

CITY OF CAMBRIDGE

BOARD OF ZONING APPEAL

831 Massachusetts Avenue, Cambridge MA 02139 2019 SEP 13 PM 3:54

617-349-6100

CITY OF CAMBRIDGE
CAMBRIDGE MASS 02139

BZA Application Form

BZA Number: 140869

General Information

The undersigned hereby petitions the Board of Zoning Appeal for the following:

Special Permit: _____ Variance: X Appeal: _____

PETITIONER: Fawwaz Habbal

PETITIONER'S ADDRESS: 82 Larch Road, Cambridge, MA 02138

LOCATION OF PROPERTY: 82 Larch Rd , Cambridge, MA

TYPE OF OCCUPANCY: garage **ZONING DISTRICT:** Residence B Zone

REASON FOR PETITION:

/New Structure/

DESCRIPTION OF PETITIONER'S PROPOSAL:

According to the BZA, the proposed garage needs to be 7.5ft from the property line. 10ft from the primary structure and 15 ft in height. The current proposed plans would require relief from the BZA regulation.

The old garage was built in 1928 and was attached to the primary and it is 6.4 ft set back from the property line. The old garage area is 11.5 ft x 19 ft, and there is a room on top of it.

The new garage has no room on top of it. The proposed new garage has a side that is 4ft from the property line, and it is 4 ft from the primary structure and 15 ft in height. The new area is 13 ft x 25 ft. The overall area does not exceed the permitted area.

There is a hardship to enter the old garage; the width is too narrow to allow for my SUV to park there.

SECTIONS OF ZONING ORDINANCE CITED:

Article: 5.000 Section: 5.31 (Table of Dimensional Requirements).

Article: 5.000 Section: 5.21.H (Accessory Structure Setbacks).

Article: 10.000 Section: 10.30 (Variance).

Article: 8.000 Section: 8.22.3 (Non-Conforming Structure).

Original
Signature(s):

Fawwaz Habbal

(Petitioner (s) / Owner)

Fawwaz HABBAL

(Print Name)

Address:

Tel. No. 617-721-7289
E-Mail Address: Habbalf@gmail.com

Date: Sept. 8, 2021

BZA APPLICATION FORM - OWNERSHIP INFORMATION

To be completed by OWNER, signed before a notary and returned to The Secretary of the Board of Zoning Appeals.

I/~~we~~ Fawwaz Habbal _____
(OWNER)

Address: 82 Larch Road, Cambridge, MA _____

State that I/We own the property located at 82 Larch Road, Cambridge, MA , which is the subject of this zoning application.

The record title of this property is in the name of Fawwaz Habbal _____

*Pursuant to a deed of duly recorded in the date 7/16/2019 , Middlesex South County Registry of Deeds at Book 72933 , Page 174 ; or Middlesex Registry District of Land Court, Certificate No. _____
Book _____ Page _____ .

Fawwaz Habbal

SIGNATURE BY LAND OWNER OR
AUTHORIZED TRUSTEE, OFFICER OR AGENT*

*Written evidence of Agent's standing to represent petitioner may be requested.

Commonwealth of Massachusetts, County of Middlesex _____

The above-name Fawwaz Habbal personally appeared before me, this 8th of May, 2021 , and made oath that the above statement is true.

My commission expires 11/14/2025 (Notary Seal) _____
Debbie D. Shay
Notary



DEBBIE D. SHAY
Notary Public
Commonwealth of Massachusetts
My Commission Expires
November 14, 2025

• If ownership is not shown in recorded deed, e.g. if by court order, recent deed, or inheritance, please include documentation.

BZA APPLICATION FORM - OWNERSHIP INFORMATION

To be completed by OWNER, signed before a notary and returned to The Secretary of the Board of Zoning Appeals.

I/We Fawwaz HABBAL
(OWNER)

Address: 82 Larch Road, Cambridge, MA 02138

State that I/We own the property located at 82 Larch Road, Cambridge, MA 02138 which is the subject of this zoning application.

The record title of this property is in the name of _____

*Pursuant to a deed of duly recorded in the date July 16, 2019, Middlesex South County Registry of Deeds at Book 72933, Page 0174; or Middlesex Registry District of Land Court, Certificate No. _____
Book _____ Page _____.

Fawwaz Habbal
**SIGNATURE BY LAND OWNER OR
~~AGENCY, TRUSTEE, OFFICER OR AGENT*~~**

*Written evidence of Agent's standing to represent petitioner may be requested.

Commonwealth of Massachusetts, County of Middlesex

The above-name Fawwaz Habbal personally appeared before me, this 4th of August, 2021, and made oath that the above statement is true.

[Signature] Notary

My commission expires 01-28-2022 (Notary Seal).



Theresa Kaufman
Notary Public
Commonwealth of Massachusetts
My Commission Expires
January 28, 2022

o If ownership is not shown in recorded deed, e.g. if by court order, recent deed, or inheritance, please include documentation.

(3) 0



2019 00101062

Bk: 72933 Pg: 174 Doc: DEED
Page: 1 of 2 07/16/2019 02:11 PM

QUITCLAIM DEED

I, Florence C. Ladd, a single woman, of Cambridge, MA

for consideration paid and in full consideration of Two Million Two Hundred Thousand and 00/100 Dollars (\$2,200,000.00)

grant to Fawwaz Habbal, now of 82 Larch Road, Cambridge, MA

with quitclaim covenants:

A certain parcel of land, with the buildings thereon, being now 82 Larch Road in said Cambridge, being shown as Lots C and D on Plan of Land in Cambridge, said plan entitled "Plan of Premises in Cambridge surveyed for R.C. Grovostein, Being a Relotting of Plan dated Nov. 1920", by W.A. Mason & Son, Surveyors, dated February 1921, and recorded with Middlesex South District Deeds in Book of Plans 294 Plan 42, and being further bounded and described, as shown on said plan, as follows:

82 Larch Road, Cambridge, MA

- NORTHEASTERLY: by said Larch Road, 90 feet;
- SOUTHEASTERLY: by Lot B, 51.94 feet;
- SOUTHWESTERLY: by said Lot B and land of owners unknown in two courses respectively 20.22 feet and 78.41 feet; and
- NORTHWESTERLY: by land of owners unknown 95.33 feet.

Containing 6,822 square feet of land more or less

For title reference see deed of Florence C. Ladd, dated August 1, 1972, recorded in said Registry of Deeds in Book 12257, Page 218.

Grantor hereby releases all rights of homestead in said premises and hereby declares under the pains and penalties of perjury that no person is entitled to claim the benefit of an existing estate of homestead in the premises

MASSACHUSETTS EXCISE TAX
Southern Middlesex District ROD # 001
Date: 07/16/2019 02:11 PM
Ctn# 003042 27805 Doc# 00101062
Fee: \$10,032.00 Cons: \$2,200,000.00

Gregg, Hunt, Ahern & Embry
One Cranberry Hill
Suite 304
Lexington, MA 02421

Under the Pains and Penalties of Perjury, witness my signature this

Day of 7th June 2019

Florence C. Ladd
Florence C. Ladd

COMMONWEALTH OF MASSACHUSETTS

County of: Worcester

On this 7th day of June, 2019, before me, the undersigned notary public, personally appeared Florence C. Ladd, proved to me through satisfactory evidence of identification, which were MAD to be the person whose name is signed on the preceding or attached document, and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of her knowledge and belief and acknowledged to me that she signed it voluntarily for its stated purpose.

[Signature]
Notary Public
My Commission Expires May 16, 2025
EAVDEN DDHR
Notary Public
Commonwealth of Massachusetts
My Commission Expires
May 16, 2025

DIMENSION OF 15'.

BZA Application Form

SUPPORTING STATEMENT FOR A VARIANCE

EACH OF THE FOLLOWING REQUIREMENTS FOR A VARIANCE MUST BE ESTABLISHED AND SET FORTH IN COMPLETE DETAIL BY THE APPLICANT IN ACCORDANCE WITH MGL 40A, SECTION 10.

A literal enforcement of the provisions of this Ordinance would involve a substantial hardship, financial or otherwise, to the petitioner or appellant for the following reasons:

A)

The literal application of the Ordinance would prevent the proposed enlargement of the garage to allow its use for the parking of the Petitioner's automobile and additional storage that a one-car garage affords. The existing garage, having been built at a time when passenger automobiles were much smaller in size, does not allow the Petitioner a usable garage space for his automobile. This inability creates a substantial hardship on the Petitioner in terms of preventing the appropriate garaged off-street parking of his automobile and creates a significant financial hardship to the Petitioner by devaluing the property which does not have a garage usable for parking an automobile.

B)

The hardship is owing to the following circumstances relating to the soil conditions, shape or topography of such land or structures and especially affecting such land or structures by not affecting generally the zoning district in which it is located for the following reasons:

The current non-conformity of the existing garage is caused by a minor encroachment of the existing garage into the side-yard and rear-yard setbacks and a non-conformity in the lot's open space ratio (all pre-dating the Zoning Ordinance). There is only one practical location for a garage on the site and that is the current location of the existing garage. Given the yard boundaries, yard shape, location of the existing house and garage, side and rear-yard setback requirements, and necessary open space ratio, no enlargement, even a minor enlargement of the garage can be accomplished without zoning relief thereby creating a hardship on the Petitioner. These circumstances are unique to this property and do not affect generally the zoning district in which the house is located.

C)

DESIRABLE RELIEF MAY BE GRANTED WITHOUT EITHER:

1)

Desirable relief may be granted without substantial detriment to the public good for the following reasons:

The minor enlargement of the existing garage in the same location as the existing garage will create no detriment to, and have no effect on, the public good in any respect.

2)

Desirable relief may be granted without nullifying or substantially derogating from the intent or purpose of this Ordinance for the following reasons:

The intent and purpose of the Ordinance is to regulate the development of property in the City based on standards that are neighborhood and use specific. Here, the relief requested is consistent with adherence to the requirements of the Ordinance and do not disturb the intentions of Ordinance with regard to the neighborhood or the property's use. The relief requested for the minor encroachment of the proposed garage into the side-yard and rear-yard setbacks and the slight reduction in lot open space, will in no way nullify or substantially derogate from the intent or purpose of this Ordinance.

BZA APPLICATION FORM

DIMENSIONAL INFORMATION

APPLICANT: Fawwaz Habbal

PRESENT USE/OCCUPANCY: Garage

LOCATION: 82 Larch Road

ZONE: Residence B Zone

PHONE: 617-721-7289

REQUESTED USE/OCCUPANCY: Garage, Replacement of an older

	<u>CONDITIONS</u>	<u>REQUESTED CONDITIONS</u>	<u>ORDINANCE REQUIREMENTS¹</u>
<u>TOTAL GROSS FLOOR AREA:</u>	<u>2,788 SF</u>	<u>3,133 SF</u>	<u>3,137.5 SF</u> (max.)
<u>LOT AREA:</u>	<u>6,821 SF</u>	<u>6,821 SF</u>	<u>5,000 SF</u> (min.)
<u>RATIO OF GROSS FLOOR AREA TO LOT AREA:²</u>	<u>41%</u>	<u>44% with new Garage</u>	<u>50%</u> (max.)
<u>LOT AREA FOR EACH DWELLING UNIT:</u>	<u>6,821 SF</u>	<u>6,821 SF</u>	<u>2,500</u> (min.)
<u>SIZE OF LOT:</u>	WIDTH	<u>90 ft</u>	<u>90 ft</u> (min.)
	DEPTH	<u>73.64 ft, (average)</u>	<u>73.64 ft,</u>
<u>Setbacks in Feet:</u>	FRONT	<u>39 ft for Garage</u>	<u>15 ft</u> (min.)
	REAR	<u>20.6 ft for Garage</u>	<u>25 ft</u> (min.)
	LEFT SIDE	<u>Garage was attached</u>	<u>Garage to be attached</u> (min.)
	RIGHT SIDE	<u>6.4 ft</u>	<u>4 ft</u> (min.)
<u>SIZE OF BLDG.:</u>	HEIGHT	<u>15.8 ft</u>	<u>35 ft</u> (max.)
	LENGTH		<u>25 ft</u>
	WIDTH		<u>13 ft</u>
<u>RATIO OF USABLE OPEN SPACE TO LOT AREA:³⁾</u>	<u>66% with former garage</u>	<u>67% with new garage</u>	<u>40%</u> (min.)
<u>NO. OF DWELLING UNITS:</u>	<u>1</u>	<u>1</u>	<u>1</u> (max.)
<u>NO. OF PARKING SPACES:</u>	<u>1</u>	<u>1</u>	<u>1</u> (min./max)
<u>NO. OF LOADING AREAS:</u>	<u>NA</u>	<u>NA</u>	(min.)
<u>DISTANCE TO NEAREST BLDG. ON SAME LOT:</u>	<u>Garage is attached to existing house</u>		(min.)

Describe where applicable, other occupancies on same lot, the size of adjacent buildings on same lot, and type of construction proposed, e.g.; wood frame, concrete, brick, steel, etc.

Structure is wood frame

1. SEE CAMBRIDGE ZONING ORDINANCE ARTICLE 5.000, SECTION 5.30 (DISTRICT OF DIMENSIONAL REGULATIONS).
2. TOTAL GROSS FLOOR AREA (INCLUDING BASEMENT 7'-0" IN HEIGHT AND ATTIC AREAS GREATER THAN 5') DIVIDED BY LOT AREA.
3. OPEN SPACE SHALL NOT INCLUDE PARKING AREAS, WALKWAYS OR DRIVEWAYS AND SHALL HAVE A MINIMUM DIMENSION OF 15'.

BZA Application Form

*Initial Submission
"missing many data"*

DIMENSIONAL INFORMATION

Applicant: Fawwaz Habbal

Present Use/Occupancy: garage

Location: 82 Larch Road

Zone: Residence B Zone

Phone: 617-721-7289

Requested Use/Occupancy: garage

	<u>Existing Conditions</u>	<u>Requested Conditions</u>	<u>Ordinance Requirements</u>
<u>TOTAL GROSS FLOOR AREA:</u>	2,788 11.5 ft x 19 ft=218.5	3,133 13*25=325	NA 3,137.5 (max.)
<u>LOT AREA:</u>	6821 N/A	6821 N/A	N/A 5000 (min.)
<u>RATIO OF GROSS FLOOR AREA TO LOT AREA:</u>	41% 218.5/6821=0.032	44% 325/6821=0.0476	N/A 50%
<u>LOT AREA OF EACH DWELLING UNIT</u>	N/A 6,821	N/A 6,821	N/A 2500
<u>SIZE OF LOT:</u>			
WIDTH	N/A 90	N/A 90	N/A 50
DEPTH	N/A 73,	N/A 73.64 ft	N/A
<u>SETBACKS IN FEET:</u>			
FRONT	N/A	N/A 39.	N/A 15
REAR	20 ft	20 ft 20.6	7.5 ft 25
LEFT SIDE	structure is attached to house	4 ft attached to house	10
RIGHT SIDE	6.4 ft	4 ft	7.5 ft
<u>SIZE OF BUILDING:</u>			
HEIGHT	10 ft and room on top	15.8	15 35
WIDTH	N/A	N/A 25	N/A
<u>RATIO OF USABLE OPEN SPACE TO LOT AREA:</u>	N/A 666	67% N/A 13	N/A 40
<u>NO. OF DWELLING UNITS:</u>	1	1	1
<u>NO. OF PARKING SPACES:</u>	one	one	one
<u>NO. OF LOADING AREAS:</u>	N/A	N/A	N/A
<u>DISTANCE TO NEAREST BLDG. ON SAME LOT</u>	garage was attached	4 ft	10 ft

Describe where applicable, other occupancies on the same lot, the size of adjacent buildings on same lot, and type of construction proposed, e.g; wood frame, concrete, brick, steel, etc.

Wood frame

1. SEE CAMBRIDGE ZONING ORDINANCE ARTICLE 5.000, SECTION 5.30 (DISTRICT OF DIMENSIONAL REGULATIONS).
2. TOTAL GROSS FLOOR AREA (INCLUDING BASEMENT 7'-0" IN HEIGHT AND ATTIC AREAS GREATER THAN 5') DIVIDED BY LOT AREA.
3. OPEN SPACE SHALL NOT INCLUDE PARKING AREAS, WALKWAYS OR DRIVEWAYS AND SHALL HAVE A MINIMUM



City of Cambridge

MASSACHUSETTS

BOARD OF ZONING APPEAL

831 Mass Avenue, Cambridge, MA.
(617) 349-6100

BZA

POSTING NOTICE – PICK UP SHEET

The undersigned picked up the notice board for the Board of Zoning Appeals Hearing.

