATE:

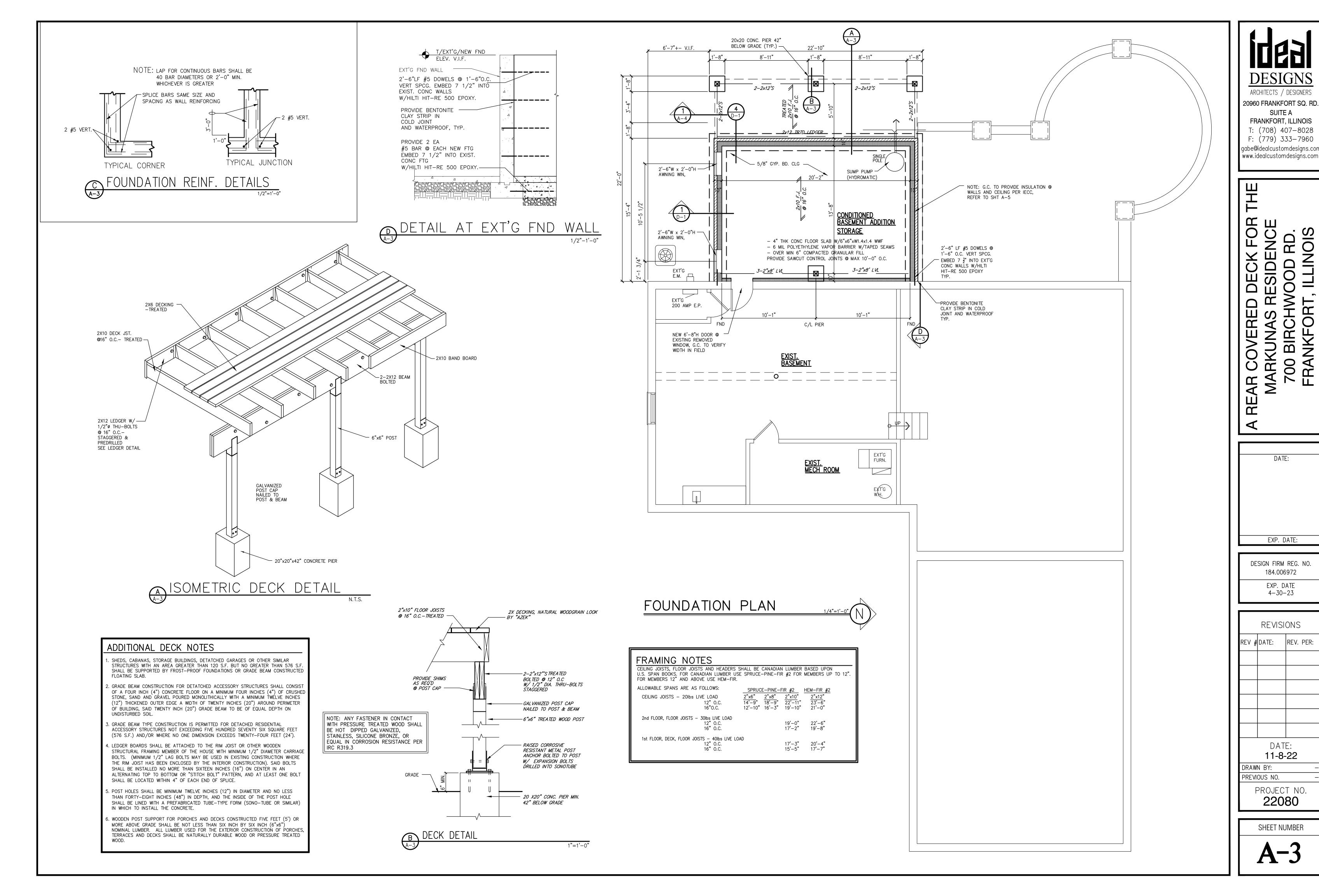
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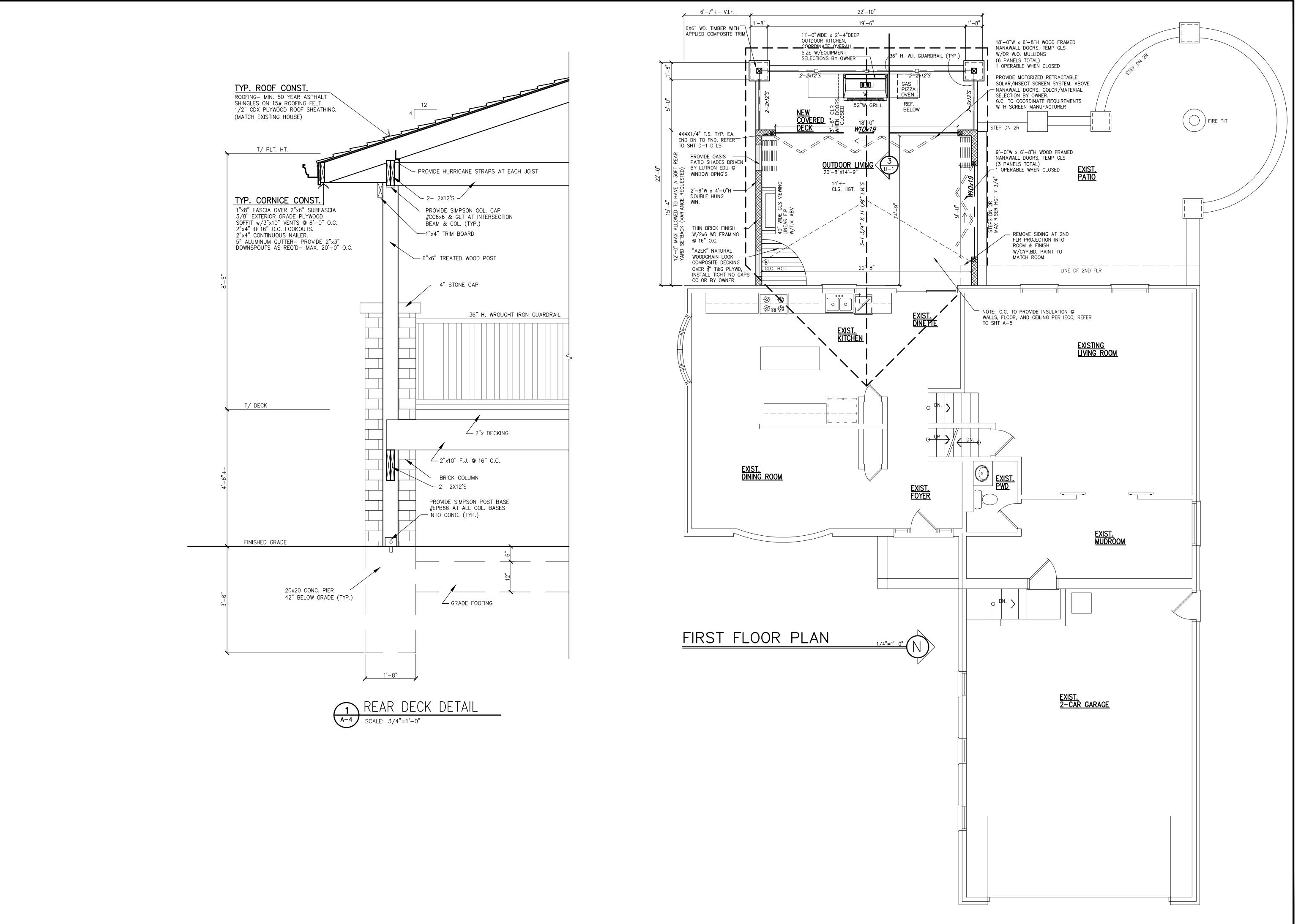
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REAR COVERED DECK FOR TH MARKUNAS RESIDENCE 700 BIRCHWOOD RD. FRANKFORT, ILLINOIS

DATE:

DESIGN FIRM REG. NO. 184.006972 EXP. DATE 4-30-23

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SHEET NUMBER

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22080

A-4

2015 IECC TABLE R402.1.2 (RESIDENTIAL) www.energycodes.gov (FREE RES-CHECK COMPLIANCE SOFTWARE) INCLUATION AND FENCTOATION DECLIDEMENTS BY COMPONIENT (a

INSULATION AND FENSTRATION REQUIREMENTS BY COMPONENT (a)										
CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT U-FACTOR	GLAZED FENESTRATION SHGC	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT WALL R-VALUE	SLAB R-VALUE & DEPTH	CRAWL SPACE WALL R-VALUE
5 (NORTH ILLINOIS)	0.32 (b)	0.55 (b)	NR (b)(e)	49 see R402.2.2	20 or 13 + 5 (h)	13/17 (i)	30 (g)	10/13 (c)	10/15 (d), 2 ft	10/19 (c)

- G. R-VALUES ARE MINIMUMS. U-FACTORS AND SHGC ARE MAXIMUMS. WHEN INSULATION IS INSTALLED IN A CAVITY WHICH IS LESS THAN THE LABEL OR DESIGN THICKNESS OF INSULATION, THE INSTALLED R-VALUE OF THE INSULATION SHALL NOT BE LESS THAN THE R-VALUE SPECIFIED IN THE TABLE (EXAMPLE: 6 1/4" R-19 IN A 2 X 6 WALL IS ACTUALLY BETWEEN R-17 AND R-18).
- b. THE FENESTRATION U-FACTOR COLUMN EXCLUDES SKYLIGHTS. THE SHGC COLUMN APPLIES TO ALL GLAZED FENESTRATION. c. "15/19" MEANS R-15 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE HOME OR R-19 CAVITY INSULATION AT THE INTERIOR OF THE BASEMENT WALL. "15/19" SHALL BE PERMITTED TO BE MET WITH R-13 CAVITY INSULATION ON THE INTERIOR OF THE BASEMENT WALL PLUS R-5 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THE HOME. "10/13" MEANS R-10 CONTINUOUS INSULATION ON THE INTERIOR OR EXTERIOR OF THEHOME OR R-13 CAVITY INSULATION AT THE INTERIOR OF THE
- D. R-5 SHALL BE ADDED TO THE REQUIRED SLAB EDGE R-VALUES FOR HEATED SLABS. INSULATION DEPTH SHALL BE THE DEPTH OF THE FOOTING OR 2 FEET, WHICHEVER IS LESS IN CLIMATE ZONES 1 THROUGH 3 FOR HEATED SLABS.
- E. NOT USED f. NOT USED
- g. OR INSULATION SUFFICIENT TO FILL FRAMING CAVITY, R-19 MINIMUM.
- h. FIRST VALUE IS CAVITY INSULATION, SECOND IS CONTINUOUS INSULATION OR INSULATED SIDING, SO "13 + 5 MEANS R-13 CAVITY INSULATION PLUS R-5 CONTINUOUS
- INSULATION OR INSULATED SIDING. IF STRUCTURAL SHEATHING COVERS 40 % OR LESS OF THE EXTERIOR, CONTINUOUS INSULATION R-VALUE SHALL BE PERMITTED TO BE REDUCED BY NO MORE THAN R-3 IN THE LOCATIONS WHERE STRUCTURAL SHEATHING IS USED — TO MAINTAIN A CONSISTENT TOTAL SHEATHING THICKNESS. i. THE SECOND R-VALUE APPLIES WHEN MORE THAN HALF THE INSULATION IS ON THE INTERIOR OF THE MASS WALL.

R101.4.3 ADDITIONS, ALTERATIONS, RENOVATIONS OR REPAIRS TO AN EXISTING BUILDING, BUILDING SYSTEM OR PORTION THEREOF SHALL CONFORM THE PROVISIONS OF THIS CODE. AN ADDITION CAN COMPLY WITH OR WITHOUT THE EXISTING.

EXCEPTIONS: RL01.4.3 #3 EXISTING CEILING. WALL OR FLOOR CAVITIES EXPOSED DURING CONSTRUCTION PROVIDED THAT THESE CAVITIES ARE FILLED WITH INSULATION (BLOWN IN FIBERGLASS OR CELLULOSE OR R15 BATTS FOR 2

R101.4.3 #2 GLASS ONLY REPLACEMENTS IN AN EXISTING SASH AND FRAME. R101.4.3 #4 CONSTRUCTION WHERE THE EXISTING ROOF, WALL OR FLOOR CAVITY IS NOT EXPOSED.

R101.4.4 SPACES UNDERGOING A CHANGE IN OCCUPANCY THAT WOULD RESULT IN AN INCREASE IN DEMAND FOR EITHER FOSSIL FUEL OR ELECTRICAL ENERGY SHALL COMPLY WITH THIS CODE.

R101.4.5 ANY NON-CONDITIONED SPACE THAT IS ALTERED TO BECOME CONDITIONED SPACE SHALL BE REQUIRED TO BE BROUGHT INTO FULL COMPLIANCE WITH THIS CODE.

R101.5.2 BUILDINGS WITH A PEAK DESIGN RATE OF ENERGY USAGE LESS THAN 3.4 BTU/H OF FLOOR AREA FOR SPACE CONDITIONING PURPOSES SHALL BE EXEMPT FROM THE CODE REQUIREMENTS.

R102 THE CODE IS NOT INTENDED TO PREVENT THE USE OF ALTERNATE MATERIALS AND DESIGNS AND CAN USE ABOVE PROGRAMS APPROVED BY THE CODE OFFICIAL AS MEETING THE INTENT OF THE CODE.

R303.2.1 EXTERIOR EXPOSED RIGID INSULATION MUST BE PROTECTED WITH A RIGID OPAQUE BARRIER EXTENDING 6" BELOW GRADE. - - SEE FOAM PLASTICS

R401.3 CERTIFICATE (MANDATORY). A PERMANENT CERTIFICATE SHALL BE COMPLETED BY THE BUILDER OR REGISTERED DESIGN PROFESSIONAL AND POSTED ON A WALL IN THE SPACE WHERE THE FURNACE IS LOCATED, A UTILITY ROOM OR AN APPROVED LOCATION INSIDE THE BUILDING. WHERE LOCATED ON AN ELECTRICAL PANEL, THE CERTIFICATE SHALL NOT COVER OR OBSTRUCT THE VISIBILITY OF THE CIRCUIT DIRECTORY LABEL, SERVICE DISCONNECT LABEL OR OTHER REQUIRED LABELS. THE CERTIFICATE SHALL LIST THE PREDOMINANT R-VALUES OF INSULATION INSTALLED IN OR ON CEILING/ROOF, WALLS, FOUNDATION(SLAB, BASEMENT WALL, CRAWLSPACE WALL AND FLOOR) AND DUCTS OUTSIDE CONDITIONED SPACES; U-FACTORS FOR FENESTRATION AND THE SOLAR HEAT GAIN COEFFICIENT (SHGC) OF FENESTRATION, AND THE RESULTS FROM ANY REQUIRED DUCT SYSTEM AND BUILDING ENVELOPE AIR LEAKAGE TESTING DONE ON THE BUILDING. WHERE THERE IS MORE THAN ONE VALUE FOR EACH COMPONENT, THE CERTIFICATE SHALL LIST THE VALUE COVERING THE LARGEST AREA. THE CERTIFICATE SHALL LIST THE TYPES AND EFFICIENCIES OF HEATING, COOLING AND SERVICE WATER HEATING EQUIPMENT. WHERE A GAS-FIRED UNVENTED ROOM HEATER, ELECTRIC FURNACE OR BASEBOARD ELECTRIC HEATER IS INSTALLED IN THE RESIDENCE, THE CERTIFICATE SHALL LIST "GAS-FIRED UNVENTED ROOM HEATER," "ELECTRIC FURNACE" OR "BASEBOARD ELECTRIC HEATER," AS APPROPRIATE. AN EFFICIENCY SHALL NOT BE LISTED FOR GAS-FIRED UNVENTED ROOM HEATERS, ELECTRIC FURNACES OR ELECTRIC BASEBOARD HEATERS.

R402.2.1 CEILINGS WITH ATTIC SPACES. WHERE SECTION R402.1.2 WOULD REQUIRE R-38 INSULATION IN THE CEILING, INSTALLING R-30 OVER 100 PERCENT OF THE CEILING AREA REQUIRING INSULATION SHALL BE DEEMED TO SATISFY THE REQUIREMENT FOR R-38 WHEREVER THE FULL HEIGHT OF UNCOMPRESSED R-30 INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE EAVES. SIMILARLY, WHERE SECTION R402.1.2 WOULD REQUIRE R-49 INSULATION IN THE CEILING, INSTALLING R-38 OVER 100 PERCENT OF THE CEILING AREA REQUIRING INSULATION SHALL BE DEEMED TO SATISFY THE REQUIREMENT FOR R-49 INSULATION WHEREVER THE FULL HEIGHT OF UNCOMPRESSED R-38 INSULATION EXTENDS OVER THE WALL TOP PLATE AT THE EAVES. THIS REDUCTION SHALL NOT APPLY TO THE U-FACTOR ALTERNATIVE APPROACH IN SECTION R402.1.4 AND THE TOTAL UA ALTERNATIVE IN SECTION R402.1.5.

R402.2.2 CEILINGS WITHOUT ATTIC SPACES. WHEN SECTION R402.1.2 WOULD REQUIRE INSULATION LEVELS ABOVE R-30 AND THE DESIGN OF THE ROOF/CEILING ASSEMBLY DOES NOT ALLOW SUFFICIENT SPACE FOR THE REQUIRED INSULATION, THE MINIMUM REQUIRED INSULATION FOR THOSE ROOF/CEILING ASSEMBLIES SHALL BE R-30. THIS REDUCTION OF INSULATION FROM THE REQUIREMENTS OF SECTION R402.1.2 SHALL BE LIMITED TO 500 SQUARE FEET (46 M2) OR 20 PERCENT OF THE TOTAL INSULATED CEILING AREA. WHICHEVER IS LESS. THIS REDUCTION SHALL NOT APPLY TO THE U-FACTOR ALTERNATIVE APPROACH IN SECTION R402.1.4 AND THE TOTAL UA ALTERNATIVE IN SECTION R402.1.5.

EXCEPTION: FOR ROOFS ON EXISTING BUILDINGS WITH SLOPE LESS THAN 2.5" IN 12". REFER TO SECTION R503.1.1.

3 EAVE BAFFLE. FOR AIR-PERMEABLE INSULATIONS IN VENTED ATTICS, A BAFFLE SHALL BE INSTALLED ADJACENT TO SOFFIT AND EAVE VENTS. BAFFLES SHALL MAINTAIN AN OPENING EQUAL OR GREATER THAN THE SIZE OF THE VENT. THE BAFFLE SHALL EXTEND OVER THE TOP OF THE ATTIC INSULATION. THE BAFFLE SHALL BE PERMITTED TO BE ANY SOLID MATERIAL.

R402.2.4 ACCESS HATCHES AND DOORS. ACCESS DOORS FROM CONDITIONED SPACES TO UNCONDITIONED SPACES SUCH AS ATTICS AND CRAWL SPACES SHALL BE WEATHERSTRIPPED AND INSULATED TO A LEVEL EQUIVALENT TO THE INSULATION ON THE SURROUNDING SURFACES. ACCESS SHALL BE PROVIDED TO ALL EQUIPMENT THAT PREVENTS DAMAGING OR COMPRESSING THE INSULATION. A WOOD-FRAMED OR EQUIVALENT BAFFLE OR RETAINER IS REQUIRED TO BE PROVIDED WHEN LOOSE-FILL INSULATION IS INSTALLED, THE PURPOSE OF WHICH IS TO PREVENT THE LOOSE-FILL INSULATION FROM SPILLING INTO THE LIVING SPACE WHEN THE ATTIC ACCESS IS OPENED, AND TO PROVIDE A PERMANENT MEANS OF MAINTAINING THE INSTALLED R-VALUE OF THE LOOSE-FILL INSULATION.

EXCEPTION: VERTICAL DOORS THAT PROVIDE ACCESS FROM CONDITIONED TO UNCONDITIONED SPACES SHALL BE PERMITTED TO MEET THE FENESTRATION REQUIREMENTS OF TABLE R402.1.2 BASED ON THE APPLICABLE CLIMATE ZONE SPECIFIED IN CHAPTER 3.

402.2.4 IECC 2015 ACCESS DOORS & HUTCHES SHALL BE WEATHER-STRIPPED AND INSULATED EQUIVALENT TO THE SURROUNDING SURFACES (MUST HAVE 1/2" DRYWALL ON UNDERSIDE, 5/8 TYPE X IN GARAGE).

R402.2.7 WALLS WITH PARTIAL STRUCTURAL SHEATHING. WHERE SECTION R402.1.2 WOULD REQUIRE CONTINUOUS INSULATION ON EXTERIOR WALLS AND STRUCTURAL SHEATHING COVERS 40 PERCENT OR LESS OF THE GROSS AREA OF ALL EXTERIOR WALLS, THE CONTINUOUS INSULATION R-VALUE SHALL BE PERMITTED TO BE REDUCED BY AN AMOUNT NECESSARY TO RESULT IN A CONSISTENT TOTAL SHEATHING THICKNESS, BUT NOT MORE THAN R-3, ON AREAS OF THE WALLS COVERED BY STRUCTURAL SHEATHING. THIS REDUCTION SHALL NOT APPLY TO THE U-FACTOR ALTERNATIVE APPROACH IN SECTION R402.1.4 AND THE TOTAL UA

R402.2.8 FLOORS. FLOOR FRAMING-CAVITY INSULATION SHALL BE INSTALLED TO MAINTAIN PERMANENT CONTACT WITH THE UNDERSIDE OF THE SUBFLOOR DECKING.

EXCEPTION: THE FLOOR FRAMING-CAVITY INSULATION SHALL BE PERMITTED TO BE IN CONTACT WITH THE TOPSIDE OF SHEATHING OR CONTINUOUS INSULATION INSTALLED ON THE BOTTOM SIDE OF FLOOR FRAMING WHERE COMBINED WITH INSULATION THAT MEETS OR EXCEEDS THE MINIMUM WOOD FRAME WALL R-VALUE IN TABLE 402.1.2 AND THAT EXTENDS FROM THE BOTTOM TO THE TOP OF ALL PERIMETER FLOOR FRAMING

R402.2.9 BASEMENT WALLS. WALLS ASSOCIATED WITH CONDITIONED BASEMENTS SHALL BE INSULATED FROM THE TOP OF THE BASEMENT WALL DOWN TO 10FEET (3048MM) BELOW GRADE OR TO WITHIN 6 INCHES (152 MM) OF THE BASEMENT FLOOR, WHICHEVER IS LESS. WALLS ASSOCIATED WITH UNCONDITIONED BASEMENTS SHALL MEET THIS REQUIREMENT UNLESS THE FLOOR OVERHEAD IS INSULATED IN ACCORDANCE WITH SECTIONS R402.L.2 AND R402.2.2.8.