Name: Fawwaz HABBAL Date: Oct. 18, 2021
(Print)

Address: 82 Larch Road

Case No. BZA-140069

Hearing Date: 11/4/21

Thank you,
Bza Members

Habbal House Garage

Dr. & Mrs. Fawwaz Habbal

82 Larch Rd. Cambridge, MA

3/18/21

PERMIT SET

DRAWING LIST

1-ARCHITECTURAL

A.200

A.300

GARAGE PLAN AND ELEVATIONS

GARAGE SECTIONS AND DETAILS

DRAWING LIST

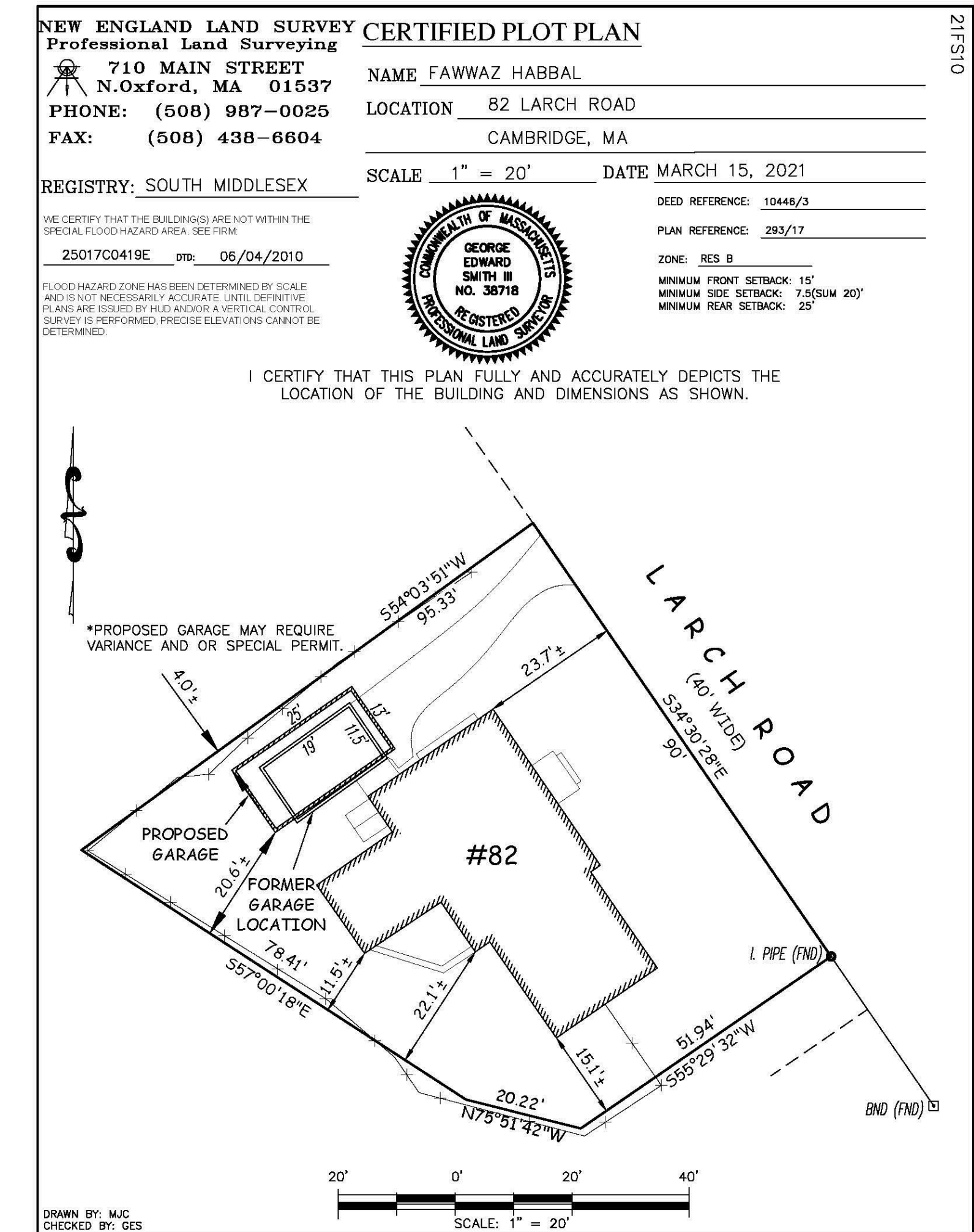
2-STRUCTURAL

S.100

S.101

GARAGE STRUCTURAL NOTES

GARAGE STRUCTURAL DRAWINGS



Architects



24 Roland Street, Suite 301
Charlestown, MA 02129
T: 617.776.6545
F: 617.776.6678
www.hktarchitects.com

Structural Engineer

Lim Consultants, Inc.
6 Pleasant Street
Malden, MA 02148
TEL: (781) 338-9300
FAX: (781) 338-9310

Client

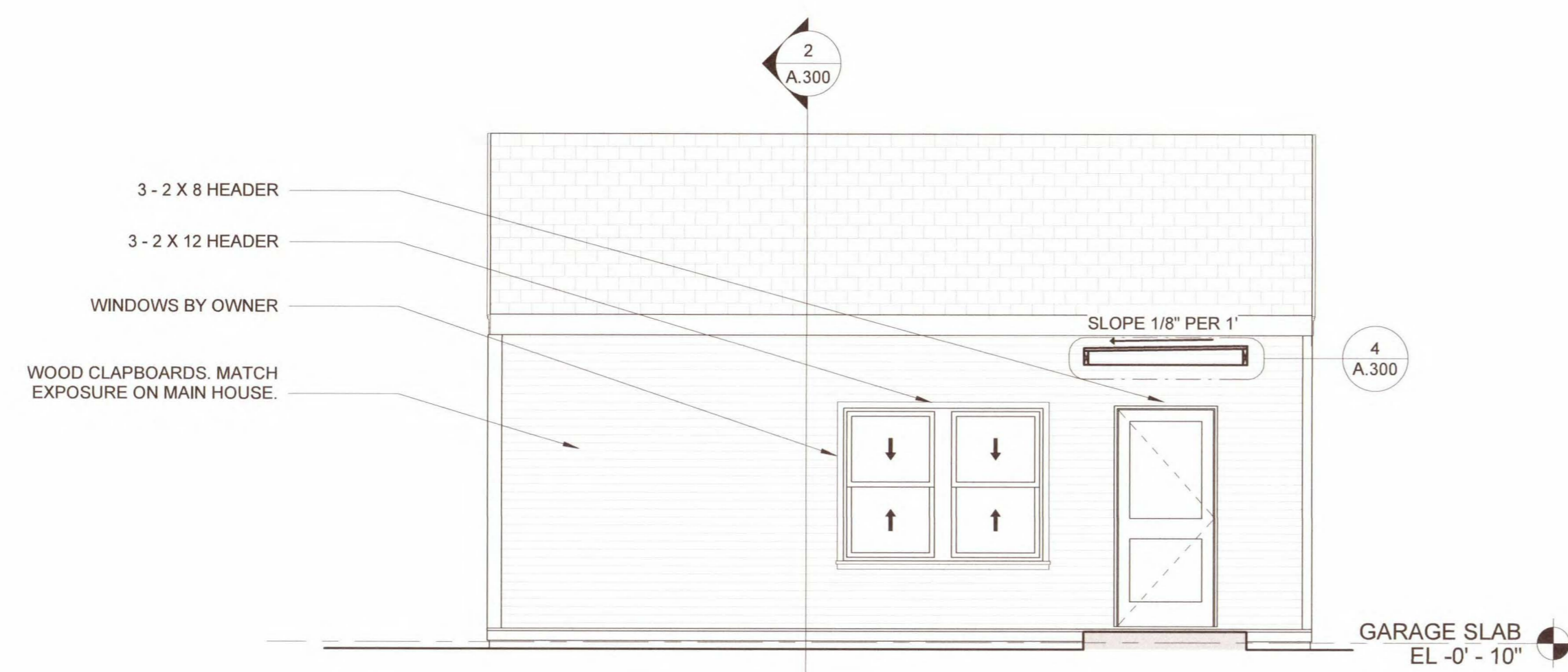
Dr. & Mrs. Fawwaz Habbal
33 Lexington Avenue
Cambridge, MA 02138

Revision Schedule		
Number	Revision	Date

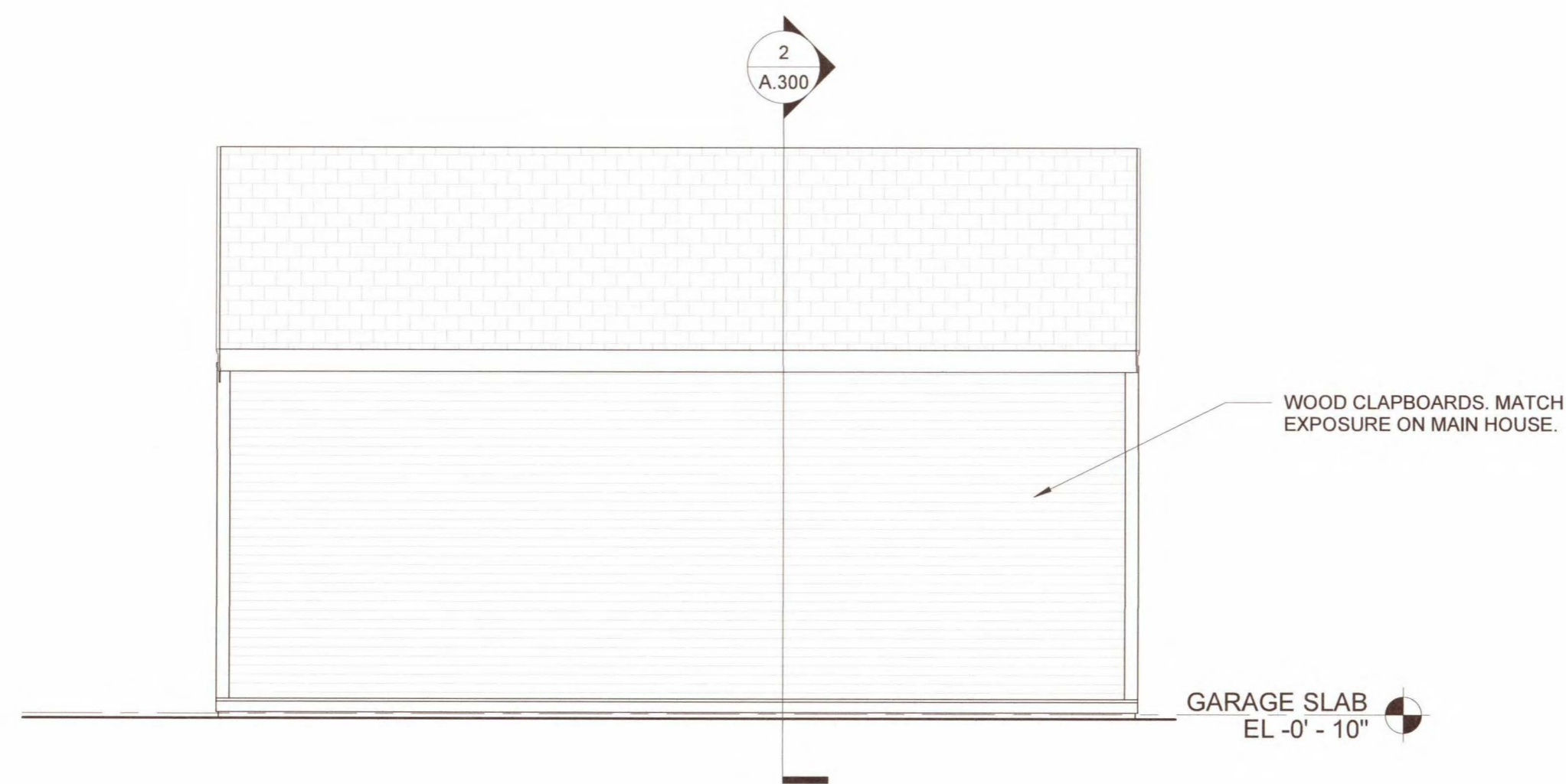
Registrations



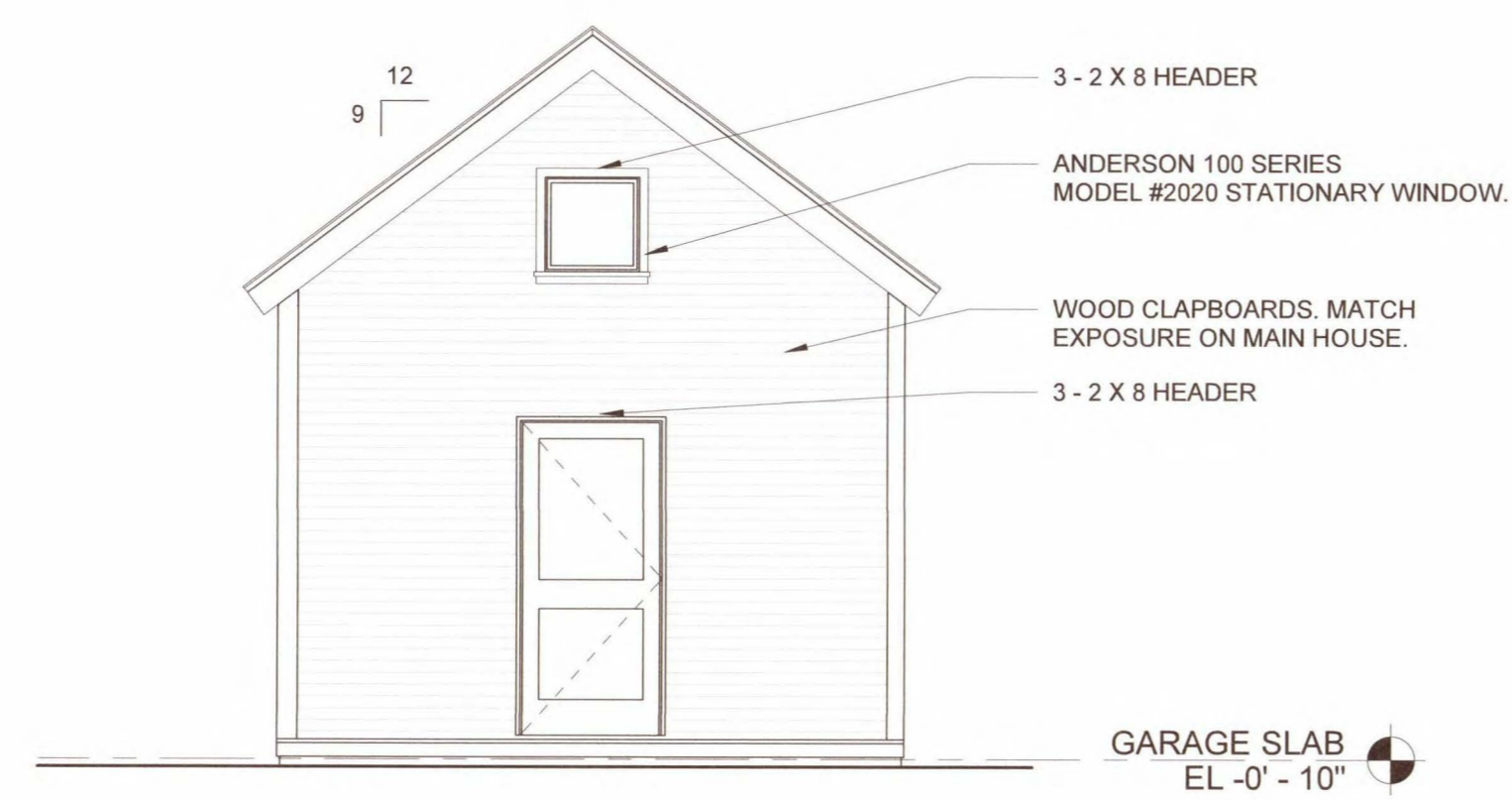
Consultants



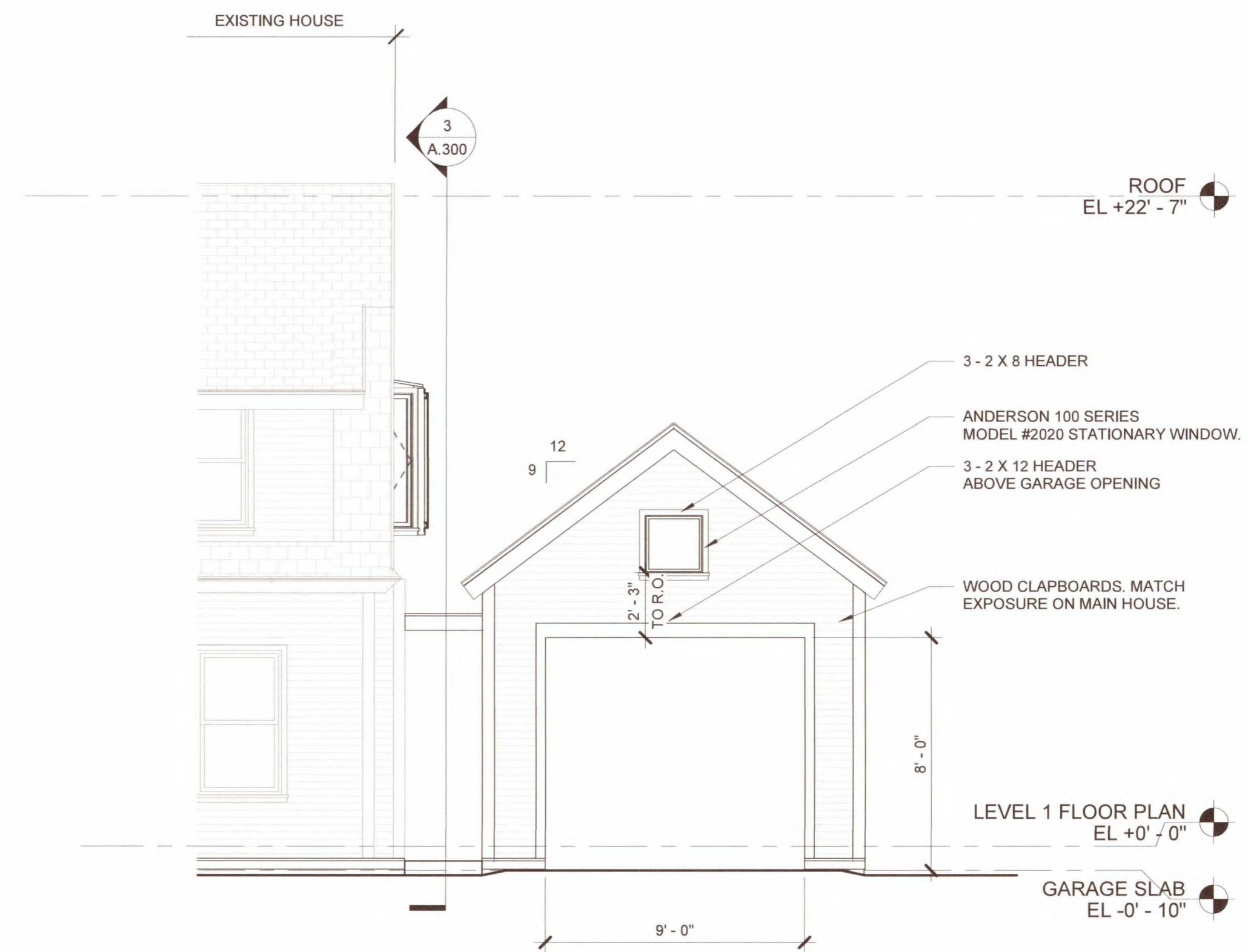
5 GARAGE - SOUTH ELEVATION
1/4" = 1'-0"



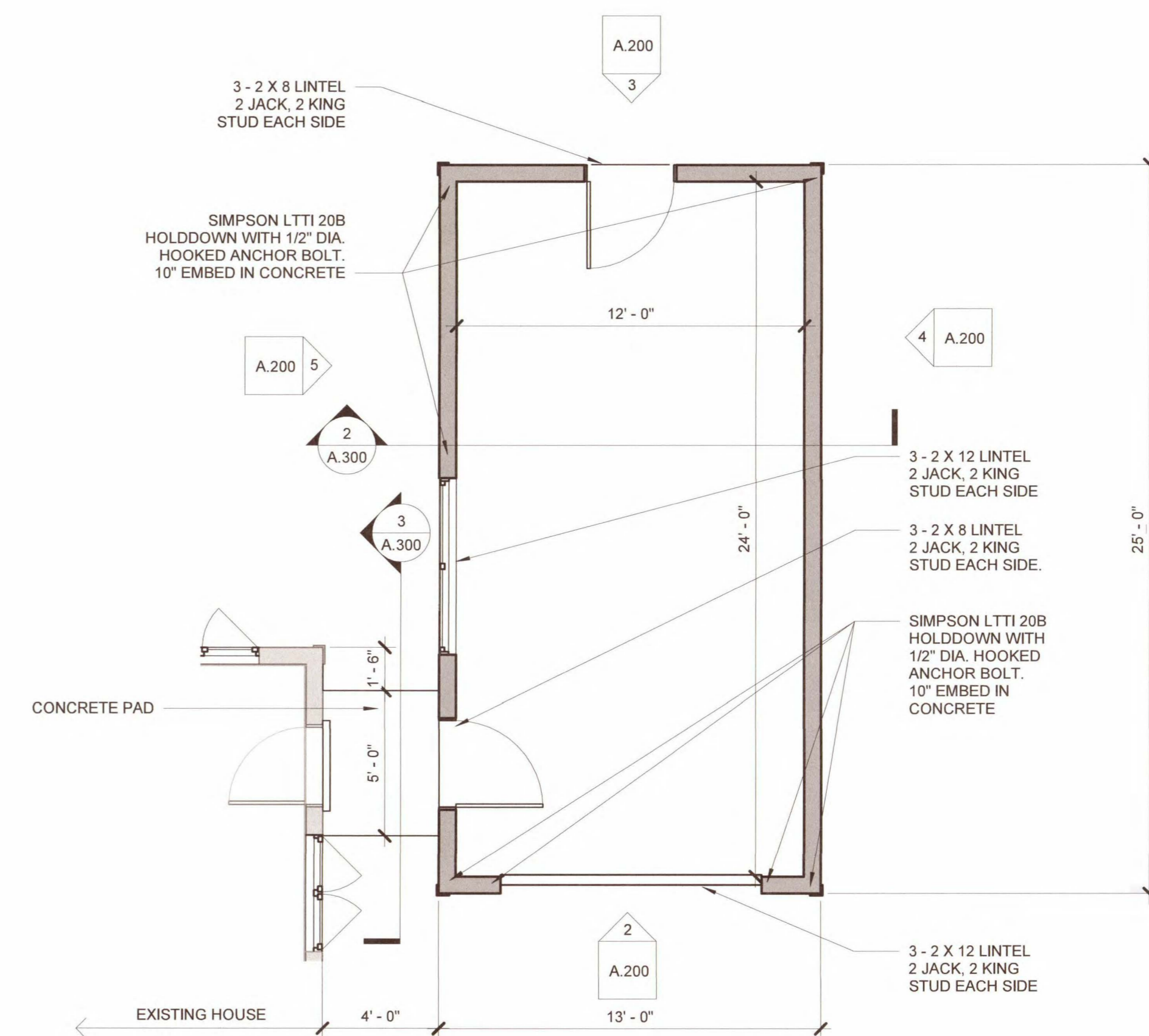
4 GARAGE - NORTH ELEVATION
1/4" = 1'-0"



3 GARAGE - WEST ELEVATION
1/4" = 1'-0"



2 GARAGE - EAST ELEVATION WITH MAIN HOUSE
1/4" = 1'-0"



1 GARAGE PLAN
1/4" = 1'-0"

Project
Habbal House Garage
82 Larch Rd. Cambridge, MA
Dr. & Mrs. Fawwaz Habbal

Drawing Title
GARAGE PLAN AND ELEVATIONS

PR WRH
Drawn by Checked by
3/18/21
Date
21935
Job number
PERMIT SET
Drawing set

Drawing number
A.200

Revision Schedule		
Number	Revision	Date

Registrations



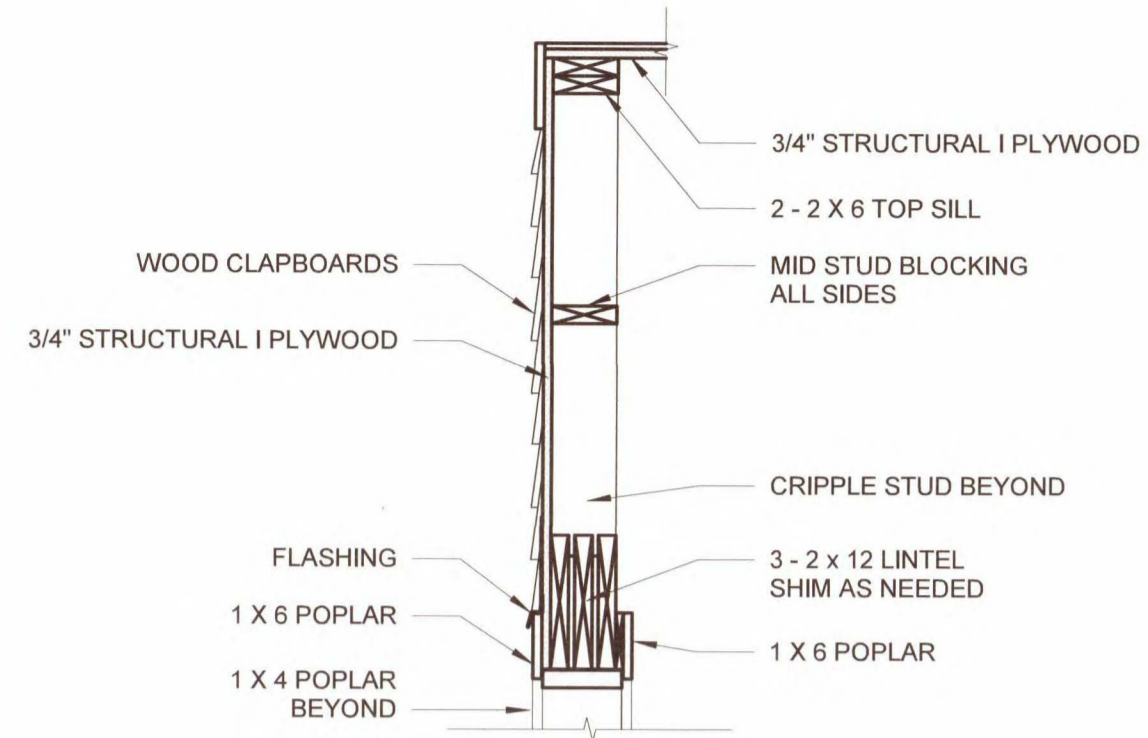
Consultants

Project
Habbal House Garage
82 Larch Rd. Cambridge, MA
Dr. & Mrs. Fawwaz Habbal

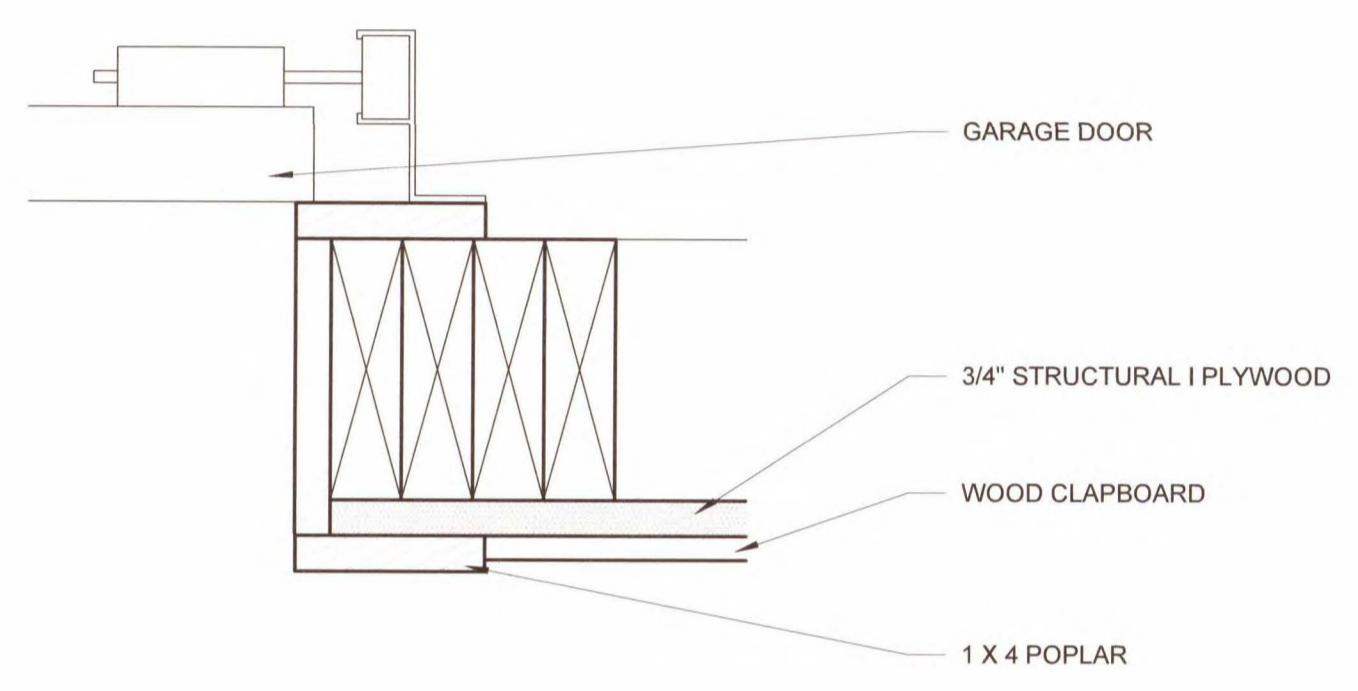
Drawing Title
GARAGE SECTIONS AND DETAILS

PR WRH
Drawn by 3/18/21
Date 21935
Job number PERMIT SET
Drawing set
Drawing number

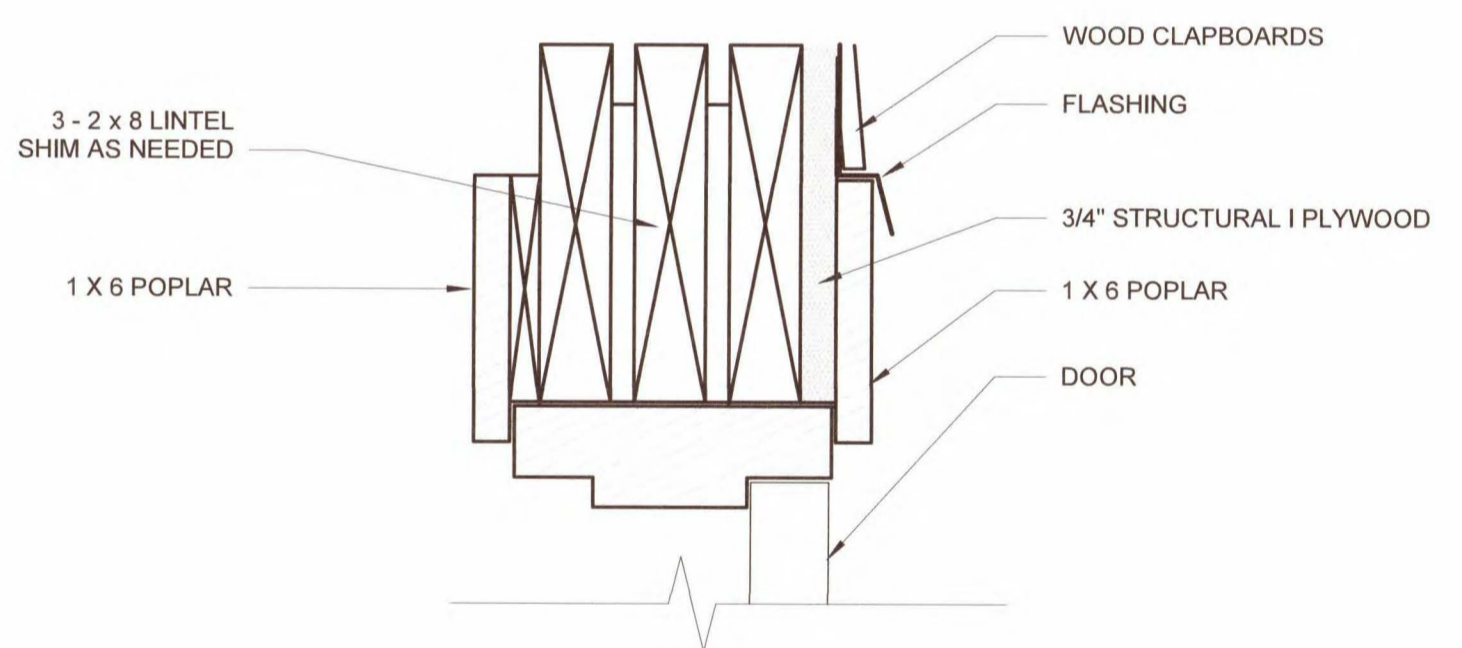
A.300



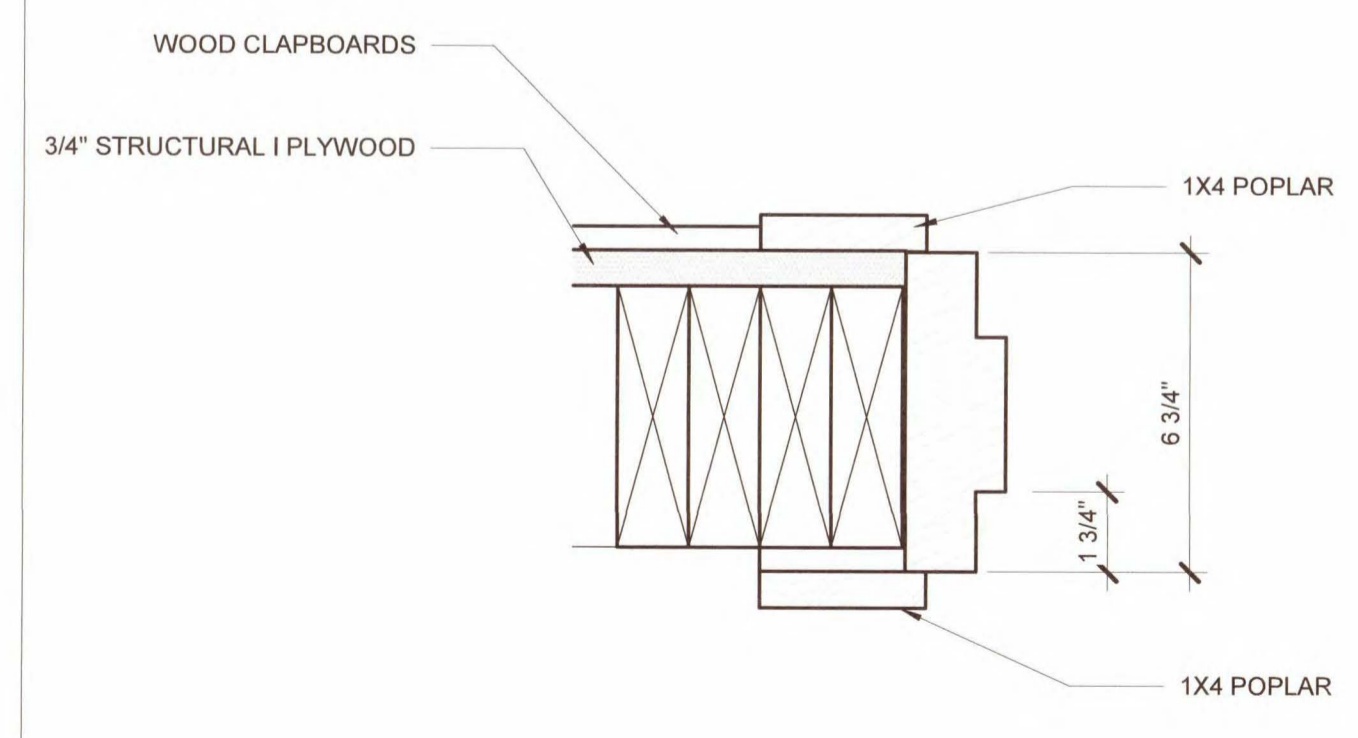
8 DET - GARAGE DOOR HEADER DETAIL
3/4" = 1'-0"