EXCEPTION: WALLS ASSOCIATED WITH CONDITIONED BASEMENTS MAY BE INSULATED FROM THE TOP OF THE BASEMENT WALL DOWN TO 4 FEET (1219 MM) BELOW GRADE WHEN THE BASEMENT WALL R-VALUE IS AT LEAST 15/19, (BASEMENT WALL U-FACTOR OF 0.050).

R402.2.10 SLAB-ON-GRADE-FLOORS. SLAB-ON-GRADE FLOORS WITH A FLOOR SURFACE LESS THAN 12 INCHES (305mm) BELOW GRADE SHALL BE INSULATED IN ACCORDANCE WITH TABLE R402.1.2. THE INSULATION SHALL EXTEND DOWNWARD FROM TOP OF SLAB ON THE OUTSIDE OR INSIDE OF THE FOUNDATION WALL. INSULATION LOCATED BELOW GRADE SHALL BE EXTENDED THE DISTANCE PROVIDED IN TABLE R402.1.2 BY ANY COMBINATION OF VERTICAL INSULATION, INSULATION EXTENDING AWAY FROM THE BUILDING SHALL BE PROTECTED BY PAVEMENT OR BY NOT LESS THAN 10 INCHES (254 mm) OF SOIL. THE TOP EDGE OF THE INSULATION INSTALLED BETWEEN THE EXTERIOR WALL AND THE EDGE OF THE INTERIOR SLAB SHALL BE PERMITTED TO BE CUT AT A 45-DEGREE ANGLE AWAY FROM THE EXTERIOR WALL. SLAB-EDGE INSULATION IS NOT REQUIRED IN JURISDICTIONS DESIGNATED BY THE CODE OFFICIAL AS HAVING A VERY HEAVY TERMITE INFESTATION.

R408.2 IRC. VENTED CRAWL SPACE (INSULATED FLOORS AND THRU FOUNDATION WALL VENTING)

THE FLOOR ABOVE A VENTED CRAWLSPACE AND ABOVE GARAGES, CANTILEVERS, ETC. MUST BE INSULATED WITH R-30 OR INSULATION SUFFICIENT TO FILL THE CAVITY BUT NOT LESS THAN R-19. R408.2: UNDER FLOOR SPACE. THE MINIMUM NET AREA OF VENTILATION OPENINGS SHALL NOT BE LESS THAN 1 SQUARE FOOT

FOR EACH 150 SQUARE FEET OF UNDER-FLOOR SPACE. ONE VENTILATING OPENING SHALL BE WITHIN 3' OF EACH CORNER OF THE BUILDING. VENTILATION OPENINGS SHALL BE COVERED FOR THEIR HEIGHT AND WIDTH WITH ANY OF THE FOLLOWING MATERIALS PROVIDED THAT THE LEAST DIMENSION OF THE COVERING SHALL NOT EXCEED 1/4".

- a. PERFORATED SHEET METAL PLATES NOT LESS THAN .070" THICK. b. EXPANDED SHEET METAL PLATES NOT LESS THAN .047" THICK.
- c. CORROSION-RESISTANT WIRE MESH, WITH THE LEAST DIMENSION BEING 1/8".
- d. EXTRUDED LOAD-BEARING BRICK VENTS. e. HARDWARE CLOTH OF .035" WIRE OR HEAVIER.
- f. CAST IRON GRILL OR GRATING.

R806.4 IRC: CONDITIONED ATTIC ASSEMBLIES. UN-VENTED CONDITIONED ATTIC ASSEMBLIES (SPACES BETWEEN THE CEILING JOISTS OF THE TOP STORY AND THE ROOF RAFTERS) ARE PERMITTED UNDER THE FOLLOWING **CONDITIONS:**

a. NO INTERIOR VAPOR RETARDERS ARE INSTALLED ON THE CEILING SIDE (ATTIC FLOOR) OF THE UNVENTED ATTIC ASSEMBLY.

INSTALLED BETWEEN EACH RAFTER ALONG THE SIDE AND OVER THE INSULATION (ANY SOLID MATERIAL IS ACCEPTABLE).

- b. AN AIR-IMPERMEABLE INSULATION IS APPLIED IN DIRECT CONTACT TO THE UNDERSIDE-INTERIOR OF THE STRUCTURAL ROOF DECK.
- c. N/A WARM HUMID LOCATIONS PER N1101.2.1
- d. SUFFICIENT INSULATION IS INSTALLED TO MAINTAIN THE MONTHLY AVERAGE TEMP OF THE CONDENSING SURFACE ABOVE 45 DEGREES. THE CONDENSING SURFACE IS DEFINED AS EITHER THE STRUCTURAL ROOF DECK OR THE INTERIOR SURFACE OF AN AIR-IMPERMEABLE INSULATION APPLIED IN DIRECT CONTACT WITH THE UNDERSIDE OF THE STRUCTURAL ROOF DECK. ASTM E283

R806.3 IRC 2006 & R402.2.3 IECC 2015 INSULATION SHALL NOT BLOCK THE FREE FLOW OF AIR FROM THE EAVE INTO THE ATTIC. FOR AIR IMPERMEABLE INSULATIONS IN VENTED ATTICS A BAFFLE MUST BE

MECHANICALLY VENTED OR CONDITIONED CRAWL SPACES (UNVENTED OPTIONS).

AS AN ALTERNATIVE TO INSULATING FLOORS ABOVE CRAWL SPACES, THE WALLS SHALL BE PERMITTED TO BE INSULATED WHEN THE CRAWL SPACE IS NOT VENTED TO THE OUTSIDE. CRAWL SPACE WALL INSULATION SHALL BE PERMANENTLY FASTENED TO THE WALL AND EXTEND DOWNWARD FROM THE FLOOR TO THE FINISHED GRADE LEVEL AND THEN VERTICALLY AND/OR HORIZONTALLY FOR AT LEAST AN ADDITIONAL 24". EXPOSED EARTH IN UNVENTED CRAWL SPACE FOUNDATIONS SHALL BE COVERED WITH A VAPOR RETARDER WITH JOINTS TAPED AND ATTACHED TO THE CRAWL WALL 6" UP. - - R408.2 ONE OF THE FOLLOWING IS PROVIDED FOR THE UNDER-FLOOR SPACE:

a. CONTINUOUSLY OPERATED MECHANICAL EXHAUST VENTILATION AT A RATE EQUAL TO 1 CFM FOR EACH OF CRAWLSPACE FLOOR AREA, INCLUDING AN AIR PATHWAY TO THE COMMON AREA (SUCH AS A DUCT OR

b. CONDITIONED AIR SUPPLY SIZED TO DELIVER AT A RATE EQUAL TO 1 CFM FOR EACH 50 SQUARE FEET OF UNDER-FLOOR AREA, INCLUDING A RETURN AIR PATHWAY TO THE COMMON AREA (SUCH AS A DUCT OR TRANSFER GRILLE)(, AND PERIMETER WALLS INSULATED IN ACCORDANCE WITH TABLE R402.1.1

TABLE 402.1.1 IECC 2015 PROVIDE A NOTE STATING THAT ALL DOORS AND WINDOWS WILL HAVE A U-VALUE OF .32 OR LESS AND A SKYLIGHT U-VALUE OF .55 OR LESS (PLEASE LEAVE STICKERS ON WINDOWS UNTIL AFTER INSULATION INSPECTION).

R402.3.1, R402.3.3 & R402.3.4 AN AREA-WEIGHTED AVERAGE OF FENESTRATION PRODUCTS SHALL BE PERMITTED TO SATISFY THE U-FACTOR REQUIREMENTS. UP TO 15 SQUARE FEET OF GLASS PER HOME SHALL BE PERMITTED TO BE EXEMPT FROM THE U-FACTOR REQUIREMENT. ONE SIDE-HINGED OPAQUE DOOR ASSEMBLY UP TO 24 SQUARE FEET IN AREA IS EXEMPTED FROM THE U-FACTOR REQUIREMENT.

R402.4.2 FIREPLACES. NEW WOOD-BURNING FIREPLACES SHALL HAVE TIGHT-FITTING FLUE DAMPERS OR DOORS, AND OUTDOOR COMBUSTION AIR. WHERE USING TIGHT-FITTING DOORS ON FACTORY-BUILT FIREPLACES LISTED AND LABELED IN ACCORDANCE WITH UL 127, THE DOORS SHALL BE TESTED AND LISTED FOR THE FIREPLACE. WHERE USING TIGHT-FITTING DOORS ON MASONRY FIREPLACES, THE DOORS SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 907.

R402.4.3 FENESTRATION AIR LEAKAGE. WINDOWS, SKYLIGHTS AND SLIDING GLASS DOORS SHALL HAVE AN AIR INFILTRATION RATE OF NOT MORE THAN .3 CFM PER SQUARE FOOT AND SWINGING DOORS NO MORE THAN .5 CFM PER SQUARE FOOT, WHEN TESTED ACCORDING TO NFRC 400 OR AAMA/WDMA/CSA 101/I.S.2/A440 BY AN ACCREDITED, INDEPENDENT LABORATORY AND LISTED AND LABELED BY THE MANUFACTURER EXCEPTION: SITE-BUILT WINDOWS, SKYLIGHTS AND DOORS,

R402.4 IECC 2015 & ILLINOIS AMENDMENT THE THERMAL ENVELOPE MUST BE DURABLY SEALED TO CREATE AN AIR BARRIER TO LIMIT AIR INFILTRATION. THE BUILDING MUST BE TESTED AND VERIFIED AS HAVING AN AIR LEAKAGE RATE OF NOT EXCEEDING 5 AIR CHANGES PER HOUR. TESTING SHALL BE CONDUCTED WITH A BLOWER DOOR AT A PRESSURE OF .2 INCHES (50 PASCALS) AND DONE BY AN APPROVED THIRD PARTY. A WRITTEN REPORT OF THE RESULTS OF THE TEST SHALL BE SIGNED BY THE PARTY CONDUCTING THE TEST AND PROVIDED TO THE CODE OFFICIAL.

TABLE R402.4.1.1 THE EXTERIOR THERMAL ENVELOPE MUST CONTAIN A CONTINUOUS AIR BARRIER WITH BREAKS OR JOINTS SEALED (PLEASE TAKE NOTE OF THE FOLLOWING TO PASS A BLOWER DOOR TEST OR VISUAL OPTION FOR BUILDING TIGHTNESS).

a) A CONTINUOUS AIR BARRIER SHALL BE INSTALLED IN THE BUILDING ENVELOPE. IF USING THE AIRTIGHT DRYWALL APPROACH SPECIAL ATTENTION TO CAULKING AND SEALING MUST BE TAKEN (SEALANT OR GASKETS AT TOP AND BOTTOM PLATES AND STUDS SURROUNDING WINDOWS AND AT CORNERS, INSULATING FOAM AROUND WINDOWS ((DO NOT USE FIBERGLASS INSULATION)).

SEALANTS FROM BOTTOM PLATES TO SUBFLOORS, CONTINUOUS GLUE SUBFLOOR TO RIM JOIST, SEAL ELECTRICAL BOXES AND AROUND ANY GAPS CUT INTO DRYWALL AT EXTERIOR WALLS AND CEILINGS. SILL SEALER AT SILL PLATE WITH A SEALANT, SEALANT BETWEEN RIM JOIST AND SILL SEALER, SOLID BLOCKING BETWEEN GARAGE AND HOME, AT CANTILEVERS AND IN LINE WITH INSULATED WALLS. KNEE WALLS SHALL BE SEALED WITH PLYWOOD ON ATTIC SIDE AND IC RATED CANS WITH GASKETS, FLOOR/RIM JOIST AND UNFINISHED BASEMENT INSULATION MUST BE COVERED BY AIR BARRIER, COVER ALL STUDS WITH SHEATHING, BEHIND TUBS WITH CEMENT BOARD, DEAD END SOFFITS WITH PLYWOOD AND PRE-FAB FIREPLACES WITH 5/8" TYPE X DRYWALL, COVER ALL CEILING JOISTS WITH SHEATHING SOFFITS ETC. TAPE BUILDING PAPER SEAMS AND USE FLASHING TAPE AROUND ANY OPENINGS).

b) THE AIR BARRIER IN ANY DROPPED CEILING/SOFFIT SHALL BE ALIGNED WITH THE INSULATION AND ANY GAPS IN THE AIR BARRIER SEALED.

c) BATTS IN NARROW CAVITIES SHALL BE CUT TO FIT.

d) AIR SEALING SHALL BE PROVIDED BETWEEN THE GARAGE AND CONDITIONED SPACES.

e) BATT INSULATION SHALL BE CUT NEATLY TO FIT AROUND WIRING AND PLUMBING INSTALLED INSIDE WALLS AROUND MAKING UP THE THERMAL ENVELOPE.

f) HVAC REGISTER BOOTS THAT PENETRATE BUILDING THERMAL ENVELOPE SHALL BE SEALED TO THE SUBFLOOR OR DRYWALL. g) THE AIR BARRIER SHALL BE INSTALLED AT ANY EXPOSED EDGE OF INSULATION (COVER FIBERGLASS WITH DRYWALL).

R402.4.1 THE BUILDING THERMAL ENVELOPE SHALL ALLOW FOR DIFFERENTIAL EXPANSION AND CONTRACTION BETWEEN DISSIMILAR MATERIALS.

M1701.1.1 BUILDINGS OF UNUSUALLY TIGHT CONSTRUCTION SHALL HAVE ALL COMBUSTION AIR TAKEN FROM OUTSIDE THE BUILDING. - - (SEE DEFINITION CH: 2) 2006 IRC

R403.1 CONTROLS (MANDATORY). AT LEAST ONE THERMOSTAT SHALL BE PROVIDED FOR EACH SEPARATE HEATING AND COOLING SYSTEM.

R403.1.1 PROGRAMMABLE THERMOSTAT. THE THERMOSTAT CONTROLLING THE PRIMARY HEATING OR COOLING SYSTEM OF THE DWELLING UNIT SHALL BE CAPABLE OF CONTROLLING THE HEATING AND COOLING SYSTEM ON A DAILY SCHEDULE TO MAINTAIN DIFFERENT TEMPERATURE SET POINTS AT DIFFERENT TIMES OF THE DAY. THIS THERMOSTAT SHALL INCLUDE THE CAPABILITY TO SET BACK OR TEMPORARILY OPERATE THE SYSTEM TO MAINTAIN ZONE TEMPERATURES DOWN TO 55°F (13°C) OR UP TO 85°F (29°C). THE THERMOSTAT SHALL INITIALLY BE PROGRAMMED BY THE MANUFACTURER WITH A HEATING TEMPERATURE SET POINT NO HIGHER THAN 70°F (21°C) AND A COOLING TEMPERATURE SET POINT NO LOWER THAN 78°F (26°C).

R403.3 DUCTS. DUCTS AND AIR HANDLERS SHALL BE IN ACCORDANCE WITH SECTIONS R403.3.1 THROUGH R403.3.5.

R403.3.1 INSULATION. (PRESCRIPTIVE). SUPPLY AND RETURN DUCTS IN ATTICS SHALL BE INSULATED TO A MINIMUM OF R-8 WHERE 3 INCHES IN DIAMETER AND GREATER; AND R-6 WHERE LESS THAN 3 INCHES IN DIAMETER. SUPPLY AND RETURN DUCTS IN OTHER PORTIONS OF THE BUILDING SHALL BE INSULATED TO A MINIMUM OF R-6 WHERE 3 INCHES IN DIAMETER OR GREATER; AND R-4.2 WHERE LESS THAN 3 INCHES IN

EXCEPTION: DUCTS OR PORTIONS THEREOF LOCATED COMPLETELY INSIDE THE BUILDING THERMAL ENVELOPE.

R403.3.2 SEALING (MANDATORY). DUCTS, AIR HANDLERS AND FILTER BOXES SHALL BE SEALED. JOINTS AND SEAMS SHALL COMPLY WITH EITHER THE INTERNATIONAL MECHANICAL CODE OR INTERNATIONAL RESIDENTIAL CODE, AS APPLICABLE.

1. AIR-IMPERNEABLE SPRAY FOAM PRODUCTS SHALL BE PERMITTED TO BE APPLIED WITHOUT ADDITIONAL JOINT SEALS. 2. FOR DUCTS HAVING A STATIC PRESSURE CLASSIFICATION OF LESS THAN 2 INCHES OF WATER COLUMN (500 Pa), ADDITIONAL CLOSURE SYSTEMS SHALL NOT BE REQUIRED FOR CONTINUOUSLY WELDED JOINTS AND SEAMS, AND LOCKING-TYPE JOINTS AND SEAMS OF OTHER THAN THE SNAP-LOCK AND BUTTON-LOCK TYPES.

R403.3.2.1 SEALED AIR HANDLER. AIR HANDLERS SHALL HAVE A MANUFACTURER'S DESIGNATION FOR AN AIR LEAKAGE OF NO MORE THAN 2 PERCENT OF THE DESIGN AIR FLOW RATE WHEN TESTED IN ACCORDANCE WITH ASHRAE 193.

R403.5.3 INSULATION FOR HOT WATER PIPE WITH A MINIMUM THERMAL RESISTANCE (R-VALUE) OF R-3 SHALL BE APPLIED TO THE FOLLOWING:

1. PIPING 3/4" AND LARGER IN NOMINAL DIAMETER.

2. PIPING SERVING MORE THAN ONE DWELLING UNIT.

3. PIPING LOCATED OUTSIDE THE CONDITIONED SPACE. 4. PIPING FROM THE WATER HEATER TO A DISTRIBUTION MANIFOLD.

5. PIPING LOCATED UNDER A FLOOR SLAB 6. BURIED PIPING.

7. SUPPLY AND RETURN PIPING IN RECIRCULATION SYSTEMS OTHER THAN DEMAND RECIRCULATION SYSTEMS.

R403.5.1 IECC 2015 & R303.4 & M1507.3 THE BUILDING SHALL BE PROVIDED WITH VENTILATION THAT MEETS THE REQUIREMENTS OF THE INTERNATIONAL RESIDENTIAL CODE SECTION R303.4 AND DESIGNED TO M1507.3 OR INTERNATIONAL MECHANICAL CODE, AS APPLICABLE, OR WITH OTHER APPROVED MEANS OF VENTILATION (HVAC CONTRACTOR TO SUBMIT METHOD OF COMPLIANCE)

a. WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM SHALL CONSIST OF ONE OR MORE SUPPLY OR EXHAUST FANS, OR A COMBINATION OF SUCH, AND ASSOCIATED DUCTS AND CONTROLS WITH A MANUAL OVERRIDE. - - M1507.3.1 & M1507.3.2

b. INTAKE OPENINGS SHALL BE LOCATED 10' FROM OR 3' BELOW ANY HAZARDOUS OR NOXIOUS CONTAMINANT, SUCH AS VENTS, CHIMNEYS, PLUMBING VENTS, STREETS, ALLEYS, PARKING LOTS AND LOADING DOCKS.

EXCEPTION: EXHAUST FROM DWELLING UNIT TOILET ROOMS, BATHROOMS AND KITCHENS.

R403.6.5 SYSTEM CONTROLS. THE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM SHALL BE PROVIDED WITH CONTROLS THAT ENABLE MANUAL OVERRIDE.

TABLE R403.6.1 MECHANICAL VENTILATION SYSTEM FAN EFFICACY

FAN LOCATION	AIR FLOW RATE MINIMUM (CFM)	MINIMUM EFFICACY (CFM/WATT)	AIR FLOW RATE MAXIMUM (CFM)
RANGE HOODS	ANY	2.8 CFM/WATT	ANY
IN-LINE FAN	ANY	2.8 CFM/WATT	ANY
BATHROOM, UTILITY ROOM	10	1.4 CFM/WATT	<90
BATHROOM, UTILITY ROOM	90	2.8 CFM/WATT	ANY

(a) FAN NOISE SHALL NOT EXCEED 1.5 SONES PER ANSI/ASHRAE/IES STANDARD 90.1-2013

TABLE R403.6.6(1) CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE

D	WELLING UNIT		NUM	IBER OF BEDRO	OMS		
F	LOOR AREA	0-1	2-3	4-5	6-7	>7	
(SQUARE FEET)		AIRFLOW IN CFM				
	<1,500	30	45	60	75	90	
	1,501 - 3,000	45	60	75	90	105	
	3,001 - 4,500	60	75	90	105	120	
	4,501 - 6,000	75	90	105	120	135	
	6,001 - 7,500	90	105	120	135	150	
	>7,500	105	120	135	150	165	

TABLE R403.6.6(2) INTERMITTENT WHOLE HOUSE MECHANICAL VENTILATION RATE FACTORS 100% RUN-TIME % IN EACH 4-HOUR SEGMENT 1.0 FACTOR (a) 4 3 2 1.5 1.3

TABLE R403.6.7 MINIMUM REQUIRED LOCAL EXHAUST RATES FOR ONE- AND TWO-FAMILY DWELLINGS

AREA TO BE EXHAUSTED	EXHAUST RATES
KITCHENS	100 CFM INTERMITTENT OR 25 CFM CONTINUOUS
BATHROOMS-TOILET ROOMS	MECHANICAL EXHAUST CAPACITY OF 50 CFM INTERMITTENT

R403.6 IECC 2015 HEATING AND COOLING EQUIPMENT MUST BE SIZED PER ACCA MANUAL S BASED ON BUILDING LOADS CALCULATED IN ACCORDANCE WITH MANUAL J OR OTHER APPROVED HEATING AND COOLING CALCULATION METHODOLOGIES (SUBMIT CALCS)

MAXIMUM SIZING LIMITS OF EQUIPMENT: FURNACES AND BOILERS 140% OF TOTAL HEATING LOAD, AIR CONDITIONERS 115% OF TOTAL COOLING LOAD.

R404.1 LIGHTING EQUIPMENT (MANDATORY). NOT LESS THAN 75 PERCENT OF THE LAMPS IN PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH-EFFICACY LAMPS OR NOT LESS THAN 75 PERCENT OF THE PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL CONTAIN ONLY HIGH-EFFICACY LAMPS. EXCEPTION: LOW-VOLTAGE LIGHTING.

R404.1.1 LIGHTING EQUIPMENT (MANDATORY). FUEL GAS LIGHTING SYSTEMS SHALL NOT HAVE CONTINUOUSLY BURNING PILOT LIGHTS.