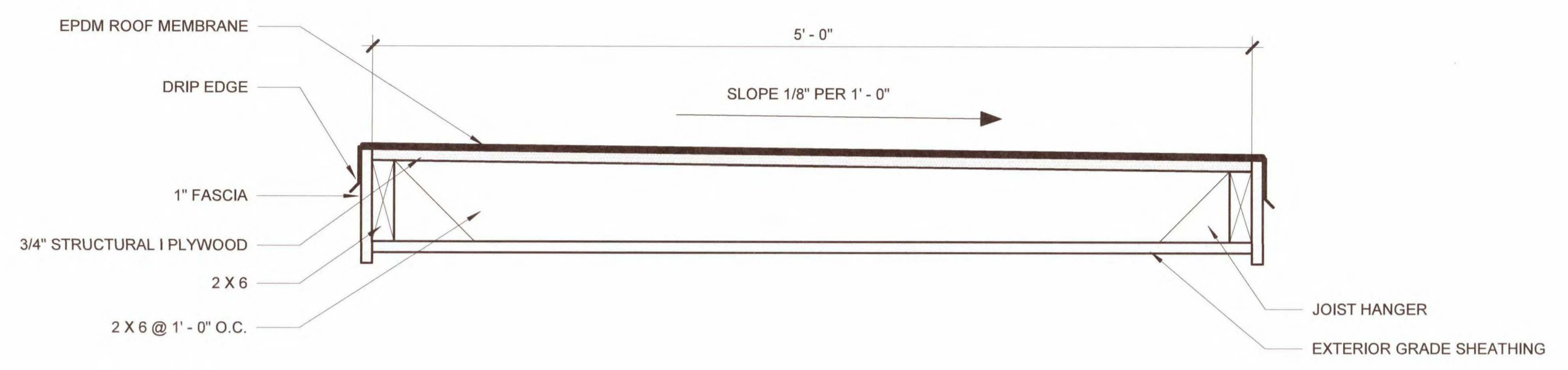
7 DET - GARAGE DOOR JAMB
3" = 1'-0"



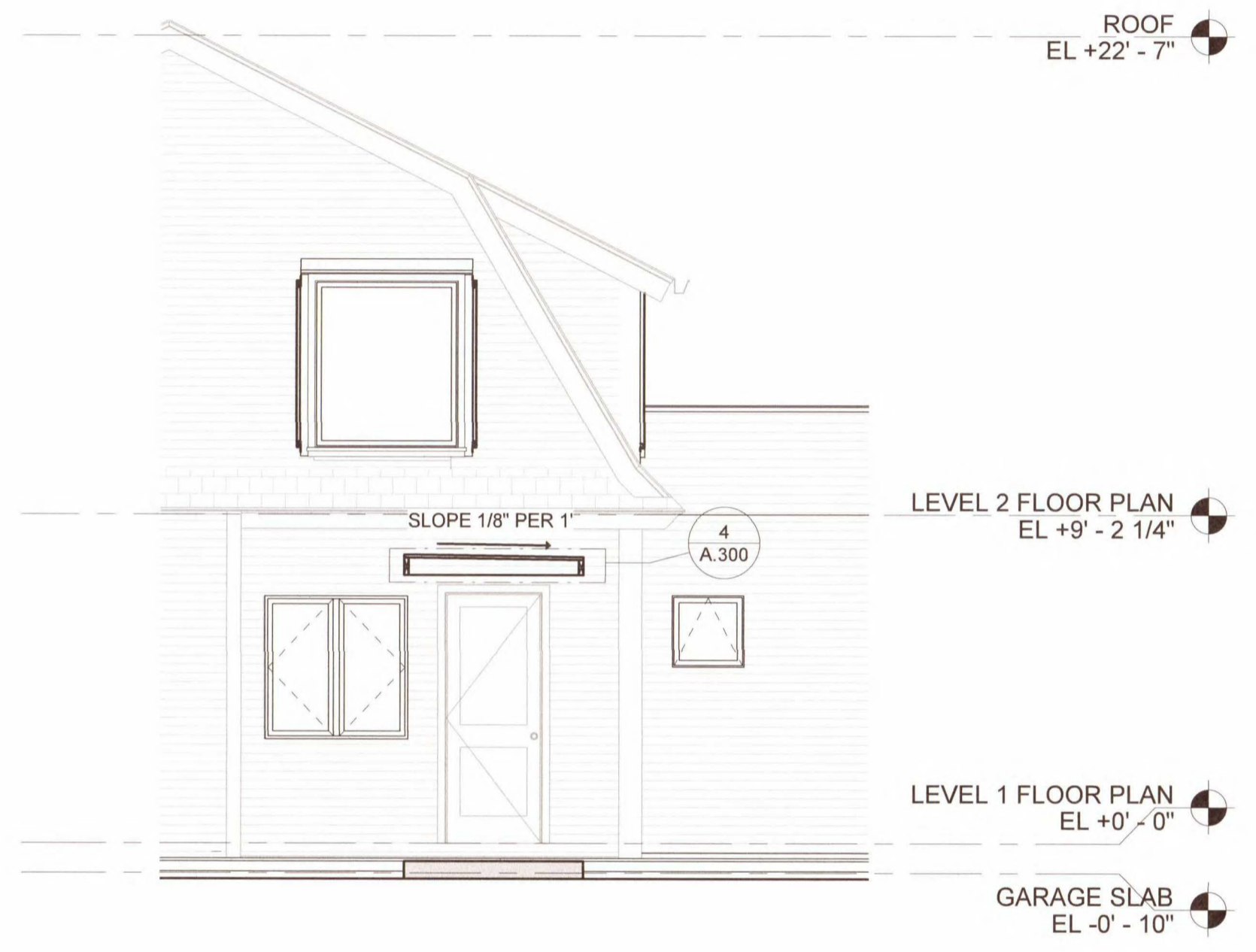
6 DET - DOOR HEADER DETAIL
3" = 1'-0"



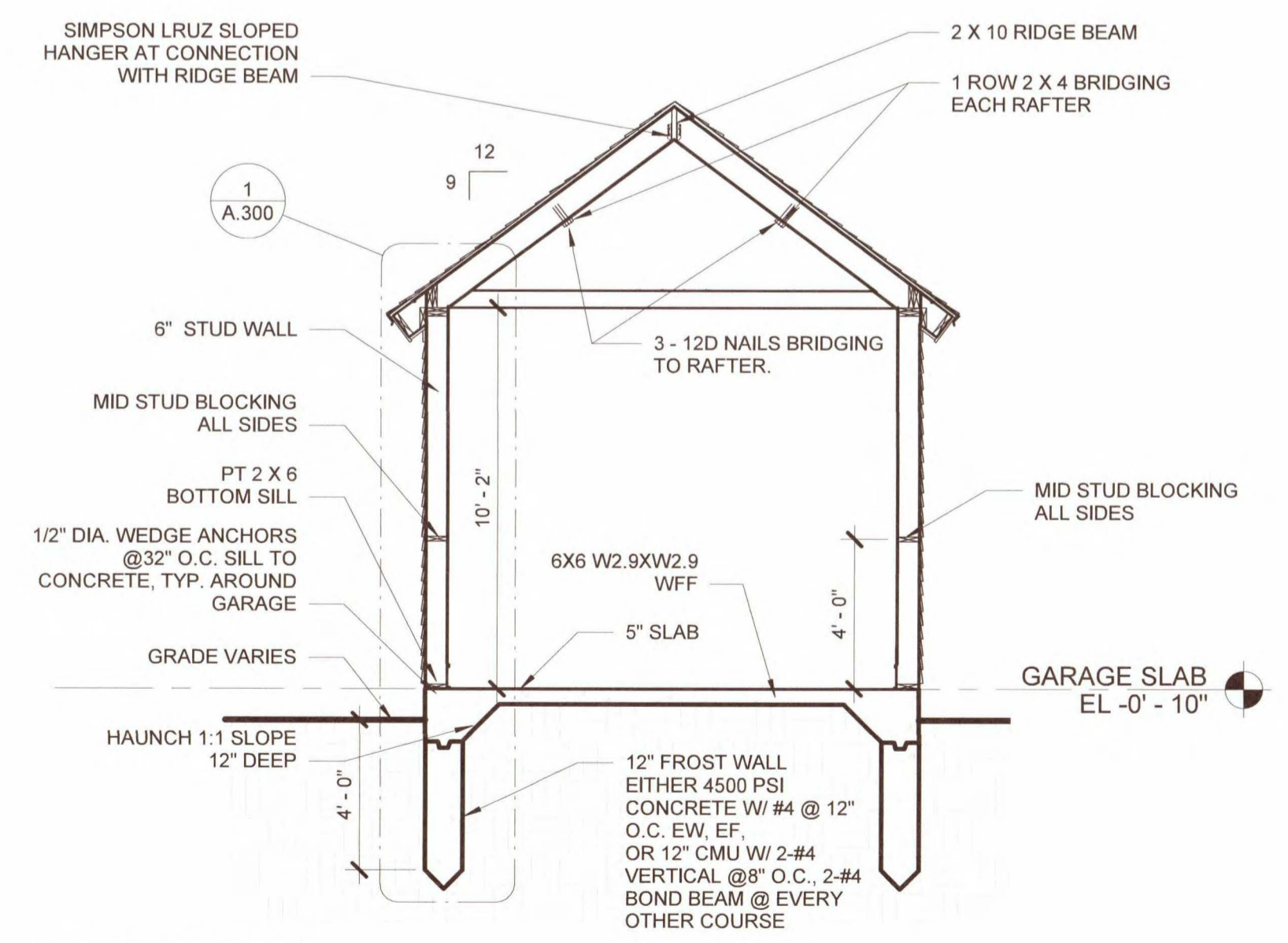
5 DET - DOOR JAMB DETAIL
3" = 1'-0"



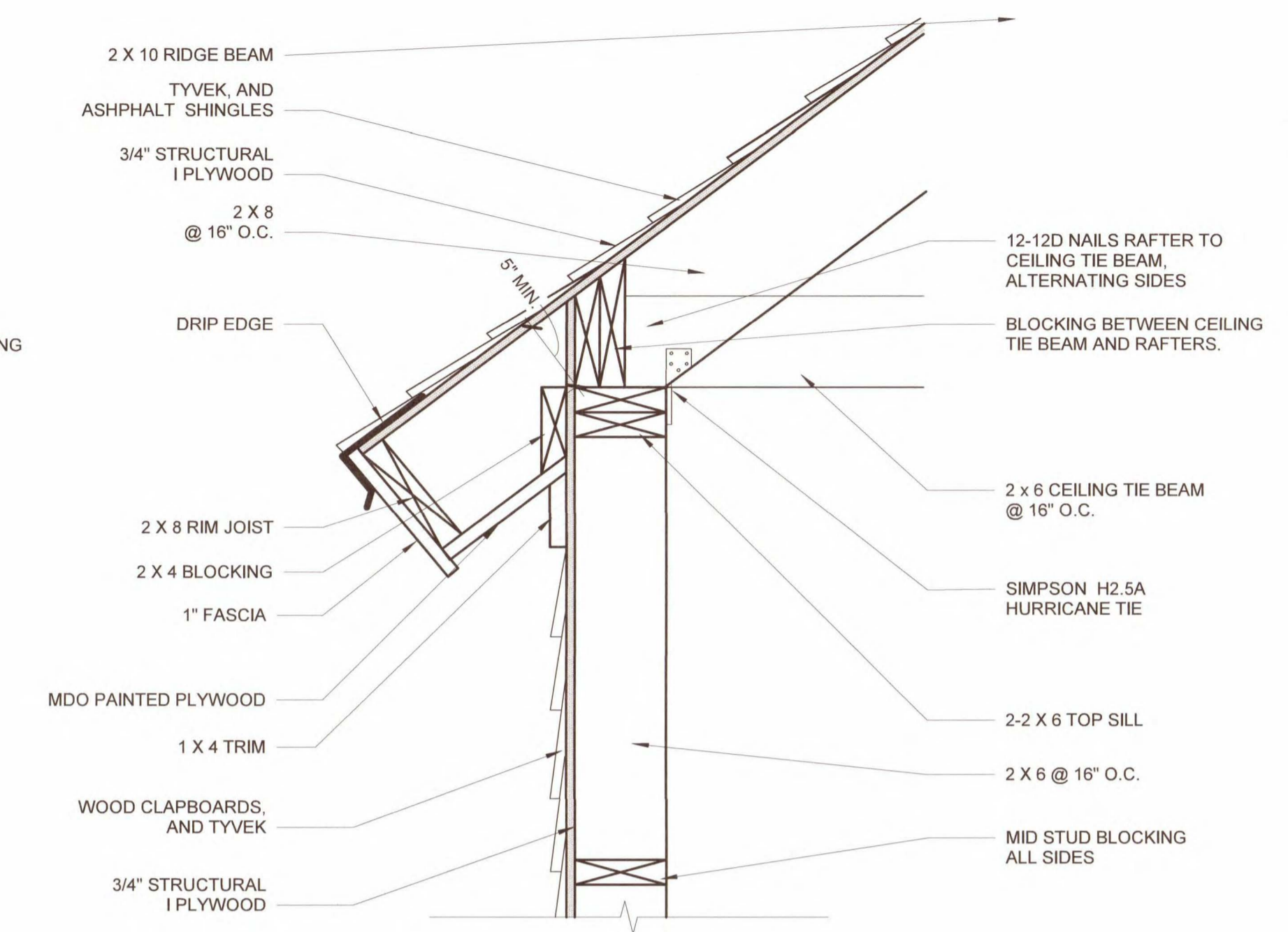
4 DET - ROOF COVERING
1 1/2" = 1'-0"



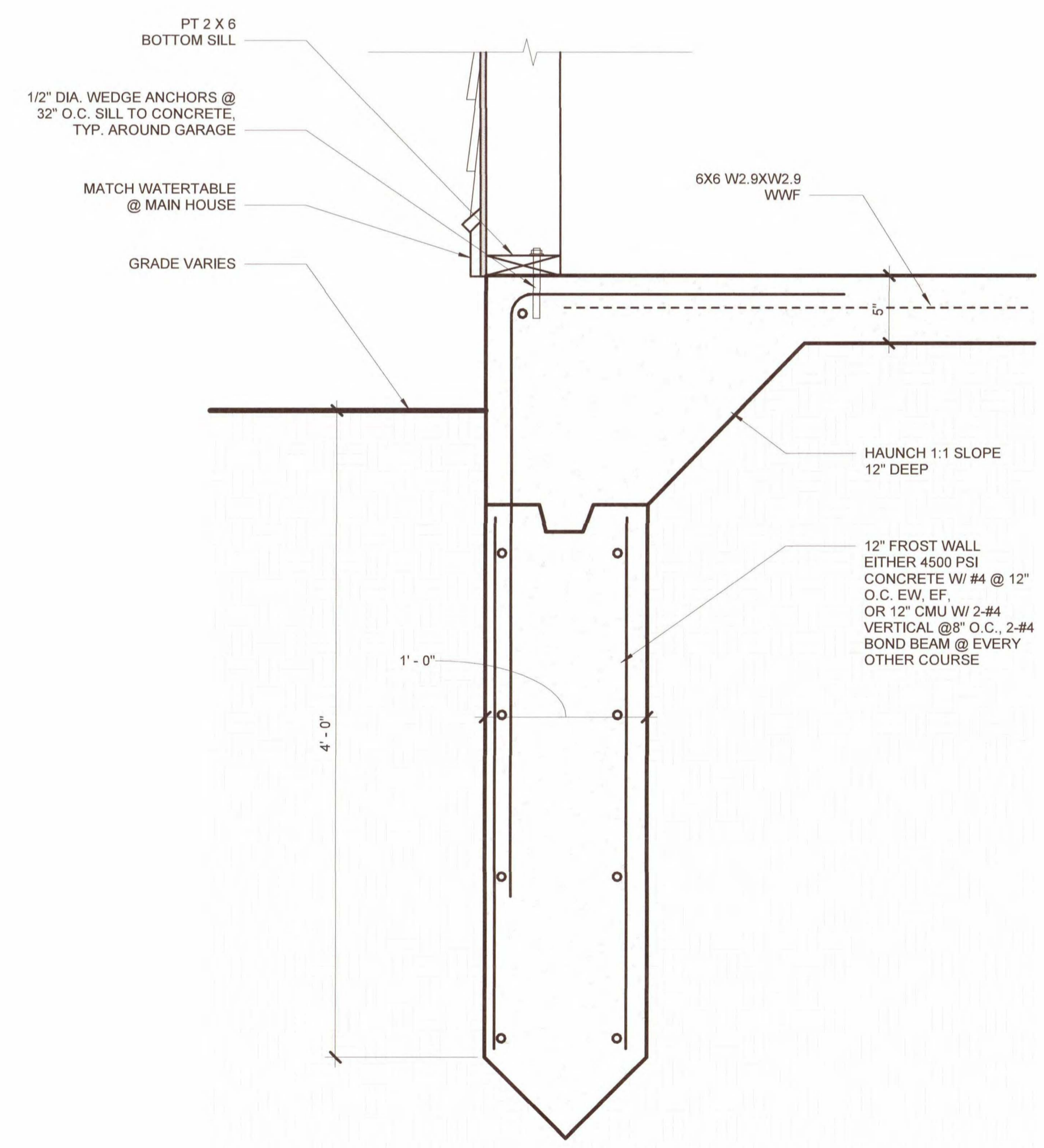
3 SECTION - THROUGH ROOF COVERING
1/4" = 1'-0"