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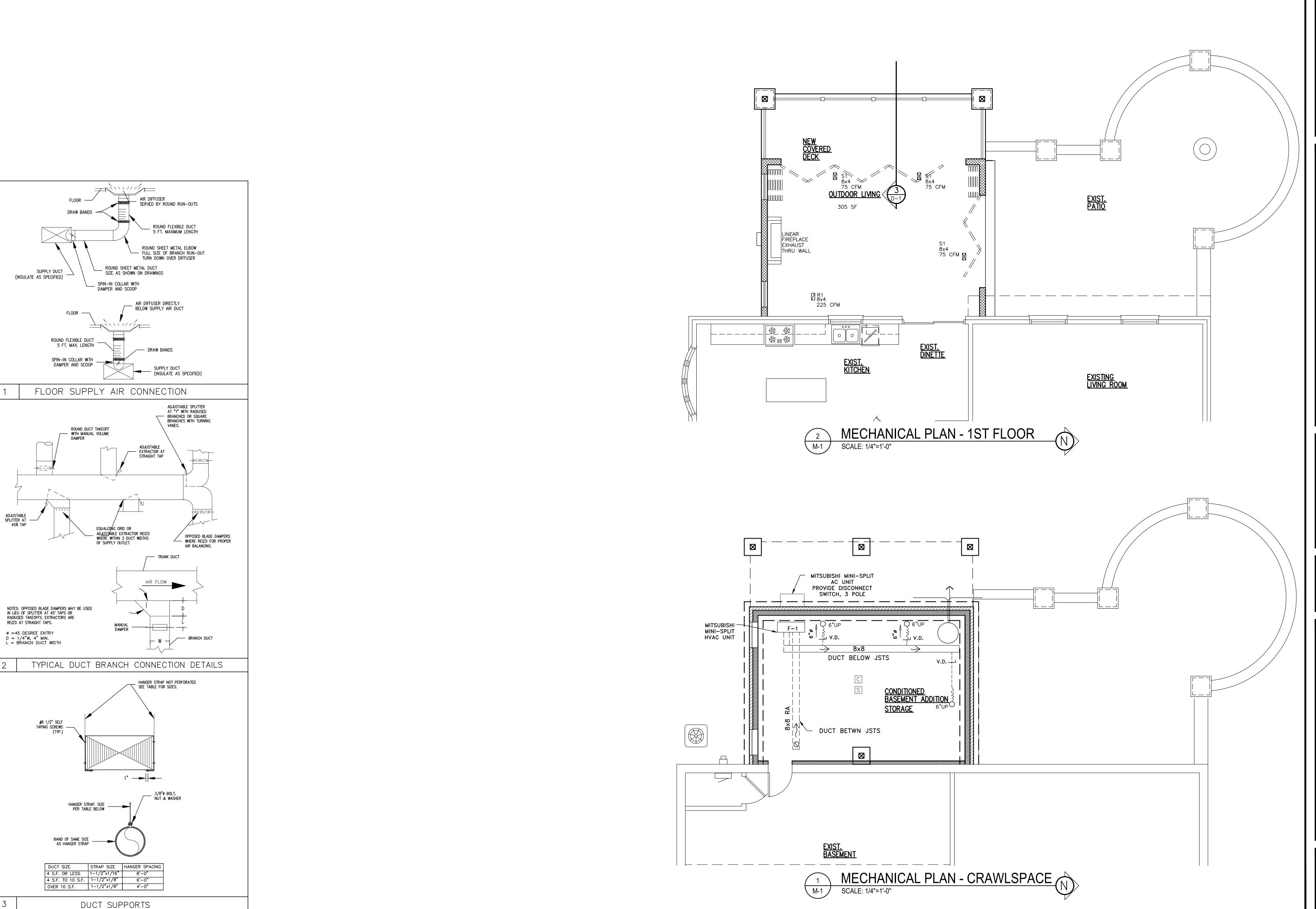
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RESIDENTIAL - ELECTRIC

. ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. UNUSED OPENINGS SHALL BE CLOSED TO AFFORD PROTECTION SUBSTANTIALLY FOULVALENT TO THE WALL OF THE EQUIPMENT. INTERNAL PARTS OF ELECTRICAL EQUIPMENT SHALL NOT BE DAMAGED OR CONTAMINATED BY FOREIGN MATERIALS, AND THERE SHALL BE NO DAMAGED PARTS THAT MAY ADVERSELY AFFECT SAFE OPERATION OR MECHANICAL STRENGTH OF THE EQUIPMENT (NEC 110.12).

2. ALL ELECTRICAL CONTRACTORS ENGAGED IN PERFORMANCE OF ELECTRICAL WORK SHALL BE LICENSED PER ILLINOIS MUNICIPAL CODE 11-33-1. THE CONTRACTOR SHALL FILE WITH THE WILL COUNTY BUILDING DEPARTMENT A COPY OF THE VALID LICENSE AND SAID LICENSE SHALL REFLECT THE SCOPE OF THE WORK (WILL COUNTY ORDINANCE 150.112).

3. PERMITS ARE REQUIRED FOR ALL ELECTRICAL WORK, AND THEY SHALL BE ISSUED ONLY WHEN A DULY LICENSED AND BONDED ELECTRICAL CONTRACTOR IS LISTED ON THE PERMIT APPLICATION (WILL COUNTY ORDINANCE 150.112). 4. CONDUCTORS SHALL BE IDENTIFIED BY THE FOLLOWING MEANS

AND PROVISIONS (IRC F33071) A. INSULATED GROUNDED CONDUCTORS OF 4 AWG OR SMALLER: I. CONTINUOUS WHITE OR GRAY OUTER FINISH. II. THREE CONTINUOUS WHITE OR GRAY STRIPES ALONG CONDUCTOR'S ENTIRE LENGTH ON OTHER THAN GREEN INSULATION.

B. INSULATED GROUNDED CONDUCTORS OF 4 AWG OR LARGER: I. CONTINUOUS WHITE OR GRAY OUTER FINISH. II. THREE CONTINUOUS WHITE OR GRAY STRIPES ALONG CONDUCTOR'S ENTIRE LENGTH ON OTHER THAN GREEN INSULATION. III. AT THE TIME OF INSULATION, A DISTINCTIVE WHITE OR GRAY MARKING AT THE TERMINATIONS, FOR WHICH SHALL

ENCIRCLE THE CONDUCTOR OR INSULATION. 5. AN ACCESSIBLE MEANS EXTERNAL TO THE SERVICE EQUIPMENT ENCLOSURE FOR CONNECTING INTERSYSTEM BONDING AND GROUNDING CONDUCTORS IS REQUIRED BY THE CODE. BONDING OF "LIMITED ENERGY"SYSTEMS SUCH AS COMMUNICATION, RADIO AND TV, AND CATV CIRCUITS TOGETHER MUST BE PROVIDED BY AT LEAST ONE OF THE FOLLOWING MEANS (NEC 250.94 EXCEPTION): A. EXPOSED NONFLEXIBLE METALLIC SERVICE RACEWAYS. B. EXPOSED GROUNDING ELECTRODE CONDUCTOR.

C. APPROVED MEANS FOR EXTERNAL CONNECTION SUCH AS 6 AWG COPPER CONDUCTOR NOT SHORTER THAN 6" AND BONDED TO THE METALLIC SERVICE RACEWAY OR SERVICE EQUIPMENT ENCLOSURE WITH A LISTED AND IDENTIFIED FITTING. THE OTHER END OF THIS CONDUCTOR MUST BE ACCESSIBLE AND BE LOCATED ON THE EXTERIOR OUTSIDE WALL, SO THAT EXTERNAL CONNECTION OF THE INTERSYSTEM BONDING, OR GROUNDING CONDUCTOR, REQUIRED FOR COMMUNICATIONS, RADIO, TELEVISION, AND CATV CIRCUITS, CAN BE MADE.

6. RACEWAYS, CABLE TRAYS, CABLEBUS, AUXILIARY GUTTERS, CABLE ARMOR, BOXES, CABLE SHEATHING, CABINETS, ELBOWS, COUPLINGS, NIPPLES, FITTINGS, SUPPORTS, AND SUPPORT HARDWARE SHALL BE OF MATERIALS SUITABLE FOR THE ENVIRONMENT IN WHICH THEY ARE TO BE INSTALLED (NEC 300.6). 7. WHEN A SERVICE RACEWAY ENTERS THE BUILDING IT MUST BE SEALED OR PLUGGED AT EITHER OR BOTH ENDS FROM MOISTURE THAT MAY CONTACT LIVE PARTS. THE SEALANTS SHALL BE IDENTIFIED FOR USE WITH THE CABLE INSULATION, SHIELD, OR OTHER

8. ALL ELECTRICAL WIRING ON THE LOAD SIDE OF THE METER SHALL BE COPPER. ADDITIONAL CONSIDERATION MAY BE GIVEN TO ALUMINUM SERVICE CONDUCTORS ON A CASE-BY-CASE BASIS (WILL COUNTY ORDINANCE 150.113(C))

9. ELECTRICAL METAL TUBING (THIN WALL) SHALL BE REQUIRED THROUGHOUT ALL STRUCTURES, HOWEVER, IT SHALL NOT BE INSTALLED UNDERGROUND OR IN CONCRETE (WILL COUNTY ORDINANCE 150.113(D)).

COMPONENTS (NEC 230.8).

10. ALL CUT ENDS OF EMT SHALL BE REAMED OR OTHERWISE FINISHED TO REMOVE ROUGH EDGES BUT NOT THREADED EMT SHALL BE INSTALLED AS A COMPLETE SYSTEM IN ACCORDANCE WITH NEC 300.18 AND SHALL BE SECURELY FASTENED IN PLACE AND SUPPORTED IN ACCORDANCE WITH THE FOLLOWING PROVISIONS (NEC

A. EMT SHALL BE SECURELY FASTENED IN PLACE EVERY 10' AND EACH EMT RUN BETWEEN TERMINATION POINTS SHALL BE SECURELY FASTENED 3'OF FACH OUTLET BOX DEVICE BOX CABINET, CONDUIT BODY, AND OTHER TUBING TERMINATION. EXCEPTIONS INCLUDE CONCEALED WORK IN FINISHED BUILDINGS OR PREFINISHED WALL PANELS. WHERE UNBROKEN LENGTHS CAN BE FISHED, AND, ALSO IF STRUCTURAL MEMBERS DO NOT READILY PERMIT FASTENING WITHIN 3', THE UNBROKEN LENGTH DISTANCE BETWEEN FASTENINGS CAN BE INCREASED FROM 3' TO 5'.

B. HORIZONTAL RUNS OF EMT SUPPORTED BY OPENINGS THROUGH FRAMING MEMBERS AT INTERVALS NOT GREATER THAN 10' AND SECURELY FASTENED WITHIN 3' OF TERMINATION POINTS SHALL BE PERMITTED.

11. THE NUMBER OF CONDUCTORS SHALL NOT EXCEED THAT PERMITTED BY THE PERCENTAGE FILL SPECIFIED IN NEC CHAPTER 9,

12. BOXES AND CONDUIT BODIES SHALL BE OF SUFFICIENT SIZE TO PROVIDE FREE SPACE FOR ALL ENCLOSED CONDUCTORS. THE MINIMUM VOLUME FOR CONDUIT BODIES SHALL BE CALCULATED IN NEC 214.16(C). THE BOX VOLUME CALCULATED FROM NEC 314.16(A) SHALL NOT BE LESS THAN THE BOX FILL CALCULATIONS FROM NEC 314.16(B) (NEC 314.16).

6'-0"

GENERAL ROOM RECEPTACLE LAYOUT

A. GENERAL: OUTLETS SHALL BE INSTALLED SO THAT

LINE IN ANY WALL SPACE IS MORE THAN 6 FEET

INCLUDING ANY WALL SPACE 2 FEET OR MORE IN

BUT EXCLUDING SLIDING PANELS IN EXTERIOR

SPACING OF ELECTRICAL OUTLETS:

NO POINT ALONG THE FLOOR

FROM AN OUTLET IN THAT SPACE,

WIDTH AND THE WALL SPACE OCCUPIED

BY FIXED PANELS IN EXTERIOR WALLS.

13. EMT SHALL NOT BE USED UNDER THE FOLLOWING CONDITIONS: WHERE VULNERABLE TO PHYSICAL DAMAGE DURING AND AFTER INSTALLATION, WHERE ENAMEL IS THE ONLY PROTECTION FROM CORROSION, IN CINDER CONCRETE OR FILL SUBJECT TO MOISTURE UNLESS PROTECTED BY NON-CINDER CONCRETE AT LEAST 2"THICK OR TUBING IS MINIMALLY 18" UNDER THE CINDER FILL, IN ANY HAZARDOUS LOCATION, SUPPORTING LUMINARIES, OR DISSIMILAR METAL CONTACT THAT DOES NOT INVOLVE ALUMINUM ENCLOSURES AND FITTINGS WITH STEEL EMT AWAY FROM SEVERE CORROSIVE INFLUENCES (NEC 358.12).

14. EVERY PANEL BOX MUST HAVE EACH CIRCUIT LABELED. ALL ELECTRICAL PANELS MUST BE LOCATED A MINIMUM OF 3' FROM SUMP PUMP OR EJECTOR PIT, LAUNDRY/MOP SINK, AND/OR LAUNDRY TUB. THE ELECTRICAL PANEL MUST HAVE A CLEARANCE AREA (WORKING SPACE) OF 30" WIDTH (WHICH DOES NOT HAVE TO BE CENTERED ON THE PANEL ITSELF), 3' DEPTH MEASURED OUT FROM THE PANEL. AND 6'-6"HEIGHT. THE HEIGHT REQUIREMENT CAN BE OMITTED IF THE PANEL IS IN AN EXISTING DWELLING AND THE ELECTRICAL SERVICE IS MAXIMUM 200 AMPS (WILL COUNTY ORDINANCE 150.113(R) AND NEC 110.26).

15. UNDERGROUND SERVICE CONDUCTORS THAT ARE NOT ENCASED IN CONCRETE AND ARE BURIED AT LEAST 18" BELOW GRADE SHALL HAVE THEIR LOCATION IDENTIFIED BY A WARNING RIBBON THAT IS PLACED IN THE TRENCH AT LEAST 12" ABOVE THE UNDERGROUND INSTALLATION (NEC 300.6(D)(3)).

16. FOR BOTH UNDERGROUND SERVICE ENTRANCE (USE) AND SERVICE ENTRANCE (SE) CABLES, THE ALLOWABLE BENDING RADIUS OF THE CABLE (MEASURED FROM THE INNER EDGE), SHALL BE AT LEAST FIVE TIMES THE DIAMETER OF THE CABLE ITSELF, PROVIDED THAT THE CABLE WILL NOT BE DAMAGED BEFORE, DURING, AND AFTER

INSTALLATION (NEC 338.24). 17. CONTINUITY OF THE GROUNDING PATH OR THE BONDING CONNECTION TO INTERIOR PIPING SHALL NOT RELY ON WATER METER, WATER SOFTENERS, WATER HEATERS, WATER FILTERING DEVICES OR OTHER SIMILAR EQUIPMENT (NEC 250.53(D)(1) AND WILL COUNTY ORDINANCE 150.113(W)).

18 .RECEPTACLE OUTLETS SHALL BE CALCULATED AT NOT LESS THAN 180 VOLT-AMPS FOR EACH SINGLE OR FOR EACH MULTIPLE RECEPTACLE ON ONE YOKE. A SINGLE PIECE OF EQUIPMENT CONSISTING OF A MULTIPLE RECEPTACLE COMPRISED OF FOUR OR MORE RECEPTACLES SHALL BE CALCULATED AT NOT LESS THAN 90 VOLT-AMPS PER RECEPTACLE. EXCEPTIONS INCLUDE THE FOLLOWING (NEC 220.14(I)): A. GENERAL-USE RÉCEPTACLE OUTLETS OF 20-AMP RATINGS OR

B. RECEPTACLE OUTLETS SERVICING THE OUTDOOR AREAS OF A DWELLING UNIT, AS WELL AS GARAGES, ACCESSORY BUILDINGS, C. LIGHTING OUTLETS SERVICING THE PORTIONS OF DWELLING

UNITS AS SPECIFIED IN NEC 210.70. 19. THE SUMP PUMP AND EJECTOR PUMP MUST BE EACH PROVIDED WITH A SINGLE DEDICATED RECEPTACLE OUTLET WITHOUT GFCI PROTECTION AND A RECEPTACLE OUTLET IN THE SAME VICINITY WITH GFCI PROTECTION (WILL COUNTY ORDINANCE 150.113(Y)).

A. T OF A LUMINAIRE OR APPLIANCE 20. GFCI PROTECTION SHALL BE PROVIDED IN THE FOLLOWING AREAS: BATHROOMS, OUTDOORS, GARAGES, CRAWL SPACES (AT OR BELOW GRADE LEVEL), UNFINISHED BASEMENTS, KITCHENS (TO SERVE THE COUNTERTOP SERVICES), WITHIN 6 FEET OF THE OUTER EDGE OF SINKS AND BATHTUBS AND SHOWER STALLS, AND LAUNDRY AREAS (WHERE THE OUTLET IS WITHIN 6 FEET FROM THE OUTSIDE EDGE OF A SINK) (NEC 210.8). MASTER BATHROOM HAS NON GFCI OUTLET.

21 .FOR THE LAUNDRY AREA, PROVIDE AT LEAST ONE 20-AMP BRANCH CIRCUIT (IN ADDITION TO THE NUMBER OF BRANCH CIRCUITS REQUIRED BY OTHER PARTS OF THIS SECTION) TO SUPPLY THE LAUNDRY RECEPTACLE OUTLET. IF THE OUTLET IS WITHIN 6 FEET FROM THE OUTSIDE EDGE OF A SINK, THEN IT MUST HAVE GFCI PROTECTION (NEC 210.8(A)(7) AND 210.11(C)(2)).

22. FOR THE KITCHEN AREA, PROVIDE AT LEAST TWO 20-AMP BRANCH CIRCUITS TO SUPPLY RECEPTACLE OUTLETS TO SERVE APPLIANCES IN THE KITCHEN. PANTRY, BREAKFAST ROOM, DINING ROOM, OR SIMILAR AREA IN A DWELLING. NO BRANCH CIRCUIT CAN SERVE MORE THAN ONE KITCHEN (NEC 210.52(B)(1))

23. RECESSED LUMINARIES INSTALLED IN THE BUILDING THERMAL ENVELOPE SHALL BE SEALED TO LIMIT AIR LEAKAGE BETWEEN CONDITIONED AND UNCONDITIONED SPACES. ALL RECESSED LUMINARIES SHALL BE IC-RATED AND LABELED AS HAVING AN AIR LEAKAGE RATE NOT MORE THAN 2.0 CFM WHEN TESTED IN ACCORDANCE WITH ASTM E 283 AT 1.57 PSF (75 PA) PRESSURE DIFFERENTIAL, AND ALL RECESSED LUMINARIES SHALL BE SEALED WITH GASKETS OR CAULK BETWEEN HOUSING AND INTERIOR WALL OR CEILING COVERING (IECC R402.4.4).

24 .FOR INTERIOR STAIRWAYS, AN ARTIFICIAL LIGHT SOURCE SHALL BE PROVIDED TO ILLUMINATE THE LANDINGS AND TREADS. THE LIGHT SOURCE SHALL BE CAPABLE OF ILLUMINATING THE TREADS AND LANDINGS AT A MINIMAL 1 FOOT-CANDLE. A WALL SWITCH AT EACH FLOOR LEVEL TO CONTROL THE LIGHT SOURCE SHALL BE PROVIDED WHERE THE STAIRWAY HAS SIX OR MORE RISERS, UNLESS REMOTE, CENTRAL, OR AUTOMATIC CONTROL OF LIGHTING IS PROVIDED (IRC R303.7).

25. ALL GARAGES ATTACHED OR DETACHED (WITH ELECTRIC POWER) ARE REQUIRED TO BE ON A SEPARATE 20-AMP CIRCUIT, ONE FOR EACH CAR SPACE. GARAGE OUTLETS MUST HAVE GFCI PROTECTION AND BE RAISED MINIMALLY 18" ABOVE THE FLOOR, FOR THE VEHICLE IS CONSIDERED AN APPLIANCE WITH AN IGNITION SOURCE SINCE THE DWELLING-GARAGE SEPARATION HAS A REQUIRED FIRE RATING, THE OUTLETS HAVE TO HAVE A HORIZONTAL SEPARATION OF AT LEAST 24" FROM ANY OPENING ON THE OTHER SIDE OF THE SEPARATION FIREWALL (WILL COUNTY ORDINANCE 150.113(P), IRC R302.4.2 EXCEPTION 1.1, AND IRC M1307.3).

26. FOR SERVICING CEILING-SUPPORTED (PADDLE) FANS, AN OUTLET BOX SHALL SOLELY SERVE AND SUPPORT THIS FAN, PROVIDED THAT THE FAN ITSELF WEIGHS LESS THAN 70 POUNDS, OR THE REQUIRED MAXIMUM SUPPORT WEIGHT SHALL HAVE A REQUIRED MARKING ON THE OUTLET BOX OR BOX SYSTEM OF THE INFORMATION (NEC

27. SPACING OF ELECTRICAL OUTLETS: A. GENERAL: OUTLETS SHALL BE INSTALLED SO THAT NO POINT ALONG THE FLOOR LINE IN ANY WALL SPACE IS MORE THAN 6 FEET FROM AN OUTLET IN THAT SPACE, INCLUDING ANY WALL SPACE 2 FEET OR MORE IN WIDTH AND THE WALL SPACE OCCUPIED BY FIXED PANELS IN EXTERIOR WALLS, BUT EXCLUDING SLIDING PANELS IN EXTERIOR WALLS (NEC 210.52(A)). B. KITCHEN COUNTER TOPS: RECEPTACLE OUTLETS SHALL BE INSTALLED AT EACH COUNTER SPACE 12"OR WIDER. RECEPTACLES SHALL BE INSTALLED SO THAT NO POINT ALONG THE WALL LINE IS MORE THAN 24"FROM A RECEPTACLE OUTLET IN THAT SPACE. ISLAND AND PENINSULAR COUNTER TOPS 12"OR WIDER SHALL HAVE AT LEAST ONE RECEPTACLE FOR EACH 4 FEET OF COUNTERTOP. COUNTERTOP SPACES SEPARATED BY RANGE TOPS, REFRIGERATORS, OR SINKS SHALL BE CONSIDERED AS SEPARATE COUNTERTOP SPACES (NEC 210.52(C)).

28. PROVIDE SMOKE DETECTORS IN EACH SLEEPING ROOM, OUTSIDE OF EACH SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS, AND ON EACH ADDITIONAL STORY. WIRE THE DETECTORS SO THAT THE ACTUATION OF THE DETECTOR ACTUATES ALL DETECTORS.