2 SECTION - GARAGE
1/4" = 1'-0"



1 DET - GARAGE WALL SECTION
1 1/2" = 1'-0"



1 DET - GARAGE WALL SECTION
1 1/2" = 1'-0"

STRUCTURAL WOOD

- W1 WOOD CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" AND ITS SUPPLEMENT BY AMERICAN WOOD COUNCIL.
- W2 STRUCTURAL WOOD SHALL BE IDENTIFIED BY THE GRADE MARK OF, OR CERTIFICATE OF INSPECTION ISSUED BY, A GRADING OR INSPECTION BUREAU OR AGENCY RECOGNIZED AS BEING COMPETENT.
- W3 STRUCTURAL WOOD SHALL BE VISUALLY STRESS-GRADED IN ACCORDANCE WITH ASTM D245, "METHODS FOR ESTABLISHING STRUCTURAL GRADES AND RELATED ALLOWABLE PROPERTIES FOR VISUALLY GRADED LUMBER."
- W4 ALL DIMENSIONS OF SOLID SAWN LUMBER SHALL CONFORM TO THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION SUPPLEMENT" LATEST EDITION. THE WOOD CROSS SECTIONAL DIMENSIONS LISTED ON THE DRAWINGS ARE ASSUMED TO BE NOMINAL STANDARD SIZES (E.G. 2X8) UNLESS THE DIMENSION IS FOLLOWED BY THE INCH SYMBOL (E.G. 4"x8.75").
- W5 MATERIALS SHALL BE HANDLED AND COVERED TO PREVENT DAMAGE AND MOISTURE ABSORPTION FROM SNOW OR RAIN.
- W6 STRUCTURAL LUMBER SHALL BE KILN DRIED AND HAVE MOISTURE CONTENT OF NOT MORE THAN 15 PERCENT. SEE SPECIFICATIONS FOR DETAIL REQUIREMENTS ON PRODUCTS.
- W7 ALL NEW WOOD CONSTRUCTION SHALL CONFORM TO THE SPECIFICATION REQUIREMENTS OF SECTION - ROUGH CARPENTRY NAILING:
 1. STUDS SHALL BE NAILED TO THE SILL PLATE WITH THREE 10d OR FOUR 8d TOE NAILS PER STUD.
 2. IF DOUBLE FRAMED, NAIL INNER STUD TO OUTER STUD WITH 16d NAILS, 24" O.C. TOE NAIL INNER STUD TO WALL PLATE WITH TWO 8d NAILS OR END NAIL WITH 16d NAILS. NAIL OUTER STUD TO HEADER WITH FOUR 16d NAILS AND TO TOP PLATE WITH TWO 8d TOE NAILS.
 3. IF SINGLE FRAMED, TOE NAIL JAMB STUD TO WALL PLATES WITH TWO 8d NAILS OR END NAIL WITH TWO 16d NAILS. TOE NAIL JAMB STUD TO HEADER WITH 8d NAILS.
- W8 CONVENTIONAL WOOD JOISTS:
 1. SPLICES SHALL OCCUR ONLY OVER BEARING POINTS.
 2. MINIMUM BEARING FOR JOISTS = 1-3/4 INCH AT ENDS, AND 3-1/2 INCHES WHERE JOISTS ARE CONTINUOUS.
 3. JOIST LAPS SHALL BE LOCATED OVER BEARING AND NAILED TOGETHER WITH 16d NAILS, MINIMUM LAP 6".
 4. MAXIMUM JOIST OVERHANG = 12" UNLESS OTHERWISE NOTED.
 5. USE METAL JOIST HANGERS AT ALL FLUSH FRAME CONSTRUCTION.
 6. JOISTS SHALL BE DOUBLED UNDER PARALLEL PARTITIONS.
 7. BRIDGING WILL BE SOLID USING 2" JOIST DEPTH INSTALLED IN OFFSET FASHION. MAXIMUM SPACING = 4 FEET.
 8. NO JOIST SHALL BE NOTCHED OR DRILLED WITH HOLES WITHOUT THE SPECIFIC APPROVAL OF THE ENGINEER.
 9. NO JOIST SHALL BE REPAIRED OR REINFORCED IN ANY WAY WITHOUT THE SPECIFIC APPROVAL OF THE STRUCTURAL ENGINEER.
 10. JOIST SUPPORT SOLELY BY NAILING IS NOT ALLOWED.
- W9 WALLS (BEARING AND NON-BEARING)
 1. CONSTRUCT WALLS AS NOTED ON THE FLOOR FRAMING PLANS AND HEREWITH.
 2. ALL STUDS ARE TO BE CONTINUOUS AND ALIGNED FROM FLOOR TO FLOOR AND FLOOR TO ROOF.
 3. INTERIOR WALL SHEATHING SHALL BE 1/2" APA STRUCTURAL I RATED PLYWOOD SHEATHING WITH MINIMUM SPAN RATING OF 32/16 EXPOSURE 1.
 4. EXTERIOR SHEATHING SHALL BE 1/2" APA STRUCTURAL I RATED PLYWOOD SHEATHING WITH A MINIMUM SPAN RATING OF 32/16, EXPOSURE 1. EXTERIOR SHEATHING SHALL BE FIRE RETARDANT TREATED (FR-T).
 5. SHEATHING PANEL EDGES SHALL BE BLOCKED WITH 2X MEMBERS OF THE SAME SIZES AS TOP PLATES. PROVIDE 2X BLOCKING AT HORIZONTAL PANEL SEAM BETWEEN SUPPORTING MEMBERS.
 6. ALL LOAD BEARING WALLS ARE CONSIDERED SHEAR WALLS. PROVIDE SHEAR BLOCKING IN SHEAR WALLS BETWEEN WHERE SHEATHING OVERLAPS BOTTOM PLATES. NAIL SHEATHING TO BOTTOM PLATES AT 6" MAXIMUM ON CENTERS UNLESS OTHERWISE NOTED.
 7. ALL WOOD COMPONENTS OF THE EXTERIOR WALL SHALL BE FIRE RETARDANT TREATED.
 8. UNLESS OTHERWISE SPECIFIED, NAILING SHOULD COMPLY WITH THE RECOMMENDATIONS OF THE AMERICAN PLYWOOD ASSOCIATION.
- W10 BEARING WALL OPENINGS:
 1. BEARING WALL OPENINGS SHALL BE FRAMED TO PROVIDE A RIGID ENCLOSURE. JAMB STUD SHALL EXTEND IN ONE PIECE FROM HEADER TO SILL PLATE. PROVIDE SPECIFIED NUMBER OF JAMB STUDS SHOWN IN PLAN.
- W11 PLATES (BEARING OR NON-BEARING):
 1. TOP PLATES FOR BEARING PARTITIONS SHALL BE MIN. TRIPLE 2x6'S OR TRIPLE 2x8'S (MATCH WALL CONSTRUCTION) OR AS NOTED ON PLAN. PLATE MEMBERS OF PRINCIPAL PARTITIONS SHALL BE LAPPED OR ANCHORED TO EXTERIOR WALL FRAMING. SPLICES SHALL OCCUR OVER STUDS. NAIL PLATES TO STUDS WITH TWO 16d NAILS AT EACH STUD. O.C UNLESS NOTED OTHERWISE. STAGGER SPLICE TOP AND BOTTOM WITH MIN. OVERLAP OF 48". MIN. (20) 16d NAILS IN LAP SPLICE.
 2. TOP PLATES FOR NON-BEARING INTERIOR PARTITIONS MAY BE SINGLE. NAIL PLATE TO STUD WITH TWO 16d NAILS. WHEN TOP PLATE IS PARALLEL TO CEILING OR FLOOR FRAMING, INSTALL 2x6 CROSS BLOCKING NOT MORE THAN 4'-0" O.C.
 3. WHEN TOP PLATE IS AT RIGHT ANGLES TO WALL WORK, REINFORCE WITH STEEL STRAPS.
 4. DOUBLE BOTTOM PLATES SHALL BE USED AT BEARING WALLS THAT DO NOT REST ON CONTINUOUS CONCRETE OR MASONRY FOUNDATIONS.
- W12 BEAMS AND GIRDERS:
 1. GIRDERS WILL NOT REST LESS THAN 4" ON SUPPORTS.
 2. WHERE BEAMS AND GIRDERS OF NOMINAL 2" MEMBERS ARE SHOWN, NAIL TOGETHER WITH TWO ROWS OF 16d NAILS STAGGERING SPACED NOT MORE THAN 12" O.C., LOCATE END JOINTS IN MEMBERS OVER SUPPORTS.
 3. ALL BEAMS MUST SPLICE ONLY OVER SUPPORTS UNLESS SPECIFICALLY INSTRUCTED OTHERWISE BY STRUCTURAL ENGINEER.
 4. DO NOT SUBSTITUTE SOLID MEMBERS WITH BUILT UP MEMBERS WITHOUT APPROVAL FROM THE ENGINEER.
- W13 FLOOR:
 1. FLOOR SHEATHING SHALL BE 3/4" T&G APA STRUCTURAL I RATED PLYWOOD PANEL HAVING A SPAN RATING OF 48/24, EXPOSURE 1. FLOOR SHEATHING SHALL BE INSTALLED WITH GRAIN OF PLYS AT RIGHT ANGLES TO JOISTS/TRUSSES AND BE STAGGERED SO THAT SPLICES IN ADJACENT PANELS OCCUR OVER DIFFERENT JOISTS/TRUSSES.
 2. FLOOR SHEATHING SHALL BE NAILED WITH 10d COMMON NAILS. NAILS SHALL BE 6 INCHES O.C. AT ALL EDGES AND AT INTERIOR LINES OF SUPPORT AND BLOCKING. BLOCK ALL PANEL EDGES W/ MIN. 2X BLOCKING BETWEEN JOISTS OR TRUSSES.
 3. FLOOR SHEATHING WITHIN 2'-0" FROM FACE OF EXTERIOR WALL SHALL BE FIRE RETARDANT TREATED.
- W14 ROOF:
 1. ROOF SHEATHING SHALL BE 3/4" APA STRUCTURAL I RATED PLYWOOD PANEL (EXTERIOR) INSTALLED WITH GRAIN OF PLYS AT RIGHT ANGLES TO JOINTS AND TRUSSES AND BE STAGGERED SO THAT SPLICES IN ADJACENT PANELS OCCUR OVER DIFFERENT TRUSSES. SPAN RATING OF SHEATHING SHALL BE 48/24.
 2. ROOF SHEATHING SHALL BE NAILED WITH 10d NAILS. NAILS SHALL BE 4 INCHES O.C. AT ALL EDGES AND 6" O.C. AT INTERIOR LINES OF SUPPORT. U.N.O.
- W15 CONNECTIONS:
 1. ALL WOOD POST BASES ON WOOD TO BE SIMPSON TYPE AB OR EQUAL UNO.
 2. ALL WOOD BEAMS ON WOOD COLUMNS TO HAVE SIMPSON TYPE CQ/ECQ OR EQUAL.
 3. ALL FLUSH FRAMED CONVENTIONAL WOOD JOIST CONNECTIONS TO BE SIMPSON TYPE BA, MIT OR EQUAL. PROVIDE SLOPED FLUSH FRAMED CONNECTORS AT SLOPING RAFTERS (MAY REQUIRE SPECIAL ORDER).
 4. COMPLY WITH MANUFACTURER SPECIFICATIONS INSTALLATIONS FOR ALL OF THE ABOVE.
 5. ANCHOR BOLTS AND BOLTS FOR STRUCTURAL TIMBER SHALL BE ASTM A307. STANDARD CUT WASHERS SHALL BE PROVIDED BETWEEN THE WOOD AND BOLT NUT, UNLESS STEEL PLATES OR PLATE WASHERS ARE USED, AS INDICATED ON STRUCTURAL DRAWINGS. BOLT HOLES IN STRUCTURAL TIMBER SHALL BE 1/16 INCH LARGER THAN THE NOMINAL BOLT DIAMETER INDICATED.
 6. ALL EXTERIOR CONNECTION HARDWARE INCLUDING NAILS, BOLTS, AND FABRICATED CONNECTORS SHALL BE HOT-DIPPED GALVANIZED.
- W16 ENGINEERED WOOD BEAMS AND HEADERS
 1. PROVIDE ENGINEERED WOOD (I-JOISTS, LVL'S, GLULAM'S ETC.) SCHEDULE ON SHOP DRAWINGS AND PROVIDE LOAD RATED PRE-MANUFACTURED WOOD CONNECTORS FOR POSTS TO BEAM AND ALL FLUSH-FRAMED MEMBERS. PROVIDE FASTENERS IN ACCORDANCE WITH MANUFACTURER RECOMMENDATION FOR EACH TYPE.
 2. WHERE NO MANUFACTURED WOOD CONNECTOR EXISTS, FABRICATE FROM 1/4 INCH WELDED STEEL PLATE TO CONFORM TO THE MOST SIMILAR SIMPSON CONNECTOR.
 3. CONNECTION SHALL BE DESIGNED FOR MAXIMUM CAPACITY OF THE CONNECTED MEMBERS FOR THE SPANS INDICATED.
 4. END BEARING OF LVL BEAMS SHALL BE 3 INCHES MINIMUM AND ACROSS THE FULL WIDTH OF THE BEAM.
 5. ALL LVL BEAMS REQUIRE LATERAL SUPPORT OR BLOCKING AT BEARING POINTS. BUILT UP LVL BEAMS SHALL BE NAILED OR BOLTED TOGETHER IN ACCORDANCE WITH THE MANUFACTURER'S LITERATURE, BUT NOT LESS THAN 3 ROWS OF 16d NAILS AT 12 INCHES O.C. THROUGH ALL PLYS.
- W17 ALL STRUCTURAL WOOD SHALL HAVE THE FOLLOWING MINIMUM DESIGN VALUES AND SHALL HAVE MATERIAL CERTIFICATES & GRADE STAMPS ATTESTING THEREOF (UNITS IN PSI UNLESS OTHERWISE NOTED):

LOCATION OF USE	Fb	Ft	Fv	Fc PAR.	Fc PERP.	E KSI
CONVENTIONAL WOOD JOISTS/RAFTERS/LINTELS (BASED ON SOUTHERN YELLOW PINE #2), (INCLUDING SISTERING MEMBERS)	1000	600	175	1400	585	1400
STUDS, PLATES, BUILT UP COLS, BLOCKING-UNO (BASED ON SPRUCE, PINE FIR, STUD GRADE), (INCLUDING SISTERING MEMBERS)	675	350	135	725	425	1200
PARALLEL STRAND LUMBER (PSL)	2400	1755	190	2500	545	1800
LAMINATED VENEER LUMBER (LVL)	3100	2150	285	3000	750	2000

- W18 ALL WOOD FRAMING SHALL BE FASTENED IN ACCORDANCE WITH THE FASTENING SCHEDULE IN TABLE 2304.10.1. OF THE IBC OR AS INDICATED IN CONTRACT DRAWINGS. THE MORE STRINGENT SHALL APPLY. WALL AND DIAPHRAGM ASSEMBLIES SHALL BE FASTENED IN ACCORDANCE WITH NOTES ON CONTRACT DRAWINGS. NAILS FASTENING SHEATHING TO SUPPORTING MEMBERS SHALL BE DRIVEN SO THAT THE NAIL HEAD IS FLUSH WITH THE SHEATHING SURFACE.
- W19 CUTTING, NOTCHING AND BORING SHALL BE AVOIDED WHEREVER POSSIBLE. WHEN ABSOLUTELY NECESSARY, CUTTING, NOTCHING AND BORING OF STRUCTURAL FRAMING AND LOAD BEARING ASSEMBLIES SHALL BE LIMITED BY THE PROVISION OF SECTION 2308 OF IBC, 2015:
- | | | |
|----|----------------------|---------------------------|
| A. | FLOOR FRAMING | 2308.8.4.2.4 AND 2308.4.3 |
| B. | WALL FRAMING | 2308.5.9 AND 2308.5.10 |
| C. | ROOF/CEILING FRAMING | 2308.7.4 |
- W20 JOIST SUPPORTED BY NAILING IS FORBIDDEN UNLESS USED WITH AN APPROVED HANGER. UNLESS NOTED OTHERWISE ON PLANS, ALL FLUSH FRAMED JOISTS AND BEAMS SHALL BE FRAMED WITH THE FOLLOWING SIMPSON HANGERS (OR APPROVED EQUALS) UNLESS NOTED OTHERWISE:
- | | | |
|-----|--------------------|-----------------------|
| (A) | 2X6, 2X8 | TYPE 'U26' |
| (B) | 2-2X6, 2-2X8 | TYPE 'U26-2' |
| (C) | 3-2X6, 3-2X8 | TYPE 'U26-3' |
| (D) | 2X10, 2X12 | TYPE 'U210' |
| (E) | 2-2X10, 2-2X12 | TYPE 'U210-2' |
| (F) | 3-2X10, 3-2X12 | TYPE 'U210-3' |
| (L) | 3 1/2"x7 1/4"LVL | TYPE 'HGLTV3.57.25' |
| (M) | 5 1/4"x7 1/4"LVL | TYPE 'HGLTV5.257.25' |
| (N) | 7"x7 1/4"LVL | TYPE 'HGLTV7.25' |
| (O) | 3 1/2"x9 1/2" LVL | TYPE 'HGLTV3.59' |
| (P) | 5 1/4"x9 1/2" LVL | TYPE 'HGLTV5.59' |
| (Q) | 7"x9 1/2"LVL | TYPE 'HGLTV7.59' |
| (R) | 3 1/2"x11 1/4" LVL | TYPE 'HGLTV3.5611.25' |
| (S) | 3 1/2"x11 7/8" LVL | TYPE 'HGLTV3.511' |
| (T) | 5 1/4"x11 7/8" LVL | TYPE 'HGLTV5.511' |
| (U) | 3 1/2"x14" LVL | TYPE 'HGLTV3.514' |
| (V) | 3 1/2"x16" LVL | TYPE 'HGLTV3.516' |
| (W) | 5 1/4"x16" LVL | TYPE 'HGLTV5.516' |
| (X) | 5 1/4"x18" LVL | TYPE 'HGLTV3.518' |

- W21 IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE CORRECT HANGERS FOR ALL SLOPED AND/OR SKEWED CONDITIONS. FOR SIZES NOT LISTED, SUBMIT HANGER TO ENGINEER FOR APPROVAL.
- W22 ALL EXISTING JOISTS AND RAFTERS MODIFIED FOR REPAIR SHALL BE RE-SUPPORTED WITH JOIST HANGERS.
- W23 TIMBER SHALL BE GENERALLY KNOT-FREE, WITH ONLY SMALL TIGHT KNOT PERMITTED AND GENERALLY STRAIGHT-GRAINED.