29. A MINIMUM OF 75 PERCENT OF THE PERMANENTLY INSTALLED LAMPS SHALL BE HIGH EFFICIENCY LAMPS WITH MINIMUM 60 LUMENS PER WATT FOR LAMPS OVER 40 WATTS, 50 LUMENS PER WATT FOR LAMPS 15-40 WATTS AND 40 LUMENS PER WATT FOR LAMPS 15 WATTS OR LESS.

30. ALL RESIDENTIAL UNITS TO BE EQUIPPED WITH CARBON MONOXIDE DETECTOR WITHIN 10 FEET OF EVERY ROOM USED FOR SLEEPING. THE CARBON MONOXIDE DETECTOR SHALL BE WIRED WITH BATTERY

31. PROGRAMMABLE THERMOSTAT: WHERE THE PRIMARY HEATING IS FORCED AIR FURNACE, AT LEAST ONE PROGRAMMABLE THERMOSTAT IS REQUIRED TO MAINTAIN ZONE TEMPERATURE TO 55 F OR UP TO 85 F. THE THERMOSTAT SHALL INITIALLY PROGRAMMED WITH A HEATING TEMPERATURE SET POINT NO HIGHER THAN 70 F AND A COOLING TEMPERATURE SET POINT NO

32. COMBINATION SMOKE ALARMS AND CARBON MONOXIDE DETECTORS ARE NOT PERMITTED. 33. ALL ELECTRIC WILL BE INSTALLED BEFORE A ROUGH INSPECTION. THE BASEMENT SHALL BE PIPED BEFORE THE ROUGH INSPECTION.

ELECTRICAL SYMBOLS

WALL SWITCH DIMMER

LOWER THAN 78 F.

THREE WAY SWITCH

FOUR WAY SWITCH

DS AUTOMATIC DOOR SWITCH • GARAGE DOOR PUSH BUTTON

GARAGE DOOR KEYPAD

├─ GAS WALL HEATING UNIT GFI (古) WEATHERPROOF, GROUND FAULT

WP LY INTERRUPTER DUPLEX OUTLET DUPLEX RECEPTACLE

DUPLEX RECEPTACLE ONE SIDE SWITCHED

CABLE TELEVISION CONNECTION

▼ TELEPHONE JACK

OWNER / CONTRACTOR

DOOR BELL TYPE AND STYLE PER OWNER / CONTRACTOR ELECTRICAL PANEL

'-♦- LOW VOLTAGE RECESSED

RECESSED LIGHT FIXTURE PER OWNER/CONTRACTOR 4" RECESSED LIGHT FIXTURE PER OWNER/ CONTRACTOR

-CEILING LIGHT FIXTURE PER OWNER/CONTRACTOR - PENDANT LIGHT FIXTURE PER OWNER/CONTRACTOR

- WALL MOUNTED LIGHT FIXTURE PER CONTRACTOR/OWNER.

CEILING EXHAUST FAN PER OWNER/CONTRACTOR UNLESS OTHERWISE NOTED.

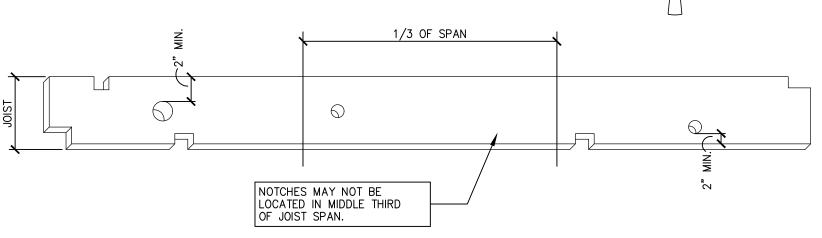
CONDUIT RUN CONCEALED ABOVE CEILING SMOKE DETECTOR, ALL SMOKE DETECTORS TO BE WIRED IN SERIES W/ BATTERY BACKUP

C CARBON MONOXIDE DETECTOR SURFACE MOUNTED 2'x4' FLUORESCENT LIGHT FIXTURE PER CONTR. / OWNER

SURFACE MOUNTED 2'x2' FLUORESCENT LIGHT FIXTURE PER CONTR. / OWNER UNDER/ABOVE CABINET STRIP LIGHTING TYPE AND STYLE PER OWNER / CONTRACTOR

THERMOSTAT LIGHT FIXTURE WITH PULL CHAIN

FLOOD LT. W/MOTION DETECTOR CEILING FAN



JOIST NOTCHING DETAIL

NOTCHES IN SOLID LUMBER JOISTS, RAFTERS AND BEAMS SHALL NOT EXCEED ONE-SIXTH OF THE DEPTH OF THE MEMBER, SHALL NOT BE LONGER THAN ONE-THIRD OF THE DEPTH OF THE MEMBER AND SHALL NOT BE LOCATED IN THE MIDDLE ONE-THIRD OF THE SPAN. NOTCHES AT THE ENDS OF THE MEMBER SHALL NOT EXCEED ONE-FOURTH THE DEPTH OF THE MEMBER. THE TENSION SIDE OF MEMBERS 4 INCHES OR GREATER IN NOMINAL THICKNESS SHALL NOT BE NOTCHED EXCEPT AT THE ENDS OF THE MEMBERS. THE DIAMETER OF HOLES BORED OF CUT INTO MEMBERS SHALL NOT EXCEED ONE-THIRD THE DEPTH OF THE MEMBER. HOLES SHALL NOT BE CLOSER THAN 2 INCHES TO THE TOP OR BOTTOM OF THE MEMBER, OR TO ANY OTHER HOLE LOCATED IN THE MEMBER. WHERE THE MEMBER IS ALSO NOTCHED, THE HOLE SHALL NOT BE CLOSER THAN 2 INCHES TO THE NOTCH.

ANY STUD IN AN EXTERIOR WALL OR BEARING PARTITION MAY BE CUT OR NOTCHED TO A DEPTH NOT EXCEEDING 25% OF IT'S WIDTH. STUDS IN NON-BEARING PARTITIONS MAY BE NOTCHED TO A DEPTH NOT TO EXCEED 40% OF A SINGLE STUD WIDTH. ANY STUD MAY BE BORED OR DRILLED, PROVIDED THAT THE DIAMETER OF THE RESULTING HOLE IS NO GREATER THAN 40% OF THE STUD WIDTH, THE EDGE OF THE HOLE IS NO CLOSER THAN 5/8 INCH (15.9mm) TH THE EDGE OF THE STUD, AND THE HOLE IS NOT LOCATED IN THE SAME SECTION AS A CUT OR A NOTCH.

EXCEPTIONS: 1. A STUD MAY BE BORED TO A DIAMETER NOT EXCEEDING 60% WALLS OR BEARING PARTITIONS ARE DOUBLED AND THAT NOT MORE THAN TWO SUCCESSIVE STUDS ARE BORED.

OF ITS WIDTH, PROVIDED THAT SUCH STUDS LOCATED IN EXTERIOR APPROVED STUD SHOES MAY BE USED WHEN INSTALLED IN

ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATION.

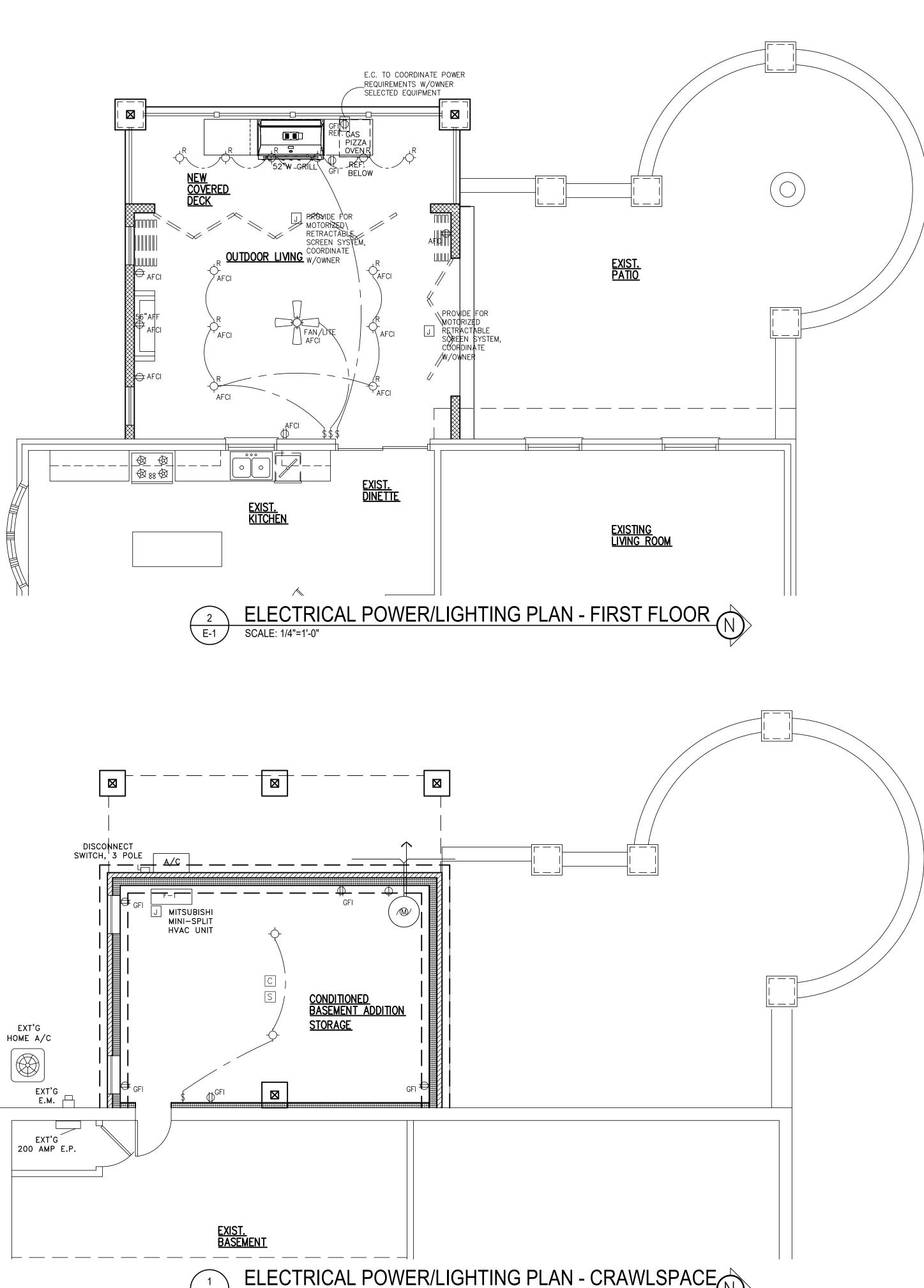
CUTTING AND NOTCHING: STRUCTURAL ROOF MEMBERS SHALL NOT BE CUT, BORED OR NOTCHED IN EXCESS OF THE LIMITATIONS SPECIFIED IN THIS SECTION.

SAWN LUMBER: NOTCHES IN SOLID LUMBER JOISTS, RAFTERS AND BEAMS SHALL NOT EXCEED ONE-SIXTH OF THE DEPTH OF THE MEMBER, SHALL NOT BE LONGER THAN ONE-THIRD OF THE DEPTH OF THE MEMBER AND SHALL NOT BE LOCATED IN THE MIDDLE ONE-THIRD OF OF THE SPAN. NOTCHES AT THE ENDS OF THE MEMBER SHALL NOT EXCEED ONE-FOURTH OF THE DEPTH OF THE MEMBER. THE TENSION SIDE OF MEMBERS 4 INCHES (102 mm) OR GREATER IN NOMINAL THICKNESS SHALL NOT BE NOTCHED EXCEPT AT THE ENDS OF THE MEMBERS. THE DIAMETER OF THE HOLES BORED OR CUT IN TO MEMBERS SHALL NOT EXCEED ONE—THIRD THE DEPTH OF THE MEMBER. HOLES SHALL NOT BE CLOSER THAN 2 INCHES (51 mm) TO THE TOP OR BOTTOM OF THE MEMBER, OR TO ANY OTHER HOLE LOCATED IN THE MEMBER. WHERE THE MEMBER IS ALSO NOTCHED, THE HOLE SHALL NOT BE CLOSER THAN 2 INCHES (15 mm) TO THE NOTCH.

EXCEPTIONS: NOTCHES ON CANTILEVERED PORTIONS OF RAFTERS ARE PERMITTED PROVIDED THE DIMENSION OF THE REMAINING PORTION OF THE RAFTER IS NOT LESS THAN 4 INCH NOMINAL (102 mm) AND THE LENGTH OF THE CANTILEVERS DO NOT EXCEED 24 INCHES (610 mm).

ENGINEERED WOOD PRODUCTS: CUTS, NOTCHES AND HOLES BORED IN LAMINATED VENEER LUMBER, GLUE-LAMINATED MEMBERS OR I-JOISTS ARE NOT PERMITTED UNLESS THE EFFECT OF SUCH PENETRATIONS ARE SPECIFICALLY CONSIDERED IN THE DESIGN OF THE MEMBER.

ALTERATIONS TO TRUSSES: TRUSS MEMBERS SHALL NOT BE CUT, NOTCHED, DRILLED, SPLICED OR OTHERWISE ALTERED IN ANY WAY WITHOUT THE APPROVAL OF A REGISTERED DESIGN PROFESSIONAL. ALTERATIONS RESULTING IN THE ADDITION OF LOAD (e.g., HVAC EQUIPMENT, WATER HEATER) THAT EXCEEDS THE DESIGN LOAD FOR THE TRUSS SHALL NOT BE PERMITTED WITHOUT VERIFICATION THAT THE TRUSS IS CAPABLE OF SUPPORTING SUCH ADDITIONAL LOADING.



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



ARCHITECTS / DESIGNERS 20960 FRANKFORT SQ. RD.

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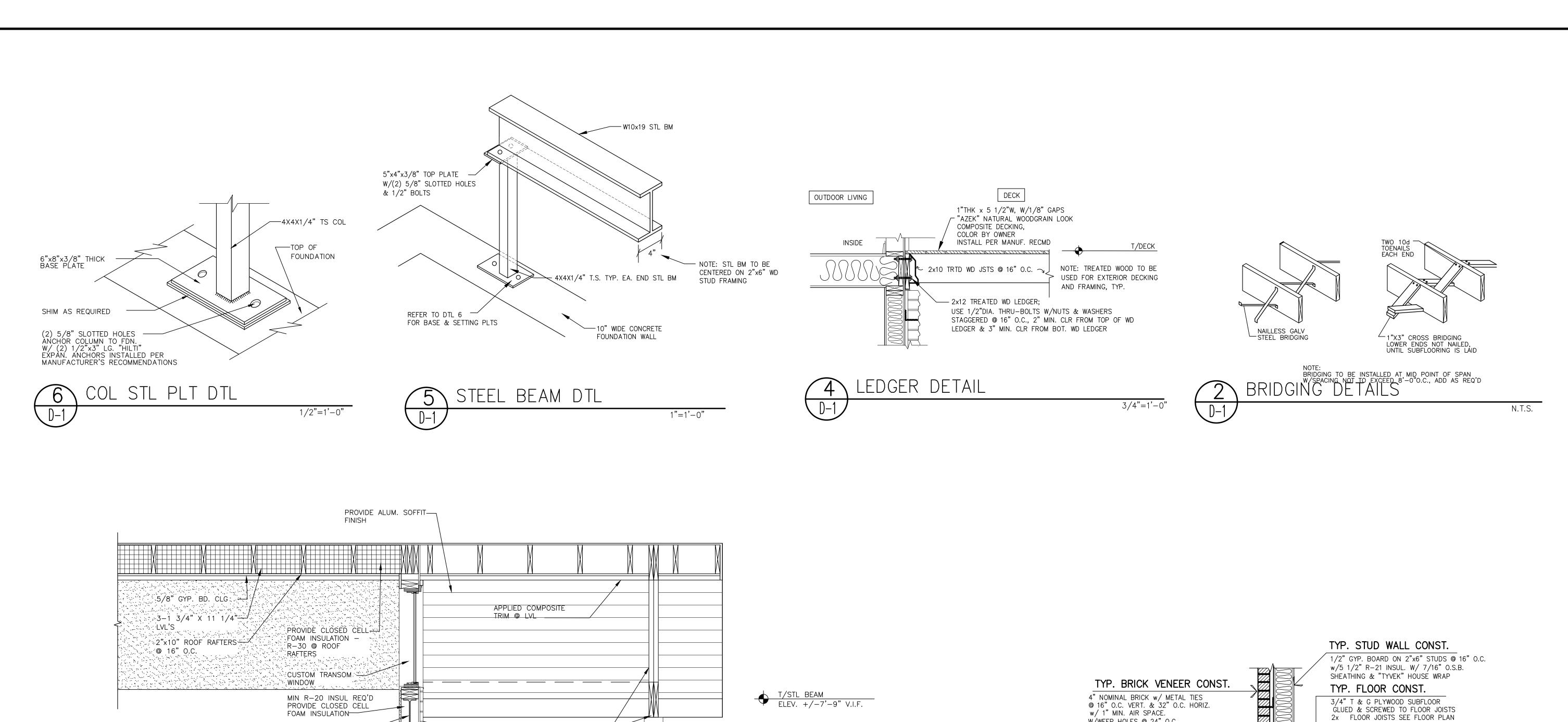
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DESIGN FIRM REG. NO. 184.006972 EXP. DATE 4-30-23

REVISIONS REV #DATE: REV. PER: DATE: 11-8-22 DRAWN BY: PREVIOUS NO.

SHEET NUMBER

PROJECT NO.



T/1ST FLR/DECK
ELEV. MATCH EXT'G

W10x19 STL BEAM

2"x6" WD STUDS -

@ 16" O.C.

W/R-21 BATT INSUL & BRICK OR STONE

SEE DTL 5

OUTDOOR LIVING

BASEMENT

STORAGE

OPERABLE TEMP GLASS DOOR SYSTEM

AS MANUF. BY "NANAWALL SYSTEMS"

OR EQ, SUBMIT SHOP DRAWINGS FOR

OWNER/ARCHITECT APPROVAL

TYP. FLOOR CONST. —

- 3/4" T&G PLYWD SUBFLOOR

- 1"THK x 5 1/2"W, "AZEK" NATURAL WOODGRAIN

- 2"x10" FLOOR JOISTS @ 16" O.C., MIN. 4" BEARING

PROVIDE MIN. 2 ROWS 1x3 WD BRIDGING

- 5/8" MOISTURE RESISTANT GYP. BD. FIRE TAPED

LOOK COMPOSITE DECKING W/CONCEALED FASTENERS, COLOR BY OWNER, INSTALL INTERIOR DECKING W/NO GAPS

@ MID-SPANS MAX 8'-0" O.C., SEE SHT A4 BRIDGING DTL

- MIN. R-30 BATT INSULATION BETWEEN JOISTS & AT RIM JOISTS

(2)2"x12" W/APPLIED ——

COMPOSITE TRIM

6X6" WD. TIMBER W/APPLIED

- PROVIDE SOLID BLOCKING | | BELOW OPERABLE DOOR TRACK

(2)2"x12"-

- THIN BRICK

COMPOSITE TRIM __

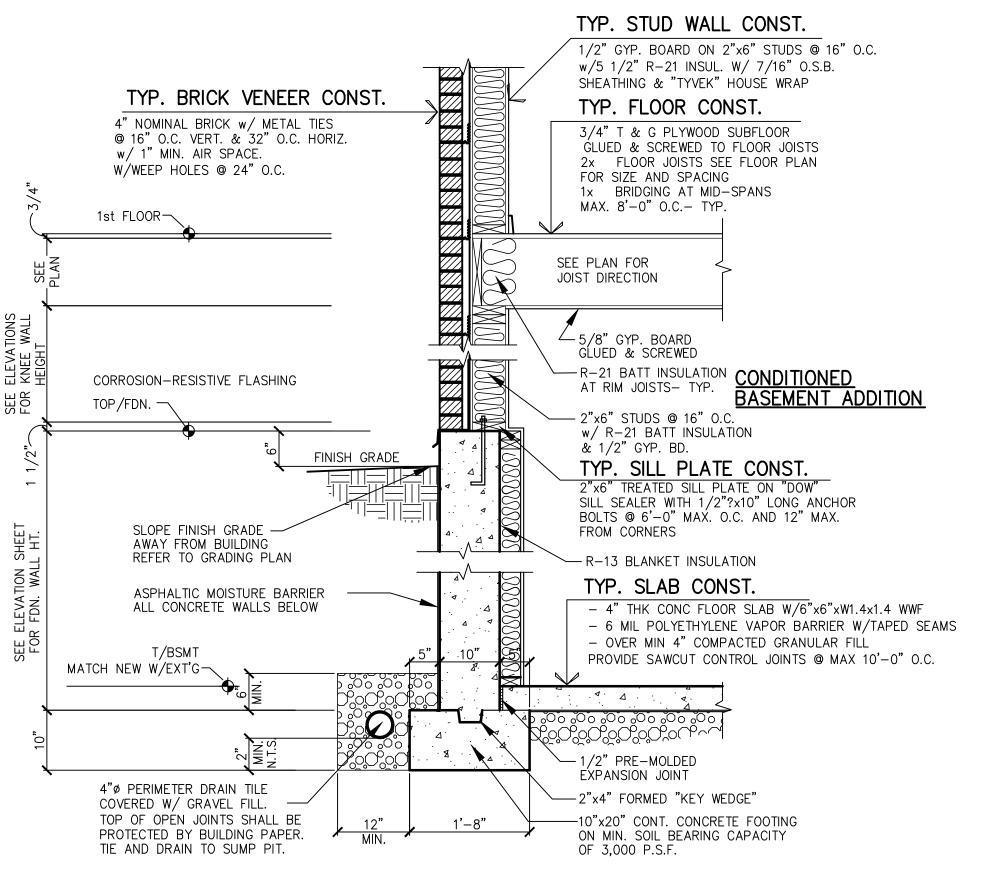
-PROVIDE SHIMS

AS REQ'D

ARTITARITO ARTITARITO ARTITARI

SECTION @ NANWALL/STL/DECK

~ 2x10 TRTD WD JSTS @ 16" O.C.~ ;



3/4"=1'-0"

SECTION



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A REAR COVERED DECK FOR TH MARKUNAS RESIDENCE 700 BIRCHWOOD RD. FRANKFORT, ILLINOIS

DATE:

DESIGN FIRM REG. NO. 184.006972 EXP. DATE 4-30-23

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