CONCRETE

- C1 CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-14)" AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301-16)".
- C2 CONCRETE SHALL BE CONTROLLED CONCRETE, PREPORTIONED, MIXED AND PLACED UNDER THE SUPERVISION OF AN APPROVED CONCRETE TESTING AGENCY.
- C3 CONCRETE SHALL HAVE THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS:
 A.) FOOTINGS (NORMALWEIGHT) 4500 PSI
 B.) ALL OTHER CONCRETE (NORMALWEIGHT) 4500 PSI
- C4 CONCRETE SHALL HAVE THE FOLLOWING NOMINAL DRY DENSITY:
 A.) NORMALWEIGHT 145 PCF
 B.) LIGHTWEIGHT 115 PCF
- C5 CONCRETE TO BE EXPOSED TO THE WEATHER IN THE FINISHED CONDITION SHALL BE AIR-ENTRAINED. SEE SPECIFICATIONS
- C6 THE USE OF CONSTRUCTION JOINTS WHERE SHOWN ON THE DRAWINGS IS MANDATORY. OMISSIONS, ADDITIONS OR CHARGES SHALL NOT BE MADE EXCEPT WITH THE SUBMISSION OF A WRITTEN REQUEST TOGETHER WITH DRAWINGS OF THE PROPOSED JOINT LOCATIONS FOR APPROVAL OF THE ENGINEER.
- C7 WHERE CONSTRUCTION JOINTS ARE NOT SHOWN, DRAWINGS SHOWING LOCATION OF CONSTRUCTION JOINTS AND CONCRETE PLACING SEQUENCE SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO PREPARATION OF THE REINFORCEMENT SHOP DRAWINGS.
- C8 SIZE OF CONCRETE PLACEMENTS UNLESS OTHERWISE SHOWN SHALL BE AS FOLLOWS:
SLABS CAST ON GRADE:
 SHALL BE LIMITED TO 60 FEET IN LENGTH AND 3600 SQUARE FEET IN AREA UNLESS INTERMEDIATE CONTROL JOINTS ARE PROVIDED TO LIMIT CRACKING, IN WHICH CASE THE LIMITS SHALL BE 10,000 SQUARE FEET UNLESS THE CONTRACTOR CAN DEMONSTRATE THE ABILITY TO PLACE AND FINISH LARGER AREAS. LOCATION OF JOINTS SHALL BE SUBMITTED BY THE CONTRACTOR FOR REVIEW PRIOR TO CONCRETE PLACEMENT.
- CONCRETE WALLS:
 SHALL BE LIMITED TO 60 FEET IN LENGTH, CONTROL JOINTS SHALL BE PROVIDED AT A MAXIMUM SPACING OF 30 FEET OR 1.5 X THE WALL HEIGHT, WHICHEVER IS LESS, UNLESS LOCATED ON DRAWINGS.
- C10 CONCRETE SHALL BE PLACED WITHOUT HORIZONTAL CONSTRUCTION JOINTS EXCEPT WHERE SHOWN OR NOTED. VERTICAL CONSTRUCTION JOINTS AND STOPS IN CONCRETE WORK SHALL BE MADE AT MID-SPAN OR AT POINTS OF MINIMUM SHEAR.
- C11 NO CONDUITS OR PIPES OF ANY TYPE WILL BE PERMITTED TO BE EMBEDDED IN THE FRAMED CONCRETE SLABS.
- C12 CONTRACTOR &/OR CONSTRUCTION MANAGER SHALL PROVIDE COLD WEATHER/FROST &/OR HOT WEATHER PROTECTION FOR ALL CONCRETE INCLUDING FOOTINGS PER SPECIFICATIONS.
- C13 NO PIPES SHALL PASS THROUGH CONCRETE WITHOUT THE PERMISSION OF THE ARCHITECT/ENGINEER. STEEL PIPE SLEEVES SHALL BE PROVIDED AND SPACED A MINIMUM OF THREE PIPE DIAMETERS CLEAR APART.

REINFORCEMENT

- R1 DETAILING, FABRICATION, AND ERECTION OF REINFORCEMENT, UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE LATEST EDITIONS OF ACI "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318-14)" AND ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING OF REINFORCED CONCRETE STRUCTURES" (ACI 315-08).
- R2 STEEL REINFORCEMENT SHALL CONFORM TO "ASTM A615 GRADE 60 (YIELD STRESS = 60,000 PSI)
- R3 WELDED & FIELD BENT STEEL REINFORCEMENT SHALL CONFORM TO: ASTM A706 GRADE 60 DEFROMED (YIELD STRESS = 60,000 PSI)
 WELDED WIRE FABRIC REINFORCEMENT SHALL CONFORM TO ASTM A185
- R4 PROVIDE AND SCHEDULE ON SHOP DRAWINGS, ALL NECESSARY ACCESSORIES TO HOLD REINFORCEMENT SECURELY IN POSITION. MINIMUM REQUIREMENTS SHALL BE:
 A.) HIGH CHAIRS - 3'-0" ON CENTER
 B.) #5 SUPPORT BAR ON HIGH CHAIRS
 C.) SLAB BOLSTERS - 3'-0" ON CENTER
- R5 MINIMUM CONCRETE COVER FOR REINFORCEMENT UNLESS OTHERWISE NOTED SHALL BE AS FOLLOWS:
 A.) UNFORMED SURFACES IN CONTACT WITH GROUND OR EXPOSED TO WEATHER (FOOTINGS, SLABS-ON-GRADE) 3 INCHES
 B.) FORMED SURFACES IN CONTACT WITH GROUND OR EXPOSED TO WEATHER (WALLS) 2 INCHES
- MAXIMUM DEVIATION FROM THESE REQUIREMENTS SHALL BE:
 1/4 INCH FOR SECTIONS 10 INCHES THICK OR LESS
 1/2 INCH FOR SECTIONS OVER 10 INCHES THICK
- R6 WHERE CONTINUOUS BARS ARE CALLED FOR THEY SHALL BE RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS. LAPS SHALL BE CLASS B TENSION LAP SPLICE UNLESS OTHERWISE SHOWN. SEE DEVELOPMENT & SPLICE LENGTH TABLE.
- R7 WHERE REINFORCEMENT IS NOT SHOWN ON DRAWINGS PROVIDE REINFORCEMENT IN ACCORDANCE WITH APPLICABLE TYPICAL DETAILS FOR MOST NEARLY SIMILAR SITUATIONS AS DETERMINED BY THE ENGINEER. IN NO CASE SHALL REINFORCEMENT BE LESS THAN THE APPLICABLE CODES.
- R8 WHERE REINFORCEMENT IS CALLED FOR IN SECTION, REINFORCEMENT IS CONSIDERED TYPICAL WHEREVER THE SECTION APPLIES.
- R9 REINFORCEMENT SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- R10 WELDED WIRE FABRIC SHALL LAP (1 SPACING + 2") OR (6") WHICHEVER IS GREATER AT EACH JOINT AND SHALL BE WIRED TOGETHER. SECURE W.W.F. TO MAINTAIN REQUIRED CONCRETE COVER DURING CONCRETE PLACEMENT.
- R11 INSTALLATION OF REINFORCEMENT SHALL BE COMPLETED AT LEAST 24 HOURS PRIOR TO SCHEDULED CONCRETE PLACEMENT. NOTIFY ENGINEER OR HIS DESIGNATE OF COMPLETION AT LEAST 48 HOURS PRIOR TO SCHEDULED COMPLETION OF PLACEMENT OF REINFORCEMENT.
- R12 ALL WWF IN GARAGE SLAB TO BE EPOXY COATED FOR CORROSION RESISTANCE.

BAR SIZE	LAP CLASS	Fc = 3,000 PSI						Fc = 4,000 PSI						Fc = 5,000 PSI						LAP CLASS	BAR SIZE
		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS		TOP BARS		OTHER BARS					
		CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2	CASE 1	CASE 2				
#3	A	22	33	17	25	19	28	15	22	16	23	12	20	A	#3						
	B	29	43	23	33	25	37	20	29	23	33	17	26	B							
#4	A	29	43	22	30	25	37	19	29	23	34	17	26	A	#4						
	B	38	56	29	43	33	49	25	38	30	45	23	34	B							
#5	A	38	54	28	42	31	47	24	36	28	42	22	32	A	#5						
	B	47	71	37	55	41	62	32	47	37	55	29	42	B							
#6	A	43	65	33	50	37	56	29	43	34	50	26	39	A	#6						
	B	55	85	43	65	49	73	38	56	45	65	34	51	B							
#7	A	63	94	48	72	54	81	42	63	49	73	38	56	A	#7						
	B	82	123	63	94	71	106	55	82	64	95	50	73	B							
#8	A	72	107	55	83	62	93	48	72	56	83	43	64	A	#8						
	B	94	140	72	108	81	121	83	94	73	108	56	84	B							
#9	A	81	121	62	93	70	105	54	81	63	94	48	72	A	#9						
	B	106	158	81	121	91	137	71	106	82	123	63	94	B							
#10	A	91	136	70	105	79	116	61	91	71	106	54	81	A	#10						
	B	119	177	91	137	103	154	80	119	93	138	71	106	B							
#11	A	101	151	78	116	87	131	67	101	78	117	60	90	A	#11						
	B	132	197	102	151	114	171	88	132	102	153	78	117	B							

BAR SIZE	COMPRESSION LAP SPLICE	BAR SIZE	COMPRESSION DEVELOPMENT LENGTH		
			3,000 PSI	4,000 PSI	5,000 PSI
#3	12	#3	9	8	8
#4	15	#4	11	10	9
#5	19	#5	14	12	12
#6	23	#6	17	15	14
#7	27	#7	20	17	16
#8	30	#8	22	19	18
#9	34	#9	25	22	21
#10	39	#10	28	25	23
#11	43	#11	31	27	26

REINFORCEMENT SPLICE NOTES

- UNLESS NOTED OTHERWISE ON STRUCTURAL DRAWINGS DEVELOPMENT AND SPLICE LENGTHS SHALL BE PER THE TABULATED VALUES.
 - TABULATED VALUES ARE BASED ON GRADE 60 REINFORCING BARS AND NORMALWEIGHT CONCRETE COVER PER ACI 318-08.
 - TABULATED VALUES FOR BEAMS AND COLUMNS ARE BASED ON TRANSVERSE REINFORCEMENT AND MINIMUM CONCRETE COVER PER CODE.
 - LAP SPLICE LENGTHS ARE MULTIPLES OF TENSION DEVELOPMENT LENGTHS:
 CLASS A = 1.0 LD
 CLASS B = 1.3 LD
 LD = DEVELOPMENT LENGTH
 - TENSION LAP SPLICES SHALL BE CLASS B.
 - REDUCTION OF ANY OF THE TABULATED VALUES AND CHANGES IN CLASSIFICATION MAY ONLY BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF ACI 318-08, SUBJECT TO THE APPROVAL OF THE ENGINEER.
 - CASES 1 AND 2, WHICH DEPEND ON THE TYPE OF STRUCTURAL ELEMENT, CONCRETE COVER, AND THE CLEAR SPACING OF THE BARS (CLEAR SPACING = CENTER TO CENTER SPACING MINUS D_b & D_b = NOMINAL DIAMETER OF REINFORCING BARS) ARE DEFINED AS FOLLOWS:
- | BEAMS OR COLUMNS | CASE 1: | COVER AT LEAST 1.0d _b AND CLEAR SPACING AT LEAST 2.0 d _b |
|------------------|---------|--|
| | CASE 2: | COVER LESS THAN 1.0d _b OR CLEAR SPACING LESS THAN 2.0d _b |
| ALL OTHERS | CASE 1: | COVER AT LEAST 1.0d _b AND CLEAR SPACING AT LEAST 3.0 d _b |
| | CASE 2: | COVER LESS THAN 1.0d _b OR CLEAR SPACING LESS THAN 3.0d _b |
- TOP BARS ARE HORIZONTAL BARS SO PLACED THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE DEVELOPMENT LENGTH OR SPLICE LENGTH.
 - DEVELOPMENT AND SPLICE LENGTHS SHALL BE DIMENSIONED ON SHOP DRAWINGS.
 - FOR EPOXY-COATED BARS MULTIPLY THE TABULATED VALUES BY ONE OF THE FOLLOWING FACTORS:
 COVER LESS THAN 3.0d_b OR C-C SPACING LESS THAN 6.0 d_b
 TOP BARS = 1.31 / OTHER BARS = 1.50
 COVER MORE THAN 3.0d_b OR C-C SPACING MORE THAN 6.0 d_b
 TOP BARS = 1.20 / OTHER BARS = 1.20
 - LIGHTWEIGHT CONCRETE MULTIPLY THE TABULATED VALUES BY 1.3.
 - WHEN BARS OF DIFFERENT SIZES ARE SPLICED, THE LONGEST REQUIRED SPLICE LENGTH CONTROLS.



24 Roland St. Suite 301
 Charlestown, MA 02129
 T: 617.776.6545
 F: 617.776.6678
 www.hktarchitects.com

Number	Revision	Date

Registrations



Consultants



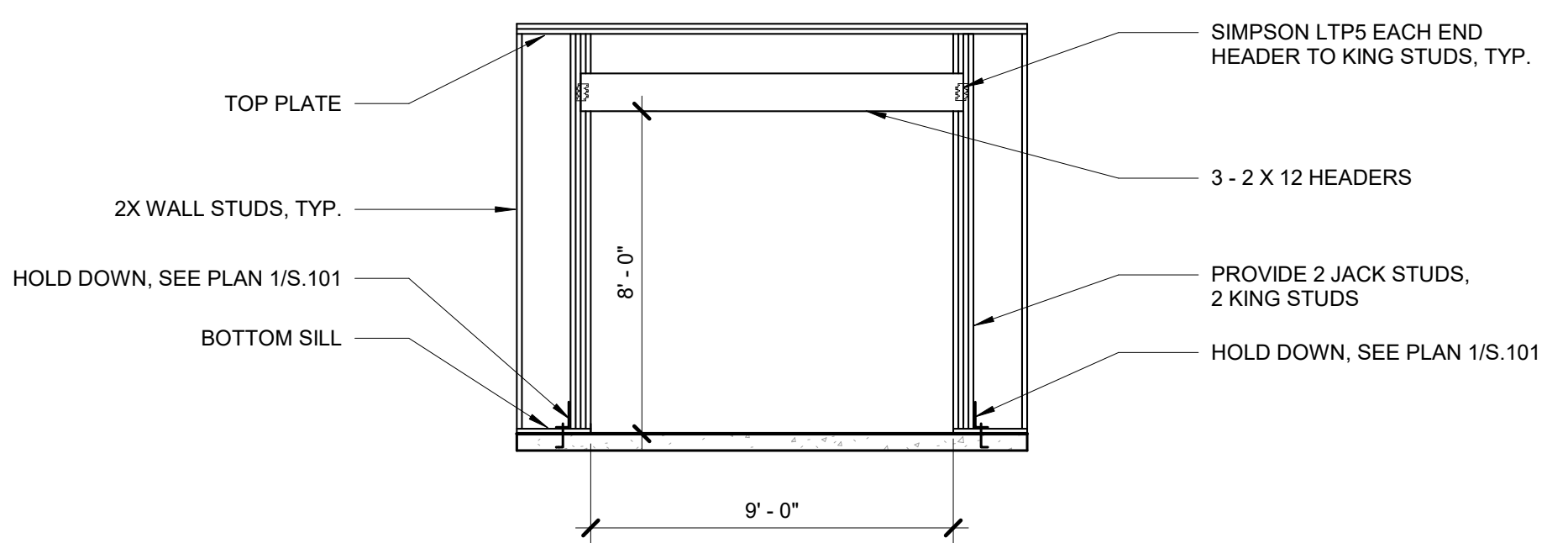
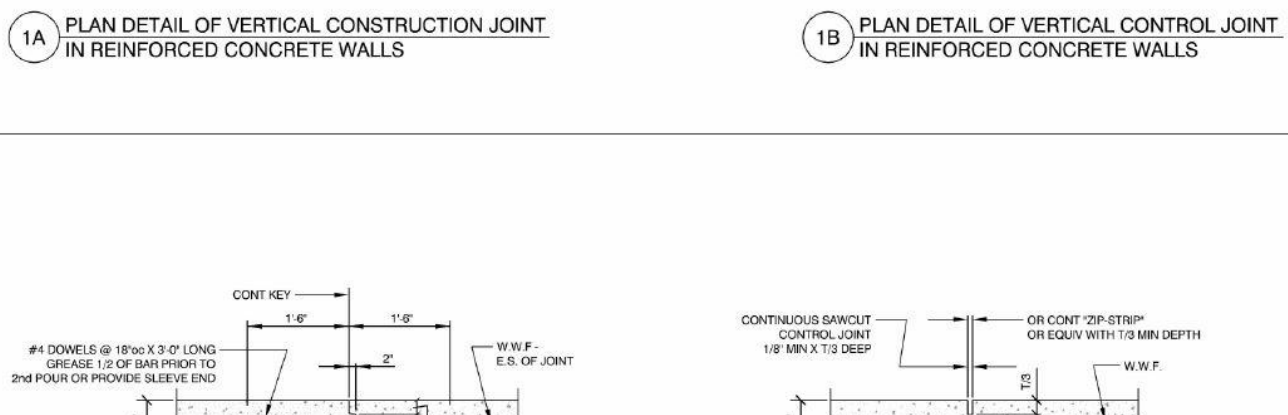
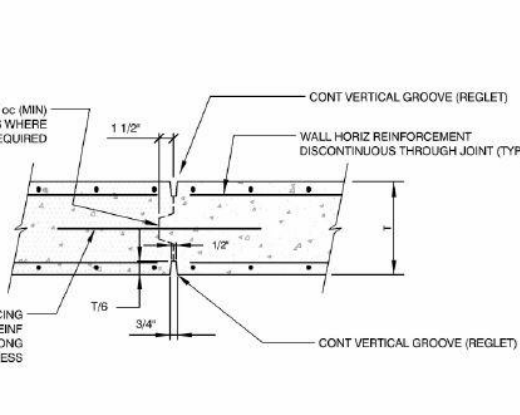
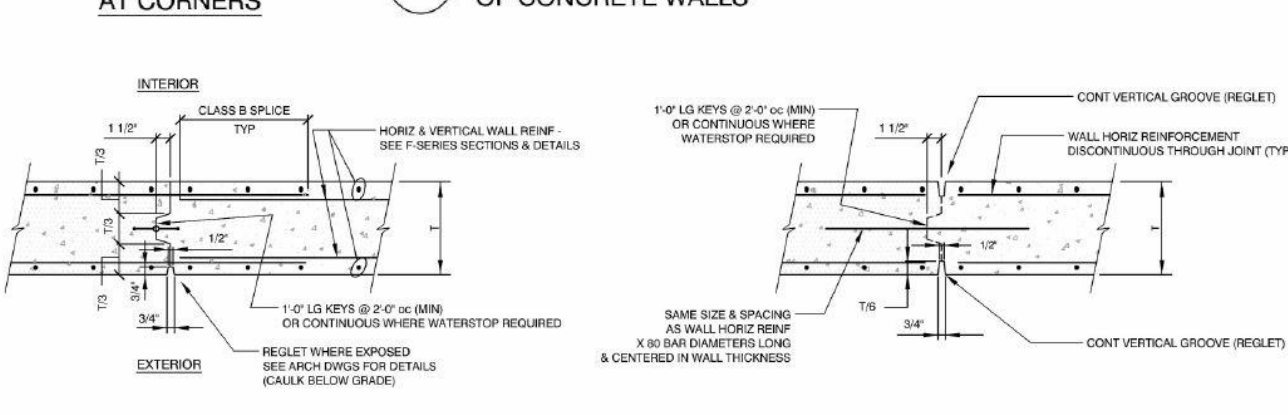
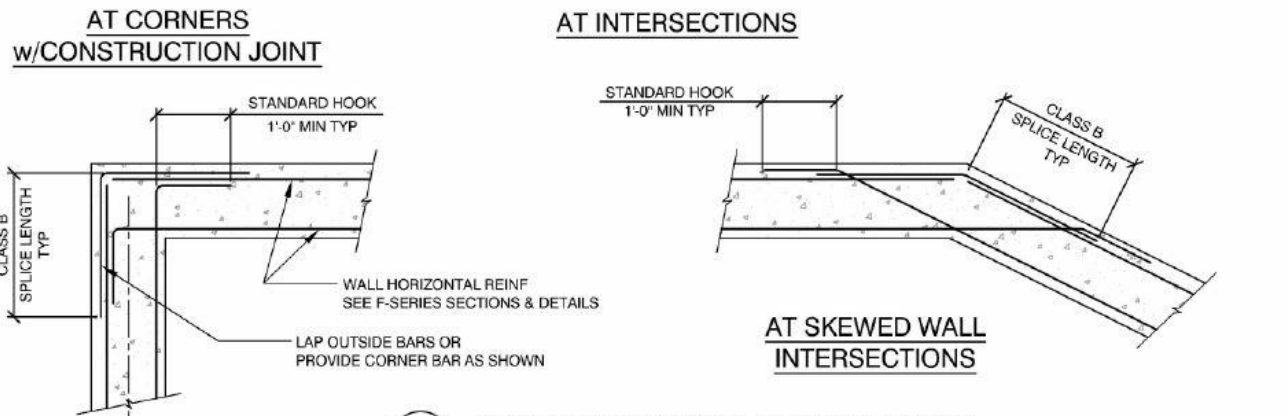
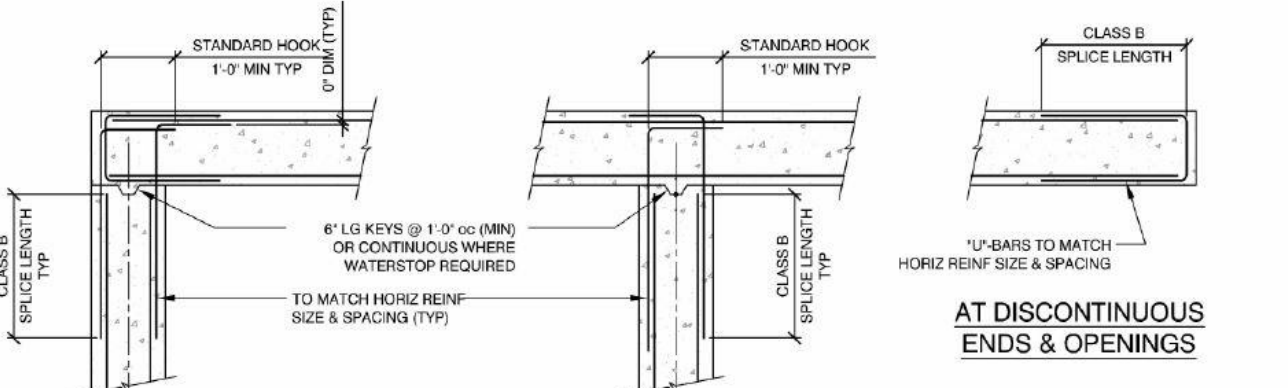
Project
 Habbal House Garage
 82 Larch Rd. Cambridge, MA

Dr. & Mrs. Fawwaz Habbal

Drawing Title
GARAGE STRUCTURAL NOTES

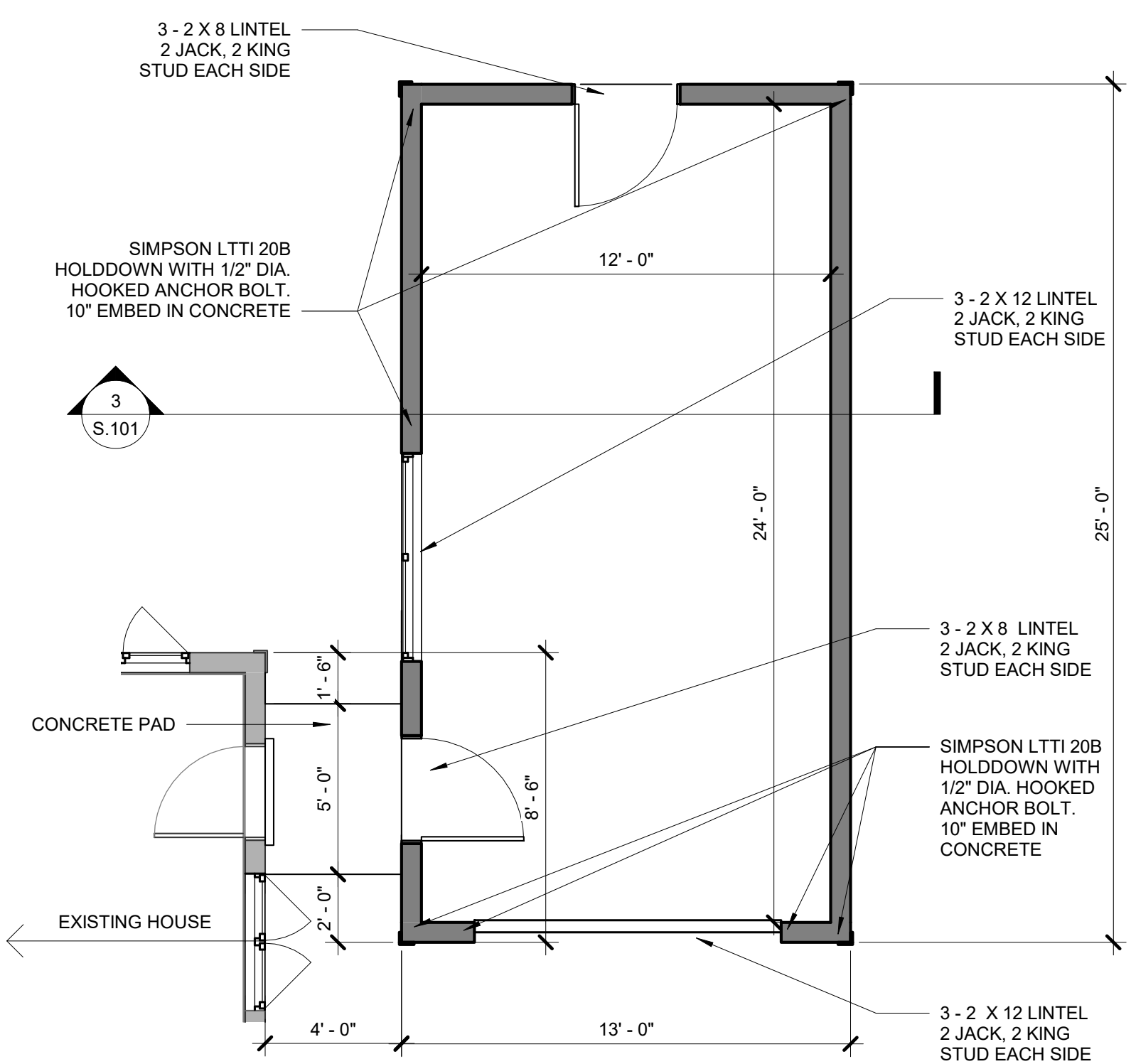
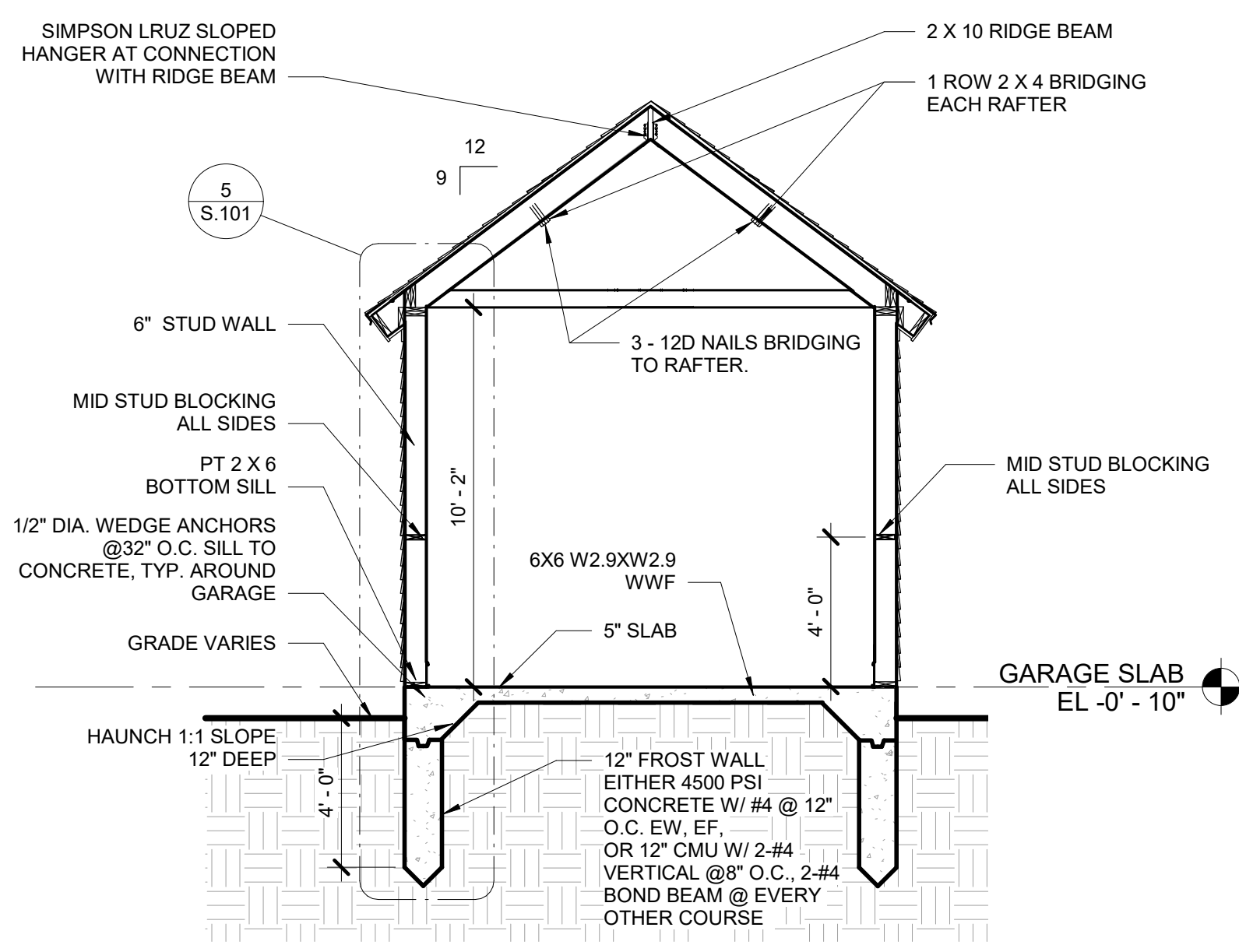
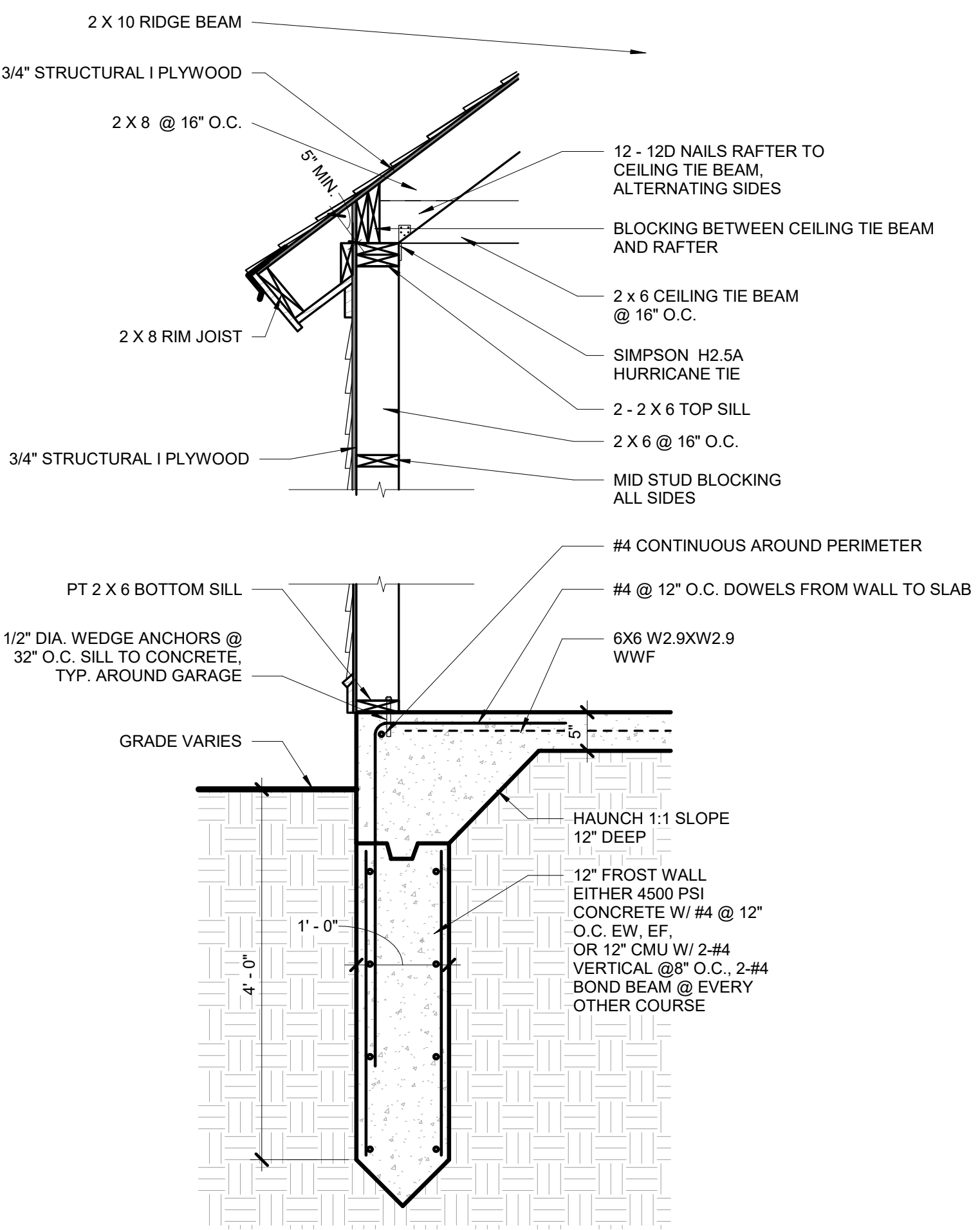
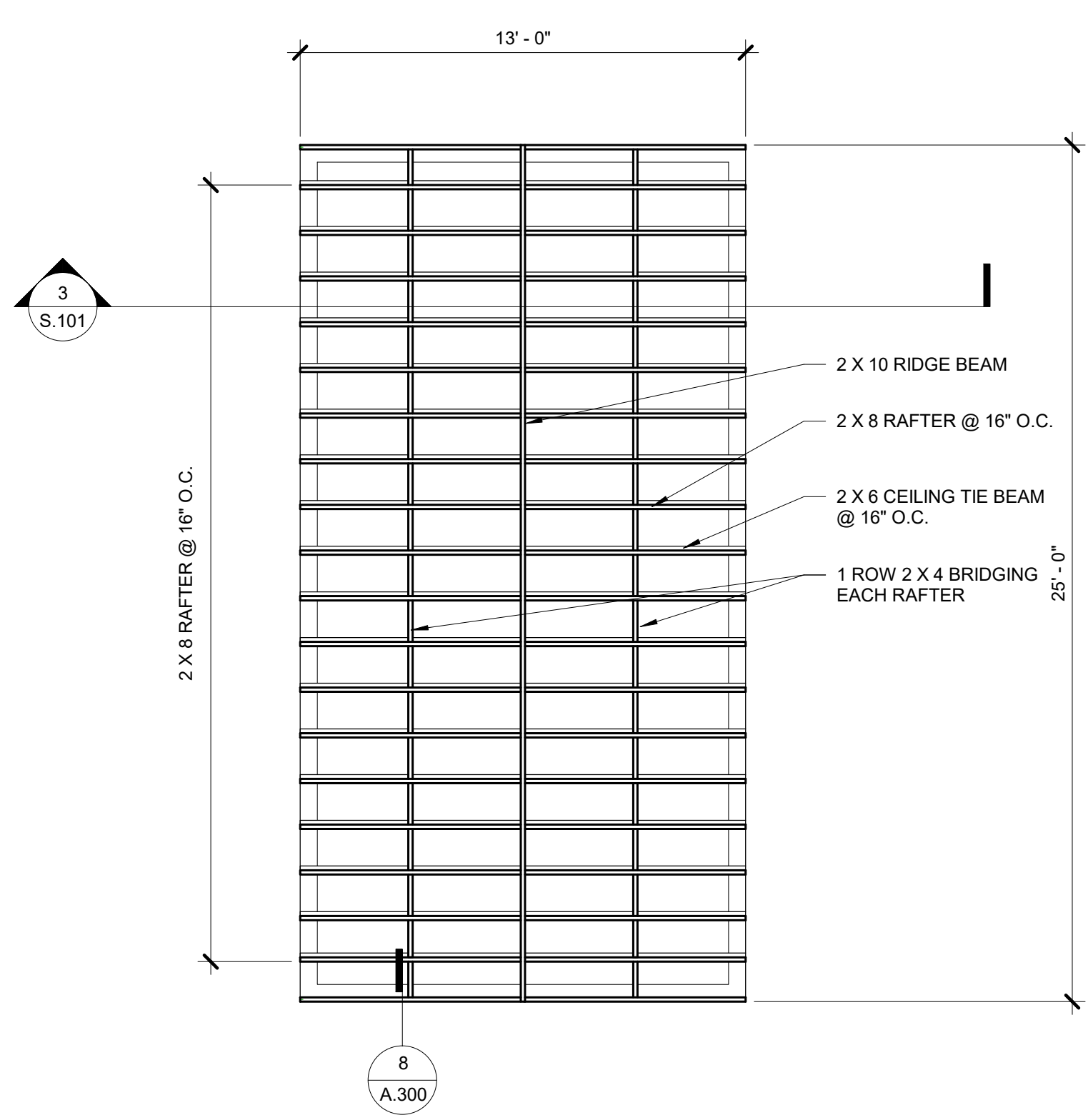
PR	WRH
Drawn by	Checked by
3/18/21	
Date	
21935	
Job number	
PERMIT SET	
Drawing set	
Drawing number	

S.100



NOTE:

1. SPLICE SHEATHING AT CENTER OF RIM JOIST, AT TYPICAL STUDS & AT CENTER OF HEADER. AT EDGE OF SHEATHING, USE 10D NAILS @ 3" O.C. AT INTERMEDIATE STUDS USE 10D NAILS @ 6" O.C.
2. ALL SUPPORTS SHALL BE CARRIED DOWN TO THE GROUND FLOOR.



Revision Schedule

Number	Revision	Date



Consultants



Project
Habbal House Garage
82 Larch Rd. Cambridge, MA

Dr. & Mrs. Fawwaz Habbal

Drawing Title
GARAGE STRUCTURAL DRAWINGS

PR Drawn by 3/18/21 Date 21935 Job number PERMIT SET Drawing set Drawing number

WRH Checked by

710 MAIN STREET
N.Oxford, MA 01537
PHONE: (508) 987-0025
FAX: (508) 438-6604

NAME FAWWAZ HABBAL
LOCATION 82 LARCH ROAD
CAMBRIDGE, MA

REGISTRY: SOUTH MIDDLESEX

SCALE 1" = 20' DATE MARCH 15, 2021

WE CERTIFY THAT THE BUILDING(S) ARE NOT WITHIN THE SPECIAL FLOOD HAZARD AREA. SEE FIRM:

25017C0419E DTD: 06/04/2010



DEED REFERENCE: 10446/3

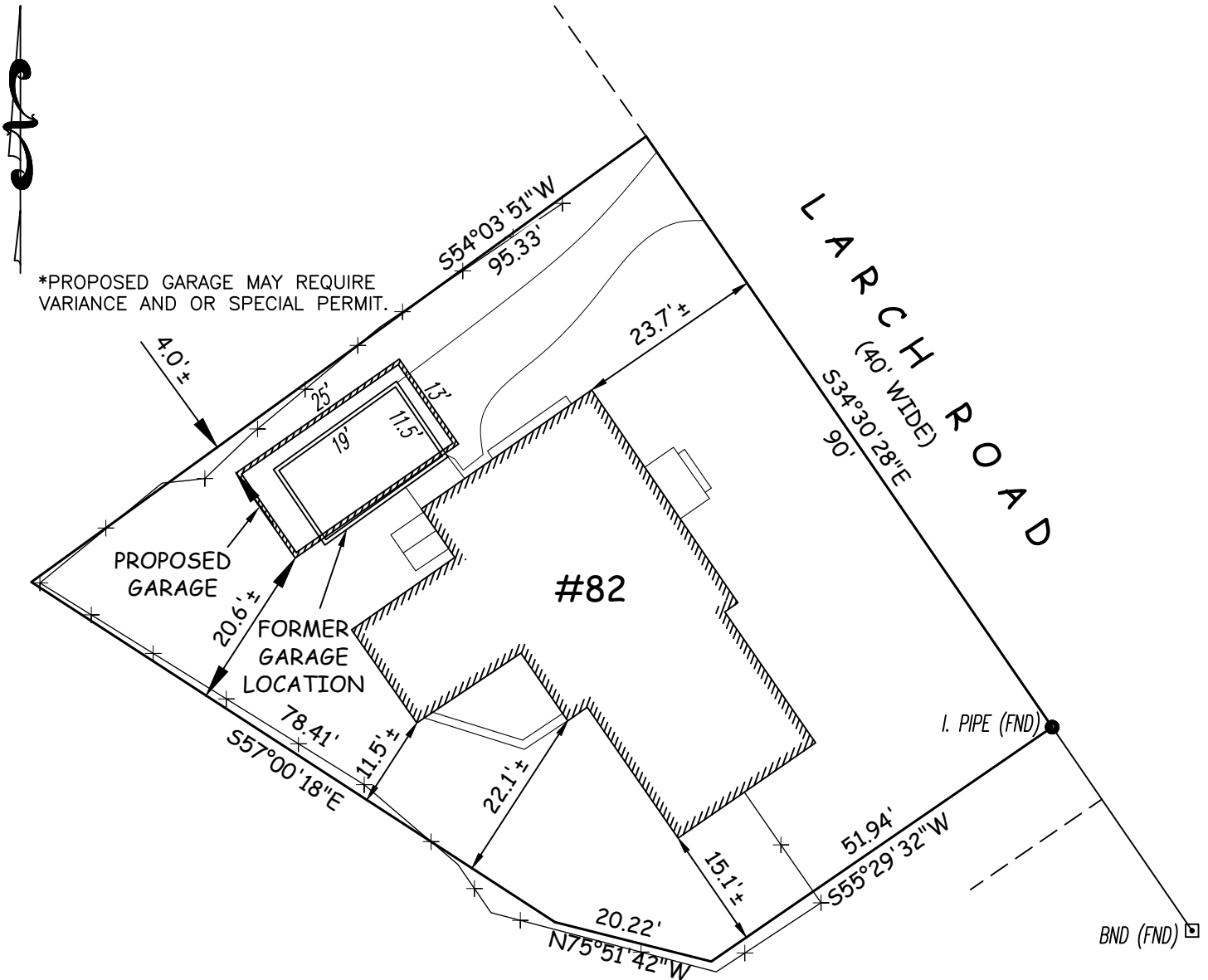
PLAN REFERENCE: 293/17

ZONE: RES B

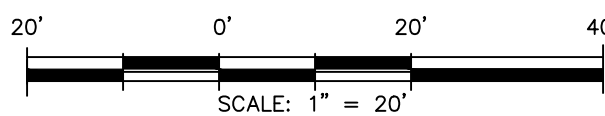
MINIMUM FRONT SETBACK: 15'
MINIMUM SIDE SETBACK: 7.5(SUM 20)'
MINIMUM REAR SETBACK: 25'

FLOOD HAZARD ZONE HAS BEEN DETERMINED BY SCALE AND IS NOT NECESSARILY ACCURATE. UNTIL DEFINITIVE PLANS ARE ISSUED BY HUD AND/OR A VERTICAL CONTROL SURVEY IS PERFORMED, PRECISE ELEVATIONS CANNOT BE DETERMINED.

I CERTIFY THAT THIS PLAN FULLY AND ACCURATELY DEPICTS THE LOCATION OF THE BUILDING AND DIMENSIONS AS SHOWN.



*PROPOSED GARAGE MAY REQUIRE VARIANCE AND OR SPECIAL PERMIT.



DRAWN BY: MJC
CHECKED BY: GES



August 24, 2021

City of Cambridge

Board of Appeal (BZA)

Re: Garage building permit for 82 Larch Road, Cambridge, MA 02138

To Whom It May Concern

I am Judith S. Weinstock, and I own the property at ⁸⁸~~84~~ Larch Road in Cambridge, which is adjacent to 82 Larch from the north side.

I understand that Fawwaz Habbal, the owner of the property at 82 Larch Road would like to build a new garage, replacing the old one and that the new structure is 4 feet from the fence separating our properties, which is about 2 ft closer to the fence, whereas the Zone regulation requires a minimum distance of 7.5 ft.

There is no concern from my side to having the garage at this new location and I do not anticipate any hardship for me or my family.

This letter should serve as an indication for my consent.

Thank you very much.



Judith S. Weinstock

88 Larch Road, Cambridge, MA 02138

82 Larch Rd.

Petitioner

247-10
CLEARY, KATHLEEN O.,
TRUSTEE OF CAMBRIDGE NOMINEE TRUST
83 LARCH RD.
CAMBRIDGE, MA 02138

247-224
TURNER, JOHN H.,JR & HARRIETT T. TAGGART
91 LARCH RD
CAMBRIDGE, MA 02138

249-60
HABBAL, FAWWAZ
82 LARCH RD
CAMBRIDGE, MA 02138

247-11
CALDWELL, SANDRA GAIL
89 LARCH RD. UNIT #1
CAMBRIDGE, MA 02138-3316

249-61
AZIM, SHAHID & NADIA AZIM
74 LARCH RD
CAMBRIDGE, MA 02138

249-203
WEINSTOCK, JUDITH S.
88-90 LARCH ROAD
CAMBRIDGE, MA 02138-3317

249-18
AARON, JONATHAN TRUSTEE &
REBECCA J. FOLKMAN TRUSTEE
100 LARCH RD
CAMBRIDGE, MA 02138

247-11
CALDWELL, SANDRA GAIL
89 LARCH RD. UNIT#1
CAMBRIDGE, MA 02138

249-202
MILDWOFF MINNIE & NICHOLAS B. MILDWOFF
63 FRESH POND PKWY
CAMBRIDGE, MA 02138

247-9
RILEY, JOHN V. & MARGARET E. GADON
77 LARCH RD
CAMBRIDGE, MA 02138

247-11
CALDWELL, SANDRA GAI
89 LARCH RD
CAMBRIDGE, MA 02138-3316

249-48
SCHATZOW EMILY TR
65 FRESH POND PKWY
CAMBRIDGE, MA 02138

249-22
SCHNEIDER, MICHAEL R. & JEAN C. KELLEY
61 FRESH POND PKWY
CAMBRIDGE, MA 02138

249-62
KHEIRANDISH, ELAHEH & HORMOZ GOODARZY
80 LARCH RD
CAMBRIDGE, MA 02138

BZA APPLICATION FORM - OWNERSHIP INFORMATION

To be completed by OWNER, signed before a notary and returned to The Secretary of the Board of Zoning Appeals.

I/We Fawwaz HABBAL
(OWNER)

Address: 82 Larch Road, Cambridge, MA 02138

State that I/We own the property located at 82 Larch Road, Cambridge, MA 02138 which is the subject of this zoning application.

The record title of this property is in the name of _____

*Pursuant to a deed of duly recorded in the date July 16, 2019, Middlesex South County Registry of Deeds at Book 72933, Page 0174; or Middlesex Registry District of Land Court, Certificate No. _____
Book _____ Page _____.

Fawwaz Habbal
SIGNATURE BY LAND OWNER OR AUTHORIZED TRUSTEE, OFFICER OR AGENT*


*Written evidence of Agent's standing to represent petitioner may be requested.

Commonwealth of Massachusetts, County of Middlesex

The above-name Fawwaz Habbal personally appeared before me, this 4th of August, 2021, and made oath that the above statement is true.

[Signature] Notary

My commission expires 01-28-2022 (Notary Seal).

 THERESA KAUFMAN
Notary Public
Commonwealth of Massachusetts
My Commission Expires
January 28, 2022

• If ownership is not shown in recorded deed, e.g. if by court order, recent deed, or inheritance, please include documentation.

Pacheco, Maria

From: kate cleary <kateocleary@gmail.com>
Sent: Monday, November 1, 2021 3:21 PM
To: Pacheco, Maria
Subject: BZA- 140869

To the Board of Zoning

I am writing in response to Case # BZA-140869, in regards to constructing a new attached garage in violation of the setbacks from the dwelling and property line.

While the structure is architecturally appealing my concern is as follows. To move/ add on to the existing garage footprint an additional 2' is a lot in this space. It is **literally** in the front door of the next door neighbors home seems extremely tight, not to mention the neighbors that are kitty corner on Fresh Pond Parkway. The neighboring home is situated so that the front door faces the intended new garage (it was built so that the side of the house faces Larch Road with no driveway etc). This home that is making the request has been under construction for the past 24 months and garage was torn down a while ago.

Most importantly, in a neighborhood that is dense as it is, granting variances like these (and the one you recently granted in the past 6 months two doors down #BZA-97200) is unfortunately changing the character of the neighborhood. **When people purchase homes, they know what they are buying, property lines and all.** To make a case based on variances that are granted in other towns should not be the case in Cambridge.

Kate Cleary
83 Larch Road